



JUNE 2017

# LA Fitness Health Club Final Environmental Impact Report

State Clearinghouse Number: 2017011033

## Volume II: Appendices







FINAL  
ENVIRONMENTAL IMPACT REPORT  
Volume II of II

# LA FITNESS HEALTH CLUB



State Clearinghouse No. 2017011033

**Lead Agency**  
City of Seal Beach  
211 Eighth Street  
Seal Beach, CA 90740

June 2017



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## **Appendix A:**

# **LA Fitness Health Club Initial Study**

**APPENDIX A:**  
**LA Fitness Health Club**  
**Initial Study**

*Lead Agency:*

City of Seal Beach  
Department of Community Development  
211 Eighth Street  
Seal Beach, California 90740

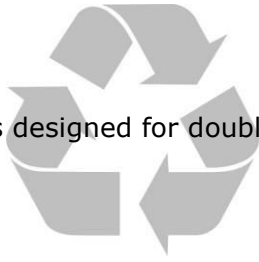


*Consultant to the City:*

MIG, Inc.  
537 S. Raymond Avenue  
Pasadena, CA 91105

December, 2016

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# 1 Introduction

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The City of Seal Beach (Lead Agency) has received an application for a Conditional Use Permit prepared by CPT Shops at Rossmoor, LLC (project proponent) for the development of a health club on the south side of Rossmoor Center Way, west of Seal Beach Boulevard. Approval of the applications constitutes a *project* that is subject to review under the California Environmental Quality Act (CEQA) 1970 (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Section 15000 et seq.).

A previous Draft Initial Study and Mitigated Negative Declaration (IS/MND) was prepared for a similar, prior application in April, 2016 and circulated for public review for a 20-day period. A Final IS/MND and a Response to Comments document were prepared in June, 2016 for public hearings. Prior to final City Council action, the applicant withdrew the application. A new application has been filed for essentially the same project. This Initial Study has been prepared for the new application and to address additional public comments from the public hearing process for the prior application. This Initial Study has been prepared to assess the short-term, long-term, and cumulative environmental impacts that could result from the proposed health club. This report has been prepared to comply with Section 15063 of the State CEQA Guidelines, which sets forth the required contents of an Initial Study. These include:

- A description of the project, including the location of the project (see Section 2)
- Identification of the environmental setting (see Section 2.9)
- Identification of environmental effects by use of a checklist, matrix, or other methods, provided that entries on the checklist or other form are briefly explained to indicate that there is some evidence to support the entries (see Section 4)
- Discussion of ways to mitigate significant effects identified, if any (see Section 4)
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls (see Section 4.10)
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study (see Section 5)

## 1.1 – Purpose of CEQA

The body of state law known as CEQA was originally enacted in 1970 and has been amended a number of times since. The legislative intent of these regulations is established in Section 21000 of the California Public Resources Code, as follows:

“The Legislature finds and declares as follows:

- a) The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.
- b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.
- c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.
- d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the state take immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.
- e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.



## Introduction

- f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.
- g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.

The Legislature further finds and declares that it is the policy of the State to:

- h) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.
- i) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.
- j) Prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.
- k) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.
- l) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.
- m) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.
- n) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment."

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in Section 21002 of the Public Resources Code, quoted below:

"The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof."

## 1.2 – Public Comments

Comments from all agencies and individuals are invited regarding the information contained in this Initial Study. Such comments should explain any perceived deficiencies in the assessment of impacts, identify the information that is purportedly lacking in the Initial Study, or indicate where the information may be found. All comments on the Initial Study are to be submitted to:

Crystal Landavazo, Senior Planner  
City of Seal Beach Department of Community Development  
211 Eighth Street  
Seal Beach, California 90740  
(562) 431-2527  
clandavazo@sealbeachca.gov

Following a 30-day period of circulation and review of the Initial Study, all comments will be considered by the City of Seal Beach prior to adoption.

### **1.3 – Availability of Materials**

All materials related to the preparation of this Initial Study are available for public review. To request an appointment to review these materials, please contact:

Crystal Landavazo, Senior Planner  
City of Seal Beach Department of Community Development  
211 Eighth Street  
Seal Beach, California 90740  
(562) 431-2527



## 2 Project Description

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### 2.1 – Project Title

LA Fitness Health Club

### 2.2 – Lead Agency Name and Address

City of Seal Beach  
Department of Community Development  
211 Eighth Street  
Seal Beach, CA 90740

### 2.3 – Contact Person and Phone Number

Crystal Landavazo, Senior Planner  
(562) 431-2527

### 2.4 – Project Location

The project encompasses a portion of the existing The Shops at Rossmoor shopping center, located at 12411 Seal Beach Boulevard in the City of Seal Beach (APN 086-492-079). The project site is located on the northwestern most portion of the shopping center parking lot on Rossmoor Center Way between Seal Beach Boulevard and Montecito Road (see Exhibit 1, Regional Context and Vicinity Map). The site is bounded by residential uses to the west and north, a Sprouts grocery store and Marshall's department store to the east, and the retail stores Home Goods and PetSmart to the south (see Exhibit 2, Site Plan).

### 2.5 – Project Sponsor's Name and Address

CPT Shops at Rossmoor, LLC  
Two Seaport Lane  
Boston, MA 02210-2021

### 2.6 – General Plan Land Use Designation

Commercial General

### 2.7 – Zoning District

GC – General Commercial

### 2.8 – Project Description

The proposed project includes the construction of a 37,000-square-foot private health club on approximately 5.28 acres within the existing Shops at Rossmoor retail development (see Exhibit 2, Site Plan).

#### Project Design

The proposed project is a single-story private health club comprising 37,000 square feet of floor space. Facilities in the health club would include free weights, circuit training, a pool, a



## **Project Description**

basketball court, separate rooms for aerobics and spinning, a personal training room, men's and women's showers and lockers, a hot yoga studio, a physical therapy room, and a children's area (see Exhibit 3, Floor Plan).

Because the project would be constructed on an existing parking lot, construction of the health club would require the removal of 87,500 square feet of existing asphalt surfaces, installation of 56,800 square feet of new asphalt surface, application of 119,065 square feet of slurry fill on the existing undisturbed asphalt, and restriping the entire 175,865-square-foot parking lot once the health club center is constructed. The project site plan includes 16,795 square feet of ornamental landscaping around the perimeter of the health club and within parking lot planters.

Architecturally (see Exhibit 4, Project Elevations), the building would consist of a painted concrete tilt-up wall system accented with a prefabricated metal panel shell finish system. The entryway would consist of anodized aluminum. Painted plaster and simulated wood paneling would also be used on the building exterior. An internally illuminated sign with 40-inch-high letters will adorn the building façade on the south side. The building would have a stepped massing from 24 feet in height at the side and rear to 28 feet at the entryway to 35 feet at the highest point of the parapet holding the illuminated sign. The molding along the top of the building and arcade features would be finished with decorative cornices. Finally, images portraying individuals engaging in physical fitness activities are proposed to be placed on the rear and side building elevations.

## **Circulation**

The applicant proposes two options for providing and improving vehicular access to the health club (see Exhibit 5, Access Improvements Option). Currently, the primary access to the north end of the shopping center is via Rossmoor Center Way. Two existing driveways provide immediate access to the proposed health club pad: a 40-foot-wide driveway just west of the proposed pad (which will be converted to a 36-foot driveway to accommodate proposed new parking) and a 36-foot-wide driveway just east of the proposed pad. Both driveways currently provide ingress and egress in a north-south direction into and out of the Shops at Rossmoor shopping center onto Rossmoor Center Way. In addition to reconfiguring the westernmost driveway, the applicant proposes to add another lane on Rossmoor Center Way between Seal Beach Boulevard and Sprouts (Option 1).

Option 2 consists of using the two existing driveways on Rossmoor Center Way as described under Option 1, but with no extra lane added to Rossmoor Center Way. Instead, the applicant would add a new southbound right-turn-in only driveway on Seal Beach Boulevard approximately 500 feet south of Rossmoor Center Way (immediately north of Verizon Wireless store). This new driveway would provide a new alternative access into the Shops at Rossmoor center for all users.

Entrance to the Shops at Rossmoor site is also provided via a 44-foot-wide entrance on Seal Beach Boulevard opposite the entrance to the Target store. Under Option 2, four driveways will provide direct access into the center of the project site for both future users of the site and emergency services. In its existing condition, the 40-foot-wide driveway (west of the proposed health club) is flanked on the west side by a sidewalk that runs for 350 feet parallel to the drive aisle. This barrier forms an enclosed area west of the proposed project site.

Additional curb barriers would be provided within the site to provide a separation between north and south sections of the parking lot. The shopping center operator proposes this configuration to encourage patrons visiting the Home Goods and PetSmart retail stores to park close to those locations and visitors to the health club to park close to that use.

## Utilities

The site is fully served by utilities. An eight-inch water main runs west along Rossmoor Center Way before turning south under the existing 40-foot-wide driveway east of the project site. This main also serves the adjacent condominium development. Project construction would necessitate the capping of the existing water main under the proposed project site, extending the main under the 40-foot-wide driveway farther south, and constructing a new eight-inch main to run west from the driveway approximately 100 feet south and perpendicular to the existing main. Lateral connections would be made to this new water main.

## Project Operation

The health club would provide membership-based fitness services, including access to exercise equipment, group fitness classes, and personal fitness training. The health club is proposed to operate seven days a week. Hours of operation would be 5:00 A.M. to 11:00 P.M. Monday through Friday, 5:00 A.M. to 10:00 P.M. on Saturdays, and 8:00 A.M. to 8:00 P.M. on Sundays.

## Off-Site Improvements

A traffic analysis was prepared by LSA Associates, Inc. to identify any potential traffic impacts resulting from the development of the proposed health club. The traffic analysis found that all study area facilities are anticipated to operate at satisfactory conditions per City standards. However, the analysis did find that the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way currently experiences queuing issues and would require improvements. The intersection is bounded by a landscaped median along Seal Beach Boulevard and a southbound left-turn pocket that provides access to the Target shopping center southeast of the intersection. The northbound left-turn movement currently experiences queuing that extends past the existing left-turn pocket during periods of peak demand. Improvements to the existing configuration is proposed to handle additional queuing that results from the project. This issue and improvements are discussed in Section 4.16 of this Initial Study.

## Project Construction

Project construction is anticipated to begin in late 2017, with completion by mid-2018. Construction would require demolition of existing asphalt paving on the project site. Construction program defaults were used for air quality and greenhouse gas emissions for a conservative estimate of timeframes and resulting emissions. The default construction schedule is as follows:

Phase	Total Days
Demolition	20
Site Preparation	10
Grading	20
Building Construction	63
Paving	20
Architectural Coating	20

## 2.9 – Environmental Setting

The project site is located within a built-out and completely urbanized area along Seal Beach Boulevard and Rossmoor Center Way. The project site currently is used as parking for the Shops at Rossmoor. The project site is surrounded by commercial and residential land uses, and the area is completely urbanized. Nominal ornamental landscaping is located on the

## Project Description

existing parking area. The project site sits at an elevation of approximately 16 feet above sea level on land that slopes gently in a westerly direction.

The proposed project site currently is an asphalt parking lot that provides parking for the Shops at Rossmoor shopping center. The Shops at Rossmoor is located in the City of Seal Beach. Surrounding uses include single-family residential, multifamily, and commercial.

### Surrounding Land Uses

Direction	General Plan Designation	Zoning District	Existing Land Use
Project Site	Commercial General	GC – General Commercial	Parking
North	Residential High Density	RHD-46 – Residential High Density	Condominiums
South	Commercial General	GC – General Commercial	Home Goods/PetSmart
East	Commercial General	GC – General Commercial	Sprouts/Marshalls
West	Residential High Density	RHD-46 – Residential High Density	Condominiums

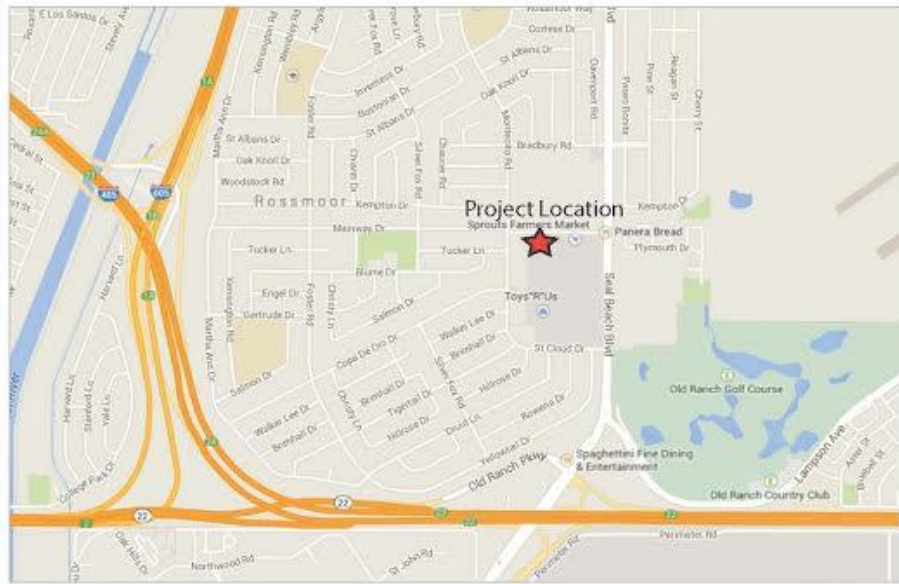
## 2.10 – Required Approvals

The City of Seal Beach is the only authority having jurisdiction. The proposed project requires the following approvals:

- Development Review for a health and exercise membership club
- Use Permit for operation of the proposed health club use

## 2.11 – Other Public Agency Whose Approval Is Required

None



Source: Google Maps

Regional



Source: Google Maps

Vicinity



<http://www.mig.com> +951-787-9222



## Exhibit 1 Regional and Vicinity Map

Rossmore Health Club  
City of Seal Beach, California

# Project Description

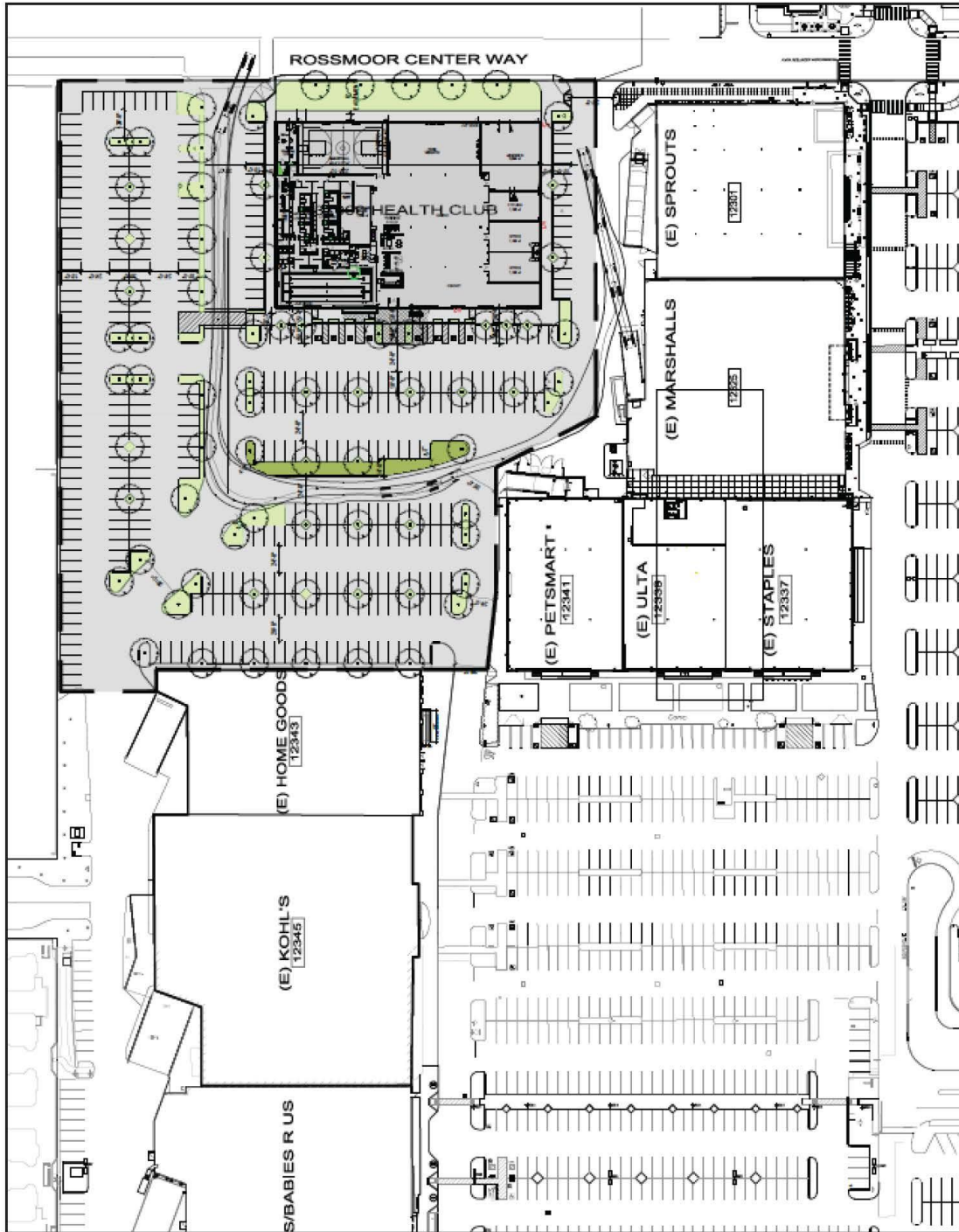
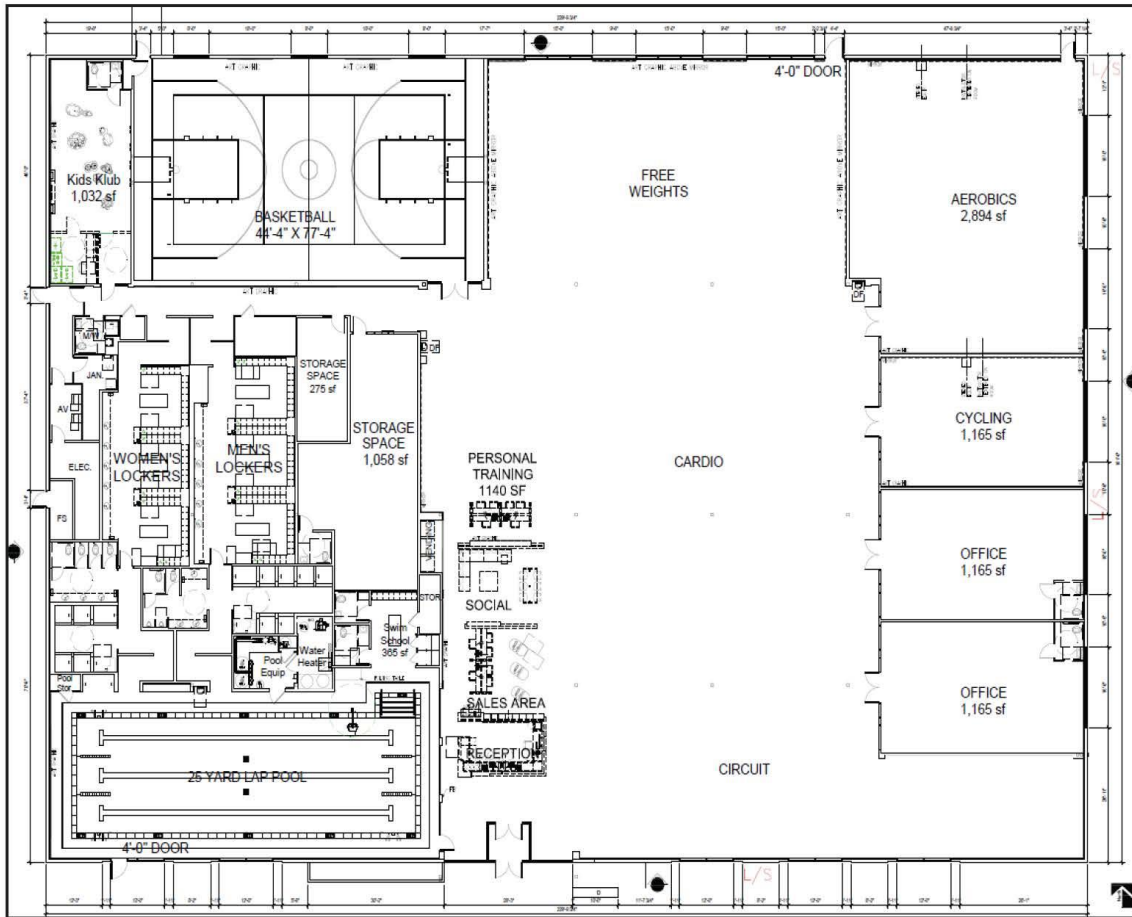


Exhibit 2 Site Plan

Source: Robinson Hill Architecture, Inc. 2015



Rossmoor LA Fitness  
City of Seal Beach, California



Source: Robinson Hill Architecture, Inc. 2015

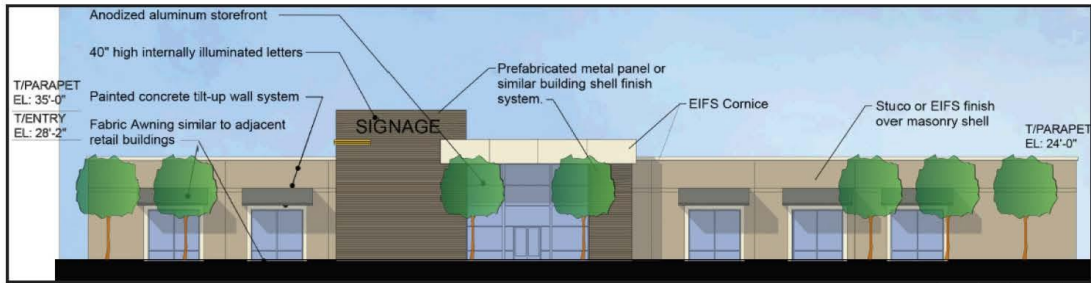


### Exhibit 3 Floor Plan

Rossmoor LA Fitness  
City of Seal Beach, California



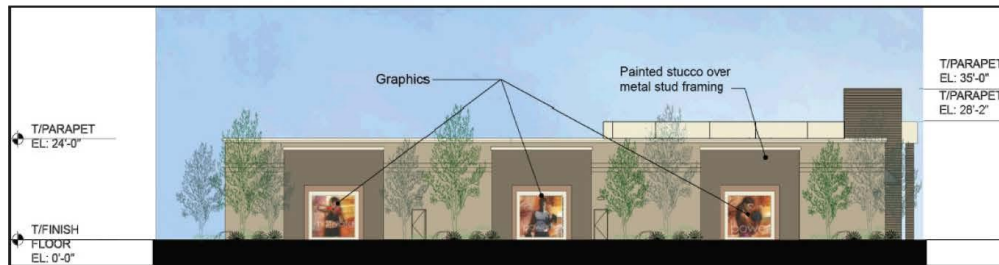
# Project Description



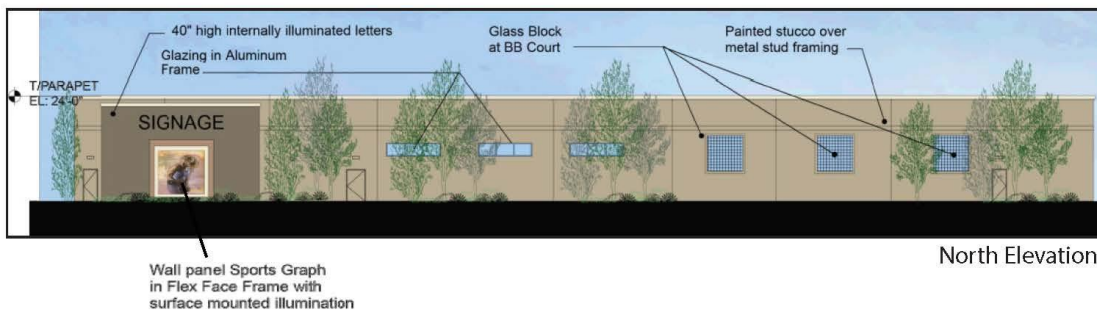
South Elevation



East Elevation



West Elevation



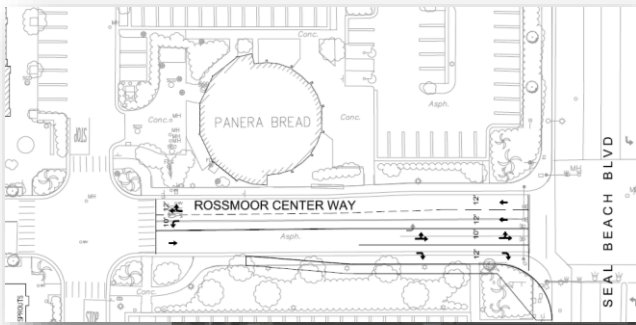
North Elevation

Source: Robinson Hill Architecture, Inc. 2015



## Exhibit 4 Project Elevations

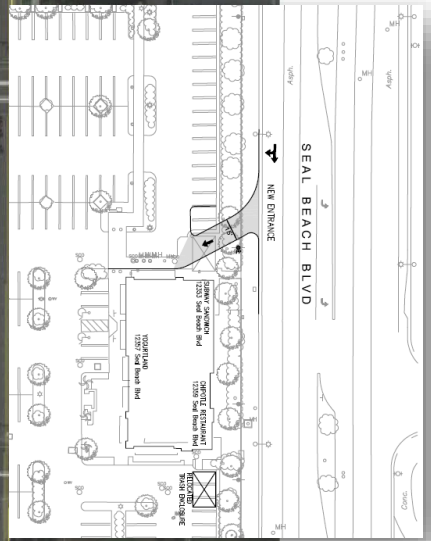
Rossmoor LA Fitness  
City of Seal Beach, California



Option #1: Add additional lane on Rossmoor Center Way (Red Line)



Option #2: Add new driveway on Seal Beach Blvd. (Blue Line)



Source: Robinson Hill Architecture, Inc. 2015

Exhibit 5 Access Improvement Options



Rossmoor LA Fitness  
City of Seal Beach, California



**Project Description**



## 3 Determination

### 3.1 – Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture Resources	<input checked="" type="checkbox"/>	Air Quality
<input type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology /Soils
<input checked="" type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards & Hazardous Materials	<input type="checkbox"/>	Hydrology / Water Quality
<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources	<input checked="" type="checkbox"/>	Noise
<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input checked="" type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities / Service Systems	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

### 3.2 – Determination

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a ‘potentially significant impact’ or ‘potentially significant unless mitigated’ impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

*Laura R. Stetson* Laura R. Stetson, MIG, on behalf of

December 19, 2016

Name: Crystal Landavazo, Senior Planner, City of Seal Beach

**Determination**



## 4 Evaluation of Environmental Impacts

### 4.1 – Aesthetics

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within view from a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This aesthetics impact analysis is based on review of project maps and drawings, aerial and ground-level photographs of the project area, renderings of the proposed project, and planning documents. The site is most visible from neighboring properties, as well as by pedestrians and motorists along Rossmoor Center Way. East and south of the subject property are retail stores within the Shops at Rossmoor development. West and north are multifamily residential developments.

a) **No Impact.** Scenic vistas can be impacted by development in two ways. First, a structure may be constructed that blocks the view of a vista. Second, the vista itself may be altered (i.e., development on a scenic hillside). The City of Seal Beach General Plan does not designate any locations within the City as a scenic vista. However, the County of Orange has designated Pacific Coast Highway as an "Urbanscape Corridor." Urbanscape Corridors, as defined by the County, are routes that traverse an urban area with a defined visual corridor that offers a view or attractive and exciting urban scene, and that has recreational value for its visual relief as a result of nature or the designed efforts of man.<sup>1</sup>

The proposed project is located on a developed site within a fully urbanized area visually dominated by commercial land uses and surface street features. This site is not considered to be

<sup>1</sup> City of Seal Beach. Seal Beach General Plan Land Use Element. pp. LU-64. December 2003.

## Environmental Evaluation

within or to comprise a portion of a scenic vista as defined by the City and the County. The project is located approximately two miles from Pacific Coast Highway. Development of the health club with the proposed two-story building, parking, and accessory landscaping elements would have no effect on a scenic vista. The proposed development is generally consistent in type and scale with the existing and planned surrounding development. No impact would occur.

b) **No Impact.** The project is not adjacent to a designated State Scenic Highway or eligible State Scenic Highway, as identified on the California Scenic Highway Mapping System.<sup>2</sup> Thus, the proposed project would not damage the integrity of existing visual resources or historic buildings located along a State Scenic Highway. The City's General Plan does not identify any local scenic roadways within the City limits. The County of Orange has designated Pacific Coast Highway as an "Urbanscape Corridor." However, the proposed project is not located in the immediate vicinity of this Urbanscape Corridor. The project site is currently developed with parking used for the Shops at Rossmoor development and contains no scenic resources. No impact on scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway, would result. Therefore, no impact to scenic resources visible from a State Scenic Highway would occur.

c) **Less Than Significant Impact.** Development of the proposed project could result in a significant impact if it resulted in substantial degradation of the existing visual character or quality of the site and its surroundings. Degradation of visual character or quality is defined by substantial changes to the existing site appearance through construction of structures such that they are poorly designed or conflict with the site's existing surroundings.

Construction of the proposed project could result in short-term impacts to the existing visual character and quality of the area. Construction activities would require the use of equipment and storage of materials within the project site. However, a construction fence will be erected around the site to avoid any temporary visual impact. Project construction would result in the removal of decorative planter trees and asphalt pavement. The project would include ornamental trees and bushes of varying species around the edge of the building. A total of 16,795 square feet of landscaped area would be provided to replace any landscaping removed.

Construction of the proposed buildings on the developed site would alter the existing visual character of the site. Upon project completion, the proposed building would consist of a single building, containing one story and a mezzanine, constructed adjacent to Rossmoor Center Way to the north. The building height would vary due to parapets and variation in roof level (see Exhibit 4, Project Elevations). However, no part of the building would exceed 35 feet in height. The proposed project is zoned *General Commercial*, which has a maximum building height of 35 feet. The proposed building is 24 feet in height, with accents up to 35 feet tall.

The proposed project is similar in use and building type to the existing surrounding buildings in the Shops at Rossmoor shopping center. The immediate surroundings along Seal Beach Boulevard and Rossmoor Center Way are occupied by commercial uses. To the west and east are high-density residential units.

The design of the health club would consist of a painted concrete tilt-up wall system accented with a prefabricated metal panel shell finish system. The entryway would consist of anodized

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<sup>2</sup> California Department of Transportation. California Scenic Highway Mapping System: Los Angeles County. Accessed March 2015.

aluminum. Painted plaster and simulated wood paneling would also be used. An internally illuminated sign with 40-inch-high letters would adorn the south building façade. The building would have a stepped massing from 24 feet in height at the side and rear to 28 feet at the entryway to 35 feet at the highest point of the parapet holding the illuminated sign. The molding along the top of the building and arcade features would be finished with decorative cornices. Images portraying people engaging in physical fitness activities are proposed on rear and side building elevations.

The project proposes landscaping features around the sides and rear of the building and along Rossmoor Center Way. Project plans include additional landscaping and shade trees within the reconfigured parking lot. This landscaping would visually break up the expanse of asphalt. The proposed project would maintain the visual urban character of the project vicinity and enhance the existing parking lot with landscaping and a building compatible with surrounding development. With specified design features included, project impact would be less than significant on the visual character of the site and surroundings.

d) **Less Than Significant Impact.** Excessive or inappropriately directed lighting can adversely impact night-time views by reducing the ability to see the night sky and stars. Glare can be caused from unshielded or misdirected lighting sources. Reflective surfaces (i.e., polished metal) can also cause glare. Impacts associated with glare range from simple nuisance to potentially dangerous situations (i.e., if glare is directed into the eyes of motorists).

Lighting sources adjacent to this site include freestanding streetlights, light fixtures on buildings, pole-mounted lights, traffic signals, and vehicle headlights. The proposed project would include exterior parking lot and security lighting and building interior lighting. However, only outdoor lighting could have any effect on neighboring land uses since interior lighting would be reduced by tinted windows. The proposed project would be required to conform to existing City lighting standards for commercial uses which require lighting to be directed downward and away from adjacent properties. Light impacts would be less than significant with compliance with City standards.

Sources of daytime glare are typically concentrated in commercial areas, such as in the vicinity of the project site, which is one of the City's primary commercial areas, and are often associated with retail uses. Glare results from development and associated parking areas that contain reflective materials such as glass, highly polished surfaces, and expanses of pavement. The proposed building would have a sand stucco finish, which is not a surface that causes glare. While windows may contribute to glare impacts, they do not compose substantial square footage of the façade and are included as architectural treatments to enhance aesthetic quality. Limited metal accents are proposed on the crown and canopy; however, these areas represent a minor percentage of the square footage of the building. Given the minimal use of glare-inducing materials in the design of the proposed building, reflective glare impacts would be less than significant.

## 4.2 – Agriculture and Forest Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-b) **No Impact.** The proposed project would be located in a fully developed, commercial, urbanized area that does not contain agriculture or forest uses. The map of Important Farmland in California (2010) prepared by the Department of Conservation does not identify the project site as being Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.<sup>3</sup> No Williamson

<sup>3</sup> California Department of Conservation. Farmland Mapping and Monitoring Program, 2008. The City of Seal Beach, including the project site, is indicated within "Area Not Mapped" in 2010 maps of Orange County.

Act contracts are active for the project site.<sup>4</sup> The property is zoned *General Commercial*, which is not intended for agricultural uses. No impact would occur.

c) **No Impact.** Public Resources Code Section 12220(g) identifies forest land as “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” The project site and surrounding properties are not currently being managed or used for forest land as identified in Public Resources Code Section 12220(g). The USDA Forest Service vegetation maps for the project site identify it as *urban* type, indicating that it is not capable of growing industrial wood tree species.<sup>5</sup> The project site has already been graded and developed with commercial uses, with no substantial vegetation onsite, with the exception of limited ornamental landscaping. Therefore, development of this project would have no impact to any timberland zoning.

d) **No Impact.** The project site is already graded land with existing development and limited ornamental landscaping; thus, there would be no loss of forest land or conversion of forest land to non-forest use as a result of this project. No impact would occur.

e) **No Impact.** The project site is a developed site within an urban environment and is surrounded by commercial and residential uses. The project would not encroach onto agricultural land nor encourage the conversion of existing farmland to non-agricultural uses. None of the surrounding sites contain existing forest uses. Development of this project would not change the existing environment in a manner that will result in the conversion of forest land to a non-forest use. No impact would occur.

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<sup>4</sup> California Department of Conservation. Williamson Act Program, 2007.

<sup>5</sup> California Department of Forestry and Fire Protection and the USDA Forest Service. California Land Cover Mapping and Monitoring Program (LCMMP), Vegetation GIS files. Pacific Southwest Region. EvvegTile51A\_\_02\_03\_v2. 2007



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**4.3 – Air Quality**

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation Incorporation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **No Impact.** A significant impact could occur if the proposed project conflicts with or obstructs implementation of the South Coast Air Basin 2007 Air Quality Management Plan. Conflicts and obstructions that hinder implementation of the AQMP can delay efforts to meet attainment deadlines for criteria pollutants and maintaining existing compliance with applicable air quality standards. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD CEQA Air Quality Handbook, consistency with the South Coast Air Basin 2007 Air Quality Management Plan (AQMP) is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation and (2) is consistent with the growth assumptions in the AQMP.<sup>6</sup> Consistency review is presented below.

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<sup>6</sup> South Coast Air Quality Management District. CEQA Air Quality Handbook. 1993.

(1) The project would result in short-term construction and long-term pollutant emissions that are less than the CEQA significance emissions thresholds established by the SCAQMD, as demonstrated in Section 4.3 et seq. of this Initial Study; therefore, the project would not result in an increase in the frequency or severity of any air quality standards violation and would not cause a new air quality standard violation.

(2) The CEQA Air Quality Handbook indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and *significant projects*. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and off-shore drilling facilities. This project, construction of a health club facility, does not involve a General Plan Amendment, Specific Plan, and is not considered a *significant project*.

Based on the consistency analysis presented above, the proposed project would not conflict with the AQMP; no impact will occur.

**b) Potentially Significant Impact.** A project may have a significant impact if project-related emissions would exceed federal, state, or regional standards or thresholds, or if project-related emissions would substantially contribute to existing or project air quality violations. The proposed project is located within the South Coast Air Basin, where efforts to attain state and federal air quality standards are governed by the South Coast Air Quality Management District (SCAQMD). Both the State of California and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as “criteria pollutants”). These pollutants include ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), inhalable particulate matter with a diameter of 10 microns or less (PM<sub>10</sub>), fine particulate matter with a diameter of 2.5 microns or less (PM<sub>2.5</sub>), and lead (Pb). The state has also established AAQS for additional pollutants. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the state and federal standards differ, California AAQS are more stringent than the national AAQS.

Air pollution levels are measured at monitoring stations located throughout the air basin. Areas that are in nonattainment with respect to federal or state AAQS are required to prepare plans and implement measures that will bring the region into attainment. Table 1 (South Coast Air Basin Attainment Status – Orange County) summarizes the attainment status in the project area for the criteria pollutants. Due to the federal and state nonattainment status for several of the pollutants, project construction and operation could exacerbate the problem and cause potentially significant air quality impacts. This issue requires analysis in an EIR.

Table  
South Coast Air Basin Attainment Status – Orange County

1

Pollutant	Federal	State
O <sub>3</sub> (1-hr)	N/A	Nonattainment
O <sub>3</sub> (8-hr)	Nonattainment	Nonattainment
PM <sup>10</sup>	Nonattainment	Nonattainment
PM <sup>2.5</sup>	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO <sub>2</sub>	Attainment	Nonattainment
SO <sub>2</sub>	Attainment	Attainment
Pb	Nonattainment	Nonattainment
Sources: CARB 2011, U.S. EPA 2012		

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c) **Less Than Significant Impact.** Cumulative short-term, construction-related emissions and long-term, operational emissions from the project would not contribute considerably to any potential cumulative air quality impact because short-term project and operational emissions would not exceed any SCAQMD daily threshold. As is required of the proposed project, other concurrent construction projects and operations in the region would be required to implement standard air quality regulations and mitigation pursuant to State CEQA requirements. Such measures include compliance with SCAQMD Rule 403, which requires daily watering to limit dust and particulate matter emissions. Impacts would be less than significant.

d) **Potentially Significant Impact.** Sensitive receptors are those segments of the population that are most susceptible to poor air quality, such as children, the elderly, the sick, and athletes who perform outdoors. Land uses associated with sensitive receptors include residences, schools, playgrounds, childcare centers, outdoor athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest land uses that considered sensitive receptors are the residential dwelling units located adjacent to the project site to the north and west. No schools are located within a quarter-mile of the project site. The proposed health club would not generate toxic pollutant emissions because the proposed fitness and gymnasium uses are characterized as typical commercial uses that do not produce such emissions. The proposed health club, therefore, would have a less than significant impact on sensitive receptors relating to toxic pollutant emissions.

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots have the potential for violation of state and federal CO standards at study area intersections, even if the broader Basin is in attainment for federal and state levels. The potential for violation of state and federal CO standards at study area intersections and exposure to sensitive receptors at those intersections is addressed using the methodology outlined in the California Department of Transportation *Project-Level Carbon Monoxide Protocol*. Section numbers for the CO Protocol are provided in parenthesis for ease of reference.

In general, SCAQMD and the California Department of Transportation Project-Level Carbon Monoxide Protocol recommend analyzing CO hotspots when a project has the potential to result in higher CO concentrations within the region and increase traffic congestion at an intersection operating at level of service (LOS) D or worse by more than two percent.

There has been a decline in CO emissions over the past two decades even though vehicle miles traveled on U.S. urban and rural roads have increased. Three major control programs have contributed to the reduced per vehicle CO emissions: exhaust standards, cleaner-burning fuels, and motor vehicle inspection/maintenance programs.

Local impacts from the project need to be examined because the project is not exempt from emissions analysis as defined by the CO Protocol (3.1.1, 3.1.2, 3.1.9). According to the CO Protocol, projects may worsen air quality if they significantly increase the percentage of vehicles in cold start modes (by two percent or more), significantly increase traffic volumes (by five percent or more) over existing volumes, or reduce average speeds on uninterrupted roadway segments (increase delays at intersections for interrupted roadway segments) (4.7.1). Project generated traffic could exacerbate the problem and cause potentially significant air quality impacts. This issue requires analysis in an EIR.

e) **No Impact.** According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). Odors are

typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. The proposed health club does not include any of the above noted uses or process; no impact would occur.

### 4.4 – Biological Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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a) **No Impact.** The project site is currently developed with an asphalt parking lot associated with the Shops at Rossmoor shopping center. A number of ornamental trees exist in planters throughout the parking lot. The ornamental trees do not support habitat of any species identified as a candidate, sensitive, or special status species. The project site is not identified as critical habitat for Threatened and Endangered Species.<sup>7</sup> Considering the highly developed nature of the project site and surrounding areas, the probability of existence of designated species under the federal Endangered Species Act or California Special Concern Species is very low. The proposed project would, therefore, not have a substantial adverse effect on any species identified as a candidate, sensitive, or special-status species in local or regional plans or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Considering the lack of habitat on the property, no impacts to wildlife species of concern would occur.

b) **No Impact.** The project site is located on land that has been previously developed in a primarily commercial portion of the City. The site has been graded and developed, with limited landscaping consisting of non-native, ornamental trees. The site is entirely paved. There is no riparian habitat onsite. As such, no impact to riparian habitat or other sensitive natural habitat would occur.

c) **No Impact.** According to the federal National Wetlands Inventory, the project site does not contain any wetlands;<sup>8</sup> furthermore, the proposed project would not disturb any offsite wetlands, as no wetlands are adjacent to the project site. (See Section 4.9 for discussion of project drainage features.) There is no vegetation or on-site water features indicative of potential wetlands. No impact would occur.

d) **No Impact.** The project site is currently developed with surface parking and is surrounded by commercial and residential development, preventing the use of the site and surrounding area as a wildlife corridor. The project site contains limited ornamental vegetation in the form of planter trees, in the context of a completely urbanized setting located along one of the City's major commercial thoroughfares. There are no substantial vegetated areas or water bodies located on site. The project site does not provide for the movement of any native resident or migratory fish or wildlife. No impact would occur.

e) **Less than Significant Impact.** The City of Seal Beach has a tree ordinance (Municipal Code Chapter 9.40) that regulates the planting, trimming, and removal of trees on City property. Trees on private property are not regulated. The small ornamental trees located in planters throughout the parking lot will be removed to facilitate construction of the health club and associated parking improvements. The proposed project would include landscaping and ornamental trees around the perimeter of the building and in proposed new parking lot

<sup>7</sup> U.S. Fish and Wildlife Service. FWS Critical Habitat for Threatened & Endangered Species. <<http://criticalhabitat.fws.gov/>> [Accessed March 2015].

<sup>8</sup> United States Fish and Wildlife Service. National Wetlands Inventory. <<http://107.20.228.18/Wetlands/WetlandsMapper.html#>> [Accessed March 2015].

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planters. The project would not affect any other natural biological resources; therefore, the project would not result in any conflicts with local or other policies or standards to protect such resources. Impacts would be less than significant.

f) **No Impact.** No adopted Habitat Conservation Plan areas<sup>9</sup> or any Natural Community Conservation Plan areas<sup>10</sup> apply to the project site. No impact would occur.

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<sup>9</sup> US Fish & Wildlife Services. Habitat Conservation Plans: Summary Report.

<<http://www.fws.gov/endangered/what-we-do/hcp-overview.html>> [Accessed March 2015].

<sup>10</sup> California Department of Fish and Game. Natural Community Conservation Planning: Status of NCCP Planning Efforts. <<http://www.dfg.ca.gov/habcon/nccp/>> [Accessed March 2015].

### 4.5 – Cultural Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**a) No Impact.** This property does not satisfy any of the criteria for a historic resource defined in Section 15064.5 of the State CEQA Guidelines. The proposed property has been previously disturbed and currently is used as surface parking for the Shops at Rossmoor shopping center. No known historically or culturally significant resources, structures, buildings, or objects are located on the project site. As such, the proposed project would not cause an adverse change in the significance of a historical resource, and impacts to historic resources are not anticipated. No impact would occur.

**b-c) Less Than Significant Impact.** The property is a previously developed site in a fully urbanized area. According to the City’s General Plan, Anaheim Bay, the San Gabriel Estuary, and the Seal Beach area have supported several cultures over the past 10,000 years. Prehistoric occupation of the Seal Beach area was associated with the Tongva (Gabrielino) Native Americans, who inhabited much of northern Orange County. Tongva coastal villages have been identified in Long Beach, Seal Beach, Huntington Beach, and Costa Mesa. Identified within Seal Beach, a Tongva community named Motuuchey, also known as “El Piojo” (The Louse), was located at the former Anaheim landing area. Identified archaeological resources within the City of Seal Beach are primarily located on the Naval Weapons Station, the Hellman Ranch property, and potentially the Boeing property.<sup>11</sup>

No known archaeological or paleontological sites are documented within the Rossmoor Center planning area. The potential for uncovering such significant resources at the project site during construction activities is considered remote given that no such resources have been discovered during prior development activity within the area, there are no unique geological resources on or

<sup>11</sup> City of Seal Beach. *General Plan: Cultural Resources Element*. P. CR-2. December 2003.



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near the project site, and the fact that the site has been significantly disturbed in the past for construction of the existing development. Only minor excavation requirements into fill materials of this previously developed site would be necessary; therefore, it is considered unlikely that archeological or paleontological resources would be found.

In accordance with standard City procedures, a halt-work condition would be in place in the unlikely event that archaeological or paleontological resources are discovered during construction. The contractor would be required to halt work in the immediate area of the find and to retain a professional archaeologist or paleontologist, as applicable, to examine the materials to determine whether they are a "unique archaeological resource" as defined in Section 21083.2(g) of the State CEQA Statutes. If this determination is positive, the scientifically consequential information must be fully recovered by the archaeologist or paleontologist, as applicable, consistent with standard City protocol. As such, impacts on archeological and/or paleontological impacts would be less than significant with adherence to existing standards and regulations.

d) **Less Than Significant Impact.** It is unlikely that human remains could be uncovered during grading operations, considering that the project site was previously disturbed during construction of the Shops at Rossmoor shopping center. Nonetheless, should suspected human remains be encountered, the contractor shall be required to notify the County Coroner in accordance with Section 7050.5 of the California Health and Safety Code, who must then determine whether the remains are of forensic interest. If the coroner, with the aid of a supervising archaeologist, determines that the remains are or appear to be of a Native American, he/she would be required to contact the Native American Heritage Commission for further investigations and proper recovery of such remains, if necessary. Through this existing regulatory procedure, impacts to human remains would be avoided. Impact would be less than significant with application of existing regulations.

### 4.6 – Geology and Soils

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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a.i) **No Impact.** Although the project site is located in seismically active Southern California, according to the California Geological Survey Alquist-Priolo Earthquake Fault Zone Map for the Los Alamitos quadrangle, the site is not located within an Alquist-Priolo Earthquake Fault Zone.<sup>12</sup> The nearest Alquist-Priolo fault zone is the Newport-Inglewood Fault, located approximately two miles southwest of the project site. No impact would occur.

a.ii) **Less Than Significant Impact.** The proposed project would be subject to ground shaking impacts should a major earthquake occur in the future. Potential impacts include injury or loss of life and property damage. The project site is located within proximity to the Newport-Inglewood Fault. Significant ground shaking may occur if an earthquake were to occur along that fault line. Other local faults can also cause significant groundshaking. Other nearby faults which present seismic risks include the Cabrillo and Palos Verdes faults.<sup>13</sup>

The project site is subject to strong seismic ground shaking, as are virtually all lands in Southern California. The proposed building would be required to be designed consistent with seismic design criteria of the California Building Code (CBC) and the project-specific design requirements of the project geotechnical report<sup>14</sup> The project geotechnical report recommends site class designation *D* for seismic design of the proposed building, given the predominance of stiff soils located on the project site. The 2013 CBC (Title 14, California Code of Regulations, Part 2) contains seismic safety provisions purposed to prevent building collapse during a design earthquake. Adherence to these requirements will reduce the potential of the building from collapsing during an earthquake, thereby minimizing injury and loss of life. The recommendations of the geotechnical report would be implemented during preparation of construction drawings for review and approval of the City. Adherence to existing regulations would reduce the risk of loss, injury, and death; impacts due to strong ground shaking would be less than significant.

a.iii) **Less Than Significant Impact.** Liquefaction is a phenomenon that occurs when soil undergoes transformation from a solid state to a liquefied condition due to the effects of increased pore-water pressure. This typically occurs where susceptible soils (particularly the medium sand to silt range) are located over a high groundwater table. Affected soils lose all strength during liquefaction and foundation failure can occur.

According to the Seismic Hazard Evaluation of the Los Alamitos 7.5-minute quadrangle, the site is located in Zone of Required Investigation for liquefaction.<sup>15</sup> This indicates that the area has been subject to historic occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacement such that mitigation as defined

<sup>12</sup> California State Department of Conservation. California Geological Survey, Alquist-Priolo Earthquake Fault Zone Maps.

<sup>13</sup> City of Seal Beach. General Plan Safety Element, 2003. p. S-33.

<sup>14</sup> Geotechnical Professionals, Inc. *Geotechnical Investigation Proposed Health Club Shops at Rossmoor*. January 5, 2014.

<sup>15</sup> California State Department of Conservation. California Geological Survey, Seismic Hazard Zones. Los Alamitos Quadrangle, March 25, 1999.

in Public Resources Code Section 2693(c) would be required. During geotechnical investigation of the site, groundwater was measured at a depth of 12 feet. However, the report found that the majority of the clays found on site do not exhibit a potential for liquefaction. Liquefaction potential is not considered to be a design issue at this site; therefore, impacts would be less than significant.

a.iv) **Less than Significant Impact.** Structures built below or on slopes subject to failure or landslides may expose people and structures to harm. The project site topography is generally flat. The project geotechnical report concluded that because the on-site soils are predominantly cohesive (silts and clays) or medium dense, silty sands, mitigation of landslide hazards is not necessary for the site. The geotechnical report noted that some slope stability problems are expected in steep, unbraced excavations. Deeper excavations may require external support such as shoring or bracing. Grading and construction would be performed in compliance with State and local codes and the recommendations of the geotechnical report. Impacts would be less than significant.

b) **Less Than Significant Impact.** Topsoil is used to cover surface areas for the establishment and maintenance of vegetation due to its high concentrations of organic matter and microorganisms. Little, if any, native topsoil is likely to occur on site since the site is covered with asphalt. During project construction, fill materials will be over-excavated to reveal underlying soils within the building footprint area. The project has the potential to expose surficial soils to wind and water erosion during construction activities. Wind erosion will be minimized through soil stabilization measures required by South Coast Air Quality Management District (SCAQMD) Rule 403 (Fugitive Dust), such as daily watering. Water erosion will be prevented through the City's standard erosion control practices required pursuant to the California Building Code and the National Pollution Discharge Elimination System (NPDES), such as silt fencing or sandbags. Following project construction, the site would be covered completely by paving, structures, and landscaping. Impacts related to soil erosion would be less than significant with implementation of existing regulations.

c) **Less Than Significant Impact.** Impacts related to liquefaction and landslides are discussed above in Section 4.6.a. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Such movement can occur on slope gradients of as little as one degree. Lateral spreading typically damages pipelines, utilities, bridges, and structures.

Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e. retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. Due to the absence of any substantial change in grade on the project site, the potential for lateral spread occurring is considered to be minimal. The project-specific geotechnical report concludes that site soils would be capable of supporting proposed structures after grading and compaction. The project is required to be constructed in accordance with the CBC, which specifies the removal of fill materials at least two feet below existing grade or planned pad grade, and at least one foot below the bottom of foundations and floor slab due to the presence of variable strength characteristics of the near surface onsite soils, so as to reduce any potential property damage from ground failure or soil instability. The CBC includes a requirement that any City-approved recommendations contained in the soil report be made conditions of the building permit. Based on the considerations of the project geotechnical report, soils can be prepared to maintain stability sufficient to support the proposed project. The recommendations of the geotechnical report will be implemented through the City's routine plan check and permitting processes. Impact would be less than significant.

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d) **Less Than Significant Impact.** The CBC requires special design considerations for foundations of structures built on soils with expansion indices greater than 20. The geotechnical report included testing of site soil samples within the proposed building footprint for expansion potential. The result of the geotechnical report expansion index soil sample test indicated that near surface sample soils had a low expansion potential. The CBC provides several options to mitigate and design for expansive soils. The geotechnical engineer for the project indicates that given the tested on-site soils' low expansion potential, expansive soils could be addressed and any hazards removed by stabilization. Compliance with CBC requirements would limit hazards related to expansive soil to less than significant, and no mitigation is required.

e) **No Impact.** The project site is served by a fully functional municipal sewer system. The project will connect to this system and would not require use of septic tanks. No impact would occur.

### 4.7 – Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **Potentially Significant Impact.** Climate change is the distinct change in measures of climate for a long period of time.<sup>16</sup> Climate change is the result of numerous, cumulative sources of greenhouse gas emissions all over the world. Natural changes in climate can be caused by indirect processes such as changes in the Earth’s orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities can affect the atmosphere through emissions of greenhouse gases (GHG) and changes to the planet’s surface. Human activities that produce GHGs are the burning of fossil fuels (coal, oil and natural gas for heating and electricity, gasoline and diesel for transportation); methane from landfill wastes and raising livestock, deforestation activities; and some agricultural practices.

Greenhouse gases differ from other emissions in that they contribute to the “greenhouse effect.” The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth’s surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth’s temperature. Greenhouse gases occur naturally and from human activities. Greenhouse gases produced by human activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). Since 1750, it is estimated that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity. Emissions of greenhouse gases affect the atmosphere directly by changing its chemical composition while changes to the land surface indirectly affect the atmosphere by changing the way the Earth absorbs gases from the atmosphere.

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<sup>16</sup> United States Environmental Protection Agency. *Frequently Asked Questions About Global Warming and Climate Change*. Back to Basics. April 2009.

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Operation emissions associated with the proposed project would include GHG emissions from mobile sources (transportation), energy, water use and treatment, waste disposal, and area sources. GHG emissions from electricity use are indirect GHG emissions from the energy (purchased energy) that is produced offsite. Area sources are owned or controlled by the project (e.g., natural gas combustion, boilers, and furnaces) and produced onsite. The project could have a cumulatively considerable impact related to greenhouse gas emissions. This issue requires analysis in an EIR.

b) **No Impact.** Seal Beach has adopted the 2013 edition of the CBC (Title 24), including the California Green Building Standards Code. The project would be subject to the California Green Building Standards Code, which requires that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies for large buildings, divert construction waste from landfills, and utilize low pollutant-emitting finish materials. The project does not include any feature (i.e. substantially alter energy demands) that would interfere with implementation of these state and City codes and plans. The City of Seal Beach does not have any additional plans, policies, standards, or regulations related to climate change and GHG emissions. Also, no other government-adopted plans or regulatory programs in effect at this time have established a specific performance standard to reduce GHG emissions from a single building project. No impact would occur.

**4.8 – Hazards and Hazardous Materials**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation Incorporation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **Less Than Significant Impact.** The proposed project could result in a significant hazard to the public if the project includes the routine transport, use, or disposal of hazardous materials or places housing near a facility which routinely transports, uses, or disposes of hazardous materials. The proposed project is located within a primarily commercial and residential area of the City, and is not located in an industrial area. The proposed project does not include a housing component and would therefore not place housing near any hazardous materials facilities. The routine use, transport, or disposal of hazardous materials is primarily associated with industrial uses that require such materials for manufacturing operations or produce hazardous wastes as by-products of production applications. The proposed project does not propose or facilitate any activity involving significant use, routine transport, or disposal of hazardous substances as part of health club use.

During construction, there would be a minor level of transport, use, and disposal of hazardous materials and wastes that are typical of construction projects. This would include fuels and lubricants for construction machinery, coating materials, etc. Routine construction control measures and best management practices for hazardous materials storage, application, waste disposal, accident prevention and clean-up, etc. would be sufficient to reduce potential impacts to a less than significant level.

With regard to project operation, widely used hazardous materials common at commercial uses such as health clubs include cleaners, pesticides, and pool chemicals. The remnants of these and other products are disposed of as household hazardous waste that are prohibited or discouraged from being disposed of at local landfills. Regular operation and cleaning of the health club would not result in significant impacts involving use, storage, transport or disposal of hazardous wastes and substances. Use of common household hazardous materials and their disposal does not present a substantial health risk to the community. Impacts associated with the routine transport and use of hazardous materials or wastes would be less than significant.

b) **Less than Significant Impact.** The health club will include a pool. Operation of pools involves the use of potentially hazardous chemical (e.g., chlorine) for public health purposes. The storage of such materials onsite will be limited to amounts needed for routine maintenance, and all materials will be stored in conformance with the requirements of the Orange County Fire Authority. Compliance with existing regulations would reduce impact to a less-than-significant level.

c) **Less than Significant Impact.** No schools are located within close proximity to the project site. The nearest schools are Rossmoor Elementary School, located approximately 3,000 feet north; Weaver Elementary School, located approximately 4,000 feet northwest; and Francis Hopkinson Elementary School, located approximately 4,000 feet southwest. Operation of the proposed project—a health club—would not generate any hazardous emissions, and the storage,

handling, production, or disposal of acutely hazardous materials is not required or proposed for any aspect of this project. As discussed above, use and storage of pool chemicals would occur in accordance with existing regulations. Impact would be less than significant with implementation of existing regulations.

d) **No Impact.** The proposed project is not located on a site listed on the state's Cortese List, a compilation of various sites throughout the state that have been compromised due to soil or groundwater contamination from past uses. Based upon review of the Cortese List, the project site is not:

- listed as a hazardous waste and substance site by the Department of Toxic Substances Control (DTSC),<sup>17</sup>
- listed as a leaking underground storage tank (LUFT) site by the State Water Resources Control Board (SWRCB),<sup>18</sup>
- listed as a hazardous solid waste disposal site by the SWRCB,<sup>19</sup>
- currently subject to a Cease and Desist Order (CDO) or a Cleanup and Abatement Order (CAO) as issued by the SWRCB,<sup>20</sup> or
- developed with a hazardous waste facility subject to corrective action by the DTSC.<sup>21</sup>

e-f) **Less than Significant Impact.** The Los Alamitos Joint Forces Training Base (JFTB) is a jointly operated military air base located at 11206 Lexington Drive, in the City of Los Alamitos. The westernmost boundary of the airfield is approximately 2,000 feet east of the proposed project site. The project site is located within the planning area for the air base. Los Alamitos JFTB includes two runways oriented in a southwest to northeast direction. Caltrans Airport Land Use Planning Handbook guidelines state that noise, obstruction of air navigation, and the safety of persons working or living in the area of the air base are the primary hazard-related concerns involving compatibility between the project and operations of the air base. Excessive noise could be damaging to the health of individuals working in or using the health club. Obstructions could occur due to tall structures within the approach and departure areas of an airport. Airport operations could also be impacted by smoke, glare, excessive lighting, and interference from electrical devices. These concerns are related to the potential for increase in aircraft crashes that can injure or kill persons on the ground, as well as the crew and passengers of involved aircraft. The potential from injury or death increases when the density of persons on the ground is increased. Potential impacts related to development of the proposed health club are discussed below.

### Airport Noise

Noise is of concern if noise levels exceed a 24-hour average level referred to as CNEL (Community Noise Equivalent Level) and report in decibels (dB, or weighted decibels, dBA). According to the Caltrans Airport Land Use Planning Handbook, the basic guidance sets a CNEL of

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<sup>17</sup> California Department of Toxic Substances Control. EnviroStor. <[www.envirostor.dtsc.ca.gov/public/search.asp](http://www.envirostor.dtsc.ca.gov/public/search.asp)> [Accessed March 2015].

<sup>18</sup> California State Water Resources Control Board. GeoTracker. <[geotracker.waterboards.ca.gov](http://geotracker.waterboards.ca.gov)> [Accessed March 2015].

<sup>19</sup> California State Water Resources Control Board. Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit. <[www.calepa.ca.gov/SiteCleanup/CorteseList/CurrentList.pdf](http://www.calepa.ca.gov/SiteCleanup/CorteseList/CurrentList.pdf)> [Accessed March 2015].

<sup>20</sup> California State Water Resources Control Board. List of Active CDO and CAO. <[www.calepa.ca.gov/SiteCleanup/CorteseList/CDOCAOList.xls](http://www.calepa.ca.gov/SiteCleanup/CorteseList/CDOCAOList.xls)> [Accessed March 2015].

<sup>21</sup> California Department of Toxic Substances Control. Hazardous Facilities Subject to Corrective Action. <[www.calepa.ca.gov/SiteCleanup/CorteseList/SectionA.htm#Facilities](http://www.calepa.ca.gov/SiteCleanup/CorteseList/SectionA.htm#Facilities)> [Accessed March 2015].

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65 dB as the maximum noise level normally compatible with urban residential land uses. The Impact Zone Map in the Airport Environs Land Use Plan (AELUP) for Los Alamitos JFTB depicts two noise contours: Noise Impact Zone 1 (greater than 65dBA, CNEL) and Noise Impact Zone 2 (between 60-65 dBA, CNEL). The proposed project site is located outside both the noise contours shown in the AELUP.<sup>22</sup> As such, the proposed project is compatible with the AELUP noise policies. Impacts related to exposing people to excess airport noise would be less than significant.

### **Obstruction of Air Navigation**

The Federal Aviation Administration (FAA), Federal Aviation Regulation (FAR) Part 77 is the primary reference source for determining obstructions to air navigation. FAR Part 77 establishes a series of imaginary surfaces in the airspace surrounding a runway or helicopter landing area. No object should penetrate into any of these surfaces to ensure an obstruction free airspace for pilots using the airport. The Caltrans Handbook and the Airport Land Use Plan Part 77 as a reference to define hazards to air navigation.

Based on the project elevations (see Exhibit 4, Project Elevations), the most elevated point of the project would be 35 feet to the top of the decorative parapet. Other commercial/retail buildings located within the shopping center reach a height of 35 feet, which is the maximum allowable height for buildings located in General Commercial zones. Based on these observations, impacts related to the obstruction of Los Alamitos JFTB operations due to the height of the proposed building would be less than significant.

Potential obstruction of airport operations is not limited to the height of structures; obstruction also includes light and glare effects, electromagnetic interference, and production of smoke. Beyond the height of the proposed building, illumination from interior lighting and proposed parking lot lights could also impact airport operations. Pursuant to the Seal Beach Zoning Code, all on-site lighting is required to be shielded and oriented so as to result in no light spillover onto adjacent properties (see Section 4.1 for further discussion). This would prevent lighting from potentially impacting approaching or departing aircraft because the light would not be substantially visible due to shielding and orientation. Lighting associated with the proposed project would result in less-than-significant impacts related to obstruction of airport operations with standard regulations implemented. As discussed in Section 4.1, glare impacts also would be reduced to less-than-significant levels with adherence to existing codes and standards.

The proposed health club does not include any use that would produce unusual electronic frequencies or create and/or emit smoke.

### **Safety**

The Los Alamitos JFTB AELUP divides the areas surrounding an airport into Clear Zones (CZ)/Runway Protection Zone (RPZ), Accident Potential Zone "I", and Accident Potential Zone "II". Clear Zones and Runway Protection Zones are designated as having the potential for extreme crash hazard. The severe potential for loss of life and property due to accidents prohibits most land uses in these areas. No buildings intended for human habitation are permitted in Clear Zones/Runway Protection Zones.

The proposed project site is not located within any of the Clear Zones/Runway Protection Zones or either Accident Potential Zone "I" or Accident Potential Zone "II", as shown in the Los Alamitos

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<sup>22</sup> Los Alamitos Joint Forces Training Base Airport Environs Land Use Plan. Impact Zones Map. December 19, 2002.

AELUP.<sup>23</sup> Furthermore, the project will not attract birds nor emit excessive glare or light, nor produce or cause steam, smoke, dust, or electronic interference that would interfere with or endanger, aeronautical operations at Los Alamitos JFTB. As such, the project would not present a safety hazard for persons in relation to airport-related accidents. Impacts would be less than significant.

g) **Less Than Significant Impact.** The proposed project is an infill project, replacing 85,600 square feet of asphalt parking with an approximately 37,000-square-foot health club. As there are no residential uses associated with the project, the project would not increase the population of the area. Given the increase in built square footage on the site, the proposed project may increase employment in the area. Per state Fire and Building Codes, sufficient space would have to be provided around the building for emergency personnel and equipment access and emergency evacuation. All project elements, including landscaping, would be sited with sufficient clearance from existing and proposed structures so as not to interfere with emergency access to and evacuation from the facility. The project would comply with the California Fire Code (Title 24, California Code of Regulations, Section 9).

The project driveways would allow emergency access and evacuation from the site, and would be constructed to California Fire Code specifications. Over the long term, the project would not impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan because no permanent public street or lane closures are proposed. Construction work in the street associated with the building would be limited to lateral utility connections; which would be limited to nominal potential traffic diversion. Project impacts would be less than significant.

h) **No Impact.** The project site is not located within a fire hazard zone, as identified on the latest Fire Hazard Severity Zone (FHSZ) maps prepared by the California Department of Forestry and Fire Protection (CALFIRE).<sup>24</sup> There are no wildland conditions in the urbanized area that the project site is located. No impact would occur.

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<sup>23</sup> Los Alamitos Joint Forces Training Base Airport Environs Land Use Plan. Impact Zones Map. December 19, 2002.

<sup>24</sup> California Department of Forestry and Fire Protection. Incorporated Fire Hazard Severity Zone: City of Seal Beach. Local Responsibility Area Recommended, May 2012.

### 4.9 – Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **Less Than Significant Impact.** A project normally would have an impact on surface water quality if discharges associated with the project would create pollution, contamination, or nuisance as defined in Section 13050 of the California Water Code (CWC), or that cause regulatory standards to be violated as defined in the applicable National Pollutant Discharge Elimination System (NPDES) stormwater permit or Water Quality Control Plan for the receiving water body. For the purpose of this specific issue, a significant impact could occur if the project would discharge water that does not meet the quality standards of the agencies which regulate surface water quality and water discharge into stormwater drainage systems. Significant impacts could also occur if the project does not comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB). These regulations include preparation of a Standard Urban Storm Water Mitigation Plan (SUSMP) to reduce potential post-construction water quality impacts.

Discharges into stormwater drains or channels from construction sites of one acre or larger are regulated by the General Permit for Storm Water Discharges Associated with Construction Activity (General Permit: Water Quality Order 99-08-DWQ) issued by the State Water Quality Control Board in August 1999 and modified in April 2001. The General Permit was issued pursuant to National Pollutant Discharge Elimination System (NPDES) regulations of the Environmental Protection Agency (EPA), as authorized by the Clean Water Act. Compliance with the General Permit involves developing and implementing a Storm Water Pollution Prevention Plan (SWPPP) specifying best management practices (BMPs) that the project would use to minimize pollution of stormwater. The SWPPP BMPs would follow the guidelines set forth by the State Water Resources Control Board (SWRCB).

The project applicant will be required to comply with NPDES permit requirements through the preparation and implementation of a SWPPP for construction activities. The City’s Public Works Director will review the application for compliance with applicable regulations and to ensure that no water quality standards or discharge requirements are violated.

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The project applicant has completed a Preliminary Water Quality Management Plan (WQMP). According to the WQMP, impervious surfaces will decrease as a result of project development. The percentage of pervious surfaces would increase from 6.1 percent to 7.4 percent of the site, and the percentage of impervious surfaces would decrease from 93.9 percent to 92.6 percent. The increase in pervious surface area and decrease in impervious surfaces would be attributed to the amount of pervious landscaping that is proposed as part of project development. Because the project would include pervious landscaped areas greater than current conditions, total runoff post-development would incrementally decrease discharge for onsite drainage for a 10-year design storm.

Nonetheless, the WQMP includes recommendations for modular wetlands biofiltration devices and structural and non-structural source control BMPs that would be incorporated into project design. Per the geotechnical report, infiltration Best Management Practices (BMPs) were determined to be infeasible for the site. Structural source control BMPs would include efficient irrigation systems and landscape design, water conservation measures, smart controllers, and storm drain stenciling and signage. Non-structural source control BMPs would include education of property owners and tenants, certain activity restrictions, management of common area landscaping, Title 22 CCR compliance, common area litter control, employee training, common area catch basin inspection, street sweeping of private streets and parking lots, and implementation of a Spill Contingency Plan and the Uniform Fire Code.

Plans for stormwater treatment are required to meet City and regional standards. With compliance with existing laws, and the implementation of the above-mentioned water quality control measures, project impacts on water quality standards would be less than significant.

b) **Less Than Significant Impact.** If the project removed an existing groundwater recharge area or substantially reduced runoff that results in groundwater recharge, a potentially significant impact could occur.

According to the project WQMP, groundwater levels beneath the site are estimated to be 12 feet below the ground surface. Project-related grading would not reach these depths, and no disturbance of groundwater is anticipated. The proposed building footprint area and paved parking areas would not increase impervious surface coverage on the site; rather, impervious surfaces would be decreased through increased on-site landscaping. As such, the total amount of infiltration on site would be increased over existing conditions. Since this site is currently developed and is not managed for groundwater supplies, this change in infiltration would not have a significant effect on groundwater supplies or recharge.

The project would be required to comply with Section 11.4.30 (Landscaping and Buffer Yards) of the City of Seal Beach Municipal Code, which would lessen the project's demand for water resources. Also, CBC Title 24 water efficiency measures require a demonstrated 20 percent reduction in the use of potable water. The project's landscaping plans include drought-tolerant landscaping materials. Compliance with Title 24 and the City's Water Conservation in Landscaping and Water Efficient Landscaping Ordinances would reduce the proposed project's impacts to groundwater supplies to a level of less than significant. Water supply is further discussed in Checklist Response 3.17d.

c) **Less Than Significant Impact.** Potentially significant impacts to the existing drainage pattern of the site or area could occur if development of the project results in substantial on- or off-site erosion or siltation. No streams cross the project site; thus, the project would not alter any stream course. As discussed in Section 4.9.a above, the project would include facilities to treat stormwater flows on site through modular wetland biofiltration and a number of structural and non-structural source control MBPs before runoff enters going to the municipal storm drain

system. A site drainage plan is required by the City of Seal Beach and would be reviewed by the City Engineer. The final grading and drainage plan will be approved by the City Engineer during plan check review. Erosion and siltation reduction measures would be implemented during construction consistent with an approved SWPPP, which will demonstrate compliance with the City's NPDES permit. At the completion of construction, the project would consist of impervious surfaces and landscaped areas, and would therefore not be prone to substantial erosion. No streams cross the project site; thus, the project would not alter any stream course. Impact would be less than significant.

d-e) **Less Than Significant Impact.** No streams traverse the project site; thus, the project would not result in the alteration of any stream course. During construction, the project applicant would be required to develop and implement a SWPPP as required by law; this would prevent polluted runoff from leaving the construction site.

With regard to project operation, on-site drainage would be directed to modular wetland biofiltration treatment systems before discharging into street drains. Construction of the proposed project would not increase the net area of impermeable surfaces on the site; in fact, the project would increase permeable areas and infiltration; therefore, substantially increased discharges to the City's existing storm drain system will not occur and will not impact local storm drain capacity. The project is not an industrial use and therefore will not result in substantial pollutant loading such that treatment control BMPs would be required to protect downstream water quality. Impacts would be less than significant.

f) **No Impact.** The project does not propose any uses that would have the potential to otherwise degrade water quality beyond those issues discussed in Section 4.9.

g) **No Impact.** The project does not propose any housing; therefore, no impact would occur.

h) **No Impact.** The proposed project is not located within a 100-year floodplain, as mapped by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. The project site is identified as Zone X, defined by FEMA as areas outside the 0.2 percent annual chance floodplain.<sup>25</sup> Therefore, no rising of a floodplain would occur.

i) **No Impact.** According to the City of Seal Beach General Plan Safety Element, the project site is not located within an inundation area of a dam.<sup>26</sup> Thus, the project is not anticipated to result in the exposure of persons or structures to risk of hazards associated with dam inundation. No impact would occur.

j) **No Impact.** The proposed project is located less than a mile from the Pacific Ocean. However, according to the Seal Beach General Plan Safety Element, seismically induced seiches (that is, the sloshing of water due to an earthquake) are not considered a potential hazard in the City. Moreover, the tsunami hazard in the City is considered low for elevations above the principal sea bluff in Seal Beach. Areas on the beach or below the sea bluff are considered to have a moderate tsunami hazard, depending on tidal conditions and their elevation with respect to sea level. The proposed project site is located in a completely urbanized area of the City, approximately 16 feet above sea level. Impacts related to seiche and tsunami are not expected to occur.

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<sup>25</sup> Federal Emergency Management Agency. Flood Insurance Rate Map. Map Number 06059C0112J. December 3, 2009.

<sup>26</sup> City of Seal Beach. Seal Beach General Plan Safety Element. P. S-69. December 2003.



### 4.10 – Land Use and Planning

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **No Impact.** The proposed project site is located on the edge of an existing shopping center, The Shops at Rossmoor and adjacent to a condominium complex to the north, separated from The Shops at Rossmoor by a block wall. The proposed project would replace asphalt parking with a health club. The proposed project is consistent and compatible with surrounding land uses within the shopping center and will not divide an established community. The project does not propose construction of any roadway, flood control channel, or other structure that would physically divide any portion of the community. Therefore, no impact would occur.

b) **No Impact.** The project site is designated as *General Commercial* in the Seal Beach General Plan. The project site is zoned *General Commercial (GC)*.

The General Commercial land use category accommodates highway-oriented commercial uses. The GC zone allows a range of retail sales and service uses by right, such as those occupying The Shops at Rossmoor center. Large-scale commercial recreation uses, such as the proposed health club project, are permitted subject to approval of a Conditional Use Permit. The proposed project is consistent with both General Plan policy and zoning regulations. No impact would occur.

c) **No Impact.** As discussed in Checklist Response 4.4.f above, the proposed project site and surrounding areas are not part of any habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. As such, no impact would occur.

**4.11 – Mineral Resources**

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-b) **No Impact.** The project site, located within a fully urbanized area of the City of Seal Beach, is surrounded by commercial and residential uses. No mineral resource areas exist in the immediate vicinity.<sup>27</sup> Development would not result in the loss of a known mineral resource. No impact would occur.

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<sup>27</sup> City of Seal Beach. Seal Beach General Plan Open Space Element. p. OS-30. December 2003.

### 4.12 – Noise

Would the project result in:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The criteria used for assessing noise impacts associated with the proposed project include the noise standards set forth in Title 24, Part 2 of the California Code of Regulations, the Federal Highway Administration Roadway Construction Noise model, and the City of Seal Beach Noise Compatibility Guidelines in the General Plan, and Chapter 7.15 (Noise) of the Municipal Code. Also, groundbourne vibrations were analyzed using criteria established by Caltrans since the City does not have any thresholds for assessing vibration impacts.

Noise can be defined as unwanted sound. Sound (and therefore noise) consists of energy waves that people receive and interpret. Sound pressure levels are described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called *bels*. In order to provide a finer description of sound, a *bel* is subdivided into 10 *decibels*, abbreviated dB. To account for the range of sound that human hearing perceives, a modified scale is utilized known as the A-weighted decibel (dBA). Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA. In fact, they would combine to produce 73 dBA. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by 3 dBA. Conversely, halving the traffic volume or speed will reduce the traffic noise level by 3 dBA. A 3 dBA change in sound is the beginning at which humans generally notice a *barely perceptible* change in sound and a 5 dBA change is generally *readily perceptible*.<sup>28</sup>

Noise consists of pitch, loudness, and duration; therefore, a variety of methods for measuring noise has been developed. According to the California General Plan Guidelines for Noise Elements, the following are common metrics for measuring noise:<sup>29</sup>

**LEQ (Equivalent Energy Noise Level):** The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over given sample periods. LEQ is typically computed over 1-, 8-, and 24-hour sample periods.

**CNEL (Community Noise Equivalent Level):** The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00pm to 10:00pm and after addition of ten decibels to sound levels in the night from 10:00pm to 7:00am.

**L<sub>DN</sub> (Day-Night Average Level):** The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of ten decibels to sound levels in the night after 10:00pm and before 7:00am.

CNEL and L<sub>DN</sub> are utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night. LEQ is better utilized for describing specific and consistent sources because of the shorter reference period.

a) **Less Than Significant Impact.** The City of Seal Beach General Plan Noise Element establishes noise/land use compatibility criteria, and Municipal Code Chapter 7.15 (Noise) sets forth noise regulations by land use.<sup>30</sup> General Plan noise policy does not directly address uses such as the proposed health club, but the use can be considered analogous to an outdoor recreation facility, which can be considered compatible in environments where the exterior noise level is up to 70-75 L<sub>dn</sub> or CNEL.

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<sup>28</sup> California Department of Transportation. Basics of Highway Noise: Technical Noise Supplement. November 2009.

<sup>29</sup> California Governor's Office of Planning and Research. General Plan Guidelines. 2003.

<sup>30</sup> City of Seal Beach Municipal Code. Chapter 7.15 (Noise).

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With regard noise ordinance regulations applied to commercial uses such as the proposed health club, the use can generate a maximum exterior noise level of 65 dBA CNEL during all hours of the day (with noise spikes permitted of short duration).

Existing land uses surrounding the project site and within the project vicinity generally consists of commercial and residential land uses. The project site is located within an existing 70 dBA CNEL noise contour for roadway and freeway noise; however, this noise level is within the "normally acceptable" level for commercial uses as denoted in the City's Code of Ordinances. The proposed project will not result in any new uses or traffic generation that would increase noise levels in the vicinity or expose persons to levels above those that are deemed normally acceptable in the noise ordinance. Impact would be less than significant.

b) **Less Than Significant Impact.** A significant impact would occur if project construction or operation results in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. Vibration is the movement of mass over time. It is described in terms of frequency and amplitude and unlike sound; there is no standard way of measuring and reporting amplitude. Vibration can be described in units of velocity (inches per second) or discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass). For purposes of this analysis, PPV will be used to describe all vibration for ease of reading and comparison. The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments such as electron microscopes. Common sources of vibration within communities include construction activities and railroads. Operation of the proposed health club does not include uses that cause vibration, and there are no railroads located in close proximity to the project site.

### Construction Impacts

The proposed project site is adjacent to a residential condominium development. Potential concerns during project construction include groundborne vibrations. Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used. According to the Caltrans vibration manual, large bulldozers, vibratory rollers (used to compact earth), and loaded trucks utilized during grading activities can produce vibration, and depending on the level of vibration, could cause annoyance at uses within the project vicinity or can damage structures. Caltrans has developed a screening tool to determine if vibration from construction equipment is substantial enough to impact surrounding uses. The Caltrans vibration manual establishes thresholds for vibration impacts on buildings and humans. These thresholds are summarized in Tables 5 (Vibration Damage Potential Threshold Criteria) and 6 (Vibration Annoyance Potential Threshold Criteria).

Table  
Vibration Damage Potential Threshold Criteria

2

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50

*Source: Caltrans 2004*

Table  
Vibration Annoyance Potential Threshold Criteria

3

Human Response	PPV Threshold (in/sec)	
	Transient	Continuous
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severely perceptible	2.00	0.40

*Source: Caltrans 2004*

As noted above, Seal Beach does not have any regulations pertaining to vibration. However, the City does regulate construction noise (see Municipal Code Section 7.15.025, Exemptions), limiting construction, repair, remodeling, or grading of any real property to between the hours of 7:00 A.M. and 8:00 P.M. on weekdays, and 8:00 A.M. and 8:00 P.M. on Saturdays. Construction activities are not permitted on Sundays.

Construction activities that use vibratory rollers and bulldozers are repetitive sources of vibration; therefore, the *continuous* threshold above has been used to assess potential impact on the adjacent residential development. Given the age of the development, the *older residential structures* threshold was used. Based on the threshold criteria summarized in Tables 5 and 6, vibration from use of heavy construction equipment for the proposed project would be below the thresholds to cause damage to nearby structures and result in less than *barely perceptible* vibration at the four receptors shown in Table 7 (Distance to Vibration Receptors) and Table 8 (Construction Vibration Impacts). Impact would be less than significant impact. Also, the requirements in the Municipal Code related to noise would limit the hours of construction as noted above.

Table  
Distance to Vibration Receptors

4

Receptors	Distance from Center of Project Site (ft)
1 - Multi-Family Residential (N)	233
2 - Multi-Family Residential (W)	298
3 - Single Family Residential (W)	590
4 - Multi-Family Residential (SW)	381

Table  
Construction Vibration Impacts

Receptors	Equipment	PPVref	Distance (feet)	PPV
1 - Multi-Family Residential (N)	Vibratory Roller	0.21	233	0.0115
2 - Multi-Family Residential (W)	Vibratory Roller	0.21	298	0.0084
3 - Single Family Residential (W)	Vibratory Roller	0.21	590	0.0034
4 - Multi-Family Residential (SW)	Vibratory Roller	0.21	381	0.0061
1 - Multi-Family Residential (N)	Large Bulldozer	0.089	233	0.0049
2 - Multi-Family Residential (W)	Large Bulldozer	0.089	298	0.0036
3 - Single Family Residential (W)	Large Bulldozer	0.089	590	0.0015
4 - Multi-Family Residential (SW)	Large Bulldozer	0.089	381	0.0010
1 - Multi-Family Residential (N)	Loaded Truck	0.076	233	0.0042
2 - Multi-Family Residential (W)	Loaded Truck	0.076	298	0.0030
3 - Single Family Residential (W)	Loaded Truck	0.076	590	0.0012
4 - Multi-Family Residential (SW)	Loaded Truck	0.076	381	0.0022
1 - Multi-Family Residential (N)	Jackhammer	0.035	233	0.0019
2 - Multi-Family Residential (W)	Jackhammer	0.035	298	0.0014
3 - Single Family Residential (W)	Jackhammer	0.035	590	0.0006
4 - Multi-Family Residential (SW)	Jackhammer	0.035	381	0.0010

c) **Potentially Significant Impact.** The proposed project has the potential to increase ambient noise levels associated with activity on the site and increased traffic generation in the project vicinity. Below is a discussion of the existing noise environment on the site, followed by a discussion of noise measurements and operational noise that can be expected from the proposed project.

**Existing Noise Environment**

The proposed project site is currently used as parking for retail and other uses within the Shops at Rossmoor. Also, vehicles have been observed using the parking lot during the late evening and overnight, after businesses have closed. As such, the project site currently experiences frequent automobile arrivals and departures associated with use of the retail shops and overnight parking. While arrivals and departures associated with the retail uses occur during the posted operating hours of businesses, arrivals and departures of other vehicles occur throughout the day and night, as observed during site visits. The project site is also located on the rear/service side of existing retail stores to the east, meaning truck trailer loading docks are located in this area. As such, this area experiences sporadic semi-truck deliveries during the daytime store operating hours, as observed during site visits. Truck trailer deliveries create temporary noise spikes with opening of trailer gates, extending of delivery ramps, and cold starting of diesel engines.

Operation of the proposed project would produce noise associated with such activities as vehicle traffic, loud conversations, opening and closing of car doors, periodic landscape maintenance, etc. These noise sources could exceed standards established in the local noise ordinance. Moreover, the proposed health club would increase traffic on either Seal Beach Boulevard or Rossmoor Center Way and therefore could result in an ambient increase in traffic-related noise by 3 dBA or more<sup>31</sup>. Thus, operation of the proposed health club and associated traffic-related noise could create noise increases that would be perceptible to the surrounding community. This issue requires analysis in an EIR.

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<sup>31</sup> LSA Associates, Inc. Traffic Analysis. Health Club Within the Shops at Rossmoor. March, 2015.

d) **Potentially Significant Impact.** The project would have associated temporary construction-related noise increases due to on-site ground disturbing and construction activities. Construction noise levels vary depending on the type and intensity of construction activity, equipment type and duration of use, and the distance between the noise sources and the receiver. Typical sound emission characteristics of construction equipment are provided in Exhibit 6 (Construction Equipment Noise).

Temporary noise increases would be greatest during demolition activities when jackhammers and small bulldozers can produce noise levels up to 88.9 dBA at 233 feet (at the adjacent condominium development) from the equipment source. This noise level could exceed the noise ordinance ambient standard for residential areas and the impact is potentially significant. This issue requires analysis in an EIR.

e,f) **No Impact.** Impacts related to excessive noise levels from Los Alamitos JFTB are discussed in Section 4.8, Hazards and Hazardous Materials. As indicated, the proposed project site is located outside both the noise contours shown in the AELUP for the air base.<sup>32</sup> As such, the proposed project would be compatible with the AELUP noise policies and would not expose persons residing or working in the project vicinity to excessive aircraft-related noise levels. Impacts related to exposing people to excess airport noise would be less than significant.

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<sup>32</sup> Los Alamitos Joint Forces Training Base Airport Environs Land Use Plan. Impact Zones Map. December 19, 2002.





### 4.13 – Population and Housing

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **Less Than Significant Impact.** The proposed project does not include any residential uses; therefore, this project could not result in any direct residential growth. No new expanded infrastructure is proposed that could accommodate additional growth in the area that is not already possible with existing infrastructure, so no indirect population growth would occur. The project would bring a new business to the area. The applicant anticipates up to 45 employees in the new health club, with approximately 15 employees on site for any single shift. According to the Southern California Association of Governments (SCAG), employment in the City is projected to increase by 1,200 jobs between 2008 and 2035.<sup>33</sup> Project employment for the project is within the employment growth assumptions for Seal Beach. Due to the urban nature of the City and surrounding area, this potential minimal increase in the employment population is expected to be accommodated by existing housing in the City and neighboring communities. Impacts would be less than significant.

b) **No Impact.** The project site is currently an asphalt parking that will be partially demolished to facilitate project construction. The project site does not contain any housing units and does not require removal of any residential units; no impact would occur.

c) **No Impact.** Displacement, in the context of housing, can generally be defined as persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of

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<sup>33</sup> Southern California Association of Governments. RTP 2012 Adopted City-Level Integrated Growth Forecast. April 2012.

## **Environmental Evaluation**

habitual residence.<sup>34</sup> There is no housing located onsite and therefore no residents. As such, the project would not result in forced or obliged removal of persons. No impact would occur.

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<sup>34</sup> The Brookings Institute. *Handbook for Applying the Guiding Principles on Internal Displacement*. 1999.

**4.14 – Public Services**

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**a) Less Than Significant Impact.** The Orange County Fire Authority (OCFA) provides fire protection and emergency medical response services to the City of Seal Beach. OCFA also provides prevention services (e.g., inspections, permits, and drills) within its jurisdiction. OCFA has mutual aid agreements with other jurisdictions and practices unified command in response to potential emergencies.

The project site is served by OCFA Fire Station No. 48, which is located 0.8 miles south of the project site. Fire Station No. 48, located at 3131 North Gate Road in Seal Beach, is staffed with a four-person quint (combination engine/ladder truck apparatus) and a two-person paramedic squad. In 2009, Fire Station No. 48 received 5,956 calls.<sup>35</sup> Use of fire protection services for the proposed project is expected to be similar to other commercial activities in the area. No new or expanded fire protection facilities would be required as a result of this project. Furthermore, the proposed health club does not propose to use hazardous materials or engage in hazardous activities that would require new or modified fire protection equipment to meet potential emergency demand. Impacts related to expansion of fire protection services would be less than significant.

**b) Less Than Significant Impact.** The Seal Beach Police Department (SBPD), headquartered at 911 Seal Beach Boulevard, provides police protection to the City, including the project site. The SBPD covers a service area of approximately 13 square miles and a population of 24,605. SBPD

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<sup>35</sup> Orange County Fire Authority Website. OCFA Fire Stations Details: Station No. 48. <http://www.ocfa.org/Menu/Departments/Operations/PopUps/stn48.htm> [Accessed March, 2015].

## Environmental Evaluation

has 40 sworn police officers, or a ratio of .615 police officers for every 1,000 persons. SBPD also has 24 civilian staff.<sup>36</sup>

The proposed health club is a commercial business that would not create any unique crime problems than any other similar operation; such activities can be handled with the existing level of police resources. Private security is currently provided for the shopping center, as observed during site visits. No new or expanded police facilities would need to be constructed as a result of this project. No substantial increase in crime is expected with development of the proposed project. Impacts on police protection services would be less than significant.

**c) Less Than Significant Impact.** As a commercial land use, this project would not have any residential population and would not generate any direct demand for school facilities. However, the project could have an indirect impact by attracting employees to the area with school-age children. Pursuant to the Leroy F. Green School Facilities Act (AB 2926), as adopted in California Education Code Section 17070.10-17070.99, the project proponent would be required to pay developer fees to the Los Alamitos Unified School District, prior to the issuance of building permits, at the current rate charged to commercial development projects. This fee would help support provision of school services for the community as a whole. According to AB 2926, payment of developer fees constitutes adequate mitigation for any project-related impacts to school facilities. Impact to school facilities would be less than significant.

**d) Less Than Significant Impact.** Demand for park and recreational facilities generally are the direct result of residential development. However, as indicated above, no residential dwelling units are proposed as part of this project. Also, the project would not substantially contribute a new employment base to the City that could impact demand for public parks (see Section 14.3). As a result, no substantial demand for park and recreation facilities would result. Furthermore, the project primary purpose is to provide onsite activities where patrons participate in recreation/fitness exercises within the proposed structure. Impact would be less than significant.

**e) No Impact.** The proposed project, a nonresidential use, would not result in any population growth that would require expansion of any other public services such as libraries or hospitals. The proposed health club would not rely on any such services to conduct normal business operations. No impact would occur.

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<sup>36</sup> City of Seal Beach. Seal Beach Police Department Website. <http://www.sealbeachca.gov/safety/police/organization/> [Accessed March, 2015].

**4.15 – Recreation**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **No Impact.** The proposed health club project would not increase use of existing recreational facilities because employees, patrons, and vendors are not expected to combine a trip to a local park with a trip to this health club. All fitness/recreational activities associated with this use are programmed to occur within the building. Therefore, no impact would occur.

b) **No Impact.** The project does not include outdoor recreational facilities and does not necessitate expansion of existing outdoor recreational facilities. The proposed project is a 37,000-square-foot health club where patrons pay a membership fee to participate in recreation/fitness exercises within the proposed structure. Therefore, no adverse physical effect on the environment caused by expansion or construction of outdoor recreational facilities would occur.

### 4.16 – Transportation and Traffic

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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**a) Potentially Significant Impact.** For the prior application, a project-specific traffic/circulation analysis, authored by LSA Associates Inc. and dated October, 2015 (see Appendices B and C, Traffic and Queuing Analysis and Traffic Impact Analysis), was prepared to assess project traffic impacts. The analysis was prepared consistent with the City Traffic Impact Study Guidelines (March 2010) and the City’s General Plan (December 2012).<sup>37</sup> The prior study found that with the proposed extension of the northbound left-turn pocket on Seal Beach Boulevard onto Rossmoor Center Way (see Exhibit 7), all traffic impacts would be reduced to a less-than-significant level. During the public hearing process, additional questions were raised about traffic impacts, including possible vehicle/pedestrian conflicts on Rossmoor Center Drive. To comprehensively address all traffic concerns, the October, 2015 traffic study will be updated, and traffic impacts will be analyzed in an EIR.

**b) No Impact.** The Congestion Management Program (CMP) is administered by the Orange County Transportation Authority (OCTA). The CMP establishes a service goal of LOS E or better on all CMP roadway segments. There are no CMP intersections, roadway segments, or highway segments in close proximity to the project site. None of the traffic study intersections or roadway segments is included in the OCTA CMP.<sup>38</sup> As identified in Section 4.16.a above, the proposed health club would result in 1,218 new trips. The project would not, therefore, conflict with an applicable congestion management program or level of service standard established by the congestion management agency. No impact would occur.

**c) No Impact.** The project site is located within the planning area of an airport land use plan; however, the project does not include any structures that would change air traffic patterns or uses that would generate air traffic. Furthermore, the proposed building height (35 feet at its highest point) would not affect airport approach or departure spaces or any air traffic patterns. Therefore, no impacts related to a change in air traffic patterns would occur.

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<sup>37</sup> LSA Associates, Inc. Traffic Analysis. Health Club Within the Shops at Rossmoor. September, 2015.

<sup>38</sup> Orange County Transportation Authority. 2011 Orange County Congestion Management Program. 2011.





Exhibit 7 Recommended Turn Pocket Extension

<http://www.mig.com> - 951-751-8222



Rossmoor LA Fitness  
City of Seal Beach, California

d) **No Impact.** Access to the project site is proposed via two driveways on Rossmoor Center Way. The site can also be accessed via Towne Center Drive from a driveway that enters the Shops at Rossmoor from Seal Beach Boulevard. The applicant is also considering establishing a new right-turn-in only driveway on southbound Seal Beach Boulevard approximately 500 feet south of Rossmoor Center Way (see previous Figure 5). Extension of the left-turn pocket from northbound Seal Beach Boulevard onto Rossmoor Center Way will be extended an additional 125 to accommodate anticipated increases in queuing. The design of the proposed project and associated circulation improvements would comply with all applicable City regulations. Furthermore, the proposed project does not involve changes in the alignment of Seal Beach Boulevard or Rossmoor Center Way, which are adjacent to the project site. The left-turn pocket extension would not revise Seal Beach Boulevard's alignment or increase hazards. With regard to the possible right-turn-in only driveway, such a driveway can only be installed if it meets City design criteria. As such, impacts related to roadway design features and incompatible uses would be less than significant.

e) **Less Than Significant Impact.** A significant impact would occur if the design of the proposed project would not satisfy emergency access requirements of the Orange County Fire Authority or in any other way threaten the ability of emergency vehicles to access and serve the project site or adjacent uses. The proposed project would not result in inadequate emergency access. As discussed above, access to the project site is proposed via two driveways on Rossmoor Center Way and an additional entrance into the Shops at Rossmoor on Seal Beach Boulevard. The width of these driveways, as well as internal drive aisles, is sufficient to provide access for fire and emergency vehicles and is consistent with the California Fire Code. All access features are subject to and must satisfy the City of Seal Beach and Orange County Fire Authority design requirements. This project would not result in adverse impacts with regard to emergency access. Impact would be less than significant.

f) **Less than Significant Impact.** Public bus transit service in the project vicinity is currently provided by the Orange County Transportation Authority (OCTA) Bus Route 42 on Seal Beach Boulevard. This line runs at a high frequency (every 15 minutes or better) over a long service day, with service late into the evening and on weekends. The proposed project would not result in any substantial changes to lane or street configuration of Seal Beach Boulevard, any surrounding streets, or to existing sidewalks. Seal Beach Boulevard is not equipped with striped bicycle lanes. While a left-turn pocket lane will be extended on Seal Beach Boulevard, this traffic improvement would not demonstrably affect performance or safety of alternative transportation facilities. During project construction, temporary closures of sidewalk areas would be required. However, these closures would be short term in nature, and appropriate signage would be required to direct pedestrians around the closure. Lane closures associated with extension of the left-turn pocket lane would be coordinated and limited to the left-turn pocket and median. Impacts would be less than significant.

### 4.17 – Utilities and Service Systems

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **Less Than Significant Impact.** The proposed project could affect Regional Water Quality Control Board treatment standards by increasing wastewater production, which would require expansion of existing facilities or construction of new facilities. Exceeding the RWQCB treatment standards could result in contamination of surface or ground waters with pollutants such as pathogens and nitrates.

The project site is served by a public sewer system. All wastewater generated by the proposed project would be discharged into the local sewer main and conveyed for treatment at the Orange County Sanitation Districts (OCSD) reclamation plants. OCSD, under contract with Seal Beach, collects and treats wastewater at regional facilities. According to the 2010 Urban Water Management Plan for the City of Seal Beach, OCSD's collection system eventually feeds into the OCSD Plant No. 2 located at 22212 Brookhurst Street in the City of Huntington Beach. OCSD Plant 2 has a treatment capacity of 70 million gallons per day (MGD).<sup>39</sup>

Based on the CalEEMod default estimates for water use, the health club would use approximately 3,551,450 gallons of water annually, which includes both indoor uses such as showers and drinking fountains and outdoor use such as sprinklers for landscaping. Generally, wastewater is approximately 80% of total water demand. As such, the project is estimated to generate approximately 2,841,160 gallons of wastewater per year, or 7,784 gallons per day (gpd). This volume is well within the remaining treatment capacity of OCSD Plant No. 2. This project would thus have a less-than-significant impact on the ability of the facility to operate within its established wastewater treatment requirements, which are enforced via the facility's NPDES permit authorized by the Santa Ana Regional Water Quality Control Board.

Wastewater flows associated with the proposed project would consist of the same kinds of substances typically generated by commercial uses, and no modifications to any existing wastewater treatment systems or construction of any new ones would be needed to treat this project's wastewater. The ultimate disposal of effluent and solids would occur in compliance with waste discharge requirements set by the California RWQCB. Wastewater conveyed from the site would undergo treatment in accordance with applicable regulations, including the requirements of the RWQCB. The project would have a less than significant impact related to wastewater treatment requirements.

b) **Less Than Significant Impact.** The City provides water to a population of 25,561 throughout its service area. The City receives its water from two main sources: 1) the Lower Santa Ana River Groundwater basin, which is managed by the Orange County Water District (OCWD) and 2) imported water from the Municipal Water District of Orange County (MWDOC). Groundwater is pumped from three active wells located throughout the City, and imported water is treated at the Diemer Filtration Plant and delivered to the City via imported water connections.

Regarding wastewater facilities, as discussed in the preceding response, wastewater generated at the project site is treated at OCSD Plant No. 2. The proposed project is estimated to have a wastewater generation of approximately 7,784 gpd. As stated in section 4.17.a, this generation is well within the existing remaining treatment capacity of OCSD Plant No. 2.

No additional improvements are anticipated to either sewer lines or treatment facilities to serve the proposed project, as the project represents a very small use in the context of all development served. Standard connection fees will address any incremental impacts of the proposed project. Therefore, the project would result in less than significant impacts.

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<sup>39</sup> City of Seal Beach. *2010 Water Quality Management Plan*. July 2011.

## Environmental Evaluation

c) **Less Than Significant Impact.** As discussed in the Hydrology section, the proposed project would not generate substantially increased runoff from the site that would require construction of new storm drainage facilities. In fact, the project would increase the total pervious surfaces on the site due to increased landscaping. As indicated in the engineering analysis conducted for the proposed project, total discharge rates for onsite drainage would decrease from 5.70 cubic feet per second (cfs) to 4.44 cfs for drainage Area A, and from 1.55 cfs to 1.53 cfs for drainage Area B. On-site Soils are not suitable for a stormwater infiltration system to reduce the flow level, and store and reuse is not technically feasible because the landscape areas are not large enough to accommodate the required re-use quantity. However, the project would include measures to treat stormwater flows on site through modular wetland biofiltration and a number of structural and non-structural source control BMPs before entering the municipal storm drain system. The expected decrease in stormwater flow and implementation of these measures mean that no new facilities or expansion of existing storm drainage facilities is required, as current levels can be accommodated by existing storm drainage facilities.

An NPDES permit would be required for the proposed project, which requires adoption of appropriate Stormwater Pollution Prevention Plan (SWPPP) and implementation of Best Management Practices (BMPs). The proposed project's storm drainage system would include the above-mentioned measures to ensure the storm water would be cleaned and retained onsite to a level equal to or greater than the NPDES mandates. Implementation of BMPs would reduce pollutants in stormwater and urban runoff from the project site. The proposed storm drainage system, in combination with the SWPPP and BMPs, must be designed to the satisfaction of the City's Public Works Director and in conformance with all applicable permits and regulations. The project applicant/developer would be required to provide all necessary on-site drainage infrastructure. Impact would be less than significant, and no mitigation beyond compliance with existing laws is required.

d) **Less Than Significant Impact.** According to the City of Seal Beach *2010 Urban Water Management Plan* (UWMP), the City has the rights to pump approximately 2,853 total acre-feet per year (afy) of water from its three wells. The UWMP reported an estimated total demand of 4,610 afy in fiscal year 2009-2010. This total includes 1,750 afy of imported water and 2,850 afy of local groundwater. Estimated demand in 2015-2016 (at the time of the proposed project completion) is predicted to be 4,720 afy; demand in 2030 is projected to be 4,880 afy. Cumulative supply from the Central Basin and Main basin exceed projected demand in 2014-2015 and 2029-2030.

The proposed project would generate a marginal increase in additional demand for water relative to overall existing citywide demand. Based on the CalEEMod default estimates for water use, the health club would use approximately 3,551,450 gallons of water annually, which includes both indoor uses such as showers and drinking fountains and outdoor use such as sprinklers for landscaping.

Water use by the building would be roughly 9,730 gallons per day, or approximately 11 afy. As the UWMP anticipates an overall increase in demand associated with development in the area over 2010 conditions, and the water demand for this project is within that demand assumption, impacts would be less than significant. The project would not substantially deplete water supplies, and the project would have a less than significant impact on entitled water supplies.

The project would be required to comply with Chapter 10.40 (Streetscape) and 11.4.30 (Landscaping and Buffer Yards) of the City of Seal Beach Municipal Code, which would lessen the project's demand for water resources. Also, CBC Title 24 water efficiency measures require a demonstrated 20 percent reduction in the use of potable water. The project's landscaping plans

include drought-tolerant landscaping materials. Compliance with Title 24 and the City's Water Conservation in Landscaping and Water Efficient Landscaping Ordinances would reduce the proposed project's impacts to groundwater supplies to a level of less than significant.

e) **Less Than Significant Impact.** As detailed in Sections 4.17a and 4.17b, the proposed project would be adequately served by existing wastewater conveyance and treatment facilities. Impact would be less than significant impact.

f) **Less Than Significant Impact.** A commercial retail use is estimated to produce 2.5 pounds per 100 square feet per day.<sup>40</sup> According to this measure, the health club would produce approximately 931 pounds of waste per day. However, the health club is likely to produce significantly less waste than the average commercial retail use, as limited packaging materials are used and the use is generally service-oriented. According to CalEEMod default settings for waste production, the proposed health club would produce 213 tons of waste annually, or 117 pounds per day.

Consolidated Disposal Services, LLC (Republic Services) provides exclusive waste and recycling collection services for residential and commercial uses in the City of Seal Beach.<sup>41</sup>

Republic Services currently operates three landfills in the Los Angeles/Orange County area in Long Beach, Gardena, and Anaheim. Republic Services also has recycling operations at their Anaheim facility, as well as at their BFI Falcon transfer station in Wilmington. Republic Services landfills currently have sufficient capacity to serve the City of Seal Beach now and into the future. The addition of 117 pounds per day of solid waste and recycling materials will not exceed the waste treatment capacity of Republic Services. Considering the availability of landfill capacity and the relatively nominal amount of solid waste generation from the proposed project, project solid waste disposal needs can be adequately met without a significant impact on the capacity of Republic Services landfills. Impacts would be less than significant.

g) **No Impact.** The proposed project is required to comply with all applicable federal, state, County, and City statutes and regulations related to solid waste as a standard project condition of approval. Therefore, no impact would occur.

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<sup>40</sup> Republic Waste Services of Southern California. *Loading Factors*. July 2011.

<sup>41</sup> Republic Services Website. *Comprehensive Waste and Recycling Services: Landfills*.

<http://site.republicservices.com/corporate/business/wasterecycling/facilities/landfills.aspx> [Accessed March 2015].

### 4.18 – Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) **Less Than Significant.** The proposed project would not impact any scenic vista or scenic resource, nor would it degrade the visual character of the area, as discussed in Section 4.1. The project would not result in excessive light or glare. The project site is located within an urbanized area with no natural habitat. The project would not impact any sensitive plants, plant communities, fish, wildlife or habitat for any sensitive species, as discussed in Section 4.4. Adverse impacts to archaeological and paleontological resources would not occur. Construction-phase procedures would be implemented in the event any important archaeological or paleontological resources are discovered during grading, consistent with required state laws. This site is not known to have any association with an important example of California’s history or prehistory. The environmental analysis provided in Section 4.2 concludes that impacts related to emissions of criteria pollutants and other air quality impacts will be less than significant. Sections 4.7 and 4.9 conclude that impacts related to climate change and hydrology and water quality will be less than significant.

Based on the preceding analysis of potential impacts in the responses to items 4.1 thru 4.17, no evidence is presented that this project would degrade the quality of the environment. The City hereby finds that impacts related to degradation of the environment, biological resources, and cultural resources would be less than significant.

b) **Less Than Significant.** Cumulative impacts can result from the interactions of environmental changes resulting from one proposed project with changes resulting from other past, present, and future projects that affect the same resources, utilities and infrastructure systems, public services, transportation network elements, air basin, watershed, or other physical conditions. Such impacts could be short-term and temporary, usually consisting of overlapping construction impacts, as well as long term, due to the permanent land use changes involved in the project.

The proposed health club would result in less than significant environmental impacts (with mitigation incorporated), as discussed in this Initial Study. Short-term impacts related to noise would be less than significant and therefore would not contribute substantially to any other concurrent construction programs that may be occurring in the vicinity. Short-term impacts related to pollutant emissions would be less than significant and would not exceed thresholds.

To assess potential cumulative impacts associated with this project, an inventory of other proposed development projects was prepared. Currently, only one nearby cumulative development was identified: a new car wash within an existing Mobil service and gas station at the northeast corner of Seal Beach Boulevard and Rossmoor Center Way/Plymouth Drive. The proposed project, in combination with this project, would not significantly cumulatively affect the environment. Water supplies have been studied in the City's UWMP, and the cumulative projects are accounted for in UWMP. Continued efforts towards water conservation, as required by state law, would reduce water demands; the project would result in a less-than-significant cumulative impact on water supply and other resources.

c) **Potentially Significant Impact.** Based on the analysis of the proposed project's impacts in the responses to items 4.1 thru 4.17, evidence indicates that this project could result in substantial adverse effects on human beings. While project construction would result in temporary noise impacts and criteria pollutant emissions, these would be minimized to acceptable levels through application of routine construction control measures. Long-term effects would include increased air pollutant emissions, increased vehicular traffic, traffic-related noise, periodic on-site operational noise, minor changes to on-site drainage, and a minor change to the visual character of the site. With regard to air quality, greenhouse gas emissions, long-term noise, and transportation/traffic, impacts are potentially significant and these issues will be examined in an EIR. None of the other identified effects would be significant.



### 5.1 – List of Preparers

#### **City of Seal Beach (Lead Agency)**

211 Eighth Street  
Seal Beach, California 90740  
(562) 431-2527

Crystal Landavazo, Senior Planner

#### **MIG, Inc. (Environmental Analysis)**

537 S. Raymond Avenue  
Pasadena, CA 91105  
(626) 744-9872  
[www.migcom.com](http://www.migcom.com)

Laura Stetson, AICP, Principal and Project Manager  
Victoria Harris, Senior Project Manager  
Cameron Hile, Project Analyst and Graphics  
Bryan Fernandez, Project Analyst

### 5.2 – Persons and Organizations Consulted

As noted in the footnotes

## **Appendix B:**

# **Notice of Preparation Comment Letters**



**South Coast**  
**Air Quality Management District**  
21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • [www.aqmd.gov](http://www.aqmd.gov)

**APPENDIX B: NOP COMMENT LETTERS**

**AGENCIES**

January 10, 2017

[sfowler@sealbeachca.gov](mailto:sfowler@sealbeachca.gov)

Steve Fowler, Assistant Planner  
City of Seal Beach, Department of Community Development  
211 Eighth Street  
Seal Beach, CA 90740

**Notice of Preparation of a CEQA Document for the  
LA Fitness Health Club Project**

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the Draft EIR. Please send the SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the Draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

**Air Quality Analysis**

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the lead agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: [http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)). SCAQMD staff also recommends that the Lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: [www.caleemod.com](http://www.caleemod.com).

The lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a Draft EIR document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment (“*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*”) can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis>. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board’s *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: <http://www.arb.ca.gov/ch/handbook.pdf>. CARB’s Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Finally, should the proposed project include equipment that generates or controls air contaminants, a permit may be required and the SCAQMD should be listed as a responsible agency and consulted. The assumptions in the submitted Draft EIR would also be the basis for permit conditions and limits. Permit questions can be directed to the SCAQMD Permit Services staff at (909) 396-3385, who can provide further assistance.

#### **Mitigation Measures**

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Mitigation Measure resources are available on the SCAQMD CEQA Air Quality Handbook website: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>

#### **Data Sources**

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD’s Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD’s webpage (<http://www.aqmd.gov>).

The SCAQMD staff is available to work with the lead agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact Gordon Mize, Air Quality Specialist by e-mail at [gmize@aqmd.gov](mailto:gmize@aqmd.gov) or by phone at (909) 396-3302.

Sincerely,

*Jillian Wong*

Jillian Wong, Ph.D.  
Planning and Rules Manager  
Planning, Rule Development & Area Sources

JW:GM

LAC170103-04  
Control Number

## NATIVE AMERICAN HERITAGE COMMISSION

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Website: <http://www.nahc.ca.gov>  
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January 9, 2016

Steve Fowler  
City of Seal Beach  
211 Eighth Street  
Seal Beach, CA 90740

sent via e-mail:  
[sfowler@sealbeachca.gov](mailto:sfowler@sealbeachca.gov)

RE: SCH# 2017011003; LA Fitness Health Club Project, Notice of Preparation for Draft Environmental Impact Report, Orange County, California

Dear Mr. Fowler:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

**CEQA was amended significantly in 2014.** Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a **separate category of cultural resources**, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code § 21084.2). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," <http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf>. Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

#### AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. **Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
  - a. A brief description of the project.
  - b. The lead agency contact information.
  - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).

- d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).
2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
    - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).
  3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
    - a. Alternatives to the project.
    - b. Recommended mitigation measures.
    - c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).
  4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
    - a. Type of environmental review necessary.
    - b. Significance of the tribal cultural resources.
    - c. Significance of the project's impacts on tribal cultural resources.
    - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).
  5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).
  6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
    - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
    - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).
  7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    - a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).
  8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).
  9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).
  10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- a. Avoidance and preservation of the resources in place, including, but not limited to:
  - i. Planning and construction to avoid the resources and protect the cultural and natural context.
  - ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - i. Protecting the cultural character and integrity of the resource.
  - ii. Protecting the traditional use of the resource.
  - iii. Protecting the confidentiality of the resource.
- c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
- e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
- f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
  - b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
  - c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)). *This process should be documented in the Cultural Resources section of your environmental document.*

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: [http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation\\_CalEPAPDF.pdf](http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf)

## SB 18

SB 18 applies to local governments and requires **local governments** to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: [https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf)

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason,

we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>

#### NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([http://ohp.parks.ca.gov/?page\\_id=1068](http://ohp.parks.ca.gov/?page_id=1068)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have been already recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.
3. Contact the NAHC for:
  - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
  - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
  - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
  - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
  - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at [gayle.totton@nahc.ca.gov](mailto:gayle.totton@nahc.ca.gov).

Sincerely,



Gayle Totton, M.A., PhD.  
Associate Governmental Program Analyst

cc: State Clearinghouse



January 30, 2017

NCL-17-003

Steve Fowler  
City of Seal Beach Planning Department  
211 Eighth Street  
Seal Beach, California 90740

Subject: Notice of Preparation for the LA Fitness Health Club Environmental Impact Report (EIR)

Dear Mr. Fowler:

Thank you for the opportunity to comment on the Notice of Preparation for the LA Fitness Health Club Environmental Impact Report (EIR). The County of Orange offers the following comments for your consideration:

- Provide the updated traffic study discussed on Page 61 of the LA Fitness Health Club Initial Study (December 2016).

Thank you for the opportunity to review this document. If you have any questions regarding these comments, please contact Jamie Reyes at (714) 647-3903 in OC Public Works Infrastructure Programs/Traffic or Linda Smith at (714) 667-8848 in OC Public Works/OC Development Services/Planning Division.

Sincerely,



*for* Laree Alonso, Manager, Planning Division  
OC Public Works Service Area/OC Development Services  
300 North Flower Street  
Santa Ana, California 92702-4048  
Laree.alonso@ocpw.ocgov.com

**From:** Anderson, Bret [mailto:[BretAnderson@ocfa.org](mailto:BretAnderson@ocfa.org)]  
**Sent:** Thursday, February 02, 2017 3:40 PM  
**To:** Steven Fowler  
**Subject:** NOP LA Fitness health Club for EIR / 12411 Seal Beach Blvd

I received your notice documents.

At this time the project as proposed has no OCFA needs.

We will condition the project next normally through any future city master plan or CUP, or site development permit, when that comes into OCFA for review, with a service request, fee, and exhibits.

Thank you

**Bret Anderson – Fire Prevention Analyst**  
[714-573-6111](tel:714-573-6111) / [bretanderson@ocfa.org](mailto:bretanderson@ocfa.org)  
**Orange County Fire Authority**  
**Planning and Development Section**  
1 Fire Authority Road  
Irvine, Ca. 92602



**Rossmoor Homeowners Association**

**P.O. Box 5058, Rossmoor, California, 90721  
(562) 799-1401 [www.Rossmoor-RHA.org](http://www.Rossmoor-RHA.org)**

Jan. 28, 2017

To: Steve Fowler, Assistant Planner  
City of Seal Beach Department of Community Development  
211 Eighth Street, Seal Beach, CA 90740

Subject: LA Fitness Health Club

The Rossmoor Homeowners Association has reviewed various plans and analyses for the LA Fitness Club Project at the Shops of Rossmoor and has serious concerns about the adequacy of the parking and traffic analysis. We would like to file these comments for the EIR.

The RHA has long worked with adjacent cities, the Los Alamitos Unified School District and the County of Orange on traffic impacts within and outside our community. The county and the school district have undertaken extensive and costly efforts to mitigate traffic congestion during school hours, which impacts not only Rossmoor residents but many Seal Beach parents who drive their children into one of Rossmoor's four elementary schools.

We are concerned that the analysis for this high volume retail establishment could reverse the improvements that the school district, the very district that serves your city, and the county have undertaken.

At its own cost, the school district has begun a program offering low cost bus service to the Rossmoor schools from Seal Beach and has cited about 200 families that are subscribing to the service each day. The health club is almost certain to add many more vehicle trips than that to Rossmoor streets.

We are particularly concerned about increased traffic volumes on St. Cloud and Montecito roads, which carry large volumes of vehicles to Rossmoor Elementary School, as well as Weaver Elementary and Hopkinson Elementary. It also is a main pedestrian and bicycle route to the schools.

The city must require the developer to improve the analysis on how future patrons will access the club. The main entrance seems to be west bound on Rossmoor Center Drive, an access road that is already congested from serving the large number of retail stores at the front of the complex.

One serious potential problem is that visitors to the sports center will find an alternative route through Rossmoor, accessing the club eastbound on Rossmoor Center Drive or from a freight entrance at the stop of sign of Copa De Oro. Either route would cause serious traffic problems during school hours. Moreover, the freight entrance does

not appear to be properly engineered for general traffic, even though it would provide access to the club.

The other issue of serious concern is the informal agreement that the Shops of Rossmoor made to allow Seal Beach residents in nearby apartments to park in the lot that is slated for development. The accommodation relieved the problem of Seal Beach residents of the apartments parking in Rossmoor in front of private homes. If this accommodation is lost, Seal Beach must find a solution to the overflow parking from the apartments.

The RHA has heard overwhelming opposition to the development of the health club. While we believe economic development in many cases is a positive for our community, we want it to be done without impairing the safety of pedestrians, congesting our residential streets or causing overflow parking into neighborhoods.

Should the city need additional information or wish to discuss RHA's views, it can contact RHA Traffic Committee Chairman Ralph Vartabedian at 213-300-1719 or RHA President Beverley Houghton at 562-596-1408.

Cc: Tim Whitacre

Dr. Sherry Kropp

# **BRIDGECREEK VILLAS CONDOMINIUMS OWNERS ASSOCIATION**

**12450 – 12600 Montecito Road, Seal Beach**

Dear City of Seal Beach :

Let this letter serve as a strong negative consensus against the proposed development of the L.A. Fitness Center at the back of the Shops at Rossmoor. Their thinly disguised, legal attempt at removing the primary objection of parking behind the Center will have no difference in the negative effects of their project. We have absolutely no objection to their right of development and to do as they wish with their land, as long as it has no negative effects on OUR community. The prior effects of the old Supersaver Movie Theaters come to mind. Added traffic, increased crime, increased trash, added noise from the cars leaving at night and racing were just some of the effects that we are talking about. Every night at 10:00 PM, the movie would end and the drag racing would begin. Many of us were here then and don't want to see a repeat of this. Their extended hours will only add to the problem. We have pondered several solutions that the Shopping Center and the City might consider, i.e. Parking Permits on the Rossmoor Streets, alternate parking within the Center, Library parking at night, etc. But all would require additional monitoring and other unpleasant procedures. Simply stated.....The LA Fitness Center is a bad idea.

As a matter of fact, I am a member of LA Fitness in Garden Grove and enjoy their facility, but I have also seen first-hand the negatives of their facility in a residential area. The main gripe were the car break-ins and traffic congestion. When I left there at 5:30 PM every night, the parking lot was overflowing and somebody was always waiting for my space. Obviously, many will opt to park in the residential streets. We are already receiving complaints of this since the Center imposed their new parking restrictions.

We hope that the Center will find a more suitable fit for this space to maximize their cash-flow and value. As elected officials of our city, please take our strong objections seriously when deciding your position.

Yours truly,

Board of Directors at

Bridgecreek Villas Condominiums

Greg Shade

Frank Dubbs

Greg Knowlton

Sean Hyepock

**To: Jim Basham, Director  
Steve Fowler Assistant Planner  
City of Seal Beach  
Department of Community Development  
211 Eight St. Seal Beach, CA 90740**

Tel. (562) 431-2527 ext. 1316  
Fax (562) 430-8763

Subject: LA Fitness

Dear Mr. Fowler:

We live at 12300 Montecito Rd. Unit 7, Seal Beach, CA 90740 and we oppose building 37000 square feet LA Fitness Health Club just behind our building.

We have gone to all Public Meetings last time and to the City Council Meetings less than 6 month ago.

After hearing all the arguments from the Citizens of Rossmoor, majority of City Council voted to reject building LA Fitness Health Club at 12411 Seal Beach Blvd, City of Seal Beach.

And here we go again!

Proposed hours of operation from 5:00 am till 11pm on week days, 5:00 am to 10 pm on Saturday and 8:00 am to 8 pm on Sunday will make our building impossible to live or sleep in.

Everyone is entitled to have a quiet enjoyment of your home, having Health Club just behind our back wall will deprive us from quiet enjoyment and rest. Our Bedrooms, Pool and Recreation area just behind the wall that we are sharing with the Shopping Center.

Parking is also the issue. After the recent rains, our garage was flooded and we have had to take our vehicles out of garage. If there would be a Health Club there, we all would have a huge problem. Even now because our cars were parked in the shopping area parking, we got "Final Warning". We would have nowhere to park at all if there would be a parking for Health Club there.

There is a lot of traffic already at Rossmoor Center Way, this is a narrow street and making a left turn pocket onto Seal Beach Blvd. will not help a problem. Cars are already lining up half the way Rossmoor Center way on the weekends and during pick traffic time. People crossing the driveway to go into the shops already causing back up of the cars blocking the street. Shoppers of Sprouts and Marshalls already are parking behind the stores, due to the parking issues.

There are a lot of Elderly in the area and access of the Emergency Vehicles to the area is of a big concern.

Schools in the area encourage parents to walk kids to school to reduce traffic issue in the mornings and afternoons. Adding 700-900!!! cars a day will compromise safety of the kids and all the residents in the area.

Noise, traffic, pollution, safety and property values are the reasons we oppose building LA Fitness.

We do not need another Health Club in our area, there is a 24 hour Fitness and LA Fitness within 3 mile radius.

We have already endured a lot since renovation of Shops at Rossmoor, re-routing the water lines to accommodate the health club building, is going to make a lot of hardship on all residents.

We love living in Rossmoor and would like to keep it a quiet residential area.

I hope that Planning Commission will take into consideration the Community Opposition to LA Fitness and reject the project.

Sincerely,

  
Lana and Jack Yelen.

## Individuals

From: Sbkwood2 <sbkwood2@aol.com>  
To: Steven Fowler <sfowler@sealbeachca.gov>  
Cc:  
Date: Thu, 5 Jan 2017 19:48:18 -0800  
Subject: LA Fitness  
I am a 22 year resident of Rossmoor.

There have been lots of changes in those years. When we moved in, the only nearby shopping was at the tired old mall with little to want me to shop there. Now it is wonderful to have two malls across from each other on Seal Beach Blvd. Most of our shopping is within walking distance.

Last year I was disappointed to learn that LA Fitness would not be coming to the Shops at Rossmoor. I drive to Long Beach to work out at the location on Stearns. It would be good to have one nearby. And it would draw more customers to the Shops.

Some people never want anything to change, I am not one of them. The talk of traffic being greatly increased is simply not true. People come and go throughout the day and evening to gyms. Perhaps residents of Rossmoor should pay more attention to how they drive through the tract and endanger pedestrians before they proclaim that children will not be safe with traffic going to the gym.

Thanks for considering my opinion.

Susan Barrett

Sent from AOL Mobile Mail

**From:** Laretta Collins [mailto:[lcollins@jrk.com](mailto:lcollins@jrk.com)]  
**Sent:** Monday, January 09, 2017 12:04 PM  
**To:** Steven Fowler  
**Subject:** Proposed LA fitness

I was told about the proposed LA Fitness plans yesterday.  
As a Ross Moor home owner I'm am opposed to this idea.  
Ross Moor residents life style are being negatively impacted by the actions of Seal Beaches greed.  
We spend 90% of our off time at some Seal Beach location as I feel most of my neighbors and friends do.  
If you continue to increase our traffic and quality of life because of the people that are traveling to our area that don't live there I will move.  
As people start to move because you are changing our neighborhood you will start getting a deferent clientele in your restaurants and other businesses.  
Lowering our quality of life will eventually lower yours.

Please consider what I have said as rethink what you are planning.

Respectfully

Laretta Collins  
A homeowner in Ross Moor



From: Lisa Guardi <lsguardi@verizon.net>  
To: Steven Fowler <sfowler@sealbeachca.gov>  
Cc:  
Date: Wed, 4 Jan 2017 15:24:42 -0800  
Subject: LA FITNESS-NO

Hello,

I am a current Rossmoor resident, My parents lived here for 45 years. We are definitely opposed to the LA Fitness.

The center has so many "name brand" tenants that people are driving here from everywhere now. The traffic is awful on Los Al Blvd.

I see people speed 50 miles an hour on Montecito to go to Khols etc.

The community would be better served with a bookstore or more boutique shops. Please!

Thank you for your consideration.

**From:** Tony Kozlowski [mailto:[tonyk@goaltrans.com](mailto:tonyk@goaltrans.com)]  
**Sent:** Sunday, January 08, 2017 5:17 PM  
**To:** Steven Fowler  
**Subject:** Proposed LA Fitness in the Shops of Rossmoor

Mr. Fowler:

I wanted to express my complete disapproval of the proposed LA Fitness facility that is being talked about for the Shops at Rossmoor. That area is completely over-developed now and even without a new fitness facility, traffic is already a nightmare for those of us who live in the area. I realize that since I live in Rossmoor I may not have a voice but I can certainly tell you that these decisions have a great impact on our quality of life. In its current state, it is already difficult to drive in and around the Shops at Rossmoor so I cannot even imagine the difficulties that would be thrust on my neighborhood. I have already begun to avoid the area and I am sure that others have as well.

If this is approved and Seal Beach goes through with building the facility, I can tell you that I will not spend a dime in ANY of the Shops at Rossmoor and I will begin to encourage everyone I know to do the same. That will also include shopping at the Old Ranch Towne Center. I would hope that you would give that consideration of lost revenue for all of the other businesses in these two locations to be a mitigating factor.

Thank you for your time and please let me know if you have any questions.

Best Regards

Tony Kozlowski  
2621 Mainway Drive  
Rossmoor, CA 90720  
Tel: [562-244-6767](tel:562-244-6767)

From: "Min, Hyun S." <hyun.min@anthem.com>  
To: Steven Fowler <sfowler@sealbeachca.gov>  
Cc:

Date: Wed, 4 Jan 2017 07:27:22 -0800

Subject: LA Fitness No!

Hello Assistant Planner Steve Fowler,

We would not like LA Fitness to be at Seal Beach shopping center. The facility would definitely increase the traffic, and it's already difficult to get in and out of the center as it is, especially during peak times, when the facility will be used. Also, I'm definitely concerned that no in depth traffic studies have been done and how it will affect pedestrians—especially children who use the shopping/food facilities as it's a close walk from their Rossmoor homes.

I'm a Rossmoor resident, and I do not want to see increase in dangerous traffic from other areas coming into Rossmoor/Seal Beach.

It was already denied, please uphold the denial.

Thank you,

Hyun Min

*Thanks, Soo*

**Hyun Soo Min, MPP** I Care Consultant Sr. I Anthem Inc.

Enhanced Personal Health Care I

[hyun.min@anthem.com](mailto:hyun.min@anthem.com) | Office # [805-208-6870](tel:805-208-6870)

From: [Monasrealestate@aol.com](mailto:Monasrealestate@aol.com) [mailto:[monasrealestate@aol.com](mailto:monasrealestate@aol.com)]

Sent: Tuesday, January 10, 2017 6:09 PM

To: Steven Fowler

Subject: 24 hour fitness

Hello Steve,

Our family 4 adults are against this project. Our area is already a bottle neck after getting off the freeway and trying to get into Rossmoor. I know this traffic will devalue our homes, be bringing in much more traffic and people that do not live in the area. Will there be a public forum?

I know business brings revenue, but at what expense? The city of Seal Beach has a Motorcycle noise ordinance, the people want their area to stay quiet.... we do too!

Thanks,

Mona Patrick

[5626186662](tel:5626186662)

From: Anthony Rudisill <arudisill@socal.rr.com>  
To: Steven Fowler <sfowler@sealbeachca.gov>  
Cc:  
Date: Wed, 4 Jan 2017 16:49:16 -0800  
Subject: LA Fitness  
Mr. Fowler,

I have been a resident of Rossmoor for 46 years. I am also a member of LA Fitness. At present, the most convenient location for me is in Garden Grove, on Valley View St. just North of Chapman Ave.

I am aware of the concerns regarding the traffic situation in the area of Sprouts. In my regular trips to LA Fitness - Garden Grove for over 3 years, I have noticed that traffic in the gym area is never congested. I believe that gym visits last much longer than grocery shopping, which may account for the difference in congestion levels. I suggest a visit to the Garden Grove location by yourself or a staff member to observe the level of traffic in the area.

I think the slight added traffic caused by a fitness center in the proposed Seal Beach location would be more than offset by the benefits. The presence of a nearby fitness center can be a positive factor for many busy people whose time is limited but who value regular exercise.

Thank you for your consideration.

Anthony Rudisill

11861 Montecito Rd., Rossmoor

[\(562\) 431-8838](tel:5624318838)

**From:** Jason Delmonico [mailto:[jddelmonico@verizon.net](mailto:jddelmonico@verizon.net)]  
**Sent:** Wednesday, January 11, 2017 2:59 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

Dear Steve,

I was happy to read an article in the Sun this week which mentioned that LA Fitness is once again going to try and come in to the Shops at Rossmoor.

I was very disappointed when they got chased away by residents of Rossmoor who are concerned about parking issues and traffic.

I believe that LA Fitness will be a great addition to our neighborhood. I am currently an LA Fitness member (and live in CPE) and would love to see an LA Fitness in such a convenient location. I usually attend the one on Valley View and the one in Long Beach on Bellflower. I do not care for the layout of the LA Fitness on Valley View. Although they recently remodeled the facility on Valley View, I don't care for the way the TV's are set up and also that there is no separate cycling room.

I think that LA Fitness will be a great addition to the Shops because it will create greater community within our community. At both gyms that I attend, I notice that people do not only go to work out but also to socialize, meet up and converse. Friendships are formed with people who attend the same classes together or work out at the same time. There is really a sense of community within the gym community. They gym will potentially encourage neighbors to get to know neighbors through meeting at the gym.

Bringing the LA Fitness to the shops will also provide convenience for those of us with busy lives and steady business to the existing shops and restaurants. It is so close to schools and shops that we can exercise and get our shopping done all in one convenient center after dropping off kids or before picking up kids from school. It is also close enough that I, and others may be encouraged to bike to the gym.

LA Fitness will also bring added revenue to our little community without tearing up undeveloped land. I often drive through the back parking lot and it is fairly empty except for the residents who park there from the condos next door. There should still be plenty of parking for those residents as well as gym members. In reality the condo should provide it's own parking for it's residents and they should not be spilling over into the shopping center on a regular basis.

Please fight hard to bring LA Fitness into our community. It would be a great asset to this area and promote a healthier lifestyle for those of us who already live in the area.

Kind regards,

Debi DelMonico  
Oleander St. Seal Beach

From: [rosemaryfrenkiel@gmail.com](mailto:rosemaryfrenkiel@gmail.com) [mailto:[rosemaryfrenkiel@gmail.com](mailto:rosemaryfrenkiel@gmail.com)]

Sent: Saturday, January 07, 2017 10:21 AM

To: Steven Fowler

Subject: LA fitness

Dear Sirs:

I am having a difficult time understanding the controversy regarding this project. There used to be a Rossmoor Gym in that area for years of which I was a member for years. I so regretted seeing them close their doors. I think an LA Fitness would be a great business to return to the area. I know I would use it. You would think it was a tattoo shop or bar, of which I would object to, because of the kinds of people/problems they attract.

Thank you for your attention.

Rosemary Frenkiel  
3631 camellia st.  
Seal Beach, ca 90740

From: Arnold Mayans [mailto:[amayans2000@yahoo.com](mailto:amayans2000@yahoo.com)]  
Sent: Wednesday, January 11, 2017 9:39 PM  
To: Steven Fowler  
Subject: LA FITNESS

We don't need an LA Fitness in the Rossmoor Shopping Center. It will disrupt a lot of things and will bring more traffic to the area, which we don't want/need.

Also, we don't need more people in the area,. I think we have enough as it is.

Everything these days is done to collect more money for the local governments at whatever cost.

Build the LA Fitness somewhere else.

Thank you.

**From:** Enea Ostrich [mailto:[eneao@hotmail.com](mailto:eneao@hotmail.com)]  
**Sent:** Friday, January 06, 2017 11:37 PM  
**To:** Steven Fowler  
**Subject:** Fwd: LA Fitness Project Plan at Shops at Rossmoor

Here is a copy of the original email I sent on this subject. I also since have seen most recently more traffic than when I originally sent this email. Please do not humor this developer in promoting this project. I was there at meeting when Ellery Deaton said it best. She said she cannot vote in favor of the project knowing that knowing that kids going to school at peak times in traffic study will not be safe. I wish to add our elderly community...some of which actually are close neighbors to this project. They do not need the fitness traffic which is constant. The elderly cannot walk fast and fitness people drive fast...just go to one and observe for an hour...you will see. I love fitness but not if people in general are in danger. We cannot expand Seal Beach BI any more then it already has been. Let's put a financial park in there. That is what needs to be there instead. We have an overdeveloped mall already...please shut down proposals like this for Shops at Rossmoor. Thank uou.

Enea Ostrich  
3621 Camelia St  
Seal Beach, Ca 90740

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From: Enea Ostrich  
Sent: Friday, July 15, 2016, 1:02 PM  
Subject: LA Fitness Project Plan at Shops at Rossmoor  
To: [smassalavitt@sealbeachca.gov](mailto:smassalavitt@sealbeachca.gov), [mvaripapa@sealbeachca.gov](mailto:mvaripapa@sealbeachca.gov), [edeaton@sealbeachca.gov](mailto:edeaton@sealbeachca.gov), [sloandistrict2@verizon.net](mailto:sloandistrict2@verizon.net), Gary Miller

Dear Seal Beach City Council:

I am writing to inform you that I am opposed to the project...for simple reason that it's neglectful when residents are griping and the developer is not listening...then adding insult to injury the councilman for this district where LA Fitness is planned to be also ignores their gripes and does not file an appeal on their behalf so they do not have to pay for an appeal!!

EQCB asked for further study and Councilman David Sloane MUST have been aware of that when he did not file an appeal on their behalf? I sure hope he did not know because otherwise it would be very foolish. At this point I am losing faith the council will vote against this project. I hear that fix-its are on the way by one of the planning commissioners who voted against this project because she felt there needed to be more study!!!

Go ahead and make the cookie cutter complete. Go ahead and make money without thinking of people's peace in life. I do not like the center as it stands today and in my last letter I provided several examples of good businesses that were in there way before this corporate lot eater came in and placed stores that do not match our Seal Beach way of life. All I see are more near misses in the center because of the way the parking was placed in front...especially in the area where California Pizza Kitchen is...too condensed and it really is not safe and I never park there myself during the day. A senior couple was hurt in there because they got confused in parking and went through a windshield of a clothing store there. I feel the condensed area confused them. Do you REALLY want safety concern again when this gym is built and they come there to work out? Pedestrians will be compromised as will bicyclists who plan to get to gym to reduce traffic but surprise surprise...they will be ignored by the automobile drivers and the combo could not be deadlier. Mark my words...we will see an increase in accidents and I only say that because with a well known gym there the traffic will increase even with modifications.

Anyhow, the center is located conveniently near the freeway...believe me there will be a lot of people coming to the "new" gym because the developer will be advertising for it everywhere. So thanks for ruining our Mayberry of the Sea if you vote in favor for this project. You just lost my respect if you did.

**From:** [SSAMUELSON@aol.com](mailto:SSAMUELSON@aol.com) [mailto:[SSAMUELSON@aol.com](mailto:SSAMUELSON@aol.com)]  
**Sent:** Sunday, January 08, 2017 10:19 AM  
**To:** Steven Fowler  
**Subject:** LA Fitness

NO!

Our local community does not need another Health Club. There are several Health Clubs close by. My main concern is the quality of life in Rossmoor is going downhill mainly because of the traffic, noise, pollution, etc.

I realize the City of Seal Beach benefits from additional taxes by adding more stores to the congested area of Rossmoor Shops, but where does it stop? I suggest LA Fitness add a location to the corner of Main and PCH.....

Stop ruining Rossmoor and sending the tax funds to Seal Beach. Shame on you!

**From:** Hartmut Schroeder [mailto:[hshroeder1@socal.rr.com](mailto:hshroeder1@socal.rr.com)]  
**Sent:** Sunday, January 08, 2017 10:56 AM  
**To:** Steven Fowler  
**Subject:** LA Fitness

Dear Mr. Fowler,

My wife and I have been residents of Rossmoor for the past 27 years. We remember when the property in question was a Family Fitness business and a Super Saver movie theatre.

Family Fitness later became 24hour Fitness and moved to Katella. We were both members then and are looking forward to having another Fitness Studio located in Rossmoor.

I understand that another EIR is planned but I cannot imagine that a fitness business can be disrupting for the immediate neighborhood.

I know that the NIMBYs are everywhere but this project should be supported and not torpedoed. Maybe the protesters can be enrolled at a discount so that they find something productive to do with their spare time.

Sincerely,

Hartmut Schroeder  
11232 Martha Ann Drive  
Rossmoor  
[562.243.4138](tel:562.243.4138)

**From:** Debbie Stea [mailto:[debbie.stea@gmail.com](mailto:debbie.stea@gmail.com)]  
**Sent:** Sunday, January 08, 2017 1:46 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

My Name is Debbie Stea and I am a resident of Rossmoor. I am very much opposed to the development of LA Fitness in the Shops at Rossmoor. We have 5 large gyms and many small ones in a five mile radius and there in no need for another one. The traffic is a nightmare in Rossmoor and a gym that size would increase traffic and noise and safety concerns tremendously.

Many of the residents are very much opposed to this gym being built. Please take our concerns into consideration.

Thank you, Debbie Stea

**From:** [wwardjd@aol.com](mailto:wwardjd@aol.com) [mailto:[wwardjd@aol.com](mailto:wwardjd@aol.com)]  
**Sent:** Saturday, January 07, 2017 4:18 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

Mr. Steve Fowler  
Assistant Planner

Re: Proposed LA Fitness - Rossmoor Center

As long time Seal Beach residents we are strongly opposed to the approval of a LA Fitness facility in the Rossmoor Shopping Center. Traffic in and out of the Center and along Seal Beach Blvd. is currently a huge problem and the proposed facility will certainly create additional problems.

You can drive by any LA fitness facility in this area at any time and observe a full parking lot with overflow to its neighbors. In addition, the nature of the customers, who are there only a short time, adds to the many cars that will enter and leave the Center many times a day along with the noise that these actions will create for the adjacent residential area. Please do not approve this inappropriate business in the Center.

Dale & Jeri Woodward  
4748 Elder Avenue

**From:** Gary Brown [mailto:[garybrown@outlook.com](mailto:garybrown@outlook.com)]  
**Sent:** Saturday, January 21, 2017 12:43 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

I oppose the construction of a workout facility. The area is already congested, traffic a complete nightmare going in and out of the center and along the blvd. I would be more inclined to support such a project with a massive overhaul of the parking and entry / exit design to better optimize traffic flow and safety for pedestrians and vehicles alike.

I live on Mainway and walk up to Sprouts twice per week and the 4 way stop sign at Sprouts is a terrible design and very pedestrian unfriendly. More traffic would be dangerous. I urge you to spend a few minutes watching that intersection and see just how many drivers fail to stop or yield to pedestrians.

regards,  
Gary Brown (Rossmoor)

**From:** Xenophon Colazas [mailto:[xencola.mila@gmail.com](mailto:xencola.mila@gmail.com)]  
**Sent:** Monday, January 23, 2017 2:51 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness Health Club

Steve Fowler, Assistant Planner  
Community Development Dept  
211 Eighth Street  
Seal Beach, CA. 90740

Dear Mr. Fowler,

My wife and I are Senior citizens who have lived at 12300 Montecito Rd., #34, (Rossmoor Regency Condos) Seal Beach 90740 for over 36 years! Most Condos in this area are occupied by senior citizens!

This is the second letter we are writing re the LA Fitness Gym. The first letter was on May 17, 2016. We also attended Committee and City Council meetings where we voiced our concerns. Eventually, , the City Council wisely rejected this project!  
Unfortunately, due to administrative delays, the developer pulled the application and that gave him the right to resubmit it as a NEW PROJECT! THIS IS NOT A NEW PROJECT!

IT'S THE SAME OLD PROJECT THAT THE CITY COUNCIL HAD REJECTED! Six hundred fifty (650) cars coming and going daily, seven days a week, from 5 am to 10 +/- pm through Seal Beach Blvd., Montecito Rd. and the ultra narrow road of Rossmoor Center Way!



There are many problems associated with this project but the most serious are as follows:

1. **TRAFFIC CONGESTION AND NOISE POLLUTION!**  
Our Condos at Rossmoor Regency will be affected the most due to such close proximity to the project. We'll be surrounded by cars on all sides trying to enter or exit the GYM! and at certain times of the day we'll be UNABLE TO ENTER OR EXIT OUR UNDERGROUND GARAGE!
2. **SAFETY OF PEDESTRIAN CHILDREN AND SENIORS** walking or going to the Center. Montecito Rd. and Rossmoor Center Way is a very dangerous intersection! We have already witnessed a vehicular death in it!
3. **PARKING ISSUES** have not been resolved!

We realize that the City of Seal Beach needs the revenue, but please try to find a project that does not DESTROY OUR WAY OF LIFE! We are Seal Beach citizens and WE DESERVE YOUR SUPPORT! THEREFORE, WE URGE THE CITY COUNCIL TO DENY THIS APPLICATION AGAIN!

Sincerely,

Xenophon Colazas  
12300 Montecito Rd., #34  
Seal Beach, CA. 90740  
[\(562\)594-6128](tel:(562)594-6128)

**From:** Steve Havens [mailto:[sbhavens@verizon.net](mailto:sbhavens@verizon.net)]  
**Sent:** Friday, January 20, 2017 8:01 PM  
**To:** Steven Fowler  
**Subject:** Opposed to Approval of LA Fitness Center in the Rossmoor/Seal Beach Shopping Center; re: Hearing planned for January 30th, 2017 Seal Beach Ca.  
**Importance:** High

Good Evening Mr. Fowler and Seal Beach Administration:

My name is Stephen B. Havens and I live on Kempton Dr. in Rossmoor, and we have lived here since 1971. It really is insanity to place this fitness Center into an area that already is over flowing with traffic and is impacted by a lack of infrastructure access. This Center will be a detriment to the surrounding residence and create chaos with morning and evening traffic access to the residential community. We as long term residence have seen the Los Alamitos Blvd grow in traffic similar to the traffic that is flowing in Huntington Beach on Beach Blvd. There is constant traffic and this destroys the neighborhood, the environment, and challenges simply running errands in the shopping areas.

Enough is enough Seal Beach...you have plenty of access in your own backyard...Place the health club on PCH ...tear down some properties ...find room where there is infrastructure in your neighborhood. We are seniors and are in the 4<sup>th</sup> Qtr. of our lives, we like to stay active and fit, but this facility has much more negative aspects than positive services for our community.

You can have traffic reports and environment reports that are made as instructed, but you will never convince a reasonable person, that this project won't have a huge negative impact in an area that is already overflowing with traffic. I have recommended to our community to hire a law firm and STOP this project. I am not sure other residence will join in on the suggestion, but to me it would be well worth the cost to STOP this project rather than live with the after effects of more SEAL BEACH projects that are built to benefit Seal Beach with absolutely no consideration for the residence of Rossmoor. Yes this is a cry...."Not in my backyard" ....but feel free to put this structure in Seal Beach on Pacific Coast Highway.

**From:** NANCY holland [mailto:[nancysueholland1022@gmail.com](mailto:nancysueholland1022@gmail.com)]  
**Sent:** Saturday, January 21, 2017 1:59 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

Jan. 21, 2017

Steve Fowler, Assistant Planner  
City of Seal Beach  
Dept. of Community Development

Dear Steve,

I live in Seal Beach, in a condo directly facing the proposed job site. I am against putting an LA Fitness Health Club on this proposed sight because of the negative impact to my quality of life. This shopping center is already congested and to try to squeeze this Club behind our property will cause noise, pollution, traffic and congestion in our neighborhood. The hours of operation are a huge factor because of the noise so close to our bedroom windows.

We urge the City of Seal Beach to reject this project because of the negative environmental impact to our community.

Sincerely,

Nancy Holland  
12300 Montecito Rd., #30  
Seal Beach, CA 90740

**From:** leland jay [mailto:[lelandjay@yahoo.com](mailto:lelandjay@yahoo.com)]  
**Sent:** Friday, January 20, 2017 6:24 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

Hi Mr. Fowler,

My name is Leland Jay and I have been a Seal Beach resident for 11 years, and a Rossmoor resident for 29 years. I am opposed to the proposal to place an LA Fitness gym in the Rossmoor Center because of the detrimental impact it will have on the quality of life for the residents of our community. I am sure you are aware of the Environmental Impact Report conducted by an independent consultant which concludes that there will be "substantial adverse effects" on humans. Besides greenhouse gas emissions, noise, and a potential increase of crime, I am primarily concerned about the addition of traffic in and around the Center.

The estimates are that there would be an additional 800-1000 cars per day as a result of the addition of LA Fitness. I happen to believe that the current configuration of the Center is already bad. I am wondering if there is a way to find out the number of traffic accidents at the corner of Seal Beach Blvd and Rossmoor Center Drive since the new configuration (Sprouts, etc.). I know of one very serious one involving a motorcyclist. Currently, traffic backs up in the left hand turn lane and spills over into the northbound lane, and cars come flying northbound up Seal Beach Blvd and it is very dangerous. A couple of weeks ago I was down there and took the attached photos. You can see the back up in the left hand turn lane. Also, if there is as much as one pedestrian crossing Rossmoor Center Dr (at Panera Bread), the traffic can back up all the way to Seal Beach Blvd. On multiple occasions, I have observed cars (with a green signal) unable to complete the turn to Rossmoor Center Dr because it's backed up so much. This exacerbates the problem on Seal Beach Blvd. When the turn signal turns red, they are blocking the southbound traffic when the other light turns green. This is more of a nuisance for the southbound traffic, but I think the real danger is on the northbound side.

So, adding another big corporate building that will add 800-1000 cars per day is simply horrible planning, let alone what kind of business it would be. Now, if we are talking about a fitness gym, it is ludicrous. I don't

believe there is a "need" in our community for one because we already have fitness gyms. I like to support local businesses and residents of our community (Seal Beach and Rossmoor). Los Al Gym is on Los Alamitos Blvd, and it takes me 5 minutes to drive there from Rossmoor. The owner is a Rossmoor resident. There is also Beach Fitness in Seal Beach. The owner has won multiple "Business of the Year" awards from the city and is highly involved in community activities. There really is no need to add another gym in the area when it will just add to the noise, traffic, pollution, greenhouse gasses, and crime to our beloved community.

I was born in Rossmoor. I have grown up to see the growth and development here. I certainly understand the desire for growth and revenue to the city of Seal Beach, but this is simply a bad idea. The independent Environmental Impact Report clearly states that there will be a significant adverse affect to humans, and I believe that the traffic increase at Seal Beach Blvd and Rossmoor Center Drive will make an already dangerous situation exponentially more dangerous for motorists traveling up Seal Beach Blvd.

Sincerely,

Leland Jay

From: Chris Marshall [mailto:[cmcycle@gmail.com](mailto:cmcycle@gmail.com)]  
Sent: Saturday, January 21, 2017 8:35 PM  
To: Steven Fowler  
Subject: LA Fitness - yes for the project

I've been a resident of Rossmoor for over 20 years, and I'm hoping an LA Fitness goes into the parking area behind Sprouts. The land will eventually be used for something, and a facility like LA Fitness would be a positive addition to the community.

There are residents of Rossmoor who have little to do but complain about anything new, and there numbers dominate the blogs and comment boxes, but they don't fully represent Rossmoor residents. In conversations with other Rossmoor residents, we welcome the thought of an LA Fitness being constructed at that location.

Thank you,  
Chris Marshall

From: Mike M [mailto:[massion@gmail.com](mailto:massion@gmail.com)]  
Sent: Friday, January 20, 2017 12:10 PM  
To: Steven Fowler  
Subject: La fitness

Hello I am opposed to the LA fitness going in in seal Beach. I am concerned on the parking situation in close by Rossmoor.

Mike Massion

**From:** Maria Mayans [mailto:[oguendo56@yahoo.com](mailto:oguendo56@yahoo.com)]  
**Sent:** Friday, January 20, 2017 3:11 PM  
**To:** Steven Fowler  
**Subject:** LA FITNESS

We certainly don't need to have LA Fitness behind Sprouts. We don't need more traffic or people in the area.

**From:** Todd N. [mailto:[duckpond981@hotmail.com](mailto:duckpond981@hotmail.com)]  
**Sent:** Monday, January 23, 2017 6:01 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

Steve,

The quiet neighborhood of Rossmoor was the reason we moved to the area 10 years ago. In the time since then, the Shops at Rossmoor has changed dramatically.

I'm concerned that a transient clientele patronizing existing businesses and possibly LA Fitness will add to traffic congestion in the area and increase the element of safety concern to residents.

I go to LA Fitness several times a week. Yet, I do not support opening an LA Fitness in my backyard at The Shops at Rossmoor.

I understand that businesses bring commerce to the city and are a vital tax base. I would prefer a family oriented business be considered over an LA Fitness or BJs.

Thanks for your service to the city.

-Todd

From: Mona [mailto:[mbpatrick@aol.com](mailto:mbpatrick@aol.com)]  
Sent: Sunday, January 22, 2017 9:23 AM  
To: Steven Fowler  
Subject: La fitness

Please do not vote to approve this!!!

Thanks,

Mona Patrick  
[5626186662](tel:5626186662)

**From:** Jason Reed [mailto:[jason.nationsrecovery@gmail.com](mailto:jason.nationsrecovery@gmail.com)]  
**Sent:** Saturday, January 21, 2017 7:28 AM  
**To:** Steven Fowler  
**Subject:** LA Fitness

I own a home in the Rossmoor community. Please approve the building of the LA Fitness. I look forward to a fitness center within walking distance of my home.

Jason M Reed  
11612 Wallingsford Rd  
Rossmoor, CA 90720  
[714-925-2555](tel:714-925-2555)

**From:** jmwagoner [mailto:[jmwagoner@Verizon.net](mailto:jmwagoner@Verizon.net)]  
**Sent:** Friday, January 20, 2017 8:16 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

We're writing to express our opposition to the LA Fitness Project proposal. It will be massive traffic to Rossmoor and to Seal Beach Blvd. And the parking will be taking up places where the apartments should be parking and employee parking for the center.

We saw a lady doing a traffic study and it was at night when it would not be so busy. I'm not sure you've done the proper study for traffic implications.

Please know that we are opposed to the project of putting LA Fitness in our community. Every corner has fitness gyms. We don't need a gym in our neighborhood. It will impact us severely.

Janet and Jim Wagoner  
[562 594 4096](tel:5625944096)  
12111 Silver Fox Rd  
Rossmoor, CA. 90720

**From:** Glenn Ducat [mailto:[glennducat@yahoo.com](mailto:glennducat@yahoo.com)]  
**Sent:** Sunday, January 29, 2017 12:54 PM  
**To:** Steven Fowler  
**Subject:** Comment on LA Fitness Proposed Project

Steve,

I am a resident of Rossmoor. My comments re the Proposed LA Fitness Project in the Rossmoor Shops are given below:

I am writing in support of the proposed project. I feel like it could be a significant improvement to the community and be a mechanism to improve traffic flow in the areas.

1. As I understand it, one of the major objections to the proposed project has to do with traffic. I agree that traffic around Sprouts is difficult. The new project offers some options to IMPROVE traffic around Sprouts. I think there are several options to improve traffic flow. Independent of the outcome of this project, Sprouts should CLOSE one or two of the first two access points from the parking lot in front of the store. This would alleviate the congestion at the North/South intersection of Rossmoor Center Way in front of Sprouts/Behind Panera. An alternative would be to close this N/S intersection to through traffic, i.e., only allow traffic from Los Al Blvd to continue over to Montecito without turns at the entrance to Sprouts and Pei Wei. This would "force" traffic away from the front of Sprouts and improve safety and traffic flow.

2. OK. Let's understand this. The opponents of the project complain that traffic would be severely increased. But, there is a second half of this complaint. Namely, if a LOT of people use the proposed project (i.e., more traffic), that means that a LOT of people WANT TO HAVE ACCESS TO THE FACILITY because it is a benefit to them and, therefore, the community. My personal impression is that a significant fraction of the people who would use the facility will be coming from Rossmoor anyway. In other words, these people would be traveling in cars through the community on their way to fitness centers currently located elsewhere, i.e., not NEW car trips, just trips to a different end point. And then, many of these folks would combine their fitness trip with a trip to Sprouts, some place they already travel to. It will be a dual purpose trip rather than a single purpose trip. This would result in no more NET traffic than is already experienced and would improve net sales at Sprouts and other surrounding businesses.

3. Duration of Stay: My experience is that visitors to fitness centers stay roughly two hours. In other words, they arrive, park and do not reappear as "traffic" for another two hours. Therefore, the number of

visitors to the fitness center, would not create as much traffic as visitors to Kohl's, Sprouts or Home Goods.

4. Traffic Flow: Traffic flow in the area needs to be improved. The only way to get this improvement is to approve the new project which will provide the "money" to provide the improvements.

5. The developers have WISELY made the front of the facility on the SOUTH. This will redirect traffic flow from away from Rossmoor Center Way and distribute traffic flow out toward many outlets toward the South. Regardless of the outcome of this project, the owners of Sprouts should be ENCOURAGED to open an entrance/exit from the back of their store. This has been done at Trader Joe's over on Bellflower and improves the movement of cars away from the front, congested entrance, the exact problem being experienced at Sprouts today.

6. Use of Property: This is a philosophical point - I believe property owners should be allowed to develop their properties as they see fit - WITHIN BOUNDS. In other words, developers should be free to develop their properties as THEY see fit as long as the new facility is not at odds with CONVENTIONAL COMMUNITY NORMS and PROVIDES A COMMUNITY BENEFIT. The proposed project is not a porn shop or the like. It will succeed or fail in the based on it's "benefits" to the community. Is the traffic resulting from Staples, Sprouts, Panera or Kohls more "beneficial" than traffic from a new fitness facility?? It's not up to "government" to decide. It's a "decision" for the free market place.

7. Provisional Approval: The city could "approve" the project "provisionally" by requiring the developer to set aside a specified amount of funds for "unforeseen" traffic mitigation improvements that become apparent only after the project is build and operational.

I hope these comments are beneficial to the reviewers.

If you have any questions, please call me at [\(562\) 596-1826](tel:5625961826).

Thanks,

Glenn Ducat,  
Rossmoor Resident

**From:** [jbgsg60@aol.com](mailto:jbgsg60@aol.com) [mailto:[jbgsg60@aol.com](mailto:jbgsg60@aol.com)]  
**Sent:** Sunday, January 29, 2017 11:21 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

City of Seal Beach Department of Community Development

The LA Fitness Health Club is supposed to promote "Good Health". How is that possible with their hours of operation? The American Medical Association for years has recommended 7 ½ to 8 hours of sleep per night for "Good Health". LAFHC will be open 18 hours 5 days and 17 hours 1 day per week plus the arrival and departures of employees that equates to 5 hours 5 days and 6 hours 1 day of quiet sleep time. This will never "settle in" it will be 6 days per week, every week, every month, every year! There will be the stopping and starting of cars, closing or slamming of car doors, alarm systems being set and unset, conversations, etc. 6 days a week that will add to noise that will not "settle in". Why should my neighbors and I be deprived of our sleep?

With this additional traffic and starting of members cars our air quality will be effected. The additional pollution that is caused will not "settle in" it also will be added 7 days a week every year. Why should we be subjected to this additional pollution?

The additional traffic will also cause more safety issues. People being who they are do not think of safety first – that will only increase with the addition of this project and more traffic.

If the health and safety of the residents that surround this proposed project matter then you in your wisdom will reject this project!

Thank you for your consideration.

Sande Gottlieb

12300 Montecito Rd #24

Seal Beach

From: Joni's Gmail [mailto:[joni.jones.cpa@gmail.com](mailto:joni.jones.cpa@gmail.com)]

Sent: Thursday, January 26, 2017 3:46 PM

To: Steven Fowler

Subject: LA Fitness

I am opposed to the LA Fitness Project at the Shops at Rossmoor.

Here are my concerns:

- 1 Traffic, traffic, traffic - gyms regularly have their heaviest volume before work (6-8am) and after work (5-8pm). This is also when people are trying to get home and is already peak traffic here. I can't stress this enough that the volume of traffic expected will not only reduce the number of people who want to live in this community but reduce the number of people who want to shop here also.
- 2 Street size - Rossmoor Center way was not built or anticipated to have traffic as estimated given the size of the proposed gym.
3. Safety - Increasing the traffic given the volume proposed will greatly increase the chances of auto accidents and auto/pedestrian accidents. Residents in this area like to walk to Sprouts, restaurants, shopping but will not feel safe to do so.
4. Parking - it will reduce the available parking in the area. The parking behind sprouts is already ready used by the local residents and is the overflow for Sprouts, Home Goods, Kohls, Petco, Ulta etc.
5. Crime - having a facility open 20 hours a day will bring people looking for targets.
6. Air quality - Increasing traffic so much will increase the pollution from vehicles and at the same time block some of the sea breeze creating additional pollution.
7. Noise - All the increased activity and traffic will create excess noise pollution for those of us living here.
7. Reduced property value - The additional traffic, reduced safety, limited parking, increased crime, decreased air quality and increased noise will reduce home property values which will over the long haul reduce the value of the commercial center as well.

Joni Jones

Rossmoor resident

**From:** Wolfgang Konrad [mailto:[postplatte@yahoo.com](mailto:postplatte@yahoo.com)]  
**Sent:** Thursday, January 26, 2017 9:57 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

Steven,

I do live in 12300 Montecito Rd Apt 6, Seal Beach, CA 90740.

I am against building the LA Fitness behind our building due to  
Negative environmental impact  
Negative impact on safety  
Other negative impacts

Sincerely,

Wolfgang Konrad

**From:** Peter Lipschultz [mailto:[plipschultz@gmail.com](mailto:plipschultz@gmail.com)]  
**Sent:** Friday, January 27, 2017 1:44 PM  
**To:** Steven Fowler  
**Cc:** Thomas Moore  
**Subject:** LA Fitness

Dear Mr. Fowler,

I object to the LA Fitness project because it would have a direct & negative impact on where I live, Rossmoor Park Condominiums. When the property was converted into condominiums in 1979, no thought was given to the lack of parking spaces for owners & renters. Seal Beach City planners did not take this into consideration at that time. As a result, we were forced to seek additional parking. When we parked in the adjacent streets in Rossmoor, we were disrupting their neighborhood life & activities. We are simply at a dead end to alleviate the parking problems. That's why such a potentially large project with so many parking spaces required, would leave residents like myself stuck in a no win situation.

Perhaps the owners of Rossmoor Ctr could come up with a smaller project that would have a lesser impact on the neighborhood. I was thinking a craft shop for kids would draw much interest in a neighborhood full of young children. Let's be creative in coming up with a solution. Furthermore, there are plenty of fitness gyms in our immediate area; my condominium offers a free gym, as do many condominiums in the immediate area. Another gym does nothing for the development of our community!!

Sincerely ,

Petrer Lipschultz 12200 Montecito Rd, SB



**From:** Peter Lipschultz [mailto:[plipschultz@gmail.com](mailto:plipschultz@gmail.com)]  
**Sent:** Thursday, January 26, 2017 9:09 PM  
**To:** Steven Fowler  
**Cc:** Thomas Moore  
**Subject:** LA Fitness

Dear Mr. Fowler,

I have several objections to the LA Fitness project which I will send you in a series of emails. My first objection would be increased traffic & resulting bottlenecks that would result. I feel confident in saying this based on my observations of the LA Fitness on Valley View St (just 4 miles from the Rossmoor Center; a ten minute ride). I was over there on the weekend & this Wednesday. On the weekend about 1 pm, the parking lot was packed with close to a hundred cars—very few spaces available to park. When I was there on Wednesday, the parking lot was filling up as the attached photo demonstrates.

Again the traffic at Rossmoor Center would be impacted greatly in a neighborhood already quite busy. Please keep this in mind.

Thanks

Peter Lipschultz  
12200 Montecito Rd, SB

**From:** Peter Lipschultz [mailto:[plipschultz@gmail.com](mailto:plipschultz@gmail.com)]  
**Sent:** Friday, January 27, 2017 3:32 PM  
**To:** Steven Fowler  
**Cc:** Thomas Moore  
**Subject:** LA Fitness

Dear Mr. Fowler,

I object to the La Fitness project based on the fact that commercial gyms prey on the consumer and must constantly generate new customers in order to keep making any profits.

From an economic standpoint gyms are not really looking for regular consumers (according to The Atlantic Magazine article, "This is Why You don't Go to the Gym", dated June 13, 2012). The following makes sense:

"Gyms make most of their money from two sorts of people: 1) Absentee members and 2) super-users who pay not only the monthly fee but also for the add-ons, like trainers and classes, all the way down to the whey smoothies.

"Commercial health clubs need about 10 times as many members as their facilities can handle, so designing them for athletes, or even aspiring athletes, makes no sense," Men's Journal explained in Everything You Know About Fitness Is a Lie. One way to build a financially efficient gym is to make it appear really financially inefficient for gym rats:

The winning marketing strategy, according to *Recreation Management Magazine*, a health club-industry trade rag, focuses strictly on luring in the "out-of-shape public," meaning all of those people whose doctors have told them. The entire gym, from soup to nuts, has been designed around getting suckers to sign up, and then getting them mildly, vaguely exercised every once in a long while, and then getting them out the door.

And like all of us do: we make resolutions to lose weight in the beginning of the year and then by April those resolutions are forgotten. However, you're still paying your monthly fees. As the Atlantic Magazine article concludes, "On the bright side, your flabby willpower means open weight machines for other gym members. Our laziness isn't good for our fitness, but it just might be good news for the fitness industry."

Such an enterprise in the midst of my neighborhood does little for COMMUNITY DEVELOPMENT . It only creates income for the owners and leaves the average consumer frustrated and disappointed! Please reject the LA Fitness project!!

Sincerely,

Peter Lipschultz 12200 Montecito Rd, SB [\(562\) 493-6362](tel:5624936362)

From: Karen Swenson [mailto:[napkaren@me.com](mailto:napkaren@me.com)]  
Sent: Friday, January 20, 2017 3:28 PM  
To: Steven Fowler  
Subject: LA Fitness

Please, DO NOT construct LA Fitness behind the Sprouts Market. Seal Beach is well aware of the safety concerns for our pedestrians and school children and the safety concerns of massive amount of new traffic added on Saint Cloud as well as on the few access driveways to the shopping center. Please, DO NOT for financial gain "ram through" a massive intrusion to the Rossmoor community. After Seal Beach tore down the small Rossmoor Gym to make room for the Shops in Rossmoor, I joined 24 Hour Fitness Gym on Katella. While a gym in the Shops of Rossmoor would be far closer, I would not want my Rossmoor community to experience the traffic and safety concerns that a huge gym would impose.

Karen Swenson  
Rossmoor Homeowners Association: Standards Committee  
Rossmoor: Block Captain

**From:** Fred Wing [mailto:[wingf52@gmail.com](mailto:wingf52@gmail.com)]  
**Sent:** Friday, January 27, 2017 2:12 PM  
**To:** Steven Fowler  
**Subject:** LA Fitness

Steve, as a long time Rossmoor resident, I have some real concerns about the proposed fitness club in the shops at Rossmoor. Specifically, the entrances at exits to the center are already woefully inadequate to handle current traffic demands, let alone additional traffic that would be created. The entrance at Rossmoor Center Way is only one lane in and one lane out to Seal Beach Blvd, and already backs up on the Northbound Seal Beach Blvd direction from the left turn lane blocking the #1 lane at peak times. Already there are people turning left into the center in front of Chik Fil A over the double/double lines, a traffic infraction. More and more drivers are finding the entrances to the center from Montecito or St. Cloud, increasing the traffic noise and dust in the residential area. The traffic study must identify these problems, and how they will be alleviated, in order for this project to move forward.

Thank you!

Fred Wing  
Rossmoor  
[\(562\) 493 3441](tel:5624933441)  
[wingf52@gmail.com](mailto:wingf52@gmail.com)

**From:** [Jbgsig60@aol.com](mailto:Jbgsig60@aol.com) [mailto:[Jbgsig60@aol.com](mailto:Jbgsig60@aol.com)]

**Sent:** Monday, January 30, 2017 10:36 AM

**To:** Steven Fowler

**Subject:** LA Fitness

City of Seal Beach Department of Community Development

The western line of the LAFHC project and eastern line of my condo home at 12300 Montecito Rd is one and the same.

Has the shopping center (CPT Shops at Rossmoor, LLC) employed experts in the field who were able to determine how much the value of my home will be negatively impacted by the HC project and what is that impact in dollars? If not addressed why hasn't it been?

An EIR was not required for this project and none were prepared for any of the previous construction projects as stated by your own Mr. Jim Basham on the record at a public meeting. Why now a U turn on the subject of an EIR?

Just think of it; if I want to rest my eyes I can look out my bedroom window at a painted blank concrete tilt-up wall. How much more restful can it get. My ears meanwhile can listen to the hum of HVAC units and exhaust fans. That noise will cover up the noise from the cars arriving and departing the site at all hours of the day and into the night.

And try to avoid the smells. BO from the exhaust fans, toilet odors from the bathroom vent stacks and chlorine, a carcinogen, from the Lap Pool.

What the hell it will be like living in paradise – Where do I sign up?

Jerome Gottlieb

12300 Montecito Rd #24

Seal Beach, CA 90740

[562-431-6803](tel:562-431-6803)

January 27, 2017

Steve Fowler, Assistant Planner  
City of Seal Beach Department of Community Development  
211 Eighth Street, Seal Beach, CA 90740

Dear Mr. Fowler:

We are writing in support of the application by LA Fitness to build a club in the Shops at Rossmoor.

As 30-year residents of neighboring Rossmoor Highlands, we believe this project would be an asset to the whole community. In our case in particular, however, it would help us to maintain our health.

We are long-time LA Fitness members who now must drive busy Seal Beach Boulevard to reach the nearest club branches in Los Altos or Garden Grove. A club at the shopping complex would allow us to simply walk there.

The traffic, noise, safety and parking mitigation that the project has promised seems quite reasonable to us.

So we hope Seal Beach officials will see their way clear to approve this project as soon as possible.

Sincerely yours,

William and Susan Nottingham

**From:** [bpiburn@verizon.net](mailto:bpiburn@verizon.net) [mailto:[bpiburn@verizon.net](mailto:bpiburn@verizon.net)]

**Sent:** Monday, January 30, 2017 9:56 AM

**To:** Steven Fowler

**Subject:** LA fitness appear again when the city knows our beliefs. We fought this once, we will

Mr. Fowler--I want to express my dismay and opposition to the building of the LA Fitness Center in the Rossmoor Center. That area is no place for a business that is open 20 hours a day. It will cause too much traffic, too much noise and totally ruin property values for the condos around it. Those of us who live here were shocked to see the whole project. We fought this once and will fight it again.

Elizabeth (Beth) Piburn  
12300 Montecito Rd #48  
Seal Beach

Beth Piburn  
[bpiburn@verizon.net](mailto:bpiburn@verizon.net)

**From:** jerry strayve [mailto:[jstrayve@gmail.com](mailto:jstrayve@gmail.com)]

**Sent:** Monday, January 30, 2017 1:34 PM

**To:** Steven Fowler

**Subject:** LA Fitness

Dear Mr. Fowler and/or Whom It May Concern:

First of all I would like to complement you and the City of Seal Beach for your efforts in maintaining a wonderful community that is the North End of Seal Beach. It is always a pleasure visiting the community; and I think of it as a "home away from home."

Last weekend when visiting Seal Beach I had the opportunity to go house "shopping" and ran across a lovely community, Rossmoor Park. 12200 Montecito Road. While previewing some Open Houses, it came to my attention that there may be a large fitness center developed across the street from where I was considering purchasing a home.

I must tell you that I was and am very concerned about living near such a facility. For all the obvious reasons, traffic flow/congestion; parking; safety (my grandchildren in particular); and security.

I hope as this matter moves forward that you and other leaders in the community will consider the option of locating that facility to another location. You have a wonderful neighborhood there. It would be a shame to lose its present idyllic ambiance by giving way to obtuse commercialization.

I wish you and your community the best,

jrs

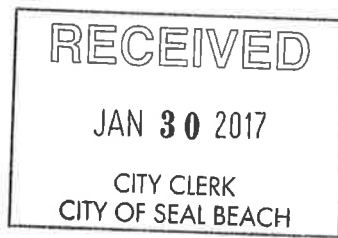
--

Jerry Strayve, Jr.

[619-990-3649](tel:619-990-3649)

[jstrayve@gmail.com](mailto:jstrayve@gmail.com)

The City of Seal Beach



January 30, 2017

Crystal Landavazo, Senior Planner  
Community Development Department  
Seal Beach, CA 90740

Ref: Initial Study, LA Fitness Health Club, dated December 2016

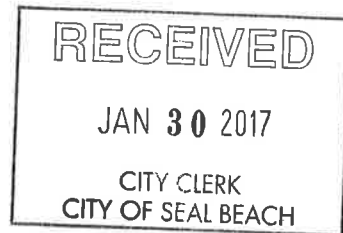
Attachment: Comments to Initial Study

Dear Crystal,

Please find my comments attached.

Best regards,

Craig Maunders  
12200 Montecito Road, Apt. J206  
Seal Beach, California  
90740



January 30, 2017

Ref: Initial Study, LA Fitness Health Club, dated December 2016

Attachment: Comments to reference

Dear interested and concerned parties,

In the present, challenged economic environment, many shopping centers in O.C. have suffered an inexorable downward spiral following short-sighted decisions by property owner or developer. While recognizing the obligation of city staff to fairly evaluate applicants proposal, it seems reasonable that the City of Seal Beach should also take every possible step to highlight a projects shortcomings, as well as its strengths, so that subsequent evaluations by city commissions can make informed decisions, and the city does not needlessly suffer the consequences and liabilities of a developer's self-inflicted wound.

In the opinion of the undersigned, this project, which in essence was already submitted and evaluated by the public, and rejected by the city processes last year should NOT be approved as a consequence of the detrimental impact not only to Shops at Rossmoor (SoR) neighbors, but to present and future customers of, as well as commercial tenants at, SoR.

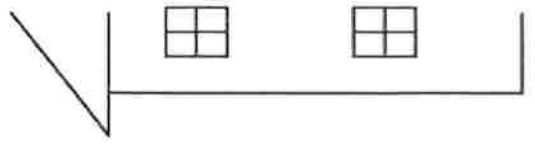
Best regards,

Craig Maunders  
12200 Montecito Road, Apt. J206  
Seal Beach, California  
90740

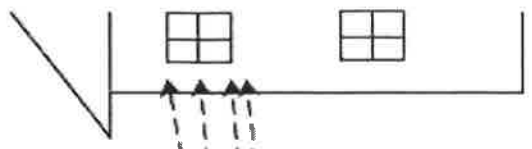
## 4.12 Noise

Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project

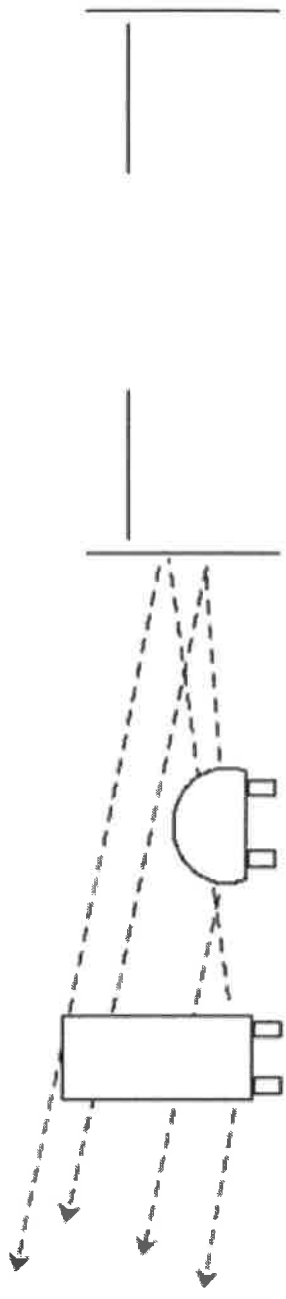
The Initial Study (page 52, ¶3), acknowledges that “operation of the proposed project... could result in an ambient increase...noise by 3 dB(A) or more,” however it fails to acknowledge that even in the absence of new traffic, the building itself, where it is presently proposed, will take on the unintended function of “acoustic reflector,” amplifying the traffic noise from Rossmoor Center Way (due to reverberation), and sending it to the condos to the north, where previously traffic noise was largely reflected away by the carport wall. With the height of the new building, both the northerly and southerly directed noise will be directed towards bedroom windows. See attached schematic illustrating this. Independent noise measurements taken at the approximate location of the proposed new building northern wall showed peaks from traffic at 72.5 dB(A) to 80.5 db(A) without the reverberation, and should be included in the EIR analysis of both traffic as well as customer-sourced noise from persons exiting and entering their vehicles and the club.



Condos



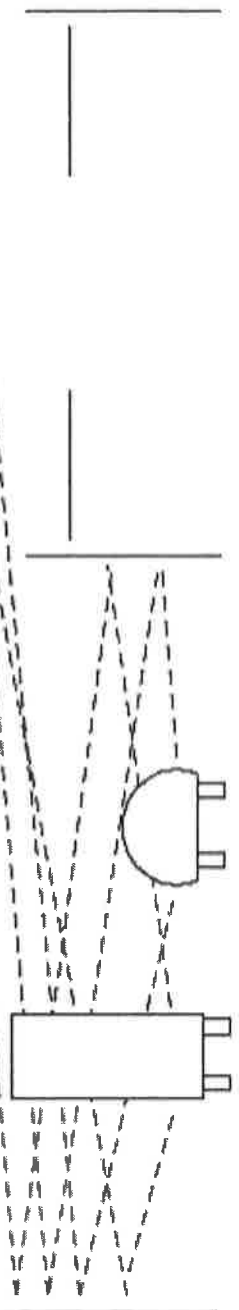
Carports



Vehicles on Rossmore Center Way



New Bldg.





## 4.16 - Transportation and Traffic

### d) Substantially increased hazards due to a design feature...

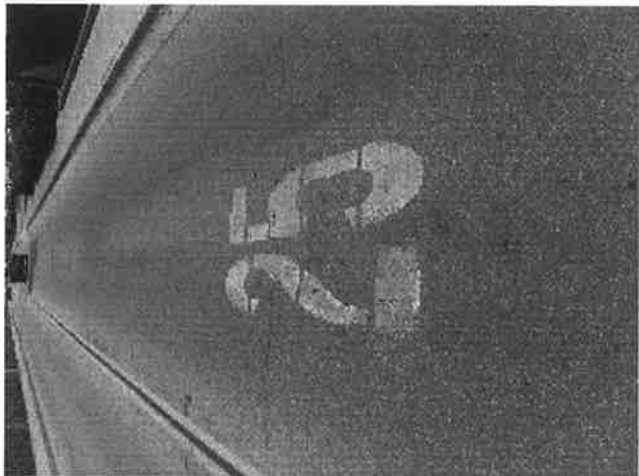
For the purpose of completeness, the new traffic study should include

1) Impact of pedestrian and bicycle usage on affected street intersections. The former traffic study did not recognize, nor acknowledge intersection-blockage events at Internal Driveway and RCW. These occur with and without pedestrian crossing there, as a result of cross-walking pedestrians blocking traffic in front of Sprouts. Clearly at RCW, a key intersection of the study should include 4-way STOP impact every time pedestrians cross, both at RCW and Internal driveway, as well as backup due to pedestrians in front of Sprouts.

2) The traffic analysis assumptions in previous report assumed RCW is a 30-mph thru-street of three (3) lanes. Attached photos show posted and placarded speed limit at 25-mph. Attached photos also show County and delivery vehicles parked on RCW, funneling traffic down to a lane and a half, these limitations should be accounted for. In addition, existence of residential gate located north of and between Sprouts loading dock (west) and its front door (east), and which empties onto RCW should be accounted for. As the adjacent Condo complex houses 256 units, dozens of vehicles exit, primarily during morning hours, and pose a potential of further blocking westbound traffic as residents attempt to negotiate into either east or west bound lanes. The new traffic study materials need to account for this, as well of the reduced window of safety in navigating the turn from said gate in the face of decreased cross- traffic arrival interval.

As a result of uncertainty in new daily trip estimate (1,218 per the former report vs 1,285 - 1,714 as suggested by the LA Fitness cited 1.5 avg. visits / week of 6,000 - 8,000 members), traffic study should assess consequences of the higher estimates. For example, the previous study cites only two-car-length queues east-bound on RCW at the 4-way STOP. At a level of only 4 car lengths, the east-bound queue there will cause east-bound exiting residents of the condo to block the west-bound lane.

The new study should address the queue which will exist with left-turning traffic in the west bound lane of RCW directly behind the Sprouts store. This queue will occur whenever traffic must wait for right-of-way to turn across the east-bound lane. The east-bound lane will be seeing increased bursts of cars from new exiting traffic from the athletic center at the West Rd / RCW intersection. At a level of only 3 car lengths, the west-bound queue behind Sprouts will cause west-bound traffic, including exiting residents of the condo, to be blocked, and east-bound traffic condo residents will not be able to see for safe exit.





EDMUND G. BROWN JR.  
GOVERNOR

STATE OF CALIFORNIA  
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH  
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX  
DIRECTOR

**Notice of Preparation**

January 4, 2017

To: Reviewing Agencies

Re: LA Fitness Health Club  
SCH# 2017011003

Attached for your review and comment is the Notice of Preparation (NOP) for the LA Fitness Health Club draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

**Steve Fowler  
City of Seal Beach  
211 Eighth Street  
Seal Beach, CA 90740**

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan  
Director, State Clearinghouse

Attachments  
cc: Lead Agency

**Document Details Report  
State Clearinghouse Data Base**

**SCH#** 2017011003  
**Project Title** LA Fitness Health Club  
**Lead Agency** Seal Beach, City of

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**Type** NOP Notice of Preparation  
**Description** The proposed project is the construction of a 37,000 sf, single story private health club to be located within the existing Shops at Rossmoor retail center. The proposed project would be built on an existing parking lot, and the surrounding parking lot would be reconfigured to accommodate the parking demands of the proposed use and the center. The health club would provide membership-based fitness services, including access to exercise equipment, group fitness classes, and personal fitness training. The health club is proposed to operate seven days a week. Hours of operation would be 5:00 AM to 11:00 PM Monday through Friday, 5:00 AM to 10:00 PM on Saturday, and 8:00 AM to 8:00 PM on and Sunday.

---

**Lead Agency Contact**

**Name** Steve Fowler  
**Agency** City of Seal Beach  
**Phone** (562) 431-2527 x 1316 **Fax**  
**email**  
**Address** 211 Eighth Street  
**City** Seal Beach **State** CA **Zip** 90740

---

**Project Location**

**County** Orange  
**City** Seal Beach  
**Region**  
**Cross Streets**  
**Lat / Long**  
**Parcel No.**  
**Township** **Range** **Section** **Base**

---

**Proximity to:**

**Highways**  
**Airports**  
**Railways**  
**Waterways**  
**Schools**  
**Land Use**

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**Project Issues** Air Quality; Noise; Traffic/Circulation; Other Issues

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**Reviewing Agencies** Resources Agency; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 5; Native American Heritage Commission; Caltrans, District 12; Regional Water Quality Control Board, Region 4; Regional Water Quality Control Board, Region 8

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**Date Received** 01/04/2017 **Start of Review** 01/04/2017 **End of Review** 02/02/2017

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Resources Agency

Resources Agency  
Nadell Gayou

Dept. of Boating & Waterways  
Denise Peterson

California Coastal Commission  
Elizabeth A. Fuchs

Colorado River Board  
Lisa Johansen

Dept. of Conservation  
Elizabeth Carpenter

California Energy Commission  
Eric Knight

Cal Fire  
Dan Foster

Central Valley Flood Protection Board  
James Herola

Office of Historic Preservation  
Ron Parsons

Dept of Parks & Recreation Environmental Stewardship Section

California Department of Resources, Recycling & Recovery  
Sue O'Leary

S.F. Bay Conservation & Dev't. Comm.  
Steve Goldbeck

Dept. of Water Resources Agency  
Nadell Gayou

Fish and Game

Dept. of Fish & Wildlife  
Scott Flint  
Environmental Services Division

Fish & Wildlife Region 1  
Curt Babcock

Fish & Wildlife Region 1E  
Laurie Hamsberger

Fish & Wildlife Region 2  
Jeff Dronngesen

Fish & Wildlife Region 3  
Craig Weightman

Fish & Wildlife Region 4  
Julie Vance

Fish & Wildlife Region 5  
Leslie Newton-Reed  
Habitat Conservation Program

Fish & Wildlife Region 6  
Tiffany Ellis  
Habitat Conservation Program

Fish & Wildlife Region 6 I/M  
Heidi Calvert  
Inyo/Mono. Habitat Conservation Program

Dept. of Fish & Wildlife M  
William Paznokas  
Marine Region

Other Departments

Food & Agriculture  
Sandra Schubert  
Dept. of Food and Agriculture

Dept. of General Services  
Public School Construction

Dept. of General Services  
Cathy Buck/George Carollo  
Environmental Services Section

Delta Stewardship Council  
Kevan Samsam

Housing & Comm. Dev.  
CEQA Coordinator  
Housing Policy Division

Independent Commissions, Boards

Delta Protection Commission  
Erik Vink

OES (Office of Emergency Services)  
Monique Wilber

Native American Heritage Comm.  
Debbie Treadway

Public Utilities Commission Supervisor

Santa Monica Bay Restoration  
Guangyu Wang

State Lands Commission  
Jennifer Deleong

Tahoe Regional Planning Agency (TRPA)  
Cherry Jacques

Cal State Transportation Agency CalSTA

Caltrans - Division of Aeronautics  
Philip Crimmins

Caltrans - Planning  
HQ LD-IGR  
Terri Pencovic

California Highway Patrol  
Suzann Ikeuchi  
Office of Special Projects

Dept. of Transportation

Caltrans, District 1  
Rex Jackman

Caltrans, District 2  
Marcelino Gonzalez

Caltrans, District 3  
Eric Federicks - South  
Susan Zanchi - North

Caltrans, District 4  
Patricia Maurice

Caltrans, District 5  
Larry Newland

Caltrans, District 6  
Michael Navarro

Caltrans, District 7  
Dianna Watson

Caltrans, District 8  
Mark Roberts

Caltrans, District 9  
Gayle Rosander

Caltrans, District 10  
Tom Dumas

Caltrans, District 11  
Jacob Armstrong

Caltrans, District 12  
Maureen El Harake

Cal EPA

Air Resources Board  
Airport & Freight  
Cathi Slaminski

Transportation Projects  
Nesamani Kalandyur

Industrial/Energy Projects  
Mike Tollstrup

State Water Resources Control Board  
Regional Programs Unit  
Division of Financial Assistance

State Water Resources Control Board  
Cindy Forbes - Asst Deputy  
Division of Drinking Water

State Water Resources Control Board  
Div. Drinking Water # \_\_\_\_\_

State Water Resources Control Board  
Student Intern, 401 Water Quality Certification Unit  
Division of Water Quality

State Water Resources Control Board  
Phil Crader  
Division of Water Rights

Dept. of Toxic Substances Control  
CEQA Tracking Center

Department of Pesticide Regulation  
CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

RWQCB 1  
Cathleen Hudson  
North Coast Region (1)

RWQCB 2  
Environmental Document Coordinator  
San Francisco Bay Region (2)

RWQCB 3  
Central Coast Region (3)

RWQCB 4  
Teresa Rodgers  
Los Angeles Region (4)

RWQCB 5S  
Central Valley Region (5)

RWQCB 5F  
Central Valley Region (5)  
Fresno Branch Office

RWQCB 5R  
Central Valley Region (5)  
Redding Branch Office

RWQCB 6  
Lahontan Region (6)

RWQCB 6V  
Lahontan Region (6)  
Victorville Branch Office

RWQCB 7  
Colorado River Basin Region (7)

RWQCB 8  
Santa Ana Region (8)

RWQCB 9  
San Diego Region (9)

Other \_\_\_\_\_

\_\_\_\_\_  
Conservancy

# **Appendix C:**

## **Air Quality**

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

**LA Fitness - Health Club at Rossmoor  
South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	34.52	1000sqft	1.12	34,523.00	0
Health Club	37.00	1000sqft	0.85	37,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - PTG - Construction presumed to begin late 2017.

Land Use - PTG - Model run updated to reflect a total of 85,600 square feet of disturbance from asphalt being removed, 34,523 square feet of new asphalt being laid over disturbed area, and the construction of the 37,000 square foot health club.

Construction Phase - PTG - Model updated to reflect an approximately six month construction timeline for the activities including ground disturbance.

Trips and VMT - PTG - Updated to capture any offhaul of debris that may be need to be taken from the site.

Architectural Coating - PTG - Model updated to reflect interior and exterior areas that will be painted as a result of the project.

Energy Use -

Construction Off-road Equipment Mitigation - PTG - Model updated to reflect compliance with SCAQMD Rule 403, and that the project would water exposed areas two times per day.

Grading -

## LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	18,500.00	29,580.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	55,500.00	88,740.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	200.00	63.00
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblLandUse	BuildingSpaceSquareFeet	34,520.00	34,523.00
tblLandUse	LandUseSquareFeet	34,520.00	34,523.00
tblLandUse	LotAcreage	0.79	1.12
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	0.00	6.00

## 2.0 Emissions Summary

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LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-10-2017	1-9-2018	0.8012	0.8012
2	1-10-2018	4-9-2018	0.6118	0.6118
3	4-10-2018	7-9-2018	0.3152	0.3152
		Highest	0.8012	0.8012

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1537	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Energy	4.1800e-003	0.0380	0.0320	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	152.7054	152.7054	5.3900e-003	1.7100e-003	153.3496
Mobile	0.3483	1.7250	4.0111	0.0120	0.9114	0.0141	0.9255	0.2442	0.0133	0.2575	0.0000	1,103.5591	1,103.5591	0.0632	0.0000	1,105.1378
Waste						0.0000	0.0000		0.0000	0.0000	42.8108	0.0000	42.8108	2.5301	0.0000	106.0619
Water						0.0000	0.0000		0.0000	0.0000	0.6943	13.8265	14.5207	0.0719	1.8000e-003	16.8546
<b>Total</b>	<b>0.5062</b>	<b>1.7631</b>	<b>4.0440</b>	<b>0.0122</b>	<b>0.9114</b>	<b>0.0170</b>	<b>0.9284</b>	<b>0.2442</b>	<b>0.0162</b>	<b>0.2604</b>	<b>43.5050</b>	<b>1,270.0927</b>	<b>1,313.5977</b>	<b>2.6705</b>	<b>3.5100e-003</b>	<b>1,381.4058</b>

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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1537	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Energy	4.1800e-003	0.0380	0.0320	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	152.7054	152.7054	5.3900e-003	1.7100e-003	153.3496
Mobile	0.3483	1.7250	4.0111	0.0120	0.9114	0.0141	0.9255	0.2442	0.0133	0.2575	0.0000	1,103.5591	1,103.5591	0.0632	0.0000	1,105.1378
Waste						0.0000	0.0000		0.0000	0.0000	42.8108	0.0000	42.8108	2.5301	0.0000	106.0619
Water						0.0000	0.0000		0.0000	0.0000	0.6943	13.8265	14.5207	0.0719	1.8000e-003	16.8546
<b>Total</b>	<b>0.5062</b>	<b>1.7631</b>	<b>4.0440</b>	<b>0.0122</b>	<b>0.9114</b>	<b>0.0170</b>	<b>0.9284</b>	<b>0.2442</b>	<b>0.0162</b>	<b>0.2604</b>	<b>43.5050</b>	<b>1,270.0927</b>	<b>1,313.5977</b>	<b>2.6705</b>	<b>3.5100e-003</b>	<b>1,381.4058</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/10/2017	11/6/2017	5	20	
2	Site Preparation	Site Preparation	11/7/2017	11/20/2017	5	10	
3	Grading	Grading	11/21/2017	12/18/2017	5	20	
4	Building Construction	Building Construction	12/19/2017	3/15/2018	5	63	
5	Paving	Paving	3/16/2018	4/12/2018	5	20	
6	Architectural Coating	Architectural Coating	4/13/2018	5/10/2018	5	20	

**Acres of Grading (Site Preparation Phase): 5**

**Acres of Grading (Grading Phase): 7.5**

**Acres of Paving: 1.12**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 88,740; Non-Residential Outdoor: 29,580; Striped Parking Area: 2,071 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	30.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0276	0.2676	0.1556	2.4000e-004		0.0165	0.0165		0.0154	0.0154	0.0000	21.9668	21.9668	5.5600e-003	0.0000	22.1057
<b>Total</b>	<b>0.0276</b>	<b>0.2676</b>	<b>0.1556</b>	<b>2.4000e-004</b>		<b>0.0165</b>	<b>0.0165</b>		<b>0.0154</b>	<b>0.0154</b>	<b>0.0000</b>	<b>21.9668</b>	<b>21.9668</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>22.1057</b>

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**3.2 Demolition - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	6.5000e-004	6.9300e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.4090	1.4090	5.0000e-005	0.0000	1.4104
<b>Total</b>	<b>7.8000e-004</b>	<b>6.5000e-004</b>	<b>6.9300e-003</b>	<b>2.0000e-005</b>	<b>1.4300e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.4090</b>	<b>1.4090</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.4104</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0276	0.2676	0.1556	2.4000e-004		0.0165	0.0165		0.0154	0.0154	0.0000	21.9668	21.9668	5.5600e-003	0.0000	22.1057
<b>Total</b>	<b>0.0276</b>	<b>0.2676</b>	<b>0.1556</b>	<b>2.4000e-004</b>		<b>0.0165</b>	<b>0.0165</b>		<b>0.0154</b>	<b>0.0154</b>	<b>0.0000</b>	<b>21.9668</b>	<b>21.9668</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>22.1057</b>

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**3.2 Demolition - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	6.5000e-004	6.9300e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.4090	1.4090	5.0000e-005	0.0000	1.4104
<b>Total</b>	<b>7.8000e-004</b>	<b>6.5000e-004</b>	<b>6.9300e-003</b>	<b>2.0000e-005</b>	<b>1.4300e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.4090</b>	<b>1.4090</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.4104</b>

**3.3 Site Preparation - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	0.0148	0.0000	0.0148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6500e-003	0.1111	0.0420	9.0000e-005		5.2300e-003	5.2300e-003		4.8100e-003	4.8100e-003	0.0000	8.0025	8.0025	2.4500e-003	0.0000	8.0638
<b>Total</b>	<b>9.6500e-003</b>	<b>0.1111</b>	<b>0.0420</b>	<b>9.0000e-005</b>	<b>0.0290</b>	<b>5.2300e-003</b>	<b>0.0342</b>	<b>0.0148</b>	<b>4.8100e-003</b>	<b>0.0196</b>	<b>0.0000</b>	<b>8.0025</b>	<b>8.0025</b>	<b>2.4500e-003</b>	<b>0.0000</b>	<b>8.0638</b>



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**3.3 Site Preparation - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.0500e-003	2.0000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2348	0.2348	2.0000e-005	0.0000	0.2352
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	2.0000e-004	2.1300e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4335	0.4335	2.0000e-005	0.0000	0.4340
<b>Total</b>	<b>2.7000e-004</b>	<b>1.2500e-003</b>	<b>2.3300e-003</b>	<b>0.0000</b>	<b>4.9000e-004</b>	<b>1.0000e-005</b>	<b>5.0000e-004</b>	<b>1.3000e-004</b>	<b>1.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.6683</b>	<b>0.6683</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6691</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0131	0.0000	0.0131	6.6500e-003	0.0000	6.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6500e-003	0.1111	0.0420	9.0000e-005		5.2300e-003	5.2300e-003		4.8100e-003	4.8100e-003	0.0000	8.0024	8.0024	2.4500e-003	0.0000	8.0637
<b>Total</b>	<b>9.6500e-003</b>	<b>0.1111</b>	<b>0.0420</b>	<b>9.0000e-005</b>	<b>0.0131</b>	<b>5.2300e-003</b>	<b>0.0183</b>	<b>6.6500e-003</b>	<b>4.8100e-003</b>	<b>0.0115</b>	<b>0.0000</b>	<b>8.0024</b>	<b>8.0024</b>	<b>2.4500e-003</b>	<b>0.0000</b>	<b>8.0637</b>

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**3.3 Site Preparation - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.0500e-003	2.0000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2348	0.2348	2.0000e-005	0.0000	0.2352
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	2.0000e-004	2.1300e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4335	0.4335	2.0000e-005	0.0000	0.4340
<b>Total</b>	<b>2.7000e-004</b>	<b>1.2500e-003</b>	<b>2.3300e-003</b>	<b>0.0000</b>	<b>4.9000e-004</b>	<b>1.0000e-005</b>	<b>5.0000e-004</b>	<b>1.3000e-004</b>	<b>1.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.6683</b>	<b>0.6683</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6691</b>

**3.4 Grading - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.1829	0.0703	1.4000e-004		8.7400e-003	8.7400e-003		8.0400e-003	8.0400e-003	0.0000	13.1079	13.1079	4.0200e-003	0.0000	13.2083
<b>Total</b>	<b>0.0160</b>	<b>0.1829</b>	<b>0.0703</b>	<b>1.4000e-004</b>	<b>0.0491</b>	<b>8.7400e-003</b>	<b>0.0579</b>	<b>0.0253</b>	<b>8.0400e-003</b>	<b>0.0333</b>	<b>0.0000</b>	<b>13.1079</b>	<b>13.1079</b>	<b>4.0200e-003</b>	<b>0.0000</b>	<b>13.2083</b>

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**3.4 Grading - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	4.0000e-004	4.2600e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8671	0.8671	3.0000e-005	0.0000	0.8679
<b>Total</b>	<b>4.8000e-004</b>	<b>4.0000e-004</b>	<b>4.2600e-003</b>	<b>1.0000e-005</b>	<b>8.8000e-004</b>	<b>1.0000e-005</b>	<b>8.9000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.8671</b>	<b>0.8671</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8679</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0221	0.0000	0.0221	0.0114	0.0000	0.0114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.1829	0.0703	1.4000e-004		8.7400e-003	8.7400e-003		8.0400e-003	8.0400e-003	0.0000	13.1079	13.1079	4.0200e-003	0.0000	13.2083
<b>Total</b>	<b>0.0160</b>	<b>0.1829</b>	<b>0.0703</b>	<b>1.4000e-004</b>	<b>0.0221</b>	<b>8.7400e-003</b>	<b>0.0309</b>	<b>0.0114</b>	<b>8.0400e-003</b>	<b>0.0194</b>	<b>0.0000</b>	<b>13.1079</b>	<b>13.1079</b>	<b>4.0200e-003</b>	<b>0.0000</b>	<b>13.2083</b>

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**3.4 Grading - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	4.0000e-004	4.2600e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8671	0.8671	3.0000e-005	0.0000	0.8679
<b>Total</b>	<b>4.8000e-004</b>	<b>4.0000e-004</b>	<b>4.2600e-003</b>	<b>1.0000e-005</b>	<b>8.8000e-004</b>	<b>1.0000e-005</b>	<b>8.9000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.8671</b>	<b>0.8671</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8679</b>

**3.5 Building Construction - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0133	0.0866	0.0646	1.0000e-004		5.5400e-003	5.5400e-003		5.3400e-003	5.3400e-003	0.0000	8.3437	8.3437	1.7500e-003	0.0000	8.3876
<b>Total</b>	<b>0.0133</b>	<b>0.0866</b>	<b>0.0646</b>	<b>1.0000e-004</b>		<b>5.5400e-003</b>	<b>5.5400e-003</b>		<b>5.3400e-003</b>	<b>5.3400e-003</b>	<b>0.0000</b>	<b>8.3437</b>	<b>8.3437</b>	<b>1.7500e-003</b>	<b>0.0000</b>	<b>8.3876</b>

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**3.5 Building Construction - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7000e-004	7.1500e-003	1.9400e-003	1.0000e-005	3.4000e-004	6.0000e-005	4.0000e-004	1.0000e-004	6.0000e-005	1.6000e-004	0.0000	1.3464	1.3464	1.0000e-004	0.0000	1.3489
Worker	8.1000e-004	6.7000e-004	7.2000e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.4632	1.4632	6.0000e-005	0.0000	1.4646
<b>Total</b>	<b>1.0800e-003</b>	<b>7.8200e-003</b>	<b>9.1400e-003</b>	<b>3.0000e-005</b>	<b>1.8200e-003</b>	<b>7.0000e-005</b>	<b>1.8900e-003</b>	<b>4.9000e-004</b>	<b>7.0000e-005</b>	<b>5.6000e-004</b>	<b>0.0000</b>	<b>2.8096</b>	<b>2.8096</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>2.8135</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0133	0.0866	0.0646	1.0000e-004		5.5400e-003	5.5400e-003		5.3400e-003	5.3400e-003	0.0000	8.3437	8.3437	1.7500e-003	0.0000	8.3876
<b>Total</b>	<b>0.0133</b>	<b>0.0866</b>	<b>0.0646</b>	<b>1.0000e-004</b>		<b>5.5400e-003</b>	<b>5.5400e-003</b>		<b>5.3400e-003</b>	<b>5.3400e-003</b>	<b>0.0000</b>	<b>8.3437</b>	<b>8.3437</b>	<b>1.7500e-003</b>	<b>0.0000</b>	<b>8.3876</b>

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**3.5 Building Construction - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7000e-004	7.1500e-003	1.9400e-003	1.0000e-005	3.4000e-004	6.0000e-005	4.0000e-004	1.0000e-004	6.0000e-005	1.6000e-004	0.0000	1.3464	1.3464	1.0000e-004	0.0000	1.3489
Worker	8.1000e-004	6.7000e-004	7.2000e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.4632	1.4632	6.0000e-005	0.0000	1.4646
<b>Total</b>	<b>1.0800e-003</b>	<b>7.8200e-003</b>	<b>9.1400e-003</b>	<b>3.0000e-005</b>	<b>1.8200e-003</b>	<b>7.0000e-005</b>	<b>1.8900e-003</b>	<b>4.9000e-004</b>	<b>7.0000e-005</b>	<b>5.6000e-004</b>	<b>0.0000</b>	<b>2.8096</b>	<b>2.8096</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>2.8135</b>

**3.5 Building Construction - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0700	0.4706	0.3747	6.0000e-004		0.0286	0.0286		0.0276	0.0276	0.0000	49.7433	49.7433	0.0100	0.0000	49.9937
<b>Total</b>	<b>0.0700</b>	<b>0.4706</b>	<b>0.3747</b>	<b>6.0000e-004</b>		<b>0.0286</b>	<b>0.0286</b>		<b>0.0276</b>	<b>0.0276</b>	<b>0.0000</b>	<b>49.7433</b>	<b>49.7433</b>	<b>0.0100</b>	<b>0.0000</b>	<b>49.9937</b>

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**3.5 Building Construction - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4200e-003	0.0402	0.0105	8.0000e-005	2.0400e-003	2.9000e-004	2.3300e-003	5.9000e-004	2.8000e-004	8.7000e-004	0.0000	8.0511	8.0511	5.8000e-004	0.0000	8.0656
Worker	4.2900e-003	3.5300e-003	0.0379	9.0000e-005	8.8900e-003	7.0000e-005	8.9600e-003	2.3600e-003	7.0000e-005	2.4300e-003	0.0000	8.5333	8.5333	2.9000e-004	0.0000	8.5406
<b>Total</b>	<b>5.7100e-003</b>	<b>0.0437</b>	<b>0.0484</b>	<b>1.7000e-004</b>	<b>0.0109</b>	<b>3.6000e-004</b>	<b>0.0113</b>	<b>2.9500e-003</b>	<b>3.5000e-004</b>	<b>3.3000e-003</b>	<b>0.0000</b>	<b>16.5844</b>	<b>16.5844</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>16.6062</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0700	0.4706	0.3747	6.0000e-004		0.0286	0.0286		0.0276	0.0276	0.0000	49.7433	49.7433	0.0100	0.0000	49.9936
<b>Total</b>	<b>0.0700</b>	<b>0.4706</b>	<b>0.3747</b>	<b>6.0000e-004</b>		<b>0.0286</b>	<b>0.0286</b>		<b>0.0276</b>	<b>0.0276</b>	<b>0.0000</b>	<b>49.7433</b>	<b>49.7433</b>	<b>0.0100</b>	<b>0.0000</b>	<b>49.9936</b>

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**3.5 Building Construction - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4200e-003	0.0402	0.0105	8.0000e-005	2.0400e-003	2.9000e-004	2.3300e-003	5.9000e-004	2.8000e-004	8.7000e-004	0.0000	8.0511	8.0511	5.8000e-004	0.0000	8.0656
Worker	4.2900e-003	3.5300e-003	0.0379	9.0000e-005	8.8900e-003	7.0000e-005	8.9600e-003	2.3600e-003	7.0000e-005	2.4300e-003	0.0000	8.5333	8.5333	2.9000e-004	0.0000	8.5406
<b>Total</b>	<b>5.7100e-003</b>	<b>0.0437</b>	<b>0.0484</b>	<b>1.7000e-004</b>	<b>0.0109</b>	<b>3.6000e-004</b>	<b>0.0113</b>	<b>2.9500e-003</b>	<b>3.5000e-004</b>	<b>3.3000e-003</b>	<b>0.0000</b>	<b>16.5844</b>	<b>16.5844</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>16.6062</b>

**3.6 Paving - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1045	0.0899	1.4000e-004		6.1000e-003	6.1000e-003		5.6200e-003	5.6200e-003	0.0000	12.2147	12.2147	3.7300e-003	0.0000	12.3079
Paving	1.4700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0117</b>	<b>0.1045</b>	<b>0.0899</b>	<b>1.4000e-004</b>		<b>6.1000e-003</b>	<b>6.1000e-003</b>		<b>5.6200e-003</b>	<b>5.6200e-003</b>	<b>0.0000</b>	<b>12.2147</b>	<b>12.2147</b>	<b>3.7300e-003</b>	<b>0.0000</b>	<b>12.3079</b>



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**3.6 Paving - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.7000e-004	6.0800e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3695	1.3695	5.0000e-005	0.0000	1.3707
<b>Total</b>	<b>6.9000e-004</b>	<b>5.7000e-004</b>	<b>6.0800e-003</b>	<b>2.0000e-005</b>	<b>1.4300e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.3695</b>	<b>1.3695</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.3707</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1045	0.0899	1.4000e-004		6.1000e-003	6.1000e-003		5.6200e-003	5.6200e-003	0.0000	12.2147	12.2147	3.7300e-003	0.0000	12.3079
Paving	1.4700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0117</b>	<b>0.1045</b>	<b>0.0899</b>	<b>1.4000e-004</b>		<b>6.1000e-003</b>	<b>6.1000e-003</b>		<b>5.6200e-003</b>	<b>5.6200e-003</b>	<b>0.0000</b>	<b>12.2147</b>	<b>12.2147</b>	<b>3.7300e-003</b>	<b>0.0000</b>	<b>12.3079</b>

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**3.6 Paving - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.7000e-004	6.0800e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3695	1.3695	5.0000e-005	0.0000	1.3707
<b>Total</b>	<b>6.9000e-004</b>	<b>5.7000e-004</b>	<b>6.0800e-003</b>	<b>2.0000e-005</b>	<b>1.4300e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.3695</b>	<b>1.3695</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.3707</b>

**3.7 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0201	0.0185	3.0000e-005		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5593
<b>Total</b>	<b>0.2820</b>	<b>0.0201</b>	<b>0.0185</b>	<b>3.0000e-005</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5593</b>

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**3.7 Architectural Coating - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.6000e-004	2.8100e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.6321	0.6321	2.0000e-005	0.0000	0.6326
<b>Total</b>	<b>3.2000e-004</b>	<b>2.6000e-004</b>	<b>2.8100e-003</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.6321</b>	<b>0.6321</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6326</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0201	0.0185	3.0000e-005		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5593
<b>Total</b>	<b>0.2820</b>	<b>0.0201</b>	<b>0.0185</b>	<b>3.0000e-005</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5593</b>

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**3.7 Architectural Coating - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.6000e-004	2.8100e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.6321	0.6321	2.0000e-005	0.0000	0.6326
<b>Total</b>	<b>3.2000e-004</b>	<b>2.6000e-004</b>	<b>2.8100e-003</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.6321</b>	<b>0.6321</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6326</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3483	1.7250	4.0111	0.0120	0.9114	0.0141	0.9255	0.2442	0.0133	0.2575	0.0000	1,103.559 1	1,103.559 1	0.0632	0.0000	1,105.137 8
Unmitigated	0.3483	1.7250	4.0111	0.0120	0.9114	0.0141	0.9255	0.2442	0.0133	0.2575	0.0000	1,103.559 1	1,103.559 1	0.0632	0.0000	1,105.137 8

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,218.41	772.19	989.01	2,399,472	2,399,472
Parking Lot	0.00	0.00	0.00		
Total	1,218.41	772.19	989.01	2,399,472	2,399,472

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Health Club	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.3009	111.3009	4.6000e-003	9.5000e-004	111.6991
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.3009	111.3009	4.6000e-003	9.5000e-004	111.6991
NaturalGas Mitigated	4.1800e-003	0.0380	0.0320	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	41.4045	41.4045	7.9000e-004	7.6000e-004	41.6505
NaturalGas Unmitigated	4.1800e-003	0.0380	0.0320	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	41.4045	41.4045	7.9000e-004	7.6000e-004	41.6505

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Health Club	775890	4.1800e-003	0.0380	0.0320	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	41.4045	41.4045	7.9000e-004	7.6000e-004	41.6505
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>4.1800e-003</b>	<b>0.0380</b>	<b>0.0320</b>	<b>2.3000e-004</b>		<b>2.8900e-003</b>	<b>2.8900e-003</b>		<b>2.8900e-003</b>	<b>2.8900e-003</b>	<b>0.0000</b>	<b>41.4045</b>	<b>41.4045</b>	<b>7.9000e-004</b>	<b>7.6000e-004</b>	<b>41.6505</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Health Club	775890	4.1800e-003	0.0380	0.0320	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	41.4045	41.4045	7.9000e-004	7.6000e-004	41.6505
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>4.1800e-003</b>	<b>0.0380</b>	<b>0.0320</b>	<b>2.3000e-004</b>		<b>2.8900e-003</b>	<b>2.8900e-003</b>		<b>2.8900e-003</b>	<b>2.8900e-003</b>	<b>0.0000</b>	<b>41.4045</b>	<b>41.4045</b>	<b>7.9000e-004</b>	<b>7.6000e-004</b>	<b>41.6505</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	318940	101.6211	4.2000e-003	8.7000e-004	101.9847
Parking Lot	30380.2	9.6798	4.0000e-004	8.0000e-005	9.7144
<b>Total</b>		<b>111.3009</b>	<b>4.6000e-003</b>	<b>9.5000e-004</b>	<b>111.6991</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	318940	101.6211	4.2000e-003	8.7000e-004	101.9847
Parking Lot	30380.2	9.6798	4.0000e-004	8.0000e-005	9.7144
<b>Total</b>		<b>111.3009</b>	<b>4.6000e-003</b>	<b>9.5000e-004</b>	<b>111.6991</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**



LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1537	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Unmitigated	0.1537	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0176					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1359					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
<b>Total</b>	<b>0.1537</b>	<b>1.0000e-005</b>	<b>9.2000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7700e-003</b>	<b>1.7700e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.8900e-003</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0176					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1359					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
<b>Total</b>	<b>0.1537</b>	<b>1.0000e-005</b>	<b>9.2000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7700e-003</b>	<b>1.7700e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.8900e-003</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

LA Fitness - Health Club at Rossmore - South Coast Air Basin, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.5207	0.0719	1.8000e-003	16.8546
Unmitigated	14.5207	0.0719	1.8000e-003	16.8546

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	2.1883 / 1.34121	14.5207	0.0719	1.8000e-003	16.8546
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>14.5207</b>	<b>0.0719</b>	<b>1.8000e-003</b>	<b>16.8546</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	2.1883 / 1.34121	14.5207	0.0719	1.8000e-003	16.8546
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>14.5207</b>	<b>0.0719</b>	<b>1.8000e-003</b>	<b>16.8546</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	42.8108	2.5301	0.0000	106.0619
Unmitigated	42.8108	2.5301	0.0000	106.0619

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	210.9	42.8108	2.5301	0.0000	106.0619
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>42.8108</b>	<b>2.5301</b>	<b>0.0000</b>	<b>106.0619</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	210.9	42.8108	2.5301	0.0000	106.0619
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>42.8108</b>	<b>2.5301</b>	<b>0.0000</b>	<b>106.0619</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**LA Fitness - Health Club at Rossmoor**  
**South Coast Air Basin, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	34.52	1000sqft	1.12	34,523.00	0
Health Club	37.00	1000sqft	0.85	37,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - PTG - Construction presumed to begin late 2017.

Land Use - PTG - Model run updated to reflect a total of 85,600 square feet of disturbance from asphalt being removed, 34,523 square feet of new asphalt being laid over disturbed area, and the construction of the 37,000 square foot health club.

Construction Phase - PTG - Model updated to reflect an approximately six month construction timeline for the activities including ground disturbance.

Trips and VMT - PTG - Updated to capture any offhaul of debris that may be need to be taken from the site.

Architectural Coating - PTG - Model updated to reflect interior and exterior areas that will be painted as a result of the project.

Energy Use -

Construction Off-road Equipment Mitigation - PTG - Model updated to reflect compliance with SCAQMD Rule 403, and that the project would water exposed areas two times per day.

Grading -

## LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	18,500.00	29,580.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	55,500.00	88,740.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	200.00	63.00
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblLandUse	BuildingSpaceSquareFeet	34,520.00	34,523.00
tblLandUse	LandUseSquareFeet	34,520.00	34,523.00
tblLandUse	LotAcreage	0.79	1.12
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	0.00	6.00

## 2.0 Emissions Summary

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LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8421	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
Energy	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
Mobile	2.2274	9.9269	24.6059	0.0744	5.5388	0.0840	5.6228	1.4820	0.0790	1.5610		7,551.6965	7,551.6965	0.4162		7,562.1002
<b>Total</b>	<b>3.0925</b>	<b>10.1354</b>	<b>24.7883</b>	<b>0.0756</b>	<b>5.5388</b>	<b>0.0999</b>	<b>5.6387</b>	<b>1.4820</b>	<b>0.0949</b>	<b>1.5769</b>		<b>7,801.7975</b>	<b>7,801.7975</b>	<b>0.4210</b>	<b>4.5800e-003</b>	<b>7,813.6885</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8421	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
Energy	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
Mobile	2.2274	9.9269	24.6059	0.0744	5.5388	0.0840	5.6228	1.4820	0.0790	1.5610		7,551.6965	7,551.6965	0.4162		7,562.1002
<b>Total</b>	<b>3.0925</b>	<b>10.1354</b>	<b>24.7883</b>	<b>0.0756</b>	<b>5.5388</b>	<b>0.0999</b>	<b>5.6387</b>	<b>1.4820</b>	<b>0.0949</b>	<b>1.5769</b>		<b>7,801.7975</b>	<b>7,801.7975</b>	<b>0.4210</b>	<b>4.5800e-003</b>	<b>7,813.6885</b>

## LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/10/2017	11/6/2017	5	20	
2	Site Preparation	Site Preparation	11/7/2017	11/20/2017	5	10	
3	Grading	Grading	11/21/2017	12/18/2017	5	20	
4	Building Construction	Building Construction	12/19/2017	3/15/2018	5	63	
5	Paving	Paving	3/16/2018	4/12/2018	5	20	
6	Architectural Coating	Architectural Coating	4/13/2018	5/10/2018	5	20	

**Acres of Grading (Site Preparation Phase): 5**

**Acres of Grading (Grading Phase): 7.5**

**Acres of Paving: 1.12**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 88,740; Non-Residential Outdoor: 29,580; Striped Parking Area: 2,071 (Architectural Coating – sqft)**

#### OffRoad Equipment

## LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	30.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
<b>Total</b>	<b>2.7625</b>	<b>26.7594</b>	<b>15.5573</b>	<b>0.0241</b>		<b>1.6477</b>	<b>1.6477</b>		<b>1.5404</b>	<b>1.5404</b>		<b>2,421.4229</b>	<b>2,421.4229</b>	<b>0.6125</b>		<b>2,436.7347</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.2 Demolition - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0575	0.7387	1.6400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		162.9783	162.9783	6.1500e-003		163.1321
<b>Total</b>	<b>0.0781</b>	<b>0.0575</b>	<b>0.7387</b>	<b>1.6400e-003</b>	<b>0.1453</b>	<b>1.2100e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.1100e-003</b>	<b>0.0397</b>		<b>162.9783</b>	<b>162.9783</b>	<b>6.1500e-003</b>		<b>163.1321</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
<b>Total</b>	<b>2.7625</b>	<b>26.7594</b>	<b>15.5573</b>	<b>0.0241</b>		<b>1.6477</b>	<b>1.6477</b>		<b>1.5404</b>	<b>1.5404</b>	<b>0.0000</b>	<b>2,421.4229</b>	<b>2,421.4229</b>	<b>0.6125</b>		<b>2,436.7347</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.2 Demolition - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0575	0.7387	1.6400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		162.9783	162.9783	6.1500e-003		163.1321
<b>Total</b>	<b>0.0781</b>	<b>0.0575</b>	<b>0.7387</b>	<b>1.6400e-003</b>	<b>0.1453</b>	<b>1.2100e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.1100e-003</b>	<b>0.0397</b>		<b>162.9783</b>	<b>162.9783</b>	<b>6.1500e-003</b>		<b>163.1321</b>

**3.3 Site Preparation - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.9297	22.2106	8.4016	0.0172		1.0451	1.0451		0.9615	0.9615		1,764.2381	1,764.2381	0.5406		1,777.7521
<b>Total</b>	<b>1.9297</b>	<b>22.2106</b>	<b>8.4016</b>	<b>0.0172</b>	<b>5.7996</b>	<b>1.0451</b>	<b>6.8446</b>	<b>2.9537</b>	<b>0.9615</b>	<b>3.9152</b>		<b>1,764.2381</b>	<b>1,764.2381</b>	<b>0.5406</b>		<b>1,777.7521</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.3 Site Preparation - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.2600e-003	0.2039	0.0391	4.8000e-004	0.0105	1.1100e-003	0.0116	2.8700e-003	1.0600e-003	3.9300e-003		52.1045	52.1045	3.8000e-003		52.1994
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0480	0.0354	0.4546	1.0100e-003	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		100.2943	100.2943	3.7900e-003		100.3890
<b>Total</b>	<b>0.0543</b>	<b>0.2393</b>	<b>0.4937</b>	<b>1.4900e-003</b>	<b>0.0999</b>	<b>1.8500e-003</b>	<b>0.1018</b>	<b>0.0266</b>	<b>1.7400e-003</b>	<b>0.0283</b>		<b>152.3988</b>	<b>152.3988</b>	<b>7.5900e-003</b>		<b>152.5884</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.9297	22.2106	8.4016	0.0172		1.0451	1.0451		0.9615	0.9615	0.0000	1,764.2381	1,764.2381	0.5406		1,777.7521
<b>Total</b>	<b>1.9297</b>	<b>22.2106</b>	<b>8.4016</b>	<b>0.0172</b>	<b>2.6098</b>	<b>1.0451</b>	<b>3.6549</b>	<b>1.3292</b>	<b>0.9615</b>	<b>2.2906</b>	<b>0.0000</b>	<b>1,764.2381</b>	<b>1,764.2381</b>	<b>0.5406</b>		<b>1,777.7521</b>



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**3.3 Site Preparation - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.2600e-003	0.2039	0.0391	4.8000e-004	0.0105	1.1100e-003	0.0116	2.8700e-003	1.0600e-003	3.9300e-003		52.1045	52.1045	3.8000e-003		52.1994
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0480	0.0354	0.4546	1.0100e-003	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		100.2943	100.2943	3.7900e-003		100.3890
<b>Total</b>	<b>0.0543</b>	<b>0.2393</b>	<b>0.4937</b>	<b>1.4900e-003</b>	<b>0.0999</b>	<b>1.8500e-003</b>	<b>0.1018</b>	<b>0.0266</b>	<b>1.7400e-003</b>	<b>0.0283</b>		<b>152.3988</b>	<b>152.3988</b>	<b>7.5900e-003</b>		<b>152.5884</b>

**3.4 Grading - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039		1,444.8958	1,444.8958	0.4427		1,455.9636
<b>Total</b>	<b>1.6023</b>	<b>18.2915</b>	<b>7.0342</b>	<b>0.0141</b>	<b>4.9143</b>	<b>0.8738</b>	<b>5.7880</b>	<b>2.5256</b>	<b>0.8039</b>	<b>3.3295</b>		<b>1,444.8958</b>	<b>1,444.8958</b>	<b>0.4427</b>		<b>1,455.9636</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.4 Grading - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0480	0.0354	0.4546	1.0100e-003	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		100.2943	100.2943	3.7900e-003		100.3890
<b>Total</b>	<b>0.0480</b>	<b>0.0354</b>	<b>0.4546</b>	<b>1.0100e-003</b>	<b>0.0894</b>	<b>7.4000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.8000e-004</b>	<b>0.0244</b>		<b>100.2943</b>	<b>100.2943</b>	<b>3.7900e-003</b>		<b>100.3890</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636
<b>Total</b>	<b>1.6023</b>	<b>18.2915</b>	<b>7.0342</b>	<b>0.0141</b>	<b>2.2114</b>	<b>0.8738</b>	<b>3.0852</b>	<b>1.1365</b>	<b>0.8039</b>	<b>1.9404</b>	<b>0.0000</b>	<b>1,444.8958</b>	<b>1,444.8958</b>	<b>0.4427</b>		<b>1,455.9636</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.4 Grading - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0480	0.0354	0.4546	1.0100e-003	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		100.2943	100.2943	3.7900e-003		100.3890
<b>Total</b>	<b>0.0480</b>	<b>0.0354</b>	<b>0.4546</b>	<b>1.0100e-003</b>	<b>0.0894</b>	<b>7.4000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.8000e-004</b>	<b>0.0244</b>		<b>100.2943</b>	<b>100.2943</b>	<b>3.7900e-003</b>		<b>100.3890</b>

**3.5 Building Construction - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085
<b>Total</b>	<b>2.9653</b>	<b>19.2365</b>	<b>14.3568</b>	<b>0.0220</b>		<b>1.2313</b>	<b>1.2313</b>		<b>1.1875</b>	<b>1.1875</b>		<b>2,043.8641</b>	<b>2,043.8641</b>	<b>0.4298</b>		<b>2,054.6085</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.5 Building Construction - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0587	1.5528	0.4108	3.1300e-003	0.0768	0.0135	0.0902	0.0221	0.0129	0.0350		333.4290	333.4290	0.0242		334.0330
Worker	0.1801	0.1326	1.7047	3.7800e-003	0.3353	2.7800e-003	0.3381	0.0889	2.5700e-003	0.0915		376.1037	376.1037	0.0142		376.4587
<b>Total</b>	<b>0.2389</b>	<b>1.6854</b>	<b>2.1155</b>	<b>6.9100e-003</b>	<b>0.4121</b>	<b>0.0162</b>	<b>0.4284</b>	<b>0.1110</b>	<b>0.0154</b>	<b>0.1265</b>		<b>709.5327</b>	<b>709.5327</b>	<b>0.0384</b>		<b>710.4917</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085
<b>Total</b>	<b>2.9653</b>	<b>19.2365</b>	<b>14.3568</b>	<b>0.0220</b>		<b>1.2313</b>	<b>1.2313</b>		<b>1.1875</b>	<b>1.1875</b>	<b>0.0000</b>	<b>2,043.8641</b>	<b>2,043.8641</b>	<b>0.4298</b>		<b>2,054.6085</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.5 Building Construction - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0587	1.5528	0.4108	3.1300e-003	0.0768	0.0135	0.0902	0.0221	0.0129	0.0350		333.4290	333.4290	0.0242		334.0330
Worker	0.1801	0.1326	1.7047	3.7800e-003	0.3353	2.7800e-003	0.3381	0.0889	2.5700e-003	0.0915		376.1037	376.1037	0.0142		376.4587
<b>Total</b>	<b>0.2389</b>	<b>1.6854</b>	<b>2.1155</b>	<b>6.9100e-003</b>	<b>0.4121</b>	<b>0.0162</b>	<b>0.4284</b>	<b>0.1110</b>	<b>0.0154</b>	<b>0.1265</b>		<b>709.5327</b>	<b>709.5327</b>	<b>0.0384</b>		<b>710.4917</b>

**3.5 Building Construction - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216		2,030.8389	2,030.8389	0.4088		2,041.0596
<b>Total</b>	<b>2.5919</b>	<b>17.4280</b>	<b>13.8766</b>	<b>0.0220</b>		<b>1.0580</b>	<b>1.0580</b>		<b>1.0216</b>	<b>1.0216</b>		<b>2,030.8389</b>	<b>2,030.8389</b>	<b>0.4088</b>		<b>2,041.0596</b>

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**3.5 Building Construction - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0516	1.4579	0.3701	3.1200e-003	0.0768	0.0107	0.0874	0.0221	0.0102	0.0323		332.4110	332.4110	0.0230		332.9850
Worker	0.1603	0.1156	1.5009	3.6700e-003	0.3353	2.6900e-003	0.3380	0.0889	2.4800e-003	0.0914		365.6160	365.6160	0.0125		365.9284
<b>Total</b>	<b>0.2119</b>	<b>1.5735</b>	<b>1.8710</b>	<b>6.7900e-003</b>	<b>0.4121</b>	<b>0.0134</b>	<b>0.4255</b>	<b>0.1110</b>	<b>0.0127</b>	<b>0.1237</b>		<b>698.0271</b>	<b>698.0271</b>	<b>0.0355</b>		<b>698.9135</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216	0.0000	2,030.8389	2,030.8389	0.4088		2,041.0596
<b>Total</b>	<b>2.5919</b>	<b>17.4280</b>	<b>13.8766</b>	<b>0.0220</b>		<b>1.0580</b>	<b>1.0580</b>		<b>1.0216</b>	<b>1.0216</b>	<b>0.0000</b>	<b>2,030.8389</b>	<b>2,030.8389</b>	<b>0.4088</b>		<b>2,041.0596</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.5 Building Construction - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0516	1.4579	0.3701	3.1200e-003	0.0768	0.0107	0.0874	0.0221	0.0102	0.0323		332.4110	332.4110	0.0230		332.9850
Worker	0.1603	0.1156	1.5009	3.6700e-003	0.3353	2.6900e-003	0.3380	0.0889	2.4800e-003	0.0914		365.6160	365.6160	0.0125		365.9284
<b>Total</b>	<b>0.2119</b>	<b>1.5735</b>	<b>1.8710</b>	<b>6.7900e-003</b>	<b>0.4121</b>	<b>0.0134</b>	<b>0.4255</b>	<b>0.1110</b>	<b>0.0127</b>	<b>0.1237</b>		<b>698.0271</b>	<b>698.0271</b>	<b>0.0355</b>		<b>698.9135</b>

**3.6 Paving - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0182	10.4525	8.9926	0.0135		0.6097	0.6097		0.5618	0.5618		1,346.4360	1,346.4360	0.4113		1,356.7186
Paving	0.1467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1650</b>	<b>10.4525</b>	<b>8.9926</b>	<b>0.0135</b>		<b>0.6097</b>	<b>0.6097</b>		<b>0.5618</b>	<b>0.5618</b>		<b>1,346.4360</b>	<b>1,346.4360</b>	<b>0.4113</b>		<b>1,356.7186</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.6 Paving - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0501	0.6504	1.5900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0700e-003	0.0396		158.4336	158.4336	5.4100e-003		158.5690
<b>Total</b>	<b>0.0695</b>	<b>0.0501</b>	<b>0.6504</b>	<b>1.5900e-003</b>	<b>0.1453</b>	<b>1.1700e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.0700e-003</b>	<b>0.0396</b>		<b>158.4336</b>	<b>158.4336</b>	<b>5.4100e-003</b>		<b>158.5690</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0182	10.4525	8.9926	0.0135		0.6097	0.6097		0.5618	0.5618	0.0000	1,346.4360	1,346.4360	0.4113		1,356.7186
Paving	0.1467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1650</b>	<b>10.4525</b>	<b>8.9926</b>	<b>0.0135</b>		<b>0.6097</b>	<b>0.6097</b>		<b>0.5618</b>	<b>0.5618</b>	<b>0.0000</b>	<b>1,346.4360</b>	<b>1,346.4360</b>	<b>0.4113</b>		<b>1,356.7186</b>



LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.6 Paving - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0501	0.6504	1.5900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0700e-003	0.0396		158.4336	158.4336	5.4100e-003		158.5690
<b>Total</b>	<b>0.0695</b>	<b>0.0501</b>	<b>0.6504</b>	<b>1.5900e-003</b>	<b>0.1453</b>	<b>1.1700e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.0700e-003</b>	<b>0.0396</b>		<b>158.4336</b>	<b>158.4336</b>	<b>5.4100e-003</b>		<b>158.5690</b>

**3.7 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.9006					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>28.1992</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.7 Architectural Coating - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0321	0.0231	0.3002	7.3000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		73.1232	73.1232	2.5000e-003		73.1857
<b>Total</b>	<b>0.0321</b>	<b>0.0231</b>	<b>0.3002</b>	<b>7.3000e-004</b>	<b>0.0671</b>	<b>5.4000e-004</b>	<b>0.0676</b>	<b>0.0178</b>	<b>5.0000e-004</b>	<b>0.0183</b>		<b>73.1232</b>	<b>73.1232</b>	<b>2.5000e-003</b>		<b>73.1857</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.9006					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>28.1992</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**3.7 Architectural Coating - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0321	0.0231	0.3002	7.3000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		73.1232	73.1232	2.5000e-003		73.1857
<b>Total</b>	<b>0.0321</b>	<b>0.0231</b>	<b>0.3002</b>	<b>7.3000e-004</b>	<b>0.0671</b>	<b>5.4000e-004</b>	<b>0.0676</b>	<b>0.0178</b>	<b>5.0000e-004</b>	<b>0.0183</b>		<b>73.1232</b>	<b>73.1232</b>	<b>2.5000e-003</b>		<b>73.1857</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2274	9.9269	24.6059	0.0744	5.5388	0.0840	5.6228	1.4820	0.0790	1.5610		7,551.6965	7,551.6965	0.4162		7,562.1002
Unmitigated	2.2274	9.9269	24.6059	0.0744	5.5388	0.0840	5.6228	1.4820	0.0790	1.5610		7,551.6965	7,551.6965	0.4162		7,562.1002

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,218.41	772.19	989.01	2,399,472	2,399,472
Parking Lot	0.00	0.00	0.00		
Total	1,218.41	772.19	989.01	2,399,472	2,399,472

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Health Club	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
NaturalGas Unmitigated	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Health Club	2125.73	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0229</b>	<b>0.2084</b>	<b>0.1751</b>	<b>1.2500e-003</b>		<b>0.0158</b>	<b>0.0158</b>		<b>0.0158</b>	<b>0.0158</b>		<b>250.0854</b>	<b>250.0854</b>	<b>4.7900e-003</b>	<b>4.5800e-003</b>	<b>251.5716</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Health Club	2.12573	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0229</b>	<b>0.2084</b>	<b>0.1751</b>	<b>1.2500e-003</b>		<b>0.0158</b>	<b>0.0158</b>		<b>0.0158</b>	<b>0.0158</b>		<b>250.0854</b>	<b>250.0854</b>	<b>4.7900e-003</b>	<b>4.5800e-003</b>	<b>251.5716</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8421	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
Unmitigated	0.8421	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0966					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7448					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9000e-004	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
<b>Total</b>	<b>0.8421</b>	<b>7.0000e-005</b>	<b>7.3500e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>0.0157</b>	<b>0.0157</b>	<b>4.0000e-005</b>		<b>0.0167</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0966					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7448					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9000e-004	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
<b>Total</b>	<b>0.8421</b>	<b>7.0000e-005</b>	<b>7.3500e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>0.0157</b>	<b>0.0157</b>	<b>4.0000e-005</b>		<b>0.0167</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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Fire Pumps and Emergency Generators



LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**LA Fitness - Health Club at Rossmoor**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	34.52	1000sqft	1.12	34,523.00	0
Health Club	37.00	1000sqft	0.85	37,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - PTG - Construction presumed to begin late 2017.

Land Use - PTG - Model run updated to reflect a total of 85,600 square feet of disturbance from asphalt being removed, 34,523 square feet of new asphalt being laid over disturbed area, and the construction of the 37,000 square foot health club.

Construction Phase - PTG - Model updated to reflect an approximately six month construction timeline for the activities including ground disturbance.

Trips and VMT - PTG - Updated to capture any offhaul of debris that may be need to be taken from the site.

Architectural Coating - PTG - Model updated to reflect interior and exterior areas that will be painted as a result of the project.

Energy Use -

Construction Off-road Equipment Mitigation - PTG - Model updated to reflect compliance with SCAQMD Rule 403, and that the project would water exposed areas two times per day.

Grading -

## LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	18,500.00	29,580.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	55,500.00	88,740.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	200.00	63.00
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblLandUse	BuildingSpaceSquareFeet	34,520.00	34,523.00
tblLandUse	LandUseSquareFeet	34,520.00	34,523.00
tblLandUse	LotAcreage	0.79	1.12
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	0.00	6.00

## 2.0 Emissions Summary

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LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8421	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
Energy	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
Mobile	2.1464	10.1047	23.7119	0.0704	5.5388	0.0849	5.6237	1.4820	0.0799	1.5618		7,155.1185	7,155.1185	0.4191		7,165.5967
<b>Total</b>	<b>3.0114</b>	<b>10.3131</b>	<b>23.8943</b>	<b>0.0717</b>	<b>5.5388</b>	<b>0.1008</b>	<b>5.6396</b>	<b>1.4820</b>	<b>0.0957</b>	<b>1.5777</b>		<b>7,405.2195</b>	<b>7,405.2195</b>	<b>0.4240</b>	<b>4.5800e-003</b>	<b>7,417.1850</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8421	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
Energy	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
Mobile	2.1464	10.1047	23.7119	0.0704	5.5388	0.0849	5.6237	1.4820	0.0799	1.5618		7,155.1185	7,155.1185	0.4191		7,165.5967
<b>Total</b>	<b>3.0114</b>	<b>10.3131</b>	<b>23.8943</b>	<b>0.0717</b>	<b>5.5388</b>	<b>0.1008</b>	<b>5.6396</b>	<b>1.4820</b>	<b>0.0957</b>	<b>1.5777</b>		<b>7,405.2195</b>	<b>7,405.2195</b>	<b>0.4240</b>	<b>4.5800e-003</b>	<b>7,417.1850</b>

## LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/10/2017	11/6/2017	5	20	
2	Site Preparation	Site Preparation	11/7/2017	11/20/2017	5	10	
3	Grading	Grading	11/21/2017	12/18/2017	5	20	
4	Building Construction	Building Construction	12/19/2017	3/15/2018	5	63	
5	Paving	Paving	3/16/2018	4/12/2018	5	20	
6	Architectural Coating	Architectural Coating	4/13/2018	5/10/2018	5	20	

**Acres of Grading (Site Preparation Phase): 5**

**Acres of Grading (Grading Phase): 7.5**

**Acres of Paving: 1.12**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 88,740; Non-Residential Outdoor: 29,580; Striped Parking Area: 2,071 (Architectural Coating – sqft)**

#### OffRoad Equipment

## LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	30.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
<b>Total</b>	<b>2.7625</b>	<b>26.7594</b>	<b>15.5573</b>	<b>0.0241</b>		<b>1.6477</b>	<b>1.6477</b>		<b>1.5404</b>	<b>1.5404</b>		<b>2,421.4229</b>	<b>2,421.4229</b>	<b>0.6125</b>		<b>2,436.7347</b>



LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.2 Demolition - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
<b>Total</b>	<b>0.0855</b>	<b>0.0632</b>	<b>0.6764</b>	<b>1.5400e-003</b>	<b>0.1453</b>	<b>1.2100e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.1100e-003</b>	<b>0.0397</b>		<b>152.9111</b>	<b>152.9111</b>	<b>5.8000e-003</b>		<b>153.0562</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
<b>Total</b>	<b>2.7625</b>	<b>26.7594</b>	<b>15.5573</b>	<b>0.0241</b>		<b>1.6477</b>	<b>1.6477</b>		<b>1.5404</b>	<b>1.5404</b>	<b>0.0000</b>	<b>2,421.4229</b>	<b>2,421.4229</b>	<b>0.6125</b>		<b>2,436.7347</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.2 Demolition - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
<b>Total</b>	<b>0.0855</b>	<b>0.0632</b>	<b>0.6764</b>	<b>1.5400e-003</b>	<b>0.1453</b>	<b>1.2100e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.1100e-003</b>	<b>0.0397</b>		<b>152.9111</b>	<b>152.9111</b>	<b>5.8000e-003</b>		<b>153.0562</b>

**3.3 Site Preparation - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.9297	22.2106	8.4016	0.0172		1.0451	1.0451		0.9615	0.9615		1,764.2381	1,764.2381	0.5406		1,777.7521
<b>Total</b>	<b>1.9297</b>	<b>22.2106</b>	<b>8.4016</b>	<b>0.0172</b>	<b>5.7996</b>	<b>1.0451</b>	<b>6.8446</b>	<b>2.9537</b>	<b>0.9615</b>	<b>3.9152</b>		<b>1,764.2381</b>	<b>1,764.2381</b>	<b>0.5406</b>		<b>1,777.7521</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.3 Site Preparation - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.4200e-003	0.2070	0.0421	4.7000e-004	0.0105	1.1300e-003	0.0116	2.8700e-003	1.0800e-003	3.9500e-003		51.2674	51.2674	3.9600e-003		51.3662
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0526	0.0389	0.4163	9.5000e-004	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		94.0992	94.0992	3.5700e-003		94.1884
<b>Total</b>	<b>0.0591</b>	<b>0.2459</b>	<b>0.4584</b>	<b>1.4200e-003</b>	<b>0.0999</b>	<b>1.8700e-003</b>	<b>0.1018</b>	<b>0.0266</b>	<b>1.7600e-003</b>	<b>0.0284</b>		<b>145.3665</b>	<b>145.3665</b>	<b>7.5300e-003</b>		<b>145.5547</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.9297	22.2106	8.4016	0.0172		1.0451	1.0451		0.9615	0.9615	0.0000	1,764.2381	1,764.2381	0.5406		1,777.7521
<b>Total</b>	<b>1.9297</b>	<b>22.2106</b>	<b>8.4016</b>	<b>0.0172</b>	<b>2.6098</b>	<b>1.0451</b>	<b>3.6549</b>	<b>1.3292</b>	<b>0.9615</b>	<b>2.2906</b>	<b>0.0000</b>	<b>1,764.2381</b>	<b>1,764.2381</b>	<b>0.5406</b>		<b>1,777.7521</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.3 Site Preparation - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.4200e-003	0.2070	0.0421	4.7000e-004	0.0105	1.1300e-003	0.0116	2.8700e-003	1.0800e-003	3.9500e-003		51.2674	51.2674	3.9600e-003		51.3662
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0526	0.0389	0.4163	9.5000e-004	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		94.0992	94.0992	3.5700e-003		94.1884
<b>Total</b>	<b>0.0591</b>	<b>0.2459</b>	<b>0.4584</b>	<b>1.4200e-003</b>	<b>0.0999</b>	<b>1.8700e-003</b>	<b>0.1018</b>	<b>0.0266</b>	<b>1.7600e-003</b>	<b>0.0284</b>		<b>145.3665</b>	<b>145.3665</b>	<b>7.5300e-003</b>		<b>145.5547</b>

**3.4 Grading - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039		1,444.8958	1,444.8958	0.4427		1,455.9636
<b>Total</b>	<b>1.6023</b>	<b>18.2915</b>	<b>7.0342</b>	<b>0.0141</b>	<b>4.9143</b>	<b>0.8738</b>	<b>5.7880</b>	<b>2.5256</b>	<b>0.8039</b>	<b>3.3295</b>		<b>1,444.8958</b>	<b>1,444.8958</b>	<b>0.4427</b>		<b>1,455.9636</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.4 Grading - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0526	0.0389	0.4163	9.5000e-004	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		94.0992	94.0992	3.5700e-003		94.1884
<b>Total</b>	<b>0.0526</b>	<b>0.0389</b>	<b>0.4163</b>	<b>9.5000e-004</b>	<b>0.0894</b>	<b>7.4000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.8000e-004</b>	<b>0.0244</b>		<b>94.0992</b>	<b>94.0992</b>	<b>3.5700e-003</b>		<b>94.1884</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2114	0.0000	2.2114	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636
<b>Total</b>	<b>1.6023</b>	<b>18.2915</b>	<b>7.0342</b>	<b>0.0141</b>	<b>2.2114</b>	<b>0.8738</b>	<b>3.0852</b>	<b>1.1365</b>	<b>0.8039</b>	<b>1.9404</b>	<b>0.0000</b>	<b>1,444.8958</b>	<b>1,444.8958</b>	<b>0.4427</b>		<b>1,455.9636</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.4 Grading - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0526	0.0389	0.4163	9.5000e-004	0.0894	7.4000e-004	0.0902	0.0237	6.8000e-004	0.0244		94.0992	94.0992	3.5700e-003		94.1884
<b>Total</b>	<b>0.0526</b>	<b>0.0389</b>	<b>0.4163</b>	<b>9.5000e-004</b>	<b>0.0894</b>	<b>7.4000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.8000e-004</b>	<b>0.0244</b>		<b>94.0992</b>	<b>94.0992</b>	<b>3.5700e-003</b>		<b>94.1884</b>

**3.5 Building Construction - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085
<b>Total</b>	<b>2.9653</b>	<b>19.2365</b>	<b>14.3568</b>	<b>0.0220</b>		<b>1.2313</b>	<b>1.2313</b>		<b>1.1875</b>	<b>1.1875</b>		<b>2,043.8641</b>	<b>2,043.8641</b>	<b>0.4298</b>		<b>2,054.6085</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.5 Building Construction - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0611	1.5581	0.4520	3.0500e-003	0.0768	0.0137	0.0904	0.0221	0.0131	0.0352		324.8003	324.8003	0.0258		325.4457
Worker	0.1974	0.1458	1.5610	3.5500e-003	0.3353	2.7800e-003	0.3381	0.0889	2.5700e-003	0.0915		352.8719	352.8719	0.0134		353.2066
<b>Total</b>	<b>0.2585</b>	<b>1.7039</b>	<b>2.0130</b>	<b>6.6000e-003</b>	<b>0.4121</b>	<b>0.0164</b>	<b>0.4286</b>	<b>0.1110</b>	<b>0.0156</b>	<b>0.1267</b>		<b>677.6722</b>	<b>677.6722</b>	<b>0.0392</b>		<b>678.6523</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085
<b>Total</b>	<b>2.9653</b>	<b>19.2365</b>	<b>14.3568</b>	<b>0.0220</b>		<b>1.2313</b>	<b>1.2313</b>		<b>1.1875</b>	<b>1.1875</b>	<b>0.0000</b>	<b>2,043.8641</b>	<b>2,043.8641</b>	<b>0.4298</b>		<b>2,054.6085</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.5 Building Construction - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0611	1.5581	0.4520	3.0500e-003	0.0768	0.0137	0.0904	0.0221	0.0131	0.0352		324.8003	324.8003	0.0258		325.4457
Worker	0.1974	0.1458	1.5610	3.5500e-003	0.3353	2.7800e-003	0.3381	0.0889	2.5700e-003	0.0915		352.8719	352.8719	0.0134		353.2066
<b>Total</b>	<b>0.2585</b>	<b>1.7039</b>	<b>2.0130</b>	<b>6.6000e-003</b>	<b>0.4121</b>	<b>0.0164</b>	<b>0.4286</b>	<b>0.1110</b>	<b>0.0156</b>	<b>0.1267</b>		<b>677.6722</b>	<b>677.6722</b>	<b>0.0392</b>		<b>678.6523</b>

**3.5 Building Construction - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216		2,030.8389	2,030.8389	0.4088		2,041.0596
<b>Total</b>	<b>2.5919</b>	<b>17.4280</b>	<b>13.8766</b>	<b>0.0220</b>		<b>1.0580</b>	<b>1.0580</b>		<b>1.0216</b>	<b>1.0216</b>		<b>2,030.8389</b>	<b>2,030.8389</b>	<b>0.4088</b>		<b>2,041.0596</b>



LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.5 Building Construction - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0538	1.4610	0.4087	3.0300e-003	0.0768	0.0108	0.0876	0.0221	0.0104	0.0325		323.5696	323.5696	0.0246		324.1834
Worker	0.1758	0.1270	1.3677	3.4500e-003	0.3353	2.6900e-003	0.3380	0.0889	2.4800e-003	0.0914		342.9758	342.9758	0.0118		343.2694
<b>Total</b>	<b>0.2296</b>	<b>1.5880</b>	<b>1.7764</b>	<b>6.4800e-003</b>	<b>0.4121</b>	<b>0.0135</b>	<b>0.4256</b>	<b>0.1110</b>	<b>0.0128</b>	<b>0.1239</b>		<b>666.5453</b>	<b>666.5453</b>	<b>0.0363</b>		<b>667.4528</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216	0.0000	2,030.8389	2,030.8389	0.4088		2,041.0596
<b>Total</b>	<b>2.5919</b>	<b>17.4280</b>	<b>13.8766</b>	<b>0.0220</b>		<b>1.0580</b>	<b>1.0580</b>		<b>1.0216</b>	<b>1.0216</b>	<b>0.0000</b>	<b>2,030.8389</b>	<b>2,030.8389</b>	<b>0.4088</b>		<b>2,041.0596</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.5 Building Construction - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0538	1.4610	0.4087	3.0300e-003	0.0768	0.0108	0.0876	0.0221	0.0104	0.0325		323.5696	323.5696	0.0246		324.1834
Worker	0.1758	0.1270	1.3677	3.4500e-003	0.3353	2.6900e-003	0.3380	0.0889	2.4800e-003	0.0914		342.9758	342.9758	0.0118		343.2694
<b>Total</b>	<b>0.2296</b>	<b>1.5880</b>	<b>1.7764</b>	<b>6.4800e-003</b>	<b>0.4121</b>	<b>0.0135</b>	<b>0.4256</b>	<b>0.1110</b>	<b>0.0128</b>	<b>0.1239</b>		<b>666.5453</b>	<b>666.5453</b>	<b>0.0363</b>		<b>667.4528</b>

**3.6 Paving - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0182	10.4525	8.9926	0.0135		0.6097	0.6097		0.5618	0.5618		1,346.4360	1,346.4360	0.4113		1,356.7186
Paving	0.1467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1650</b>	<b>10.4525</b>	<b>8.9926</b>	<b>0.0135</b>		<b>0.6097</b>	<b>0.6097</b>		<b>0.5618</b>	<b>0.5618</b>		<b>1,346.4360</b>	<b>1,346.4360</b>	<b>0.4113</b>		<b>1,356.7186</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.6 Paving - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0550	0.5927	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0700e-003	0.0396		148.6228	148.6228	5.0900e-003		148.7501
<b>Total</b>	<b>0.0762</b>	<b>0.0550</b>	<b>0.5927</b>	<b>1.4900e-003</b>	<b>0.1453</b>	<b>1.1700e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.0700e-003</b>	<b>0.0396</b>		<b>148.6228</b>	<b>148.6228</b>	<b>5.0900e-003</b>		<b>148.7501</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0182	10.4525	8.9926	0.0135		0.6097	0.6097		0.5618	0.5618	0.0000	1,346.4360	1,346.4360	0.4113		1,356.7186
Paving	0.1467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1650</b>	<b>10.4525</b>	<b>8.9926</b>	<b>0.0135</b>		<b>0.6097</b>	<b>0.6097</b>		<b>0.5618</b>	<b>0.5618</b>	<b>0.0000</b>	<b>1,346.4360</b>	<b>1,346.4360</b>	<b>0.4113</b>		<b>1,356.7186</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.6 Paving - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0550	0.5927	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0700e-003	0.0396		148.6228	148.6228	5.0900e-003		148.7501
<b>Total</b>	<b>0.0762</b>	<b>0.0550</b>	<b>0.5927</b>	<b>1.4900e-003</b>	<b>0.1453</b>	<b>1.1700e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.0700e-003</b>	<b>0.0396</b>		<b>148.6228</b>	<b>148.6228</b>	<b>5.0900e-003</b>		<b>148.7501</b>

**3.7 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.9006					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>28.1992</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.7 Architectural Coating - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0352	0.0254	0.2736	6.9000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		68.5952	68.5952	2.3500e-003		68.6539
<b>Total</b>	<b>0.0352</b>	<b>0.0254</b>	<b>0.2736</b>	<b>6.9000e-004</b>	<b>0.0671</b>	<b>5.4000e-004</b>	<b>0.0676</b>	<b>0.0178</b>	<b>5.0000e-004</b>	<b>0.0183</b>		<b>68.5952</b>	<b>68.5952</b>	<b>2.3500e-003</b>		<b>68.6539</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.9006					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>28.1992</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**3.7 Architectural Coating - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0352	0.0254	0.2736	6.9000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		68.5952	68.5952	2.3500e-003		68.6539
<b>Total</b>	<b>0.0352</b>	<b>0.0254</b>	<b>0.2736</b>	<b>6.9000e-004</b>	<b>0.0671</b>	<b>5.4000e-004</b>	<b>0.0676</b>	<b>0.0178</b>	<b>5.0000e-004</b>	<b>0.0183</b>		<b>68.5952</b>	<b>68.5952</b>	<b>2.3500e-003</b>		<b>68.6539</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1464	10.1047	23.7119	0.0704	5.5388	0.0849	5.6237	1.4820	0.0799	1.5618		7,155.1185	7,155.1185	0.4191		7,165.5967
Unmitigated	2.1464	10.1047	23.7119	0.0704	5.5388	0.0849	5.6237	1.4820	0.0799	1.5618		7,155.1185	7,155.1185	0.4191		7,165.5967

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,218.41	772.19	989.01	2,399,472	2,399,472
Parking Lot	0.00	0.00	0.00		
Total	1,218.41	772.19	989.01	2,399,472	2,399,472

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Health Club	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
NaturalGas Unmitigated	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716



LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Health Club	2125.73	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0229</b>	<b>0.2084</b>	<b>0.1751</b>	<b>1.2500e-003</b>		<b>0.0158</b>	<b>0.0158</b>		<b>0.0158</b>	<b>0.0158</b>		<b>250.0854</b>	<b>250.0854</b>	<b>4.7900e-003</b>	<b>4.5800e-003</b>	<b>251.5716</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Health Club	2.12573	0.0229	0.2084	0.1751	1.2500e-003		0.0158	0.0158		0.0158	0.0158		250.0854	250.0854	4.7900e-003	4.5800e-003	251.5716
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0229</b>	<b>0.2084</b>	<b>0.1751</b>	<b>1.2500e-003</b>		<b>0.0158</b>	<b>0.0158</b>		<b>0.0158</b>	<b>0.0158</b>		<b>250.0854</b>	<b>250.0854</b>	<b>4.7900e-003</b>	<b>4.5800e-003</b>	<b>251.5716</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8421	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
Unmitigated	0.8421	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0966					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7448					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9000e-004	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
<b>Total</b>	<b>0.8421</b>	<b>7.0000e-005</b>	<b>7.3500e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>0.0157</b>	<b>0.0157</b>	<b>4.0000e-005</b>		<b>0.0167</b>

LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0966					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7448					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9000e-004	7.0000e-005	7.3500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0157	0.0157	4.0000e-005		0.0167
<b>Total</b>	<b>0.8421</b>	<b>7.0000e-005</b>	<b>7.3500e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>0.0157</b>	<b>0.0157</b>	<b>4.0000e-005</b>		<b>0.0167</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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Fire Pumps and Emergency Generators

## LA Fitness - Health Club at Rossmoor - South Coast Air Basin, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**LA Fitness - Health Club at Rossmoor (Slurry and restriping)**  
**South Coast Air Basin, Annual**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	21.12	1000sqft	0.48	21,117.00	0
Other Non-Asphalt Surfaces	119.06	1000sqft	2.73	119,065.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - PTG - Model run for the slurry fill and the asphalt overlay, which do not required ground disturbance.

Land Use -

Construction Phase - PTG - Model updated to reflect paving activities and architectural coating during the same time frame as they would during construction of the health club and area's that would require asphalt being replaced.

Off-road Equipment -

Construction Off-road Equipment Mitigation - PTG - model updated to reflect compliance with SCAQMD 403, and that the project would water exposed areas two times per day.

## LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblAreaCoating	Area_EF_Parking	100	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	50	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	PhaseEndDate	11/30/2018	5/10/2018
tblConstructionPhase	PhaseEndDate	11/6/2018	4/12/2018
tblConstructionPhase	PhaseStartDate	11/7/2018	4/13/2018
tblConstructionPhase	PhaseStartDate	10/12/2018	3/16/2018
tblLandUse	BuildingSpaceSquareFeet	21,120.00	21,117.00
tblLandUse	BuildingSpaceSquareFeet	119,060.00	119,065.00
tblLandUse	LandUseSquareFeet	21,120.00	21,117.00
tblLandUse	LandUseSquareFeet	119,060.00	119,065.00
tblProjectCharacteristics	OperationalYear	2018	2020

## 2.0 Emissions Summary

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LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	1-10-2018	4-9-2018	0.1446	0.1446
3	4-10-2018	7-9-2018	0.0415	0.0415
		Highest	0.1446	0.1446

**2.2 Overall Operational**  
**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.2300e-003	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4800e-003	3.4800e-003	1.0000e-005	0.0000	3.7100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.9209	5.9209	2.4000e-004	5.0000e-005	5.9421
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.2300e-003</b>	<b>2.0000e-005</b>	<b>1.8000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.9244</b>	<b>5.9244</b>	<b>2.5000e-004</b>	<b>5.0000e-005</b>	<b>5.9458</b>



LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.2300e-003	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4800e-003	3.4800e-003	1.0000e-005	0.0000	3.7100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.9209	5.9209	2.4000e-004	5.0000e-005	5.9421
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.2300e-003</b>	<b>2.0000e-005</b>	<b>1.8000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.9244</b>	<b>5.9244</b>	<b>2.5000e-004</b>	<b>5.0000e-005</b>	<b>5.9458</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Paving	Paving	3/16/2018	4/12/2018	5	20	
2	Architectural Coating	Architectural Coating	4/13/2018	5/10/2018	5	20	

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 3.21**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 8,411 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Paving Equipment	2	6.00	132	0.36

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

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**3.2 Paving - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0142	0.1452	0.1243	1.9000e-004		8.3700e-003	8.3700e-003		7.7200e-003	7.7200e-003	0.0000	16.9875	16.9875	5.1500e-003	0.0000	17.1161
Paving	6.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0149</b>	<b>0.1452</b>	<b>0.1243</b>	<b>1.9000e-004</b>		<b>8.3700e-003</b>	<b>8.3700e-003</b>		<b>7.7200e-003</b>	<b>7.7200e-003</b>	<b>0.0000</b>	<b>16.9875</b>	<b>16.9875</b>	<b>5.1500e-003</b>	<b>0.0000</b>	<b>17.1161</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	8.7000e-004	9.3500e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	2.1070	2.1070	7.0000e-005	0.0000	2.1088
<b>Total</b>	<b>1.0600e-003</b>	<b>8.7000e-004</b>	<b>9.3500e-003</b>	<b>2.0000e-005</b>	<b>2.1900e-003</b>	<b>2.0000e-005</b>	<b>2.2100e-003</b>	<b>5.8000e-004</b>	<b>2.0000e-005</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>2.1070</b>	<b>2.1070</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>2.1088</b>

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**3.2 Paving - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0142	0.1452	0.1243	1.9000e-004		8.3700e-003	8.3700e-003		7.7200e-003	7.7200e-003	0.0000	16.9875	16.9875	5.1500e-003	0.0000	17.1161
Paving	6.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0149</b>	<b>0.1452</b>	<b>0.1243</b>	<b>1.9000e-004</b>		<b>8.3700e-003</b>	<b>8.3700e-003</b>		<b>7.7200e-003</b>	<b>7.7200e-003</b>	<b>0.0000</b>	<b>16.9875</b>	<b>16.9875</b>	<b>5.1500e-003</b>	<b>0.0000</b>	<b>17.1161</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	8.7000e-004	9.3500e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	2.1070	2.1070	7.0000e-005	0.0000	2.1088
<b>Total</b>	<b>1.0600e-003</b>	<b>8.7000e-004</b>	<b>9.3500e-003</b>	<b>2.0000e-005</b>	<b>2.1900e-003</b>	<b>2.0000e-005</b>	<b>2.2100e-003</b>	<b>5.8000e-004</b>	<b>2.0000e-005</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>2.1070</b>	<b>2.1070</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>2.1088</b>

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**3.3 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0201	0.0185	3.0000e-005		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5593
<b>Total</b>	<b>2.9900e-003</b>	<b>0.0201</b>	<b>0.0185</b>	<b>3.0000e-005</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5593</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	5.2000e-004	5.6100e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2642	1.2642	4.0000e-005	0.0000	1.2653
<b>Total</b>	<b>6.4000e-004</b>	<b>5.2000e-004</b>	<b>5.6100e-003</b>	<b>1.0000e-005</b>	<b>1.3200e-003</b>	<b>1.0000e-005</b>	<b>1.3300e-003</b>	<b>3.5000e-004</b>	<b>1.0000e-005</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>1.2642</b>	<b>1.2642</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.2653</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**3.3 Architectural Coating - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0201	0.0185	3.0000e-005		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5593
<b>Total</b>	<b>2.9900e-003</b>	<b>0.0201</b>	<b>0.0185</b>	<b>3.0000e-005</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5593</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	5.2000e-004	5.6100e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2642	1.2642	4.0000e-005	0.0000	1.2653
<b>Total</b>	<b>6.4000e-004</b>	<b>5.2000e-004</b>	<b>5.6100e-003</b>	<b>1.0000e-005</b>	<b>1.3200e-003</b>	<b>1.0000e-005</b>	<b>1.3300e-003</b>	<b>3.5000e-004</b>	<b>1.0000e-005</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>1.2642</b>	<b>1.2642</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.2653</b>

**4.0 Operational Detail - Mobile**

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

**4.4 Fleet Mix**







LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	18583	5.9209	2.4000e-004	5.0000e-005	5.9421
<b>Total</b>		<b>5.9209</b>	<b>2.4000e-004</b>	<b>5.0000e-005</b>	<b>5.9421</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	18583	5.9209	2.4000e-004	5.0000e-005	5.9421
<b>Total</b>		<b>5.9209</b>	<b>2.4000e-004</b>	<b>5.0000e-005</b>	<b>5.9421</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.2300e-003	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4800e-003	3.4800e-003	1.0000e-005	0.0000	3.7100e-003
Unmitigated	9.2300e-003	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4800e-003	3.4800e-003	1.0000e-005	0.0000	3.7100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4800e-003	3.4800e-003	1.0000e-005	0.0000	3.7100e-003
<b>Total</b>	<b>9.2300e-003</b>	<b>2.0000e-005</b>	<b>1.8000e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>3.4800e-003</b>	<b>3.4800e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>3.7100e-003</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4800e-003	3.4800e-003	1.0000e-005	0.0000	3.7100e-003
<b>Total</b>	<b>9.2300e-003</b>	<b>2.0000e-005</b>	<b>1.8000e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>3.4800e-003</b>	<b>3.4800e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>3.7100e-003</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**LA Fitness - Health Club at Rossmoor (Slurry and restriping)**  
**South Coast Air Basin, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	21.12	1000sqft	0.48	21,117.00	0
Other Non-Asphalt Surfaces	119.06	1000sqft	2.73	119,065.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - PTG - Model run for the slurry fill and the asphalt overlay, which do not required ground disturbance.

Land Use -

Construction Phase - PTG - Model updated to reflect paving activities and architectural coating during the same time frame as they would during construction of the health club and area's that would require asphalt being replaced.

Off-road Equipment -

Construction Off-road Equipment Mitigation - PTG - model updated to reflect compliance with SCAQMD 403, and that the project would water exposed areas two times per day.

## LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblAreaCoating	Area_EF_Parking	100	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	50	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	PhaseEndDate	11/30/2018	5/10/2018
tblConstructionPhase	PhaseEndDate	11/6/2018	4/12/2018
tblConstructionPhase	PhaseStartDate	11/7/2018	4/13/2018
tblConstructionPhase	PhaseStartDate	10/12/2018	3/16/2018
tblLandUse	BuildingSpaceSquareFeet	21,120.00	21,117.00
tblLandUse	BuildingSpaceSquareFeet	119,060.00	119,065.00
tblLandUse	LandUseSquareFeet	21,120.00	21,117.00
tblLandUse	LandUseSquareFeet	119,060.00	119,065.00
tblProjectCharacteristics	OperationalYear	2018	2020

## 2.0 Emissions Summary

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LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0510</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>0.0000</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>0.0307</b>	<b>0.0307</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.0327</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0510</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>0.0000</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>0.0307</b>	<b>0.0307</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.0327</b>

## LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Paving	Paving	3/16/2018	4/12/2018	5	20	
2	Architectural Coating	Architectural Coating	4/13/2018	5/10/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 8,411 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Paving Equipment	2	6.00	132	0.36

#### Trips and VMT

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Paving - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718		1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.0629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4868</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>		<b>0.8370</b>	<b>0.8370</b>		<b>0.7718</b>	<b>0.7718</b>		<b>1,872.5505</b>	<b>1,872.5505</b>	<b>0.5672</b>		<b>1,886.7312</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**3.2 Paving - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
<b>Total</b>	<b>0.1069</b>	<b>0.0770</b>	<b>1.0006</b>	<b>2.4500e-003</b>	<b>0.2236</b>	<b>1.7900e-003</b>	<b>0.2254</b>	<b>0.0593</b>	<b>1.6500e-003</b>	<b>0.0609</b>		<b>243.7440</b>	<b>243.7440</b>	<b>8.3300e-003</b>		<b>243.9523</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.0629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4868</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>		<b>0.8370</b>	<b>0.8370</b>		<b>0.7718</b>	<b>0.7718</b>	<b>0.0000</b>	<b>1,872.5505</b>	<b>1,872.5505</b>	<b>0.5672</b>		<b>1,886.7312</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**3.2 Paving - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
<b>Total</b>	<b>0.1069</b>	<b>0.0770</b>	<b>1.0006</b>	<b>2.4500e-003</b>	<b>0.2236</b>	<b>1.7900e-003</b>	<b>0.2254</b>	<b>0.0593</b>	<b>1.6500e-003</b>	<b>0.0609</b>		<b>243.7440</b>	<b>243.7440</b>	<b>8.3300e-003</b>		<b>243.9523</b>

**3.3 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>0.2986</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>



LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**3.3 Architectural Coating - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0641	0.0462	0.6004	1.4700e-003	0.1341	1.0800e-003	0.1352	0.0356	9.9000e-004	0.0366		146.2464	146.2464	5.0000e-003		146.3714
<b>Total</b>	<b>0.0641</b>	<b>0.0462</b>	<b>0.6004</b>	<b>1.4700e-003</b>	<b>0.1341</b>	<b>1.0800e-003</b>	<b>0.1352</b>	<b>0.0356</b>	<b>9.9000e-004</b>	<b>0.0366</b>		<b>146.2464</b>	<b>146.2464</b>	<b>5.0000e-003</b>		<b>146.3714</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>0.2986</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**3.3 Architectural Coating - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0641	0.0462	0.6004	1.4700e-003	0.1341	1.0800e-003	0.1352	0.0356	9.9000e-004	0.0366		146.2464	146.2464	5.0000e-003		146.3714
<b>Total</b>	<b>0.0641</b>	<b>0.0462</b>	<b>0.6004</b>	<b>1.4700e-003</b>	<b>0.1341</b>	<b>1.0800e-003</b>	<b>0.1352</b>	<b>0.0356</b>	<b>9.9000e-004</b>	<b>0.0366</b>		<b>146.2464</b>	<b>146.2464</b>	<b>5.0000e-003</b>		<b>146.3714</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Non-Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0510	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
Unmitigated	0.0510	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
<b>Total</b>	<b>0.0510</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>0.0000</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>0.0307</b>	<b>0.0307</b>	<b>8.0000e-005</b>		<b>0.0327</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
<b>Total</b>	<b>0.0510</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>0.0000</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>0.0307</b>	<b>0.0307</b>	<b>8.0000e-005</b>		<b>0.0327</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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Fire Pumps and Emergency Generators

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**LA Fitness - Health Club at Rossmoor (Slurry and restriping)**  
**South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	21.12	1000sqft	0.48	21,117.00	0
Other Non-Asphalt Surfaces	119.06	1000sqft	2.73	119,065.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - PTG - Model run for the slurry fill and the asphalt overlay, which do not required ground distrubance.

Land Use -

Construction Phase - PTG - Model updated to reflect paving activities and architectural coating during the same time frame as they would during construction of the health club and area's that would require asphalt being replaced.

Off-road Equipment -

Construction Off-road Equipment Mitigation - PTG - model updated to reflect compliance with SCAQMD 403, and that the project would water exposed areas two times per day.

## LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblAreaCoating	Area_EF_Parking	100	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	50	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	PhaseEndDate	11/30/2018	5/10/2018
tblConstructionPhase	PhaseEndDate	11/6/2018	4/12/2018
tblConstructionPhase	PhaseStartDate	11/7/2018	4/13/2018
tblConstructionPhase	PhaseStartDate	10/12/2018	3/16/2018
tblLandUse	BuildingSpaceSquareFeet	21,120.00	21,117.00
tblLandUse	BuildingSpaceSquareFeet	119,060.00	119,065.00
tblLandUse	LandUseSquareFeet	21,120.00	21,117.00
tblLandUse	LandUseSquareFeet	119,060.00	119,065.00
tblProjectCharacteristics	OperationalYear	2018	2020

## 2.0 Emissions Summary

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LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0510</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>0.0000</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>0.0307</b>	<b>0.0307</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.0327</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0510</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>0.0000</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>0.0307</b>	<b>0.0307</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.0327</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Paving	Paving	3/16/2018	4/12/2018	5	20	
2	Architectural Coating	Architectural Coating	4/13/2018	5/10/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 8,411 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Paving Equipment	2	6.00	132	0.36

#### Trips and VMT

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Paving - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718		1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.0629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4868</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>		<b>0.8370</b>	<b>0.8370</b>		<b>0.7718</b>	<b>0.7718</b>		<b>1,872.5505</b>	<b>1,872.5505</b>	<b>0.5672</b>		<b>1,886.7312</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**3.2 Paving - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1172	0.0847	0.9118	2.3000e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		228.6505	228.6505	7.8300e-003		228.8463
<b>Total</b>	<b>0.1172</b>	<b>0.0847</b>	<b>0.9118</b>	<b>2.3000e-003</b>	<b>0.2236</b>	<b>1.7900e-003</b>	<b>0.2254</b>	<b>0.0593</b>	<b>1.6500e-003</b>	<b>0.0609</b>		<b>228.6505</b>	<b>228.6505</b>	<b>7.8300e-003</b>		<b>228.8463</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.0629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4868</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>		<b>0.8370</b>	<b>0.8370</b>		<b>0.7718</b>	<b>0.7718</b>	<b>0.0000</b>	<b>1,872.5505</b>	<b>1,872.5505</b>	<b>0.5672</b>		<b>1,886.7312</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**3.2 Paving - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1172	0.0847	0.9118	2.3000e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		228.6505	228.6505	7.8300e-003		228.8463
<b>Total</b>	<b>0.1172</b>	<b>0.0847</b>	<b>0.9118</b>	<b>2.3000e-003</b>	<b>0.2236</b>	<b>1.7900e-003</b>	<b>0.2254</b>	<b>0.0593</b>	<b>1.6500e-003</b>	<b>0.0609</b>		<b>228.6505</b>	<b>228.6505</b>	<b>7.8300e-003</b>		<b>228.8463</b>

**3.3 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>0.2986</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>



LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**3.3 Architectural Coating - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0703	0.0508	0.5471	1.3800e-003	0.1341	1.0800e-003	0.1352	0.0356	9.9000e-004	0.0366		137.1903	137.1903	4.7000e-003		137.3078
<b>Total</b>	<b>0.0703</b>	<b>0.0508</b>	<b>0.5471</b>	<b>1.3800e-003</b>	<b>0.1341</b>	<b>1.0800e-003</b>	<b>0.1352</b>	<b>0.0356</b>	<b>9.9000e-004</b>	<b>0.0366</b>		<b>137.1903</b>	<b>137.1903</b>	<b>4.7000e-003</b>		<b>137.3078</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>0.2986</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**3.3 Architectural Coating - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0703	0.0508	0.5471	1.3800e-003	0.1341	1.0800e-003	0.1352	0.0356	9.9000e-004	0.0366		137.1903	137.1903	4.7000e-003		137.3078
<b>Total</b>	<b>0.0703</b>	<b>0.0508</b>	<b>0.5471</b>	<b>1.3800e-003</b>	<b>0.1341</b>	<b>1.0800e-003</b>	<b>0.1352</b>	<b>0.0356</b>	<b>9.9000e-004</b>	<b>0.0366</b>		<b>137.1903</b>	<b>137.1903</b>	<b>4.7000e-003</b>		<b>137.3078</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Other Non-Asphalt Surfaces	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0510	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
Unmitigated	0.0510	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0327
<b>Total</b>	<b>0.0510</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>0.0000</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>0.0307</b>	<b>0.0307</b>	<b>8.0000e-005</b>		<b>0.0327</b>

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	lb/day										lb/day						
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	0.0497					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0144	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005			0.0327
<b>Total</b>	<b>0.0510</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>0.0000</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>0.0307</b>	<b>0.0307</b>	<b>8.0000e-005</b>			<b>0.0327</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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Fire Pumps and Emergency Generators

LA Fitness - Health Club at Rossmoor (Slurry and restriping) - South Coast Air Basin, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**Appendix D:**  
**Noise Assessment**

APPENDIX D:

ASSESSMENT OF  
ENVIRONMENTAL NOISE

ROSSMOOR HEALTH CLUB SEAL BEACH  
CEQA NOISE REPORT

January 26, 2017

By

Veneklasen Associates, Inc.  
1711 16<sup>th</sup> Street  
Santa Monica, CA 90404

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## ASSESSMENT OF ENVIRONMENTAL NOISE

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### 1.0 INTRODUCTION

This report evaluates potential impacts associated with the construction and operation noise of the Rossmoor Health Club project in Seal Beach, California.

#### 1.1 Project Description

The proposed project consists of a standalone commercial building in a retail parking lot currently used for the Shops at Rossmoor. The project site is bounded by Rossmoor Center Way to the north and commercial parking spots immediately to the south, east, and west. There are commercial buildings across parking spaces to the south and east, and 3-story residential buildings across parking spaces to the west as well as across Rossmoor Center Way to the north. The closest major freeways are over 3,000 feet away from the project site.

#### 1.2 Characteristics of Noise

Noise is usually defined as unwanted sound and can be an undesirable by-product of society's normal day-to-day activities. Sound becomes unwanted when it interferes with normal activities, causes actual physical harm, or has an adverse effect on health.

People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness." However, the sound pressure magnitude can be objectively measured and quantified using a logarithmic ratio of pressures which yields the level of sound, utilizing the measurement scale of decibels (dB). The decibel is generally adjusted to the A-weighted level (dBA) which de-emphasizes very low frequencies to better approximate the human ear's range of sensitivity. In practice, the noise level of a sound source is measured using a sound level meter that includes an electronic filter corresponding to the A-weighting curve. Table A.1 in Appendix A of this report defines the decibel along with other technical terms used in this analysis.

Even though the A-weighted scale accounts for the relative loudness perceived by the human ear and, therefore, is commonly used to quantify individual events or general community sound levels, the degree of annoyance or other response effects also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- Magnitude of the event sound level relative to the background noise
- Spectral (frequency) composition (e.g. presence of tones)
- Duration of the sound event
- Number of event occurrences, repetitiveness, and intermittency
- Time of day the event occurs.

In determining the daily level of environmental noise, it is important to account for the difference in human responses to daytime and nighttime noises. At night, exterior background noise levels are generally lower than daytime levels. However, most household noise also decreases at night, and exterior noise may become increasingly noticeable. Further, most people sleep at night and have greater sensitivity to noise intrusion. To account for human sensitivity to nighttime noise levels, a 24-hour descriptor, the Community Noise Equivalent Level (CNEL) has been developed. The CNEL divides the 24-hour day into a daytime period of 7:00 a.m. to 7:00 p.m., an evening period from 7:00 p.m. to 10:00 p.m., and a nighttime period of 10:00 p.m. to 7:00 a.m. In determining the CNEL, noise levels occurring during the evening period are increased by 5 dB, while noise levels occurring during the nighttime period are increased by 10 dB to account for the greater sensitivity during the evening and nighttime periods.

The effects of noise on people fall into three general categories:

- Subjective effects of annoyance and nuisance
- Interference with activities such as speech, sleep and learning
- Physiological effects such as hearing loss

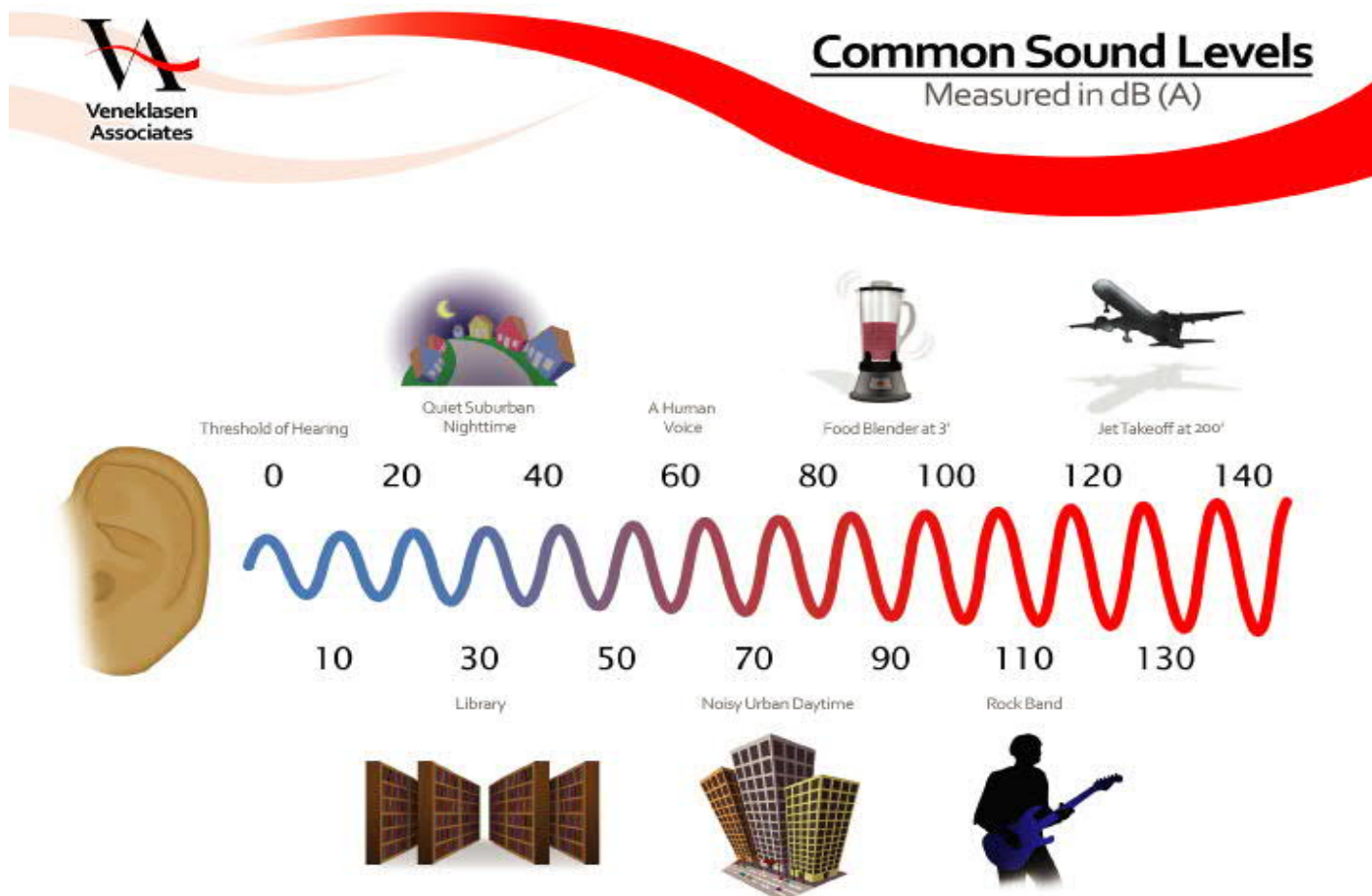
In most cases, the levels associated with environmental noise produce effects only in the first two categories. However, workers in industrial plants may experience noise effects in the last category. There is no completely effective way to measure the subjective effects of noise or the corresponding reactions of annoyance, because of the wide variation in individual thresholds of annoyance and degrees to which people become acclimated to noise. Thus, an important way of determining a person's subjective reaction to a new noise source is by comparison to the existing environment to which they are accustomed (the "ambient environment"). In general, the more the level of a noise event exceeds the prevailing ambient noise level, the less acceptable the noise source will be to those exposed to it.

With regard to increases in A-weighted noise levels, the following relationships are applicable to this analysis:

- Except in carefully controlled laboratory experiments, a 1 dB change cannot be perceived.
- Outside of a laboratory, a 3 dBA change will be generally perceivable by most people.
- A change in level of at least 5 dBA is considered a noticeable change by most people.
- A 10 dBA change will result in the perception of doubling or halving the loudness of the noise.

Common noise levels associated with various activities are shown on Figure 1, Common Noise Levels.

Figure 1 - Common Noise Levels



Noise sources are either "point sources", such as stationary equipment or individual motor vehicles, or "line sources", such as a roadway with a large number of mobile point sources (motor vehicles). Sound generated by a stationary point source typically diminishes (attenuates) at a rate of 6 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites, and at a rate of 7.5 dBA at acoustically "soft" sites.<sup>1</sup> For example, a 60 dBA noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dBA at 100 feet from the source and it would be 48 dBA at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling of distance from the source to the receptor for hard and soft sites, respectively.<sup>2</sup> Man-made or natural barriers can also attenuate sound levels.

<sup>1</sup> U.S. Department of Transportation, Federal Highway Administration, Highway Noise Fundamentals, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 97. A "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt, concrete, and very hard packed soils. An acoustically "soft" or absorptive site is characteristic of normal earth and most ground with vegetation.

<sup>2</sup> U.S. Department of Transportation, Federal Highway Administration, Highway Noise Fundamentals, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 97.

The minimum attenuation of exterior to interior noise provided by typical structures is provided in Table 1, Outside to Inside Noise Attenuation.

Table 1  
Outside to Inside Noise Attenuation (dBA)

Building Type	Open Windows	Closed Windows <sup>1</sup>
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Convalescent Homes	17	25
Offices	17	25
Theaters	20	30
Hotels/Motels	17	25

Source: Transportation Research Board, National Research Council, Highway Noise: A Design Guide for Highway Engineers, National Cooperative Highway Research Program Report 117.

<sup>1</sup> As shown, structures with closed windows can attenuate exterior noise by a minimum of 25 to 30 dBA.

### 1.3 Characteristics of Vibration

Vibration is minute variation in pressure through structures and the earth, whereas, noise is minute variation in pressure through air. Some vibration effects can be caused by noise; e.g., the rattling of windows from truck pass-bys. This phenomenon is related to the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Ground-borne vibration attenuates rapidly as distance from the source of the vibration increases. Vibration amplitude can be measured as peak particle velocity (PPV), the maximum instantaneous peak amplitude in inches per second, or root-mean-square (RMS) velocity in inches per second or as vibration level in decibels (VdB) referenced to 1 micro-inch per second. The ratio between the PPV and the maximum RMS amplitude is termed the "crest factor." According to the Federal Transit Administration (FTA), the PPV level for construction equipment is typically 1.7 to 6 times greater than the RMS vibration level. The FTA uses a crest factor of 4 for the conversion of PPV levels to RMS vibration levels. For the purposes of ground-borne vibration analysis of impacts to existing structures, vibration velocity is described in terms of PPV. For the analysis of the human response to vibration, VdB is utilized.

The vibration velocity threshold of perception for humans is approximately 65 VdB, and a vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people<sup>3</sup>. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Common ground-induced vibrations related to roadway traffic and construction activities pose no threat to buildings or structures. If a roadway is

<sup>3</sup> – U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, (Washington, DC: U.S. Department of Transportation, Federal Transit Administration, May 2006), p. 7-8.

smooth, the ground-borne vibration from traffic is barely perceptible. The range of interest is from approximately 50 VdB, which is typically the background vibration velocity, to 94 VdB. This 94 VdB vibration level corresponds to 0.2 PPV, which is the general threshold where minor damage can occur in non-engineered timber and masonry buildings.

## 2.0 REGULATORY FRAMEWORK

Many government agencies have established noise regulations and policies to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise and ground-borne vibration. The City of Seal Beach has adopted the General Plan Noise Element and a Noise Ordinance which are based in part on Federal and State regulations and are intended to control, minimize, or mitigate environmental noise effects. The regulations and policies that are relevant to project construction and operation noise are discussed below.

### 2.1 Applicable State Noise Standards

The California Environmental Quality Act (CEQA) Guidelines establishes guidelines for the evaluation of significant impacts of environmental noise attributable to a proposed project. The guidelines ask whether the project would result in:

1. Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or Noise Ordinance or applicable standards of other agencies.
2. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
6. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The CEQA Guidelines and the City's Noise Element provide no definition of what constitutes a substantial noise increase. Typically, in high noise environments, if the CNEL due to the project would increase by 3 dBA at noise sensitive receptors, the impact is considered significant.



## 2.2 City of Seal Beach Noise Element & Municipal Code – Noise Ordinance

The City of Seal Beach Noise Element establishes noise/land use compatibility criteria. Multifamily residential uses can be considered normally acceptable within noise environments of up to 65 CNEL.

Section 7.15.015 of the Seal Beach Municipal Code states that the noise level in a residential zone cannot exceed 55 dBA between 7:00 A.M. and 10:00 P.M. and 50 dBA between 10:00 P.M. and 7:00 A.M. These limits apply to cumulative period of more than 30 minutes in an hour. The limits increase by 5 dBA for a cumulative period of more than 15 minutes in an hour; 10 dBA for 5 minutes of an hour; 15 dBA for 1 minute in an hour, and 20 dBA for any period of time.

Section 7.15.025 states that noise related to construction performed between 7:00 A.M. and 8:00 P.M. on weekdays and between 8:00 A.M. and 8:00 P.M. on Saturdays is exempt from Code limits.

The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment document offers guidelines for assessment of construction noise that take into account the existing environment, absolute noise levels of construction activity, duration of construction activity, and adjacent land uses. Recognizing that construction activity is noisy, the FTA document provides the following mitigation measures, which are required by other city general plans:

1. When adjacent to occupied noise-sensitive land uses, implement a construction-related noise mitigation plan. This plan would depict the location of construction equipment storage and maintenance areas, and document methods to be employed to minimize noise impacts on adjacent noise-sensitive land uses.
2. Construction equipment shall utilize noise-reduction features (e.g. mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
3. Haul truck deliveries are subject to the same hours specified for construction. Additionally, the plan shall denote any construction traffic haul routes where heavy trucks would exceed 100 daily trips (counting those both to and from the construction site). To the extent feasible, the plan shall denote haul routes that do not pass sensitive land uses or residential dwellings.

Section 7.15.035 states that building permits will not be issued if HVAC equipment noise exceeds 50 dBA at adjacent residential areas. It further states that building permits may be issued if a timing device deactivates the HVAC equipment between 10:00 P.M. and 7:00 A.M. and equipment noise does not exceed 55 dBA.

## 2.3 City of Seal Beach Noise Element – Ground-Borne Vibration

The City's Noise Element requires construction activity to comply with the local Noise Ordinance, which does not provide limits on ground-borne vibration. The FTA Transit Noise and Vibration Impact Assessment document referenced above offers the following vibration criteria:

Table 2  
Groundborne Vibration Impact Criteria for General Assessment

Land Use Category	Impact Levels (VdB)		
	Frequent Events <sup>a</sup>	Occasional Events <sup>b</sup>	Infrequent Events <sup>c</sup>
Category 1: Buildings where vibration would interfere with interior operations	65 <sup>d</sup>	65 <sup>d</sup>	65 <sup>d</sup>
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Vibration levels are measured in or near the vibration-sensitive use.

- "Frequent Events" is defined as more than 70 vibration events of the same source per day.
- "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
- "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.
- This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels.

Source: Federal Transit Administration, Transit Noise Impact and Vibration Assessment, May 2006.

## 2.4 Project Requirements

The above requirements for the project are summarized in the following Table 3.

Table 3  
Project Requirements

Activity	Standard
Exterior Noise at Multi-Family Residences	65 CNEL
Construction Noise	- Limited to the hours of: 7:00am – 8:00pm Weekdays 8:00am – 8:00pm Saturdays
Operational Noise	At residential property, more than 30-minute duration: 55 dBA from 7:00 a.m. to 10:00 p.m. 50 dBA from 10:00 p.m. to 7:00 a.m. At residential property, 15 to 30-minute duration: 60 dBA from 7:00 a.m. to 10:00 p.m. 55 dBA from 10:00 p.m. to 7:00 a.m. At residential property, 5 to 15-minute duration: 65 dBA from 7:00 a.m. to 10:00 p.m. 60 dBA from 10:00 p.m. to 7:00 a.m. At residential property, 1 to 5-minute duration: 70 dBA from 7:00 a.m. to 10:00 p.m. 65 dBA from 10:00 p.m. to 7:00 a.m. At residential property, less than 1-minute duration: 75 dBA from 7:00 a.m. to 10:00 p.m. 70 dBA from 10:00 p.m. to 7:00 a.m.

HVAC Equipment Noise	At residential property,; 50 dBA anytime 55 dBA if non-operational from 10:00 p.m. to 7:00 a.m.
Vibration	Developments which are to generate a significant amount of vibration must ensure acceptable interior vibration levels within limits of Groundborne Vibration Impact Criteria for General Assessment.

### 3.0 ENVIRONMENTAL IMPACTS AND SIGNIFICANCE

#### 3.1 Significance Thresholds

The following significance thresholds are used in this report to evaluate the significance of the project noise impacts:

- Project would expose persons to or generate noise levels in excess of standards established in the City's Noise Element or Noise Ordinance.
- Project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. A substantial permanent increase in traffic noise would occur if the project would result in an increase of 3 dBA CNEL or more.
- Project would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Construction noise would be considered significant if it would take place outside of the allowable hours set forth in Table 4 or exceed the guidelines set forth by the FTA.

#### 3.2 Impact 1. Noise levels in excess of standards

Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or Noise Ordinance or applicable standards of other agencies?

##### 3.2.1 Methodology

Analysis of the existing and future noise environments presented in this section is based on technical reports, long and short-term noise monitoring, and noise prediction modeling. Traffic volumes utilized for future traffic noise calculations were based on information provided in the traffic study prepared by LSA Associates in December 2016 for this project.

##### 3.2.2 Existing Ambient Monitored Noise Levels

Vehicular traffic on Rossmoor Center Way was noted by the public as one of the main noise sources. Since the proposed project site is currently used as parking for the Shops at Rossmoor, it currently experiences frequent automobile arrivals and departures associated with use of the retail shops. While arrivals and departures associated

with the retail uses occur during the posted store operating hours, arrivals and departures associated with unauthorized use of the lot during nighttime hours also may occur. The project site is located on the rear/service side of existing retail stores to the east, meaning truck trailer loading docks are located in this area. Thus, this area experiences sporadic semi-truck deliveries during the daytime store operating hours, as observed during site visits. Truck trailer deliveries create temporary noise spikes with opening of trailer gates, extending of delivery ramps, and cold starting of diesel engines. The project building will shield the majority of the existing retail delivery area from the nearby residential complexes.

To establish existing ambient noise levels in residential areas surrounding the project site, a field monitoring study was conducted. Measurements were performed near the project site (see Figure 2, below) for documenting the ambient conditions. A Bruel & Kjaer Model 2270 Sound Level Meter, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation, was located on the property line of the residential complex to the west of the project site from 9:00 P.M. November 5 through 9:00 P.M. November 7, 2016. This captured both a full weekend 24 hours and weekday 24 hours. Noise readings were measured over 5-minute intervals with "A" frequency fast time weighting. Table B.1 in Appendix B of this report lists the results from the long-term monitoring.

Figure 2 – Project Site and Noise Monitoring Location



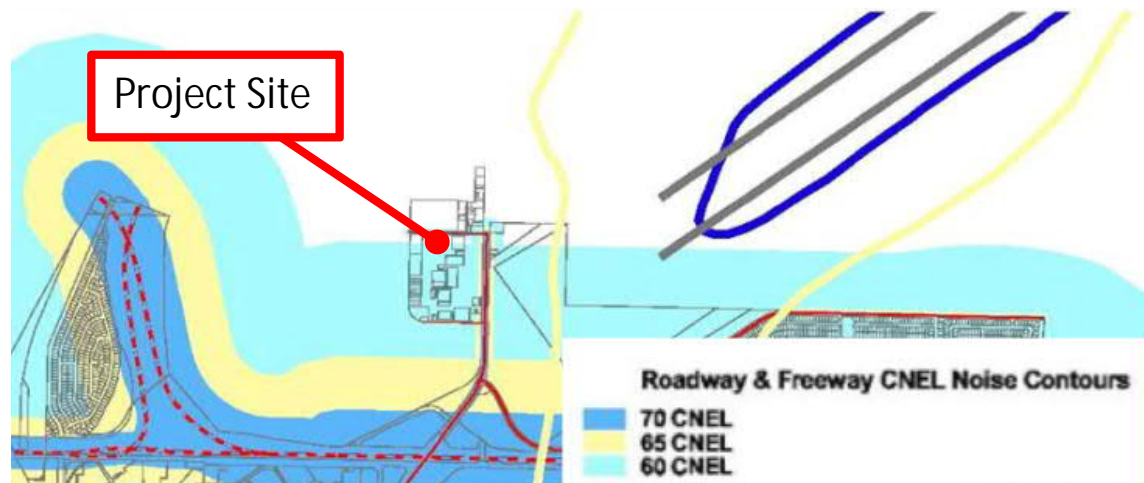
In general, the weather conditions were normal for the field monitoring study. The first night, there was a delivery truck stationed at the easternmost parking slots near Home Goods that skewed the results higher than what is expected on most nights. The results cited below, and used for analysis, are the lower of the two nights; lower ambient levels provide less masking to any noise specifically from the project or its parking lot. The measurement

location itself was also highly suited to measuring levels with the quietest ambient (most susceptible to disturbances) as it was away from any local street noise (parking lot car routes) and shielded from direct street noise.

Typical noise levels generated for the measurements were vehicular noise from local parking traffic and streets. Any human noises from the existing commercial neighbors or residential neighbors were averaged out of the levels reported.

Based on the long-term monitor measurements at the residences, the loudest 1-hour  $L_{E0}$  was 53 dBA. In addition, a 56 CNEL was calculated at the residential units to the west. This is consistent with the Noise Element which shows that the residential complexes are located partially within the 60 CNEL noise contour for roadway and freeway noise (reference Figure 3, below).

Figure 3 – Project Site and Nearby Road CNEL Contours



### 3.2.3 Future Project Noise Levels

Using the December 2016 traffic study information, the changes in dBA levels were calculated for potential future noise conditions due to future traffic volumes associated with the proposed project and increases in background traffic. At approximately 1,000 feet from Seal Beach Boulevard, the residential neighbors are barely affected by traffic noise. Effects are similar for Montecito Boulevard at approximately 450 feet away. Rossmoor Center Way traffic will have a greater influence due to its proximity. The calculated decibel effects due to traffic changes are shown below, regardless of distance to the residential complexes.

Table 4  
Traffic Noise Levels (dBA) Increases over Time vs. 2016

Road	Opening Year (2018) No Project	Opening Year (2018) with Project	Future Year No Project	Future Year with Project
Seal Beach Blvd (avg. of segments north and south of Rossmoor Center Way) – Weekday/Saturday	0.20/0.24	0.27/0.29	0.54/0.58	0.60/0.62
Rossmoor Center Drive between Eastern and Western Internal Drives – Weekday/Saturday	0.04/0.04	1.30/0.79	0.39/0.39	1.56/1.09
Rossmoor Center Drive between Western Internal Drive and West Road – Weekday/Saturday	0.04/0.04	0.04/0.04	0.39/0.39	0.39/0.39
Rossmoor Center Drive between West Road and Montecito – Weekday/ Saturday	0.04/0.04	0.24/0.17	0.39/0.39	0.58/0.51
Montecito Blvd (avg. of segments north and south of Rossmoor Center Way) – Weekday/Saturday	0.07/0.09	0.11/0.12	0.42/0.44	0.45/0.46

With decibel increases of at most 1.5, the proposed project will not result in any new uses or traffic generation that would increase noise levels in the vicinity or expose the residential neighbors to levels above those that are deemed normally acceptable in the noise ordinance, or less than 60 CNEL.

This impact is less than significant.

### 3.3 Impact 2. Excessive ground-borne vibration

Would the project result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

The proposed project site is currently used as parking for retail development within the Shops at Rossmoor. Construction equipment associated with building the project would be the only vibration generating sources introduced by the project. The City of Seal Beach Municipal Code limits construction to specific hours of the day, with no construction activity permitted on Sundays.

The FTA document provides vibration criteria due to construction equipment as shown in Table 2, above, and Table 5, below. Using vibration levels of typical construction equipment given in the FTA document, vibration levels at

receivers nearest the project site were calculated to be as indicated in Table 5. The distance loss was calculated using equations for ground-borne vibration published by the FTA, and the distance used was from the center of the building in the development that is closest to a sensitive receptor.

Table 5  
Calculated Vibration Levels of Typical Construction Equipment to Nearest Sensitive Receptor

Equipment	Vibration Level at 25ft (VdB)	Vibration Level at Nearest Sensitive Receptor (VdB)	Vibration Criteria for Frequent Events (VdB)
Jack Hammer	79	49	72
Loaded Trucks	86	56	72
Large Bulldozer	87	57	72
Vibratory Roller	94	64	72

Based on calculations to the nearest sensitive receptor, the construction of the development is not anticipated to generate vibration levels that exceed criteria given by FTA document. This impact is less than significant.

### 3.4 Impact 3. Permanent increase in ambient noise levels

Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

#### 3.4.1 Increase due to Project Traffic

As indicated in Table 4, which shows decibel increases of no more than 1.5 dBA, the proposed project would not result in any new uses or traffic generation that would increase noise levels in the vicinity or expose residential neighbors to levels above those that are deemed normally acceptable in the noise ordinance.

Impact would be less than significant due to project traffic.

#### 3.4.2 Operational Noise, Indoor Fitness Activity

The proposed health club would host various exercise activities (e.g., treadmill running, weight lifting, basketball playing, and swimming), as well as classes (e.g., aerobics and cycling). Project floor plans shows that the basketball court and swimming pool will be located on the west side of the project building closest to the nearest residences. Rooms for exercise classes are shown on the east side of the building. Depending on the specific exercise activity, interior health club sound levels can range from 65 dBA to over 85 dBA with amplified music. Exterior wall and roof elements (e.g. stucco, metal decking, gypsum board or plywood sheathing) typically offer at least 40 dBA of sound reduction. Exterior doors and windows normally underperform walls and roofs by only offering 30 dBA of reduction. This assumes that doors include full perimeter weather stripping, which is typical for exterior doors. Plans show that the basketball court—as well as swimming pool and aerobics rooms—will have single doors that lead to the exterior.



These exterior doors are emergency exits that would not be used for normal entry into the health club. The plans show a vestibule at the main entrance to the health club. Based on expected noise reductions from exterior building elements, doors, and windows, noise levels due to exercise activity within the health club are calculated to be below Municipal Code limits during the day (55 dBA) and nighttime/early morning (50 dBA) at less than 40 dBA at the residences.

Noise associated with indoor fitness activity would be less than significant.

### 3.4.3 Operational Noise, Outdoor Parking Lot Activities

Operation of the proposed project would produce noise associated with such activities as vehicle traffic, delivery trucks, loud conversations, opening and closing of car doors, car horns, etc. in the adjacent parking lot. Since the project does not include a loading dock, it is assumed that delivery trucks will be relatively small, such as for delivering packages, rather than large tractor trailers used for transporting palletized goods. The mentioned noise sources above are typical of commercial/retail uses, including those existing today on site within the Shops at Rossmoor center. To understand how these activities generate noise, similar health clubs were observed in Culver City and Garden Grove as early as the 5:00 A.M. hour. At both sites the fitness lot was unshielded from the highways, unlike the project site; the city street noise (not the fitness center or its respective parking lot activity) controlled both the constant and loud sporadic noise even at the early hour. While useful to observe these activities to apply to the project, the strong influence of the city streets made the data measured not clean enough to use in analysis for the new project site. To isolate offending noise sources for analysis, each of the anticipated noise sources within the project parking lot and listed above was individually measured separately.

Each isolated measured noise source was calibrated to the distance it was measured in a noise propagation model in Bruel & Kjaer Predictor 11.0. Then, the noise level reaching the residences to the west and north were calculated. The loudest noise source that was closest to thresholds in the Noise Ordinance was the car horn, which achieved 47 dBA at the west residential complex and 50 dBA at the north residential complex, assuming the noise would occur at parking lot locations as close as possible to the residences. Both these levels are well below the limit of 50 dBA (Noise Ordinance) + 20 dBA, as well as 41 dBA (actual quietest ambient level at the site) + 20 dBA. The horn noise would be audible at the residences compared to the ambient levels but would not exceed City-established noise thresholds.

Noise associated with outdoor activity in the parking lot would be less than significant.

### 3.4.4 HVAC Equipment Noise

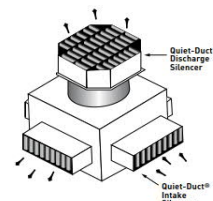
The health club will be served by thirteen (13) HVAC units located on the rooftop. Approximately one-half of the rooftop units will be located on the western half the building, and the remaining will sit on the eastern half. No



screening is proposed. Based on manufacturer's sound data for the basis of design RTUs, cumulative noise levels due to the project RTUs are calculated to be 53 dBA at the nearest residential property line; this is calculated at maximum equipment operation, which is the worst case scenario. At least one of three mitigation options will be applied so the Municipal Code limit of 50 dBA is not exceeded: an equipment screen or taller parapet on the roof, baffles/silencers/attenuators on the equipment, or quieter equipment that can be shown to achieve the requirement.

Mitigation 1: Screen or Parapet. To be an effective noise barrier, the screen or parapet should extend at least one (1) foot above the tallest RTU and should be continuous at the north and west edges of the health club building.

or Mitigation 2: Baffles/Silencers/Attenuators. RTU's would need to be fully enclosed with noise control devices located at air ventilation to lessen the noise radiating from the equipment. A representative figure of this concept is shown to the right.



or Mitigation 3: Quieter Units. Once specific RTU's are selected, sound data from their manufacturer can be used to show that the Code limit of 50 dBA at nearby property lines would not be exceeded.

This impact is anticipated to be less than significant with mitigation.

### 3.5 Impact 4. Temporary increase in ambient noise levels

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction of the project will generate temporary increased noise levels at the property line of the project site. While construction activity will occur within the time periods established in the Noise Ordinance, peaks in construction equipment work could be considered objectionable by some residents in adjacent units. The following measures are identified to reduce the potential effects of construction noise on adjacent properties. They have been separated via the City of Seal Beach General Plan requirements for construction and standard practices for acoustical control.

Mitigation 4.

Seal Beach Municipal Code limits construction activity to the hours listed in Table 3.

Standard Practices for Mitigating Construction Noise include the following:

- Implement a construction-related noise mitigation plan. This plan would depict the location of construction equipment storage and maintenance areas and document methods to be employed to minimize noise impacts on adjacent noise-sensitive land uses. Additionally, the plan shall denote any construction traffic haul routes where heavy trucks would exceed 100 daily trips (counting those both to and from the

construction site). To the extent feasible, the plan shall denote haul routes that do not pass sensitive land uses or residential dwellings.

- Equip internal combustion engine-driven equipment with original factory (or equivalent) intake and exhaust mufflers which are maintained in good condition.
- Prohibit and post signs prohibiting unnecessary idling of internal combustion engines.
- Locate all stationary noise-generating equipment such as air compressors and portable generators as far as practicable from noise-sensitive land uses.
- Utilize "quiet" air compressors and other stationary equipment where feasible and available.
- Designate a noise disturbance coordinator who would respond to neighborhood complaints about construction noise by determining the cause of the noise complaints, and require implementation of reasonable measures to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site.

The General Plan and Noise Ordinance exempts construction noise from the guidelines, provided the construction activities are limited to the allowable hours indicated in Table 3. If construction outside of the hours indicated is desired, the appropriate permitting must be obtained.

The construction will be limited to the hours indicated in Table 3, unless appropriate permitting is obtained. In order to ensure a less than significant impact of noise to neighboring noise-sensitive areas, the previously noted mitigation measures shall be required of the project. This impact is less than significant with the mitigation measures presented.

### 3.6 Impact 5. Airport noise exposure

For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project is not within two miles of a public airport or public use airport. Therefore, there is no noise impact.

### 3.7 Impact 6. Private airstrip noise exposure

For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The project is not within the vicinity of a private airstrip. Therefore, there is no impact.

#### 4.0 SUMMARY

##### 4.1 Summary of significance of impacts

CEQA Noise Impact Question		No Impact	Less Than Significant	Less Than Significant with Mitigation	Potentially Significant
<b>1</b>	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		<b>X</b>		
<b>2</b>	Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?		<b>X</b>		
<b>3</b>	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			<b>X</b>	
<b>4</b>	A substantial temporary or periodic increase in ambient noise levels in the project vicinity about levels existing without the project?			<b>X</b>	
<b>5</b>	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<b>X</b>			
<b>6</b>	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<b>X</b>			

##### 4.2 Summary of Mitigation Measures

At least one of the three mitigation measures as described in section 3.4.4 will be enacted to reduce the noise levels from the rooftop mechanical equipment to the residences.

Standard Practices for Mitigating Construction Noise as described in section 3.5 will be enacted as needed for the construction equipment to be used.

## APPENDIX A

Table A.1 – Definitions of Noise-Related Terms

Term	Definition
Decibel, dB	A unit describing the amplitude of sound equivalent to 20 times the logarithm, to the base 10, of the ratio of the pressure of the sound to the reference pressure of 20 $\mu$ Pa.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured in an A-weighting filter network. The A-weighting de-emphasizes the very low frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are in the A-weighted scale.
$L_0$ ( $L_{max}$ ), $L_2$ , $L_8$ , $L_{25}$ , $L_{50}$	The A-weighted noise levels that are exceeded 0 percent (maximum noise level), 2 percent, 8 percent, 25 percent, and 50 percent of the time during the measurement period.
Equivalent Noise Level, $L_{eq}$	The average A-weighted noise level during the stated measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 P.M. to 10:00 P.M., and after addition of 10 decibels to noise levels in the night between 10:00 P.M. and 7:00 A.M.
Day-Night Noise Level, DNL, $L_{dn}$	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 P.M. and 7:00 A.M.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Impulsive Noise	Sound of short duration. Typically associated with an abrupt onset and rapid decay (i.e., gun-shots, etc.).
Pure Tones	A sound wave, residing over a small range of frequencies, which has a sinusoidal behavior over time.
VdB	Unit of measurement used by FHWA to describe ground-borne vibration. Equivalent to 20 times the logarithm, to the base 10, of the ratio of the root mean square ground-borne velocity to the reference of reference of $1 \times 10^{-6}$ in/sec.

APPENDIX B

Table B.1 – Summary of Measured Long-Term Sound Levels

Measurement Date	Measurement Time	Exterior Sound Level, 1-hour LAeq	CNEL
1/6/2016	9:00	52	56
	10:00	51	
	11:00	52	
	12:00	52	
	13:00	53	
	14:00	52	
	15:00	53	
	16:00	52	
	17:00	52	
	18:00	53	
	19:00	52	
	20:00	52	
	21:00	53	
	22:00	53	
23:00	51		
1/7/2016	0:00	47	
	1:00	48	
	2:00	48	
	3:00	44	
	4:00	43	
	5:00	43	
	6:00	46	
	7:00	47	
8:00	53		

**Appendix E:**  
**Traffic Study**

# TRAFFIC ANALYSIS

HEALTH CLUB WITHIN THE SHOPS AT ROSSMOOR  
CITY OF SEAL BEACH  
COUNTY OF ORANGE, CALIFORNIA

This Traffic Impact Analysis has been prepared under the supervision of  
Donson H. Liu, T.E.

Signed 



**LSA**

March 2017

# TRAFFIC ANALYSIS

HEALTH CLUB WITHIN THE SHOPS AT ROSSMOOR  
CITY OF SEAL BEACH  
COUNTY OF ORANGE, CALIFORNIA

Submitted to:

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LSA Project No. MPA1401



March 2017



## **TRAFFIC ANALYSIS HEALTH CLUB WITHIN THE SHOPS AT ROSSMOOR**

LSA has prepared this updated traffic/circulation analysis within a study area along Seal Beach Boulevard north of the Interstate 405 (I-405) freeway in the City of Seal Beach in order to identify any potential traffic impacts resulting from the development of the proposed project. This traffic/circulation analysis serves as an update to the *Health Club within the Shops at Rossmoor Traffic Analysis* (LSA, October 2015) and accompanying *Revised Health Club within the Shops at Rossmoor Expanded Queuing Assessment* (LSA, April 2016), referred to collectively as Previous Analyses. This update was performed as the Previous Analyses were based on traffic counts collected in November 2014 and are not considered current. This update is based on traffic counts collected in October 2016. The project description, which includes the construction of a 37,000-square-foot (sf) health club within the existing Shops at Rossmoor, remains the same as previously analyzed.

Through the identification of various community concerns collected during the preparation of the Previous Analyses, the project includes two off-site improvements to access facilities. These include the lengthening of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Drive to 250 feet and the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard.

The study area is consistent with the Previous Analyses, which were developed in coordination with City staff. This study area includes intersections and roadway segments along Seal Beach Boulevard and local access roads adjacent to the proposed project. Per previous direction from the City, LSA also evaluated recent accident and pedestrian data in the study area. The traffic analysis has been prepared consistent with the City Traffic Impact Study Guidelines (March 2010) and the City's General Plan (December 2003).

### **EXECUTIVE SUMMARY**

The purpose of this analysis is to determine short-term and long-term traffic impacts resulting from the development of a 37,000 sf health club within the existing Shops at Rossmoor retail center along the south side of Rossmoor Center Way between West Road and Sprouts Farmers Market.

The traffic analysis reviewed the weekday a.m., p.m., and weekend peak-hour levels of service (LOS) at study intersections and roadway segments for the following scenarios:

1. Existing (2016) conditions with current occupancy of the Shops at Rossmoor retail center.
2. Existing (2016) conditions with estimated full occupancy of the Shops at Rossmoor retail center.
3. Existing (2016) conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.

4. Project Completion Year (2018) conditions with estimated full occupancy of the Shops at Rossmoor retail center.
5. Project Completion Year (2018) conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.
6. Future (2035) General Plan Buildout conditions with estimated full occupancy of the Shops at Rossmoor retail center.
7. Future (2035) General Plan Buildout conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.

Based on the results of this TIA, the proposed project can be implemented without impacting the design or the operation of the surrounding intersections and roadways with the implementation of project off-site improvements. The evaluation of intersection and roadway LOS shows that the addition of project traffic to existing, Project Completion Year (2018), and Future (2035) General Plan Buildout traffic volumes would not significantly impact the study area intersections or roadways according to City performance criteria.

Project access circulation and queuing were also analyzed based on coordination with City staff on the Previous Analyses. Based on the circulation and queuing analysis, the addition of project traffic will contribute to the northbound left-turn queue at the intersection of Seal Beach Boulevard and Rossmoor Center Way, which currently exceeds the provided storage lane. The extension of this northbound left-turn pocket is a project off-site improvement. This improvement is consistent with recommendations made in the Previous Analyses. Additionally, project off-site improvements to access the facilities will include the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard. At the community's request, an optional improvement was evaluated for the construction of an additional inbound-only driveway and right-turn deceleration lane on Seal Beach Boulevard south of Rossmoor Center Way. This improvement, however, was determined to be infeasible based on several factors. The proposed Rossmoor Center Way improvement, in conjunction with the extension of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way will improve vehicular access to both the project site and the Shops at Rossmoor.

These project off-site improvements are not required by the City or California Environmental Quality Act (CEQA) guidelines but have been evaluated to investigate concerns raised by the local community.

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**APPENDICES**

- A: EXISTING TRAFFIC COUNTS
- B: INTERSECTION LOS WORKSHEETS
- C: ROADWAY LOS WORKSHEETS
- D: ACCIDENT DATA
- E: SIMTRAFFIC QUEUING AND ARTERIAL PERFORMANCE WORKSHEETS

## INTRODUCTION

LSA has prepared this updated traffic/circulation analysis within a study area along Seal Beach Boulevard north of I-405 in the City of Seal Beach in order to identify any potential traffic impacts resulting from the development of the proposed project. This traffic/circulation analysis serves as an update to the Previous Analyses, which were based on traffic counts collected in November 2014 and are not considered current. This update is based on traffic counts collected in October 2016. The project description includes the construction of a 37,000-square-foot (sf) health club within the existing Shops at Rossmoor.

The study area is consistent with the Previous Analyses, which were developed in coordination with the City staff. This study area includes intersections and roadway segments along Seal Beach Boulevard and local access roads adjacent to the proposed project. Per previous direction from the City, LSA also evaluated recent accident data in the study area. The traffic analysis has been prepared consistent with the City Traffic Impact Study Guidelines (March 2010) and the City's General Plan (December 2003).

The traffic analysis reviewed the weekday a.m., p.m., and weekend peak-hour LOS at study intersections and roadway segments for the following scenarios:

1. Existing (2016) conditions with current occupancy of the Shops at Rossmoor retail center.
2. Existing (2016) conditions with estimated full occupancy of the Shops at Rossmoor retail center.
3. Existing (2016) conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.
4. Project Completion Year (2018) conditions with estimated full occupancy of the Shops at Rossmoor retail center.
5. Project Completion Year (2018) conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.
6. Future (2035) General Plan Buildout conditions with estimated full occupancy of the Shops at Rossmoor retail center.
7. Future (2035) General Plan Buildout conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.

## Project Description

The proposed project consists of 37,000 sf of health club uses to be developed on surface parking within the existing Shops at Rossmoor retail center along the south side of Rossmoor Center Way between West Road and Sprouts Farmers Market as shown on Figure 1. The project site is bound by residential uses to the north and west. Access to the project will be provided by the site-adjacent intersections of West Road at Rossmoor Center Way and Project Driveway at Rossmoor Center Way. As part of the proposed project, two off-site improvements to access facilities will be implemented. These include the lengthening of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way to 250 feet and the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard. These project off-site improvements will be fully funded by the project applicant.

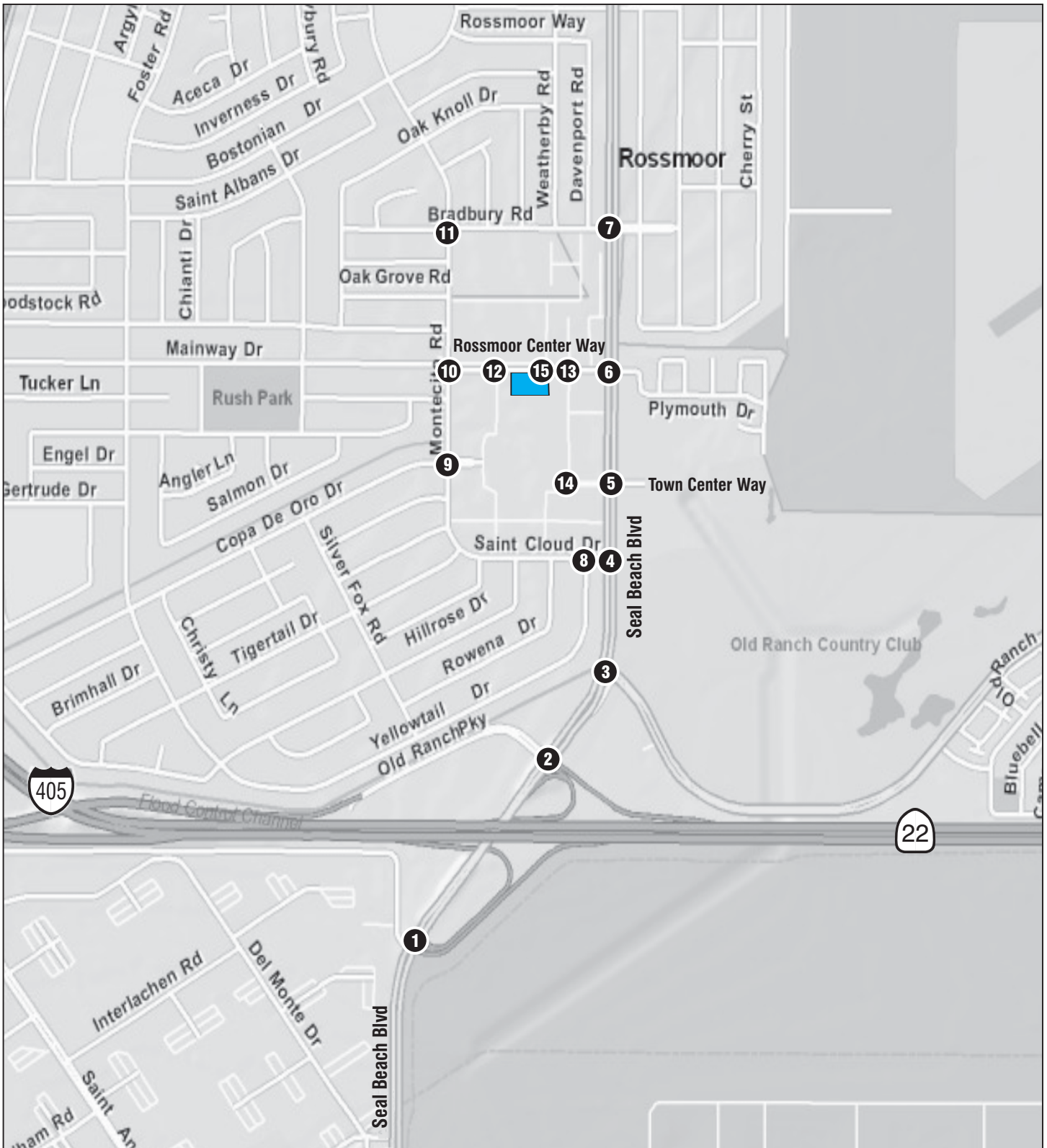


FIGURE 1

L S A

LEGEND

- Project Site
- 8 - Study Area Intersection



*Health Club within The Shops at Rossmoor*  
 Project Location and  
 Study Area Intersections

SOURCE: ESRI

I:\MPA1401\G\Location & Study Ints.cdr (12/13/2016)

## STUDY AREA

As Figure 2 shows, Seal Beach Boulevard is a north-south arterial that provides access to both residential and commercial (retail) uses within the City of Seal Beach. Seal Beach Boulevard is a six-lane Major Arterial per the City's General Plan, which provides connection to the I-405 freeway as well as the Interstate 605 (I-605) freeway (via Katella Avenue). The 1.2-mile (mi) section of Seal Beach Boulevard between I-405 and Bradbury Road provides connection to commercial uses such as office, retail, and hotel, and residential uses (both east and west of Seal Beach Boulevard) via local collector streets such as Bradbury Road, Lampson Avenue, Rossmoor Center Way, Town Center Drive, and St. Cloud Drive. There are retail/commercial uses on either side of Seal Beach Boulevard between St. Cloud Drive and Bradbury Road. The Shops at Rossmoor retail/commercial center west of Seal Beach Boulevard recently underwent modifications and changes at several locations and is close to full occupancy with only one unoccupied restaurant space of 8,827 sf (former Marie Callender's). The existing traffic along Seal Beach Boulevard includes the traffic from the occupied retail and restaurant space within the Shops at Rossmoor as well as residential traffic from the Rossmoor community, but does not include traffic generated by the restaurant space that is currently unoccupied.

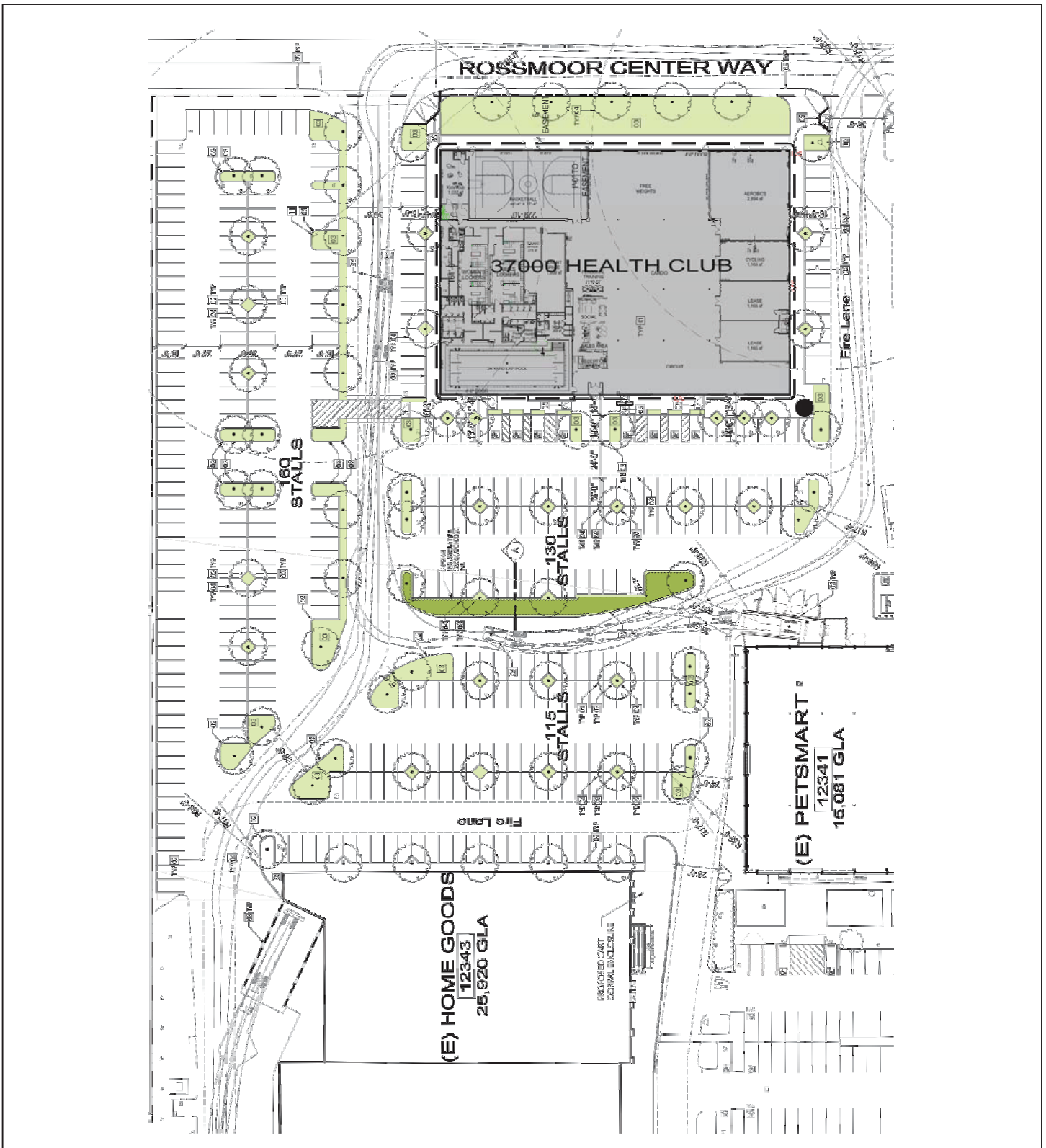
In order to analyze the traffic conditions along Seal Beach Boulevard when the Shops at Rossmoor is fully occupied, traffic for the unoccupied restaurant space was added to existing traffic volumes.

Based on discussion with City staff and the criteria provided in the City's Traffic Impact Study Guidelines, the following roadway segments and intersections are analyzed for the study:

### Roadway Segments

- Seal Beach Boulevard between:
  - Rossmoor Way and Bradbury Road;
  - Bradbury Road and Rossmoor Center Way;
  - Rossmoor Center Way and Town Center Drive;
  - Town Center Drive and St. Cloud Drive;
  - St. Cloud Drive and Lampson Avenue; and
  - Lampson Avenue and I-405 Northbound ramps.
- St. Cloud Drive between:
  - Seal Beach Boulevard and Yellowtail Drive.
- Montecito Road between:
  - Yellowtail Drive and Copa De Oro Drive;
  - Copa De Oro Drive and Mainway Drive; and
  - Mainway Drive and Bradbury Road.
- Rossmoor Center Way between:
  - Montecito Road and Seal Beach Boulevard.





LSA

LEGEND

■ - Project Site

FIGURE 2



SOURCE: robinson hill architecture, inc.  
I:\MPA1401\G\Site Plan.cdr (12/13/2016)

Health Club within The Shops at Rossmoor  
Site Plan

## Intersections

1. Seal Beach Boulevard/I-405 Southbound ramps;
2. Seal Beach Boulevard/I-405 Northbound ramps;
3. Seal Beach Boulevard/Lampson Avenue;
4. Seal Beach Boulevard/St. Cloud Drive;
5. Seal Beach Boulevard/Town Center Drive;
6. Seal Beach Boulevard/Rossmoor Center Way;
7. Seal Beach Boulevard-Los Alamitos Boulevard/Bradbury Road;
8. Yellowtail Drive/St. Cloud Drive (unsignalized);
9. Montecito Road/Copa De Oro Drive (unsignalized);
10. Montecito Road/Mainway Drive-Rossmoor Center Way (unsignalized);
11. Montecito Road/Bradbury Road (unsignalized);
12. West Road/Rossmoor Center Way (unsignalized);
13. Internal Driveway (Eastern)/Rossmoor Center Way (unsignalized);
14. Internal Driveway/Towne Center Drive (unsignalized); and
15. Internal Driveway (Western)/Rossmoor Center Way (unsignalized).

Figure 3 shows the existing intersection lane geometrics at all 15 intersections.

## METHODOLOGY

To determine the peak hour intersection operations at signalized intersections within the study area, intersection capacity utilization (ICU) methodology was used per City of Seal Beach Traffic Study Guidelines. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. The ICUs were developed for this study using the Traffix (Version 8.0) software.

According to the City of Seal Beach Traffic Impact Study Guidelines, LOS at an intersection is considered to be unsatisfactory when the ICU exceeds 0.90 (LOS D). As such, improvements are recommended at locations that operate at LOS E or F. The relationship of ICU (v/c ratio) to LOS is demonstrated in the following table:

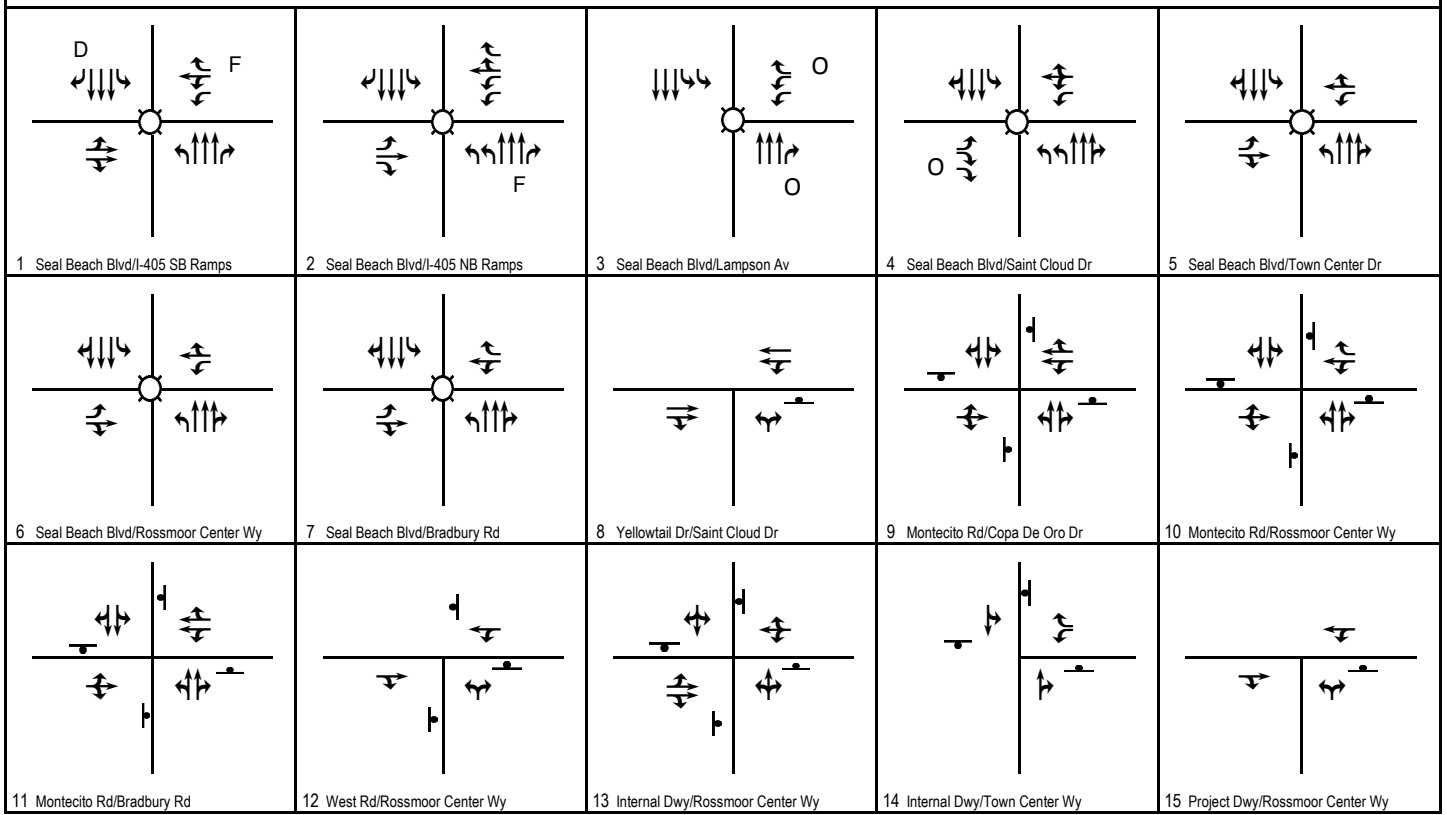
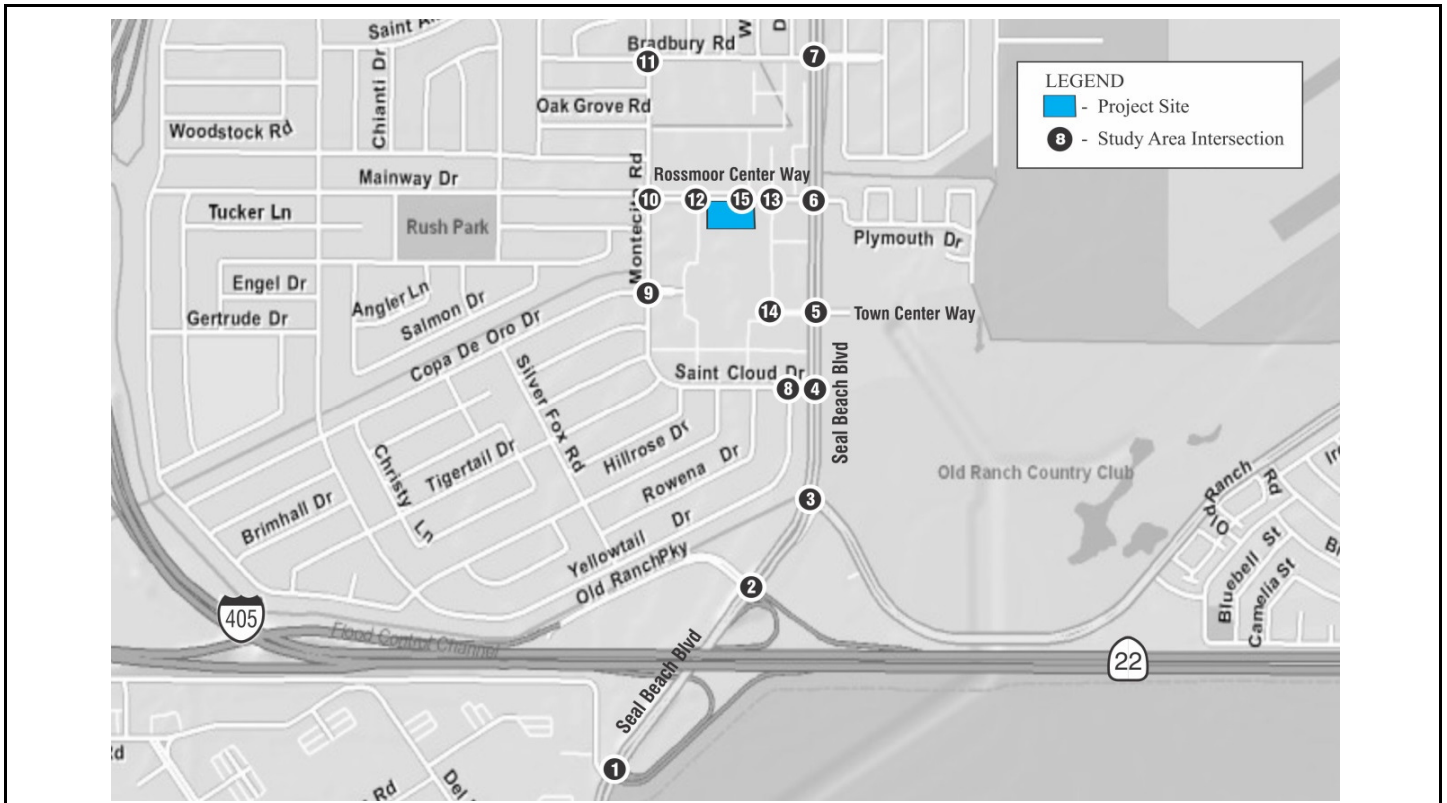


FIGURE 3

Legend

- Signal
- Right Turn Overlap
- Stop Sign
- D Defacto Right Turn Lane
- F Free Right Turn

Health Club within The Shops at Rossmoor

Existing (2016) Lane Geometrics and Traffic Control Devices

LOS	Operating Condition	ICU (v/c ratio)
A	Free flowing, virtually no delay. Minimal traffic	<0.60
B	Free flow and choice of lanes. Delays are minimal. All cars clear intersection easily.	0.60–0.69
C	State flow. Queue at signal starting to get relatively long. Delays starting to become a factor but still within “acceptable” limits.	0.70–0.79
D	Approaching unstable flow. Queues at intersection are quite long but most cars clear intersection on their green signal. Occasionally, several vehicles must wait for a second green signal. Congestion is moderate.	0.80–0.89
E	Severe congestion and delay. Most of the available capacity is used. Many cars must wait through a complete signal cycle to clear the intersection.	0.90–0.99
F	Excessive delay and congestion. Most cars must wait through more than one on one signal cycle. Queues are very long and drivers are obviously irritated.	>1.00

ICU = Intersection Capacity Utilization

LOS = level of service

v/c = volume-to-capacity

Per City guidelines, the following project-related increases in intersection ICU shall be deemed as “significant” and require mitigation:

Existing ICU	Project-Related Increase in ICU
0.00–0.69	0.06
0.70–0.79	0.04
0.80–0.89	0.02
0.90+	0.01

ICU = Intersection Capacity Utilization

In addition to the ICU methodology of calculating signalized intersection LOS, the *Highway Capacity Manual* (HCM 2010) methodology was used to determine the LOS at the signalized ramp intersections that are governed by California Department of Transportation (Caltrans) and at unsignalized study area intersections. The HCM 2010 unsignalized intersection methodology presents LOS in terms of control delay (in seconds per vehicle). The resulting delay is expressed in terms of LOS, as in the ICU methodology. The relationship of delay to LOS is demonstrated in the following table:

LOS	Signalized Intersection Delay (seconds)	Unsignalized Intersection Delay (seconds)
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: *Highway Capacity Manual* (2010), Exhibits 18-4, 19-1, and 20-2.

LOS = level of service

It should be noted that this study focuses on capacity (i.e., ICU). The HCM method is another method to evaluate operational conditions at signalized intersections, such as signal timing and queue lengths at turn lanes. While briefly discussed, this operational tool is not the focus of this impact study,

although it is used to evaluate the operations (queuing) at intersections as discussed later in this report. All HCM analysis for this study has been developed utilizing the Synchro (Version 9.1) software.

For roadway segments situated between intersections, LOS is described via a “mid-block roadway link” analysis. The Highway Capacity Software Version 5.2 (HCS) was utilized to analyze roadway segments in the study area consistent with Chapter 21 of the HCM. The basic input data for conducting a roadway analysis include the number of lanes and peak-hour volumes along the segments.

Roadway segments have uniform traffic conditions and roadway characteristics. The measure used to provide an estimate of LOS is density, where density is calculated from the average vehicle flow rate per lane and the average speed. The following shows the correlation between LOS and flow density:

LOS	Density (pc/mi/ln)
A	≤11
B	>11–18
C	>18–26
D	>26–35
E	>35–45
F	>45

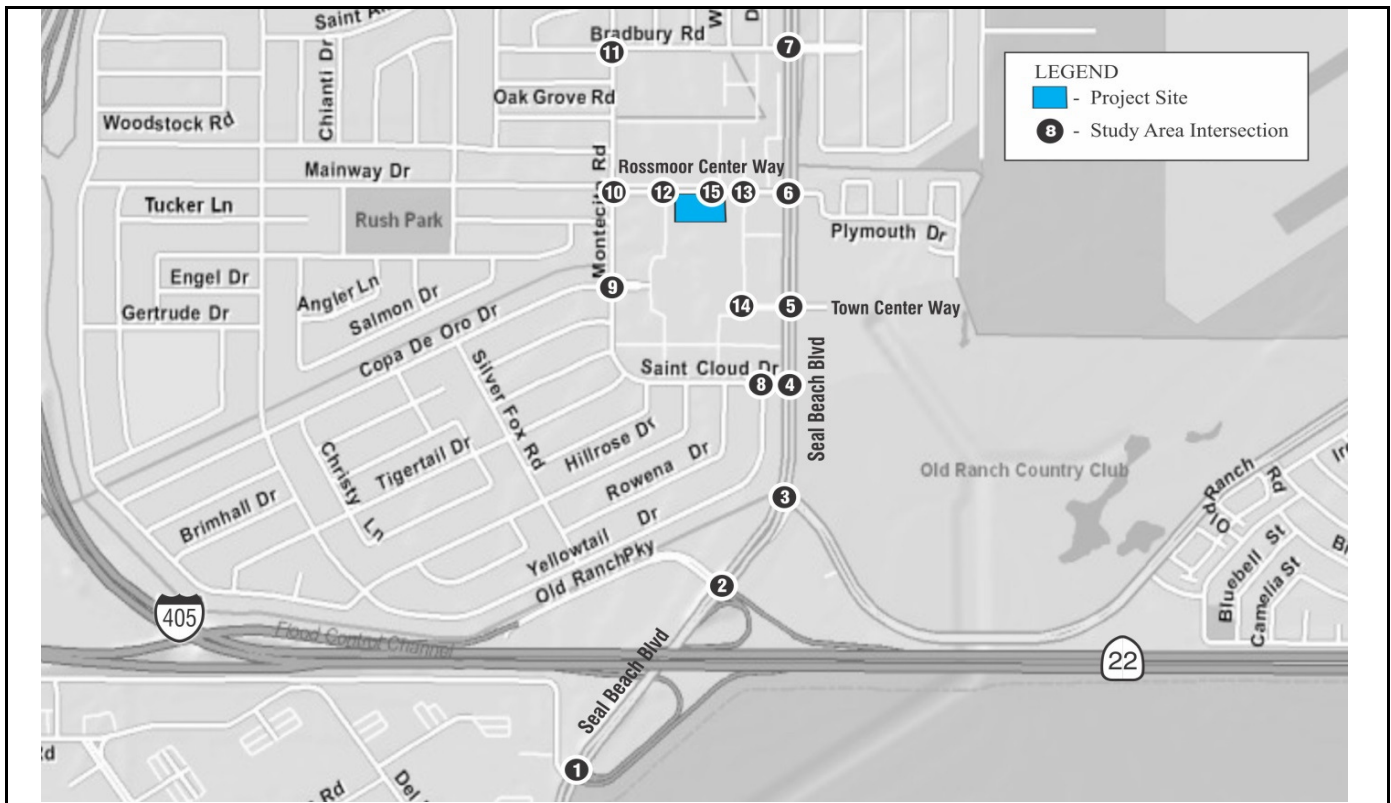
LOS = level of service  
pc/mi/ln = passenger cars per mile per lane

For the purposes of this study, LOS D is considered satisfactory on all study area roadway segments.

## EXISTING CONDITIONS

Existing weekday a.m., p.m., and weekend midday peak-hour traffic conditions and LOS were analyzed for Existing (2016) conditions.

LSA obtained intersection turn-movement counts at the 15 study area intersections for the weekday a.m. peak hour (7:00 a.m.–9:00 a.m.), the p.m. peak hour (4:00 p.m.–6:00 p.m.), and a weekend (Saturday) midday peak hour (11:00 a.m.–1:00 p.m.). Daily 24-hour counts were conducted for the 11 study area roadway segments in between the study area intersections. The counts were conducted by an independent car count company (National Data & Surveying Services [NDS]) for a weekday and weekend (Saturday) in October 2016. The traffic counts are included in Appendix A. The trips generated from surrounding existing land uses, which consist of residential and retail uses east and west of Seal Beach Boulevard, are included in the counts. Count data were collected before the week of the Thanksgiving holiday. LSA collected geometric, traffic control, and posted speed limit data at all study area locations. Figures 4 and 5 show the Existing (2016) peak-hour volumes at the study area intersections for weekday and weekend conditions, respectively.



<table border="1"> <tr><td>72 / 127</td><td>1449 / 1066</td><td>525 / 517</td></tr> <tr><td>87 / 166</td><td>428 / 1516</td><td>44 / 35</td></tr> <tr><td>28 / 30</td><td>14 / 11</td><td>696 / 321</td></tr> <tr><td>16 / 20</td><td>1051 / 1445</td><td>166 / 361</td></tr> <tr><td></td><td>166 / 361</td><td></td></tr> </table> <p>1 Seal Beach Blvd/I-405 SB Ramps</p>	72 / 127	1449 / 1066	525 / 517	87 / 166	428 / 1516	44 / 35	28 / 30	14 / 11	696 / 321	16 / 20	1051 / 1445	166 / 361		166 / 361		<table border="1"> <tr><td>463 / 370</td><td>1565 / 1439</td><td>549 / 664</td></tr> <tr><td>7 / 75</td><td>328 / 313</td><td>53 / 15</td></tr> <tr><td>11 / 72</td><td>110 / 41</td><td>367 / 195</td></tr> <tr><td>5 / 87</td><td>1196 / 1536</td><td>348 / 555</td></tr> <tr><td></td><td>1445 / 1691</td><td></td></tr> <tr><td></td><td>305 / 544</td><td></td></tr> </table> <p>2 Seal Beach Blvd/I-405NB Ramps</p>	463 / 370	1565 / 1439	549 / 664	7 / 75	328 / 313	53 / 15	11 / 72	110 / 41	367 / 195	5 / 87	1196 / 1536	348 / 555		1445 / 1691			305 / 544		<table border="1"> <tr><td>1653 / 1591</td><td>605 / 454</td></tr> <tr><td>296 / 630</td><td>702 / 540</td></tr> <tr><td>1445 / 1691</td><td></td></tr> <tr><td>305 / 544</td><td></td></tr> </table> <p>3 Seal Beach Blvd/Lampson Av</p>	1653 / 1591	605 / 454	296 / 630	702 / 540	1445 / 1691		305 / 544		<table border="1"> <tr><td>46 / 66</td><td>1301 / 1649</td><td>2 / 5</td></tr> <tr><td>106 / 86</td><td>4 / 5</td><td>13 / 31</td></tr> <tr><td>3 / 0</td><td>377 / 406</td><td>65 / 193</td></tr> <tr><td>567 / 385</td><td>1633 / 1617</td><td>47 / 132</td></tr> <tr><td></td><td>47 / 132</td><td></td></tr> </table> <p>4 Seal Beach Blvd/Saint Cloud Dr</p>	46 / 66	1301 / 1649	2 / 5	106 / 86	4 / 5	13 / 31	3 / 0	377 / 406	65 / 193	567 / 385	1633 / 1617	47 / 132		47 / 132		<table border="1"> <tr><td>13 / 83</td><td>1345 / 1370</td><td>21 / 59</td></tr> <tr><td>3 / 85</td><td>21 / 78</td><td>2 / 47</td></tr> <tr><td>4 / 28</td><td>30 / 180</td><td>24 / 139</td></tr> <tr><td>14 / 185</td><td>1627 / 1415</td><td>31 / 84</td></tr> <tr><td></td><td>31 / 84</td><td></td></tr> </table> <p>5 Seal Beach Blvd/Town Center Dr</p>	13 / 83	1345 / 1370	21 / 59	3 / 85	21 / 78	2 / 47	4 / 28	30 / 180	24 / 139	14 / 185	1627 / 1415	31 / 84		31 / 84	
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FIGURE 4

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor  
Existing (2016) Peak Hour Volumes (AM/PM)



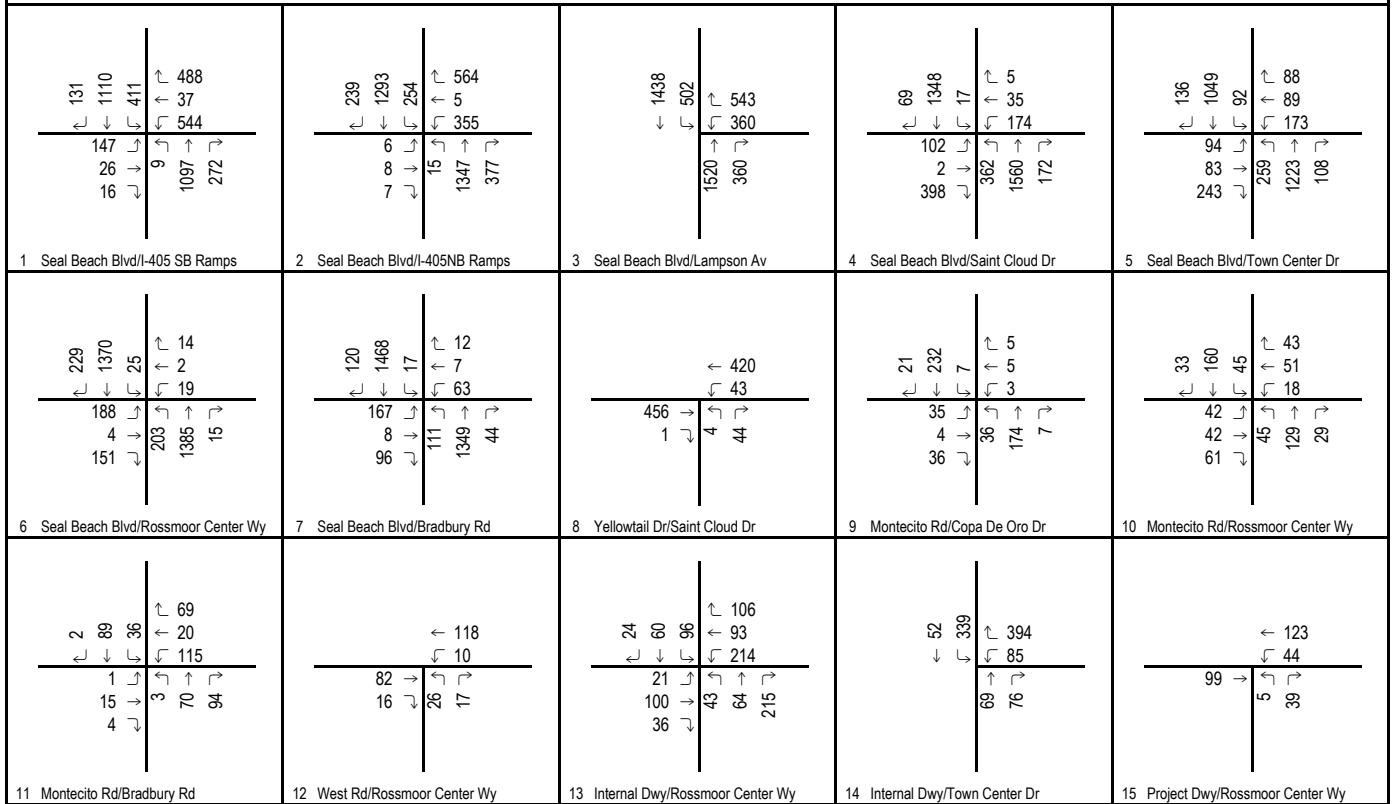
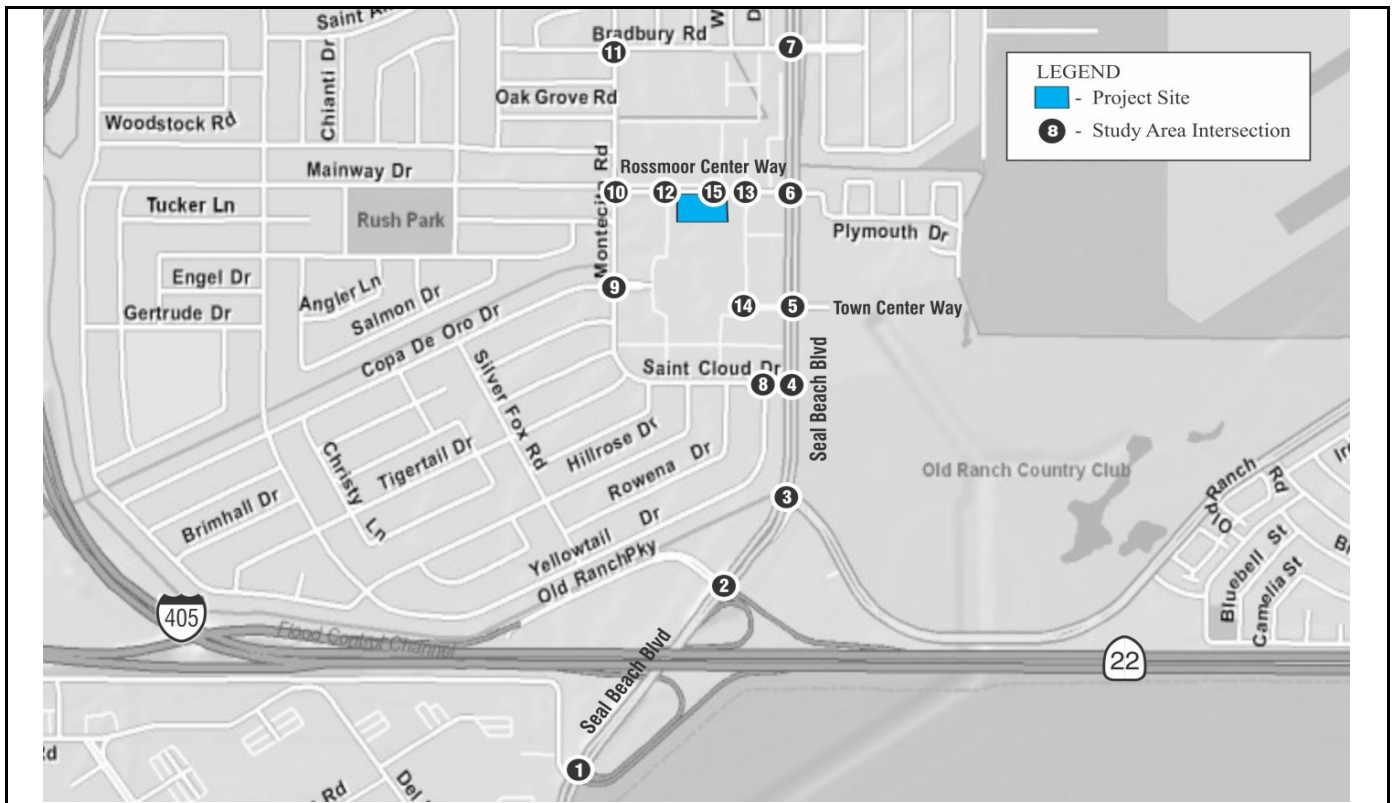


FIGURE 5

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor  
Existing (2016) Peak Hour Volumes (Saturday)

Summaries of Existing (2016) LOS for intersections and roadway segments are presented in Tables A and B, respectively. Intersection LOS worksheets are included in Appendix B while roadway LOS worksheets are included in Appendix C. As Tables A and B indicate, all study area intersections and roadway segments are currently operating at satisfactory LOS (LOS D or better).

## Accident History

The City's Traffic Impact Study Guidelines require the identification and analysis of intersections or roadway segments having five or more reported accidents within the most recent 12-month period. Five accidents is a generalized figure used by City staff as an indication of potential problems that could require improvements. The accident data provided by the City are included in Appendix D.

The City of Seal Beach Police Department provided accident data for the years of 2015 and 2016 in the City of Seal Beach. It should be noted that the 2016 data represents only 11 months. As such, this study will focus on the accidents within the study area identified in 2015.

Table C provides the total number of accidents reported within the study area each year. As this table indicates, five accidents or more have occurred in 2015 in the vicinity of the intersections of Seal Beach Boulevard at the I-405 southbound on/off ramps, I-405 northbound on/off ramps, and Lampson Avenue. Table D shows a detailed description of the primary collision factor, type of accident, and number of injuries reported at each of these three locations. The most common factor at the intersections of Seal Beach Boulevard at the I-405 southbound on/off ramps and Seal Beach Boulevard at the I-405 northbound on/off ramps was unsafe speed.

As Table C shows, the number of accidents at these two Caltrans-controlled intersections increased from 2015 through the first 11 months of 2016.

The intersection of Seal Beach Boulevard and Lampson Avenue experienced five accidents in 2015 and four accidents within the first 11 months of 2016. Improvements were implemented in this location in 2011. Based on the operational analysis provided in this report, this intersection operates at an acceptable LOS and no additional improvements are recommended at this time.

Based on weekday average daily traffic (ADT) counts taken in October 2016, the segment of Seal Beach Boulevard between the I-405 northbound on/off ramps and Lampson Avenue currently experiences approximately 53,000 vehicles per day. The project is anticipated to add 451 vehicles per day to this same segment. The project's anticipated traffic contribution would increase daily traffic on this section of Seal Beach Boulevard by 0.8 percent. The segment of Seal Beach Boulevard between Lampson Avenue and St. Cloud Drive would experience a similar 1.2 percent growth in daily traffic from the development of the project (existing ADT of approximately 49,900 with an anticipated project ADT of 597 vehicles). This increase in daily traffic due to project traffic would not significantly alter existing traffic volumes. The effect of this magnitude of traffic growth on accident rates would be nominal and is not considered significant.

It is recommended that the City and Caltrans continue to monitor the operation and safety of all intersections and roadway segments within their respective jurisdictions and make the necessary improvements to reduce potential accidents in the future.



**Table A: Existing (2016) Peak Hour Intersection Level of Service Summary**

Intersection		AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS
1	Seal Beach Boulevard/I-405 SB On/Off Ramps <sup>1</sup>	42.8	D	42.7	D	40.1	D
2	Seal Beach Boulevard/I-405 NB On/Off Ramps <sup>1</sup>	43.2	D	49.2	D	34.1	C
3	Seal Beach Boulevard/Lampson Avenue	0.804	D	0.792	C	0.764	C
4	Seal Beach Boulevard/Saint Cloud Drive	0.626	B	0.717	C	0.648	B
5	Seal Beach Boulevard/Town Center Drive	0.501	A	0.732	C	0.815	D
6	Seal Beach Boulevard/Rossmoor Center Way	0.535	A	0.686	B	0.668	B
7	Seal Beach Boulevard/Bradbury Road	0.726	C	0.679	B	0.627	B
8	Yellow Tail Drive/Saint Cloud Drive*	13.4	B	10.8	B	10.8	B
9	Montecito Road/Copa De Oro Drive*	11.3	B	9.5	A	8.8	A
10	Montecito Road/Rossmoor Center Way*	11.9	B	10.2	B	9.6	A
11	Montecito Road/Bradbury Road*	12.8	B	10.1	B	8.9	A
12	West Road/Rossmoor Center Way*	7.7	A	8.0	A	7.8	A
13	Internal Driveway/Rossmoor Center Way*	8.7	A	13.0	B	18.0	C
14	Internal Driveway/Town Center Drive*	7.4	A	11.5	B	15.5	C
15	Project Driveway/Rossmoor Center Way*	8.9	A	9.1	A	9.2	A

ICU V/C ratio is used for signalized intersections in the City of Seal Beach.

\* Indicates unsignalized intersection. HCM delay in seconds is used for unsignalized intersections.

■ (Shade) = Exceeds City level of service criteria (LOS D)

<sup>1</sup> HCM Methodology-consistent with Caltrans requirements

**Table B: Existing (2016) Peak Hour Roadway Level of Service Summary**

Roadway	Segment	Direction	AM			PM			Saturday Mid-day		
			Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS
Seal Beach Boulevard	I-405 Northbound On/Off Ramps and Lampson Avenue	Northbound	45.0	16.6	B	45.0	18.0	B*	45.0	15.4	B
		Southbound	45.0	18.0	B*	45.0	16.4	B	45.0	14.0	B
	Lampson Avenue and Saint Cloud Drive	Northbound	45.0	19.5	C	45.0	18.3	C	45.0	17.7	B
		Southbound	45.0	16.7	B	45.0	17.0	B	45.0	14.9	B
	Saint Cloud Drive and Town Center Drive	Northbound	45.0	14.6	B	45.0	14.6	B	45.0	14.0	B
		Southbound	45.0	11.1	B	45.0	12.9	B	45.0	11.3	B
	Town Center Drive and Rossmoor Center Way	Northbound	45.0	13.5	B	45.0	13.1	B	45.0	12.4	B
		Southbound	45.0	11.2	B	45.0	12.3	B	45.0	11.2	B
	Rossmoor Center Way and Bradbury Road	Northbound	45.0	13.1	B	45.0	13.1	B	45.0	12.6	B
		Southbound	45.0	11.6	B	45.0	14.0	B	45.0	12.8	B
	Bradbury Road and Rossmoor Way	Northbound	45.0	14.7	B	45.0	13.8	B	45.0	12.4	B
		Southbound	45.0	12.4	B	45.0	14.9	B	45.0	12.8	B
Saint Cloud Drive*	Seal Beach Boulevard and Yellowtail Drive		22.8	-	D	26.5	-	C	26.7	-	C
Montecito Road*	Yellowtail Drive and Copa De Oro Drive		26.0	-	C	28.8	-	B	29.3	-	B
	Copa De Oro Drive and Mainway Drive		30.1	-	B	30.2	-	B	31.1	-	A
	Mainway Drive and Bradbury Road		29.1	-	B	30.3	-	B	31.2	-	A
Rossmoor Center Way**	Montecito Road and Seal Beach Boulevard		27.6	-	A	25.7	-	A	25.2	-	B

\* Analyzed as Two Lane Roadways with a speed limit of 35 MPH


\*\* Analyzed as Two Lane Roadway with a speed limit of 30 MPH

**Table C - North Seal Beach Total Accident History Summary**

Location	Year	
	2016 <sup>1</sup>	2015
Seal Beach Boulevard/I-405 SB On/Off Ramps	7	5
Seal Beach Boulevard/I-405 NB On/Off Ramps	10	7
Seal Beach Boulevard/Lampson Avenue	2	5
Seal Beach Boulevard/St. Cloud Drive	3	2
Seal Beach Boulevard/Town Center Drive	4	3
Seal Beach Boulevard/Rossmoor Center Way-Plymouth Drive	1	2
Seal Beach Boulevard/Bradbury Road	4	3
Yellowtail Drive/St. Cloud Drive	1	0
Internal Driveway/Rossmoor Center Way	1	0
Internal Driveway/Town Center Way	1	1

Data is presented in total number of accidents per location

<sup>1</sup> 2016 Data represents January - November only

 = Location will be further analyzed in the traffic study

**Table D - North Seal Beach High Accident Location Details (2015)**

<b>Location</b>	<b>Primary Collision Factor</b>	<b>Type</b>	<b>Injury</b>	<b>Fatality</b>
<b>Seal Beach Boulevard/I-405 SB On/Off Ramps</b> (5 Total Accidents)	Unsafe Speed	Rear End	0	0
	Unsafe Speed	Rear End	0	0
	Unsafe Speed	Rear End	0	0
	Unsafe Speed	Not Specified	1	0
	Lane Change	Sideswipe	0	0
		<b>Total:</b>	1	0
<b>Seal Beach Boulevard/I-405 NB On/Off Ramps</b> (7 Total Accidents)	Unsafe Speed	Not Specified	1	0
	Unsafe Speed	Rear End	0	0
	Unsafe Speed	Rear End	0	0
	Improper Turn	Broadside	0	0
	Unsafe Speed	Broadside	0	0
	Unsafe Speed	Rear End	0	0
	Signage	Broadside	0	0
		<b>Total:</b>	1	0
<b>Seal Beach Boulevard/Lampson Avenue</b> (5 Total Accidents)	Improper Turn	Broadside	0	0
	Unsafe Speed	Rear End	2	0
	Unsafe Speed	Not Specified	0	0
	Signage	Broadside	2	0
	Grand Theft Auto	Not Specified	0	0
		<b>Total:</b>	4	0

### Pedestrian Conditions

In an effort to address concerns regarding pedestrian safety that were expressed by local residents, this analysis conducted a pedestrian and cyclist survey of the surrounding residential area. Specifically, five intersections along Montecito Road and St. Cloud Drive between Bradbury Road and Seal Beach Boulevard were counted as the most utilized pedestrian crossing points due to the presence of crosswalks. This survey revealed that there is the presence of pedestrian activity during the peak hours. As shown on Figure 6, the highest number of peak hour pedestrians observed to cross Montecito Road or Saint Cloud Drive are at the marked crosswalk on the south side of the intersection of Montecito Road and Rossmoor Center Way with 15 pedestrians in the weekday p.m. peak hour. These pedestrians are most likely nearby residents traveling to and from the Shops at Rossmoor for shopping or dining in the afternoon and do not occur during periods of school travel activity. This would suggest that these pedestrians are not students. As this intersection, along with all other study intersections along Montecito Road and Saint Cloud Drive, is a low delay intersection (LOS A or B in all analysis scenarios), pedestrian and traffic conditions along Montecito Road and Saint Cloud drive are anticipated to remain largely the same. The pedestrian and cyclist counts are included in Appendix A.

In an effort to illustrate the project’s effect on local traffic adjacent to the pedestrians identified, weekday counts taken in October 2016 for segments of St. Cloud Drive and Montecito Road are shown below alongside the anticipated project traffic. As vehicular traffic during times of school-related pedestrian activity are of particular concern, the a.m. and p.m. peak hours shown correspond with the peak morning drop-off and afternoon pick-up hours of the surrounding schools.

Roadway	Segment	Analysis Period <sup>1</sup>	Existing Trips	Project Trips	Percent Increase
Saint Cloud Drive	Seal Beach Boulevard and Yellowtail Drive	AM Peak	966	2	0.2%
		Midday Peak	929	7	0.8%
		ADT	12,295	61	0.5%
Montecito Road	Yellowtail Drive and Copa De Oro Drive	AM Peak	552	2	0.3%
		Midday Peak	555	7	1.3%
		ADT	6,275	49	0.8%
	Copa De Oro Drive and Mainway Drive	AM Peak	427	2	0.5%
		Midday Peak	511	5	1.0%
		ADT	5,895	37	0.6%
	Mainway Drive and Bradbury Road	AM Peak	536	2	0.4%
		Midday Peak	540	4	0.7%
		ADT	5,647	37	0.7%

<sup>1</sup> Analysis Period: AM Peak (7:00 a.m. – 8:00 a.m.); Midday Peak (2:00 p.m. – 3:00 p.m.); ADT = Average Daily Traffic

As shown above, the project related traffic increase during both peak school traffic hours and the whole day are anticipated to result in a growth of about one percent or less. The increases in peak school activity hours and daily traffic due to project traffic would not alter existing traffic volumes in any noticeable way. The effect of this magnitude of traffic growth on the pedestrian experience would be nominal.

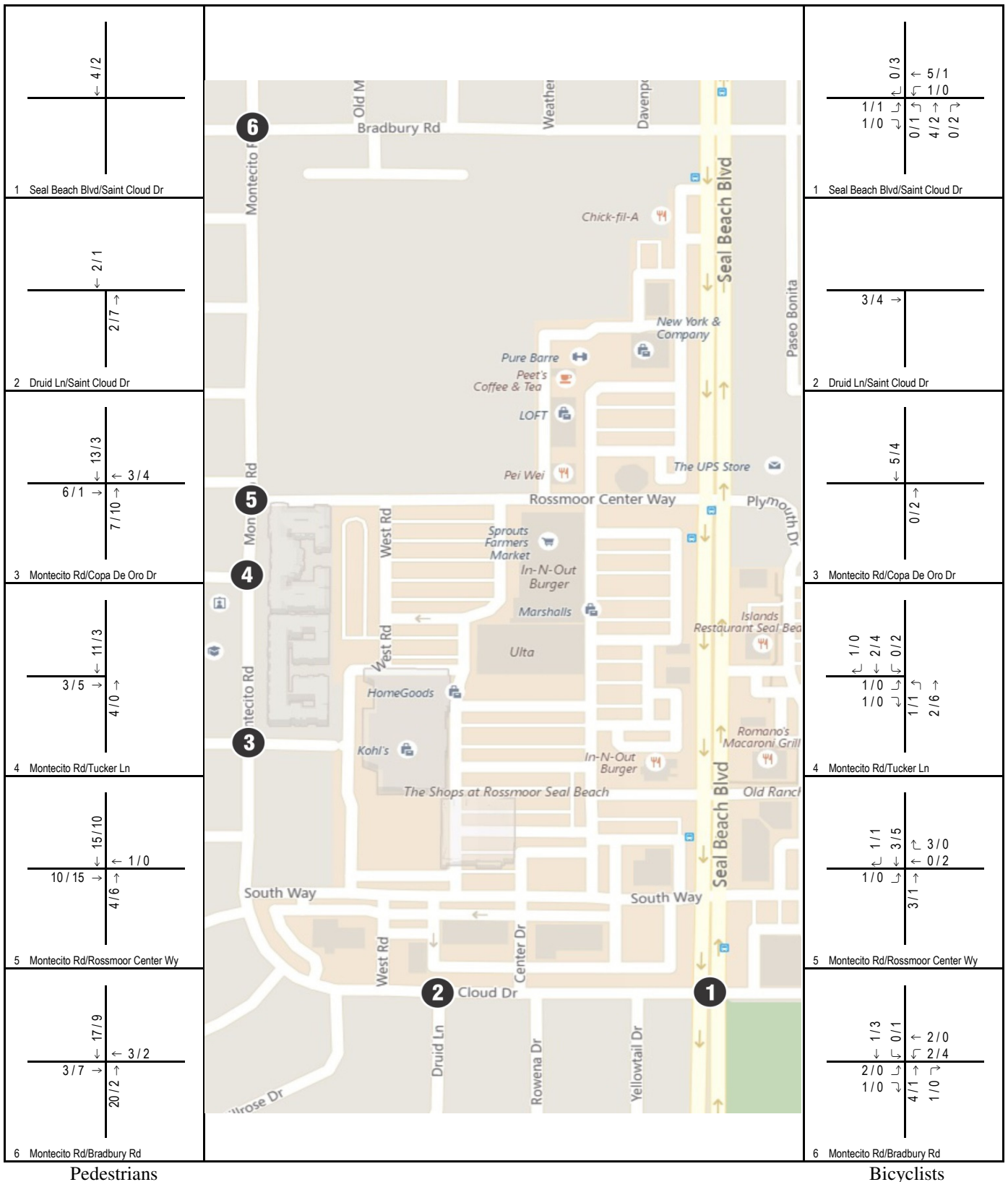


FIGURE 6

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmore  
 Pedestrian and Bicyclist Peak Hour Volumes (AM/PM)

## HEALTH CLUB

The proposed project will consist of 37,000 sf of health/fitness club uses and is bounded on the north by Rossmoor Center Drive, on the west by West Road, and on the east by Sprouts Farmers Market. The project site is located in the northwest parking lot of The Shops at Rossmoor retail center. This parking lot serves as an employee/overflow lot behind all of the existing adjacent stores and does not provide direct access to Sprouts, Marshalls, or PetSmart. The main access points to the project site are located on either side of the proposed building at West Road, and the existing driveway along the south side of Rossmoor Center Drive west of Sprouts Farmers Market. As part of the proposed project, two off-site improvements to access facilities will be implemented. These include the lengthening of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way to 205 feet and the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard.

### Trip Generation and Distribution

The generation and distribution of trips associated with the proposed project site are discussed below.

**Trip Generation.** Trip generation for the proposed project is calculated based on rates contained in the Institute of Transportation Engineers' (ITE) *Trip Generation* (Ninth Edition), which is a standard reference used by jurisdictions throughout the country for estimating the trip generation potential of new developments. The project is classified as Health/Fitness club use (ITE Land Use 492). The project's potential trip generation was calculated using the average rates (per 1,000 sf).

As indicated in Table E, the proposed project is estimated to generate 1,218 daily trips, 52 weekday a.m. peak hour trips, 131 weekday p.m. peak hour trips, and 103 Saturday midday peak hour trips.

**Table E: Project Trip Generation**

	Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
<b>Trip Rate<sup>1</sup></b>												
Health Fitness Club		TSF	32.93	0.71	0.71	1.41	2.01	1.52	3.53	1.25	1.53	2.78
<b>Trip Generation</b>												
Health Fitness Club	37,000	TSF	1,218	26	26	52	74	56	131	46	57	103

<sup>1</sup> Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation*, Ninth Edition (2012).  
ADT = average daily traffic  
TSF = thousand square feet

**Trip Distribution and Trip Assignment.** The project trips were distributed throughout the study area using information from the County's current travel demand model (Orange County Transportation Analysis Model [OCTAM]). Using the travel demand model, a process known as "select zone assignment" is applied to distribute and assign trips from a specific zone through the circulation network to an origin.

The travel demand model goes through several iterations to develop the most likely distribution pattern that takes into account several factors such as the shortest distance between origin and destination, availability of capacity, and type of uses, etc., before assigning the trips. The trips were distributed manually based on a select zone assignment from OCTAM. Based on the select zone assignments and further manual refinements, the project traffic is distributed as follows: 43 percent of traffic will travel north along Seal Beach Boulevard, 49 percent will travel south along Seal Beach Boulevard, of which 3 percent will travel west on the State Route 22 (SR-22) freeway into Long Beach, 12 percent will travel east along Lampson Avenue, 10 percent northwest along northbound I-405, 15 percent southeast along the I-405 southbound, and the remaining 9 percent would continue to travel south along Seal Beach Boulevard. A total of 8 percent will have destinations within close proximity to the retail site. Figures 7 and 8 illustrate the health club trip assignment for weekday and weekend conditions based on the trip generation and the trip distribution identified above.

### UNOCCUPIED SPACE WITHIN THE SHOPS AT ROSSMOOR

In order to evaluate the adjacent Shops at Rossmoor retail center at full occupancy, traffic from the former Marie Callender’s restaurant in the southern part of the retail center has been developed. The unoccupied restaurant consists of 8,827 sf of restaurant use just west of Seal Beach Boulevard. Figure 9 shows the location of the unoccupied restaurant in relation to the rest of the retail center.

### Retail Trip Generation and Distribution

The generation and distribution of trips associated with this unoccupied space are discussed below.

**Trip Generation.** Trip generation for the unoccupied space is calculated based on rates contained in the ITE *Trip Generation* (Ninth Edition).

The former restaurant has been conservatively classified as a high-turnover restaurant use (ITE Land Use 932) as it most closely represents the use of the former Marie Callender’s. As indicated in Table F, the unoccupied restaurant is estimated to generate 1,122 daily trips, 96 weekday a.m. peak hour trips, 87 weekday p.m. peak hour trips, and 124 Saturday midday peak hour trips.

**Table F: Unoccupied Space within the Shops at Rossmoor Trip Generation**

	Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
<b>Trip Rate<sup>1</sup></b>												
High-Turnover Restaurant		TSF	127.15	5.95	4.86	10.81	5.91	3.94	9.85	7.46	6.61	14.07
<b>Trip Generation</b>												
High-Turnover Restaurant	8,827	TSF	1,122	53	43	96	52	35	87	66	58	124

<sup>1</sup> Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation*, Ninth Edition (2012).

ADT = average daily traffic

TSF = thousand square feet



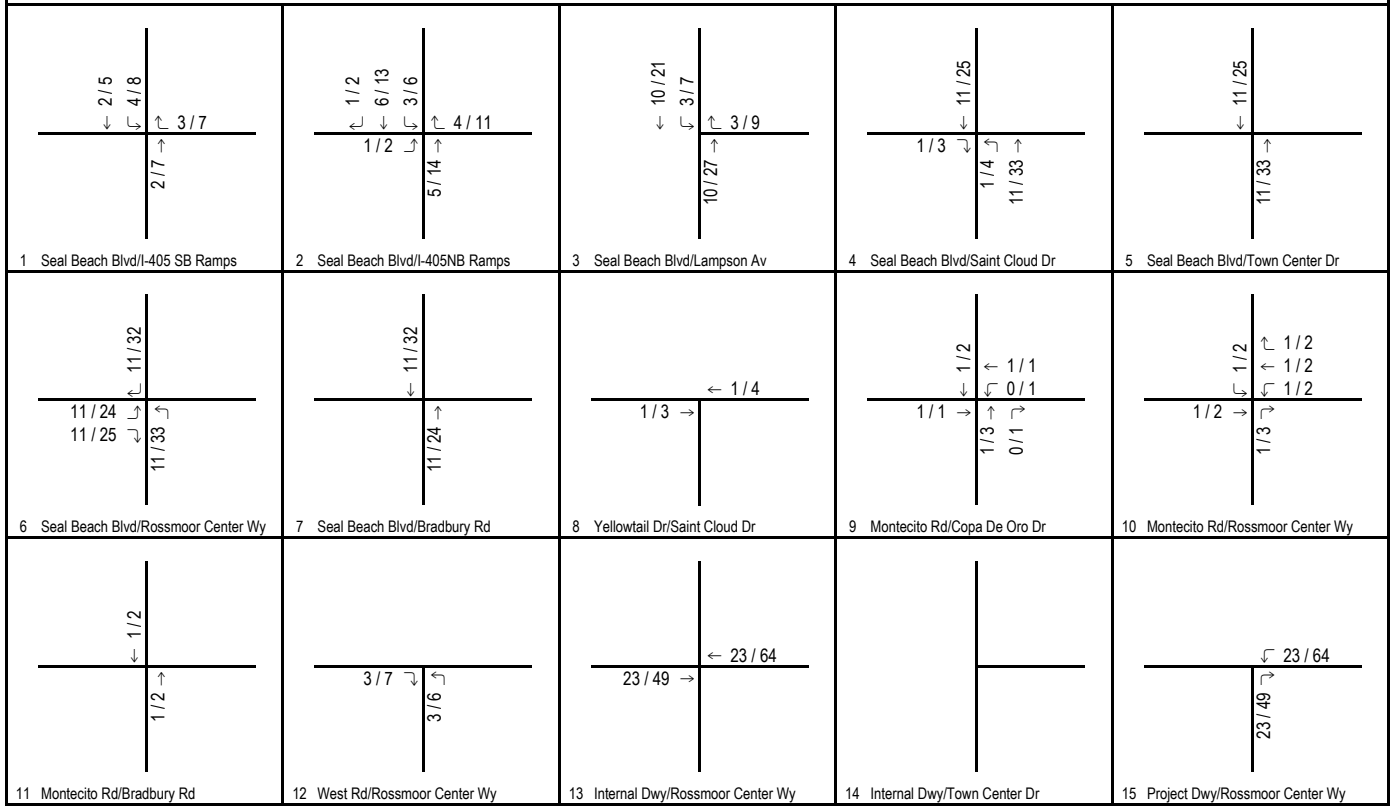
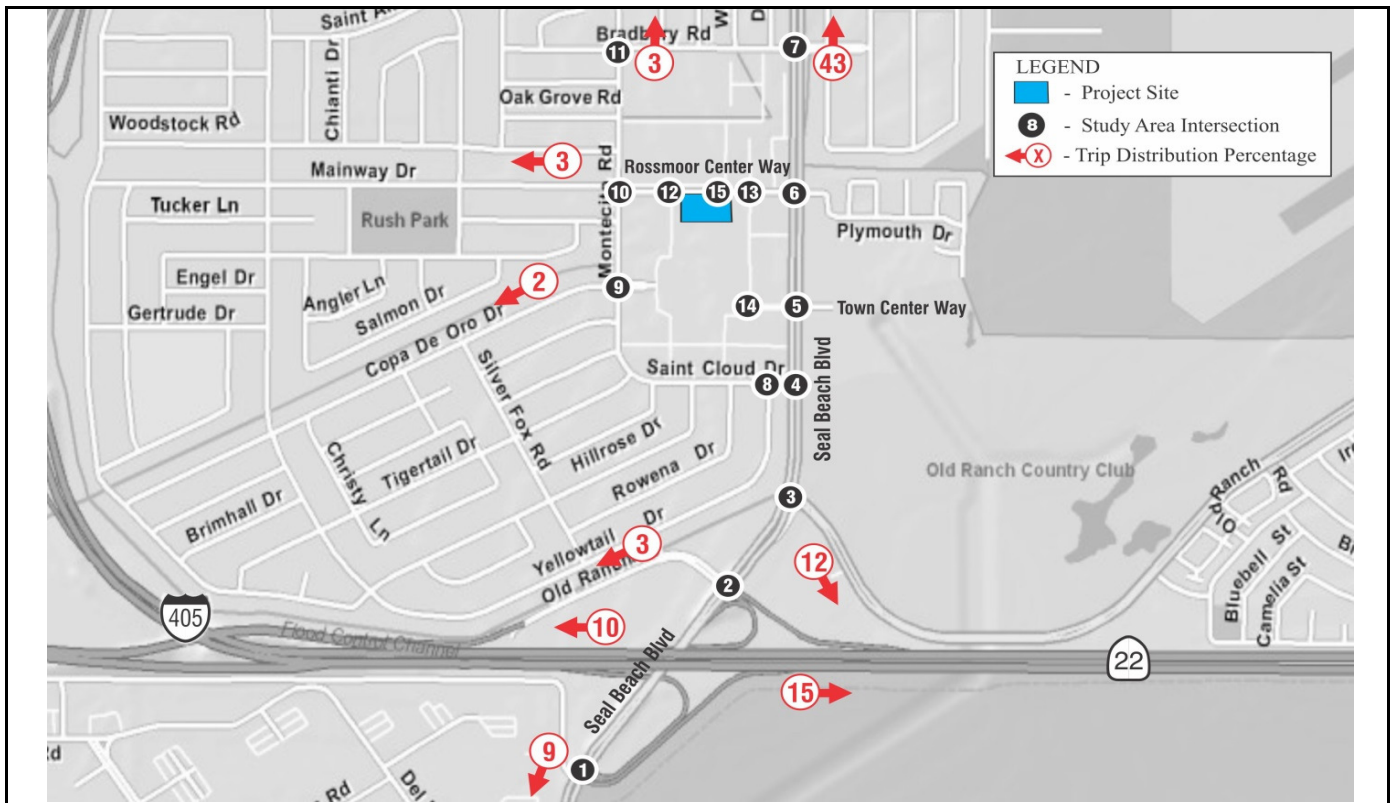


FIGURE 7

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor  
Project Peak Hour Volumes (AM/PM)

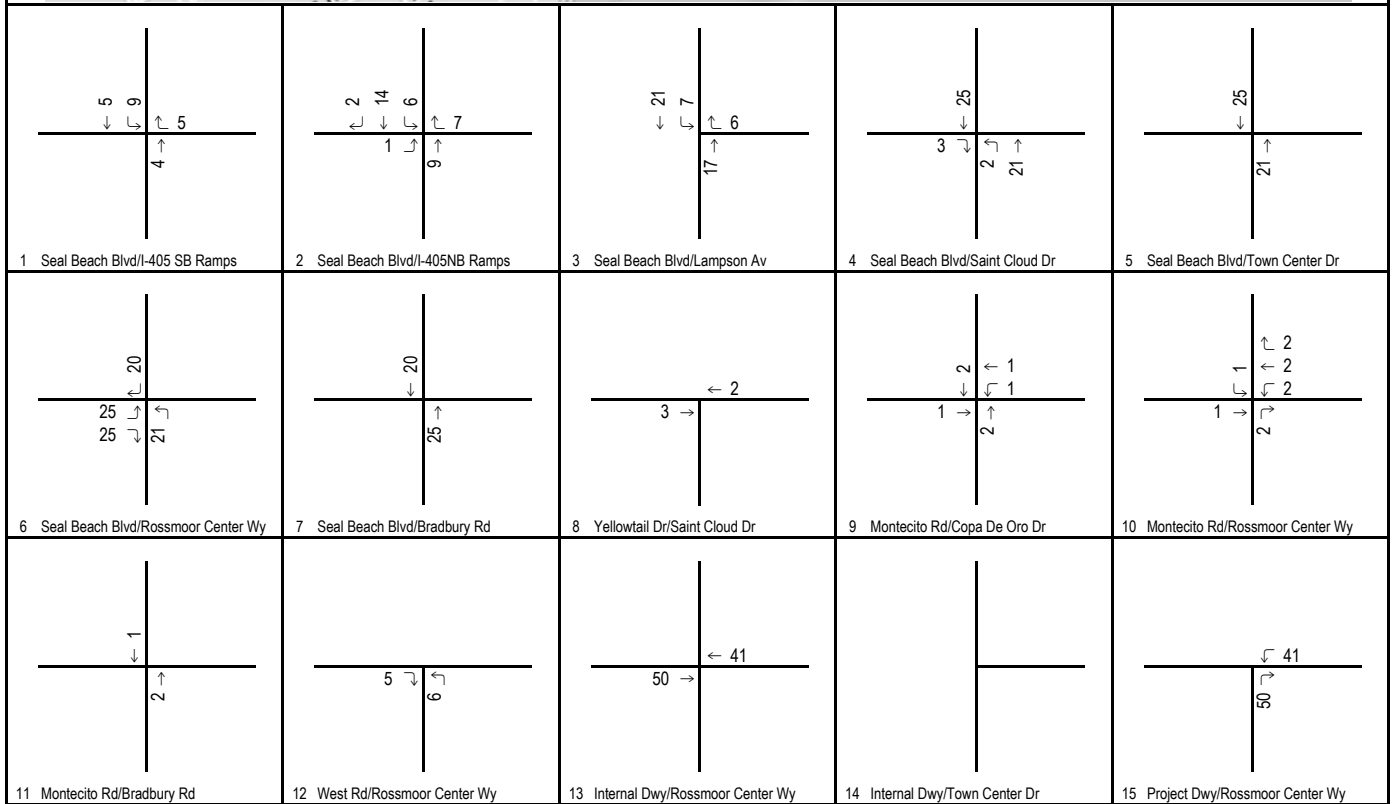
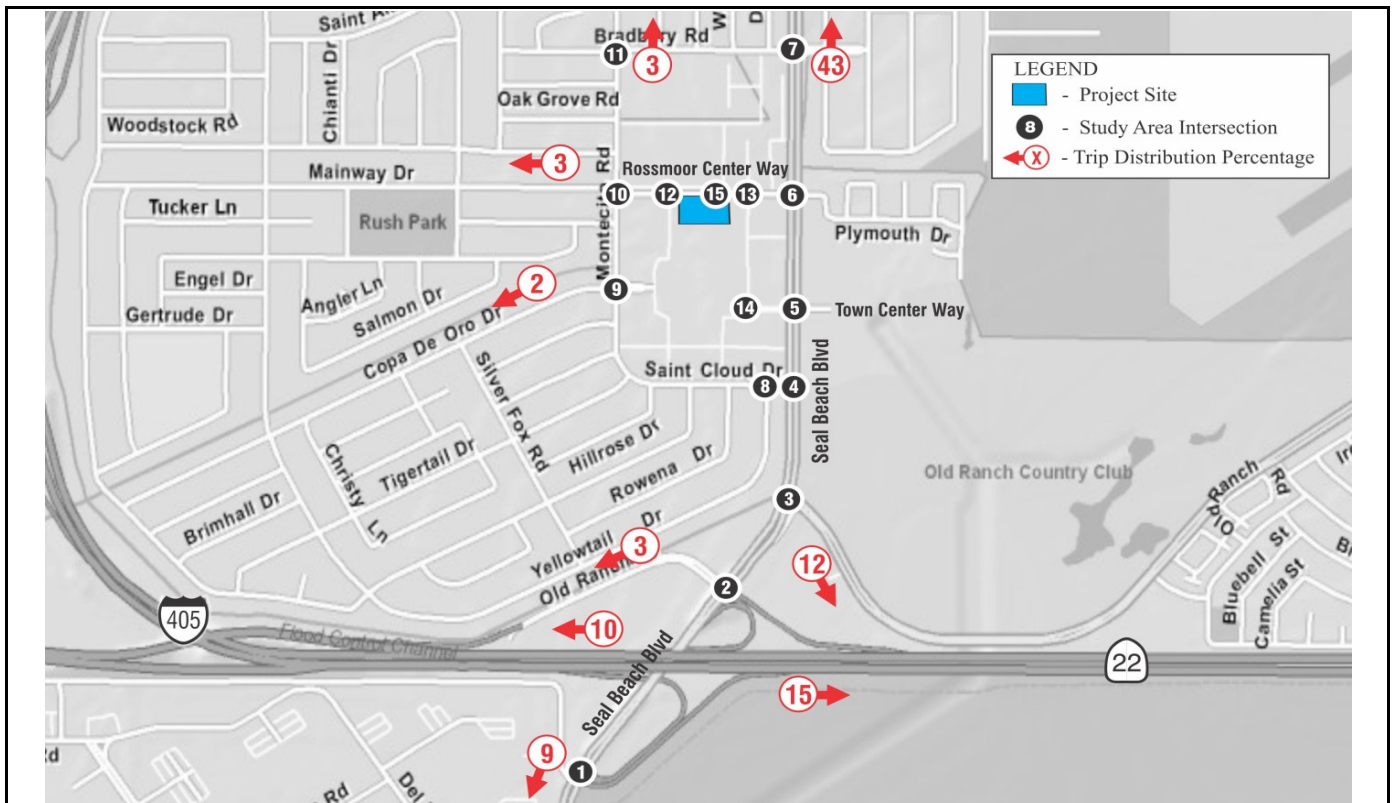


FIGURE 8

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor  
Project Peak Hour Volumes (Saturday)



L S A

LEGEND

- Unoccupied Parcel



FIGURE 9

*Health Club within The Shops at Rossmoor*  
 The Shops at Rossmoor Existing Site Plan

**Trip Distribution and Trip Assignment.** The unoccupied restaurant trips were distributed throughout the study area using the same information from OCTAM that was utilized for the proposed project.

Figures 10 and 11 illustrate the trip assignment for weekday and weekend conditions based on the trip generation and the trip distribution identified previously. Trips generated by the unoccupied restaurant were added to the base traffic volumes to develop “with Full Occupancy” traffic volumes.

## **EXISTING (2016) WITH FULL OCCUPANCY CONDITIONS**

To represent the full potential of traffic that could traverse Seal Beach Boulevard and the study area in the existing condition, existing weekday a.m., p.m., and weekend midday peak-hour traffic conditions were modified based on the additional traffic from the unoccupied restaurant for the Existing (2016) with Full Occupancy scenario.

The trip assignment of the unoccupied restaurant was added to the Existing (2016) counts to develop the volumes for the Existing (2016) with Full Occupancy conditions. Figures 12 and 13 show Existing (2016) with Full Occupancy condition peak-hour volumes at study area intersections for weekday and weekend conditions.

Tables G and H present summaries of Existing (2016) with Full Occupancy conditions LOS at study area intersections and roadway segments. Intersection LOS worksheets are included in Appendix B while roadway LOS worksheets are included in Appendix C. As the tables indicate, all study area intersections and roadway segments are anticipated to operate at satisfactory LOS (D or better).

## **EXISTING (2016) WITH FULL OCCUPANCY PLUS PROJECT CONDITIONS**

In order to identify any potential project impacts to traffic and circulation, project traffic was added to Existing (2016) with Full Occupancy traffic. Figures 14 and 15 show the resulting Existing (2016) with Full Occupancy plus Project conditions weekday a.m., p.m., and weekend midday peak-hour traffic volumes.

Tables G and H present summaries of Existing (2016) with Full Occupancy plus Project LOS for study area intersections and roadway segments. Intersection LOS worksheets are included in Appendix B while roadway LOS worksheets are included in Appendix C. As the tables indicate, all study area intersections and roadway segments are anticipated to continue to operate at satisfactory LOS (D or better) with the addition of project traffic.

## **PROJECT COMPLETION YEAR (2018) WITH FULL OCCUPANCY CONDITIONS**

According to the project applicant, the proposed project will be completed in 2018. In order to present a near-term 2018 traffic condition, an ambient growth rate of 0.5 percent per year was added to existing traffic volumes along with traffic from the unoccupied parcel within The Shops at Rossmoor.

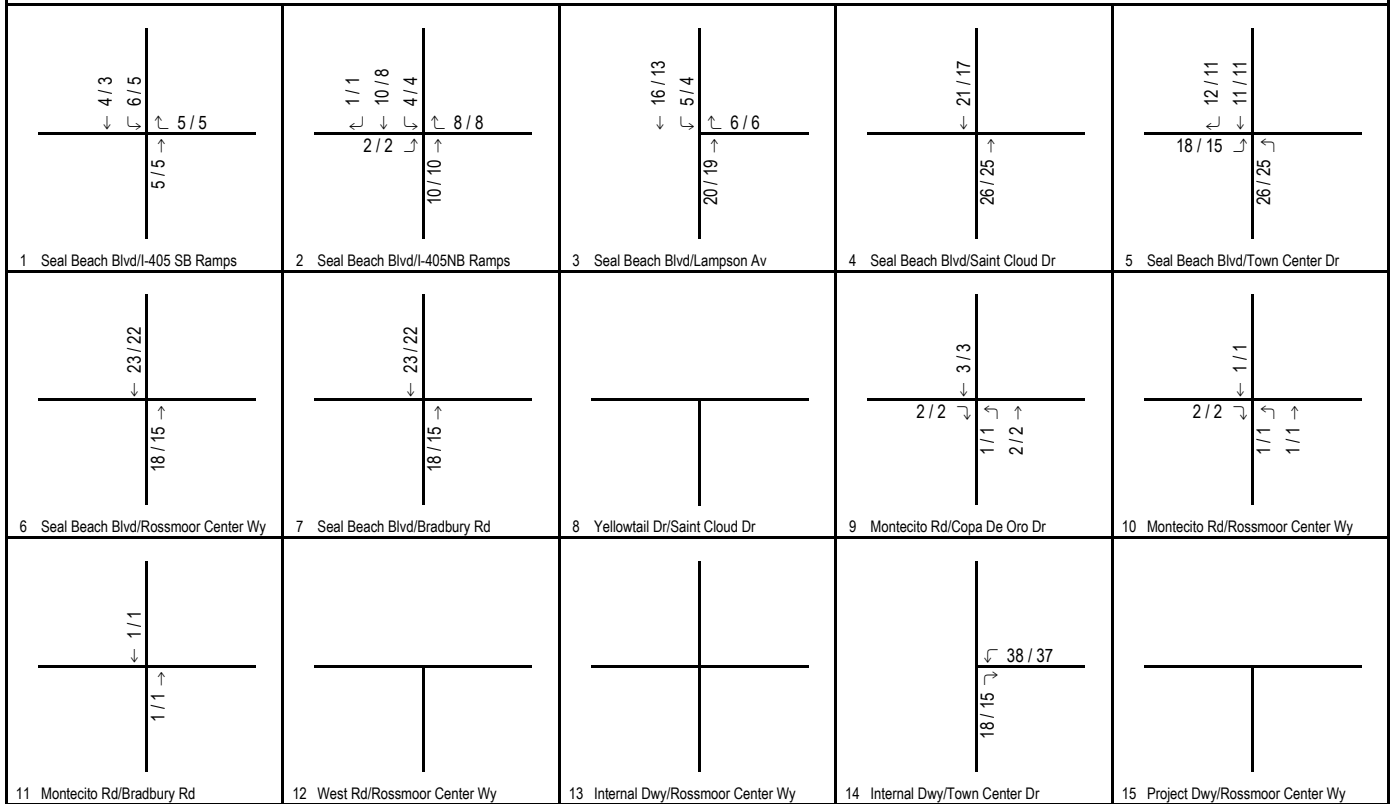
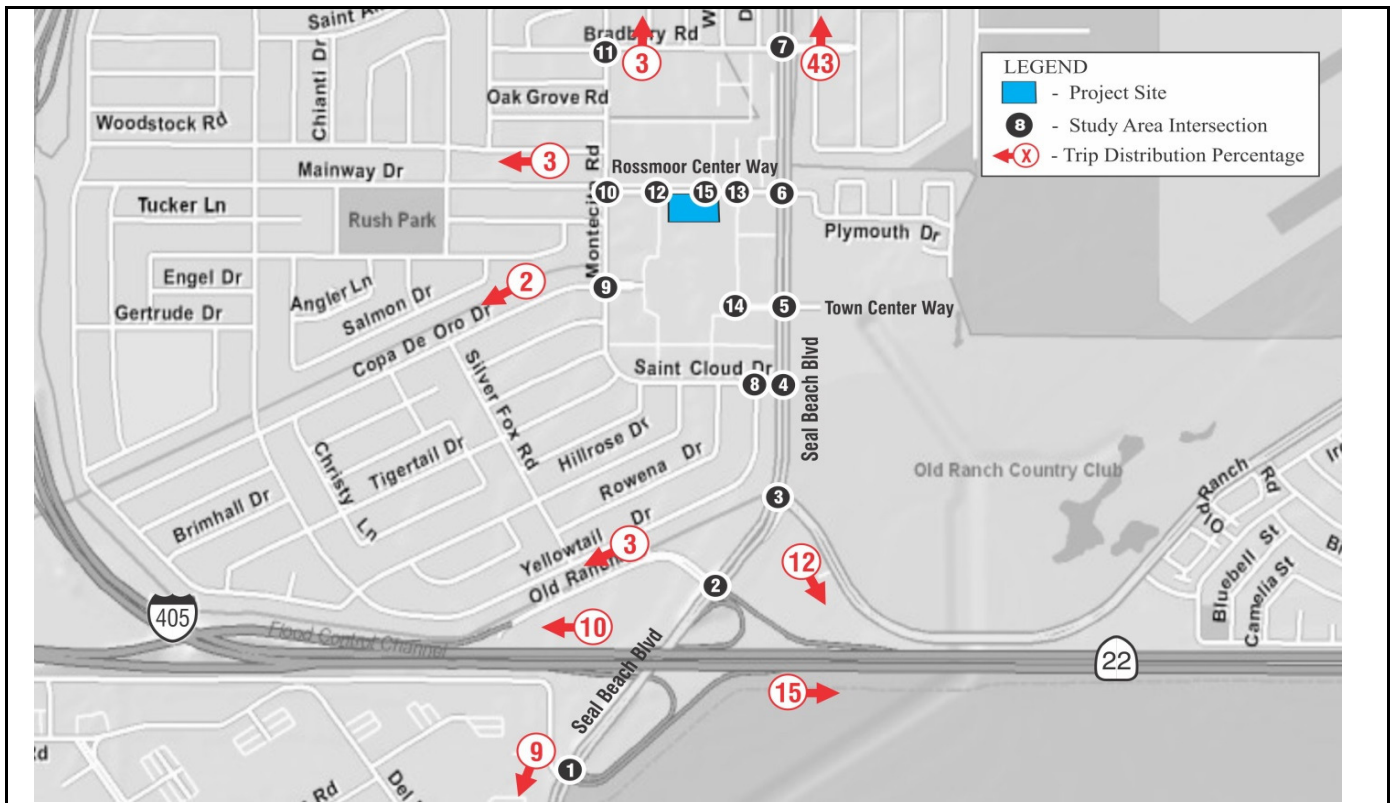


FIGURE 10

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor  
Unoccupied Uses Peak Hour Volumes (AM/PM)



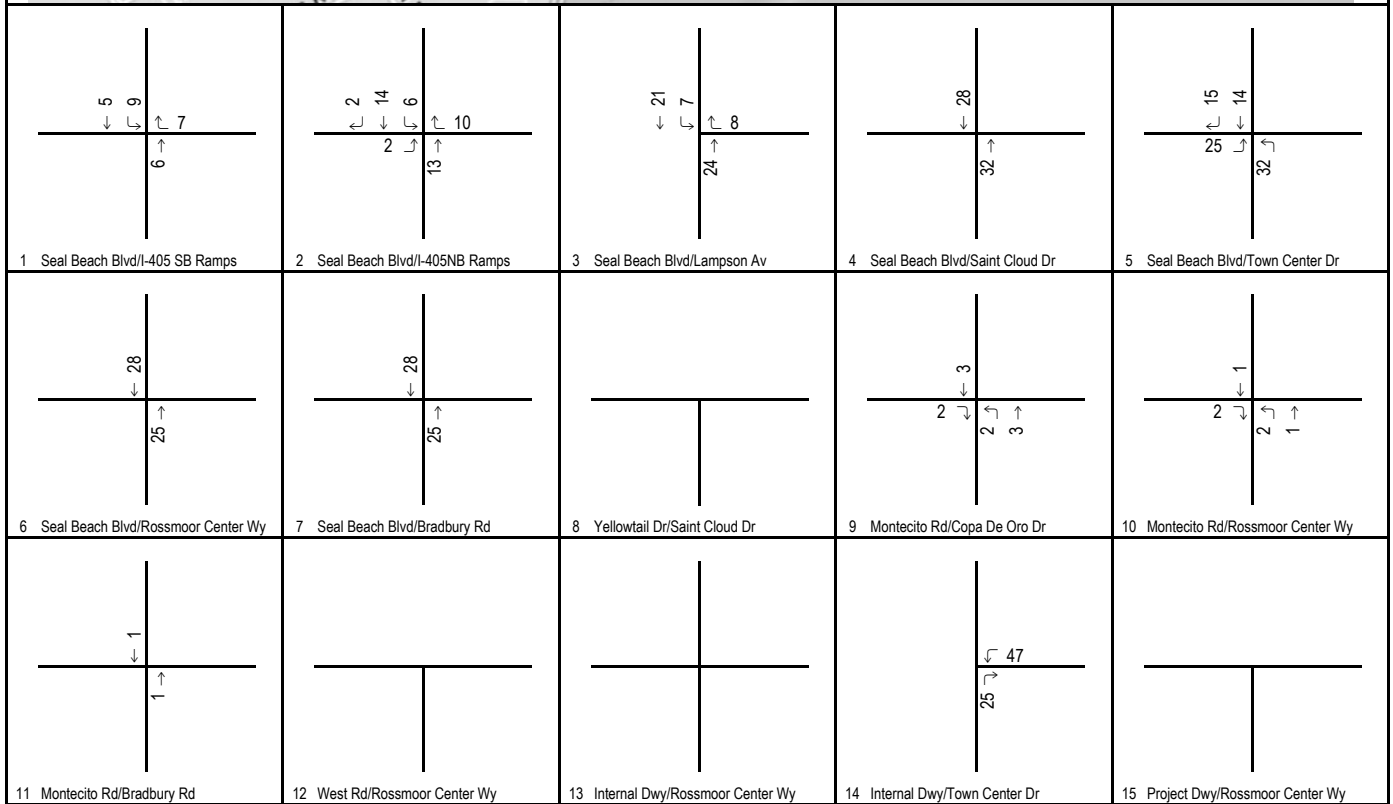
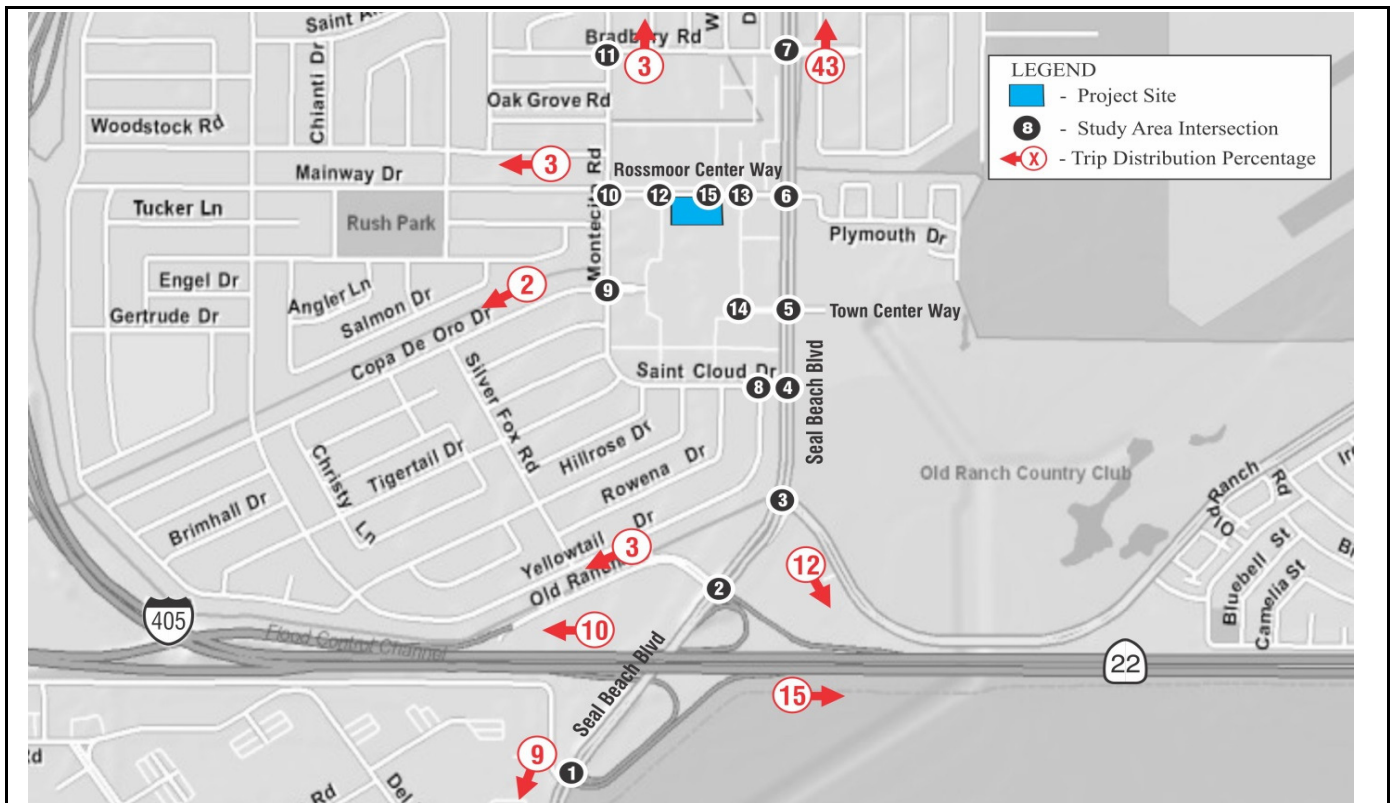
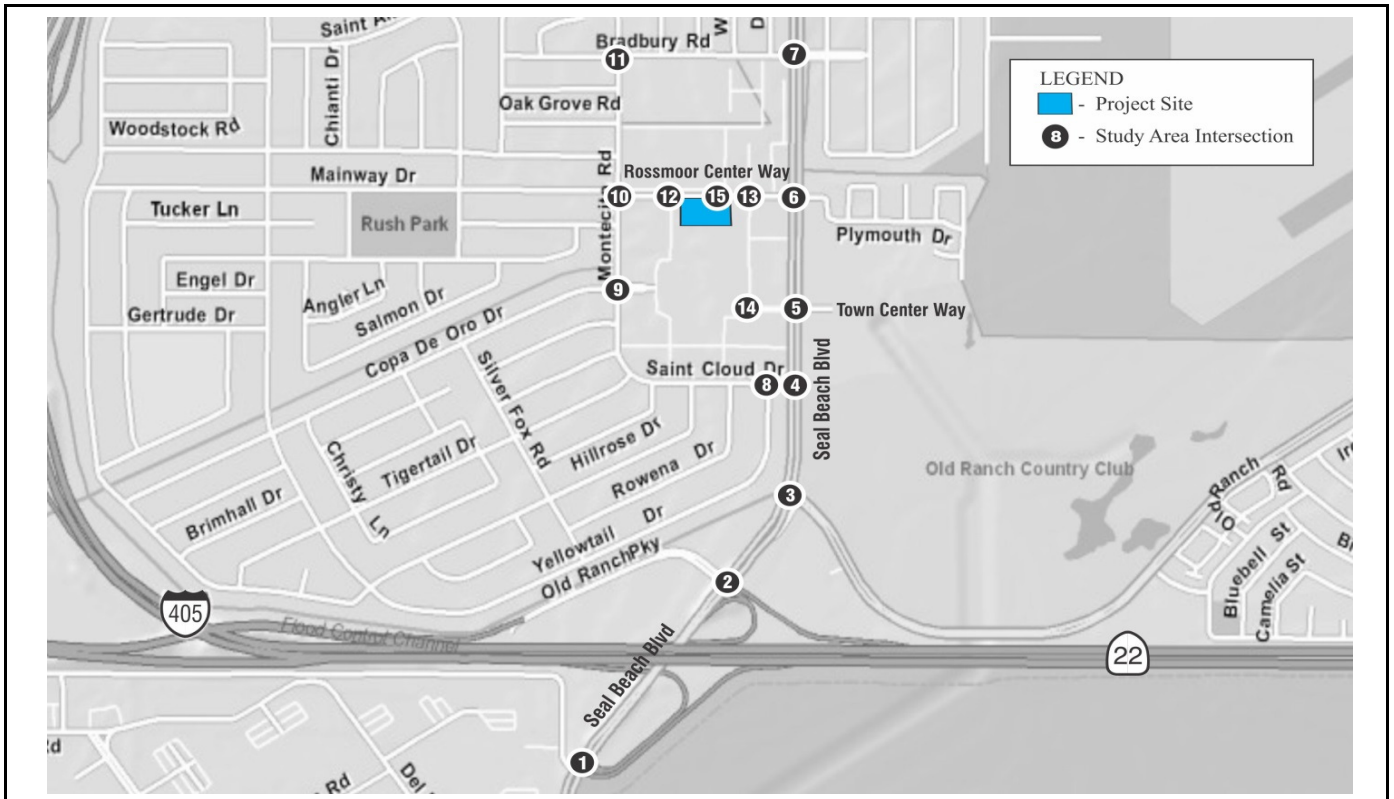


FIGURE 11

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor  
Unoccupied Uses Peak Hour Volumes (Saturday)



<p>1 Seal Beach Blvd/I-405 SB Ramps</p> <table border="1"> <tr><td>72 / 127</td><td>1453 / 1069</td></tr> <tr><td>87 / 166</td><td>434 / 1521</td></tr> <tr><td>28 / 30</td><td>530 / 522</td></tr> <tr><td>16 / 20</td><td>44 / 35</td></tr> <tr><td>14 / 11</td><td>696 / 321</td></tr> <tr><td>1056 / 1450</td><td>166 / 361</td></tr> </table>	72 / 127	1453 / 1069	87 / 166	434 / 1521	28 / 30	530 / 522	16 / 20	44 / 35	14 / 11	696 / 321	1056 / 1450	166 / 361	<p>2 Seal Beach Blvd/I-405NB Ramps</p> <table border="1"> <tr><td>464 / 371</td><td>1575 / 1447</td></tr> <tr><td>9 / 77</td><td>332 / 317</td></tr> <tr><td>11 / 72</td><td>557 / 672</td></tr> <tr><td>5 / 87</td><td>53 / 15</td></tr> <tr><td>110 / 41</td><td>367 / 195</td></tr> <tr><td>1206 / 1546</td><td>348 / 555</td></tr> </table>	464 / 371	1575 / 1447	9 / 77	332 / 317	11 / 72	557 / 672	5 / 87	53 / 15	110 / 41	367 / 195	1206 / 1546	348 / 555	<p>3 Seal Beach Blvd/Lampson Av</p> <table border="1"> <tr><td>1669 / 1604</td><td>301 / 634</td></tr> <tr><td>1465 / 1710</td><td>611 / 460</td></tr> <tr><td>305 / 544</td><td>702 / 540</td></tr> </table>	1669 / 1604	301 / 634	1465 / 1710	611 / 460	305 / 544	702 / 540	<p>4 Seal Beach Blvd/Saint Cloud Dr</p> <table border="1"> <tr><td>46 / 66</td><td>1322 / 1666</td></tr> <tr><td>106 / 86</td><td>4 / 5</td></tr> <tr><td>3 / 0</td><td>2 / 5</td></tr> <tr><td>567 / 385</td><td>13 / 31</td></tr> <tr><td>377 / 406</td><td>65 / 193</td></tr> <tr><td>1659 / 1642</td><td>47 / 132</td></tr> </table>	46 / 66	1322 / 1666	106 / 86	4 / 5	3 / 0	2 / 5	567 / 385	13 / 31	377 / 406	65 / 193	1659 / 1642	47 / 132	<p>5 Seal Beach Blvd/Town Center Dr</p> <table border="1"> <tr><td>25 / 94</td><td>1356 / 1361</td></tr> <tr><td>21 / 100</td><td>21 / 78</td></tr> <tr><td>4 / 28</td><td>21 / 59</td></tr> <tr><td>14 / 185</td><td>2 / 47</td></tr> <tr><td>56 / 205</td><td>24 / 139</td></tr> <tr><td>1627 / 1415</td><td>31 / 84</td></tr> </table>	25 / 94	1356 / 1361	21 / 100	21 / 78	4 / 28	21 / 59	14 / 185	2 / 47	56 / 205	24 / 139	1627 / 1415	31 / 84
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FIGURE 12

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor  
Existing (2016) with Full Occupancy Peak Hour Volumes (AM/PM)

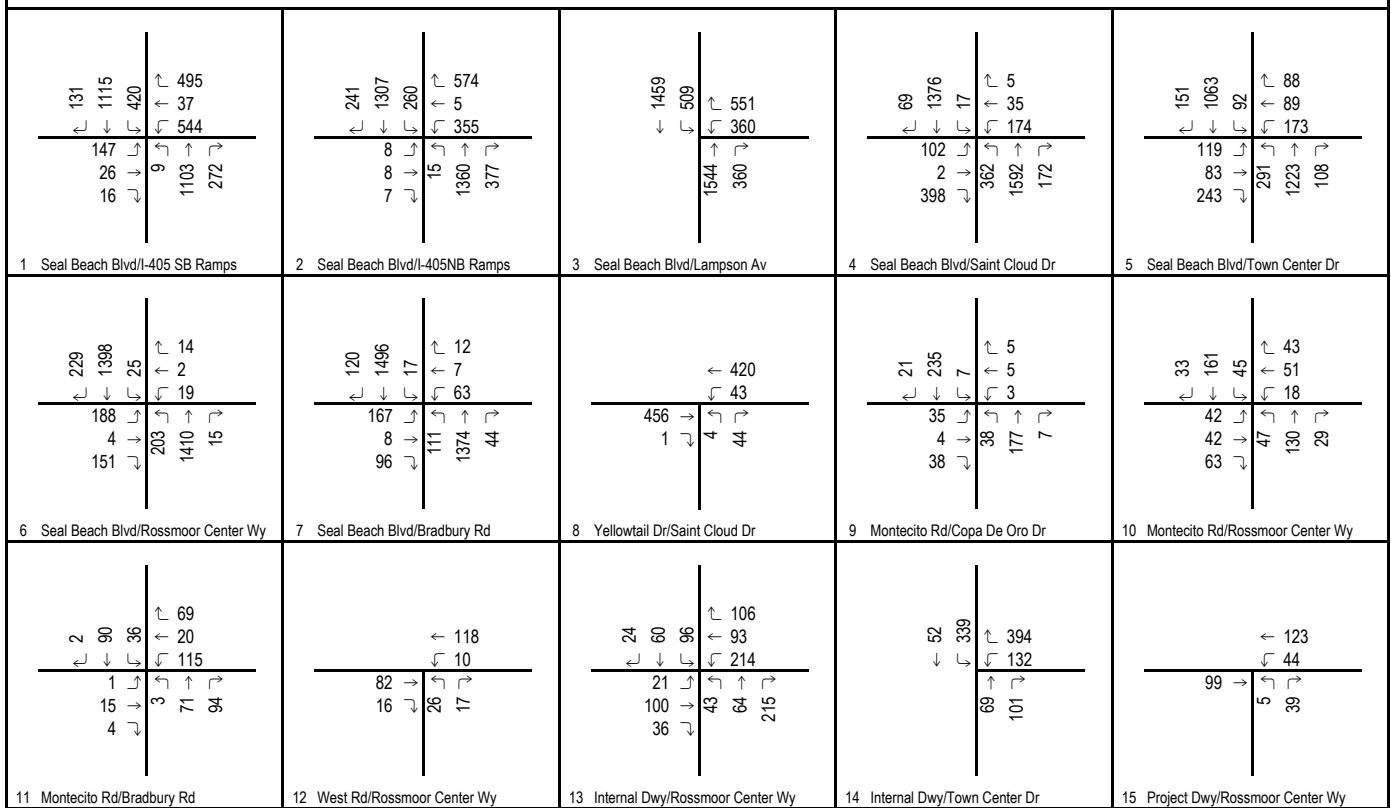
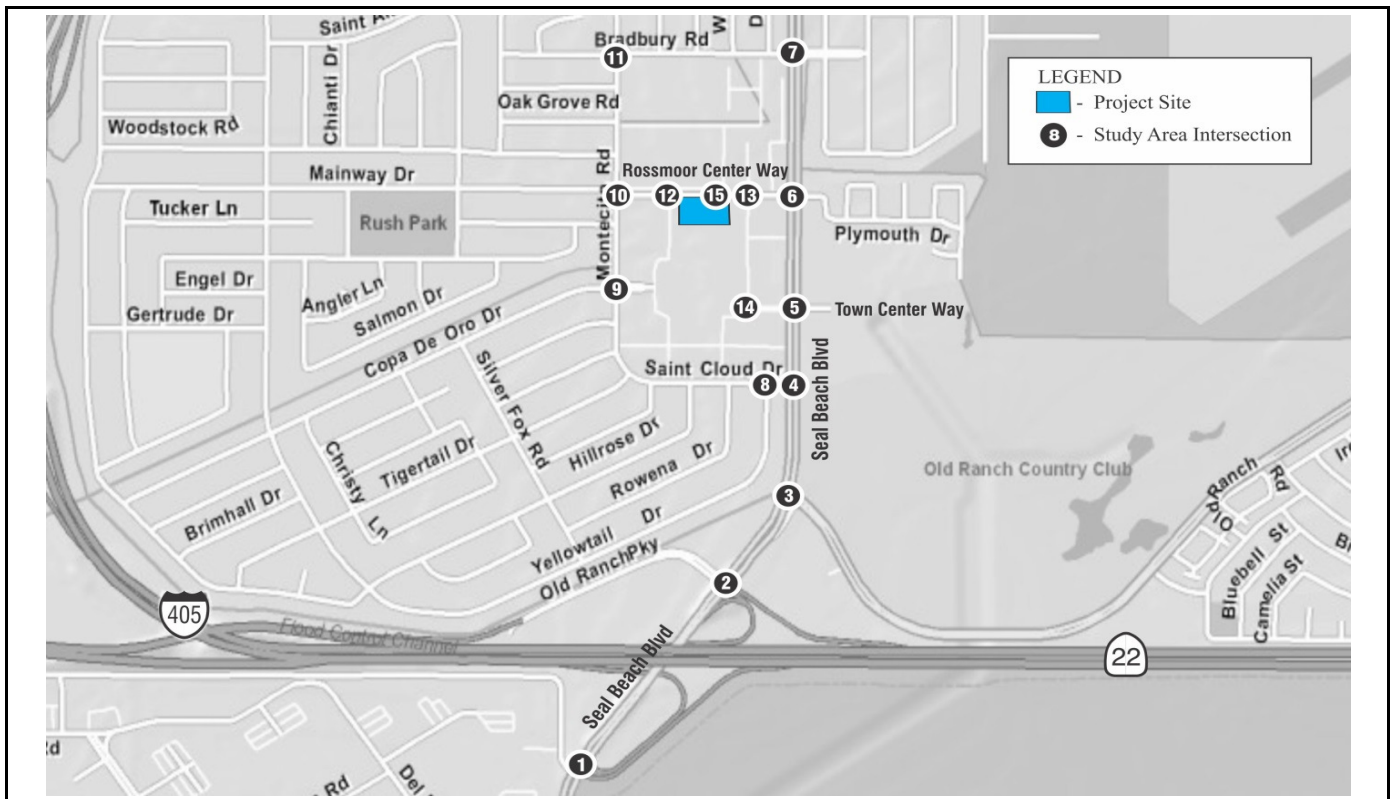


FIGURE 13

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor  
Existing (2016) with Full Occupancy Peak Hour Volumes (Saturday)



**Table G: Existing (2016) with Full Occupancy Peak Hour Intersection Level of Service Summary**

Intersection		Existing (2016) + Full Occupancy						Existing (2016) + Full Occupancy + Project								
		AM		PM		Sat		AM			PM			Sat		
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU
1	Seal Beach Boulevard/I-405 SB On/Off Ramps <sup>1</sup>	42.1	D	42.6	D	40.4	D	41.7	D	-	42.4	D	-	40.7	D	-
2	Seal Beach Boulevard/I-405 NB On/Off Ramps <sup>1</sup>	44.0	D	50.0	D	34.9	C	44.5	D	-	51.2	D	-	35.7	D	-
3	Seal Beach Boulevard/Lampson Avenue	0.812	D	0.797	C	0.774	C	0.816	D	0.004	0.804	D	0.007	0.781	C	0.007
4	Seal Beach Boulevard/Saint Cloud Drive	0.631	B	0.720	C	0.654	C	0.634	B	0.003	0.727	C	0.007	0.660	B	0.006
5	Seal Beach Boulevard/Town Center Drive	0.501	A	0.752	C	0.841	C	0.503	A	0.002	0.757	C	0.005	0.846	D	0.005
6	Seal Beach Boulevard/Rossmoor Center Way	0.539	A	0.691	B	0.673	B	0.548	A	0.009	0.733	C	0.042	0.705	C	0.032
7	Seal Beach Boulevard/Bradbury Road	0.731	C	0.684	B	0.632	B	0.733	C	0.002	0.690	B	0.006	0.636	B	0.004
8	Yellow Tail Drive/Saint Cloud Drive*	13.9	B	10.9	B	10.8	B	13.9	B	-	10.9	B	-	11.0	B	-
9	Montecito Road/Copa De Oro Drive*	11.4	B	9.6	A	8.8	A	11.4	B	-	9.6	A	-	8.8	A	-
10	Montecito Road/Rossmoor Center Way*	11.9	B	10.2	B	9.7	A	12.0	B	-	10.3	B	-	9.8	A	-
11	Montecito Road/Bradbury Road*	12.8	B	10.1	B	8.9	A	12.8	B	-	10.1	B	-	8.9	A	-
12	West Road/Rossmoor Center Way*	7.7	A	8.0	A	7.8	A	7.7	A	-	8.1	A	-	7.8	A	-
13	Internal Driveway/Rossmoor Center Way*	8.7	A	13.0	B	18.0	C	8.9	A	-	15.8	C	-	22.9	C	-
14	Internal Driveway/Town Center Drive*	7.8	A	11.6	B	16.0	C	7.8	A	-	11.6	B	-	16.0	C	-
15	Project Driveway/Rossmoor Center Way*	8.9	A	9.1	A	9.2	A	9.1	A	-	9.3	A	-	9.5	A	-

ICU V/C ratio is used for signalized intersections in the City of Seal Beach.

\* Indicates unsignalized intersection. HCM delay in seconds is used for unsignalized intersections.

■ (Shade) = Exceeds City level of service criteria (LOS D)

<sup>1</sup> HCM Methodology-consistent with Caltrans requirements

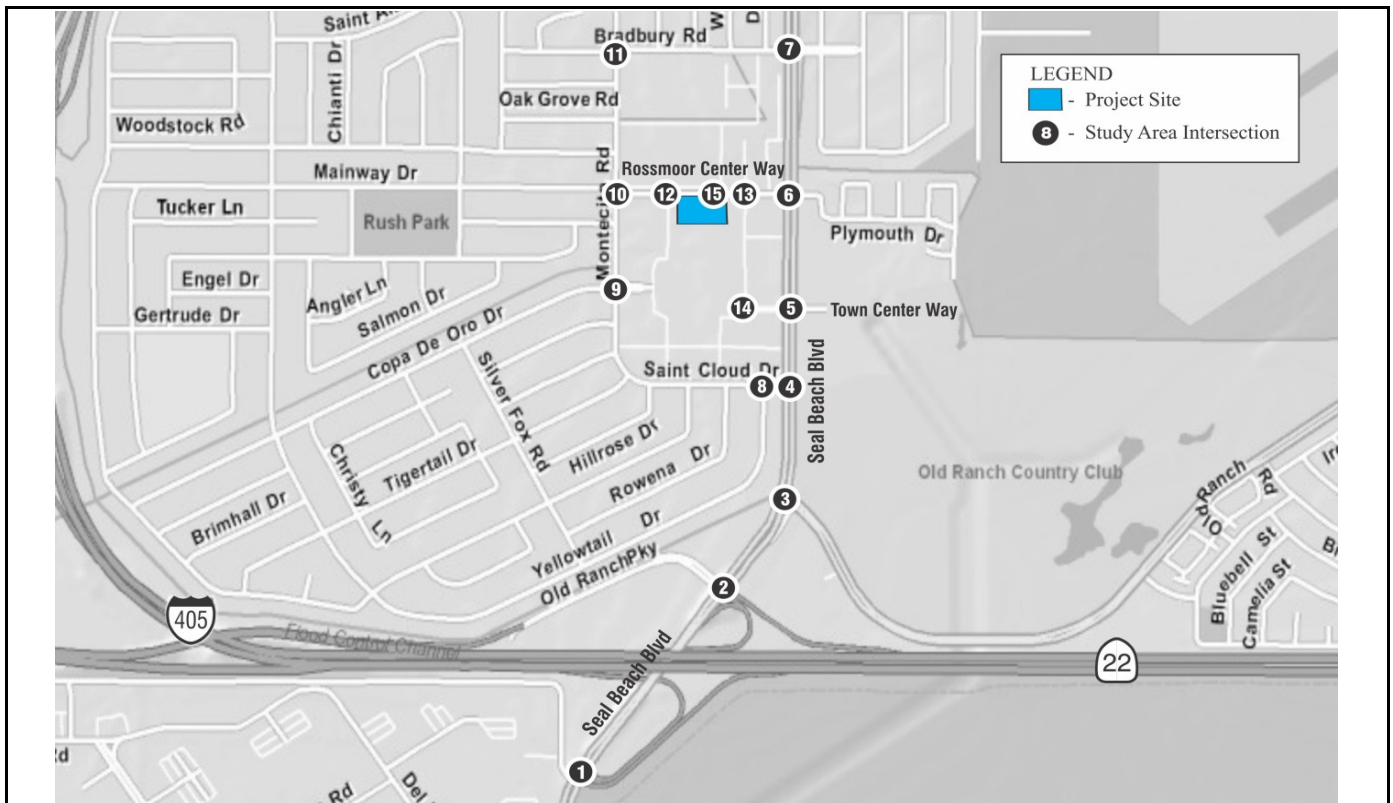
**Table H: Existing (2016) With Full Occupancy Peak Hour Roadway Level of Service Summary**

Roadway	Segment	Direction	Existing (2016) + Full Occupancy									Existing (2016) + Full Occupancy + Project								
			AM			PM			Saturday Mid-day			AM			PM			Saturday Mid-day		
			Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS
Seal Beach Boulevard	I-405 Northbound On/Off Ramps and Lampson Avenue	NB	45.0	16.8	B	45.0	18.1	C	45.0	15.6	B	45.0	16.9	B	45.0	18.3	C	45.0	15.8	B
		SB	45.0	18.1	C	45.0	16.5	B	45.0	14.1	B	45.0	18.2	C	45.0	16.7	B	45.0	14.3	B
	Lampson Avenue and Saint Cloud Drive	NB	45.0	19.7	C	45.0	18.5	C	45.0	18.0	B*	45.0	19.9	C	45.0	18.8	C	45.0	18.2	C
		SB	45.0	16.9	B	45.0	17.1	B	45.0	15.1	B	45.0	17.0	B	45.0	17.3	B	45.0	15.3	B
	Saint Cloud Drive and Town Center Drive	NB	45.0	14.8	B	45.0	14.8	B	45.0	14.3	B	45.0	14.9	B	45.0	15.0	B	45.0	14.5	B
		SB	45.0	11.2	B	45.0	13.0	B	45.0	11.5	B	45.0	11.3	B	45.0	13.2	B	45.0	11.6	B
	Town Center Drive and Rossmoor Center Way	NB	45.0	13.6	B	45.0	13.2	B	45.0	12.6	B	45.0	13.7	B	45.0	13.5	B	45.0	12.8	B
		SB	45.0	11.4	B	45.0	12.5	B	45.0	11.4	B	45.0	11.5	B	45.0	12.7	B	45.0	11.6	B
	Rossmoor Center Way and Bradbury Road	NB	45.0	13.3	B	45.0	13.2	B	45.0	12.8	B	45.0	13.4	B	45.0	13.4	B	45.0	13.0	B
		SB	45.0	11.8	B	45.0	14.2	B	45.0	13.0	B	45.0	11.9	B	45.0	14.4	B	45.0	13.2	B
Bradbury Road and Rossmoor Way	NB	45.0	14.9	B	45.0	13.9	B	45.0	12.6	B	45.0	15.0	B	45.0	14.1	B	45.0	12.8	B	
	SB	45.0	12.6	B	45.0	15.1	B	45.0	13.0	B	45.0	12.7	B	45.0	15.4	B	45.0	13.2	B	
Saint Cloud Drive*	Seal Beach Boulevard and Yellowtail Drive		22.8	-	D	26.5	-	C	26.7	-	C	22.8	-	D	26.5	-	C	26.7	-	C
Montecito Road*	Yellowtail Drive and Copa De Oro Drive		26.0	-	C	28.8	-	B	29.2	-	B	25.9	-	C	28.7	-	B	29.2	-	B
	Copa De Oro Drive and Mainway Drive		30.0	-	B	30.1	-	B	31.1	-	A	30.0	-	B	30.1	-	B	31.0	-	A
	Mainway Drive and Bradbury Road		29.1	-	B	30.3	-	B	31.2	-	A	29.1	-	B	30.2	-	B	31.2	-	A
Rossmoor Center Way**	Montecito Road and Seal Beach Boulevard		27.6	-	A	25.7	-	A	25.2	-	B	27.4	-	A	25.1	-	B	24.7	-	B

NB = Northbound, SB = Southbound

\*Analyzed as Two Lane Roadways with a speed limit of 35 MPH

\*\*Analyzed as Two Lane Roadway with a speed limit of 30 MPH



<table border="1"> <tr><td>72 / 127</td><td>1455 / 1074</td><td>533 / 529</td></tr> <tr><td>87 / 166</td><td>438 / 1529</td><td>44 / 35</td></tr> <tr><td>28 / 30</td><td>14 / 11</td><td>696 / 321</td></tr> <tr><td>16 / 20</td><td>1058 / 1457</td><td>166 / 361</td></tr> <tr><td></td><td>166 / 361</td><td></td></tr> </table> <p>1 Seal Beach Blvd/I-405 SB Ramps</p>	72 / 127	1455 / 1074	533 / 529	87 / 166	438 / 1529	44 / 35	28 / 30	14 / 11	696 / 321	16 / 20	1058 / 1457	166 / 361		166 / 361		<table border="1"> <tr><td>465 / 373</td><td>1581 / 1460</td><td>561 / 683</td></tr> <tr><td>10 / 79</td><td>335 / 323</td><td>53 / 15</td></tr> <tr><td>11 / 72</td><td>110 / 41</td><td>367 / 195</td></tr> <tr><td>5 / 87</td><td>1211 / 1560</td><td>348 / 555</td></tr> <tr><td></td><td>110 / 41</td><td></td></tr> </table> <p>2 Seal Beach Blvd/I-405NB Ramps</p>	465 / 373	1581 / 1460	561 / 683	10 / 79	335 / 323	53 / 15	11 / 72	110 / 41	367 / 195	5 / 87	1211 / 1560	348 / 555		110 / 41		<table border="1"> <tr><td>1679 / 1625</td><td>614 / 469</td></tr> <tr><td>304 / 641</td><td>702 / 540</td></tr> <tr><td>1475 / 1737</td><td>305 / 544</td></tr> <tr><td></td><td></td></tr> </table> <p>3 Seal Beach Blvd/Lampson Av</p>	1679 / 1625	614 / 469	304 / 641	702 / 540	1475 / 1737	305 / 544			<table border="1"> <tr><td>46 / 66</td><td>1333 / 1691</td><td>2 / 5</td></tr> <tr><td>106 / 86</td><td>4 / 5</td><td>13 / 31</td></tr> <tr><td>3 / 0</td><td>378 / 410</td><td>65 / 193</td></tr> <tr><td>568 / 388</td><td>1670 / 1675</td><td>47 / 132</td></tr> <tr><td></td><td></td><td></td></tr> </table> <p>4 Seal Beach Blvd/Saint Cloud Dr</p>	46 / 66	1333 / 1691	2 / 5	106 / 86	4 / 5	13 / 31	3 / 0	378 / 410	65 / 193	568 / 388	1670 / 1675	47 / 132				<table border="1"> <tr><td>25 / 94</td><td>1367 / 1406</td><td>21 / 59</td></tr> <tr><td>21 / 100</td><td>21 / 78</td><td>2 / 47</td></tr> <tr><td>4 / 28</td><td>56 / 205</td><td>24 / 139</td></tr> <tr><td>14 / 185</td><td>1638 / 1448</td><td>31 / 84</td></tr> <tr><td></td><td></td><td></td></tr> </table> <p>5 Seal Beach Blvd/Town Center Dr</p>	25 / 94	1367 / 1406	21 / 59	21 / 100	21 / 78	2 / 47	4 / 28	56 / 205	24 / 139	14 / 185	1638 / 1448	31 / 84			
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FIGURE 14

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor  
Existing (2016) with Full Occupancy plus Project Peak Hour Volumes (AM/PM)

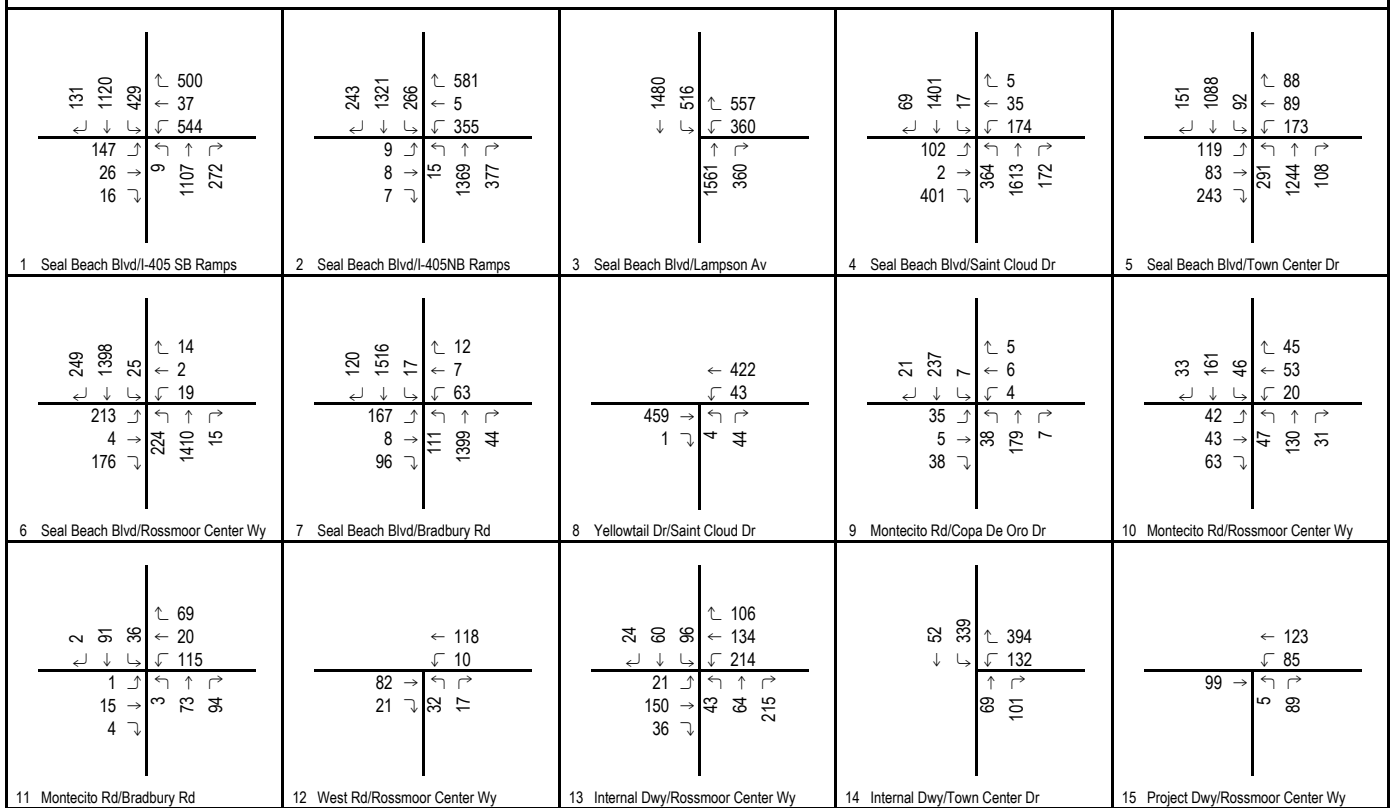
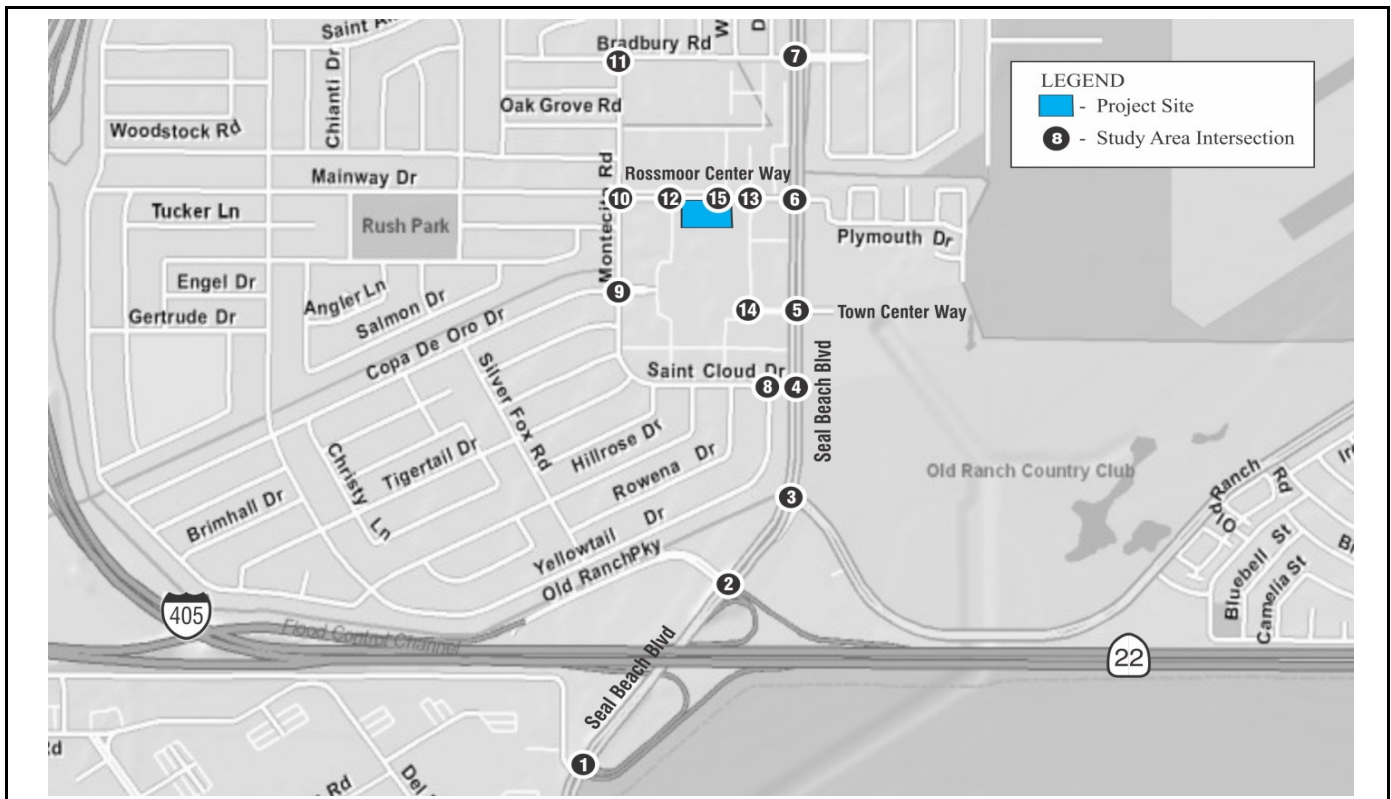


FIGURE 15

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor  
Existing (2016) with Full Occupancy plus Project Peak Hour Volumes (Saturday)

This growth rate is consistent with the growth rate utilized in the Previous Analyses, which was reached through consultation with City staff.

In addition to the inclusion of an ambient growth rate, anticipated traffic from nearby planned developments that may utilize the study area roadway facilities by the time the project is planned to be built and operational was considered in this analysis. At the time the Previous Analyses was conducted, City staff provided information on one nearby cumulative development of a new car wash within the Mobil gas station on the northeast corner of Seal Beach Boulevard and Rossmoor Center Way/Plymouth Drive. Additional traffic from this development was not included in this analysis as the traffic counts taken in October 2016 have taken into account the now existing car wash within the Mobil gas station. The neighboring City of Los Alamitos was also contacted for information on anticipated developments that may contribute traffic to study area facilities. Based on information provided by City of Los Alamitos staff, traffic from the following cumulative projects in the City of Los Alamitos was included in this analysis:

- Village 605 – 3131 Katella Avenue
  - Replacement of existing office use with the construction of a 113,800 sf neighborhood retail center within seven buildings.
- Fairfield Inn & Suites – 10650 Los Alamitos Boulevard
  - Construction of a 108-room hotel.

Specific traffic information from these cumulative projects was provided by City of Los Alamitos staff. Figures 16 and 17 show the resulting Project Completion Year (2018) with Full Occupancy conditions weekday a.m., p.m., and weekend midday peak hour traffic volumes.

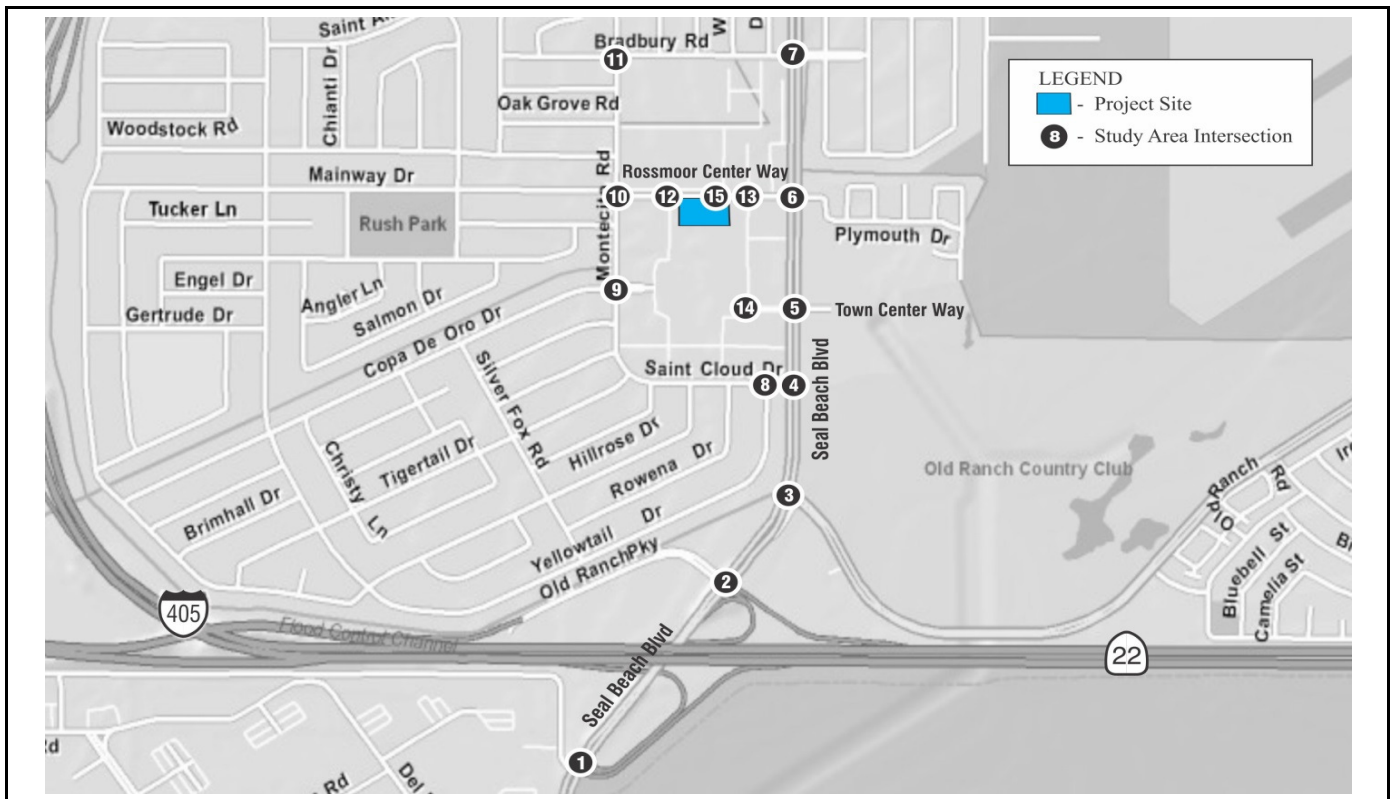
Traffic from the proposed project was then added to assess any near-term deficiencies. Figures 18 and 19 show Project Completion Year (2018) with Full Occupancy plus Project conditions weekday a.m., p.m., and weekend midday peak hour traffic volumes.

Summaries of Project Completion Year (2018) with Full Occupancy without and with Project traffic LOS for study area intersections and roadway segments are presented in Tables I and J, respectively. As the tables show, all study area intersections and roadway segments are anticipated to operate at satisfactory LOS (D or better) under Project Completion Year (2018) with Full Occupancy conditions, without and with the proposed project.

Intersection LOS worksheets for Project Completion Year (2018) with Full Occupancy without and with Project scenarios are included in Appendix B while roadway LOS worksheets are included in Appendix C.

## **FUTURE (2035) GENERAL PLAN BUILDOUT CONDITIONS**

Traffic conditions for the future long-range condition, corresponding to the buildout of the City's General Plan, were analyzed in the study. The traffic volumes for Future (2035) General Plan Buildout traffic conditions were developed based on an annual growth rate applied to the Existing (2016) weekday a.m., p.m., and weekend peak-hour traffic volumes at study intersections and



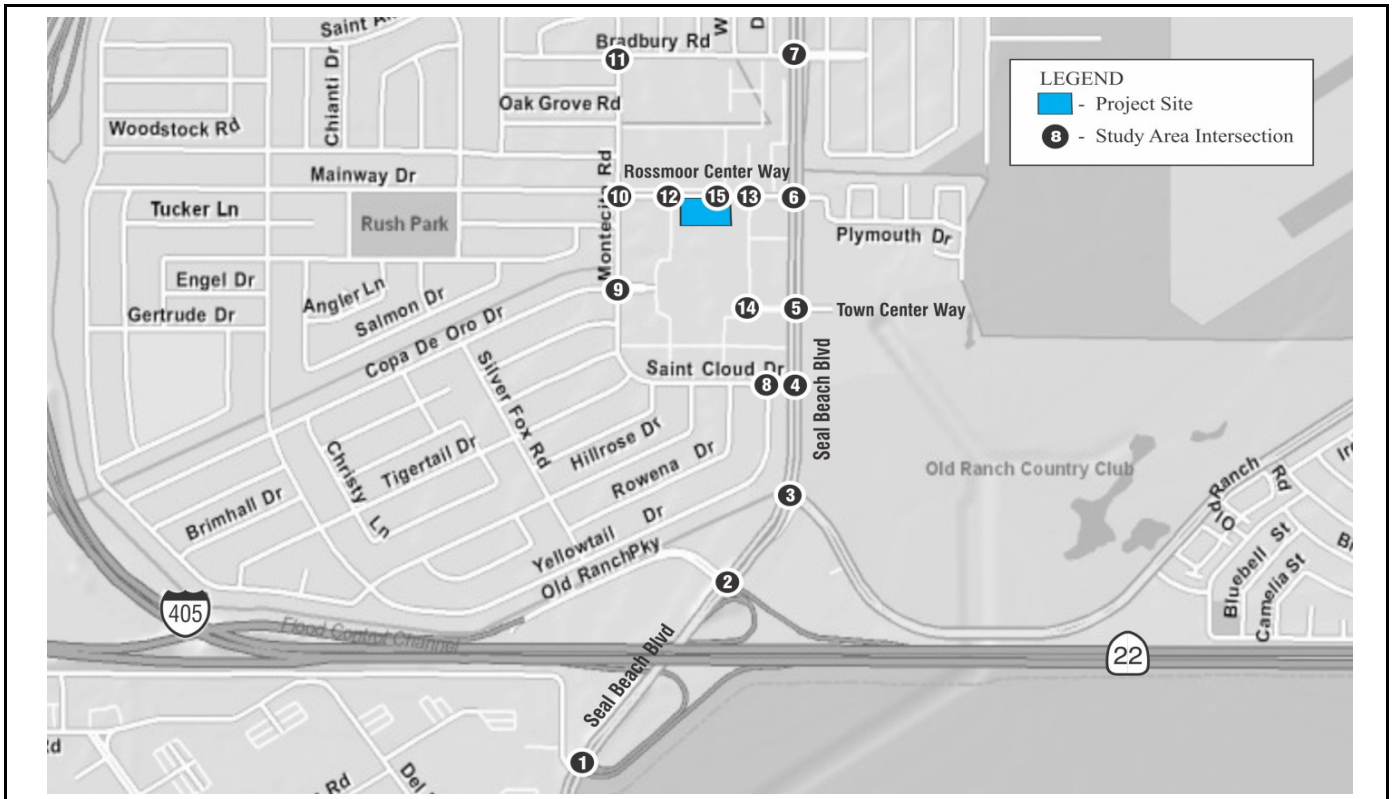
<table border="1"> <tr><td>73 / 128</td><td>539 / 530</td></tr> <tr><td>1467 / 1080</td><td>44 / 35</td></tr> <tr><td>440 / 529</td><td>703 / 324</td></tr> <tr><td>88 / 168</td><td>14 / 11</td></tr> <tr><td>28 / 30</td><td>1067 / 1464</td></tr> <tr><td>16 / 20</td><td>168 / 365</td></tr> </table> <p>1 Seal Beach Blvd/I-405 SB Ramps</p>	73 / 128	539 / 530	1467 / 1080	44 / 35	440 / 529	703 / 324	88 / 168	14 / 11	28 / 30	1067 / 1464	16 / 20	168 / 365	<table border="1"> <tr><td>469 / 375</td><td>565 / 683</td></tr> <tr><td>1593 / 1464</td><td>54 / 15</td></tr> <tr><td>338 / 323</td><td>371 / 197</td></tr> <tr><td>9 / 78</td><td>111 / 41</td></tr> <tr><td>11 / 73</td><td>1222 / 1564</td></tr> <tr><td>5 / 88</td><td>351 / 561</td></tr> </table> <p>2 Seal Beach Blvd/I-405NB Ramps</p>	469 / 375	565 / 683	1593 / 1464	54 / 15	338 / 323	371 / 197	9 / 78	111 / 41	11 / 73	1222 / 1564	5 / 88	351 / 561	<table border="1"> <tr><td>1709 / 1628</td><td>617 / 481</td></tr> <tr><td>336 / 640</td><td>709 / 545</td></tr> <tr><td>1491 / 1744</td><td>308 / 549</td></tr> </table> <p>3 Seal Beach Blvd/Lampson Av</p>	1709 / 1628	617 / 481	336 / 640	709 / 545	1491 / 1744	308 / 549	<table border="1"> <tr><td>53 / 70</td><td>2 / 5</td></tr> <tr><td>1390 / 1690</td><td>13 / 31</td></tr> <tr><td>4 / 5</td><td>66 / 195</td></tr> <tr><td>107 / 95</td><td>381 / 410</td></tr> <tr><td>3 / 0</td><td>1687 / 1691</td></tr> <tr><td>573 / 389</td><td>47 / 133</td></tr> </table> <p>4 Seal Beach Blvd/Saint Cloud Dr</p>	53 / 70	2 / 5	1390 / 1690	13 / 31	4 / 5	66 / 195	107 / 95	381 / 410	3 / 0	1687 / 1691	573 / 389	47 / 133	<table border="1"> <tr><td>32 / 95</td><td>21 / 60</td></tr> <tr><td>1424 / 1406</td><td>2 / 47</td></tr> <tr><td>21 / 179</td><td>24 / 140</td></tr> <tr><td>21 / 101</td><td>56 / 207</td></tr> <tr><td>4 / 28</td><td>1655 / 1470</td></tr> <tr><td>14 / 187</td><td>31 / 85</td></tr> </table> <p>5 Seal Beach Blvd/Town Center Dr</p>	32 / 95	21 / 60	1424 / 1406	2 / 47	21 / 179	24 / 140	21 / 101	56 / 207	4 / 28	1655 / 1470	14 / 187	31 / 85
73 / 128	539 / 530																																																									
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FIGURE 16

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor  
Project Completion Year (2018) with Full Occupancy Peak Hour Volumes (AM/PM)



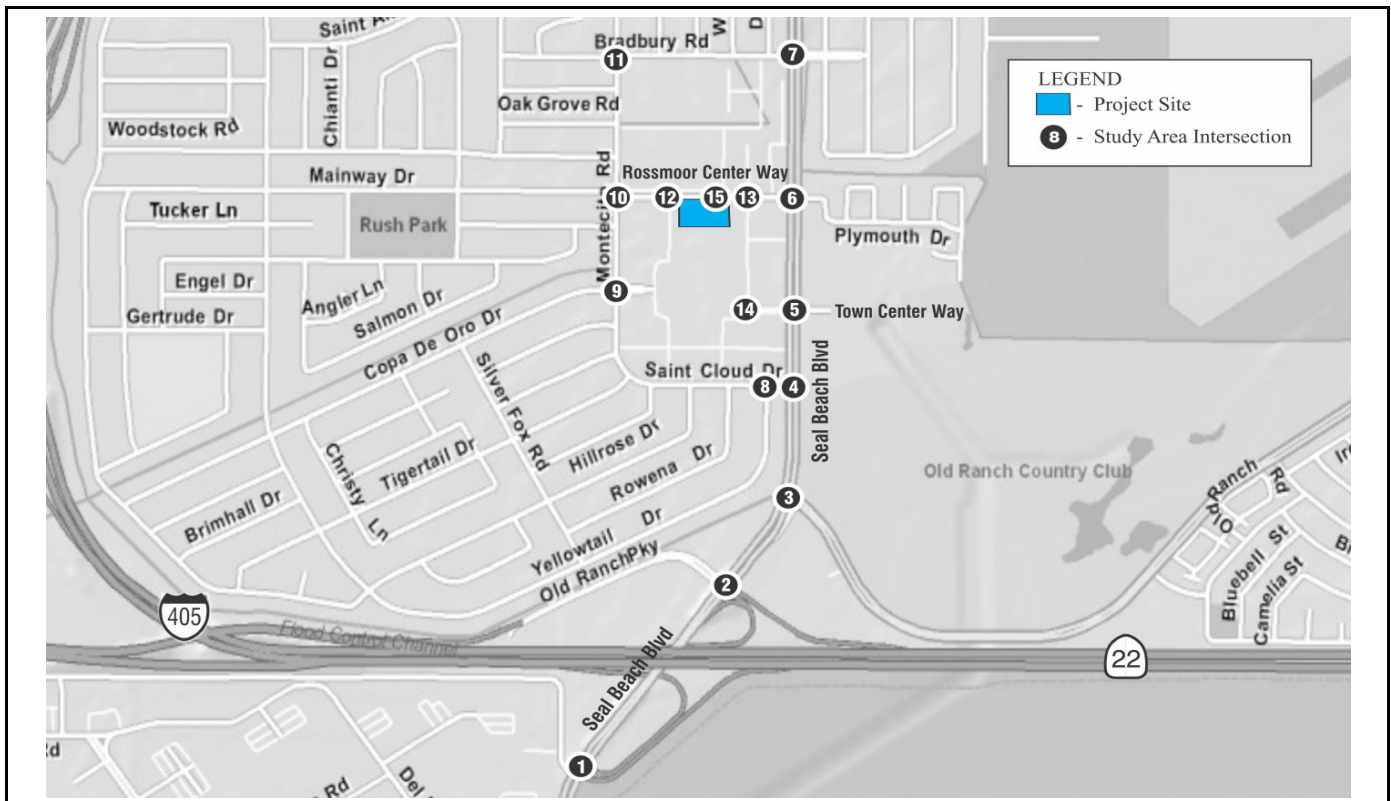
Intersection	Northbound	Southbound	Eastbound	Westbound
1 Seal Beach Blvd/I-405 SB Ramps	132	1126	504	37
2 Seal Beach Blvd/I-405NB Ramps	243	1324	585	5
3 Seal Beach Blvd/Lampson Av	1482	514	572	364
4 Seal Beach Blvd/Saint Cloud Dr	73	1398	5	35
5 Seal Beach Blvd/Town Center Dr	152	1085	89	90
6 Seal Beach Blvd/Rossmoor Center Wy	231	1424	14	2
7 Seal Beach Blvd/Bradbury Rd	126	1523	21	7
8 Yellowtail Dr/Saint Cloud Dr	461	4	424	43
9 Montecito Rd/Copa De Oro Dr	21	237	5	5
10 Montecito Rd/Rossmoor Center Wy	33	163	43	52
11 Montecito Rd/Bradbury Rd	2	91	70	20
12 West Rd/Rossmoor Center Wy	83	16	119	10
13 Internal Dwy/Rossmoor Center Wy	24	61	107	94
14 Internal Dwy/Town Center Dr	53	342	398	133
15 Project Dwy/Rossmoor Center Wy	100	5	124	44

FIGURE 17

Legend

123 Saturday Volume Health Club within The Shops at Rossmoor Project Completion Year (2018) with Full Occupancy Peak Hour Volumes (Saturday)





<table border="1"> <tr><td>73 / 128</td><td>1469 / 1085</td><td>542 / 537</td></tr> <tr><td>88 / 168</td><td>444 / 1537</td><td>44 / 35</td></tr> <tr><td>28 / 30</td><td>1069 / 1471</td><td>703 / 324</td></tr> <tr><td>16 / 20</td><td>14 / 11</td><td>168 / 365</td></tr> <tr><td></td><td>1069 / 1471</td><td>168 / 365</td></tr> </table> <p>1 Seal Beach Blvd/I-405 SB Ramps</p>	73 / 128	1469 / 1085	542 / 537	88 / 168	444 / 1537	44 / 35	28 / 30	1069 / 1471	703 / 324	16 / 20	14 / 11	168 / 365		1069 / 1471	168 / 365	<table border="1"> <tr><td>470 / 377</td><td>1599 / 1477</td><td>569 / 694</td></tr> <tr><td>10 / 80</td><td>341 / 329</td><td>54 / 15</td></tr> <tr><td>11 / 73</td><td>111 / 41</td><td>371 / 197</td></tr> <tr><td>5 / 88</td><td>1227 / 1578</td><td>351 / 561</td></tr> <tr><td></td><td>111 / 41</td><td>351 / 561</td></tr> </table> <p>2 Seal Beach Blvd/I-405NB Ramps</p>	470 / 377	1599 / 1477	569 / 694	10 / 80	341 / 329	54 / 15	11 / 73	111 / 41	371 / 197	5 / 88	1227 / 1578	351 / 561		111 / 41	351 / 561	<table border="1"> <tr><td>1719 / 1649</td><td>620 / 490</td></tr> <tr><td>339 / 647</td><td>709 / 545</td></tr> <tr><td>1501 / 1771</td><td>308 / 549</td></tr> <tr><td></td><td>1501 / 1771</td><td>308 / 549</td></tr> </table> <p>3 Seal Beach Blvd/Lampson Av</p>	1719 / 1649	620 / 490	339 / 647	709 / 545	1501 / 1771	308 / 549		1501 / 1771	308 / 549	<table border="1"> <tr><td>53 / 70</td><td>1401 / 1715</td><td>2 / 5</td></tr> <tr><td>107 / 95</td><td>4 / 5</td><td>13 / 31</td></tr> <tr><td>3 / 0</td><td>382 / 414</td><td>66 / 195</td></tr> <tr><td>574 / 392</td><td>1698 / 1724</td><td>47 / 133</td></tr> <tr><td></td><td>382 / 414</td><td>47 / 133</td></tr> </table> <p>4 Seal Beach Blvd/Saint Cloud Dr</p>	53 / 70	1401 / 1715	2 / 5	107 / 95	4 / 5	13 / 31	3 / 0	382 / 414	66 / 195	574 / 392	1698 / 1724	47 / 133		382 / 414	47 / 133	<table border="1"> <tr><td>32 / 95</td><td>1435 / 1431</td><td>21 / 60</td></tr> <tr><td>21 / 101</td><td>21 / 79</td><td>2 / 47</td></tr> <tr><td>4 / 28</td><td>56 / 207</td><td>24 / 140</td></tr> <tr><td>14 / 187</td><td>1666 / 1503</td><td>31 / 85</td></tr> <tr><td></td><td>56 / 207</td><td>31 / 85</td></tr> </table> <p>5 Seal Beach Blvd/Town Center Dr</p>	32 / 95	1435 / 1431	21 / 60	21 / 101	21 / 79	2 / 47	4 / 28	56 / 207	24 / 140	14 / 187	1666 / 1503	31 / 85		56 / 207	31 / 85
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FIGURE 18

Legend

123 / 456

AM / PM Volume

Project Completion Year (2018) with Full Occupancy plus Project Peak Hour Volumes (AM/PM)

Health Club within The Shops at Rossmoor



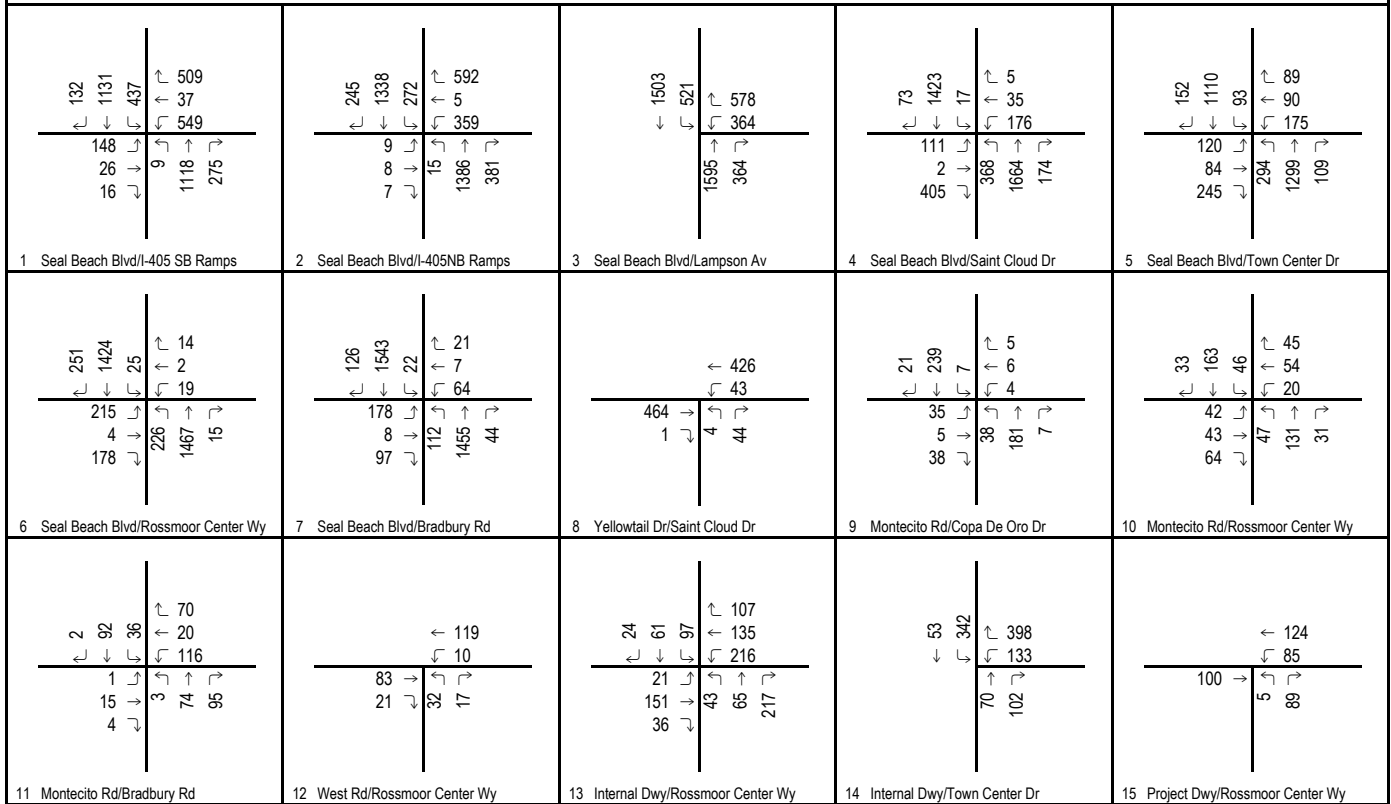
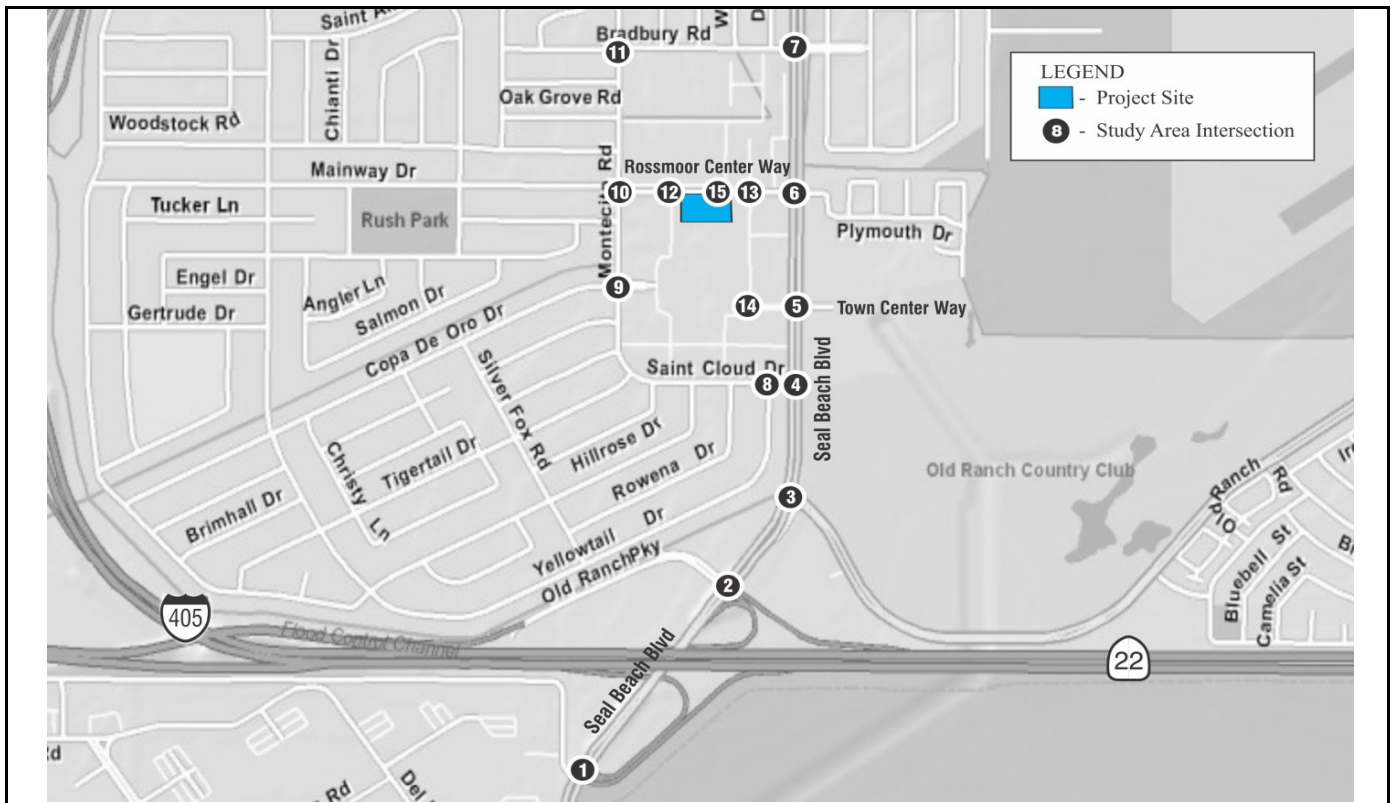


FIGURE 19

Legend

123 Saturday Volume Health Club within The Shops at Rossmoor  
 Project Completion Year (2018) with Full Occupancy plus Project Peak Hour Volumes (Saturday)

**Table I: Project Completion Year (2018) Peak Hour Intersection Level of Service Summary**

Intersection		Project Completion Year (2018)						Project Completion Year (2018) + Project								
		AM		PM		Sat		AM			PM			Sat		
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU
1	Seal Beach Boulevard/I-405 SB On/Off Ramps <sup>1</sup>	41.7	D	42.9	D	41.1	D	41.4	D	-	42.7	D	-	41.5	D	-
2	Seal Beach Boulevard/I-405 NB On/Off Ramps <sup>1</sup>	45.3	D	51.3	D	35.7	D	45.8	D	-	52.5	D	-	36.5	D	-
3	Seal Beach Boulevard/Lampson Avenue	0.822	D	0.807	D	0.794	D	0.826	D	0.004	0.814	D	0.007	0.802	D	0.008
4	Seal Beach Boulevard/Saint Cloud Drive	0.650	B	0.734	C	0.668	C	0.653	B	0.003	0.740	C	0.006	0.673	B	0.005
5	Seal Beach Boulevard/Town Center Drive	0.507	A	0.761	C	0.851	C	0.509	A	0.002	0.766	C	0.005	0.856	D	0.005
6	Seal Beach Boulevard/Rossmoor Center Way	0.549	A	0.699	B	0.681	B	0.566	A	0.017	0.741	C	0.042	0.713	C	0.032
7	Seal Beach Boulevard/Bradbury Road	0.759	C	0.698	B	0.647	B	0.761	C	0.002	0.705	C	0.007	0.651	B	0.004
8	Yellow Tail Drive/Saint Cloud Drive*	14.0	B	10.8	B	11.0	B	14.7	B	-	10.8	B	-	11.0	B	-
9	Montecito Road/Copa De Oro Drive*	11.5	B	9.6	A	8.8	A	11.6	B	-	9.6	A	-	8.8	A	-
10	Montecito Road/Rossmoor Center Way*	12.0	B	10.3	B	9.7	A	12.1	B	-	10.4	B	-	9.8	A	-
11	Montecito Road/Bradbury Road*	12.9	B	10.1	B	8.9	A	12.9	B	-	10.2	B	-	9.0	A	-
12	West Road/Rossmoor Center Way*	7.7	A	8.0	A	7.8	A	7.7	A	-	8.1	A	-	7.8	A	-
13	Internal Driveway/Rossmoor Center Way*	8.7	A	13.2	B	18.5	C	8.9	A	-	16.1	C	-	23.7	C	-
14	Internal Driveway/Town Center Drive*	7.8	A	11.8	B	16.3	C	7.8	A	-	11.8	B	-	16.3	C	-
15	Project Driveway/Rossmoor Center Way*	8.9	A	9.2	A	9.2	A	9.1	A	-	9.3	A	-	9.5	A	-

ICU V/C ratio is used for signalized intersections in the City of Seal Beach.

\* Indicates unsignalized intersection. HCM delay in seconds is used for unsignalized intersections.

■ (Shade) = Exceeds City level of service criteria (LOS D)

<sup>1</sup> HCM Methodology-consistent with Caltrans requirements

**Table J: Project Completion Year (2018) With Full Occupancy Peak Hour Roadway Level of Service Summary**

Roadway	Segment	Direction	Project Completion Year (2018)									Project Completion Year (2018) + Project								
			AM			PM			Saturday Mid-day			AM			PM			Saturday Mid-day		
			Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS
Seal Beach Boulevard	I-405 Northbound On/Off Ramps and Lampson Avenue	NB	45.0	17.1	B	45.0	18.4	C	45.0	15.9	B	45.0	17.2	B	45.0	18.6	C	45.0	16.1	B
		SB	45.0	18.4	C	45.0	16.7	B	45.0	14.3	B	45.0	18.5	C	45.0	16.9	B	45.0	14.5	B
	Lampson Avenue and Saint Cloud Drive	NB	45.0	20.0	C	45.0	19.0	C	45.0	18.4	C	45.0	20.2	C	45.0	19.3	C	45.0	18.6	C
		SB	45.0	17.5	B	45.0	17.3	B	45.0	15.3	B	45.0	17.6	B	45.0	17.6	B	45.0	15.5	B
	Saint Cloud Drive and Town Center Drive	NB	45.0	15.1	B	45.0	15.2	B	45.0	14.7	B	45.0	15.2	B	45.0	15.4	B	45.0	14.9	B
		SB	45.0	11.8	B	45.0	13.2	B	45.0	11.7	B	45.0	11.9	B	45.0	13.4	B	45.0	11.9	B
	Town Center Drive and Rossmoor Center Way	NB	45.0	13.8	B	45.0	13.7	B	45.0	13.0	B	45.0	13.9	B	45.0	14.0	B	45.0	13.2	B
		SB	45.0	12.0	B	45.0	12.7	B	45.0	11.6	B	45.0	12.1	B	45.0	12.9	B	45.0	11.8	B
	Rossmoor Center Way and Bradbury Road	NB	45.0	13.5	B	45.0	13.6	B	45.0	13.2	B	45.0	13.6	B	45.0	13.8	B	45.0	13.4	B
		SB	45.0	12.4	B	45.0	14.4	B	45.0	13.2	B	45.0	12.5	B	45.0	14.6	B	45.0	13.4	B
Bradbury Road and Rossmoor Way	NB	45.0	15.2	B	45.0	14.5	B	45.0	13.2	B	45.0	15.3	B	45.0	14.7	B	45.0	13.4	B	
	SB	45.0	13.4	B	45.0	15.4	B	45.0	13.3	B	45.0	13.5	B	45.0	15.7	B	45.0	13.4	B	
Saint Cloud Drive*	Seal Beach Boulevard and Yellowtail Drive		22.8	-	D	26.4	-	C	26.6	-	C	22.8	-	D	26.4	-	C	26.5	-	C
Montecito Road*	Yellowtail Drive and Copa De Oro Drive		25.9	-	C	28.7	-	B	29.2	-	B	25.9	-	C	28.6	-	B	29.1	-	B
	Copa De Oro Drive and Mainway Drive		30.0	-	B	30.1	-	B	31.0	-	A	30.0	-	B	30.0	-	B	31.0	-	A
	Mainway Drive and Bradbury Road		29.0	-	B	30.2	-	B	31.2	-	A	29.0	-	B	30.2	-	B	31.1	-	A
Rossmoor Center Way**	Montecito Road and Seal Beach Boulevard		27.6	-	A	25.6	-	A	25.2	-	B	27.3	-	A	25.1	-	B	24.7	-	B

NB = Northbound, SB = Southbound

\* Analyzed as Two Lane Roadways with a speed limit of 35 MPH

\*\* Analyzed as Two Lane Roadway with a speed limit of 30 MPH

roadway segments to represent a 19-year horizon. In the Previous Analyses, the development of the Future (2035) General Plan Buildout baseline volumes were initially based on an estimated annual growth rate of 0.2 percent per year based on the growth along Seal Beach Boulevard using OCTAM. However, based on discussions with City staff, a growth rate of 0.5 percent per year was applied over the time frame between Existing and Future (2035) General Plan Buildout traffic conditions to provide a conservative traffic analysis. This analysis has forecast future volumes consistent with this previously agreed upon approach.

To account for the fully occupied retail center, the trip assignment generated earlier for the unoccupied restaurant was manually added to the Future (2035) General Plan Buildout traffic volumes to develop the volumes for the Future (2035) General Plan Buildout with Full Occupancy condition. The LOS at the study area intersections and roadway segments were identified based on these data. Figures 20 and 21 show the Future (2035) General Plan Buildout with Full Occupancy peak hour volumes at the study area intersections for weekday and weekend conditions, respectively. Intersection turning movement volumes resulting from the addition of the proposed project are shown in Figures 22 and 23 for weekday and weekend conditions, respectively.

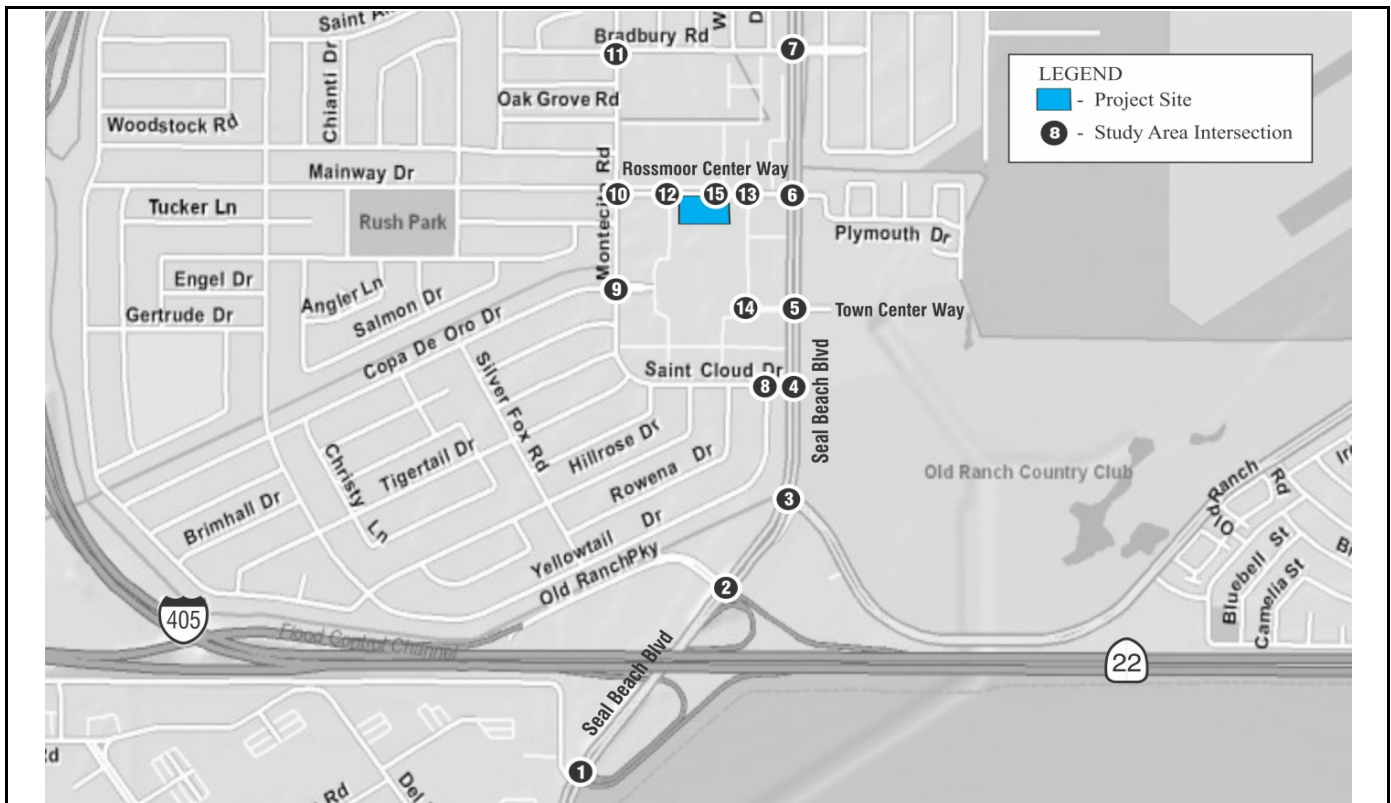
Tables K and L present summaries of Future (2035) General Plan Buildout with Full Occupancy without and with Project LOS for study area intersections and roadway segments. As Tables K and L demonstrate, all study area intersections and roadway segments are anticipated to operate at satisfactory LOS (D or better) under Future (2035) General Plan Buildout with Full Occupancy without and with Project conditions. Intersection LOS worksheets for Future (2035) General Plan Buildout without and with Project scenarios are included in Appendix B while roadway LOS worksheets are included in Appendix C.

As Table K shows, the addition of project traffic at the intersection of Seal Beach Boulevard and Rossmoor Center Way results in an ICU increase that meets the City's threshold of significance of 0.040 during the weekday p.m. peak hour. It should be noted this intersection is anticipated to operate at an acceptable LOS C or better under all peak hours in the Future (2035) General Plan Buildout with Full Occupancy with Project conditions. As all study area intersections and roadway facilities are anticipated to operate at satisfactory LOS from Existing (2016) to Future (2035) General Plan Buildout with Full Occupancy plus Project traffic conditions, operational improvements aimed at alleviating LOS deficiencies are not warranted and have not been recommended.

Existing queuing issues that occur in the northbound left-turn lane at the intersection of Seal Beach Boulevard and Rossmoor Center Way are anticipated to be alleviated by the project's proposed improvement to the northbound left-turn lane. Although this northbound left-turn queuing is an existing concern, the project will improve the stacking distance to alleviate existing and anticipated queues.

## **ON-SITE CIRCULATION AND QUEUING**

This section presents the results of the site access assessment conducted for Existing (2016) with Full Occupancy without and with Project conditions. As presented previously in this report, both project driveways and site-adjacent intersections are anticipated to operate at satisfactory LOS for all analysis scenarios.



<table border="1"> <tr><td>79 / 139</td><td>1591 / 1170</td></tr> <tr><td>584 / 574</td><td>477 / 573</td></tr> <tr><td>48 / 38</td><td>762 / 351</td></tr> <tr><td>95 / 182</td><td>15 / 12</td></tr> <tr><td>31 / 33</td><td>1156 / 1587</td></tr> <tr><td>18 / 22</td><td>182 / 395</td></tr> <tr><td></td><td>1156 / 1587</td></tr> <tr><td></td><td>182 / 395</td></tr> </table> <p>1 Seal Beach Blvd/I-405 SB Ramps</p>	79 / 139	1591 / 1170	584 / 574	477 / 573	48 / 38	762 / 351	95 / 182	15 / 12	31 / 33	1156 / 1587	18 / 22	182 / 395		1156 / 1587		182 / 395	<table border="1"> <tr><td>508 / 406</td><td>1726 / 1587</td></tr> <tr><td>612 / 739</td><td>366 / 350</td></tr> <tr><td>58 / 16</td><td>402 / 214</td></tr> <tr><td>10 / 84</td><td>120 / 45</td></tr> <tr><td>12 / 79</td><td>1324 / 1695</td></tr> <tr><td>5 / 95</td><td>381 / 608</td></tr> <tr><td></td><td>120 / 45</td></tr> <tr><td></td><td>1324 / 1695</td></tr> <tr><td></td><td>381 / 608</td></tr> </table> <p>2 Seal Beach Blvd/I-405NB Ramps</p>	508 / 406	1726 / 1587	612 / 739	366 / 350	58 / 16	402 / 214	10 / 84	120 / 45	12 / 79	1324 / 1695	5 / 95	381 / 608		120 / 45		1324 / 1695		381 / 608	<table border="1"> <tr><td>1849 / 1763</td><td>361 / 694</td></tr> <tr><td>668 / 519</td><td>769 / 591</td></tr> <tr><td>1614 / 1888</td><td>334 / 596</td></tr> <tr><td>662 / 485</td><td>4 / 8</td></tr> <tr><td>9 / 3</td><td>9 / 3</td></tr> <tr><td>77 / 54</td><td>77 / 54</td></tr> </table> <p>3 Seal Beach Blvd/Lampson Av</p>	1849 / 1763	361 / 694	668 / 519	769 / 591	1614 / 1888	334 / 596	662 / 485	4 / 8	9 / 3	9 / 3	77 / 54	77 / 54	<table border="1"> <tr><td>57 / 75</td><td>1501 / 1831</td></tr> <tr><td>2 / 5</td><td>4 / 5</td></tr> <tr><td>14 / 34</td><td>71 / 211</td></tr> <tr><td>116 / 102</td><td>413 / 445</td></tr> <tr><td>3 / 0</td><td>1826 / 1829</td></tr> <tr><td>621 / 422</td><td>51 / 145</td></tr> </table> <p>4 Seal Beach Blvd/Saint Cloud Dr</p>	57 / 75	1501 / 1831	2 / 5	4 / 5	14 / 34	71 / 211	116 / 102	413 / 445	3 / 0	1826 / 1829	621 / 422	51 / 145	<table border="1"> <tr><td>33 / 102</td><td>1539 / 1522</td></tr> <tr><td>23 / 65</td><td>23 / 85</td></tr> <tr><td>2 / 51</td><td>26 / 152</td></tr> <tr><td>21 / 108</td><td>59 / 222</td></tr> <tr><td>4 / 31</td><td>1794 / 1590</td></tr> <tr><td>15 / 203</td><td>34 / 92</td></tr> </table> <p>5 Seal Beach Blvd/Town Center Dr</p>	33 / 102	1539 / 1522	23 / 65	23 / 85	2 / 51	26 / 152	21 / 108	59 / 222	4 / 31	1794 / 1590	15 / 203	34 / 92
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FIGURE 20

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor

Future (2035) General Plan Buildout with Full Occupancy Peak Hour Volumes (AM/PM)

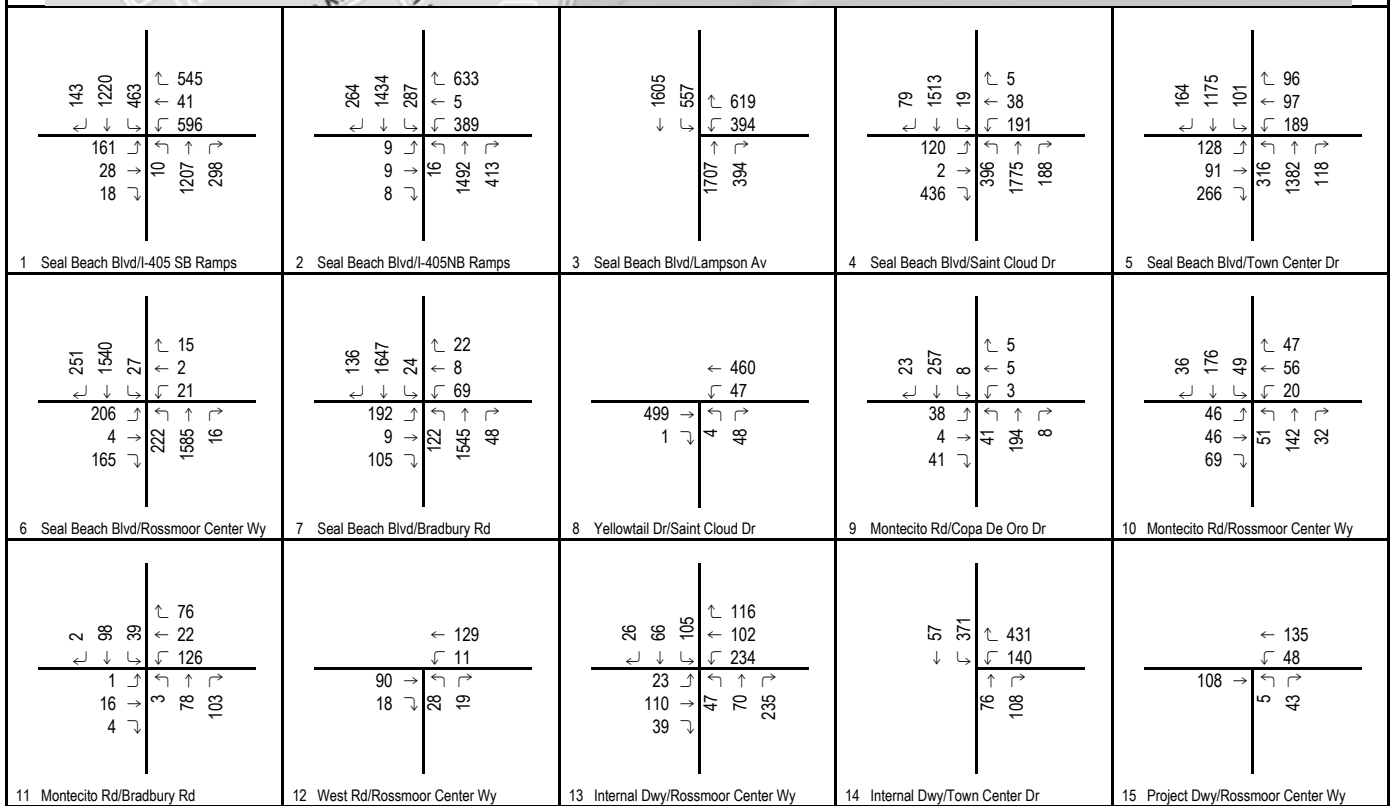
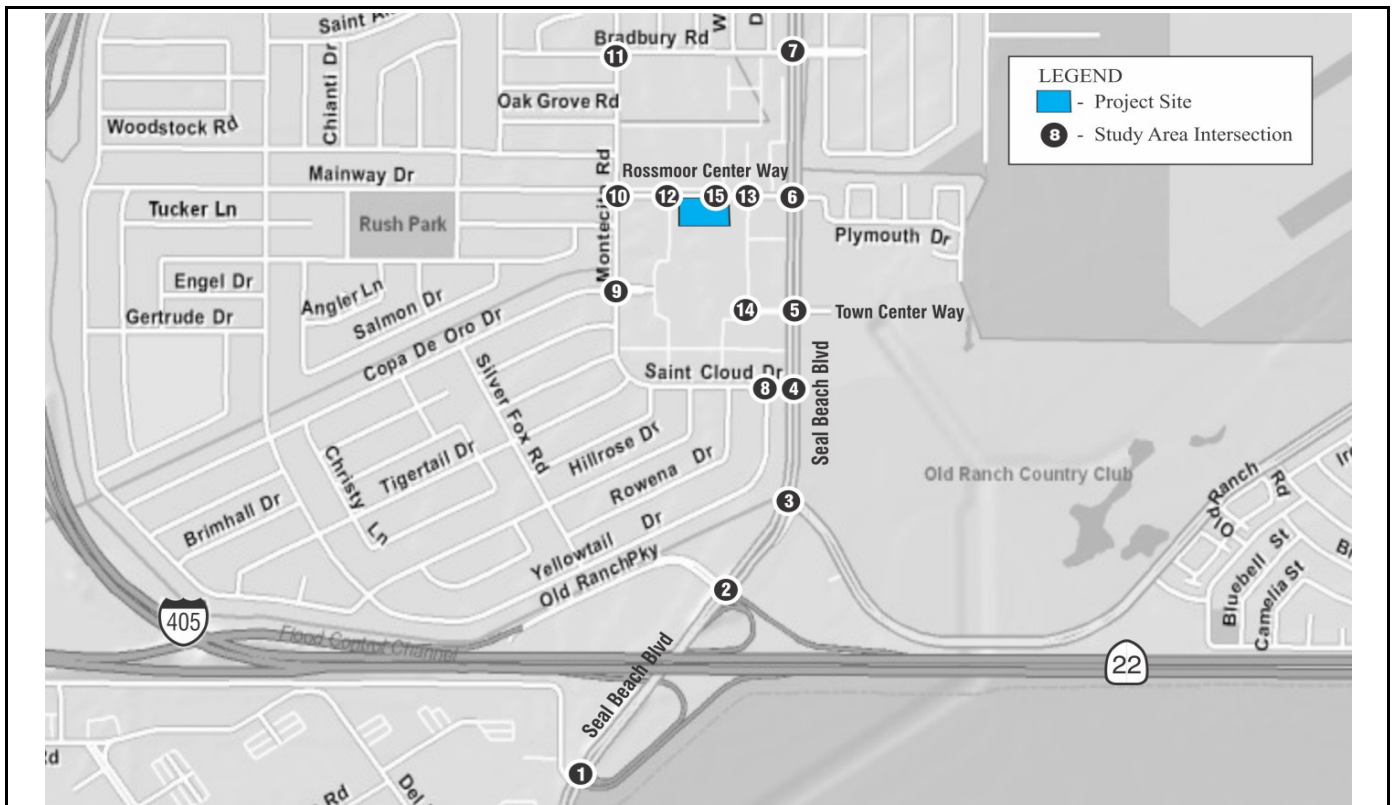


FIGURE 21

Legend

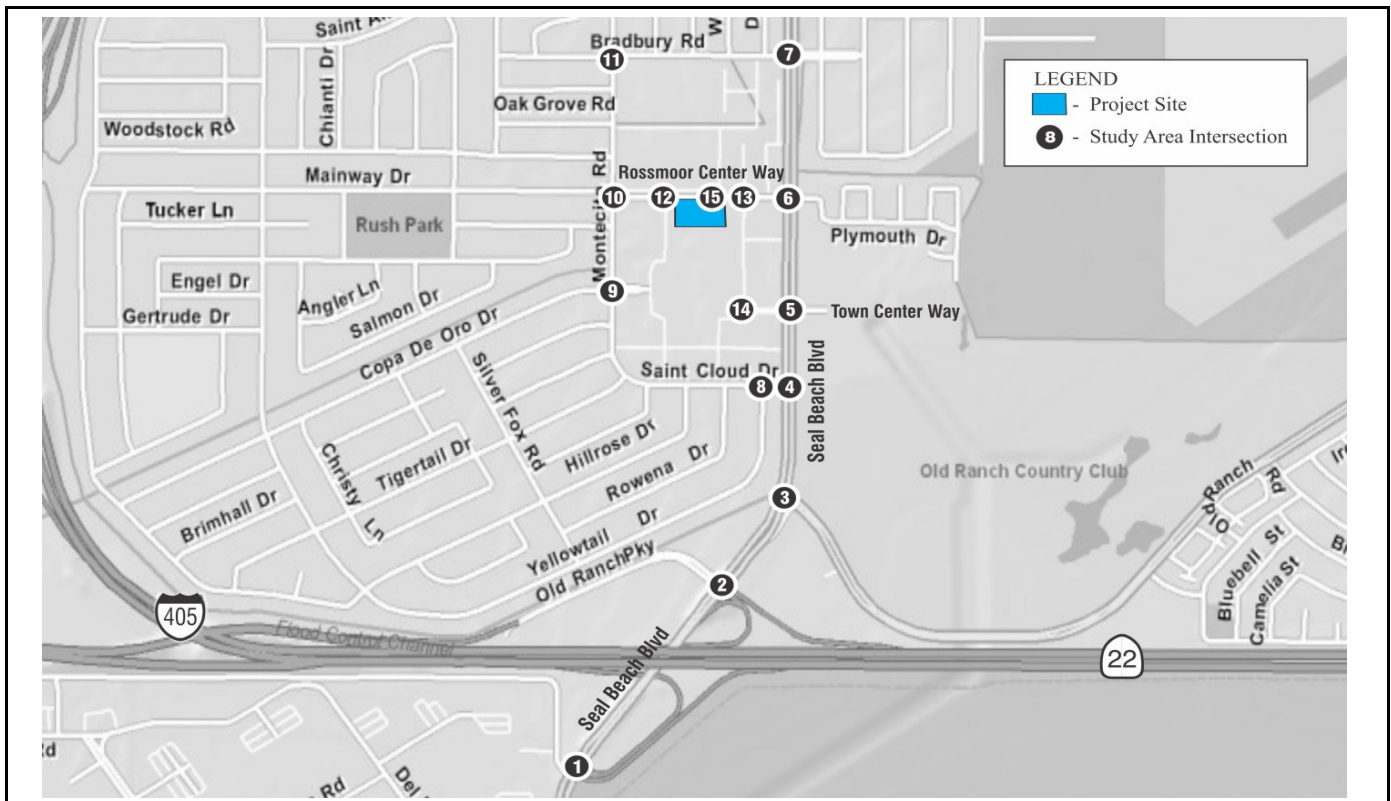
123

Saturday Volume

Health Club within The Shops at Rossmoor

Future (2035) General Plan Buildout with Full Occupancy Peak Hour Volumes (Saturday)





LEGEND  
 - Project Site  
 - Study Area Intersection

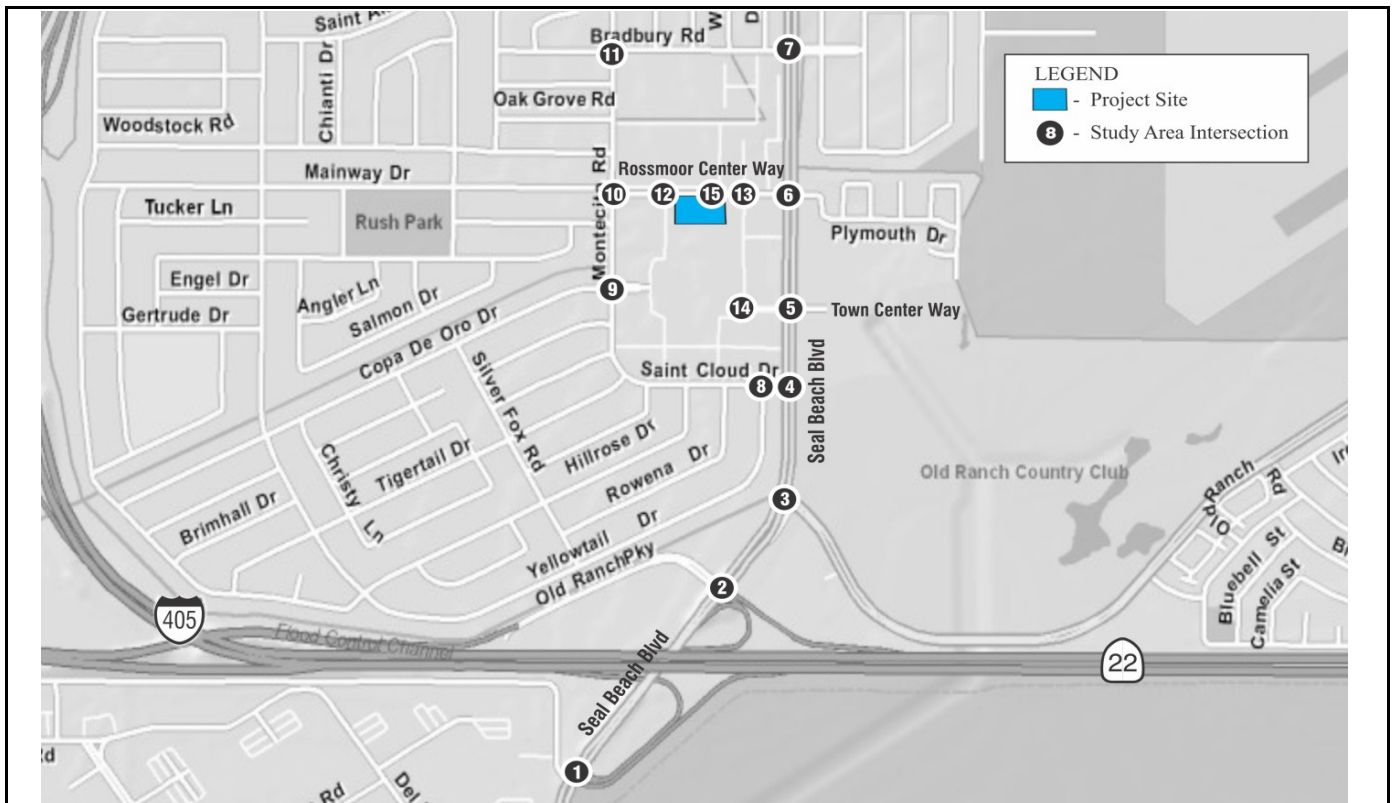
<table border="1"> <tr><td>79 / 139</td><td>1593 / 1175</td><td>587 / 581</td></tr> <tr><td>95 / 182</td><td>481 / 581</td><td>48 / 38</td></tr> <tr><td>31 / 33</td><td>762 / 351</td><td></td></tr> <tr><td>18 / 22</td><td>15 / 12</td><td>1158 / 1594</td></tr> <tr><td></td><td>182 / 395</td><td></td></tr> </table>	79 / 139	1593 / 1175	587 / 581	95 / 182	481 / 581	48 / 38	31 / 33	762 / 351		18 / 22	15 / 12	1158 / 1594		182 / 395		<table border="1"> <tr><td>509 / 408</td><td>1732 / 1600</td><td>616 / 750</td></tr> <tr><td>11 / 86</td><td>369 / 356</td><td>58 / 16</td></tr> <tr><td>12 / 79</td><td>402 / 214</td><td></td></tr> <tr><td>5 / 95</td><td>120 / 45</td><td>1329 / 1709</td></tr> <tr><td></td><td>381 / 608</td><td></td></tr> </table>	509 / 408	1732 / 1600	616 / 750	11 / 86	369 / 356	58 / 16	12 / 79	402 / 214		5 / 95	120 / 45	1329 / 1709		381 / 608		<table border="1"> <tr><td>1859 / 1784</td><td>671 / 528</td></tr> <tr><td>364 / 701</td><td>769 / 591</td></tr> <tr><td>1624 / 1915</td><td>334 / 596</td></tr> </table>	1859 / 1784	671 / 528	364 / 701	769 / 591	1624 / 1915	334 / 596	<table border="1"> <tr><td>57 / 75</td><td>1512 / 1856</td><td>2 / 5</td></tr> <tr><td>116 / 102</td><td>4 / 5</td><td>14 / 34</td></tr> <tr><td>3 / 0</td><td>71 / 211</td><td></td></tr> <tr><td>622 / 425</td><td>414 / 449</td><td>1837 / 1862</td></tr> <tr><td></td><td>51 / 145</td><td></td></tr> </table>	57 / 75	1512 / 1856	2 / 5	116 / 102	4 / 5	14 / 34	3 / 0	71 / 211		622 / 425	414 / 449	1837 / 1862		51 / 145		<table border="1"> <tr><td>33 / 102</td><td>1550 / 1547</td><td>23 / 65</td></tr> <tr><td>21 / 108</td><td>23 / 85</td><td>2 / 51</td></tr> <tr><td>4 / 31</td><td>26 / 152</td><td></td></tr> <tr><td>15 / 203</td><td>59 / 222</td><td>1805 / 1623</td></tr> <tr><td></td><td>34 / 92</td><td></td></tr> </table>	33 / 102	1550 / 1547	23 / 65	21 / 108	23 / 85	2 / 51	4 / 31	26 / 152		15 / 203	59 / 222	1805 / 1623		34 / 92	
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FIGURE 22

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor  
 Future (2035) General Plan Buildout with Full Occupancy plus Project Peak Hour Volumes (AM/PM)



<p>1 Seal Beach Blvd/I-405 SB Ramps</p>	<p>2 Seal Beach Blvd/I-405NB Ramps</p>	<p>3 Seal Beach Blvd/Lampson Av</p>	<p>4 Seal Beach Blvd/Saint Cloud Dr</p>	<p>5 Seal Beach Blvd/Town Center Dr</p>
<p>6 Seal Beach Blvd/Rossmoor Center Wy</p>	<p>7 Seal Beach Blvd/Bradbury Rd</p>	<p>8 Yellowtail Dr/Saint Cloud Dr</p>	<p>9 Montecito Rd/Copa De Oro Dr</p>	<p>10 Montecito Rd/Rossmoor Center Wy</p>
<p>11 Montecito Rd/Bradbury Rd</p>	<p>12 West Rd/Rossmoor Center Wy</p>	<p>13 Internal Dwy/Rossmoor Center Wy</p>	<p>14 Internal Dwy/Town Center Dr</p>	<p>15 Project Dwy/Rossmoor Center Wy</p>

FIGURE 23

Legend

123 Saturday Volume Health Club within The Shops at Rossmoor  
 Future (2035) General Plan Buildout with Full Occupancy plus Project Peak Hour Volumes (Saturday)



**Table K: Future Buildout Year (2035) Peak Hour Intersection Level of Service Summary**

Intersection		Future Buildout Year (2035)						Future Buildout Year (2035) + Project								
		AM		PM		Sat		AM			PM			Sat		
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU
1	Seal Beach Boulevard/I-405 SB On/Off Ramps <sup>1</sup>	42.1	D	47.0	D	46.6	D	41.7	D	-	47.1	D	-	47.2	D	-
2	Seal Beach Boulevard/I-405 NB On/Off Ramps <sup>1</sup>	43.2	D	44.9	D	36.6	D	43.7	D	-	46.9	D	-	37.4	D	-
3	Seal Beach Boulevard/Lampson Avenue	0.809	D	0.848	D	0.799	D	0.813	D	0.004	0.855	D	0.007	0.806	D	0.007
4	Seal Beach Boulevard/Saint Cloud Drive	0.623	B	0.738	C	0.669	C	0.625	B	0.002	0.744	C	0.006	0.675	B	0.006
5	Seal Beach Boulevard/Town Center Drive	0.498	A	0.776	C	0.870	C	0.501	A	0.003	0.781	C	0.005	0.875	D	0.005
6	Seal Beach Boulevard/Rossmoor Center Way	0.544	A	0.713	C	0.713	C	0.559	A	0.015	0.753	C	0.040	0.744	C	0.031
7	Seal Beach Boulevard/Bradbury Road	0.766	C	0.730	C	0.680	C	0.769	C	0.003	0.736	C	0.006	0.684	B	0.004
8	Yellow Tail Drive/Saint Cloud Drive*	12.5	B	10.7	B	10.8	B	12.9	B	-	10.7	B	-	10.9	B	-
9	Montecito Road/Copa De Oro Drive*	10.4	B	9.3	A	8.8	A	10.4	B	-	9.3	A	-	8.8	A	-
10	Montecito Road/Rossmoor Center Way*	11.0	B	9.8	A	9.6	A	11.1	B	-	9.9	A	-	9.7	A	-
11	Montecito Road/Bradbury Road*	11.3	B	9.9	A	9.1	A	11.3	B	-	9.9	A	-	9.1	A	-
12	West Road/Rossmoor Center Way*	7.6	A	8.0	A	7.8	A	7.6	A	-	8.0	A	-	7.8	A	-
13	Internal Driveway/Rossmoor Center Way*	8.7	A	13.9	B	19.5	C	9.0	A	-	17.3	C	-	25.0	C	-
14	Internal Driveway/Town Center Drive*	7.7	A	11.4	B	17.9	C	7.7	A	-	11.4	B	-	17.9	C	-
15	Project Driveway/Rossmoor Center Way*	8.9	A	9.1	A	9.3	A	9.0	A	-	9.3	A	-	9.4	A	-

ICU V/C ratio is used for signalized intersections in the City of Seal Beach.

\* Indicates unsignalized intersection. HCM delay in seconds is used for unsignalized intersections.

■ (Shade) = Exceeds City level of service criteria (LOS D)

<sup>1</sup> HCM Methodology-consistent with Caltrans requirements

**Table L: Future (2035) Buildout with Full Occupancy Peak Hour Roadway Level of Service Summary**

Roadway	Segment	Direction	Future Buildout Year (2035)									Future Buildout Year (2035) + Project								
			AM			PM			Saturday Mid-day			AM			PM			Saturday Mid-day		
			Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS
Seal Beach Boulevard	I-405 Northbound On/Off Ramps and Lampson Avenue	NB	45.0	14.4	B	45.0	18.5	C	45.0	15.7	B	45.0	14.5	B	45.0	18.7	C	45.0	15.8	B
		SB	45.0	19.3	C	45.0	17.4	B	45.0	14.8	B	45.0	19.4	C	45.0	17.6	B	45.0	14.9	B
	Lampson Avenue and Saint Cloud Drive	NB	45.0	16.9	B	45.0	17.9	B	45.0	17.4	B	45.0	17.0	B	45.0	18.1	C	45.0	17.5	B
		SB	45.0	16.3	B	45.0	18.2	C	45.0	15.9	B	45.0	16.4	B	45.0	18.4	C	45.0	16.1	B
	Saint Cloud Drive and Town Center Drive	NB	45.0	14.2	B	45.0	14.1	B	45.0	13.7	B	45.0	14.3	B	45.0	14.4	B	45.0	13.8	B
		SB	45.0	11.6	B	45.0	14.0	B	45.0	12.0	B	45.0	11.7	B	45.0	14.2	B	45.0	12.2	B
	Town Center Drive and Rossmoor Center Way	NB	45.0	13.6	B	45.0	13.6	B	45.0	12.7	B	45.0	13.7	B	45.0	13.9	B	45.0	12.8	B
		SB	45.0	12.1	B	45.0	13.3	B	45.0	11.7	B	45.0	12.2	B	45.0	13.5	B	45.0	11.9	B
	Rossmoor Center Way and Bradbury Road	NB	45.0	13.9	B	45.0	14.2	B	45.0	13.0	B	45.0	14.0	B	45.0	14.4	B	45.0	13.2	B
		SB	45.0	12.4	B	45.0	14.8	B	45.0	13.5	B	45.0	12.5	B	45.0	15.0	B	45.0	13.6	B
Bradbury Road and Rossmoor Way	NB	45.0	15.7	B	45.0	14.2	B	45.0	13.3	B	45.0	15.7	B	45.0	14.4	B	45.0	13.5	B	
	SB	45.0	13.0	B	45.0	16.0	B	45.0	13.4	B	45.0	13.1	B	45.0	16.3	B	45.0	13.5	B	
Saint Cloud Drive *	Seal Beach Boulevard and Yellowtail Drive		25.5	-	C	26.5	-	C	26.7	-	C	25.5	-	C	26.5	-	C	26.7	-	C
Montecito Road *	Yellowtail Drive and Copa De Oro Drive		27.8	-	C	29.1	-	B	29.1	-	B	27.8	-	C	29.0	-	B	29.1	-	B
	Copa De Oro Drive and Mainway Drive		30.3	-	B	30.7	-	A	31.0	-	A	30.4	-	B	30.7	-	A	31.0	-	A
	Mainway Drive and Bradbury Road		29.8	-	B	30.7	-	A	31.4	-	A	29.7	-	B	30.7	-	A	31.4	-	A
Rossmoor Center Way **	Montecito Road and Seal Beach Boulevard		27.8	-	A	26.1	-	A	25.7	-	A	27.6	-	A	25.5	-	A	25.3	-	B

NB = Northbound, SB = Southbound

\* Analyzed as Two Lane Roadways with a speed limit of 35 MPH

\*\* Analyzed as Two Lane Roadway with a speed limit of 30 MPH

### **Site Adjacent Driveways and Circulation (Rossmoor Park)**

Based on the intersection and roadway analysis and observations made by LSA staff, the section of Rossmoor Center Way adjacent to the project site between Montecito Road and the internal driveways into Pei Wei and Sprouts operate at desirable levels of traffic. The amount of traffic on this segment of Rossmoor Center Way is lower than the segment of Rossmoor Center Way just west of Seal Beach Boulevard. Specifically, 2,620 vehicles were counted in a 24 hour period on Tuesday, October 18, 2016 on Rossmoor Center Way between Montecito Road and the Sprouts and Pei Wei driveways while 8,267 vehicles were counted in the same period on Rossmoor Center Way between the Sprouts and Pei Wei driveways and Seal Beach Boulevard. In an effort to provide perspective on what these volumes mean for traffic, the City considers 12,500 vehicles per day to be the capacity for a two-lane undivided roadway like the segment of Rossmoor Center Way between Montecito Road and the Sprouts and Pei Wei driveways.

Additionally, weekday a.m., p.m., and weekend mid-day peak hour counts at the unsignalized Rossmoor Park outbound only driveway to the north of the site revealed a maximum of 46 peak hour vehicles leaving the residences during any peak hour. This translates to approximately 1 vehicle leaving the Rossmoor Park residential development every 78 seconds during the weekday p.m. peak hour. Combined with the daily volumes counted on Rossmoor Center Way directly in front of this driveway, which are within the 12,500 vehicles per day capacity, the operations at this location and along this segment are considered acceptable and would not result in unacceptable interruptions in vehicular movements because of traffic.

It needs to be clarified that this does not apply to the segment of Rossmoor Center Way between the Sprouts and Pei Wei driveways and Seal Beach Boulevard which see more than three times the daily traffic of the segment discussed above. Further analysis of the segment of Rossmoor Center Way between the Sprouts and Pei Wei driveways and Seal Beach Boulevard and the overall traffic operations at the intersection of Seal Beach Boulevard and Rossmoor Center Way are the focus of the following analysis.

### **Rossmoor Center Way and Shops at Rossmoor Access and Circulation**

As part of the site access assessment, existing and potential turn-pocket queuing issues at site access points and site-adjacent intersections were analyzed using the SimTraffic (Version 9.1) software. SimTraffic is analysis software that provides a microscopic model that more accurately simulates real world conditions as compared to macroscopic analysis tools such as Traffix. SimTraffic tracks and collects measures of effectiveness for each vehicle in a traffic system during a simulation. Due to variability that arises from simulations of this nature, multiple simulation runs for each analysis scenario have been averaged in order to draw representative queuing results. This method more accurately measures the full impact of queuing and blocking of traffic.

Table M shows queuing results for Existing (2016) with Full Occupancy without and with Project traffic conditions and indicates all existing peak-hour queues at site access points and site-adjacent intersections are anticipated to be sufficiently stored by existing facilities with the exception of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way. The existing weekday p.m. and weekend midday 95<sup>th</sup> percentile peak-hour queues extend past the storage provided by the existing northbound left-turn pocket. The northbound left-turn pocket

**Table M: Site Access Queuing Summary**

Intersection	Movement	Storage Length	95th Percentile Queue (ft)		
			AM	PM	Sat Mid-day
<b>Existing (2016) with Full Occupancy</b>					
<b>Existing Signal Timing</b>					
6 Seal Beach Boulevard/Rossmoor Center Way	NBL	105	103	190	168
	EBL	230	113	213	185
	EBTR	230	78	81	87
13 Internal Driveway/Rossmoor Center Way	EBLT	190	51	48	56
	EBTR	190	51	50	52
	WBLTR	230	89	165	156
<b>Existing (2016) with Full Occupancy plus Project</b>					
<b>Existing Signal Timing</b>					
6 Seal Beach Boulevard/Rossmoor Center Way	NBL	250	107	198	176
	EBL	230	128	240	200
	EBTR	230	82	96	103
13 Internal Driveway/Rossmoor Center Way	EBLT	190	50	56	53
	EBTR	190	49	53	59
	WBLTR	230	96	200	172
<b>Rossmoor Center Way Reconfiguration (Two Westbound Lanes, One Eastbound Lane and Dedicated Right-Turn Lane)</b>					
6 Seal Beach Boulevard/Rossmoor Center Way	NBL	250	115	224	210
	EBLT	230	121	231	223
	EBR	150	58	168	168
13 Internal Driveway/Rossmoor Center Way	EBLTR	190	58	73	80
	WBLT	230	77	180	145
	WBR	230	55	58	64
<b>Addition of Right-In Only Driveway on Seal Beach Boulevard</b>					
13 Internal Driveway/Rossmoor Center Way	EBLT	190	50	50	55
	EBTR	190	50	50	56
	WBLTR	230	85	189	164

Storage Length = Storage length as measured from stop bar to the end of lane striping, ft = feet, NB = northbound, EB = eastbound, L = left, T = through, R = right

■ (Shade) = Exceeds existing storage length

currently provides 105 feet of storage with a 100-foot transition. However, as Table M shows, a potential queue of 190 feet (without the project) during the weekday p.m. peak hour could spill back into the adjacent through lane.

Because this northbound left-turn lane will be improved by the project applicant concurrent with project implementation, the added project traffic to this queue is not anticipated to spill back into the adjacent through lane. The addition of traffic associated with the project to this movement is anticipated to result in a 95<sup>th</sup> percentile queue of 198 feet during the weekday p.m. peak hour. It should be noted that anticipated queue lengths are not directly correlated to their associated volumes as queuing for a given movement is also dependent on traffic signal operations.

This existing queuing issue is anticipated to continue into future analysis scenarios if the northbound left-turn pocket is not lengthened. All other site access points and site-adjacent intersections are anticipated to be sufficiently served by existing facilities. SimTraffic queuing worksheets for both Existing (2016) with Full Occupancy without and with Project conditions are provided in Appendix E.

Eastbound and westbound queues on the segment of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard are shown as adequately accommodated in Table M for both Existing (2016) with Full Occupancy without and with Project conditions. However, field observations and experience with this segment reveal that vehicles on occasion fill up the 230 feet between the driveways to the Shops at Rossmoor and Seal Beach Boulevard. The lack of overflow shown in the analysis may be a function of vehicles staying in the upstream northbound left and southbound right movements on Seal Beach Boulevard in order to avoid illegally blocking the intersection. The queues in Table M show that anticipated inbound queues reach 200 feet in the weekday p.m. peak hour, a length that is less than 40 feet from filling up the entire available inbound lane. The operations of this segment of Rossmoor Center Way affect the upstream northbound left-turn queues, which have been identified in Table M as exceeding the currently available storage in without project conditions.

## **PROJECT OFF-SITE IMPROVEMENTS**

As part of the proposed project, two off-site improvements to access facilities will be implemented. These include the lengthening of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way to 250 feet and the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard. At the community's request, an optional improvement was evaluated to include the construction of an additional inbound-only driveway on Seal Beach Boulevard south of Rossmoor Center Way. This section provides details on these project off-site improvements.

### **Northbound Left-Turn Pocket Lengthening**

The northbound left-turn movement is currently experiencing queues that could extend past the existing left-turn pocket during periods of peak demand. The provision of dual left-turn lanes is one possible solution to long queues. However, if an unequal utilization of the left-turn lanes were probable, the effectiveness of providing two lanes would be greatly diminished. In addition, right-of-

way may be necessary to implement dual left-turn lanes. In these circumstances, extending the queue available to the single lane may be a better option. As previously referenced Table M shows, the northbound left-turn pocket would require a storage length of approximately 190 feet (an extension of 85 feet) to accommodate Existing (2016) with Full Occupancy peak-hour queues and a storage length of approximately 198 feet (an extension of 93 feet) to accommodate Existing (2016) with Full Occupancy plus Project peak-hour queues. As illustrated in Figure 24, the existing landscaped median along Seal Beach Boulevard would require modification and possibly vacation in order to provide the recommended storage length. As shown in Figure 24, a storage length of 250 feet (an extension of 145 feet) would not reduce the existing 100-foot southbound left-turn pocket providing access to the adjacent Target shopping center, but may create a situation where the two adjacent left-turn pockets would effectively be “back to back.”

As shown in Table N, the proposed project’s contribution to this existing and future queuing deficiency is at most, 17 percent during any peak hour under Existing (2016) with Full Occupancy plus Project conditions.

**Table N: Project Traffic Contribution**

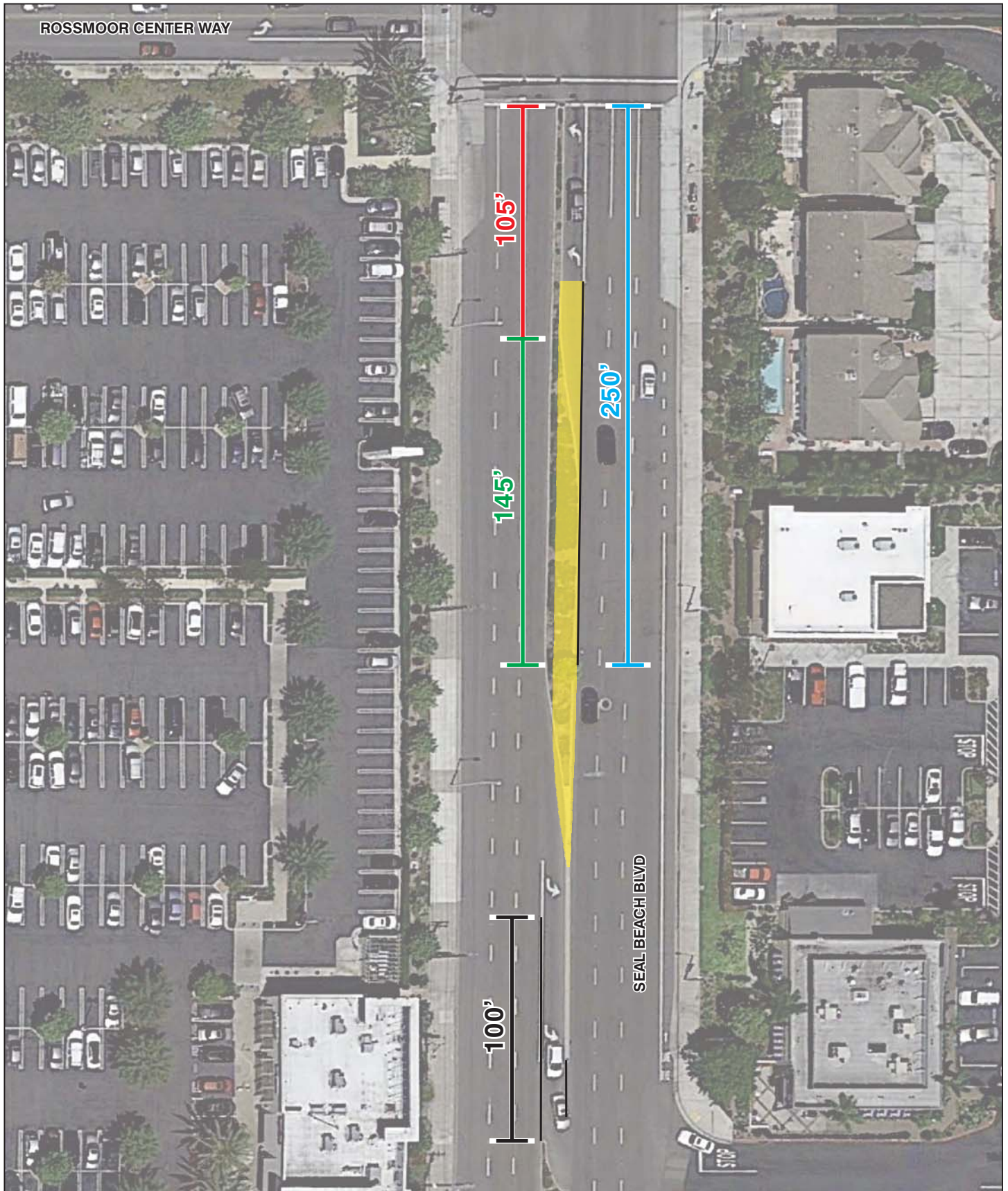
Intersection		Peak Hour	2016 FO+P NB Left-Turn Volume	Project NB Left-Turn Volume	Project % of NB Left-Turn Volume
6	Seal Beach Boulevard/Rossmoor Center Way	AM	76	11	14%
		PM	192	33	<b>17%</b>
		Saturday	224	21	9%

**Bold** = Highest peak-hour project percentage; NB = northbound; FO+P = Full Occupancy Plus Project

**Reconfiguration of Rossmoor Center Way (Two Westbound Lanes and One Eastbound Lane plus Dedicated Right-Turn Lane)**

As illustrated on Figure 25, an improvement to reduce the westbound queuing on Rossmoor Center Way between the internal driveway and Seal Beach Boulevard is to increase the capacity for vehicles entering the project site at Rossmoor Center Way/Seal Beach Boulevard. Providing two inbound lanes (460 feet) would increase the storage for incoming vehicles and reduce the chance that vehicles would back out onto Seal Beach Boulevard. As shown in previously referenced Table M, the addition of a second westbound lane along Rossmoor Center Way will reduce westbound (inbound) queue lengths to approximately 180 feet (from 200 feet) in the new westbound shared left-turn/through lane and approximately 64 feet in the new westbound right-turn lane. This would mean that the total queue in both lanes, 244 feet, would fit within the total capacity of both lanes (460 feet). However, the restriction of the eastbound lanes along Rossmoor Center Way is anticipated to lengthen eastbound (outbound) queues.

The constraint of this improvement is that the two outbound lanes, which provide 460 feet of storage (230 feet in each lane; from Sprouts/Pei Wei to Seal Beach Boulevard), would be reduced to 1 lane and a dedicated right-turn lane (approximately 380 feet of storage, 230 feet in the shared through left-turn lane and 150 feet in the right-turn lane).



L S A



0 30 60  
FEET

SOURCE: Google Earth

LEGEND

- Recommended Turn Pocket Extension
- Existing Turn Pocket Storage
- Recommended Turn Pocket Storage
- Recommended Extension

FIGURE 24

*Health Club within The Shops at Rossmoor*  
Recommended Turn Pocket Extension



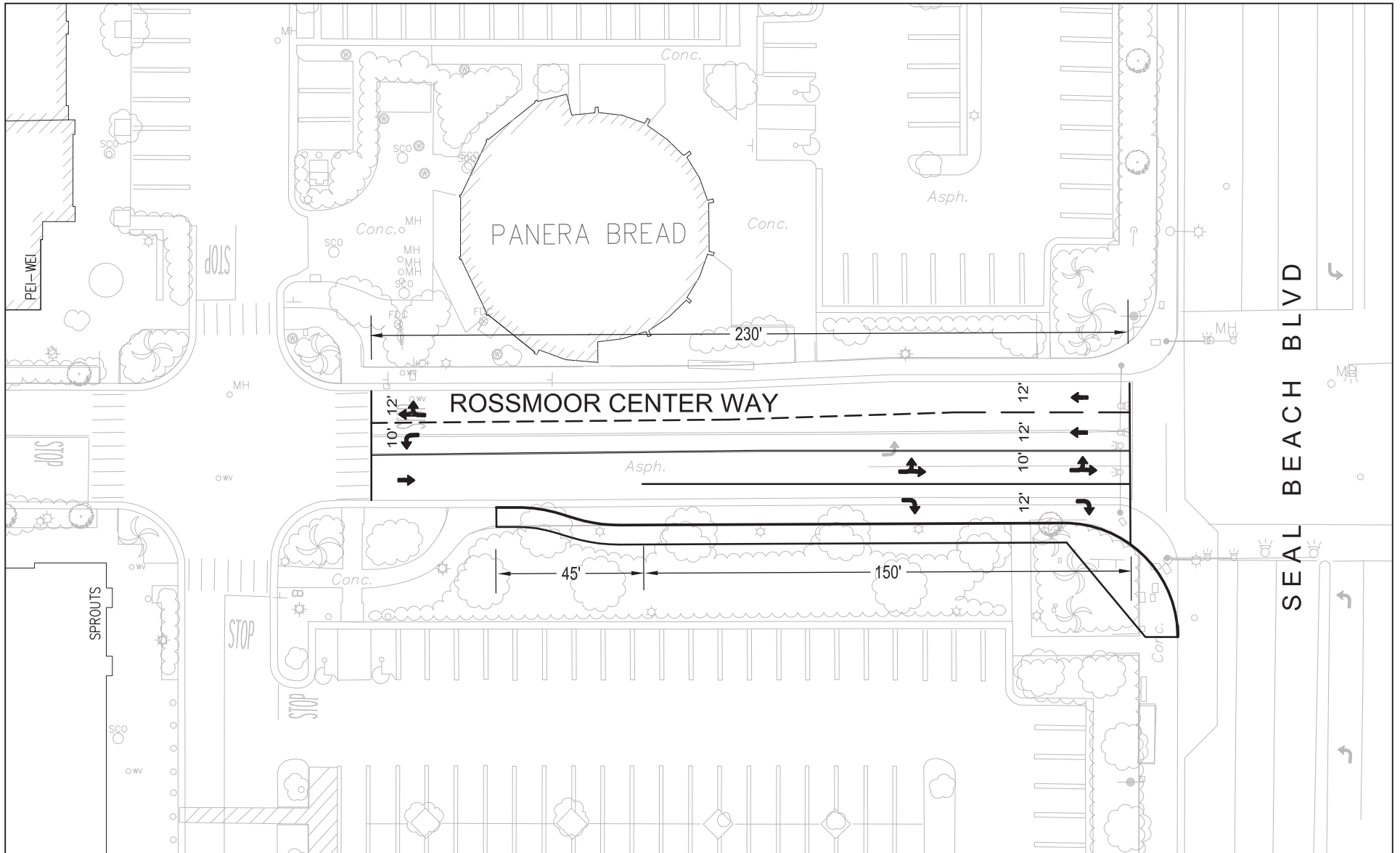


FIGURE 25

L S A





As Table M shows, the eastbound (outbound) queues at the intersection of Seal Beach Boulevard and Rossmoor Center Way would be approximately 231 feet (from 240 feet) in the eastbound shared left-turn/through lane and approximately 168 feet (from 96 feet) in the eastbound right-turn lane. The traffic and queuing analysis describes how vehicles on occasion back up past the internal intersection due to the queue of vehicles waiting for the green light at Rossmoor Center Way/Seal Beach Boulevard. Based on our observations, the majority of vehicles turn left at the intersection.

### **Optional Improvement - Addition of Right-In Only Driveway on Seal Beach Boulevard**

Based on community input, an alternative to improving the westbound queuing on the segment of Rossmoor Center Way was evaluated. An additional access point into the retail center would decrease the number of vehicles using this segment. This alternative proposes an inbound only driveway south of Rossmoor Center Way near the existing Subway restaurant, as illustrated on Figure 26. This improvement was evaluated as an alternative to the Rossmoor Center Way improvements discussed above.

Southbound vehicles attempting to reach the Sprouts side of the retail center would most likely use this access point. These vehicles have been singled out as they would be the most likely vehicles entering the retail center to benefit from an additional entry point as southbound vehicles attempting to reach the Pei Wei side of the retail center would most likely make a southbound right at the unsignalized driveway near the California Pizza Kitchen. Northbound left-turning vehicles would be less likely to benefit from an additional entry point to the retail center as there is already an unsignalized driveway into the retail center near the California Pizza Kitchen.

For the purposes of this analysis, half of the southbound right-turning vehicles that would ultimately make a westbound left into the Sprouts side of the retail center are thought to potentially utilize this driveway. The number of southbound right-turning vehicles that would ultimately make a westbound left into the Sprouts side of the retail center was calculated by multiplying the proportion of inbound vehicles making a left into Sprouts of all inbound vehicles by the number of southbound right-turning vehicles. This number was then divided in half in order to arrive at the number of vehicles that would utilize the new inbound only driveway. As shown on Figure 26, 15 weekday a.m., 46 weekday p.m., and 58 weekend midday peak-hour vehicles are anticipated to utilize this new inbound driveway.

As previously referenced Table M shows, this new driveway is anticipated to reduce the westbound queue on Rossmoor Center Way to 189 feet (from 200 feet) in the weekday p.m. peak-hour and 164 feet (from 172 feet) in the weekend midday peak-hour.

It should be noted that this SimTraffic analysis cannot take into account the number of additional southbound right-turning vehicles that may be diverted to the new entry to the south due to instances of peak congestion. The assumption of half of these southbound right-turning vehicles into Sprouts was arrived at based on anticipated travel patterns and does not take into consideration atypical traffic conditions of inbound vehicles while traveling southbound on Seal Beach Boulevard. Passing instances where the westbound queue on Rossmoor Center Way may be full may incentivize a larger proportion of such southbound right-turning vehicles to utilize the proposed inbound driveway to the south. All SimTraffic site access queuing worksheets and arterial coordination worksheets are included in Appendix E.

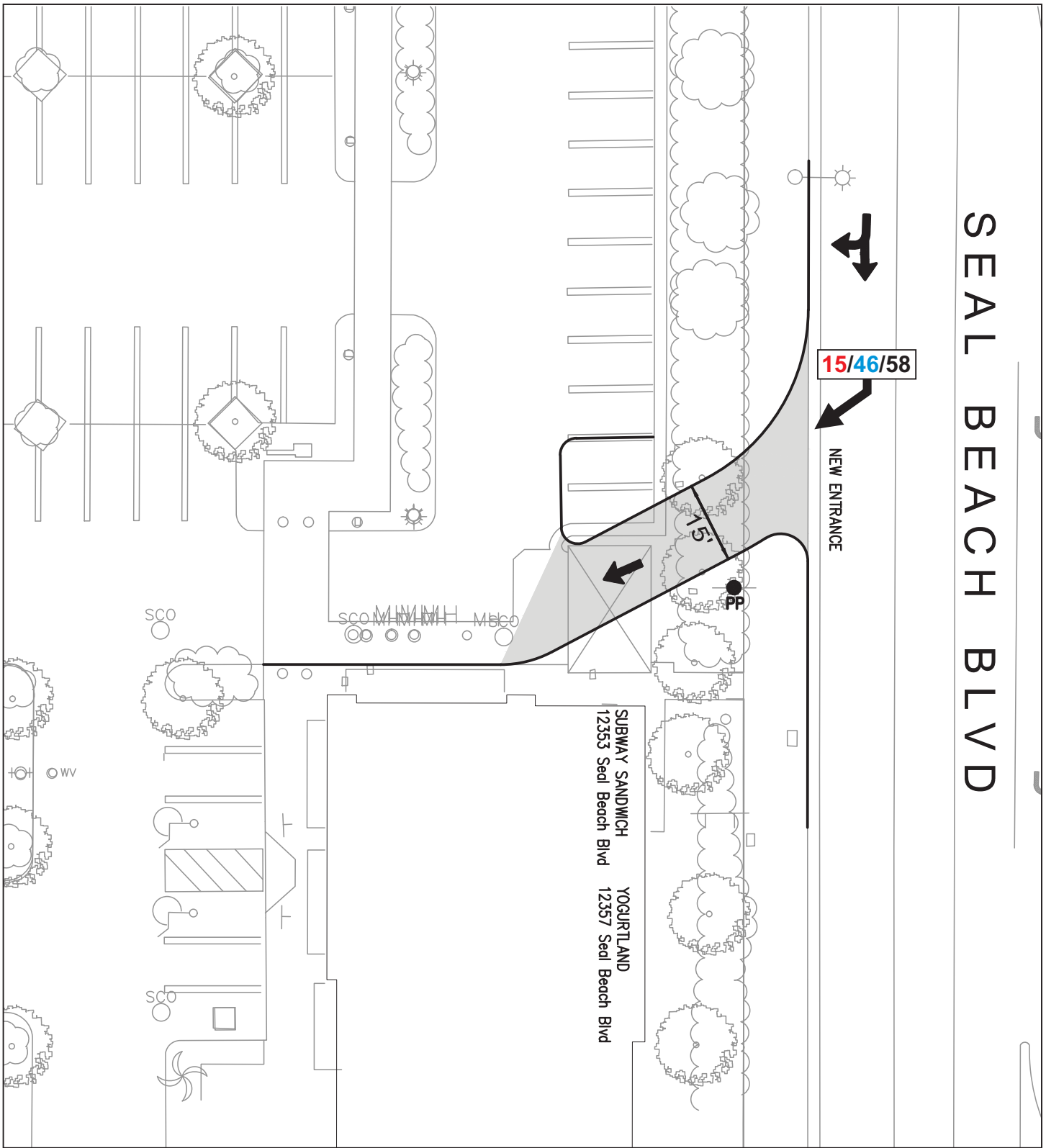


FIGURE 26

L S A

LEGEND

XX/YY/ZZ - Morning/Afternoon/Saturday Peak Hour Trips



Based on the analysis described above, either off-site improvement alternative is anticipated to improve vehicular access to both the project site and the Shops at Rossmoor. However, upon discussions with City staff and the City's transportation consultant, further investigation of the feasibility of the alternative improvement was conducted. The City required a 120-foot deceleration lane on Seal Beach Boulevard in order to allow the new driveway. This investigation revealed the following challenges of implementing the new driveway and right-in only lane:

- Adding a deceleration lane could pose considerable conflicts with existing public utilities which would render this option financially infeasible;
- A new driveway would result in a reduction of onsite parking spaces;
- Several of the operating tenants will have to grant their approval for the design;
- The utilization of the new driveway is less than 50 inbound peak hour vehicles.

Due to these challenges associated with the Seal Beach Boulevard driveway and right-in only improvement, this alternative was not considered feasible. The Rossmoor Center Way widening alternative is considered to be the feasible and thus preferred improvement alternative.

## CONCLUSIONS

This traffic/circulation analysis was prepared for a study area along Seal Beach Boulevard north of I-405 in order to identify any potential traffic impacts resulting from the development of the proposed health club within the Shops at Rossmoor. The study included analysis of intersections and roadway segments along Seal Beach Boulevard and local access roads adjacent to the proposed project.

The LOS at 15 intersections and 11 roadway segments within the study area for 7 scenarios were analyzed and physical and/or operational improvements were not recommended, as all facilities were found to meet the City's LOS standards.

A queuing analysis of site-access points and site-adjacent intersections found that all peak-hour queues are anticipated to be sufficiently stored by existing facilities with the exception of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way. The extension of the existing northbound left-turn pocket from 105 feet to 250 feet by the project applicant is anticipated to alleviate this existing and anticipated queuing deficiency. Additionally, project off-site improvements to access facilities will include the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard. At the community's request, an optional improvement was evaluated for the construction of an additional inbound-only driveway and right turn deceleration lane on Seal Beach Boulevard south of Rossmoor Center Way. This improvement, however, was determined to be infeasible based on several factors. The proposed Rossmoor Center Way improvement, in conjunction with the extension of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way, will improve vehicular access to both the project site and the Shops at Rossmoor.

# APPENDIX A

## EXISTING TRAFFIC COUNTS

# ITM Peak Hour Summary

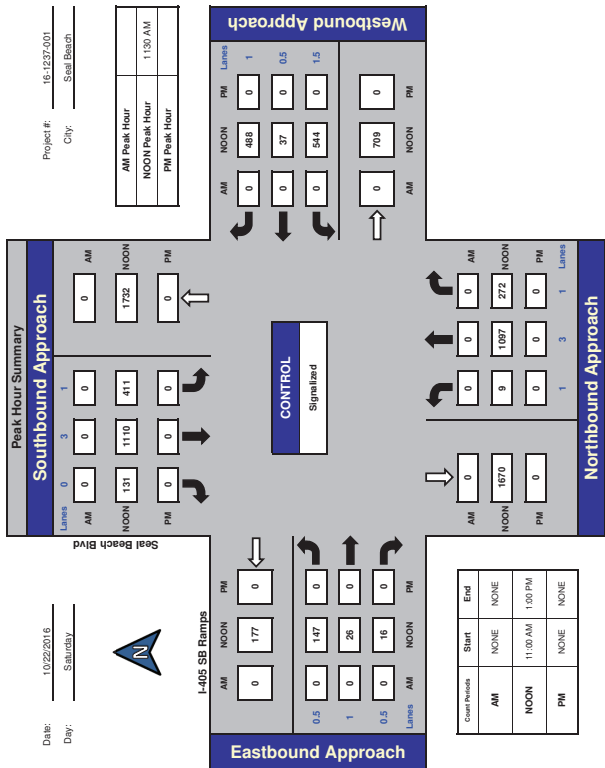
Prepared by: **NDS**

National Data & Surveying Services

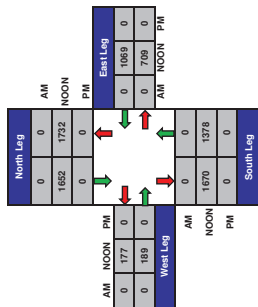
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Date: 10/22/2016  
Day: Saturday

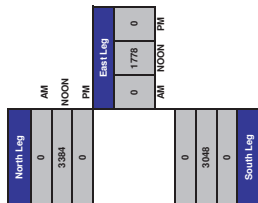
Project #: 16-1237-001  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

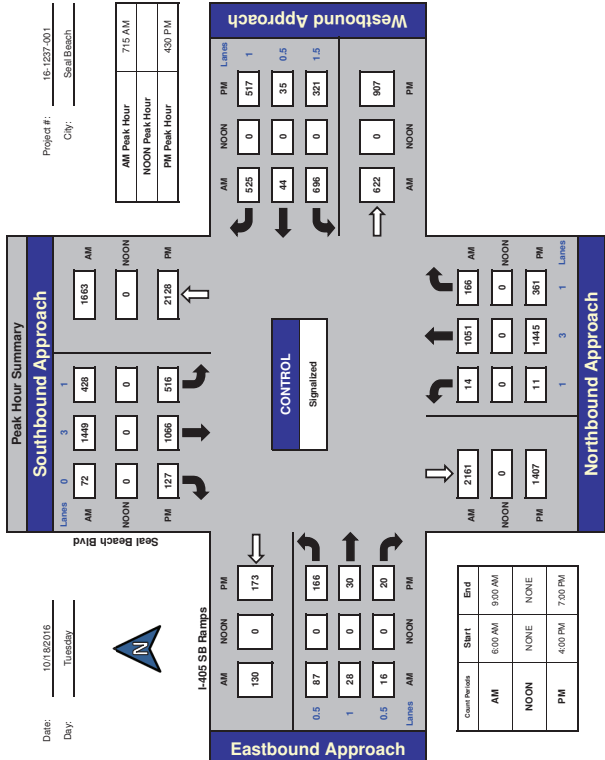
Prepared by: **NDS**

National Data & Surveying Services

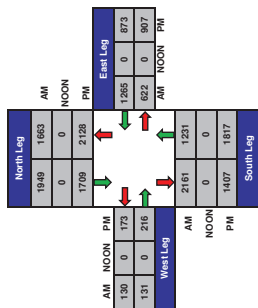
## Seal Beach Blvd and I-405 SB Ramps - Seal Beach

Date: 10/18/2016  
Day: Tuesday

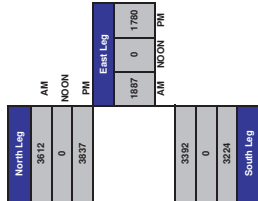
Project #: 16-1237-001  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

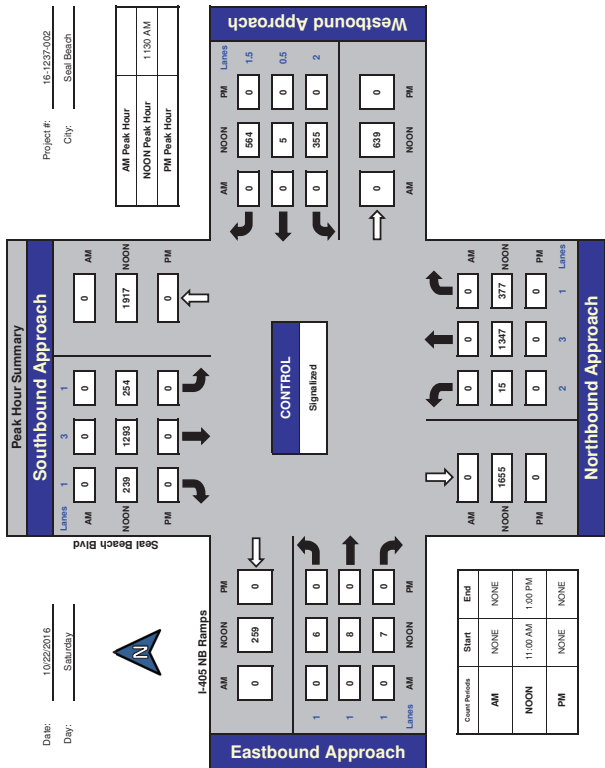
Prepared by: **NDS**

National Data & Surveying Services

## Seal Beach Blvd and I-405 NB Ramps - Seal Beach

Date: 10/22/2016  
Day: Saturday

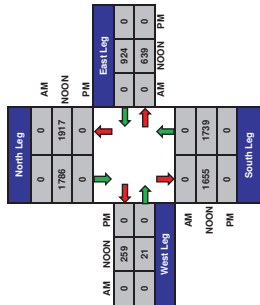
Project #: 15-1237-002  
City: Seal Beach



### Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	0	3703	0
East Leg	0	1503	0
West Leg	0	260	0
South Leg	0	3394	0

### Total Ins & Outs



# ITM Peak Hour Summary

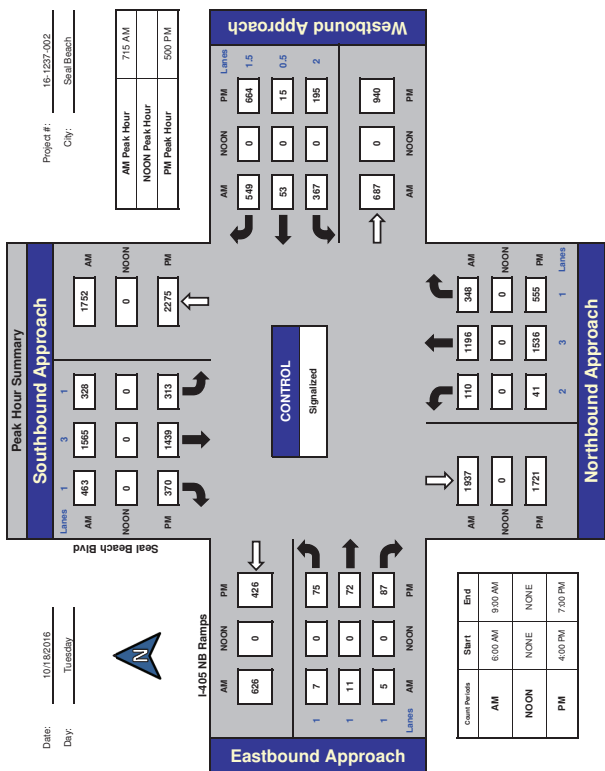
Prepared by: **NDS**

National Data & Surveying Services

## Seal Beach Blvd and I-405 NB Ramps - Seal Beach

Date: 10/18/2016  
Day: Tuesday

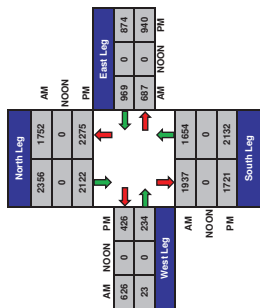
Project #: 15-1237-002  
City: Seal Beach



### Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	4108	0	4397
East Leg	1656	0	1814
West Leg	649	0	660
South Leg	3591	0	3853

### Total Ins & Outs



# ITM Peak Hour Summary

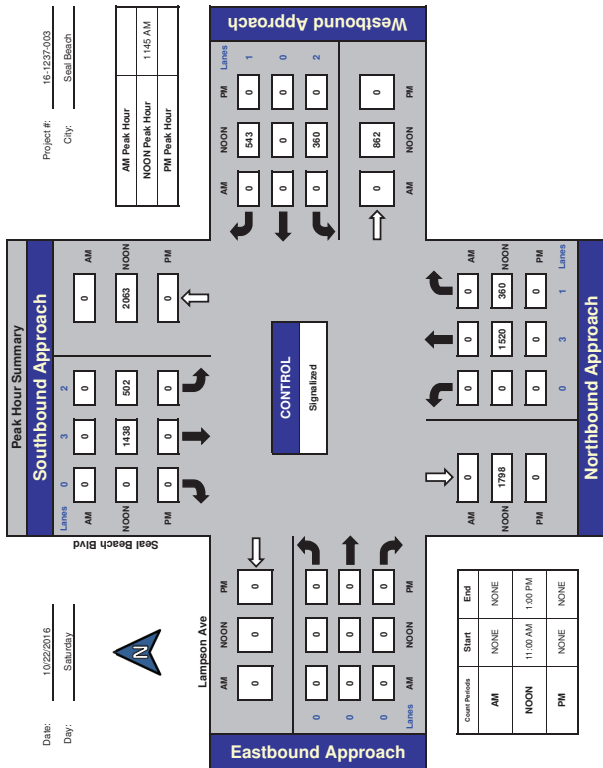
Prepared by: **NDS**

National Data & Surveying Services

Seal Beach Blvd and Lampson Ave., Seal Beach

Date: 10/22/2016  
Day: Saturday

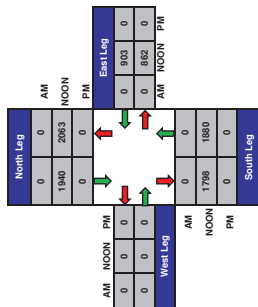
Project #: 15-1237-003  
City: Seal Beach



## Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	0	4003	0
East Leg	0	0	1765
West Leg	0	0	0
South Leg	0	3678	0

## Total Ins & Outs



# ITM Peak Hour Summary

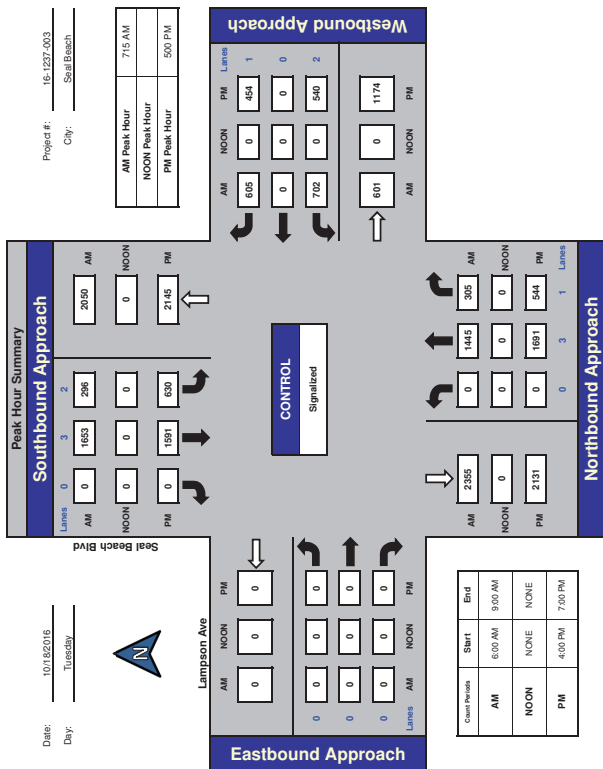
Prepared by: **NDS**

National Data & Surveying Services

Seal Beach Blvd and Lampson Ave., Seal Beach

Date: 10/18/2016  
Day: Tuesday

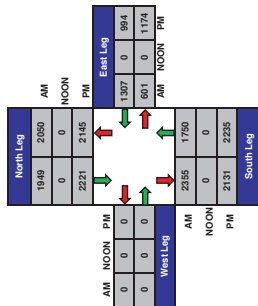
Project #: 15-1237-003  
City: Seal Beach



## Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	3939	0	4366
East Leg	1908	0	2168
West Leg	0	0	0
South Leg	4105	0	4366

## Total Ins & Outs



# ITM Peak Hour Summary

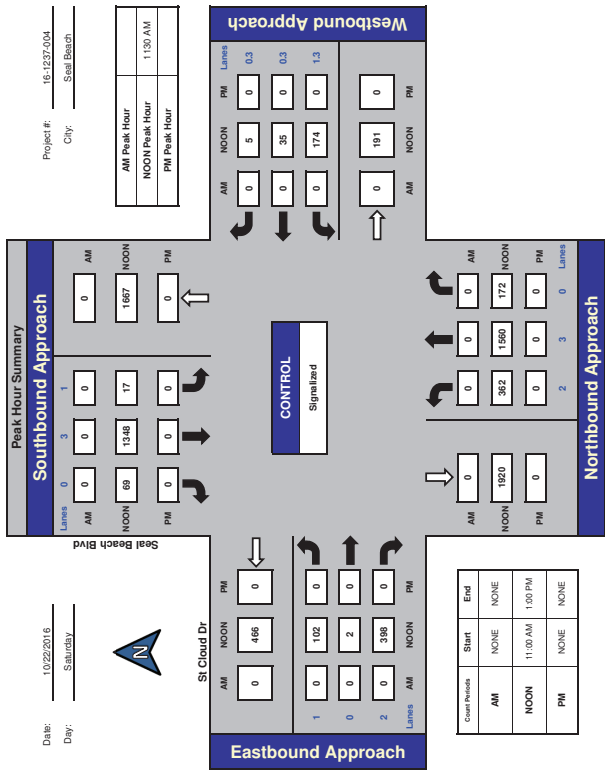
Prepared by: **NDS**

National Data & Surveying Services

## Seal Beach Blvd and St Cloud Dr - Seal Beach

Date: 10/22/2016  
Day: Saturday

Project #: 15-1237-004  
City: Seal Beach



### Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	0	3101	0
West Leg	0	968	0
East Leg	0	405	0
South Leg	0	4014	0

### Total Ins & Outs

Leg	AM	NOON	PM
North Leg	0	1434	1667
West Leg	0	486	0
East Leg	0	214	0
South Leg	0	1520	2094

# ITM Peak Hour Summary

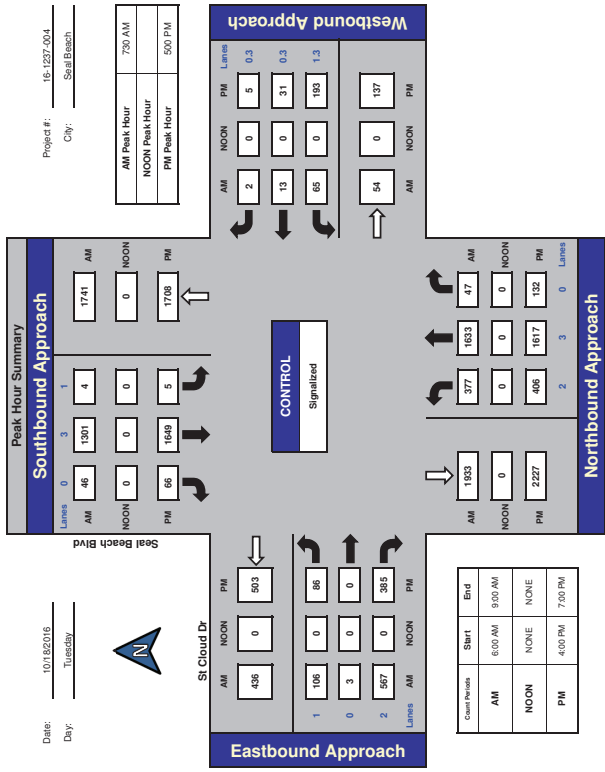
Prepared by: **NDS**

National Data & Surveying Services

## Seal Beach Blvd and St Cloud Dr - Seal Beach

Date: 10/18/2016  
Day: Tuesday

Project #: 15-1237-004  
City: Seal Beach



### Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	3932	0	3428
West Leg	1112	0	974
East Leg	134	0	366
South Leg	3930	0	4382

### Total Ins & Outs

Leg	AM	NOON	PM
North Leg	1335	0	1741
West Leg	458	0	500
East Leg	68	0	229
South Leg	1933	0	2687



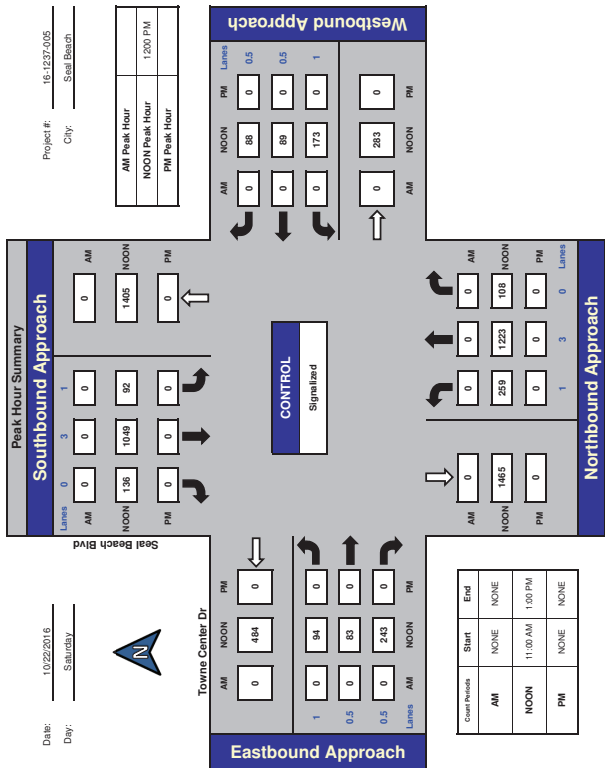
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

## Seal Beach Blvd and Towne Center Dr., Seal Beach

Date: 10/22/2016  
Day: Saturday

Project #: 15-1237-005  
City: Seal Beach



AM Peak Hour	NOON Peak Hour	PM Peak Hour
0	0	0
0	0	0
0	0	0

AM Peak Hour	NOON Peak Hour	PM Peak Hour
0	0	0
0	0	0
0	0	0

### Total Volume Per Leg

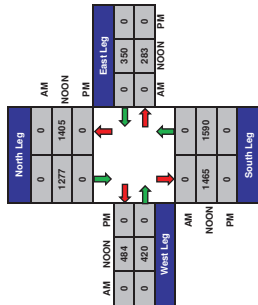
North Leg	AM	NOON	PM
0	2682	0	0

West Leg	AM	NOON	PM
0	904	0	0

East Leg	AM	NOON	PM
0	633	0	0

South Leg	AM	NOON	PM
0	3055	0	0

### Total Ins & Outs



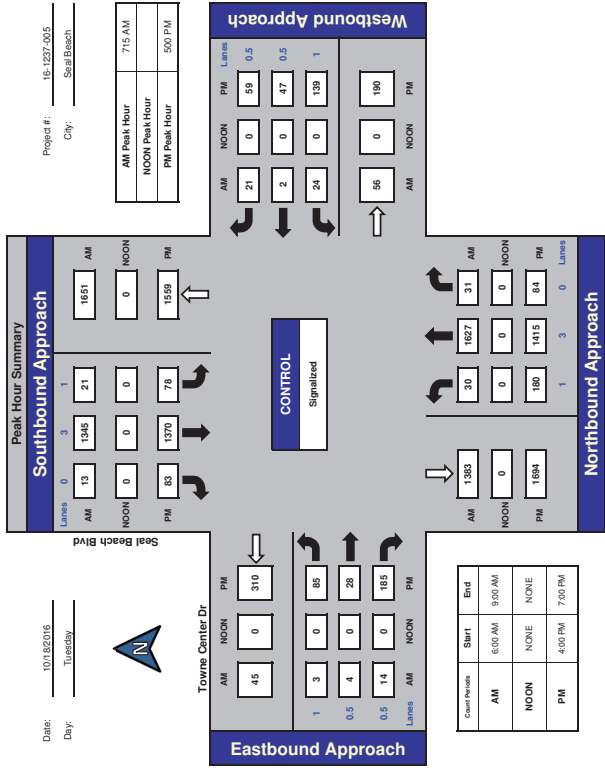
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

## Seal Beach Blvd and Towne Center Dr., Seal Beach

Date: 10/18/2016  
Day: Tuesday

Project #: 15-1237-005  
City: Seal Beach



AM Peak Hour	NOON Peak Hour	PM Peak Hour
0	0	0
0	0	0
0	0	0

AM Peak Hour	NOON Peak Hour	PM Peak Hour
0	0	0
0	0	0
0	0	0

### Total Volume Per Leg

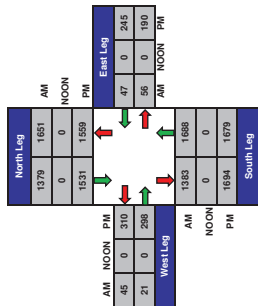
North Leg	AM	NOON	PM
3939	0	3090	0

West Leg	AM	NOON	PM
66	0	608	0

East Leg	AM	NOON	PM
103	0	435	0

South Leg	AM	NOON	PM
3971	0	3372	0

### Total Ins & Outs



# ITM Peak Hour Summary

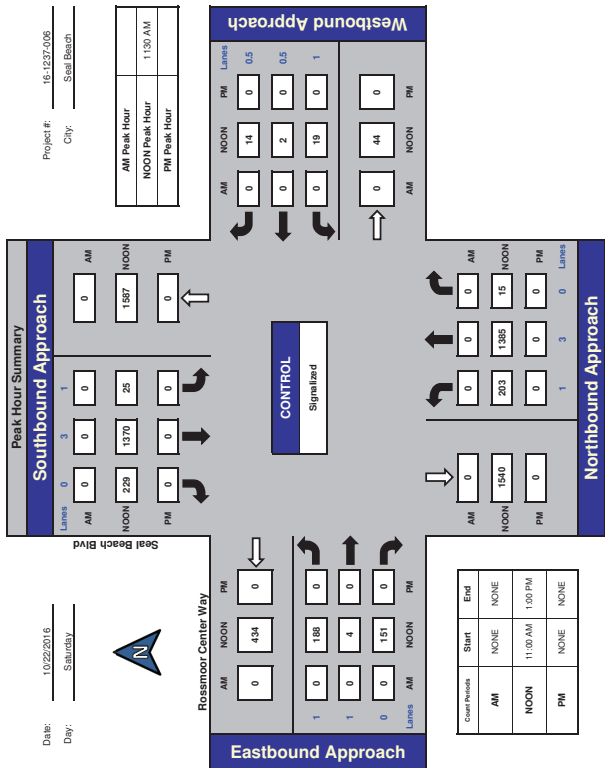
Prepared by: **NDS**

National Data & Surveying Services

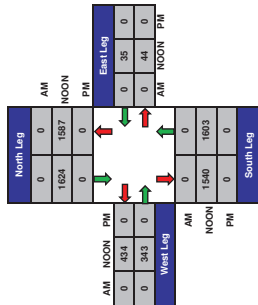
## Seal Beach Blvd and Rossmore Center Way - Seal Beach

Date: 10/22/2016  
Day: Saturday

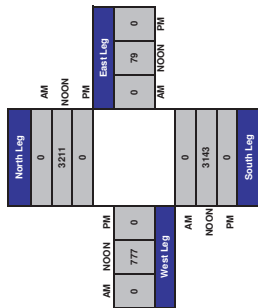
Project #: 15-1237-006  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

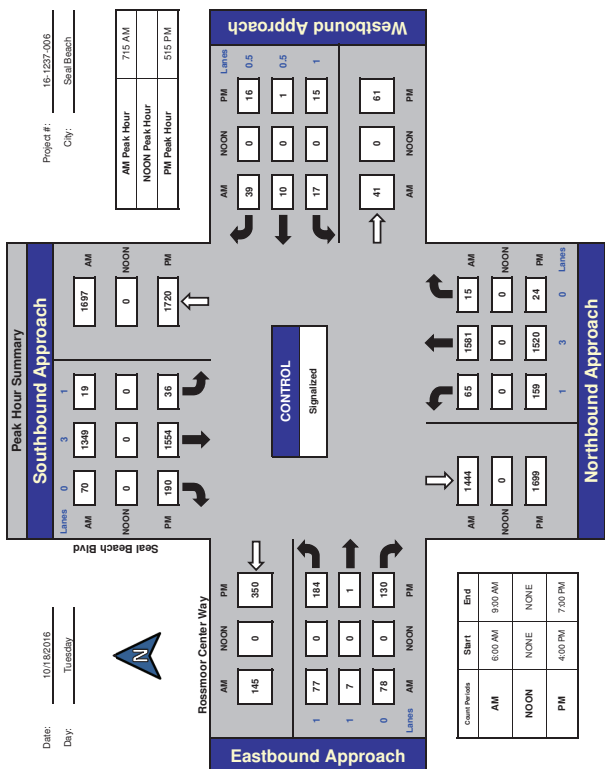
Prepared by: **NDS**

National Data & Surveying Services

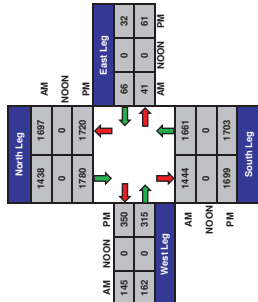
## Seal Beach Blvd and Rossmore Center Way - Seal Beach

Date: 10/18/2016  
Day: Tuesday

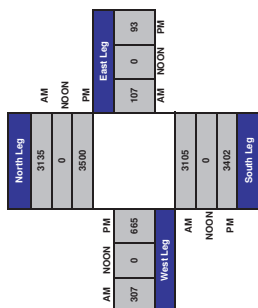
Project #: 15-1237-006  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

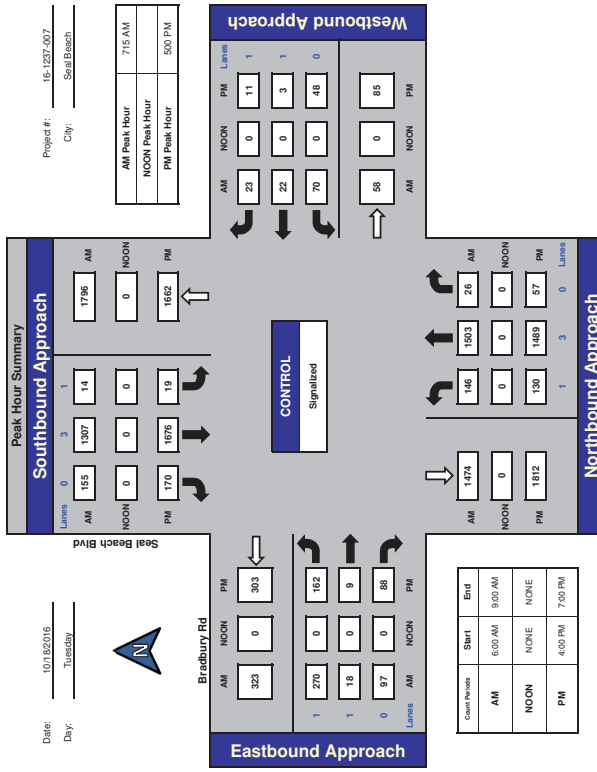


National Data & Surveying Services

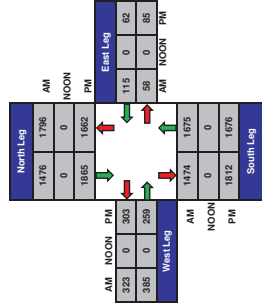
## Seal Beach Blvd and Bradbury Rd., Seal Beach

Date: 10/8/2016  
Day: Tuesday

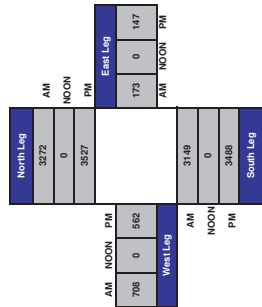
Project #: 15-1237-007  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

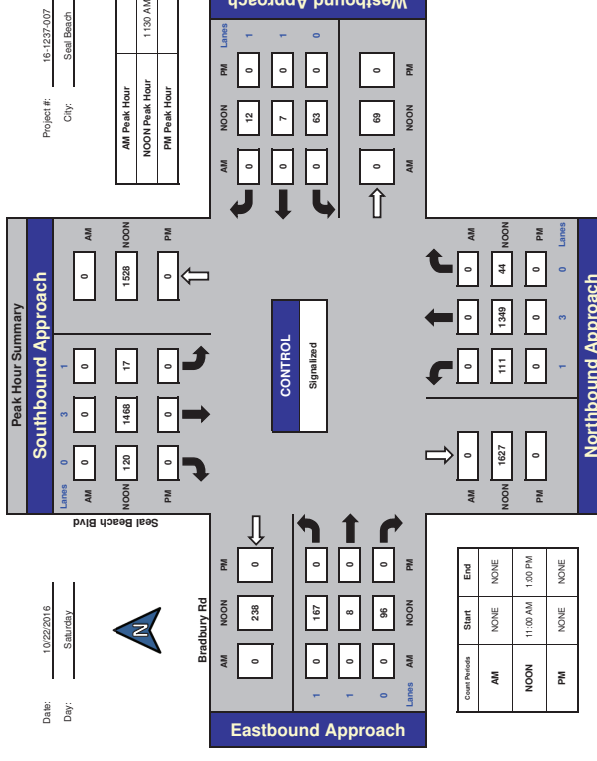


National Data & Surveying Services

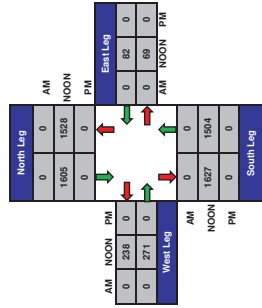
## Seal Beach Blvd and Bradbury Rd., Seal Beach

Date: 10/22/2016  
Day: Saturday

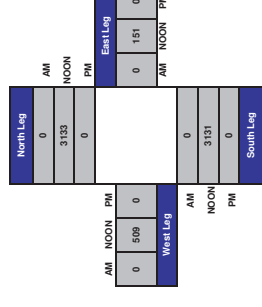
Project #: 15-1237-007  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



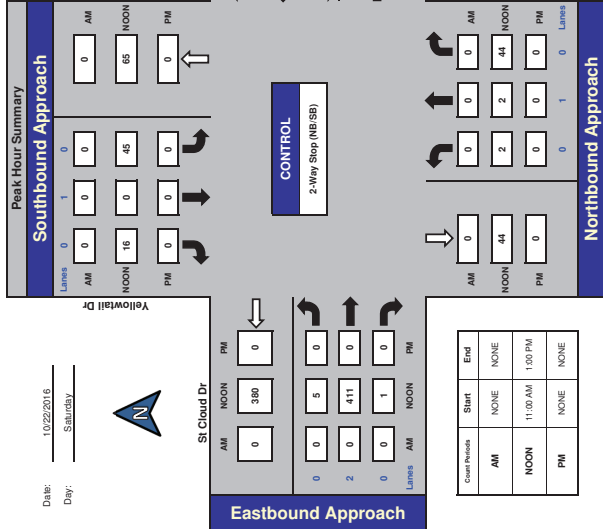
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

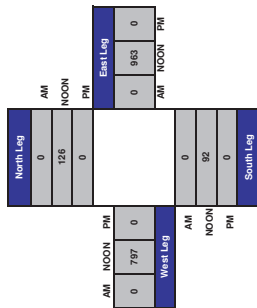
## Yellowtail Dr and St Cloud Dr - Seal Beach

Date: 10/22/2016  
Day: Saturday

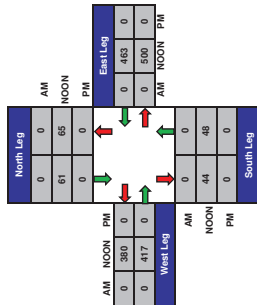
Project #: 15-1237-008  
City: Seal Beach



### Total Volume Per Leg



### Total Ins & Outs



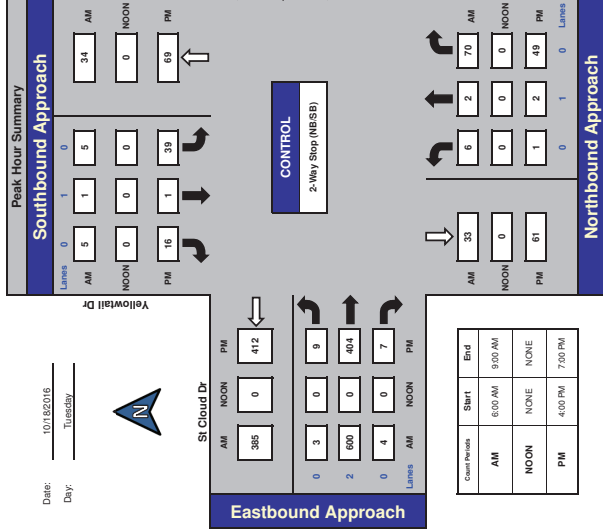
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

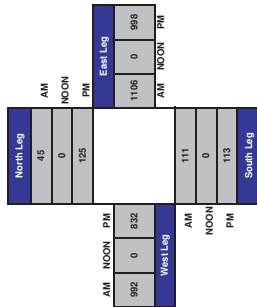
## Yellowtail Dr and St Cloud Dr - Seal Beach

Date: 10/18/2016  
Day: Tuesday

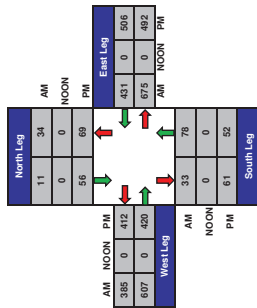
Project #: 15-1237-008  
City: Seal Beach



### Total Volume Per Leg



### Total Ins & Outs



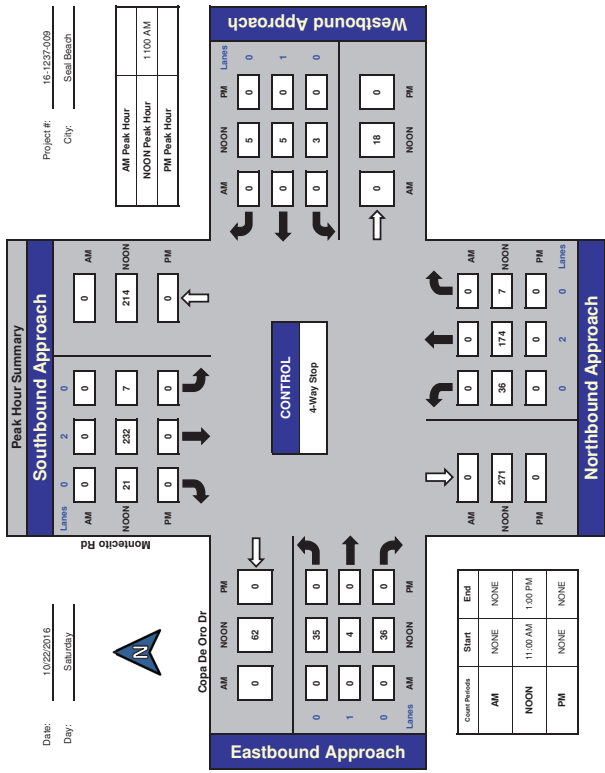
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

Montecito Rd and Copa De Oro Dr., Seal Beach

Date: 1/02/2016  
Day: Saturday

Project #: 15-1237-009  
City: Seal Beach



AM Peak Hour	NOON Peak Hour	PM Peak Hour	1:00 AM
0	0	0	0
222	7	0	0
0	0	0	0

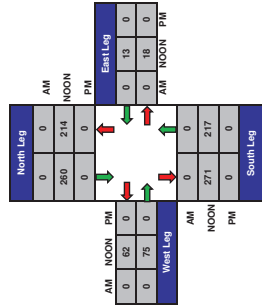
AM Peak Hour	NOON Peak Hour	PM Peak Hour	7:00 AM	5:15 PM
0	0	0	0	0
21	231	7	252	0
0	0	0	0	0

Count Period	Start	End
AM	NONE	NONE
NOON	11:00 AM	1:00 PM
PM	NONE	NONE

## Total Volume Per Leg

North Leg	AM	NOON	PM
0	0	0	0
474	0	0	0
0	0	0	0

## Total Ins & Outs



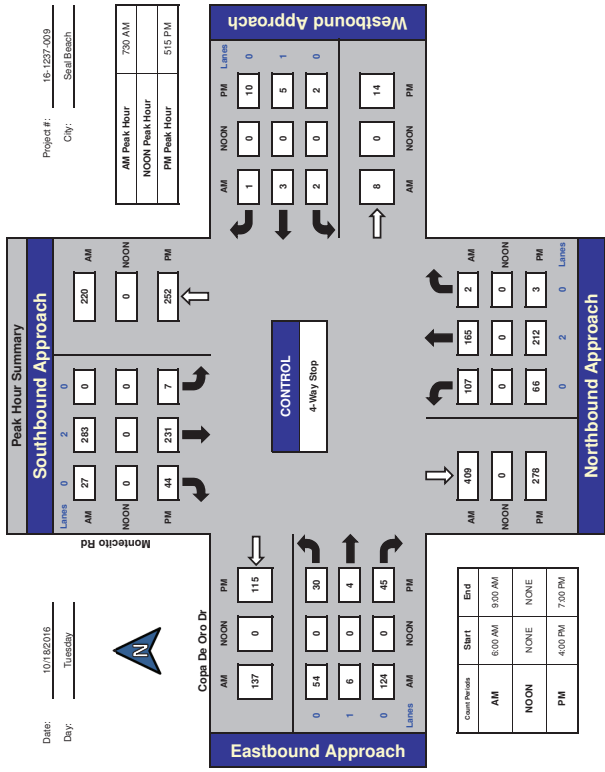
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

Montecito Rd and Copa De Oro Dr., Seal Beach

Date: 1/01/2016  
Day: Tuesday

Project #: 15-1237-009  
City: Seal Beach



AM Peak Hour	NOON Peak Hour	PM Peak Hour	7:00 AM
0	0	0	0
222	7	0	0
0	0	0	0

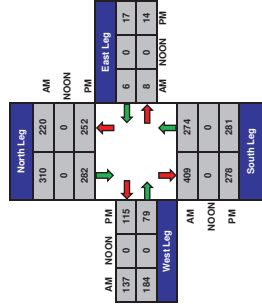
AM Peak Hour	NOON Peak Hour	PM Peak Hour	7:00 AM	5:15 PM
0	0	0	0	0
27	231	7	252	0
0	0	0	0	0

Count Period	Start	End
AM	6:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	7:00 PM

## Total Volume Per Leg

North Leg	AM	NOON	PM
530	0	0	0
534	0	0	0
0	0	0	0

## Total Ins & Outs



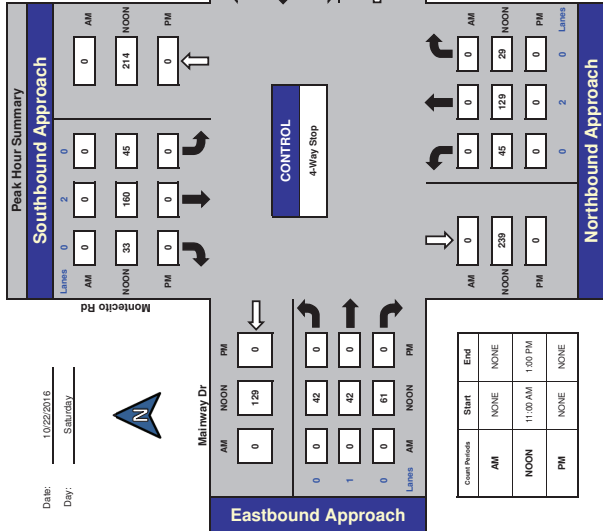
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

## Montecito Rd and Mainway Dr., Seal Beach

Date: 1/02/2016  
Day: Saturday

Project #: 15-1237-010  
City: Seal Beach

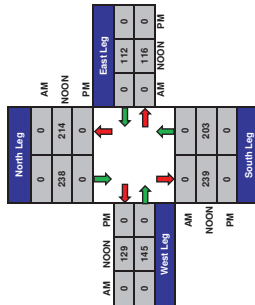


AM Peak Hour	NOON Peak Hour	PM Peak Hour
7:30 AM	1:00 AM	5:30 PM

### Total Volume Per Leg

North Leg	AM	NOON	PM
0	462	0	0
East Leg	AM	NOON	PM
0	228	0	0
West Leg	AM	NOON	PM
0	274	0	0
South Leg	AM	NOON	PM
0	442	0	0

### Total Ins & Outs



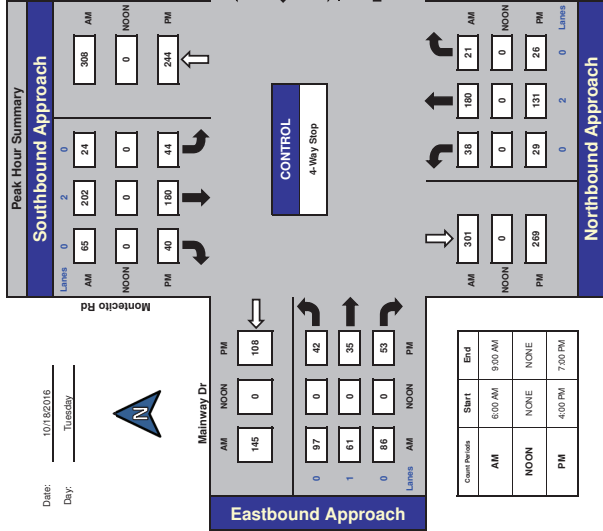
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

## Montecito Rd and Mainway Dr., Seal Beach

Date: 1/01/2016  
Day: Tuesday

Project #: 15-1237-010  
City: Seal Beach

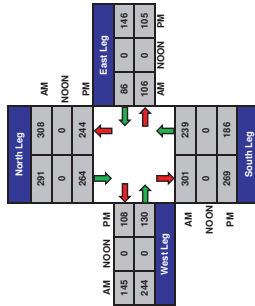


AM Peak Hour	NOON Peak Hour	PM Peak Hour
7:30 AM	1:00 AM	5:30 PM

### Total Volume Per Leg

North Leg	AM	NOON	PM
599	0	508	0
East Leg	AM	NOON	PM
192	0	251	0
West Leg	AM	NOON	PM
389	0	238	0
South Leg	AM	NOON	PM
540	0	455	0

### Total Ins & Outs



# ITM Peak Hour Summary

Prepared by: **NDS**

National Data & Surveying Services

## Montecito Rd and Bradbury Rd - Seal Beach

### Peak Hour Summary

#### Southbound Approach

Lanes	0	2	0
AM	0	0	0
NOON	2	89	36
PM	0	0	0

Date: 10/22/2016  
Day: Saturday

Project #: 15-1237-011  
City: Seal Beach



AM Peak Hour	NOON Peak Hour	PM Peak Hour	1:200 PM
0	0	0	0
0	0	0	0
0	0	0	0

#### Westbound Approach

AM	NOON	PM	Lanes
0	69	0	1
0	20	0	0.5
0	11.5	0	0.5

AM	NOON	PM	Lanes
0	25	0	0
0	1	0	0
0	15	0	0
0	4	0	0

#### Eastbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	1	0	0
1	0	15	0
0	0	4	0

AM	NOON	PM	Lanes
146	0	64	1
18	0	25	0.5
135	0	148	0.5

#### Northbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0

#### CONTROL

4-Way Stop

Count Periods	Start	End
AM	NONE	NONE
NOON	11:00 AM	1:00 PM
PM	NONE	NONE

Count Periods	Start	End
AM	6:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	7:00 PM

### Total Volume Per Leg

North Leg	AM	NOON	PM
0	0	0	0
267	0	0	0
0	0	0	0

### Total Ins & Outs

North Leg	AM	NOON	PM
0	127	140	0
0	0	0	0
0	0	0	0

# ITM Peak Hour Summary

Prepared by: **NDS**

National Data & Surveying Services

## Montecito Rd and Bradbury Rd - Seal Beach

### Peak Hour Summary

#### Southbound Approach

Lanes	0	2	0
AM	2	131	74
NOON	0	0	0
PM	3	123	41

Date: 10/18/2016  
Day: Tuesday

Project #: 15-1237-011  
City: Seal Beach



AM Peak Hour	NOON Peak Hour	PM Peak Hour	7:00 AM
289	0	0	0
0	0	0	0
0	0	0	0

#### Westbound Approach

AM	NOON	PM	Lanes
146	0	64	1
18	0	25	0.5
135	0	148	0.5

AM	NOON	PM	Lanes
20	0	33	0
0	5	0	1
24	0	17	0
2	0	2	0

#### Eastbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0

#### Northbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0

#### CONTROL

4-Way Stop

Count Periods	Start	End
AM	6:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	7:00 PM

### Total Volume Per Leg

North Leg	AM	NOON	PM
466	0	0	0
0	0	0	0
334	0	0	0

### Total Ins & Outs

North Leg	AM	NOON	PM
267	0	0	0
0	167	167	0
0	0	0	0

# ITM Peak Hour Summary

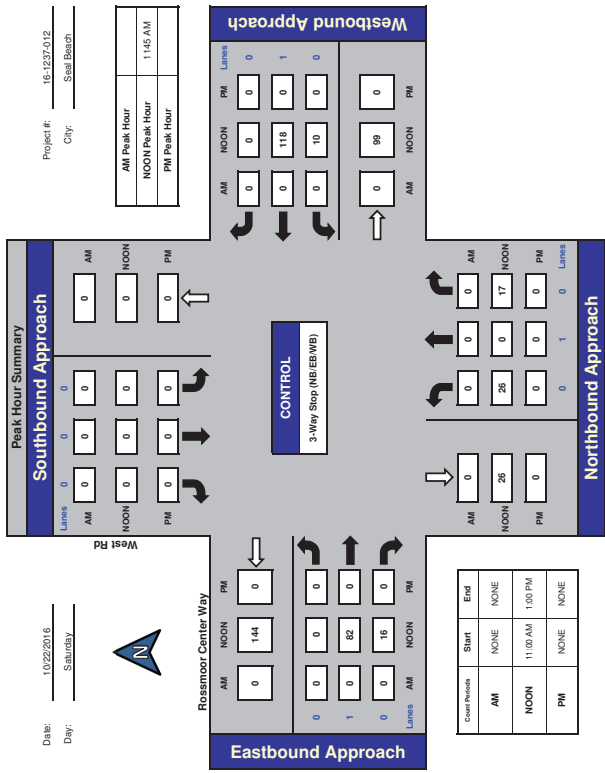
Prepared by: **NDS**

National Data & Surveying Services

## West Rd and Rossmoor Center Way - Seal Beach

Date: 10/22/2016  
Day: Saturday

Project #: 16-1237-012  
City: Seal Beach

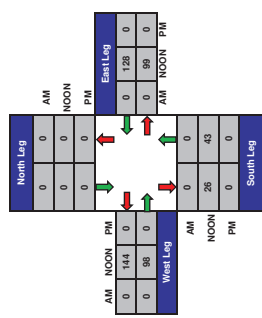


AM Peak Hour	NOON Peak Hour	PM Peak Hour
0	116	10
0	0	0
0	0	0

### Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	0	0	0
West Leg	0	242	0
East Leg	0	227	0
South Leg	0	69	0

### Total Ins & Outs



# ITM Peak Hour Summary

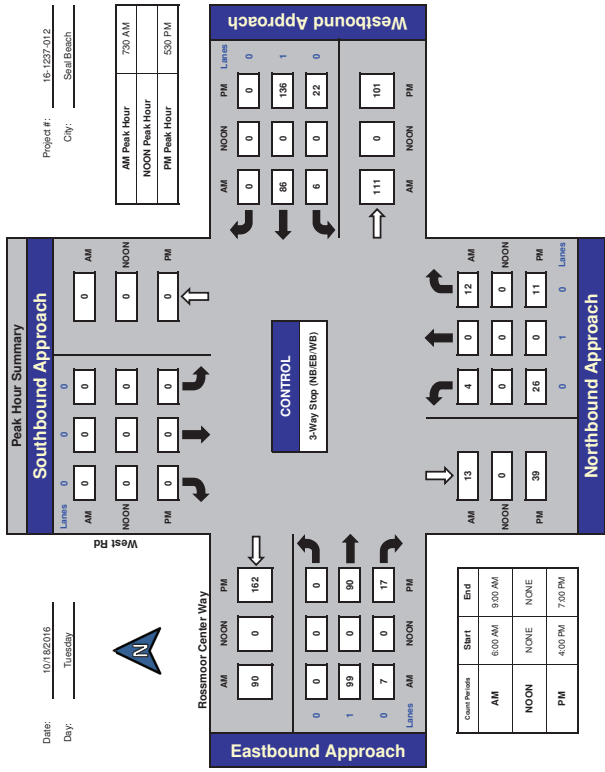
Prepared by: **NDS**

National Data & Surveying Services

## West Rd and Rossmoor Center Way - Seal Beach

Date: 10/18/2016  
Day: Tuesday

Project #: 16-1237-012  
City: Seal Beach

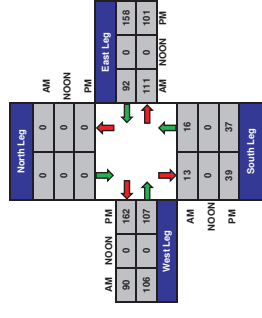


AM Peak Hour	NOON Peak Hour	PM Peak Hour
96	156	22
0	0	0
0	0	0

### Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	0	0	0
West Leg	196	0	269
East Leg	203	0	259
South Leg	29	0	76

### Total Ins & Outs





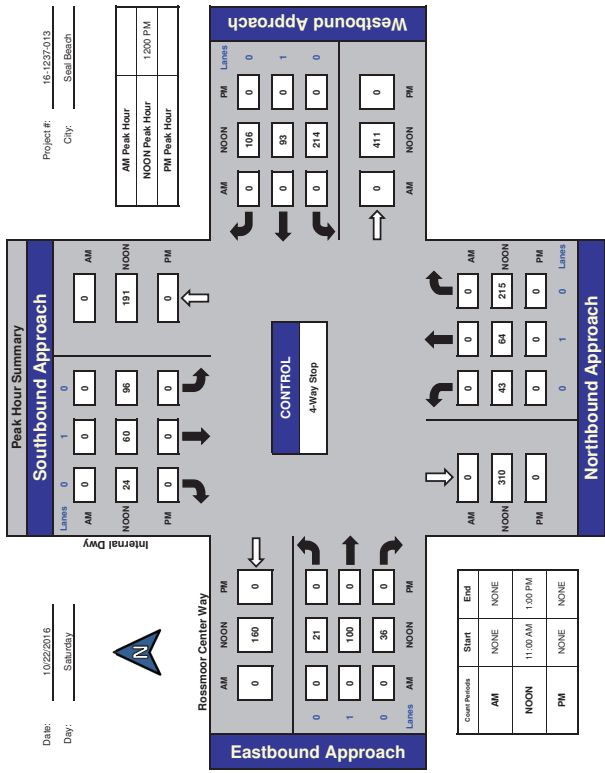
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

## Internal Dwy and Rossmoor Center Way - Seal Beach

Date: 10/22/2016  
Day: Saturday

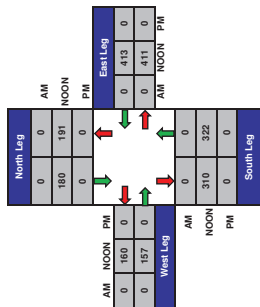
Project #: 15-1237-013  
City: Seal Beach



### Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	0	0	0
West Leg	0	317	0
East Leg	0	824	0
South Leg	0	632	0

### Total Ins & Outs



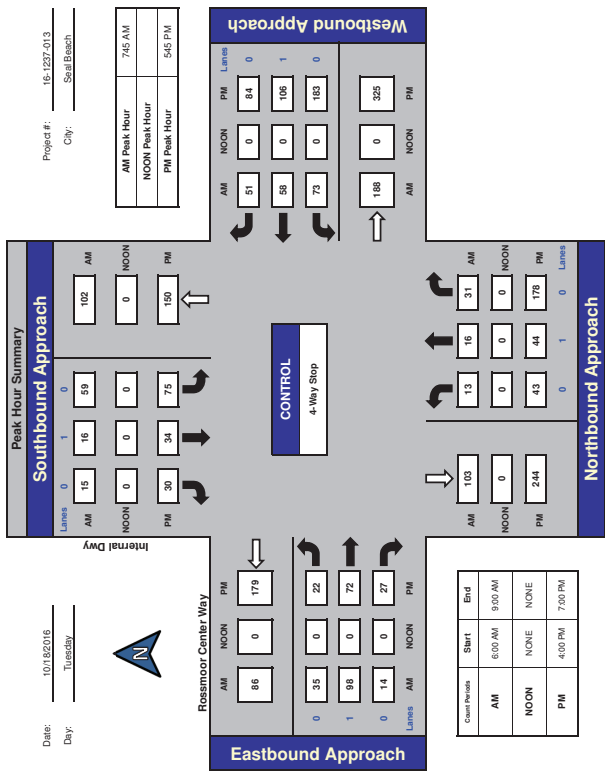
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

## Internal Dwy and Rossmoor Center Way - Seal Beach

Date: 10/18/2016  
Day: Tuesday

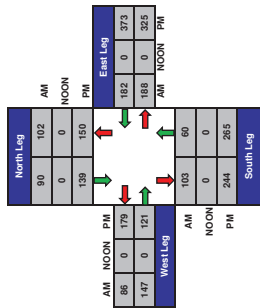
Project #: 15-1237-013  
City: Seal Beach



### Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	192	0	289
West Leg	233	0	300
East Leg	570	0	698
South Leg	163	0	509

### Total Ins & Outs



# ITM Peak Hour Summary

Prepared by:

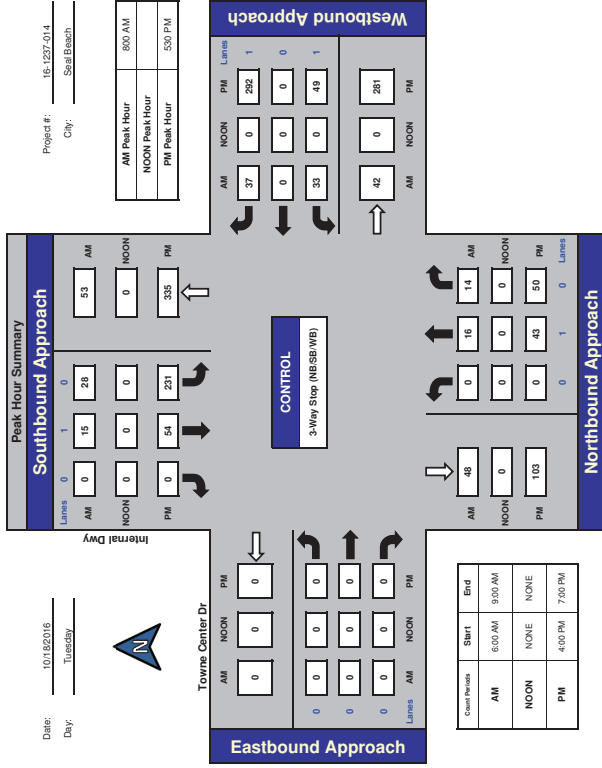


National Data & Surveying Services

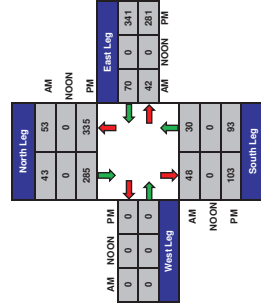
## Internal Dwy and Towne Center Dr., Seal Beach

Date: 10/8/2016  
Day: Tuesday

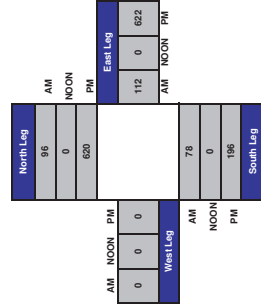
Project #: 15-1237-014  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

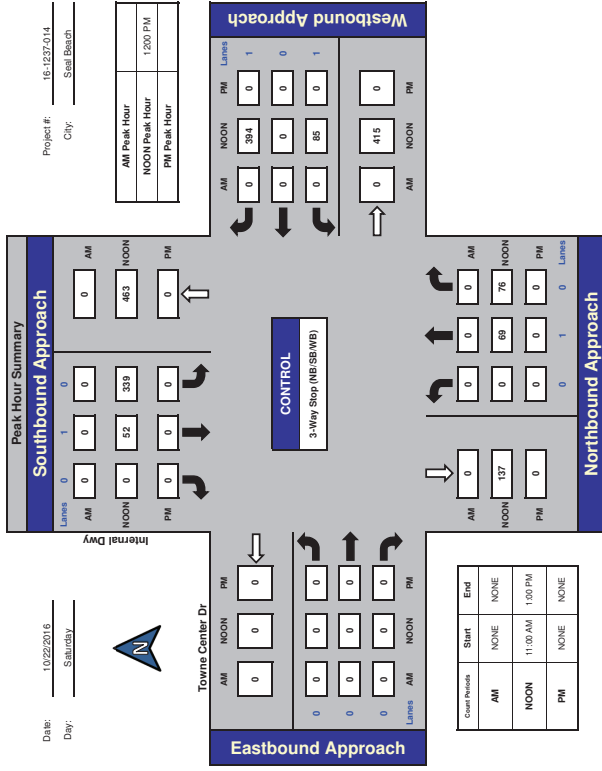


National Data & Surveying Services

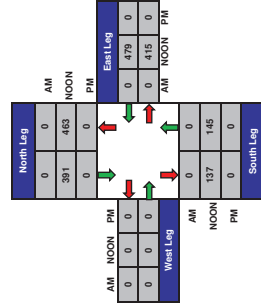
## Internal Dwy and Towne Center Dr., Seal Beach

Date: 10/22/2016  
Day: Saturday

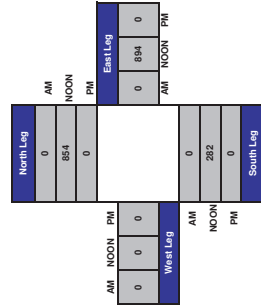
Project #: 15-1237-014  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

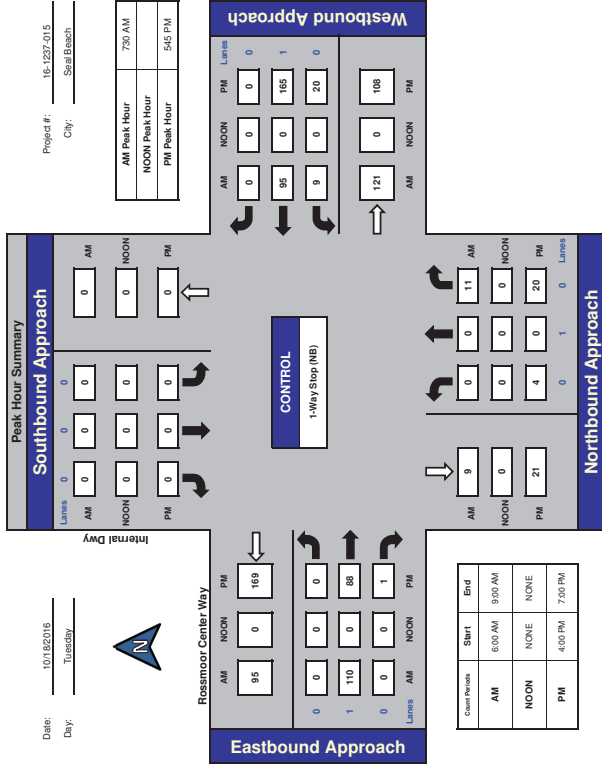


National Data & Surveying Services

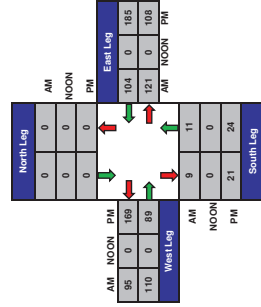
## Internal Dwy and Rossmoor Center Way - Seal Beach

Date: 10/8/2016  
Day: Tuesday

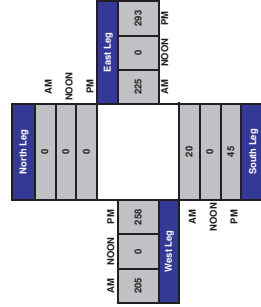
Project #: 15-1237-015  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

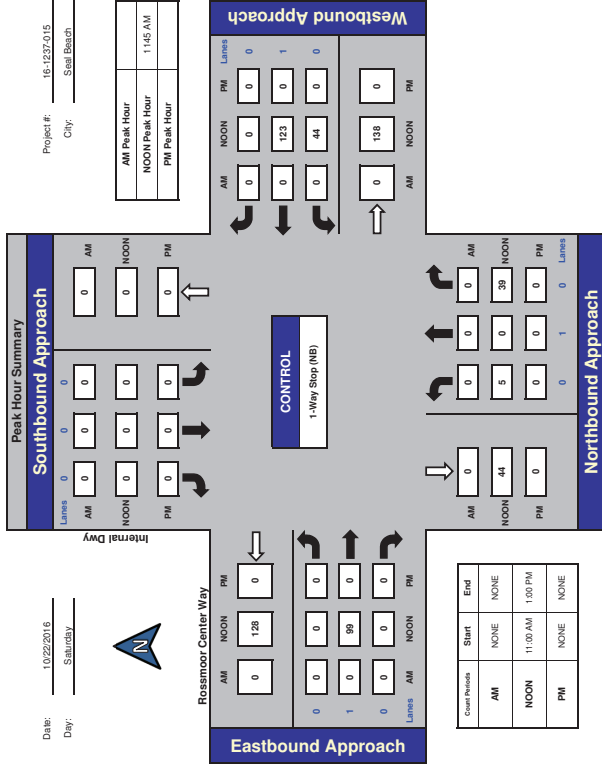


National Data & Surveying Services

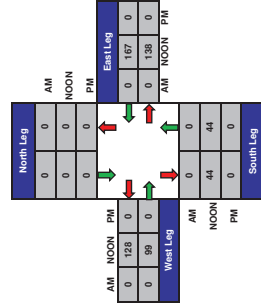
## Internal Dwy and Rossmoor Center Way - Seal Beach

Date: 10/22/2016  
Day: Saturday

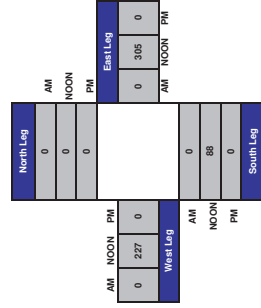
Project #: 15-1237-015  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



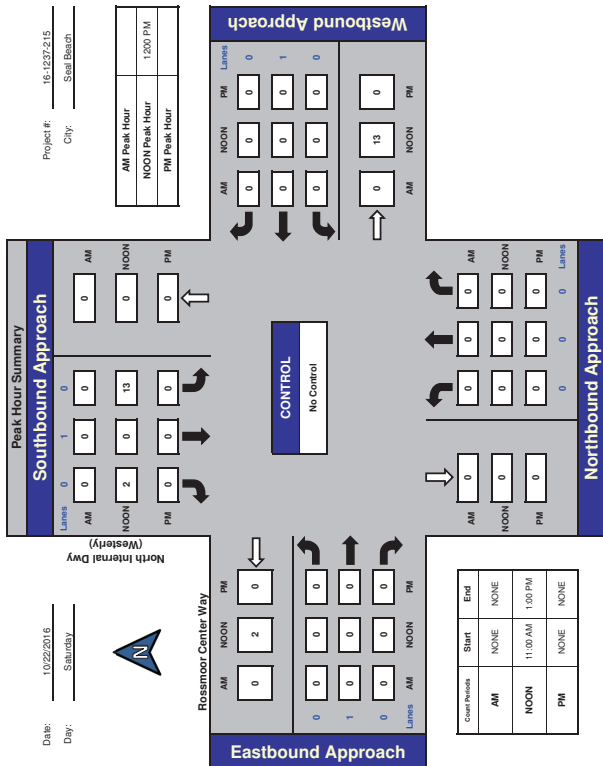
# ITM Peak Hour Summary

Prepared by: **NDS**

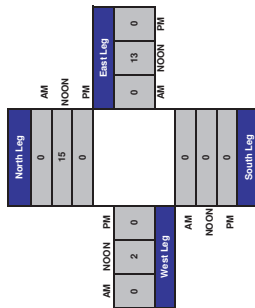
National Data & Surveying Services

## North Internal Dwy (Westerly) and Rossmoor Center Way - Seal Beach

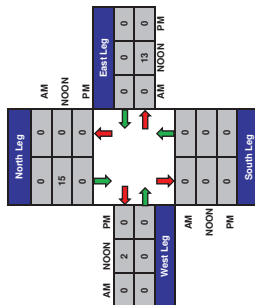
Date: 10/22/2016 Day: Saturday  
 Project #: 15-1237-215 City: Seal Beach



### Total Volume Per Leg



### Total Ins & Outs



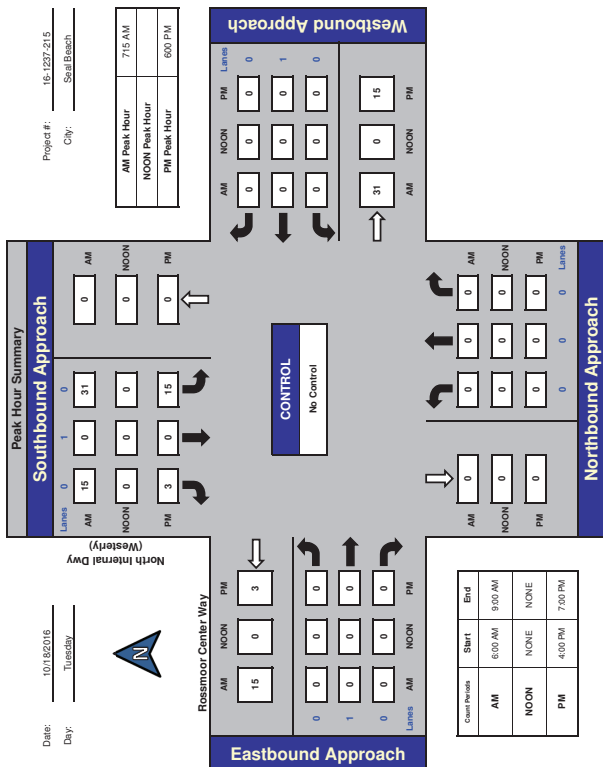
# ITM Peak Hour Summary

Prepared by: **NDS**

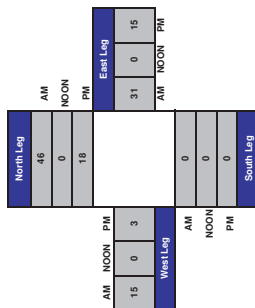
National Data & Surveying Services

## North Internal Dwy (Westerly) and Rossmoor Center Way - Seal Beach

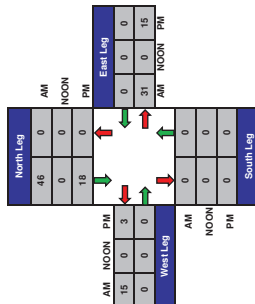
Date: 10/18/2016 Day: Tuesday  
 Project #: 15-1237-215 City: Seal Beach



### Total Volume Per Leg



### Total Ins & Outs



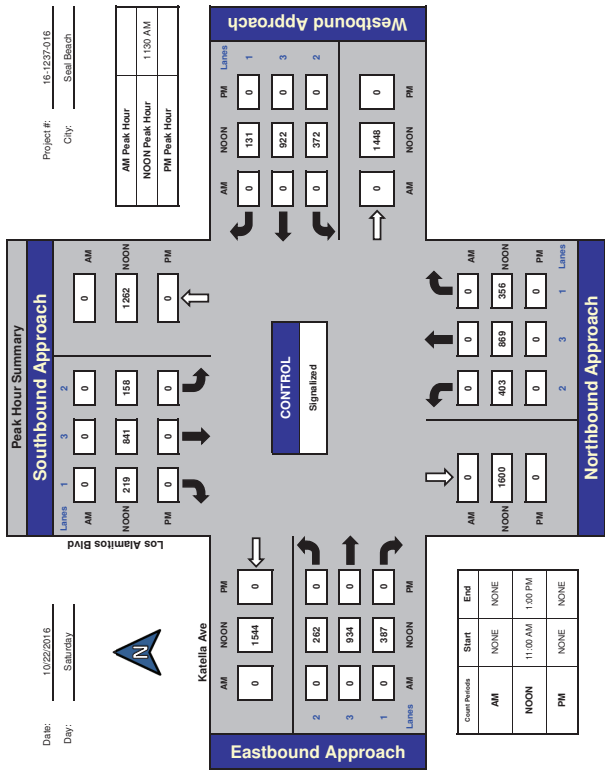
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

Los Alamitos Blvd and Katella Ave., Seal Beach

Date: 10/22/2016  
Day: Saturday

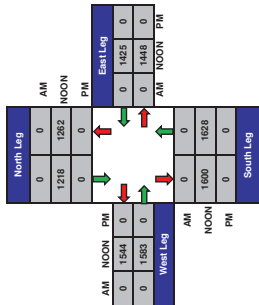
Project #: 15-1237-016  
City: Seal Beach



## Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	0	2480	0
East Leg	0	0	2873
West Leg	0	3127	0
South Leg	0	3228	0

## Total Ins & Outs



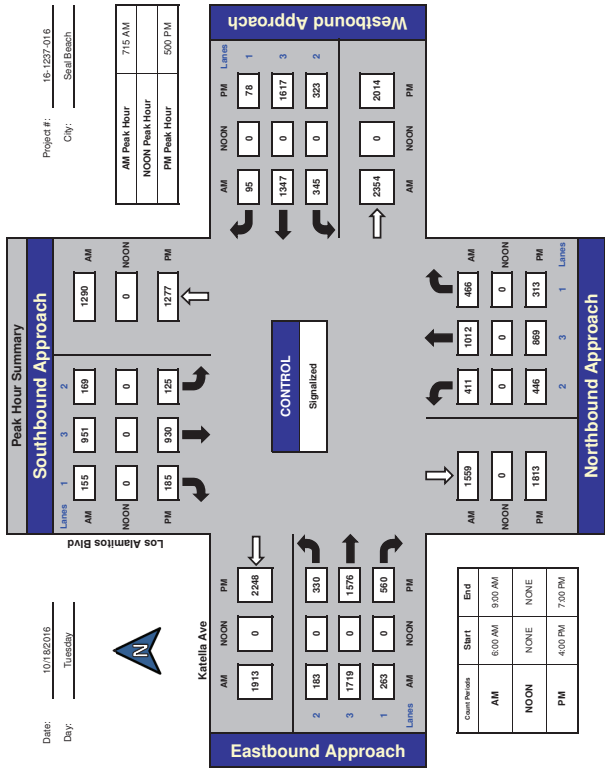
# ITM Peak Hour Summary

Prepared by: **NDS**  
National Data & Surveying Services

Los Alamitos Blvd and Katella Ave., Seal Beach

Date: 10/18/2016  
Day: Tuesday

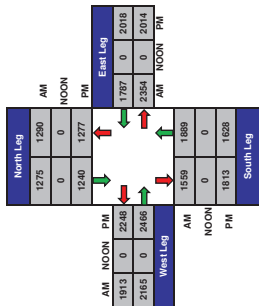
Project #: 15-1237-016  
City: Seal Beach



## Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	2565	0	2517
East Leg	4141	0	4032
West Leg	4078	0	4714
South Leg	3448	0	3441

## Total Ins & Outs





# ITM Peak Hour Summary

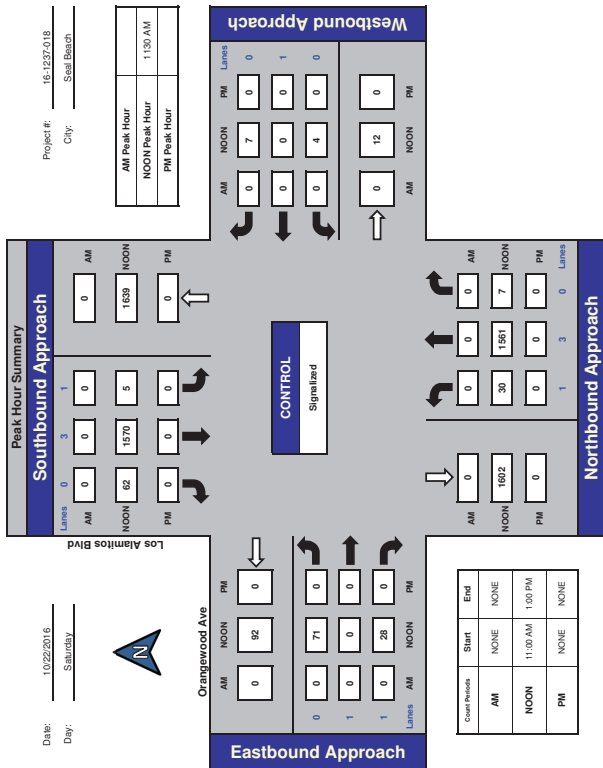
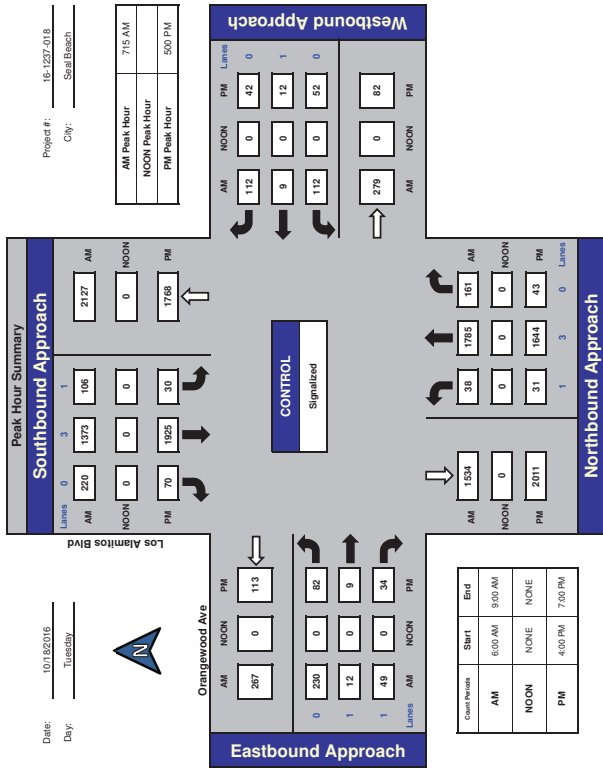
Prepared by: **NDS**

National Data & Surveying Services

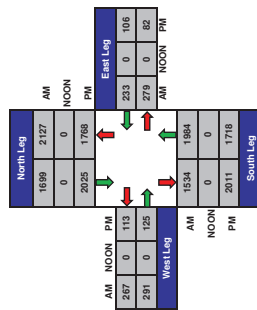
## Los Alamitos Blvd and Orangewood Ave., Seal Beach

Date: 10/8/2016  
Day: Tuesday

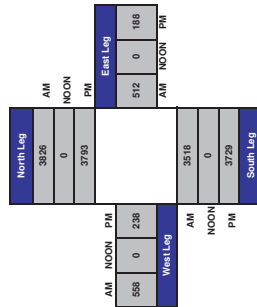
Project #: 15-1237-018  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

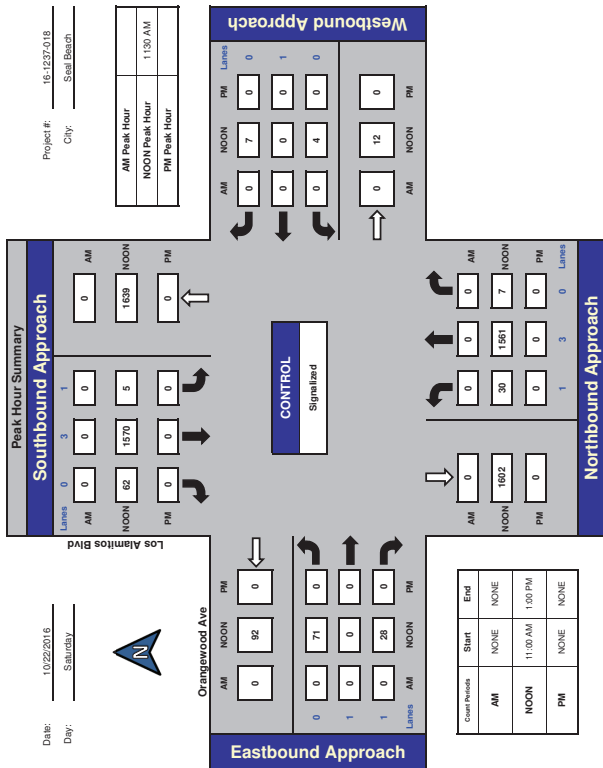
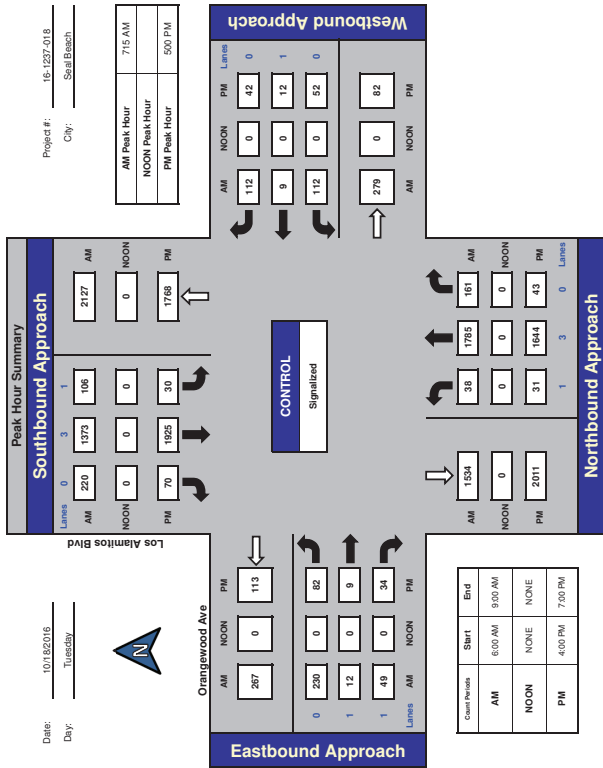
Prepared by: **NDS**

National Data & Surveying Services

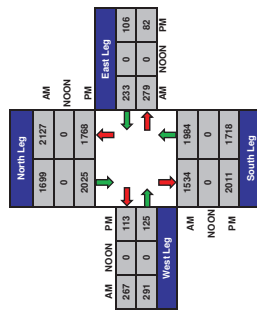
## Los Alamitos Blvd and Orangewood Ave., Seal Beach

Date: 10/22/2016  
Day: Saturday

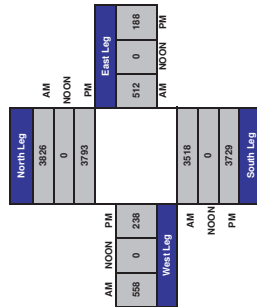
Project #: 15-1237-018  
City: Seal Beach



### Total Ins & Outs



### Total Volume Per Leg

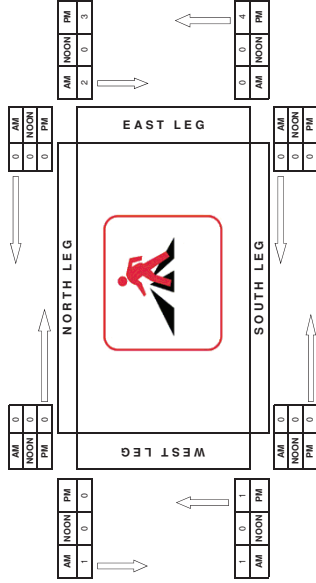


PREPARED BY NATIONAL DATA & SURVEYING SERVICES  
Pedestrian Count Peak Hour

PROJECT#: 16-1239-006  
NS Street: Seal Beach Blvd  
EW Sheet: S C Blvd D  
DATE: 10/18/2016  
CITY: Seal Beach

DAY: Tuesday

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

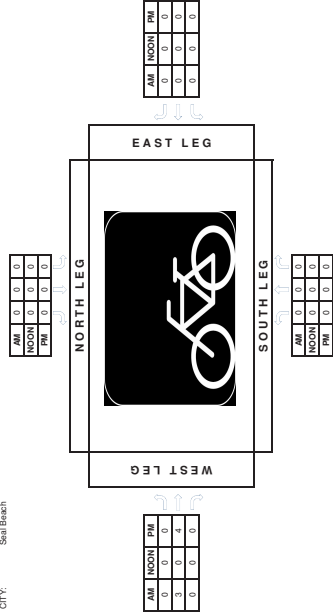


PREPARED BY NATIONAL DATA & SURVEYING SERVICES  
Bicycle Count Peak Hour

PROJECT#: 16-1239-008  
NS Street: Dard Ln  
EW Sheet: C Blvd D  
DATE: 10/18/2016  
CITY: Seal Beach

DAY: Tuesday

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

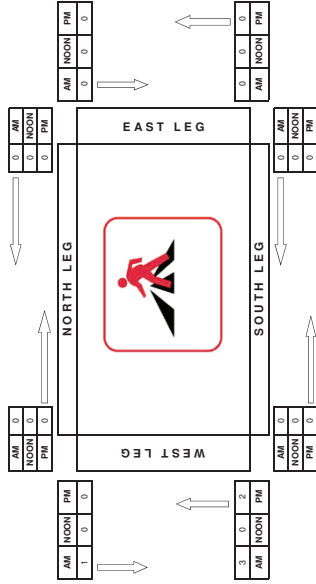


PREPARED BY NATIONAL DATA & SURVEYING SERVICES  
Pedestrian Count Peak Hour

PROJECT#: 16-1239-001  
NS Street: Seal Beach Blvd  
EW Sheet: S C Blvd D  
DATE: 10/18/2016  
CITY: Seal Beach

DAY: Tuesday

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

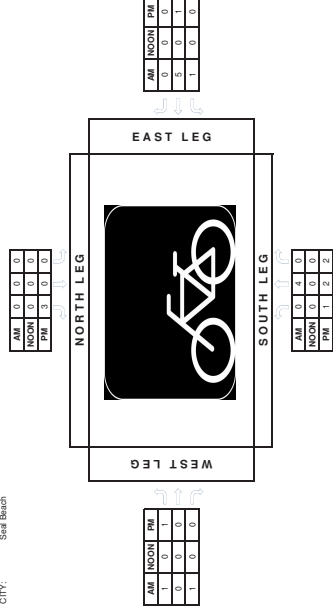


PREPARED BY NATIONAL DATA & SURVEYING SERVICES  
Bicycle Count Peak Hour

PROJECT#: 16-1239-001  
NS Street: Seal Beach Blvd  
EW Sheet: C Blvd D  
DATE: 10/18/2016  
CITY: Seal Beach

DAY: Tuesday

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00



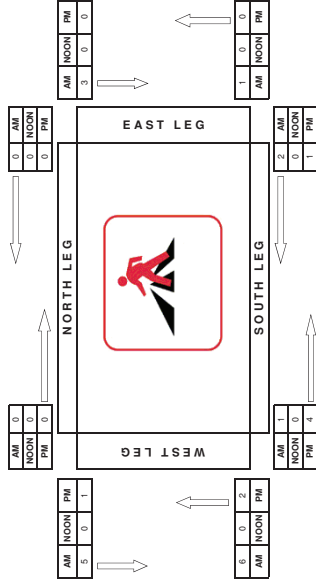


PREPARED BY NATIONAL DATA & SURVEYING SERVICES  
Pedestrian Count Peak Hour

PROJECT#: 16-1238-005  
NS Street: Morongo Rd  
EW Sheet: Ticker Ln  
DATE: 10/18/2016  
CITY: Seal Beach

DAY: Tuesday

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00



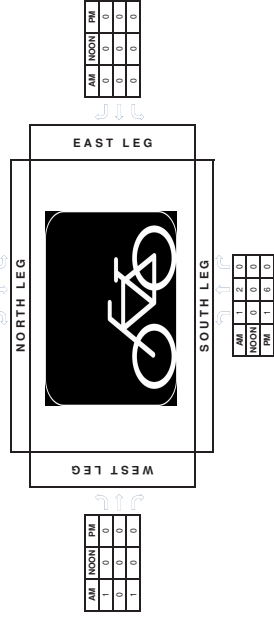
PREPARED BY NATIONAL DATA & SURVEYING SERVICES  
Bicycle Count Peak Hour

PROJECT#: 16-1238-005  
NS Street: Morongo Rd  
EW Sheet: Ticker Ln  
DATE: 10/18/2016  
CITY: Seal Beach

DAY: Tuesday

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

AM	NOON	PM
1	2	0
0	0	0
0	4	2

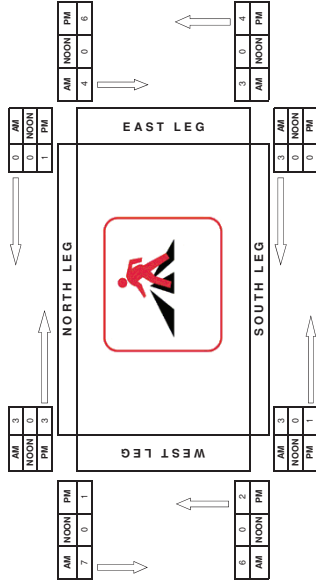


PREPARED BY NATIONAL DATA & SURVEYING SERVICES  
Pedestrian Count Peak Hour

PROJECT#: 16-1238-002  
NS Street: Morongo Rd  
EW Sheet: Corp Dr Old Dr  
DATE: 10/18/2016  
CITY: Seal Beach

DAY: Tuesday

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00



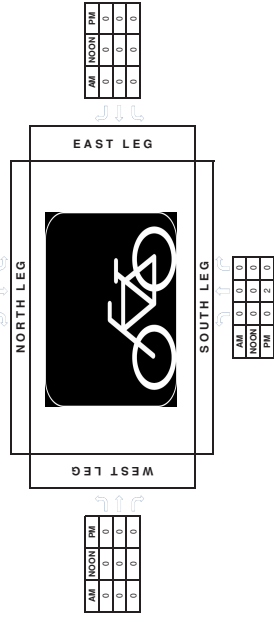
PREPARED BY NATIONAL DATA & SURVEYING SERVICES  
Bicycle Count Peak Hour

PROJECT#: 16-1238-002  
NS Street: Morongo Rd  
EW Sheet: Corp Dr Old Dr  
DATE: 10/18/2016  
CITY: Seal Beach

DAY: Tuesday

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

AM	NOON	PM
0	5	0
0	0	0
0	4	0



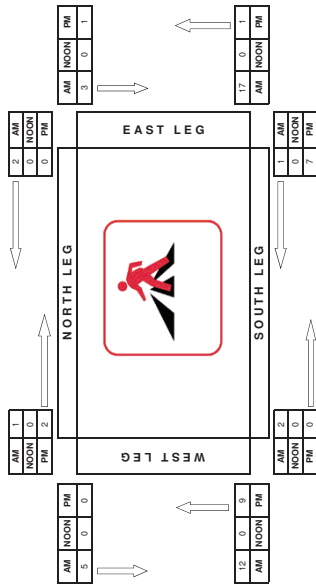
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count Peak Hour

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 16-1239-004  
 NS Street: Monrovia Rd  
 EW Sheet: 10/18/2016  
 DATE: 10/18/2016  
 CITY: Seal Beach

DAY: Tuesday



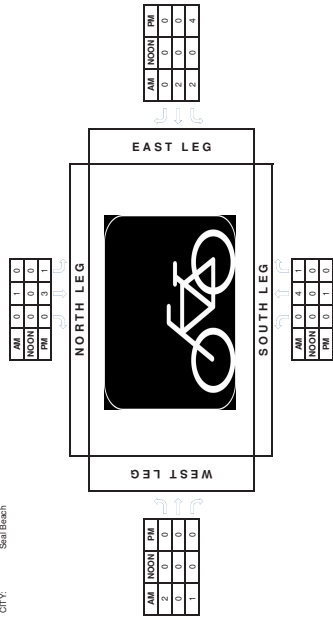
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 16-1239-004  
 NS Street: Monrovia Rd  
 EW Sheet: 10/18/2016  
 DATE: 10/18/2016  
 CITY: Seal Beach

DAY: Tuesday



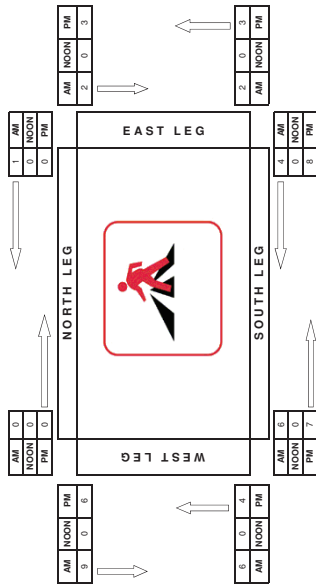
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count Peak Hour

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 16-1239-003  
 NS Street: Monrovia Rd  
 EW Sheet: 10/18/2016  
 DATE: 10/18/2016  
 CITY: Seal Beach

DAY: Tuesday



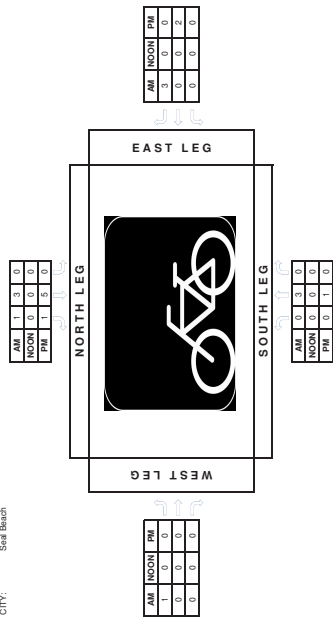
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

Shift	Start	End
AM	6:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 16-1239-003  
 NS Street: Monrovia Rd  
 EW Sheet: 10/18/2016  
 DATE: 10/18/2016  
 CITY: Seal Beach

DAY: Tuesday



DAILY TOTALS												Total	
AM Period	NB	SB	EB	TOTAL	NB	SB	EB	TOTAL	NB	SB	EB	TOTAL	6,275
00:00	5	1	1	7	2,781	3,494	0	0	0	0	0	0	6,275
00:15	4	3	3	10	12:15	42	42	77					
00:30	3	2	2	7	12:30	36	42	78					
00:45	1	1	1	3	12:45	28	143	170					
01:00	2	0	0	2	13:00	37	54	91					
01:15	0	0	0	0	13:15	44	44	88					
01:30	1	1	1	3	13:30	51	51	102					
01:45	1	4	1	6	13:45	44	186	230					
02:00	1	0	0	1	14:00	86	44	130					
02:15	0	4	4	8	14:15	58	55	113					
02:30	0	0	0	0	14:30	62	100	162					
02:45	1	2	0	3	14:45	48	254	301					
03:00	1	0	0	1	15:00	47	51	98					
03:15	1	1	1	3	15:15	56	71	127					
03:30	0	3	3	6	15:30	42	76	118					
03:45	0	2	2	4	15:45	49	194	243					
04:00	1	4	4	9	16:00	45	61	106					
04:15	1	6	6	13	16:15	61	59	120					
04:30	1	4	4	9	16:30	49	63	112					
04:45	1	4	13	18	16:45	80	235	315					
05:00	2	13	13	28	17:00	59	47	106					
05:15	4	23	23	50	17:15	64	65	129					
05:30	5	20	20	45	17:30	63	58	121					
05:45	7	18	21	46	17:45	91	277	368					
06:00	9	28	28	65	18:00	56	80	136					
06:15	7	26	26	59	18:15	65	65	130					
06:30	14	48	48	110	18:30	54	90	144					
06:45	21	52	73	146	18:45	59	217	276					
07:00	26	60	60	146	19:00	62	26	88					
07:15	33	72	72	175	19:15	28	44	72					
07:30	68	76	76	144	19:30	36	24	60					
07:45	103	230	114	322	19:45	29	155	184					
08:00	51	132	132	215	20:00	35	27	62					
08:15	41	87	87	128	20:15	43	17	60					
08:30	29	57	57	86	20:30	50	29	79					
08:45	22	52	52	74	20:45	55	30	85					
09:00	22	52	52	74	21:00	55	104	159					
09:15	21	58	58	79	21:15	13	15	28					
09:30	27	48	48	75	21:30	24	9	33					
09:45	15	85	54	154	21:45	17	89	106					
10:00	34	46	46	80	22:00	15	12	27					
10:15	26	50	50	76	22:15	13	10	23					
10:30	22	52	52	74	22:30	13	8	21					
10:45	38	120	31	179	22:45	5	46	51					
11:00	29	32	32	61	23:00	7	3	10					
11:15	28	48	48	76	23:15	7	2	9					
11:30	28	48	48	76	23:30	1	2	3					
11:45	52	139	43	177	23:45	1	8	9					
TOTALS	816	1538	65.3%	2354	TOTALS	1985	1956	3941					
SPLIT %	34.7%	65.3%		37.5%	SPLIT %	50.1%	49.9%	50.0%					

DAILY TOTALS												Total	
AM Period	NB	SB	EB	TOTAL	NB	SB	EB	TOTAL	NB	SB	EB	TOTAL	6,275
AM Peak Hour	07:30	07:30	07:30	07:30	14:30	17:15	17:15	17:15					
AM PK Volume	263	409	672	1044	508	1004	1004	1004					
PK-Hr Factor	0.638	0.775	0.775	0.888	0.888	0.888	0.888	0.888					
7 - 9 Volume	377	660	1037	2074	955	1869	1869	1869					
7 - 9 PK Volume	263	409	672	1044	508	1004	1004	1004					
PK-Hr Factor	0.638	0.775	0.775	0.888	0.888	0.888	0.888	0.888					
TOTALS	816	1538	65.3%	2354	TOTALS	1985	1956	3941					
SPLIT %	34.7%	65.3%		37.5%	SPLIT %	50.1%	49.9%	50.0%					

DAILY TOTALS												Total	
AM Period	NB	SB	EB	TOTAL	NB	SB	EB	TOTAL	NB	SB	EB	TOTAL	12,295
00:00	6	8	8	22	12:00	101	88	189					
00:15	8	9	9	26	12:15	105	83	188					
00:30	4	3	3	10	12:30	94	84	178					
00:45	1	1	1	3	12:45	86	386	472					
01:00	2	4	4	10	13:00	111	95	206					
01:15	3	3	3	9	13:15	87	168	255					
01:30	1	1	1	3	13:30	82	96	178					
01:45	3	9	3	15	13:45	105	415	520					
02:00	1	0	0	1	14:00	82	134	216					
02:15	4	4	4	12	14:15	107	99	206					
02:30	3	4	4	11	14:30	156	114	270					
02:45	2	10	4	16	14:45	141	486	627					
03:00	0	1	1	2	15:00	122	109	231					
03:15	1	1	1	3	15:15	126	106	232					
03:30	4	0	0	4	15:30	132	133	265					
03:45	1	8	2	11	15:45	139	519	658					
04:00	7	4	4	15	16:00	121	96	217					
04:15	6	5	5	16	16:15	97	119	216					
04:30	15	8	23	46	16:30	109	95	204					
04:45	28	56	3	87	16:45	110	440	550					
05:00	20	2	2	24	17:00	115	107	222					
05:15	33	1	3	37	17:15	120	126	246					
05:30	42	10	5	57	17:30	112	127	239					
05:45	49	144	18	171	17:45	127	474	601					
06:00	64	18	18	100	18:00	137	112	249					
06:15	60	16	16	92	18:15	116	112	228					
06:30	86	22	22	130	18:30	98	112	210					
06:45	116	329	35	480	18:45	70	383	453					
07:00	131	43	174	248	19:00	68	106	174					
07:15	132	55	187	374	19:15	65	88	153					
07:30	149	104	253	506	19:30	58	79	137					
07:45	182	594	170	946	19:45	46	237	283					
08:00	204	77	281	562	20:00	63	69	132					
08:15	142	81	223	446	20:15	50	81	131					
08:30	109	81	190	380	20:30	65	65	130					
08:45	115	552	308	975	20:45	68	216	284					
09:00	123	123	123	372	21:00	76	54	130					
09:15	97	50	147	294	21:15	27	35	62					
09:30	104	74	178	356	21:30	18	39	57					
09:45	100	416	240	756	21:45	22	95	117					
10:00	101	82	183	366	22:00	31	37	68					
10:15	107	68	175	350	22:15	19	30	49					
10:30	90	73	163	326	22:30	13	20	33					
10:45	76	374	301	751	22:45	13	76	89					
11:00	146	68	166	380	23:00	3	15	18					
11:15													

Day: Tuesday  
 Date: 10/18/2016

DAILY TOTALS												Total
AM Period		NB		WB		TOTAL		PM Period		WB		Total
1	2	2,773	3	2,874	0	0	12:00	34	37	0	0	5,647
0:00	1	2	3	12:00	34	37	71					
0:15	1	1	2	12:15	30	28	58					
0:30	3	4	7	12:30	41	36	77					
0:45	1	6	7	12:45	38	143	181					
1:00	0	1	1	13:00	36	51	87					
1:15	0	0	0	13:15	35	30	65					
1:30	0	0	0	13:30	35	30	65					
1:45	1	2	3	13:45	51	175	226					
2:00	0	1	1	14:00	53	55	108					
2:15	0	1	1	14:15	45	70	115					
2:30	1	1	2	14:30	107	60	167					
2:45	0	1	1	14:45	67	83	150					
3:00	1	1	2	15:00	59	73	132					
3:15	0	0	0	15:15	53	88	141					
3:30	0	0	0	15:30	49	83	132					
3:45	1	2	3	15:45	48	216	264					
4:00	0	0	0	16:00	48	55	103					
4:15	3	0	3	16:15	68	58	126					
4:30	0	0	0	16:30	42	58	100					
4:45	1	6	7	16:45	45	203	248					
5:00	7	2	9	17:00	56	61	117					
5:15	5	1	6	17:15	53	65	118					
5:30	8	3	11	17:30	41	68	109					
5:45	8	28	36	17:45	63	213	276					
6:00	10	7	17	18:00	90	64	154					
6:15	28	4	32	18:15	85	40	125					
6:30	33	26	59	18:30	40	55	95					
6:45	50	110	160	18:45	89	190	279					
7:00	69	26	95	19:00	35	41	76					
7:15	73	33	106	19:15	19	48	67					
7:30	90	51	141	19:30	30	25	55					
7:45	95	327	422	19:45	23	107	130					
8:00	90	149	239	20:00	16	23	39					
8:15	80	57	137	20:15	20	16	36					
8:30	34	37	71	20:30	28	37	65					
8:45	248	37	285	20:45	15	85	100					
9:00	36	37	73	21:00	15	18	33					
9:15	36	39	75	21:15	13	31	46					
9:30	28	24	52	21:30	8	18	26					
9:45	24	114	138	21:45	9	45	54					
10:00	25	31	56	22:00	5	8	13					
10:15	28	39	67	22:15	5	9	14					
10:30	35	26	61	22:30	7	12	19					
10:45	27	115	142	22:45	6	23	29					
11:00	28	39	67	23:00	5	7	12					
11:15	43	31	74	23:15	4	7	11					
11:30	43	31	74	23:30	1	2	3					
11:45	28	141	169	23:45	0	10	10					
TOTALS	1100	877	1977	TOTALS	1673	1997	3670					
SPLIT %	55.6%	44.4%	35.0%	SPLIT %	45.6%	54.4%	65.0%					

DAILY TOTALS												Total
AM Period		NB		WB		TOTAL		PM Period		WB		Total
7:30	7:30	2,773	3,342	0	0	0	7:30	14:30	0	0	5,895	
AM Peak Hour	7:30	2,773	3,342	0	0	0	7:30	14:30	0	0	5,895	
AM PK Volume	355	266	621	0.672	0.800	0.668	0.800	0.668	0.929	0.883	590	
PK Hr Factor	0.334	0.334	0.334	0.672	0.800	0.668	0.800	0.668	0.929	0.883	590	
7 - 9 Volume	575	391	966	4 - 6 Volume	416	518	934					
7 - 9 Peak Hour	7:30	7:30	7:30	4 - 6 Peak Hour	17:00	17:00	17:00					
7 - 9 PK Volume	355	266	621	4 - 6 PK Volume	213	272	485					
PK Hr Factor	0.334	0.334	0.334	0.672	0.800	0.668	0.800					

Day: Tuesday  
 Date: 10/18/2016

DAILY TOTALS												Total
AM Period		NB		WB		TOTAL		PM Period		WB		Total
1	2	2,553	3,242	0	0	0	12:00	38	49	0	0	5,895
0:00	2	1	3	12:00	38	49	87					
0:15	4	4	8	12:15	33	41	74					
0:30	3	1	4	12:30	40	54	94					
0:45	2	9	11	12:45	30	141	171					
1:00	1	0	1	13:00	35	48	83					
1:15	2	0	2	13:15	38	49	87					
1:30	1	1	2	13:30	36	47	83					
1:45	1	5	6	13:45	39	166	205					
2:00	0	1	1	14:00	66	52	118					
2:15	0	1	1	14:15	41	62	103					
2:30	0	1	1	14:30	69	64	133					
2:45	0	2	2	14:45	47	223	270					
3:00	1	7	8	15:00	53	76	129					
3:15	0	2	2	15:15	46	87	133					
3:30	0	1	1	15:30	35	76	111					
3:45	1	4	5	15:45	41	185	226					
4:00	0	0	0	16:00	41	69	110					
4:15	2	2	4	16:15	61	59	120					
4:30	1	3	4	16:30	44	75	119					
4:45	2	6	8	16:45	64	216	280					
5:00	7	7	14	17:00	60	55	115					
5:15	4	14	18	17:15	61	53	114					
5:30	4	14	18	17:30	62	64	126					
5:45	8	23	31	17:45	72	255	327					
6:00	10	18	28	18:00	53	76	129					
6:15	28	4	32	18:15	47	45	92					
6:30	33	26	59	18:30	40	55	95					
6:45	50	110	160	18:45	51	210	261					
7:00	36	59	95	19:00	51	40	91					
7:15	25	53	78	19:15	25	47	72					
7:30	57	58	115	19:30	29	32	61					
7:45	55	173	228	19:45	28	133	161					
8:00	70	93	163	20:00	21	31	52					
8:15	49	76	125	20:15	33	23	56					
8:30	33	49	82	20:30	45	37	82					
8:45	176	46	222	20:45	37	120	157					
9:00	20	46	66	21:00	22	14	36					
9:15	32	52	84	21:15	14	16	30					
9:30	24	38	62	21:30	14	9	23					
9:45	18	94	112	21:45	14	64	78					
10:00	29	43	72	22:00	5	10	15					
10:15	28	52	80	22:15	9	7	16					
10:30	22	37	59	22:30	12	13	25					
10:45	33	112	145	22:45	3	29	32					
11:00	37	35	72	23:00	6	4	10					
11:15	30	44	74	23:15	1	1	2					
11:30	28	44	72	23:30	0	1	1					
11:45	36	140	176	23:45	0	11	11					
TOTALS	798	1247	2045	TOTALS	1755	2095	3850					
SPLIT %	39.0%	61.0%	34.7%	SPLIT %	45.6%	54.4%	65.3%					

DAILY TOTALS												Total
AM Period		NB		WB		TOTAL		PM Period		WB		Total
7:30	7:30	2,553	3,242	0	0	0	7:30	14:30	0	0	5,895	
AM Peak Hour	7:30	2,553	3,242	0	0	0	7:30	14:30	0	0		

**APPENDIX B**

**INTERSECTION LOS WORKSHEETS**

HCM 2010 Signalized Intersection Summary  
 1.: Seal Beach Boulevard & I-405 SB Ramps

11/21/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	87	28	16	696	44	525	14	1051	166	428	1449	72
Traffic Volume (veh/h)	87	28	16	696	44	525	14	1051	166	428	1449	72
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	96	31	18	799	0	0	15	1155	182	470	1592	79
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	861	0	384	30	1232	384	643	3074	957
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.24	0.40	0.40
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5065	1583	1774	5065	1583
Grp Volume(v), veh/h	96	0	49	799	0	0	15	1155	182	470	1592	79
Grp Sat Flow(s), veh/h/ln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.5	10.8	26.8	25.9	3.4
Cycle Q Clear(g.c), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.5	10.8	26.8	25.9	3.4
Prop In Lane	1.00	0.00	0.37	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	861	0	384	30	1232	384	643	3074	957
V/C Ratio(X)	1.08	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.73	0.52	0.08
Avail Cap(c.a), veh/h	89	0	87	861	0	384	30	1232	384	643	3074	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.7	36.7	20.7	13.9
Incr Delay (d2), s/veh	119.6	0.0	7.8	15.4	0.0	0.0	12.7	14.5	4.2	3.2	0.5	0.1
Initial Q Delay(d3), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.6	0.0	1.6	13.7	0.0	0.0	0.6	13.1	5.2	13.7	12.3	1.5
LnGrp Delay(d), s/veh	172.3	0.0	58.9	56.1	0.0	0.0	66.3	55.3	39.9	39.9	21.1	14.1
LnGrp LOS	F	E	E	E	E	E	E	E	D	D	C	B
Approach Vol, veh/h	145			799			1352				2141	
Approach Delay, s/veh	134.0			56.1			53.4				25.0	
Approach LOS	F			E			D				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	45.7	32.4	10.2	5.8	72.3	32.5						
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8	5.8						
Max Green Setting (Gmax), s	30.0	* 27	* 5.5	5.0	51.7	27.5						
Max Q Clear Time (g_c+I), s	28.8	26.5	7.5	2.9	27.9	26.2						
Green Ext Time (p_c), s	0.2	0.2	0.0	0.0	14.2	0.5						
Intersection Summary	42.8											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
 2.: Seal Beach Boulevard & I-405 NB Ramps

11/21/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	11	5	367	53	549	110	1196	348	328	1565	463
Traffic Volume (veh/h)	7	11	5	367	53	549	110	1196	348	328	1565	463
Future Volume (veh/h)	7	11	5	367	53	549	110	1196	348	328	1565	463
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	8	12	6	408	0	649	122	1329	0	364	1739	514
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	44	46	39	877	0	783	549	1885	587	306	1869	582
Arrive On Green	0.02	0.02	0.02	0.25	0.00	0.25	0.32	0.74	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	8	12	6	408	0	649	122	1329	0	364	1739	514
Grp Sat Flow(s), veh/h/ln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.5	0.7	0.4	10.8	0.0	21.3	2.9	15.6	0.0	19.0	36.2	33.4
Cycle Q Clear(g.c), s	0.5	0.7	0.4	10.8	0.0	21.3	2.9	15.6	0.0	19.0	36.2	33.4
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	44	46	39	877	0	783	549	1885	587	306	1869	582
V/C Ratio(X)	0.18	0.26	0.15	0.47	0.00	0.83	0.22	0.71	0.00	1.19	0.93	0.88
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	549	1885	587	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.59	0.59	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.6	52.5	35.2	0.0	39.2	32.5	11.0	0.0	45.5	33.4	32.6
Incr Delay (d2), s/veh	1.9	2.9	1.8	0.4	0.0	3.6	0.1	1.3	0.0	112.5	9.8	17.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3	0.4	0.2	5.3	0.0	9.8	1.4	7.1	0.0	18.9	18.6	17.4
LnGrp Delay(d), s/veh	54.5	55.5	54.3	35.6	0.0	42.8	32.6	12.3	0.0	158.0	43.3	50.1
LnGrp LOS	D	E	D	D	D	D	C	B		F	D	D
Approach Vol, veh/h	26			1057			1451				2617	
Approach Delay, s/veh	54.9			40.0			14.0				60.6	
Approach LOS	D			D			B				E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	46.6	33.0	7.4	23.3	46.2	33.0						
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	5.8	* 5.8	5.8						
Max Green Setting (Gmax), s	26.7	* 27	* 5.0	5.0	51.7	27.5						
Max Q Clear Time (g_c+I), s	17.6	17.6	2.7	4.9	38.2	23.3						
Green Ext Time (p_c), s	0.0	5.6	0.0	0.0	2.3	3.8						
Intersection Summary	43.2											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Health Club within the Shops at Rossmoor  
Existing (2016) Current Occupancy  
AM Peak Hour

Level of Service Computation Report  
ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
Intersection #3 Seal Beach Blvd/Lampson Ave  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.804  
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 68 Level Of Service: D

Street Name: Seal Beach Blvd East Bound West Bound  
Approach: North Bound South Bound Lampson Ave  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted  
Rights: Ovl Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 0 1

Volume Module:  
Base Vol: 0 1445 305 296 1653 0 0 0 0 702 0 605  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Base: 0 1445 305 296 1653 0 0 0 0 702 0 605  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91  
PHF Volume: 0 1591 336 326 1820 0 0 0 0 773 0 666  
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 1591 336 326 1820 0 0 0 0 773 0 666  
OvLAdjVol: 0 0 0 0 0 0 0 0 0 0 0 0

Saturation Flow Module:  
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
Vol/Sat: 0.00 0.31 0.20 0.10 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.39  
OvLAdjV/S: 0.00 0.31 0.20 0.10 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.39  
Crit Moves: \*\*\*\*

Health Club within the Shops at Rossmoor  
Existing (2016) Current Occupancy  
AM Peak Hour

Level of Service Computation Report  
ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
Intersection #4 Seal Beach Blvd/St. Cloud Dr  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.626  
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 42 Level Of Service: B

Street Name: Seal Beach Blvd East Bound West Bound  
Approach: North Bound South Bound St. Cloud Dr  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected  
Rights: Ovl Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:  
Base Vol: 377 1633 47 4 1301 46 106 3 567 65 13 2  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Base: 377 1633 47 4 1301 46 106 3 567 65 13 2  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88  
PHF Volume: 429 1858 53 5 1480 52 121 3 645 74 15 2  
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 429 1858 53 5 1480 52 121 3 645 74 15 2  
OvLAdjVol: 0 0 0 0 0 0 0 0 0 0 0 0

Saturation Flow Module:  
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 2.00 2.92 0.08 1.00 2.90 0.10 0.97 0.03 2.00 1.63 0.32 0.05  
Final Sat.: 3400 4957 143 1700 4926 174 1653 47 3400 2763 552 85

Capacity Analysis Module:  
Vol/Sat: 0.13 0.37 0.37 0.00 0.30 0.30 0.07 0.07 0.19 0.03 0.03 0.03  
OvLAdjV/S: 0.13 0.37 0.37 0.00 0.30 0.30 0.07 0.07 0.19 0.03 0.03 0.03  
Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.535  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 35 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 65 1581 15 19 1349 70 77 7 78 17 10 39  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 65 1581 15 19 1349 70 77 7 78 17 10 39  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92  
 PHF Volume: 71 1728 16 21 1474 77 84 8 85 19 11 43  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 71 1728 16 21 1474 77 84 8 85 19 11 43  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 71 1728 16 21 1474 77 84 8 85 19 11 43  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00 2.85 0.15 1.00 0.08 0.92 1.00 0.20 0.80  
 Final Sat.: 1700 5052 48 1700 4648 252 1700 140 1560 1700 347 1353  
 Capacity Analysis Module:  
 Vol/Sat: 0.04 0.34 0.34 0.01 0.30 0.30 0.05 0.05 0.05 0.01 0.03 0.03  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.501  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 33 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 30 1627 31 21 1345 13 3 4 14 24 2 21  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 30 1627 31 21 1345 13 3 4 14 24 2 21  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90  
 PHF Volume: 33 1800 34 23 1488 14 3 4 15 27 2 23  
 Reduct Vol: 0 0 0 0 0 0 0 0  
 Reduced Vol: 33 1800 34 23 1488 14 3 4 15 27 2 23  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 33 1800 34 23 1488 14 3 4 15 27 2 23  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.94 0.06 1.00 2.97 0.03 1.00 0.22 0.78 1.00 0.09 0.91  
 Final Sat.: 1700 5005 95 1700 5051 49 1700 378 1322 1700 148 1552  
 Capacity Analysis Module:  
 Vol/Sat: 0.02 0.36 0.36 0.01 0.29 0.29 0.00 0.01 0.01 0.02 0.01 0.01  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*



Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.726  
 Loss Time (sec): 54 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 54 Level of Service: C  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1  
 Volume Module:  
 Base Vol: 146 1503 26 14 1307 155 270 18 97 70 22 23  
 Growth 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  
 Initial Bse: 146 1503 26 14 1307 155 270 18 97 70 22 23  
 User 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  
 PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94  
 PHF Volume: 156 1607 28 15 1398 166 289 19 104 75 24 25  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 156 1607 28 15 1398 166 289 19 104 75 24 25  
 PCE 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  
 M/F 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  
 Final Volume: 156 1607 28 15 1398 166 289 19 104 75 24 25  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 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  
 Final Sat: 1700 5013 87 1700 4559 541 1700 266 1434 1293 407 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.09 0.32 0.32 0.01 0.31 0.31 0.17 0.07 0.07 0.04 0.06 0.01  
 Crit Moves: \*\*\*\*

Intersection	12											
Int Delay, s/veh												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	605	4	28	403	6	70						
Future Vol, veh/h	605	4	28	403	6	70						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	0						
Veh in Median Storage, #	0	-	-	0	0	0						
Grade, %	0	-	-	0	0	0						
Peak Hour Factor	79	79	79	79	79	79						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	766	5	35	510	8	89						
Major/Minor	Major1						Major2					
Conflicting Flow All	0						0					
Stage 1	-						-					
Stage 2	-						-					
Critical Hdwy	-						4.14					
Critical Hdwy Stg 1	-						5.84					
Critical Hdwy Stg 2	-						5.84					
Follow-up Hdwy	-						2.22					
Pot Cap-1 Maneuver	-						840					
Stage 1	-						-					
Stage 2	-						-					
Platoon blocked, %	-						-					
Mov Cap-1 Maneuver	-						840					
Mov Cap-2 Maneuver	-						-					
Stage 1	-						-					
Stage 2	-						-					
Approach	EB						WB					
HCM Control Delay, s	0						0.8					
HCM LOS							B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	525	-	-	840	-							
HCM Lane V/C Ratio	0.183	-	-	0.042	-							
HCM Control Delay (s)	13.4	-	-	9.5	0.2							
HCM Lane LOS	B	-	-	A	A							
HCM 95th %ile Q(veh)	0.7	-	-	0.1	-							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/21/2016

Intersection												
Intersection Delay, s/veh											11.3	
Intersection LOS											B	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	54	6	124	0	2	3	1	0	107	165	2
Future Vol, veh/h	0	54	6	124	0	2	3	1	0	107	165	2
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	68	8	157	0	3	4	1	0	135	209	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2
Approach	EB		WB		WB		NB		NB		SB	
Opposing Approach	WB		EB		EB		SB		SB		EB	
Opposing Lanes	1		1		1		2		2		2	
Conflicting Approach Left	SB		NB		EB		EB		EB		1	
Conflicting Lanes Left	2		2		2		2		2		1	
Conflicting Approach Right	NB		SB		WB		WB		WB		1	
Conflicting Lanes Right	2		2		2		2		2		1	
HCM Control Delay	11.3		9.3		9.3		11.7		11.7		B	
HCM LOS	B		A		A		B		B		B	

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	56%	0%	29%	33%	0%	0%
Vol Thru, %	44%	98%	3%	50%	100%	78%
Vol Right, %	0%	2%	67%	17%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	85	184	6	189	121
LT Vol	107	0	54	2	0	0
Through Vol	83	83	6	3	189	94
RT Vol	0	2	124	1	0	27
Lane Flow Rate	240	107	233	8	239	154
Geometry Grp	7	7	2	2	7	7
Degree of Utl (X)	0.4	0.169	0.348	0.013	0.377	0.236
Departure Headway (Hd)	6	5.688	5.375	6.196	5.668	5.522
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	602	630	671	577	635	651
Service Time	3.727	3.424	3.404	4.241	3.405	3.247
HCM Lane V/C Ratio	0.399	0.17	0.347	0.014	0.376	0.237
HCM Control Delay	12.7	9.6	11.3	9.3	11.8	10
HCM Lane LOS	B	A	B	A	B	A
HCM 95th-tile Q	1.9	0.6	1.6	0	1.8	0.9

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/21/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR	SBU	SBR
Traffic Vol, veh/h	0	0	283	27	0	27
Future Vol, veh/h	0	0	283	27	0	27
Peak Hour Factor	0.92	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	358	34	0	0
Number of Lanes	0	0	2	0	2	0
Approach	SB		SB		B	
Opposing Approach	NB		NB		B	
Opposing Lanes	2		2		2	
Conflicting Approach Left	WB		WB		1	
Conflicting Lanes Left	1		1		1	
Conflicting Approach Right	EB		EB		1	
Conflicting Lanes Right	1		1		1	
HCM Control Delay	11.1		11.1		B	
HCM LOS	B		B		B	

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

11/21/2016

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Existing + Current Occupancy AM Peak Hour  
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Intersection Delay, s/veh	0	97	61	86	0	13	42	31	0	38	180	21	0	24	202	65
Intersection LOS	B				B				B				B			
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	97	61	86	0	13	42	31	0	38	180	21	0	24	202	65
Future Vol, veh/h	0	97	61	86	0	13	42	31	0	38	180	21	0	24	202	65
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	117	73	104	0	16	51	37	0	46	217	25	0	29	243	78
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2
Approach	EB	WB	WB	EB	WB	WB	EB	WB	NB	NB	SB	SB	SB	SB	SB	SB
Opposing Approach	WB	EB	WB	EB	WB	WB	EB	WB	SB	SB	NB	NB	SB	SB	SB	SB
Opposing Lanes	1	2	1	2	2	2	1	2	2	2	1	2	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB	WB	WB	EB	WB	SB	SB	NB	NB	SB	SB	SB	SB
Conflicting Lanes Left	2	1	2	1	2	2	1	2	2	2	1	2	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB	WB	WB	EB	WB	SB	SB	NB	NB	SB	SB	SB	SB
Conflicting Lanes Right	2	1	2	1	2	2	1	2	2	2	1	2	2	2	2	2
HCM Control Delay	13.6	10.4	10.4	11.2	11.2	11.2	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
HCM LOS	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	12.8				B				B			
Intersection LOS	B				B				B			
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	5	24	2	0	135	18	146	0	0	138	219
Future Vol, veh/h	0	5	24	2	0	135	18	146	0	0	138	219
Peak Hour Factor	0.92	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	30	3	0	171	23	185	0	0	175	277
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0	2
Approach	EB	WB	WB	EB	WB	WB	EB	WB	NB	NB	SB	SB
Opposing Approach	WB	EB	WB	EB	WB	WB	EB	WB	SB	SB	NB	NB
Opposing Lanes	2	1	2	1	2	2	1	2	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB	WB	WB	EB	WB	SB	SB	NB	NB
Conflicting Lanes Left	2	1	2	1	2	2	1	2	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB	WB	WB	EB	WB	SB	SB	NB	NB
Conflicting Lanes Right	2	1	2	1	2	2	1	2	2	2	1	2
HCM Control Delay	10.9	12.5	12.5	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6
HCM LOS	B	B	B	B	B	B	B	B	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	30%	0%	40%	15%	19%	0%	0%	53%
Vol Thru, %	70%	81%	25%	49%	81%	61%	47%	97%
Vol Right, %	0%	19%	35%	36%	0%	39%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	111	244	86	125	166	140	68
LT Vol	38	0	97	13	24	0	74	0
Through Vol	90	90	61	42	101	101	0	66
RT Vol	0	21	86	31	0	65	0	66
Lane Flow Rate	154	134	294	104	151	200	177	85
Geometry Grp	7	7	2	2	7	7	7	7
Degree of Utl (X)	0.274	0.227	0.463	0.173	0.262	0.327	0.33	0.153
Departure Headway (Hd)	6.399	6.113	5.666	6.021	6.267	5.89	6.721	6.429
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	560	586	635	593	571	608	533	556
Service Time	4.159	3.872	3.722	4.095	4.025	3.648	4.482	4.191
HCM Lane V/C Ratio	0.275	0.229	0.463	0.175	0.264	0.329	0.332	0.163
HCM Control Delay	11.6	10.7	13.6	10.4	11.3	11.5	12.8	10.4
HCM Lane LOS	B	B	B	B	B	B	B	B
HCM 95th-ile Q	1.1	0.9	2.4	0.6	1	1.4	1.2	0.5

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	16%	88%	0%	53%	0%	0%
Vol Thru, %	100%	17%	77%	12%	0%	47%	97%	0%
Vol Right, %	0%	83%	6%	0%	100%	0%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	265	31	153	146	140	68	68
LT Vol	0	0	5	135	0	74	0	0
Through Vol	92	46	24	18	0	66	66	66
RT Vol	0	219	2	0	146	0	2	2
Lane Flow Rate	116	335	39	194	185	177	85	85
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.202	0.526	0.078	0.375	0.298	0.33	0.153	0.153
Departure Headway (Hd)	6.226	5.649	7.193	6.97	5.813	6.721	6.429	6.429
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	574	637	495	515	615	533	556	556
Service Time	3.991	3.403	5.276	4.725	3.568	4.482	4.191	4.191
HCM Lane V/C Ratio	0.202	0.526	0.079	0.377	0.301	0.332	0.163	0.163
HCM Control Delay	10.6	14.6	10.9	13.9	11	12.8	10.4	10.4
HCM Lane LOS	B	B	B	B	B	B	B	B
HCM 95th-ile Q	0.7	3.1	0.3	1.7	1.2	1.4	0.5	0.5

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Existing + Current Occupancy AM Peak Hour  
 02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	74	131	2
Future Vol, veh/h	0	74	131	2
Peak Hour Factor	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	94	166	3
Number of Lanes	0	0	2	0
Approach	SB			
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	12			
HCM LOS	B			

HCM 2010 AWSC  
 1.2: West Road & Rossmore Center Way  
 11/21/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	7.7								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	99	7	0	6	86	0	4	12
Future Vol, veh/h	0	99	7	0	6	86	0	4	12
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	8	0	7	101	0	5	14
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	WB	WB	EB			NB		
Opposing Approach	WB			EB					
Opposing Lanes	1			1			0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			1		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			1		
HCM Control Delay	7.7			7.7			7.1		
HCM LOS	A			A			A		
Lane	NBU	NB	NB	WBU	WB	WB	NBU	NBL	NBR
Vol Left, %	25%	0%	7%						
Vol Thru, %	0%	93%	93%						
Vol Right, %	75%	7%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	16	106	92						
LT Vol	4	0	6						
Through Vol	0	99	86						
RT Vol	12	7	0						
Lane Flow Rate	19	125	108						
Geometry Grp	1	1	1						
Degree of Utl (X)	0.021	0.139	0.122						
Departure Headway (Hd)	4.031	4.008	4.074						
Convergence, Y/N	Yes	Yes	Yes						
Cap	893	893	879						
Service Time	2.031	2.038	2.105						
HCM Lane V/C Ratio	0.021	0.14	0.123						
HCM Control Delay	7.1	7.7	7.7						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.1	0.5	0.4						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

11/21/2016

Intersection															
Intersection Delay, s/veh 8.7															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	35	98	14	0	73	58	51	0	13	16	31	0	59	16
Future Vol, veh/h	0	35	98	14	0	73	58	51	0	13	16	31	0	59	16
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	105	15	0	78	62	55	0	14	17	33	0	63	17
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1

Approach		EB	WB	NB	SB
Opposing Approach	WB	EB	WB	NB	SB
Opposing Lanes	1	2	2	1	1
Conflicting Approach Left	SB	EB	NB	WB	WB
Conflicting Lanes Left	1	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB	EB
Conflicting Lanes Right	1	1	1	2	2
HCM Control Delay	8.5	9	8.1	8.7	8.7
HCM LOS	A	A	A	A	A

Lane		NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %		22%	42%	0%	40%	66%
Vol Thru, %		27%	58%	78%	32%	18%
Vol Right, %		52%	0%	22%	28%	17%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		60	84	63	182	90
LT Vol		13	35	0	73	59
Through Vol		16	49	49	58	16
RT Vol		31	0	14	51	15
Lane Flow Rate		65	90	68	196	97
Geometry Grp		2	7	7	5	2
Degree of Utl (X)		0.083	0.133	0.093	0.246	0.131
Departure Headway (Hd)		4.626	5.298	4.932	4.529	4.876
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		773	677	726	793	735
Service Time		2.664	3.03	2.663	2.559	2.912
HCM Lane V/C Ratio		0.084	0.133	0.094	0.247	0.132
HCM Control Delay		8.1	8.8	8.2	9	8.7
HCM Lane LOS		A	A	A	A	A
HCM 95th-tile Q		0.3	0.5	0.3	1	0.4

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

11/21/2016

Intersection														
Intersection Delay, s/veh 7.4														
Intersection LOS A														
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT				
Traffic Vol, veh/h	0	33	37	0	16	14	0	28	15	15				
Future Vol, veh/h	0	33	37	0	16	14	0	28	15	15				
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.87	0.87	0.87	0.87				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	38	43	0	18	16	0	32	17	17				
Number of Lanes	0	1	1	0	1	0	0	0	0	1				

Approach		WB	NB	SB
Opposing Approach	WB <td>NB <td>SB <td>SB</td> </td></td>	NB <td>SB <td>SB</td> </td>	SB <td>SB</td>	SB
Opposing Lanes	0	1	1	1
Conflicting Approach Left	NB	WB	WB	WB
Conflicting Lanes Left	1	0	2	2
Conflicting Approach Right	SB	WB	WB	WB
Conflicting Lanes Right	1	2	2	0
HCM Control Delay	7.5	7	7.6	7.6
HCM LOS	A	A	A	A

Lane		NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %		0%	100%	0%	66%
Vol Thru, %		53%	0%	0%	35%
Vol Right, %		47%	0%	100%	0%
Sign Control		Stop	Stop	Stop	Stop
Traffic Vol by Lane		30	33	37	43
LT Vol		0	33	0	28
Through Vol		16	0	0	15
RT Vol		14	0	37	0
Lane Flow Rate		34	38	43	49
Geometry Grp		2	7	7	2
Degree of Utl (X)		0.037	0.055	0.047	0.068
Departure Headway (Hd)		3.829	5.181	3.979	4.229
Convergence, Y/N		Yes	Yes	Yes	Yes
Cap		924	690	897	840
Service Time		1.898	2.92	1.718	2.291
HCM Lane V/C Ratio		0.037	0.055	0.048	0.068
HCM Control Delay		7	8.2	6.9	7.6
HCM Lane LOS		A	A	A	A
HCM 95th-tile Q		0.1	0.2	0.1	0.2

Intersection	0.7			
Int Delay, s/veh	EBT	EBR	WBL	WBT
Movement	110	0	9	95
Traffic Vol, veh/h	110	0	9	95
Future Vol, veh/h	0	0	0	0
Conflicting Peds, #/hr	Free	Free	Free	Free
Sign Control	-	None	-	None
RT Channelized	-	None	-	None
Storage Length	0	-	0	0
Veh in Median Storage, #	0	-	0	0
Grade, %	89	89	89	89
Peak Hour Factor	2	2	2	2
Heavy Vehicles, %	124	0	10	107
Mvmt Flow				
Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	124	0
Stage 1	-	-	124	-
Stage 2	-	-	127	-
Critical Hwy	-	-	4.12	-
Critical Hwy Stg 1	-	-	5.42	-
Critical Hwy Stg 2	-	-	5.42	-
Follow-up Hwy	-	-	2,218	-
Pot Cap-1 Maneuver	-	-	1463	-
Stage 1	-	-	902	-
Stage 2	-	-	899	-
Platoon blocked, %	-	-	1463	-
Mov Cap-1 Maneuver	-	-	733	-
Mov Cap-2 Maneuver	-	-	733	-
Stage 1	-	-	902	-
Stage 2	-	-	893	-
Approach	EB	WB	NB	
HCM Control Delay, s	0	0.6	8.9	
HCM LOS		A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL
Capacity (veh/h)	927	-	-	1463
HCM Lane V/C Ratio	0.013	-	-	0.007
HCM Control Delay (s)	8.9	-	-	7.5
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4TB			4			4TB				
Traffic Volume (veh/h)	166	30	20	321	35	517	11	1445	31	516	1066	127
Future Volume (veh/h)	166	30	20	321	35	517	11	1445	31	516	1066	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	171	31	21	357	0	0	11	1490	372	532	1099	131
Adj No. of Lanes	0	2	0	2	0	0	1	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	416	0	186	23	1591	495	562	3218	1002
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.63	1.00	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1593	1774	5085	1593	1774	5085	1593
Grp Volume(v), veh/h	171	0	52	357	0	0	11	1490	372	532	1099	131
Grp Sat Flow(s), veh/h	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.3	23.2	30.2	0.0	0.0
Cycle Q Clear(g.c), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.3	23.2	30.2	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	416	0	186	23	1591	495	562	3218	1002
V/C Ratio(X)	1.34	0.00	0.42	0.86	0.00	0.00	0.48	0.94	0.75	0.95	0.34	0.13
Avail Cap(c,a), veh/h	127	0	125	426	0	190	81	1600	498	562	3218	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.7	33.9	19.3	0.0	0.0
Incr Delay (d2), s/veh	197.2	0.0	2.2	15.6	0.0	0.0	14.6	11.8	10.1	23.3	0.3	0.2
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 Back(Q50%), veh/h	10.8	0.0	1.6	6.2	0.0	0.0	0.4	16.4	11.5	17.8	0.1	0.1
LnGrp Delay(d), s/veh	248.3	0.0	51.0	63.2	0.0	0.0	68.5	48.6	44.0	42.7	0.3	0.2
LnGrp LOS	F	D	E	E	E	E	D	D	D	D	A	A
Approach Vol, veh/h	223			357			1873				1762	
Approach Delay, s/veh	202.3			63.2			47.8				13.1	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	40.6	40.2		12.6	5.4	75.4		18.7				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+H), s	32.2	33.3		9.9	2.7	2.0		12.9				
Green Ext Time (p_c), s	0.4	1.1		0.0	0.0	13.3		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay	42.7											
HCM 2010 LOS	D											
Notes												

11/29/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	75	72	87	195	15	664	41	1536	555	313	1439	370
Future Volume (veh/h)	75	72	87	195	15	664	41	1536	555	313	1439	370
Number	7	4	0	14	3	8	18	5	2	12	1	6
Initial Q (Obs.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	77	74	90	201	0	695	42	1584	0	323	1484	381
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Cap. veh/h	81	85	72	909	0	811	519	1920	588	242	1763	549
Arrive On Green	0.05	0.05	0.05	0.26	0.00	0.26	0.30	0.76	0.00	0.14	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	77	74	90	201	0	695	42	1584	0	323	1484	381
Grp Sat Flow(s), veh/h/m	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g.s.)	4.8	4.3	5.0	4.9	0.0	23.0	1.0	22.3	0.0	15.0	29.6	22.8
Cycle Q Clear(g.s.)	4.8	4.3	5.0	4.9	0.0	23.0	1.0	22.3	0.0	15.0	29.6	22.8
Prp In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	85	72	909	0	811	519	1920	588	242	1763	549
V/C Ratio(X)	0.95	0.87	1.25	0.22	0.00	0.86	0.08	0.83	0.00	1.34	0.84	0.69
Avail Cap(c), veh/h	81	85	72	1258	0	1123	519	1920	588	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.54	0.54	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	52.2	32.3	3.0	39.0	33.0	11.1	0.0	47.5	33.1	30.9	3.0
Incr Delay (d2), s/veh	84.8	58.3	187.7	0.1	0.0	5.0	0.0	2.3	0.0	176.2	5.1	7.1
Initial Q Delay(Q3), 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(50%), veh/ln	3.6	5.9	2.4	0.0	10.6	0.5	10.4	0.0	19.2	14.7	11.0	1.0
LnGrp Delay(d), s/veh	137.2	110.5	240.2	32.4	0.0	44.0	33.0	13.4	0.0	223.7	38.2	38.0
LnGrp LOS	F	F	F	C	D	C	B	F	D	F	D	D
Approach Vol, veh/h	241			896				1626				2188
Approach Delay, s/veh	167.5			41.4				13.9				65.6
Approach LOS	F			D				B				E
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6			8				
Phs Duration (G+Y+Rc), s	9.0	47.3	9.7	22.4	43.9			34.0				
Change Period (Y+Rc), s	4.0	5.8	* 4.7	5.8	* 5.8			5.8				
Max Green Setting (Gmax), s	30.7	* 5.0	* 5.0	* 41				39.0				
Max Q Clear Time (g_c+I1), s	24.3	7.0	3.0	31.6				25.0				
Green Ext Time (p_c), s	0.0	4.7	0.0	1.7	6.5			3.2				
Intersection Summary	49.2											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Existing Current Occ PM Mon Feb 20, 2017 15:10:35 Page 2-1  
 Health Club within the Shops at Rossmoor  
 Existing (2016) Current Occupancy  
 PM Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.792
Loss Time (sec):	65	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	65	Level Of Service:	C

Street Name: Seal Beach Blvd East Bound Lampson Ave  
 Approach: North Bound South Bound West Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R L - I - R

Control:	Protected	Include	Protected	Include	Protected	Permitted
Rights:	Ovl	Include	Ovl	Include	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	2 0 0 0 1	0 0 0 0 1

Volume Module:

Base Vol:	0	1691	544	630	1591	0	0	0	0	540	0	454
Growth 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
Initial Base:	0	1691	544	630	1591	0	0	0	0	540	0	454
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	1731	557	645	1628	0	0	0	0	553	0	465
Reduced Vol:	0	1731	557	645	1628	0	0	0	0	553	0	465
PCE 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
MLF 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
Final Volume:	0	1731	557	645	1628	0	0	0	0	553	0	465
OvAdjVol:												142

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	2.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	5100	1700	3400	5100	0	0	0	0	3400	0	1700

Capacity Analysis Module:

Vol/Sat:	0.00	0.34	0.33	0.19	0.32	0.00	0.00	0.00	0.00	0.16	0.00	0.27
OvAdjV/S:	****	****	****	****	****	****	****	****	****	****	****	****
Crit Moves:	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.732  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 54 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0	1	0	1
Lanes:	1	0	2	1	0	1	0	1

Volume Module:  
 Base Vol: 180 1415 84 78 1370 83 85 28 185 139 47 59  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 180 1415 84 78 1370 83 85 28 185 139 47 59  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHE Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 190 1496 89 82 1448 88 90 30 196 147 50 62  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 190 1496 89 82 1448 88 90 30 196 147 50 62  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 190 1496 89 82 1448 88 90 30 196 147 50 62

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.83 0.17 1.00 2.83 0.17 1.00 0.13 0.87 1.00 0.44 0.56  
 Final Sat.: 1700 4814 286 1700 4609 291 1700 223 1477 1700 754 946

Capacity Analysis Module:  
 Vol/Sat: 0.11 0.31 0.05 0.30 0.30 0.05 0.13 0.13 0.09 0.07 0.07  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.717  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 52 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	2	0	2	1	0	1	0	2
Lanes:	2	0	2	1	0	1	0	2

Volume Module:  
 Base Vol: 406 1617 132 5 1649 66 86 0 385 193 31 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 406 1617 132 5 1649 66 86 0 385 193 31 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHE Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 437 1739 142 5 1773 71 92 0 414 208 33 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 437 1739 142 5 1773 71 92 0 414 208 33 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 437 1739 142 5 1773 71 92 0 414 208 33 5  
 OrLAdjVol: 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.77 0.23 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04  
 Final Sat.: 3400 4715 385 1700 4904 196 1700 0 3400 2866 460 74

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.37 0.37 0.00 0.36 0.36 0.05 0.00 0.12 0.07 0.07 0.07  
 OrLAdjV/S: 0.00  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*



Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.679  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 48 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0
	1	0	2	1	0

Volume Module:  
 Base Vol: 130 1489 57 19 1676 170 162 9 88 48 3 11  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 130 1489 57 19 1676 170 162 9 88 48 3 11  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 134 1530 59 20 1723 175 166 9 90 49 3 11  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 134 1530 59 20 1723 175 166 9 90 49 3 11  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 134 1530 59 20 1723 175 166 9 90 49 3 11

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.69 0.11 1.00 2.72 0.28 1.00 0.09 0.91 0.94 0.06 1.00  
 Final Sat.: 1700 4912 188 1700 4630 470 1700 158 1542 1600 100 1700

Capacity Analysis Module:  
 Vol/Sat: 0.08 0.31 0.31 0.01 0.37 0.37 0.10 0.06 0.06 0.03 0.03 0.01  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.686  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 48 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0
	1	0	2	1	0

Volume Module:  
 Base Vol: 159 1520 24 36 1554 190 184 1 130 15 1 16  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 159 1520 24 36 1554 190 184 1 130 15 1 16  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 168 1608 25 38 1644 201 195 1 138 16 1 17  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 168 1608 25 38 1644 201 195 1 138 16 1 17  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 168 1608 25 38 1644 201 195 1 138 16 1 17

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.95 0.05 1.00 2.67 0.33 1.00 0.01 0.99 1.00 0.06 0.94  
 Final Sat.: 1700 5021 79 1700 4544 556 1700 13 1687 1700 100 1600

Capacity Analysis Module:  
 Vol/Sat: 0.10 0.32 0.32 0.02 0.36 0.36 0.11 0.08 0.08 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

11/29/2016

Intersection	1 2											
Int Delay, s/veh	A											
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	443	7	53	453	3	49						
Future Vol, veh/h	443	7	53	453	3	49						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	0						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	90	90	90	90	90	90						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	492	8	59	503	3	54						
Major/Minor	Major1	Major2	Minor1									
Conflicting Flow All	0	0	500	0	865	250						
Stage 1	-	-	-	-	496	-						
Stage 2	-	-	-	-	369	-						
Critical Hwy	-	-	4.14	-	6.84	6.94						
Critical Hwy Stg 1	-	-	-	-	5.84	-						
Critical Hwy Stg 2	-	-	-	-	5.84	-						
Follow-up Hwy	-	-	2.22	-	3.52	3.32						
Pot Cap-1 Maneuver	-	-	1060	-	293	750						
Stage 1	-	-	-	-	577	-						
Stage 2	-	-	-	-	670	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	1060	-	270	750						
Mov Cap-2 Maneuver	-	-	-	-	270	-						
Stage 1	-	-	-	-	577	-						
Stage 2	-	-	-	-	618	-						
Approach	EB	WB	NB									
HCM/Control Delay, s	0	1.2	10.8									
HCM LOS	B											
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	680	-	-	1060	-							
HCM Lane V/C Ratio	0.085	-	-	0.056	-							
HCM Control Delay (s)	10.8	-	-	8.6	0.3							
HCM Lane LOS	B	-	-	A	A							
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/29/2016

Intersection	9.5												
Intersection Delay	A												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Traffic Vol, veh/h	0	30	4	45	0	2	5	10	0	66	212	3	
Future Vol, veh/h	0	30	4	45	0	2	5	10	0	66	212	3	
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	36	5	54	0	2	6	12	0	79	252	4	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	
Approach	EB	WB				NB							
Opposing Approach	WB	EB				SB							
Opposing Lanes	1	1				2							
Conflicting Approach Left	SB	NB				EB							
Conflicting Lanes Left	2	2				1							
Conflicting Approach Right	NB	SB				WB							
Conflicting Lanes Right	2	2				1							
HCM Control Delay	9	8.5				9.9							
HCM LOS	A	A				A							
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2							
Vol Left, %	38%	0%	38%	12%	6%	0%							
Vol Thru, %	62%	97%	5%	29%	94%	72%							
Vol Right, %	0%	3%	57%	59%	0%	28%							
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	172	109	79	17	123	160							
LT Vol	66	0	30	2	7	0							
Through Vol	106	106	4	5	116	116							
RT Vol	0	3	45	10	0	44							
Lane Flow Rate	205	130	94	20	146	190							
Geometry Grp	7	7	2	2	7	7							
Degree of Utl (X)	0.303	0.184	0.135	0.029	0.21	0.261							
Departure Headway (Ht)	5.328	5.115	5.16	5.228	5.176	4.953							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes							
Cap	672	699	691	680	691	723							
Service Time	3.077	2.864	3.216	3.299	2.923	2.7							
HCM Lane V/C Ratio	0.305	0.186	0.136	0.029	0.211	0.263							
HCM Control Delay	10.4	9	9	8.5	9.3	9.5							
HCM Lane LOS	B	A	A	A	A	A							
HCM 95th %tile Q	1.3	0.7	0.5	0.1	0.8	1							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/29/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR	SBL	SBR
Traffic Vol, veh/h	0	7	231	44		
Future Vol, veh/h	0	7	231	44		
Peak Hour Factor	0.92	0.84	0.84	0.84		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	8	275	52		
Number of Lanes	0	0	2	0		
Approach						
Opposing Approach	SB	SB				
Opposing Lanes	NB	NB				
Conflicting Approach Left	WB	WB				
Conflicting Lanes Left	1	1				
Conflicting Approach Right	EB	EB				
Conflicting Lanes Right	1	1				
HCM Control Delay	9.4	9.4				
HCM LOS	A	A				
Lane						
	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	31%	0%	32%	25%	33%	0%
Vol Thru, %	69%	72%	27%	27%	67%	69%
Vol Right, %	0%	28%	41%	49%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	92	130	146	134	130
LT Vol	29	0	42	36	44	0
RT Vol	0	26	53	71	0	40
Lane Flow Rate	112	109	155	174	160	155
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.189	0.172	0.234	0.268	0.263	0.238
Departure Headway (Hd)	6.034	5.677	5.434	5.339	5.925	5.54
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	595	632	661	673	606	648
Service Time	3.769	3.412	3.471	3.376	3.657	3.273
HCM Lane V/C Ratio	0.188	0.172	0.234	0.259	0.264	0.239
HCM Control Delay	10.2	9.6	10.1	10.2	10.8	10
HCM Lane LOS	B	A	B	B	B	A
HCM 95th-ile Q	0.7	0.6	0.9	1	1.1	0.9

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

11/29/2016

Intersection															
Intersection Delay, s/veh10.2															
Intersection LOS															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	42	35	53	0	36	39	71	0	29	131	26	0	44	180
Future Vol, veh/h	0	42	35	53	0	36	39	71	0	29	131	26	0	44	180
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	50	42	63	0	43	46	85	0	35	156	31	0	52	214
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2
Approach															
Opposing Approach	WB	WB			WB	WB			NB	NB			SB	SB	
Opposing Lanes	1	1			1	1			2	2			2	2	
Conflicting Approach Left	SB	SB			NB	NB			EB	EB			WB	WB	
Conflicting Lanes Left	2	2			2	2			1	1			1	1	
Conflicting Approach Right	NB	NB			SB	SB			WB	WB			EB	EB	
Conflicting Lanes Right	2	2			2	2			1	1			1	1	
HCM Control Delay	10.1	10.1			10.2	10.2			9.9	9.9			10.4	10.4	
HCM LOS	B	B			B	B			A	A			B	B	
Lane															
	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2									
Vol Left, %	31%	0%	32%	25%	33%	0%									
Vol Thru, %	69%	72%	27%	27%	67%	69%									
Vol Right, %	0%	28%	41%	49%	0%	31%									
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop									
Traffic Vol by Lane	95	92	130	146	134	130									
LT Vol	29	0	42	36	44	0									
RT Vol	0	26	53	71	0	40									
Lane Flow Rate	112	109	155	174	160	155									
Geometry Grp	7	7	2	2	7	7									
Degree of Util (X)	0.189	0.172	0.234	0.268	0.263	0.238									
Departure Headway (Hd)	6.034	5.677	5.434	5.339	5.925	5.54									
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes									
Cap	595	632	661	673	606	648									
Service Time	3.769	3.412	3.471	3.376	3.657	3.273									
HCM Lane V/C Ratio	0.188	0.172	0.234	0.259	0.264	0.239									
HCM Control Delay	10.2	9.6	10.1	10.2	10.8	10									
HCM Lane LOS	B	A	B	B	B	A									
HCM 95th-ile Q	0.7	0.6	0.9	1	1.1	0.9									

HCM 2010 AWSC Existing + Current Occupancy PM Peak Hour  
 1.1: Montecito Road & Bradbury Road 02/22/2017

Intersection	10.1											
Intersection Delay, s/veh	B											
Intersection LOS	B											
<b>Movement</b>	<b>EBU</b>	<b>EBL</b>	<b>EBT</b>	<b>EBR</b>	<b>WBU</b>	<b>WBL</b>	<b>WBT</b>	<b>WBR</b>	<b>NBU</b>	<b>NBL</b>	<b>NBT</b>	<b>NBR</b>
Lane Configurations	0	1	17	2	0	148	25	64	0	5	102	106
Traffic Vol, veh/h	0	1	17	2	0	148	25	64	0	5	102	106
Future Vol, veh/h	0.92	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.92	0.87	0.87	0.87
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Heavy Vehicles, %	0	1	20	2	0	170	29	74	0	6	117	122
Mvmt Flow	0	0	1	0	0	1	1	1	0	0	2	0
Number of Lanes												
<b>Approach</b>	<b>EB</b>						<b>WB</b>					
Opposing Approach	WB						EB					
Opposing Lanes	2						1					
Conflicting Approach Left	SB						NB					
Conflicting Lanes Left	2						2					
Conflicting Approach Right	NB						SB					
Conflicting Lanes Right	2						2					
HCM Control Delay	9.3						10.9					
HCM LOS	A						B					

Lane	NBLn1	NBLn2	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	5%	0%	86%	0%	40%	0%
Vol Thru, %	91%	32%	85%	14%	0%	0%	60%	95%
Vol Right, %	0%	68%	10%	0%	100%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	157	20	173	64	103	65	65
LT Vol	5	0	1	148	0	41	0	0
Through Vol	51	51	17	25	0	62	62	62
RT Vol	0	166	2	0	64	0	3	0
Lane Flow Rate	64	180	23	199	74	118	74	74
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.101	0.256	0.039	0.335	0.101	0.191	0.115	0.115
Departure Headway (Hd)	5.634	5.112	6.095	6.064	4.929	5.828	5.593	5.593
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	631	697	591	589	719	610	635	635
Service Time	3.416	2.894	4.095	3.854	2.719	3.617	3.381	3.381
HCM Lane V/C Ratio	0.101	0.268	0.039	0.338	0.103	0.193	0.117	0.117
HCM Control Delay	9.1	9.7	9.3	11.9	8.3	10	9.1	9.1
HCM Lane LOS	A	A	A	B	A	A	A	A
HCM 95th-ile Q	0.3	1	0.1	1.5	0.3	0.7	0.4	0.4

HCM 2010 AWSC Existing + Current Occupancy PM Peak Hour  
 1.1: Montecito Road & Bradbury Road 02/22/2017

Intersection	10.1											
Intersection Delay, s/veh	B											
Intersection LOS	B											
<b>Movement</b>	<b>SBU</b>	<b>SBL</b>	<b>SBT</b>	<b>SBR</b>								
Lane Configurations	0	41	123	3								
Traffic Vol, veh/h	0	41	123	3								
Future Vol, veh/h	0.92	0.87	0.87	0.87								
Peak Hour Factor	2	2	2	2								
Heavy Vehicles, %	0	47	141	3								
Mvmt Flow	0	0	2	0								
Number of Lanes												
<b>Approach</b>	<b>SB</b>											
Opposing Approach	NB											
Opposing Lanes	2											
Conflicting Approach Left	WB											
Conflicting Lanes Left	2											
Conflicting Approach Right	EB											
Conflicting Lanes Right	1											
HCM Control Delay	9.7											
HCM LOS	A											

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

11/29/2016

Intersection												
Intersection Delay, s/veh 8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	90	17	0	22	136	0	26	11			
Future Vol, veh/h	0	90	17	0	22	136	0	26	11			
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	100	19	0	24	151	0	29	12			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach												
Opposing Approach												
Opposing Lanes												
Conflicting Approach Left												
Conflicting Lanes Left												
Conflicting Approach Right												
Conflicting Lanes Right												
HCM Control Delay												
HCM LOS												
Approach	EB	WB	EB	NB								
Opposing Approach	WB	EB										
Opposing Lanes	1	1										
Conflicting Approach Left	0	NB	EB									
Conflicting Lanes Left	0	1	1									
Conflicting Approach Right	NB	0	WB									
Conflicting Lanes Right	1	0	1									
HCM Control Delay	7.7	8.2	7.8									
HCM LOS	A	A	A									

Lane												
Vol Left, %												
Vol Thru, %												
Vol Right, %												
Sign Control												
Traffic Vol by Lane												
LT Vol												
Through Vol												
RT Vol												
Lane Flow Rate												
Geometry Grp												
Degree of Util (X)												
Departure Headway (Hd)												
Convergence, Y/N												
Cap												
Service Time												
HCM Lane V/C Ratio												
HCM Control Delay												
HCM Lane LOS												
HCM 95th-tile Q												
NBLn1	EBLn1	WBLn1	NBLn1									
70%	0%	14%										
0%	84%	86%										
30%	16%	0%										
Stop	Stop	Stop										
37	107	158										
26	0	22										
0	90	136										
11	17	0										
41	119	176										
1	1	1										
0.052	0.134	0.201										
4.532	4.044	4.125										
Yes	Yes	Yes										
795	877	864										
2.532	2.113	2.179										
0.052	0.136	0.204										
7.8	7.7	8.2										
A	A	A										
0.2	0.5	0.7										

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

11/29/2016

Intersection														
Intersection Delay, s/veh 13														
Intersection LOS B														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	22	72	27	0	183	106	84	0	43	44	178	0	75
Future Vol, veh/h	0	22	72	27	0	183	106	84	0	43	44	178	0	75
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	75	28	0	191	110	88	0	45	46	185	0	78
Number of Lanes	0	0	2	0	0	0	1	0	0	1	0	0	0	1

Approach												
Opposing Approach												
Opposing Lanes												
Conflicting Approach Left												
Conflicting Lanes Left												
Conflicting Approach Right												
Conflicting Lanes Right												
HCM Control Delay												
HCM LOS												
Approach	EB	WB	EB	NB								
Opposing Approach	WB	EB										
Opposing Lanes	1	2										
Conflicting Approach Left	SB	NB	EB									
Conflicting Lanes Left	1	1	2									
Conflicting Approach Right	NB	SB	WB									
Conflicting Lanes Right	1	1	1									
HCM Control Delay	9.7	15.7	11.8									
HCM LOS	A	C	B									

Lane													
Vol Left, %													
Vol Thru, %													
Vol Right, %													
Sign Control													
Traffic Vol by Lane													
LT Vol													
Through Vol													
RT Vol													
Lane Flow Rate													
Geometry Grp													
Degree of Util (X)													
Departure Headway (Hd)													
Convergence, Y/N													
Cap													
Service Time													
HCM Lane V/C Ratio													
HCM Control Delay													
HCM Lane LOS													
HCM 95th-tile Q													
NBLn1	EBLn1	EBLn2	WBLn1	SBLn1									
16%	38%	0%	49%	54%									
17%	62%	57%	28%	24%									
67%	0%	43%	23%	22%									
Stop	Stop	Stop	Stop	Stop									
285	58	63	373	139									
43	22	0	183	75									
44	36	36	106	34									
178	0	27	84	30									
276	60	66	389	145									
2	7	7	5	2									
0.403	0.108	0.109	0.582	0.234									
5.259	6.457	5.959	5.393	5.825									
Yes	Yes	Yes	Yes	Yes									
682	553	600	668	614									
3.31	4.213	3.715	3.435	3.885									
0.405	0.108	0.11	0.582	0.236									
11.8	10	9.4	15.7	10.7									
B	A	A	C	B									
1.9	0.4	0.4	3.8	0.9									

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

11/29/2016

Intersection												
Intersection Delay, s/veh 11.5												
Intersection LOS B												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	49	292	0	43	50	0	231	54			
Future Vol, veh/h	0	49	292	0	43	50	0	231	54			
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	55	328	0	48	56	0	260	61			
Number of Lanes	0	1	1	0	1	0	0	0	1			
<b>Approach</b>												
	WB	WB		NB	NB		SB	SB				
Opposing Approach	0			SB	SB		NB	NB				
Opposing Lanes	0			1	1		1	1				
Conflicting Approach Left	NB			WB	WB							
Conflicting Lanes Left	1			0	0		2	2				
Conflicting Approach Right	SB			WB	WB							
Conflicting Lanes Right	1			2	2		0	0				
HCM Control Delay	11.3			8.9	8.9		12.5	12.5				
HCM LOS	B			A	A		B	B				
<b>Lane</b>												
	NBLn1	WBLn1	WBLn2	SBLn1	SBLn2							
Vol Left, %	0%	100%	0%	81%								
Vol Thru, %	46%	0%	0%	19%								
Vol Right, %	54%	0%	100%	0%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	93	49	292	285								
LT Vol	0	49	0	231								
Through Vol	43	0	0	54								
RT Vol	50	0	292	0								
Lane Flow Rate	104	55	328	320								
Geometry Grp	2	7	7	2								
Degree of Util (X)	0.144	0.093	0.446	0.467								
Departure Headway (Hd)	4.964	6.099	4.889	5.143								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	713	684	732	695								
Service Time	3.06	3.874	2.662	3.219								
HCM Lane V/C Ratio	0.146	0.094	0.448	0.46								
HCM Control Delay	8.9	9.5	11.6	12.5								
HCM Lane LOS	A	A	B	B								
HCM 95th-ile Q	0.5	0.3	2.3	2.4								

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

11/29/2016

Intersection												
Int Delay, s/veh 1.2												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	88	1	20	165	4	20						
Future Vol, veh/h	88	1	20	165	4	20						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	93	93	93	93	93	93						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	95	1	22	177	4	22						
<b>Major/Minor</b>												
	Major1	Major2	Minor1									
Conflicting Flow All	0	0	96	0	315	95						
Stage 1	-	-	-	-	220	-						
Stage 2	-	-	-	-	6.42	6.22						
Critical Hdwy	-	-	-	-	4.12	-						
Critical Hdwy Stg 1	-	-	-	-	5.42	-						
Critical Hdwy Stg 2	-	-	-	-	5.42	-						
Follow-up Hdwy	-	-	2.218	-	3.518	3.318						
Pot Cap-1 Maneuver	-	-	1498	-	678	962						
Stage 1	-	-	-	-	929	-						
Stage 2	-	-	-	-	817	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	1498	-	667	962						
Mov Cap-2 Maneuver	-	-	-	-	667	-						
Stage 1	-	-	-	-	929	-						
Stage 2	-	-	-	-	804	-						
<b>Approach</b>												
	EB	WB	WB	NB								
HCM Control Delay, s	0	0.8	0.8	9.1								
HCM LOS		A	A									
<b>Minor Lane/Major Mvmt</b>												
	NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	896	-	-	1498	-							
HCM Lane V/C Ratio	0.029	-	-	0.014	-							
HCM Control Delay (s)	9.1	-	-	7.4	0							
HCM Lane LOS	A	-	-	A	A							
HCM 95th-ile Q(veh)	0.1	-	-	0	-							

HCM 2010 Signalized Intersection Summary  
 1.: Seal Beach Boulevard & I-405 SB Ramps

11/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB			4								
Traffic Volume (veh/h)	147	26	16	544	37	488	9	1097	272	411	1110	131
Future Volume (veh/h)	147	26	16	544	37	488	9	1097	272	411	1110	131
Number	7	4	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pBT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	156	28	17	607	0	0	10	1167	289	437	1181	139
Adj No. of Lanes	0	2	0	2	0	2	1	3	1	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	679	0	303	21	1312	408	503	2775	864
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.57	1.00	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	156	0	45	607	0	0	10	1167	289	437	1181	139
Grp Sat Flow(s), veh/h/ln	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.3	18.2	23.2	0.0	0.0
Cycle Q Clear(g.c), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.3	18.2	23.2	0.0	0.0
Prop In Lane	1.00	0.00	0.38	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	679	0	303	21	1312	408	503	2775	864
V/C Ratio(X)	1.33	0.00	0.39	0.89	0.00	0.00	0.47	0.89	0.71	0.87	0.43	0.16
Avail Cap(c.a), veh/h	118	0	116	748	0	334	81	1350	420	503	2775	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	0.89
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.4	0.0	0.0	54.0	39.3	37.0	22.1	0.0	0.0
Incr Delay (d2), s/veh	193.4	0.0	2.1	12.4	0.0	0.0	15.3	9.3	9.9	13.7	0.4	0.4
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(50%), veh/ln	9.9	0.0	1.4	10.2	0.0	0.0	0.4	12.5	9.1	13.1	0.1	0.1
LnGrp Delay(d), s/veh	244.8	0.0	51.3	55.8	0.0	0.0	69.3	48.6	47.0	35.8	0.4	0.4
LnGrp LOS	F	D	E	E	D	E	D	D	D	D	A	A
Approach Vol, veh/h	201			607				1466				1757
Approach Delay, s/veh	201.4			55.8				48.4				9.2
Approach LOS	F			E				D				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	37.0	34.2	12.0	5.3	65.8	26.9						
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8	5.8						
Max Green Setting (Gmax), s	30.0	* 29	* 7.3	5.0	54.2	23.2						
Max Q Clear Time (g_c+I), s	25.2	26.3	9.3	2.6	2.0	20.4						
Green Ext Time (p_c), s	1.0	2.1	0.0	0.0	0.0	13.6						0.7
Intersection Summary	40.1											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
 2.: Seal Beach Boulevard & I-405 NB Ramps

11/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	6	8	7	355	5	564	15	1347	377	254	1293	239
Traffic Volume (veh/h)	6	8	7	355	5	564	15	1347	377	254	1293	239
Future Volume (veh/h)	6	8	7	355	5	564	15	1347	377	254	1293	239
Number	7	4	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pBT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	6	8	7	374	0	597	16	1418	0	267	1361	252
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	38	40	34	815	0	728	754	2175	677	242	1672	521
Arrive On Green	0.02	0.02	0.02	0.23	0.00	0.23	0.44	0.86	0.00	0.14	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	6	8	7	374	0	597	16	1418	0	267	1361	252
Grp Sat Flow(s), veh/h/ln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.4	0.5	0.5	10.0	0.0	19.7	0.3	10.0	0.0	15.0	27.0	14.0
Cycle Q Clear(g.c), s	0.4	0.5	0.5	10.0	0.0	19.7	0.3	10.0	0.0	15.0	27.0	14.0
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	38	40	34	815	0	728	754	2175	677	242	1672	521
V/C Ratio(X)	0.16	0.20	0.21	0.46	0.00	0.82	0.02	0.65	0.00	1.10	0.81	0.48
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	754	2175	677	242	1682	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.68	0.68	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	52.9	52.9	36.5	0.0	40.2	24.2	5.3	0.0	47.5	33.8	29.5
Incr Delay (d2), s/veh	1.9	2.4	2.9	0.4	0.0	2.9	0.0	1.1	0.0	88.4	4.5	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2	0.3	0.2	4.9	0.0	8.9	0.1	4.4	0.0	13.3	13.3	6.6
LnGrp Delay(d), s/veh	54.7	55.3	55.8	36.9	0.0	43.1	24.2	6.3	0.0	135.9	38.3	32.7
LnGrp LOS	D	E	E	D	D	C	A	A	F	D	D	C
Approach Vol, veh/h	21			971				1434				1880
Approach Delay, s/veh	55.3			40.7				6.5				51.4
Approach LOS	E			D				A				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	52.9	52.9	7.1	29.9	42.0	31.1						
Change Period (Y+Rc), s	4.0	* 4.0	* 4.7	5.8	* 5.8	5.8						
Max Green Setting (Gmax), s	30.7	* 30.7	* 5.0	5.0	54.1	39.0						
Max Q Clear Time (g_c+I), s	12.0	2.5	2.3	2.9	2.0	21.7						
Green Ext Time (p_c), s	0.0	9.3	0.0	2.0	7.2	3.6						
Intersection Summary	34.1											
HCM 2010 Ctrl Delay	C											
HCM 2010 LOS	C											
Notes												

Health Club within the Shops at Rossmoor  
Existing (2016) Current Occupancy  
Saturday Peak Hour

Level Of Service Computation Report  
ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
Intersection #3 Seal Beach Blvd/Lampson Ave  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.764  
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 60 Level Of Service: C

Street Name: Seal Beach Blvd  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Protected Permitted  
Rights: Ovl Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 0 1

Volume Module:  
Base Vol: 0 1520 360 502 1438 0 0 0 0 360 0 543  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Base: 0 1520 360 502 1438 0 0 0 0 360 0 543  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
PHF Volume: 0 1634 387 540 1546 0 0 0 387 0 584  
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 1634 387 540 1546 0 0 0 387 0 584  
OvAdjVol: 0 1634 387 540 1546 0 0 0 387 0 584

Saturation Flow Module:  
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 2.00 0.00 1.00  
Final Sat.: 0 5100 1700 3400 5100 0 0 0 3400 0 1700  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.32 0.23 0.16 0.30 0.00 0.00 0.00 0.11 0.00 0.34  
OvAdjV/S: 0.00 0.32 0.23 0.16 0.30 0.00 0.00 0.00 0.11 0.00 0.34  
Crit Moves: \*\*\*\*

Health Club within the Shops at Rossmoor  
Existing (2016) Current Occupancy  
Saturday Peak Hour

Level Of Service Computation Report  
ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
Intersection #4 Seal Beach Blvd/St. Cloud Dr  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.648  
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 44 Level Of Service: B

Street Name: Seal Beach Blvd  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Protected Split Phase  
Rights: Ovl Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:  
Base Vol: 362 1560 172 17 1348 69 102 2 398 174 35 5  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Base: 362 1560 172 17 1348 69 102 2 398 174 35 5  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
PHF Volume: 391 1683 186 18 1454 74 110 2 429 188 38 5  
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 391 1683 186 18 1454 74 110 2 429 188 38 5  
OvAdjVol: 391 1683 186 18 1454 74 110 2 429 188 38 5

Saturation Flow Module:  
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 2.00 2.70 0.30 1.00 2.85 0.15 0.98 0.02 2.00 1.62 0.33 0.05  
Final Sat.: 3400 4594 506 1700 4852 248 1667 33 3400 2764 556 79  
Capacity Analysis Module:  
Vol/Sat: 0.11 0.37 0.37 0.01 0.30 0.30 0.07 0.07 0.13 0.07 0.07 0.07  
OvAdjV/S: 0.11 0.37 0.37 0.01 0.30 0.30 0.07 0.07 0.13 0.07 0.07 0.07  
Crit Moves: \*\*\*\*



Health Club within the Shops at Rossmoor  
Existing (2016) Current Occupancy  
Saturday Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.815  
 Loss Time (sec): 70 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 70 Level of Service: D

Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:  
 Base Vol: 259 1223 108 92 1049 136 94 83 243 173 89 88  
 Growth 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  
 Initial Base: 259 1223 108 92 1049 136 94 83 243 173 89 88  
 User 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  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 273 1290 114 97 1107 143 99 88 256 182 94 93  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 273 1290 114 97 1107 143 99 88 256 182 94 93  
 PCE 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  
 MLF 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  
 Final Volume: 273 1290 114 97 1107 143 99 88 256 182 94 93

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.76 0.24 1.00 2.66 0.34 1.00 0.25 0.75 1.00 0.50 0.50  
 Final Sat.: 1700 4686 414 1700 4515 585 1700 433 1267 1700 855 845

Capacity Analysis Module:  
 Vol/Sat: 0.16 0.28 0.28 0.06 0.25 0.25 0.06 0.20 0.20 0.11 0.11 0.11  
 Crit Moves: \*\*\*\*

Health Club within the Shops at Rossmoor  
Existing (2016) Current Occupancy  
Saturday Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.668  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 46 Level of Service: B

Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:  
 Base Vol: 203 1385 15 25 1370 229 188 4 151 19 2 14  
 Growth 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  
 Initial Base: 203 1385 15 25 1370 229 188 4 151 19 2 14  
 User 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  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 208 1422 15 26 1407 235 193 4 155 20 2 14  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 208 1422 15 26 1407 235 193 4 155 20 2 14  
 PCE 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  
 MLF 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  
 Final Volume: 208 1422 15 26 1407 235 193 4 155 20 2 14

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00 2.57 0.43 1.00 0.03 0.97 1.00 0.13 0.87  
 Final Sat.: 1700 5045 55 1700 4370 730 1700 44 1656 1700 213 1487

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.28 0.28 0.02 0.32 0.32 0.11 0.09 0.09 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*

Intersection		EBT		EBR		WBL		WBT		NBL		NBR	
Int Delay, s/veh		1		1		1		1		1		1	
<b>Movement</b>													
Traffic Vol, veh/h		456	1	43	420	4	44						
Future Vol, veh/h		456	1	43	420	4	44						
Conflicting Peds. #/hr		0	0	0	0	0	0						
Sign Control		Free	Free	Free	Free	Stop	Stop						
RT Channelized		-	None	-	None	-	None						
Storage Length		-	-	-	-	0	0						
Veh in Median Storage, #		0	-	0	0	0	0						
Grade, %		0	-	0	0	0	0						
Peak Hour Factor		94	94	94	94	94	94						
Heavy Vehicles, %		2	2	2	2	2	2						
Mvmt Flow		485	1	46	447	4	47						
<b>Major/Minor</b>													
Major1 Major2 Major3 Minor1													
Conflicting Flow All		0	0	486	0	801	243						
Stage 1		-	-	-	-	486	-						
Stage 2		-	-	-	-	-	315						
Critical Hdwy		-	-	4.14	-	6.84	6.94						
Critical Hdwy Stg 1		-	-	-	-	5.84	-						
Critical Hdwy Stg 2		-	-	-	-	5.84	-						
Follow-up Hdwy		-	-	2.22	-	3.52	3.32						
Pot Cap-1 Maneuver		-	-	1073	-	322	768						
Stage 1		-	-	-	-	584	-						
Stage 2		-	-	-	-	713	-						
Platoon blocked, %		-	-	-	-	-	-						
Mov Cap-1 Maneuver		-	-	1073	-	304	768						
Mov Cap-2 Maneuver		-	-	-	-	584	-						
Stage 1		-	-	-	-	672	-						
Stage 2		-	-	-	-	-	-						
<b>Approach</b>													
EB WB NB													
HCM Control Delay, s		0		1		10.8							
HCM LOS				B									
<b>Minor Lane/Major Mvmt</b>													
NBLn1 EBT EBR WBL WBT													
Capacity (veh/h)		674	-	1073	-	-	-						
HCM Lane V/C Ratio		0.076	-	0.043	-	-	-						
HCM Control Delay (s)		10.8	-	8.5	0.2	-	-						
HCM Lane LOS		B	-	A	A	-	-						
HCM 95th %ile Q(veh)		0.2	-	0.1	-	-	-						

Existing Current Occ Sat Mon Feb 20, 2017 15:11:30 Page 6-1  
 Health Club within the Shops at Rossmore  
 Existing (2016) Current Occupancy  
 Saturday Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.627  
 Loss Time (sec): 42 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 42 Level of Service: B

Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R

Control:	Protected	Protected	Protected	Protected	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include	Include	Include
Mfn. Green:	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0	1	0

Volume Module:  
 Base Vol: 111 1349 44 17 1468 120 167 8 96 63 7 12  
 Growth 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  
 Initial Bse: 111 1349 44 17 1468 120 167 8 96 63 7 12  
 User 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  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 113 1377 45 17 1498 122 170 8 98 64 7 12  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 113 1377 45 17 1498 122 170 8 98 64 7 12  
 PCE 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  
 M/F 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  
 Final Volume: 113 1377 45 17 1498 122 170 8 98 64 7 12

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 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  
 Final Sat: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Capacity Analysis Module:  
 Vol/Sat: 0.07 0.28 0.28 0.01 0.32 0.32 0.10 0.06 0.06 0.04 0.04 0.01  
 Crit Moves: \*\*\*\*

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/18/2016

Intersection													
Intersection Delay, s/veh													8.8
Intersection LOS													A
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBR	WBT	NBU	NBL	NBT	NBR	NBR
Traffic Vol, veh/h	0	35	4	36	0	3	5	5	0	36	174	7	7
Future Vol, veh/h	0	35	4	36	0	3	5	5	0	36	174	7	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	4	39	0	3	5	5	0	39	189	8	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0
Approach	EB	WB	WB	WB	WB	WB	WB	WB	NB	NB	NB	NB	NB
Opposing Approach	WB	WB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB
Opposing Lanes	1	1	1	1	1	1	1	1	2	2	2	2	2
Conflicting Approach Left	SB	NB	NB	NB	EB	EB	EB	EB	1	1	1	1	1
Conflicting Lanes Left	2	2	2	2	2	2	2	2	1	1	1	1	1
Conflicting Approach Right	NB	SB	SB	SB	WB	WB	WB	WB	1	1	1	1	1
Conflicting Lanes Right	2	2	2	2	2	2	2	2	1	1	1	1	1
HCM Control Delay	8.6	8.6	8.2	8.2	8.2	8.2	8.2	8.2	8.8	8.8	8.8	8.8	8.8
HCM LOS	A	A	A	A	A	A	A	A	A	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	29%	0%	47%	23%	6%	0%
Vol Thru, %	71%	93%	5%	38%	94%	85%
Vol Right, %	0%	7%	48%	38%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	94	75	13	123	137
LT Vol	36	0	35	3	7	0
Through Vol	87	87	4	5	116	116
RT Vol	0	7	36	5	0	21
Lane Flow Rate	134	102	82	14	134	149
Geometry Grp	7	7	2	2	7	7
Degree of Utlr (X)	0.192	0.141	0.111	0.02	0.186	0.202
Departure Headway (Hd)	5.167	4.967	4.915	5.029	5.011	4.875
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	695	721	728	710	717	736
Service Time	2.898	2.699	2.952	3.074	2.741	2.604
HCM Lane V/C Ratio	0.193	0.141	0.113	0.02	0.187	0.202
HCM Control Delay	9.1	8.5	8.6	8.2	8.9	8.8
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.4	0.1	0.7	0.8

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/18/2016

Intersection						
Intersection Delay, s/veh						8.8
Intersection LOS						A
Movement	SBU	SBL	SBT	SBR	SBR	SBR
Traffic Vol, veh/h	0	7	232	21	21	21
Future Vol, veh/h	0	7	232	21	21	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	252	23	23	23
Number of Lanes	0	0	2	0	0	0
Approach	SB	SB	SB	SB	SB	SB
Opposing Approach	NB	NB	NB	NB	NB	NB
Opposing Lanes	2	2	2	2	2	2
Conflicting Approach Left	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	1	1
Conflicting Approach Right	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1
HCM Control Delay	8.8	8.8	8.8	8.8	8.8	8.8
HCM LOS	A	A	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	29%	0%	47%	23%	6%	0%
Vol Thru, %	71%	93%	5%	38%	94%	85%
Vol Right, %	0%	7%	48%	38%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	94	75	13	123	137
LT Vol	36	0	35	3	7	0
Through Vol	87	87	4	5	116	116
RT Vol	0	7	36	5	0	21
Lane Flow Rate	134	102	82	14	134	149
Geometry Grp	7	7	2	2	7	7
Degree of Utlr (X)	0.192	0.141	0.111	0.02	0.186	0.202
Departure Headway (Hd)	5.167	4.967	4.915	5.029	5.011	4.875
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	695	721	728	710	717	736
Service Time	2.898	2.699	2.952	3.074	2.741	2.604
HCM Lane V/C Ratio	0.193	0.141	0.113	0.02	0.187	0.202
HCM Control Delay	9.1	8.5	8.6	8.2	8.9	8.8
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.4	0.1	0.7	0.8

HCM 2010 AWSC  
10: Montecito Road & Mainway Drive/Rossmoor Center Way

11/18/2016

Intersection	Intersection Delay, s/veh																Intersection LOS			
	8.9																A			
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR				
Traffic Vol, veh/h	0	42	42	61	0	18	51	43	0	45	129	29	0	45	160	33				
Future Vol, veh/h	0	42	42	61	0	18	51	43	0	45	129	29	0	45	160	33				
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	47	47	68	0	20	57	48	0	50	143	32	0	50	178	37				
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2				
Approach	EB		EB		WB		WB		NB		NB		SB		SB					
Opposing Approach	WB		EB		EB		WB		SB		SB		NB		NB					
Opposing Lanes	1		1		2		2		2		2		2		2					
Conflicting Approach Left	SB		NB		EB		WB		WB		WB		WB		WB					
Conflicting Lanes Left	2		2		1		1		1		1		1		1					
Conflicting Approach Right	NB		SB		WB		WB		WB		WB		WB		WB					
Conflicting Lanes Right	2		2		1		1		1		1		1		1					
HCM Control Delay	9.7		9.4		9.4		9.6		9.6		9.6		9.7		9.7					
HCM LOS	A		A		A		A		A		A		A		A					

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	41%	0%	29%	16%	36%	0%	0%	0%
Vol Thru, %	59%	69%	29%	46%	64%	71%	71%	71%
Vol Right, %	0%	31%	42%	38%	0%	29%	0%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	94	145	112	125	113	113	113
LT Vol	45	0	42	18	45	0	0	0
Through Vol	65	65	42	51	80	80	80	80
RT Vol	0	29	61	43	0	33	0	33
Lane Flow Rate	122	104	161	124	139	126	126	126
Geometry Grp	7	7	2	2	7	7	7	7
Degree of Utl (X)	0.198	0.154	0.228	0.178	0.219	0.185	0.185	0.185
Departure Headway (Hd)	5.858	5.331	5.105	5.259	5.689	5.4	5.4	5.4
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	617	665	694	687	624	668	668	668
Service Time	3.558	3.13	3.2	3.259	3.488	3.1	3.1	3.1
HCM Lane V/C Ratio	0.198	0.156	0.232	0.18	0.223	0.189	0.189	0.189
HCM Control Delay	10	9.1	9.7	9.4	10.1	9.3	9.3	9.3
HCM Lane LOS	A	A	A	A	B	A	A	A
HCM 95th-ile Q	0.7	0.5	0.9	0.6	0.8	0.7	0.7	0.7

HCM 2010 AWSC  
11: Montecito Road & Bradbury Road

02/22/2017

Intersection	Intersection Delay, s/veh																Intersection LOS			
	8.9																A			
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR								
Traffic Vol, veh/h	0	1	15	4	0	115	20	69	0	3	70	94								
Future Vol, veh/h	0	1	15	4	0	115	20	69	0	3	70	94								
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97								
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2								
Mvmt Flow	0	1	15	4	0	119	21	71	0	3	72	97								
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0	2								
Approach	EB		EB		WB		WB		NB		NB									
Opposing Approach	WB		EB		EB		WB		SB		SB									
Opposing Lanes	2		2		1		1		2		2									
Conflicting Approach Left	SB		NB		WB		WB		EB		EB									
Conflicting Lanes Left	2		2		2		2		1		1									
Conflicting Approach Right	NB		SB		WB		WB		WB		WB									
Conflicting Lanes Right	2		2		2		2		2		2									
HCM Control Delay	8.7		9.3		9.3		8.5		8.5		8.5									
HCM LOS	A		A		A		A		A		A									

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	5%	85%	0%	45%	0%
Vol Thru, %	92%	27%	75%	15%	0%	55%	96%	96%
Vol Right, %	0%	73%	20%	0%	100%	0%	4%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	38	129	20	135	69	81	47	47
LT Vol	3	0	1	115	0	36	0	0
Through Vol	35	35	15	20	0	45	45	45
RT Vol	0	94	4	0	69	0	2	2
Lane Flow Rate	39	133	21	139	71	83	48	48
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.058	0.176	0.031	0.221	0.091	0.128	0.07	0.07
Departure Headway (Hd)	5.33	4.776	5.447	5.724	4.594	5.54	5.285	5.285
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	750	655	626	777	646	677	677
Service Time	3.068	2.514	3.502	3.466	2.335	3.281	3.025	3.025
HCM Lane V/C Ratio	0.058	0.177	0.032	0.222	0.091	0.128	0.071	0.071
HCM Control Delay	8.4	8.5	8.7	10.1	7.8	9.1	8.4	8.4
HCM Lane LOS	A	A	A	B	A	A	A	A
HCM 95th-ile Q	0.2	0.6	0.1	0.8	0.3	0.4	0.4	0.4

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Existing + Current Occupancy Saturday Peak Hour  
 02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement				
Lane Configurations				
Traffic Vol, veh/h	0	36	89	2
Future Vol, veh/h	0	36	89	2
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	37	92	2
Number of Lanes	0	0	2	0
Approach	SB			
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	8.8			
HCM LOS	A			

HCM 2010 AWSC  
 1.2: West Road & Rossmore Center Way  
 11/18/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	7.8								
Intersection LOS	A								
Movement									
Traffic Vol, veh/h	0	82	16	0	10	118	0	26	17
Future Vol, veh/h	0	82	16	0	10	118	0	26	17
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	90	18	0	11	130	0	29	19
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB			WB			NB		
Opposing Approach	WB			EB			EB		
Opposing Lanes	1			1			0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			1		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			1		
HCM Control Delay	7.6			8			7.6		
HCM LOS	A			A			A		
Lane	NBU	NB	NBU	WBU	WB	NBU	NB	NBU	NB
Vol Left, %	60%	0%	8%						
Vol Thru, %	0%	84%	92%						
Vol Right, %	40%	16%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	43	98	128						
LT Vol	26	0	10						
Through Vol	0	82	118						
RT Vol	17	16	0						
Lane Flow Rate	47	108	141						
Geometry Grp	1	1	1						
Degree of Util (X)	0.057	0.12	0.161						
Departure Headway (Hd)	4.353	4.025	4.114						
Convergence, Y/N	Yes	Yes	Yes						
Cap	828	883	866						
Service Time	2.353	2.086	2.165						
HCM Lane V/C Ratio	0.057	0.122	0.163						
HCM Control Delay	7.6	7.6	8						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.2	0.4	0.6						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

11/18/2016

Intersection Delay, s/veh 18																
Intersection LOS C																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	21	100	36	0	214	93	106	0	43	64	215	0	96	60	24
Future Vol, veh/h	0	21	100	36	0	214	93	106	0	43	64	215	0	96	60	24
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	106	38	0	228	99	113	0	46	68	229	0	102	64	26
Number of Lanes	0	0	2	0	0	0	1	0	0	0	0	1	0	0	0	1

Approach																
	EB			WB			NB			SB			SB			
Opposing Approach	WB			EB			SB			NB			WB			
Opposing Lanes	1			2			1			1			1			
Conflicting Approach Left	1			1			1			1			1			
Conflicting Lanes Left	1			1			1			1			1			
Conflicting Approach Right	1			1			1			1			1			
Conflicting Lanes Right	1			1			1			1			1			
HCM Control Delay	11.1			24			16.3			13.2			13.2			
HCM LOS	B			C			C			B			B			

Lane																
	NBU			EBU			WBU			NBU			SBU			
Vol Left, %	13%			30%			0%			52%			53%			
Vol Thru, %	20%			70%			58%			23%			33%			
Vol Right, %	67%			0%			42%			26%			13%			
Sign Control	Stop			Stop			Stop			Stop			Stop			
Traffic Vol by Lane	322			71			86			413			160			
LT Vol	43			21			0			214			96			
Through Vol	64			50			50			93			60			
RT Vol	215			0			36			106			24			
Lane Flow Rate	343			76			91			439			191			
Geometry Grp	2			7			7			5			2			
Degree of Utl (X)	0.561			0.151			0.172			0.735			0.352			
Departure Headway (Hd)	5.894			7.205			6.753			6.026			6.61			
Convergence, Y/N	Yes			Yes			Yes			Yes			Yes			
Cap	610			497			530			598			544			
Service Time	3.941			4.963			4.511			4.071			4.665			
HCM Lane V/C Ratio	0.562			0.153			0.172			0.734			0.351			
HCM Control Delay	16.3			11.3			10.9			24			13.2			
HCM Lane LOS	C			B			B			C			B			
HCM 95th-ile Q	3.5			0.5			0.6			6.3			1.6			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

11/18/2016

Intersection Delay, s/veh 15.5																
Intersection LOS C																
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT						
Traffic Vol, veh/h	0	85	394	0	69	76	0	339	52	52						
Future Vol, veh/h	0	85	394	0	69	76	0	339	52	52						
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97	0.97						
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2						
Mvmt Flow	0	88	406	0	71	78	0	349	54	54						
Number of Lanes	0	1	1	0	1	0	0	0	0	1						

Approach																
	WB			NB			SB			SB						
Opposing Approach	0			1			1			1						
Opposing Lanes	0			1			1			1						
Conflicting Approach Left	1			0			1			2						
Conflicting Lanes Left	1			0			1			2						
Conflicting Approach Right	1			1			1			0						
Conflicting Lanes Right	1			2			2			0						
HCM Control Delay	15.1			10.3			17.9			17.9						
HCM LOS	C			B			C			C						

Lane																
	NBU			WBU			NBU			SBU						
Vol Left, %	0%			100%			0%			87%						
Vol Thru, %	48%			0%			0%			13%						
Vol Right, %	52%			0%			100%			0%						
Sign Control	Stop			Stop			Stop			Stop						
Traffic Vol by Lane	145			85			394			391						
LT Vol	0			85			0			339						
Through Vol	69			0			0			52						
RT Vol	76			0			394			0						
Lane Flow Rate	149			88			406			403						
Geometry Grp	2			7			7			2						
Degree of Utl (X)	0.232			0.161			0.607			0.632						
Departure Headway (Hd)	5.589			6.599			5.383			5.642						
Convergence, Y/N	Yes			Yes			Yes			Yes						
Cap	641			543			670			641						
Service Time	3.638			4.337			3.12			3.679						
HCM Lane V/C Ratio	0.232			0.162			0.606			0.629						
HCM Control Delay	10.3			10.6			16.1			17.9						
HCM Lane LOS	B			B			C			C						
HCM 95th-ile Q	0.9			0.6			4.1			4.5						

Intersection	2.4			
Int Delay, s/veh	EBT	EBR	WBL	WBT
Movement	99	0	44	123
Traffic Vol, veh/h	99	0	44	123
Future Vol, veh/h	0	0	0	0
Conflicting Peds, #/hr	Free	Free	Free	Free
Sign Control	-	None	-	None
RT Channelized	-	-	-	-
Storage Length	0	-	0	0
Veh in Median Storage, #	0	-	0	0
Grade, %	0	-	0	0
Peak Hour Factor	92	92	92	92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	108	0	48	134
Major/Minor	Major1	Major2	Minor1	Minor1
Conflicting Flow All	0	0	337	108
Stage 1	-	-	108	-
Stage 2	-	-	229	-
Critical Hwy	-	-	4.12	6.22
Critical Hwy Stg 1	-	-	5.42	-
Critical Hwy Stg 2	-	-	3.518	3.318
Follow-up Hwy	-	-	1483	946
Pot Cap-1 Maneuver	-	-	916	-
Stage 1	-	-	809	-
Stage 2	-	-	635	946
Platoon blocked, %	-	-	1483	-
Mov Cap-1 Maneuver	-	-	635	-
Mov Cap-2 Maneuver	-	-	916	-
Stage 1	-	-	781	-
Stage 2	-	-	-	-
Approach	EB	WB	NB	NB
HCM Control/Delay, s	0	2	9.2	9.2
HCM LOS		A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL
Capacity (veh/h)	896	-	1483	-
HCM Lane V/C Ratio	0.053	-	0.032	-
HCM Control/Delay (s)	9.2	-	7.5	0
HCM Lane LOS	A	-	A	A
HCM 95th %tile Q(veh)	0.2	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	87	28	16	696	44	530	14	1056	166	434	1453
Traffic Volume (veh/h)	87	28	16	696	44	530	14	1056	166	434	1453
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6
Number	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/h	96	31	18	799	0	0	15	1160	182	477	1597
Adj Flow Rate, veh/h	0	2	0	2	0	1	3	1	1	1	3
Adj No. of Lanes	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	89	55	32	861	0	384	30	1233	384	682	3187
Cap, veh/h	0.05	0.05	0.05	0.24	0.00	0.00	0.24	0.24	0.24	0.26	0.42
Arrive On Green	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085
Sat Flow, veh/h	96	0	49	799	0	0	15	1160	182	477	1597
Grp Volume(v), veh/h	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695
Grp Sat Flow(s),veh/h	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.6	10.8	26.8	25.4
Q Serve(g.s), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.6	10.8	26.8	25.4
Cycle Q Clear(g.c), s	1.00	1.00	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	89	0	87	861	0	384	30	1233	384	682	3187
Lane Grp Cap(c), veh/h	1.08	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.70	0.50
V/C Ratio(X)	89	0	87	887	0	396	81	1234	384	682	3187
Avail Cap(c,a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.74	0.74	0.74
Upstream Filter(i)	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.7	35.1	19.3
Uniform Delay (d), s/veh	119.6	0.0	7.8	15.4	0.0	0.0	12.7	14.8	4.1	2.4	0.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	5.6	0.0	1.6	13.7	0.0	0.0	0.6	13.2	5.2	13.6	12.0
%ile Back(Q)(50%) veh/h	172.3	0.0	58.9	56.1	0.0	0.0	66.3	55.7	39.8	37.4	19.7
LnGrp Delay(d),s/veh	F	E	E	E	E	E	E	D	D	D	B
LnGrp LOS	F	E	E	E	E	E	E	D	D	D	B
Approach Vol, veh/h	145		799		1357						2153
Approach Delay, s/veh	134.0		56.1		53.7						23.4
Approach LOS	F	E	E	E	D						C
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2	4	5	6						
Phs Duration (G+Y+Rc), s	48.1	32.5	10.2	5.8	74.7	32.5					
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8	5.8					
Max Green Setting (Gmax), s	30.0	* 27	* 5.5	5.0	51.7	27.5					
Max Q Clear Time (g_c+I), s	28.8	26.6	7.5	2.9	27.4	26.2					
Green Ext Time (p_c), s	0.2	0.1	0.0	0.0	14.5	0.5					
Intersection Summary											
HCM 2010 Ctrl Delay	42.1										
HCM 2010 LOS	D										
Notes											

12/1/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	9	11	5	367	53	557	110	1206	348	332	1575	464
Future Volume (veh/h)	9	11	5	367	53	557	110	1206	348	332	1575	464
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	10	12	6	408	0	658	122	1340	0	369	1750	516
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Cap. veh/h	46	49	41	887	0	791	534	1865	581	306	1871	583
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.31	0.73	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	10	12	6	408	0	658	122	1340	0	369	1750	516
Grp Sat Flow(s), veh/h/m	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Serve(g.s), s	0.6	0.7	0.4	10.7	0.0	21.6	2.9	16.3	0.0	19.0	36.5	33.6
Cycle Q Clear(g.s)	0.6	0.7	0.4	10.7	0.0	21.6	2.9	16.3	0.0	19.0	36.5	33.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	46	49	41	887	0	791	534	1865	581	306	1871	583
V/C Ratio(X)	0.22	0.25	0.15	0.46	0.00	0.83	0.23	0.72	0.00	1.20	0.94	0.89
Avail Cap(c), veh/h	81	85	72	1258	0	1123	534	1865	581	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.58	0.58	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	52.5	52.5	0.0	39.1	33.1	11.5	0.0	45.5	33.5	32.6
Incr Delay (d2), s/veh	2.3	2.6	1.6	0.4	0.0	3.8	0.1	1.4	0.0	118.7	10.3	17.8
Initial Q Delay(Q3), 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(50%), veh/ln	0.4	0.2	0.2	5.3	0.0	9.9	1.4	7.4	0.0	19.4	18.8	17.5
LnGrp Delay(d), s/veh	54.8	55.1	53.9	35.3	0.0	42.8	33.2	12.9	0.0	164.2	43.8	50.4
LnGrp LOS	D	E	D	D	D	C	B	B	F	D	D	D
Approach Vol, veh/h	28	54.7	39.9	1066	0	1462	14.6	619	0	2635	619	0
Approach Delay, s/veh	54.7	54.7	39.9	39.9	0	39.9	14.6	619	0	619	619	0
Approach LOS	D	D	D	B	B	B	B	E	E	E	E	E
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+R), s	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.1
Change Period (Y+R), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7
Max Q Clear Time (g_c+d), s	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary  
 HCM 2010 Ctrl Delay 44.0  
 HCM 2010 LOS D  
 Notes

Existing Full Occ AM Mon Feb 20, 2017 15:11:53 Page 2-1  
 Health Club within the Shops at Rossmoor  
 Existing (2016) Full Occupancy  
 AM Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.812
Loss Time (sec):	69	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	69	Level Of Service:	D

Street Name: Seal Beach Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Permitted
Rights:	Ovl	Include	Ovl	Include	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	2 0 0 0 1	2 0 0 0 1

Volume Module:  
 Base Vol: 0 1465 305 301 1669 0 0 0 0 0 702 0 611  
 Growth 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  
 Initial Base: 0 1465 305 301 1669 0 0 0 0 0 702 0 611  
 User 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  
 PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91  
 PHF Volume: 0 1613 336 331 1838 0 0 0 0 0 773 0 673  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1613 336 331 1838 0 0 0 0 0 773 0 673  
 PCE 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  
 MLF 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  
 Final Volume: 0 1613 336 331 1838 0 0 0 0 0 773 0 673  
 OvlAdjVol: 0 1613 336 331 1838 0 0 0 0 0 773 0 673

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 2.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.32 0.20 0.10 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.40  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*



Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.501  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 33 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1

Volume Module:  
 Base Vol: 56 1627 31 21 1356 25 21 4 14 24 2 21  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 56 1627 31 21 1356 25 21 4 14 24 2 21  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90  
 PHF Volume: 62 1800 34 23 1500 28 23 4 15 27 2 23  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 62 1800 34 23 1500 28 23 4 15 27 2 23  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 62 1800 34 23 1500 28 23 4 15 27 2 23

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.94 0.06 1.00 2.95 0.05 1.00 0.22 0.78 1.00 0.09 0.91  
 Final Sat.: 1700 5005 95 1700 5008 92 1700 378 1322 1700 148 1552

Capacity Analysis Module:  
 Vol/Sat: 0.04 0.36 0.36 0.01 0.30 0.30 0.01 0.01 0.01 0.02 0.01 0.01  
 Crit Moves: \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.631  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 43 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Split Phase	Split Phase
Rights:	Include	Include	OVI	Include
Min. Green:	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1

Volume Module:  
 Base Vol: 377 1659 47 4 1322 46 106 3 567 65 13 2  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 377 1659 47 4 1322 46 106 3 567 65 13 2  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88  
 PHF Volume: 429 1887 53 5 1504 52 121 3 645 74 15 2  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 429 1887 53 5 1504 52 121 3 645 74 15 2  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 429 1887 53 5 1504 52 121 3 645 74 15 2  
 OriAdjVol: \*\*\*\*\*

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.92 0.08 1.00 2.90 0.10 0.97 0.03 2.00 1.63 0.32 0.05  
 Final Sat.: 3400 4959 141 1700 4929 171 1653 47 3400 2763 552 85

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.38 0.38 0.00 0.31 0.31 0.07 0.07 0.19 0.03 0.03 0.03  
 OriAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.731  
 Loss Time (sec): 54 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 54 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Include	Permitted
Rights:	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 146 1521 26 14 1330 155 270 18 97 70 22 23  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 146 1521 26 14 1330 155 270 18 97 70 22 23  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHE Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94  
 PHF Volume: 156 1627 28 15 1422 166 289 19 104 75 24 25  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 156 1627 28 15 1422 166 289 19 104 75 24 25  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 156 1627 28 15 1422 166 289 19 104 75 24 25

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.05 1.00 2.69 0.31 1.00 0.16 0.84 0.76 0.24 1.00  
 Final Sat.: 1700 5014 86 1700 4568 532 1700 266 1434 1293 407 1700

Capacity Analysis Module:  
 Vol/Sat: 0.09 0.32 0.32 0.01 0.31 0.31 0.17 0.07 0.07 0.04 0.06 0.01  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.539  
 Loss Time (sec): 36 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 36 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Include	Permitted
Rights:	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 65 1599 15 19 1372 70 77 7 78 17 10 39  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 65 1599 15 19 1372 70 77 7 78 17 10 39  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHE Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92  
 PHF Volume: 71 1748 16 21 1499 77 84 8 85 19 11 43  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 71 1748 16 21 1499 77 84 8 85 19 11 43  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 71 1748 16 21 1499 77 84 8 85 19 11 43

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.05 1.00 2.85 0.15 1.00 0.08 0.92 1.00 0.20 0.80  
 Final Sat.: 1700 5053 47 1700 4852 248 1700 140 1560 1700 347 1353

Capacity Analysis Module:  
 Vol/Sat: 0.04 0.35 0.35 0.01 0.31 0.31 0.05 0.05 0.05 0.01 0.03 0.03  
 Crit Moves: \*\*\*\*

12/1/2016

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection																	
Int Delay, s/veh											1.3						
<b>Movement</b>																	
Traffic Vol, veh/h	EBT	EBR	WBL	WBT	NBL	NBR											
605	4	28	403	8	70	70											
Future Vol, veh/h	605	4	28	403	8	70											
Conflicting Peds, #/hr	0	0	0	0	0	0											
Sign Control	Free	Free	Free	Free	Stop	Stop											
RT Channelized	-	None	-	None	-	None											
Storage Length	-	-	-	-	0	-											
Veh in Median Storage, #	0	-	-	0	0	-											
Grade, %	0	-	-	0	0	-											
Peak Hour Factor	79	79	79	79	79	79											
Heavy Vehicles, %	2	2	2	2	2	2											
Mvmt Flow	766	5	35	510	10	89											
<b>Major/Minor</b>																	
Major1											Major2						
Major1											Minor1						
Conflicting Flow All	0	0	771	0	1094	385											
Stage 1	-	-	-	-	768	-											
Stage 2	-	-	-	-	326	-											
Critical Hwy	-	-	4.14	-	6.84	6.94											
Critical Hwy Stg 1	-	-	-	-	5.84	-											
Critical Hwy Stg 2	-	-	-	-	5.84	-											
Follow-up Hwy	-	-	2.22	-	3.52	3.32											
Pot Cap-1 Maneuver	-	-	840	-	208	613											
Stage 1	-	-	-	-	418	-											
Stage 2	-	-	-	-	704	-											
Platoon blocked, %	-	-	-	-	-	-											
Mov Cap-1 Maneuver	-	-	840	-	196	613											
Mov Cap-2 Maneuver	-	-	-	-	196	-											
Stage 1	-	-	-	-	418	-											
Stage 2	-	-	-	-	663	-											
<b>Approach</b>																	
EB											WB						
0											0.8						
<b>HCM/Control Delay, s</b>																	
0											13.9						
<b>HCM LOS</b>																	
B											B						
<b>Minor Lane/Major Mvmt</b>																	
NBLn1											EBT		WBL		WBT		
Capacity (veh/h)	503											-		840		-	
HCM Lane V/C Ratio	0.196											-		0.042		-	
HCM Control Delay (s)	13.9											-		9.5		0.2	
HCM Lane LOS	B											A		A		A	
HCM 95th %tile Q(veh)	0.7											-		0.1		-	

12/1/2016

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection																					
Int Delay, s/veh											11.4										
<b>Intersection LOS</b>																					
B											B										
<b>Movement</b>																					
Traffic Vol, veh/h	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR									
0	54	6	126	0	2	3	1	0	108	167	2	2									
Future Vol, veh/h	0	54	6	126	0	2	3	1	0	108	167	2									
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79									
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2									
Mvmt Flow	0	68	8	159	0	3	4	1	0	137	211	3									
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2									
<b>Approach</b>																					
EB											WB										
WB											EB										
Opposing Approach	1											1									
Opposing Lanes	SB											NB									
Conflicting Approach Left	2											2									
Conflicting Lanes Left	NB											SB									
Conflicting Approach Right	2											2									
Conflicting Lanes Right	11.3											9.4									
HCM Control Delay	B											A									
HCM LOS	B											B									
<b>Lane</b>																					
NBLn1											NBLn2		EBLn1		EBLn2		SBLn1		SBLn2		
Vol Left, %	56%											0%		29%		33%		0%		0%	
Vol Thru, %	44%											98%		3%		50%		100%		78%	
Vol Right, %	0%											2%		68%		17%		0%		22%	
Sign Control	Stop											Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	192											86		186		6		191		122	
LT Vol	108											0		54		2		0		0	
Through Vol	84											84		6		3		191		95	
RT Vol	0											2		126		1		0		27	
Lane Flow Rate	242											108		235		8		241		155	
Geometry Grp	7											7		2		2		7		7	
Degree of Util (X)	0.405											0.172		0.352		0.013		0.382		0.238	
Departure Headway (Ht)	6.017											5.715		5.389		6.224		5.697		5.541	
Convergence, Y/N	Yes											Yes		Yes		Yes		Yes		Yes	
Cap	599											629		669		574		632		649	
Service Time	3.741											3.439		3.418		4.269		3.42		3.264	
HCM Lane V/C Ratio	0.404											0.172		0.351		0.014		0.381		0.239	
HCM Control Delay	12.8											9.6		11.3		9.4		11.9		10	
HCM Lane LOS	B											A		B		A		B		A	
HCM 95th %tile Q	2											0.6		1.6		0		1.8		0.9	

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR	SBL	SBR
Traffic Vol, veh/h	0	0	286	27		
Future Vol, veh/h	0	0	286	27		
Peak Hour Factor	0.92	0.79	0.79	0.79		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	0	362	34		
Number of Lanes	0	0	2	0		
Approach						
Approach	SB		SB			
Opposing Approach	NB		NB			
Opposing Lanes	2		2			
Conflicting Approach Left	WB		WB			
Conflicting Lanes Left	1		1			
Conflicting Approach Right	EB		EB			
Conflicting Lanes Right	1		1			
HCM Control Delay	11.2		11.2			
HCM LOS	B		B			

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection Delay, s/veh11.9																
Intersection LOS																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR	
Traffic Vol, veh/h	0	97	61	88	0	13	42	31	0	39	181	21	0	24	203	
Future Vol, veh/h	0	97	61	88	0	13	42	31	0	39	181	21	0	24	203	
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	117	73	106	0	16	51	37	0	47	218	25	0	29	245	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	
Approach																
Approach	EB		WB		WB		EB		NB		NB		SB		SB	
Opposing Approach	WB		EB		EB		WB		SB		SB		NB		NB	
Opposing Lanes	1		1		1		1		2		2		2		2	
Conflicting Approach Left	SB		NB		NB		EB		WB		WB		WB		WB	
Conflicting Lanes Left	2		2		2		1		1		1		1		1	
Conflicting Approach Right	NB		SB		SB		WB		WB		WB		EB		EB	
Conflicting Lanes Right	2		2		2		1		1		1		1		1	
HCM Control Delay	13.7		10.4		10.4		11.2		11.2		11.5		11.5		11.5	
HCM LOS	B		B		B		B		B		B		B		B	
Lane																
Lane	NBU1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2					
Vol Left, %	30%		0%		39%		15%		19%		0%					
Vol Thru, %	70%		81%		25%		49%		81%		61%					
Vol Right, %	0%		19%		36%		0%		39%		0%					
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop					
Traffic Vol by Lane	130		112		246		86		126		167					
LT Vol	39		0		97		13		24		0					
Through Vol	91		91		61		42		102		102					
RT Vol	0		21		88		31		0		65					
Lane Flow Rate	156		134		296		104		151		201					
Geometry Grp	7		7		2		2		7		7					
Degree of Util (X)	0.278		0.229		0.467		0.174		0.264		0.329					
Departure Headway (Hd)	6.412		6.125		5.674		6.04		6.281		5.905					
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes					
Cap	559		584		631		591		570		606					
Service Time	4.175		3.887		3.733		4.116		4.04		3.665					
HCM Lane V/C Ratio	0.279		0.229		0.469		0.176		0.265		0.332					
HCM Control Delay	11.6		10.7		13.7		10.4		11.3		11.6					
HCM Lane LOS	B		B		B		B		B		B					
HCM 95th-ile Q	1.1		0.9		2.5		0.6		1.1		1.4					

HCM 2010 AWSC Existing Full Occupancy AM Peak Hour  
 11: Montecito Road & Bradbury Road 02/22/2017

Intersection													
Intersection Delay, s/veh	12.8												
Intersection LOS	B												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations	0	5	24	2	0	135	18	146	0	0	139	219	
Traffic Vol, veh/h	0	5	24	2	0	135	18	146	0	0	139	219	
Future Vol, veh/h	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2	
Heavy Vehicles, %	0	6	30	3	0	171	23	185	0	0	176	277	
Mvmt Flow	0	0	1	0	0	1	1	1	0	0	2	0	
Number of Lanes													

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	WB	EB	NB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	10.9	12.5	12.5	13.6	13.6
HCM LOS	B	B	B	B	B

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	16%	88%	0%	53%	0%	0%	0%	0%
Vol Thru, %	100%	17%	77%	12%	0%	47%	97%	0%	0%	0%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	0%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	265	31	153	146	140	68	0	0	0
LT Vol	0	0	5	135	0	74	0	0	0	0
Through Vol	93	46	24	18	0	66	66	0	0	0
RT Vol	0	219	2	0	146	0	2	0	0	0
Lane Flow Rate	117	336	39	194	185	177	86	0	0	0
Geometry Grp	7	7	6	7	7	7	7	0	0	0
Degree of Utl (X)	0.203	0.528	0.079	0.375	0.299	0.331	0.154	0	0	0
Departure Headway (Hd)	6.242	5.655	7.204	6.977	5.82	6.726	6.406	0	0	0
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	574	635	495	515	615	533	555	0	0	0
Service Time	3.996	3.409	5.284	4.733	3.576	4.487	4.197	0	0	0
HCM Lane V/C Ratio	0.204	0.529	0.079	0.377	0.301	0.332	0.165	0	0	0
HCM Control Delay	10.6	14.6	10.9	13.9	11.1	12.8	10.4	0	0	0
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.8	3.1	0.3	1.7	1.3	1.4	0.5	0	0	0

HCM 2010 AWSC Existing Full Occupancy AM Peak Hour  
 11: Montecito Road & Bradbury Road 02/22/2017

Intersection													
Intersection Delay, s/veh	12.8												
Intersection LOS	B												
Movement	SBU	SBL	SBT	SBR									
Lane Configurations	0	74	132	2									
Traffic Vol, veh/h	0	74	132	2									
Future Vol, veh/h	0.92	0.79	0.79	0.79									
Peak Hour Factor	2	2	2	2									
Heavy Vehicles, %	0	94	167	3									
Mvmt Flow	0	0	2	0									
Number of Lanes													

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	12
HCM LOS	B

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 7.7												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	99	7	0	6	86	0	4	12			
Future Vol, veh/h	0	99	7	0	6	86	0	4	12			
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	116	8	0	7	101	0	5	14			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach			WB			NB		
Opposing Approach	WB	EB						
Opposing Lanes	1	1				0		
Conflicting Approach Left	0	NB				EB		
Conflicting Lanes Left	1	1				1		
Conflicting Approach Right	NB	0				WB		
Conflicting Lanes Right	1	0				1		
HCM Control Delay	7.7	7.7				7.1		
HCM LOS	A	A				A		

Lane												
NBLn1 EBLn1 WBLn1												
Vol Left, %	25% 0% 7%											
Vol Thru, %	0% 93% 93%											
Vol Right, %	75% 7% 0%											
Sign Control	Stop	Stop	Stop									
Traffic Vol by Lane	16	106	92									
LT Vol	4	0	6									
Through Vol	0	99	86									
RT Vol	12	7	0									
Lane Flow Rate	19	125	108									
Geometry Grp	1 1 1											
Degree of Utl (X)	0.021 0.139 0.122											
Departure Headway (Hd)	4.031 4.008 4.074											
Convergence, Y/N	Yes	Yes	Yes									
Cap	893	893	879									
Service Time	2.031 2.038 2.105											
HCM Lane V/C Ratio	0.021 0.14 0.123											
HCM Control Delay	7.1 7.7 7.7											
HCM Lane LOS	A A A											
HCM 95th-tile Q	0.1 0.5 0.4											

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 8.7												
Intersection LOS A												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBR
Traffic Vol, veh/h	0	35	98	14	0	73	58	51	0	13	16	31
Future Vol, veh/h	0	35	98	14	0	73	58	51	0	13	16	31
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	105	15	0	78	62	55	0	14	17	33
Number of Lanes	0	0	2	0	0	0	1	0	0	1	0	0

Approach			WB			NB		
Opposing Approach	WB	EB						
Opposing Lanes	1	2				1		
Conflicting Approach Left	SB	NB				EB		
Conflicting Lanes Left	1	1				2		
Conflicting Approach Right	NB	SB				WB		
Conflicting Lanes Right	1	1				1		
HCM Control Delay	8.5	9				8.1		
HCM LOS	A	A				A		

Lane												
NBLn1 EBLn1 EBLn2 WBLn1 SBLn1												
Vol Left, %	22% 42% 0% 40% 66%											
Vol Thru, %	27% 58% 78% 32% 18%											
Vol Right, %	52% 0% 22% 28% 17%											
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	60	84	63	182	90							
LT Vol	13	35	0	73	59							
Through Vol	16	49	49	58	16							
RT Vol	31	0	14	51	15							
Lane Flow Rate	65	90	68	196	97							
Geometry Grp	2 7 7 5 2											
Degree of Utl (X)	0.083 0.133 0.093 0.246 0.131											
Departure Headway (Hd)	4.626 5.298 4.932 4.529 4.876											
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes							
Cap	773	677	726	793	735							
Service Time	2.664 3.03 2.663 2.559 2.912											
HCM Lane V/C Ratio	0.084 0.133 0.094 0.247 0.132											
HCM Control Delay	8.1 8.8 8.2 9 8.7											
HCM Lane LOS	A A A A A											
HCM 95th-tile Q	0.3 0.5 0.3 1 0.4											

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection										
Intersection Delay, s/veh 7.8										
Intersection LOS A										
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT	SBT
Traffic Vol, veh/h	0	71	37	0	16	32	0	28	15	15
Future Vol, veh/h	0	71	37	0	16	32	0	28	15	15
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	82	43	0	18	37	0	32	17	17
Number of Lanes	0	1	1	0	1	0	0	0	1	1
Approach	WB		WB		NB		SB		SB	
Opposing Approach	0		0		SB		NB		NB	
Opposing Lanes	0		0		1		1		1	
Conflicting Approach Left	NB		0		WB		2		2	
Conflicting Lanes Left	1		0		WB		2		2	
Conflicting Approach Right	SB		0		WB		0		0	
Conflicting Lanes Right	1		0		2		0		0	
HCM Control Delay	8.1		7.1		7.1		7.7		A	
HCM LOS	A		A		A		A		A	
Lane	NBLn1 WBLn1 WBLn2		SBLn1		SBLn1		SBLn1		SBLn1	
Vol Left, %	0%		100%		0%		65%		65%	
Vol Thru, %	33%		0%		0%		35%		35%	
Vol Right, %	67%		0%		100%		0%		0%	
Sign Control	Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	48		71		37		43		43	
LT Vol	0		71		0		28		28	
Through Vol	16		0		0		15		15	
RT Vol	32		0		37		0		0	
Lane Flow Rate	55		82		43		49		49	
Geometry Grp	2		7		7		2		2	
Degree of Util (X)	0.06		0.118		0.047		0.061		0.061	
Departure Headway (Hd)	3.897		5.216		4.014		4.428		4.428	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes	
Cap	924		685		885		814		814	
Service Time	1.899		2.97		1.768		2.43		2.43	
HCM Lane V/C Ratio	0.06		0.12		0.049		0.06		0.06	
HCM Control Delay	7.1		8.7		7		7.7		7.7	
HCM Lane LOS	A		A		A		A		A	
HCM 95th-ile Q	0.2		0.4		0.1		0.2		0.2	

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection										
Intersection Delay, s/veh 0.7										
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h	110	0	9	95	0	11				
Future Vol, veh/h	110	0	9	95	0	11				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	89	89	89	89	89	89				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	124	0	10	107	0	12				
Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	0	0	124	0	251	124				
Stage 1	-	-	-	-	124	-				
Stage 2	-	-	-	-	127	-				
Critical Hdwy	-	-	4.12	-	6.42	6.22				
Critical Hdwy Stg 1	-	-	-	-	5.42	-				
Critical Hdwy Stg 2	-	-	-	-	5.42	-				
Follow-up Hdwy	-	-	2.218	-	3.518	3.318				
Pot Cap-1 Maneuver	-	-	1463	-	738	927				
Stage 1	-	-	-	-	902	-				
Stage 2	-	-	-	-	899	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1463	-	733	927				
Mov Cap-2 Maneuver	-	-	-	-	733	-				
Stage 1	-	-	-	-	902	-				
Stage 2	-	-	-	-	893	-				
Approach	EB		WB		NB					
HCM Control Delay, s	0		0.6		8.9					
HCM LOS	A		A		A					
Minor Lane/Major Mvmt	NBLn1		EBT		EBR					
Capacity (veh/h)	927		-		1463					
HCM Lane V/C Ratio	0.013		-		0.007					
HCM Control Delay (s)	8.9		-		7.5					
HCM Lane LOS	A		-		A					
HCM 95th-ile Q(veh)	0		-		0					

HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB			4								
Traffic Volume (veh/h)	166	30	20	321	35	522	11	1450	361	521	1069	127
Future Volume (veh/h)	166	30	20	321	35	522	11	1450	361	521	1069	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pBT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	171	31	21	357	0	0	11	1495	372	537	1102	131
Adj No. of Lanes	0	2	0	2	0	0	1	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	416	0	186	23	1592	496	570	3242	1009
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.64	1.00	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	171	0	52	357	0	0	11	1495	372	537	1102	131
Grp Sat Flow(s), veh/h/ln	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.5	23.2	30.2	0.0	0.0
Cycle Q Clear(g.c), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.5	23.2	30.2	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	416	0	186	23	1592	496	570	3242	1009
V/C Ratio(X)	1.34	0.00	0.42	0.86	0.00	0.00	0.48	0.94	0.75	0.94	0.34	0.13
Avail Cap(c.a), veh/h	127	0	125	426	0	190	81	1600	498	570	3242	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.8	33.9	18.8	0.0	0.0
Incr Delay (d2), s/veh	197.2	0.0	2.2	15.6	0.0	0.0	14.6	12.1	10.0	22.3	0.3	0.2
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(50%), veh/ln	10.8	0.0	1.6	6.2	0.0	0.0	0.4	16.5	11.5	17.8	0.1	0.1
LnGrp Delay(d), s/veh	248.3	0.0	51.0	63.2	0.0	0.0	68.5	48.9	44.0	41.0	0.3	0.2
LnGrp LOS	F	D	E	E	D	E	D	D	D	D	A	A
Approach Vol, veh/h	223			357				1878			1770	
Approach Delay, s/veh	202.3			63.2				48.0			12.6	
Approach LOS	F			E				D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	41.1	40.2		12.6	5.4	75.9		16.7				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+I), s	32.2	33.5		9.9	2.7	2.0		12.9				
Green Ext Time (p_c), s	0.5	1.0		0.0	0.0	0.0		13.4				
Intersection Summary												
HCM 2010 Ctrl Delay	42.6											
HCM 2010 LOS	D											
Notes												

Health Club within The Shops at Rossmore TIA 5:00 pm 3/23/2016 Existing Full Occupancy PM Peak Hour  
 LSA Associates, Inc. - DL

Health Club within The Shops at Rossmore TIA 5:00 pm 3/23/2016 Existing Full Occupancy PM Peak Hour  
 LSA Associates, Inc. - DL

HCM 2010 Signalized Intersection Summary  
 1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB			4								
Traffic Volume (veh/h)	166	30	20	321	35	522	11	1450	361	521	1069	127
Future Volume (veh/h)	166	30	20	321	35	522	11	1450	361	521	1069	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pBT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	171	31	21	357	0	0	11	1495	372	537	1102	131
Adj No. of Lanes	0	2	0	2	0	0	1	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	416	0	186	23	1592	496	570	3242	1009
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.64	1.00	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	171	0	52	357	0	0	11	1495	372	537	1102	131
Grp Sat Flow(s), veh/h/ln	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.5	23.2	30.2	0.0	0.0
Cycle Q Clear(g.c), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.5	23.2	30.2	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	416	0	186	23	1592	496	570	3242	1009
V/C Ratio(X)	1.34	0.00	0.42	0.86	0.00	0.00	0.48	0.94	0.75	0.94	0.34	0.13
Avail Cap(c.a), veh/h	127	0	125	426	0	190	81	1600	498	570	3242	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.8	33.9	18.8	0.0	0.0
Incr Delay (d2), s/veh	197.2	0.0	2.2	15.6	0.0	0.0	14.6	12.1	10.0	22.3	0.3	0.2
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(50%), veh/ln	10.8	0.0	1.6	6.2	0.0	0.0	0.4	16.5	11.5	17.8	0.1	0.1
LnGrp Delay(d), s/veh	248.3	0.0	51.0	63.2	0.0	0.0	68.5	48.9	44.0	41.0	0.3	0.2
LnGrp LOS	F	D	E	E	D	E	D	D	D	D	A	A
Approach Vol, veh/h	223			357				1878			1770	
Approach Delay, s/veh	202.3			63.2				48.0			12.6	
Approach LOS	F			E				D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	41.1	40.2		12.6	5.4	75.9		16.7				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+I), s	32.2	33.5		9.9	2.7	2.0		12.9				
Green Ext Time (p_c), s	0.5	1.0		0.0	0.0	0.0		13.4				
Intersection Summary												
HCM 2010 Ctrl Delay	42.6											
HCM 2010 LOS	D											
Notes												

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Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.691  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 49 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 159 1535 24 36 1576 190 184 1 130 15 1 16  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 159 1535 24 36 1576 190 184 1 130 15 1 16  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 168 1624 25 38 1668 201 195 1 138 16 1 17  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 168 1624 25 38 1668 201 195 1 138 16 1 17  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 168 1624 25 38 1668 201 195 1 138 16 1 17

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.95 0.05 1.00 2.68 0.32 1.00 0.01 0.99 1.00 0.06 0.94  
 Final Sat.: 1700 5021 79 1700 4551 549 1700 13 1687 1700 100 1600

Capacity Analysis Module:  
 Vol/Sat: 0.10 0.32 0.32 0.02 0.37 0.37 0.11 0.08 0.08 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.752  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 57 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 205 1415 84 78 1381 94 100 28 185 139 47 59  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 205 1415 84 78 1381 94 100 28 185 139 47 59  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 217 1496 89 82 1460 99 106 30 196 147 50 62  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 217 1496 89 82 1460 99 106 30 196 147 50 62  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 217 1496 89 82 1460 99 106 30 196 147 50 62

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.83 0.17 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56  
 Final Sat.: 1700 4814 286 1700 4775 325 1700 223 1477 1700 754 946

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.31 0.31 0.05 0.31 0.31 0.06 0.13 0.13 0.09 0.07 0.07  
 Crit Moves: \*\*\*\*\*

Intersection	12					
Int Delay, s/veh	12					
<b>Movement</b>	<b>EBT</b>	<b>EBR</b>	<b>WBL</b>	<b>WBT</b>	<b>NBL</b>	<b>NBR</b>
Traffic Vol, veh/h	443	7	53	453	3	49
Future Vol, veh/h	443	7	53	453	3	49
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	492	8	59	503	3	54
<b>Major/Minor</b>	<b>Major1</b>	<b>Major2</b>	<b>Minor1</b>			
Conflicting Flow All	0	0	500	0	865	250
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	369	-
Critical Hdwy	-	-	4.14	-	7.54	6.94
Critical Hdwy Stg 1	-	-	-	-	6.54	-
Critical Hdwy Stg 2	-	-	-	-	6.54	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1060	-	248	750
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	623	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1060	-	233	750
Mov Cap-2 Maneuver	-	-	-	-	524	-
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	-	-
<b>Approach</b>	<b>EB</b>	<b>WB</b>	<b>WB</b>	<b>NB</b>		
HCM Control Delay, s	0	12	12	10.9	B	
HCM LOS						
<b>Minor Lane/Major Mvmt</b>	<b>NBLn1</b>	<b>EBT</b>	<b>EBR</b>	<b>WBL</b>	<b>WBT</b>	
Capacity (veh/h)	665	-	-	1060	-	
HCM Lane V/C Ratio	0.087	-	-	0.056	-	
HCM Control Delay (s)	10.9	-	-	8.6	0.3	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %ile Q(veh)	0.3	-	-	0.2	-	

Existing Full Occ PM Mon Feb 20, 2017 15:12:10 Page 6-1  
 Health Club within the Shops at Rossmore  
 Existing (2016) Full Occupancy  
 PM Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.684  
 Loss Time (sec): 48 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 10 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1  
 \*\*\*\*\*  
 Volume Module:  
 Base Vol: 130 1504 57 19 1698 170 162 9 88 48 3 11  
 Growth 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  
 Initial Bse: 130 1504 57 19 1698 170 162 9 88 48 3 11  
 User 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  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 134 1546 59 20 1745 175 166 9 90 49 3 11  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 134 1546 59 20 1745 175 166 9 90 49 3 11  
 PCE 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  
 M/F 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  
 Final Volume: 134 1546 59 20 1745 175 166 9 90 49 3 11  
 \*\*\*\*\*  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Lanes: 1.00 2.69 0.11 1.00 2.73 0.27 1.00 0.09 0.91 0.94 0.06 1.00  
 Final Sat.: 1700 4914 186 1700 4636 464 1700 158 1542 1600 100 1700  
 \*\*\*\*\*  
 Capacity Analysis Module:  
 Vol/Sat: 0.08 0.31 0.31 0.01 0.38 0.38 0.10 0.06 0.06 0.03 0.03 0.01  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection	9.6											
Intersection Delay, s/veh	A											
Intersection LOS	A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	30	4	47	0	2	5	10	0	67	214	3
Future Vol, veh/h	0	30	4	47	0	2	5	10	0	67	214	3
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	5	56	0	2	6	12	0	80	255	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2

Approach	EB	WB	WB	NB
Opposing Approach	WB	EB	WB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	WB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	9.1	8.5	8.5	10
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	39%	0%	37%	12%	6%	0%
Vol Thru, %	61%	97%	5%	29%	94%	73%
Vol Right, %	0%	3%	58%	59%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	110	81	17	124	161
LT Vol	67	0	30	2	7	0
Through Vol	107	107	4	5	117	117
RT Vol	0	3	47	10	0	44
Lane Flow Rate	207	131	96	20	148	192
Geometry Grp	7	7	2	2	7	7
Degree of Utl (X)	0.307	0.187	0.138	0.029	0.213	0.265
Departure Headway (Hd)	5.341	5.128	5.167	5.247	5.189	4.968
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	698	690	677	689	721
Service Time	3.089	2.876	3.225	3.322	2.935	2.714
HCM Lane V/C Ratio	0.308	0.188	0.139	0.03	0.215	0.266
HCM Control Delay	10.5	9.1	9.1	8.5	9.3	9.5
HCM Lane LOS	B	A	A	A	A	A
HCM 95th-tile Q	1.3	0.7	0.5	0.1	0.8	1.1

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection	9.6					
Intersection Delay, s/veh	A					
Intersection LOS	A					
Movement	SBU	SBL	SBT	SBR	SBU	SBR
Traffic Vol, veh/h	0	7	234	44	0	44
Future Vol, veh/h	0	7	234	44	0	44
Peak Hour Factor	0.92	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	279	52	0	0
Number of Lanes	0	0	2	0	2	0

Approach	SB	SB
Opposing Approach	NB	NB
Opposing Lanes	2	2
Conflicting Approach Left	WB	WB
Conflicting Lanes Left	1	1
Conflicting Approach Right	EB	EB
Conflicting Lanes Right	1	1
HCM Control Delay	9.4	9.4
HCM LOS	A	A

Lane

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection	Intersection Delay, s/veh 10.2															
Intersection LOS	B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	35	55	0	36	39	71	0	30	132	26	0	44	181	40
Future Vol, veh/h	0	42	35	55	0	36	39	71	0	30	132	26	0	44	181	40
Peak Hour Factor	0.92	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	50	42	65	0	43	46	85	0	36	157	31	0	52	215	48
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				2				2			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	2				2				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	2				2				1				1			
HCM Control Delay	10.2				10.3				9.9				10.4			
HCM LOS	B				B				A				B			

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	31%	0%	32%	25%	33%	0%	0%	0%
Vol Thru, %	69%	72%	27%	27%	67%	69%	0%	0%
Vol Right, %	0%	28%	42%	49%	0%	31%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	92	132	146	135	131	0	0
LT Vol	30	0	42	36	44	0	0	0
Through Vol	66	66	35	39	91	91	0	0
RT Vol	0	26	55	71	0	40	0	0
Lane Flow Rate	114	110	157	174	160	155	0	0
Geometry Grp	7	7	2	2	7	7	0	0
Degree of Utl (X)	0.192	0.173	0.237	0.259	0.264	0.24	0	0
Departure Headway (Hd)	6.049	5.69	5.439	5.355	5.939	5.556	0	0
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	593	631	660	671	605	646	0	0
Service Time	3.783	3.424	3.477	3.391	3.668	3.285	0	0
HCM Lane V/C Ratio	0.192	0.174	0.238	0.259	0.264	0.24	0	0
HCM Control Delay	10.2	9.6	10.2	10.3	10.8	10	0	0
HCM Lane LOS	B	A	B	B	B	A	0	0
HCM 95th-ile Q	0.7	0.6	0.9	1.1	0.9	0.9	0	0

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Existing Full Occupancy PM Peak Hour  
02/22/2017

Intersection	Intersection Delay, s/veh 10.1															
Intersection LOS	B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR				
Traffic Vol, veh/h	0	1	17	2	0	148	25	64	0	5	103	106				
Future Vol, veh/h	0	1	17	2	0	148	25	64	0	5	103	106				
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.92	0.87	0.87	0.87				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	1	20	2	0	170	29	74	0	6	118	122				
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0	2				
Approach	EB				WB				NB							
Opposing Approach	WB				EB				SB							
Opposing Lanes	2				1				2							
Conflicting Approach Left	SB				NB				EB							
Conflicting Lanes Left	2				2				1							
Conflicting Approach Right	NB				SB				WB							
Conflicting Lanes Right	2				2				2							
HCM Control Delay	9.3				10.9				9.5							
HCM LOS	A				B				A							

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	5%	5%	86%	0%	40%	0%
Vol Thru, %	91%	33%	85%	14%	0%	0%	60%	95%
Vol Right, %	0%	67%	10%	0%	100%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	158	20	173	64	103	65	0
LT Vol	5	0	1	148	0	41	0	0
Through Vol	52	52	17	25	0	62	62	0
RT Vol	0	106	2	0	64	0	3	0
Lane Flow Rate	65	181	23	199	74	118	75	0
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.102	0.257	0.039	0.335	0.101	0.192	0.116	0
Departure Headway (Hd)	5.635	5.115	6.101	6.07	4.935	5.829	5.595	0
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	631	695	590	587	717	610	634	0
Service Time	3.418	2.897	4.101	3.861	2.725	3.617	3.383	0
HCM Lane V/C Ratio	0.103	0.26	0.039	0.339	0.103	0.193	0.118	0
HCM Control Delay	9.1	9.7	9.3	11.9	8.3	10	9.1	0
HCM Lane LOS	A	A	A	B	A	A	A	A
HCM 95th-ile Q	0.3	1	0.1	0.1	1.5	0.3	0.7	0.4

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road

Existing Full Occupancy PM Peak Hour  
 02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh			41	
Intersection LOS			A	
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	41	124	3
Future Vol, veh/h	0	41	124	3
Peak Hour Factor	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	47	143	3
Number of Lanes	0	0	2	0
Approach	SB	SB		
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	9.7			
HCM LOS	A			

HCM 2010 AWSC  
 1.2: West Road & Rossmoor Center Way

12/1/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	90	17	0	22	136	0	26	11
Future Vol, veh/h	0	90	17	0	22	136	0	26	11
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	100	19	0	24	151	0	29	12
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	WB	WB	EB	EB	NB	NB	NB	NB
Opposing Approach	WB								
Opposing Lanes	1								
Conflicting Approach Left		NB							
Conflicting Lanes Left	0	1							
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1						1		
HCM Control Delay	7.7	8.2					7.8		
HCM LOS	A	A					A		
Lane	NBU	NB	NB	NB	NB	NB	NB	NB	NB
Vol Left, %	70%	0%	14%						
Vol Thru, %	0%	84%	86%						
Vol Right, %	30%	16%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	37	107	158						
LT Vol	26	0	22						
Through Vol	0	90	136						
RT Vol	11	17	0						
Lane Flow Rate	41	119	176						
Geometry Grp	1	1	1						
Degree of Util (X)	0.052	0.134	0.201						
Departure Headway (Hd)	4.532	4.044	4.125						
Convergence, Y/N	Yes	Yes	Yes						
Cap	795	877	864						
Service Time	2.532	2.113	2.179						
HCM Lane V/C Ratio	0.052	0.136	0.204						
HCM Control Delay	7.8	7.7	8.2						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.2	0.5	0.7						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection Delay, s/veh 13															
Intersection LOS B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	22	72	27	0	183	106	84	0	43	44	178	0	75	34
Future Vol, veh/h	0	22	72	27	0	183	106	84	0	43	44	178	0	75	34
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	75	28	0	191	110	88	0	45	46	185	0	78	35
Number of Lanes	0	0	2	0	0	1	0	0	0	0	1	0	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	NB	SB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.7	15.7	11.8	10.7
HCM LOS	A	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	16%	38%	0%	49%	54%
Vol Thru, %	17%	62%	57%	28%	24%
Vol Right, %	67%	0%	43%	23%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	265	58	63	373	139
LT Vol	43	22	0	183	75
Through Vol	44	36	36	106	34
RT Vol	178	0	27	84	30
Lane Flow Rate	276	60	66	389	145
Geometry Grp	2	7	7	5	2
Degree of Utl (X)	0.403	0.108	0.109	0.582	0.234
Departure Headway (Hd)	5.259	6.457	5.959	5.383	5.825
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	682	553	600	668	614
Service Time	3.31	4.213	3.715	3.435	3.885
HCM Lane V/C Ratio	0.405	0.108	0.11	0.582	0.236
HCM Control Delay	11.8	10	9.4	15.7	10.7
HCM Lane LOS	B	A	A	C	B
HCM 95th-tile Q	1.9	0.4	0.4	3.8	0.9

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection Delay, s/veh 11.6														
Intersection LOS B														
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT				
Traffic Vol, veh/h	0	86	292	0	43	43	65	0	231	54				
Future Vol, veh/h	0	86	292	0	43	43	65	0	231	54				
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.89	0.92	0.89	0.89				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	97	328	0	48	73	0	260	61	1				
Number of Lanes	0	1	1	0	1	0	0	0	0	1				

Approach	WB	NB	SB
Opposing Approach	WB <td>NB <td>SB</td> </td>	NB <td>SB</td>	SB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB	WB	NB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	NB
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.4	9.2	12.9
HCM LOS	B	A	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	81%
Vol Thru, %	40%	0%	0%	19%
Vol Right, %	60%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	86	292	285
LT Vol	0	86	0	231
Through Vol	43	0	0	54
RT Vol	65	0	292	0
Lane Flow Rate	121	97	328	320
Geometry Grp	2	7	7	2
Degree of Utl (X)	0.173	0.165	0.45	0.467
Departure Headway (Hd)	5.125	6.147	4.936	5.249
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	704	579	722	679
Service Time	3.125	3.94	2.728	3.338
HCM Lane V/C Ratio	0.172	0.168	0.454	0.471
HCM Control Delay	9.2	10.2	11.8	12.9
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.6	0.6	2.3	2.5

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection	1 2			
Int Delay, s/veh	EBT	EBR	WBL	WBT
Movement	88	1	20	165
Traffic Vol, veh/h	88	1	20	165
Future Vol, veh/h	0	0	0	0
Conflicting Peds, #/hr	Free	Free	Free	Free
Sign Control	-	None	-	None
RT Channelized	-	None	-	None
Storage Length	0	-	0	0
Veh in Median Storage, #	0	-	0	0
Grade, %	93	93	93	93
Peak Hour Factor	2	2	2	2
Heavy Vehicles, %	95	1	22	177
Mvmt Flow				
Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	96	0	315
Stage 1	-	-	-	95
Stage 2	-	-	-	220
Critical Hwy	-	4.12	-	6.42
Critical Hwy Stg 1	-	-	-	5.42
Critical Hwy Stg 2	-	-	-	5.42
Follow-up Hwy	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	1498	-	678
Stage 1	-	-	-	929
Stage 2	-	-	-	817
Platoon blocked, %	-	-	-	667
Mov Cap-1 Maneuver	-	1498	-	667
Mov Cap-2 Maneuver	-	-	-	667
Stage 1	-	-	-	929
Stage 2	-	-	-	804
Approach	EB	WB	NB	
HCM Control Delay, s	0	0.8	9.1	
HCM LOS		A		
Minor Lane/Major Mvmt	NBLn1	EBL	WBL	WBT
Capacity (veh/h)	896	-	1498	-
HCM Lane V/C Ratio	0.029	-	0.014	-
HCM Control Delay (s)	9.1	-	7.4	0
HCM Lane LOS	A	-	A	A
HCM 95th %ile Q(veh)	0.1	-	0	-

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB	4TB	4TB	4TB	4TB	4TB	4TB	4TB	4TB	4TB	4TB	4TB
Traffic Volume (veh/h)	147	26	16	544	37	495	9	1103	272	420	1115	131
Future Volume (veh/h)	147	26	16	544	37	495	9	1103	272	420	1115	131
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	156	28	17	607	0	0	10	1173	289	447	1186	139
Adj No. of Lanes	0	2	0	2	0	2	1	3	1	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	679	0	303	21	1314	409	502	2775	864
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.57	1.00	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	156	0	45	607	0	0	10	1173	289	447	1186	139
Grp Sat Flow(s), veh/h	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.5	18.2	24.3	0.0	0.0
Cycle Q Clear(g.c), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.5	18.2	24.3	0.0	0.0
Prop In Lane	1.00	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	679	0	303	21	1314	409	502	2775	864
V/C Ratio(X)	1.33	0.00	0.39	0.89	0.00	0.00	0.47	0.89	0.71	0.89	0.43	0.16
Avail Cap(c.a), veh/h	118	0	116	748	0	334	81	1350	420	502	2775	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.4	0.0	0.0	54.0	39.3	37.0	22.4	0.0	0.0
Incr Delay (d2), s/veh	193.4	0.0	2.1	12.4	0.0	0.0	15.3	9.5	9.8	16.3	0.4	0.4
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 Back(Q)(50%) veh/h	99	0.0	1.4	10.2	0.0	0.0	0.4	12.6	9.1	13.9	0.1	0.1
LnGrp Delay(d), s/veh	244.8	0.0	51.3	55.8	0.0	0.0	69.3	48.8	46.8	38.7	0.4	0.4
LnGrp LOS	F	D	E	E	D	E	E	D	D	D	A	A
Approach Vol, veh/h	201			607			1472				1772	
Approach Delay, s/veh	201.4			55.8			48.6				10.1	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	6	8					
Phs Duration (G+Y+Rc), s	36.9	34.2	12.0	5.3	65.8	26.9						
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8	5.8						
Max Green Setting (Gmax), s	30.0	* 29	* 7.3	5.0	54.2	23.2						
Max Q Clear Time (g_c+H), s	26.3	26.5	9.3	2.6	2.0	20.4						
Green Ext Time (p_c), s	0.7	2.0	0.0	0.0	0.0	13.7	0.7					
Intersection Summary				40.4								
HCM 2010 Ctrl Delay				D								
HCM 2010 LOS				D								
Notes												



12/1/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	8	8	7	355	5	574	15	1360	377	260	1307	241
Traffic Volume (veh/h)	8	8	7	355	5	574	15	1360	377	260	1307	241
Future Volume (veh/h)	8	8	7	355	5	574	15	1360	377	260	1307	241
Number	7	4	0	14	3	8	18	5	2	12	1	6
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	8	8	7	374	0	607	16	1432	0	274	1376	254
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Cap. veh/h	41	43	36	827	0	738	730	2152	670	242	1683	524
Arrive On Green	0.02	0.02	0.02	0.23	0.00	0.23	0.42	0.85	0.00	0.14	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	8	8	7	374	0	607	16	1432	0	274	1376	254
Grp SatFlow(s),veh/h/m174	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.5	0.5	0.5	9.9	0.0	20.0	0.3	10.9	0.0	15.0	27.3	14.1
Cycle Q Clear(g.c), s	0.5	0.5	0.5	9.9	0.0	20.0	0.3	10.9	0.0	15.0	27.3	14.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	41	43	36	827	0	738	730	2152	670	242	1683	524
V/C Ratio(X)	0.20	0.19	0.19	0.45	0.00	0.82	0.02	0.67	0.00	1.13	0.82	0.48
Avail Cap(c), veh/h	81	85	72	1258	0	1123	730	2152	670	242	1682	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	52.7	52.7	36.2	0.0	40.0	25.0	5.7	0.0	47.5	33.8	29.3
Incr Delay (d2), s/veh	2.3	2.1	2.5	0.4	0.0	3.1	0.0	1.1	0.0	98.3	4.5	3.2
Initial Q Delay(Q3), 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(50%), veh/In0.3	0.3	0.2	0.2	4.9	0.0	9.0	0.1	5.0	0.0	13.9	13.4	6.6
LnGrp Delay(d), s/veh	55.1	54.8	55.3	36.6	0.0	43.1	25.0	6.8	0.0	145.8	38.3	32.5
LnGrp LOS	E	D	E	D	D	C	C	A	F	D	C	C
Approach Vol, veh/h	23	981	1448									
Approach Delay, s/veh	55.0	40.6	7.0									
Approach LOS	E	D	A									
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+R), s	52.3	7.2	29.1	42.2	31.4							
Change Period (Y+R), s	4.0	5.8	* 4.7	5.8	* 5.8							
Max Green Setting (Gmax), s	30.7	* 5.0	* 5.0	* 41	39.0							
Max Q Clear Time (g_c+I), s	12.9	2.5	2.3	29.3	22.0							
Green Ext Time (p_c), s	0.0	9.1	0.0	2.0	7.1							

Intersection Summary	34.9
HCM 2010 Ctrl Delay	
HCM 2010 LOS	C
Notes	

Health Club within the Shops at Rossmore  
 Existing (2016) Full Occupancy  
 Saturday Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.774
Loss Time (sec):	61	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	Level Of Service:	C
Street Name:	Seal Beach Blvd	Lampson Ave	
Approach:	North Bound	South Bound	East Bound
Movement:	L - I - R	L - I - R	L - I - R
Control:	Protected	Protected	Protected
Rights:	Ovl	Include	Permitted
Min. Green:	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0
Volume Module:	0 1544 360 509 1459	0 0 0 0 0	0 360 0 551
Base Vol:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00
Growth Adj:	0 1544 360 509 1459	0 0 0 0 0	0 360 0 551
Initial Base:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00
User Adj:	0.93 0.93 0.93 0.93 0.93	0.93 0.93 0.93 0.93 0.93	0.93 0.93 0.93 0.93
PHF Adj:	0.1660 387 547 1569	0 0 0 0 0	0 387 0 592
PHF Volume:	0 1660 387 547 1569	0 0 0 0 0	0 387 0 592
Reduced Vol:	0 1660 387 547 1569	0 0 0 0 0	0 387 0 592
PCE 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 1.00 1.00
MLF 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 1.00 1.00
Final Volume:	0 1660 387 547 1569	0 0 0 0 0	0 387 0 592
OvAdjVol:			
Saturation Flow Module:			
Sat/Lane:	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700
Adjustment:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00
Lanes:	0.00 3.00 1.00 2.00 3.00	0.00 0.00 0.00 0.00 0.00	2.00 0.00 1.00 1.00
Final Sat.:	0 5100 1700 3400 5100	0 0 0 0 0	0 3400 0 1700
Capacity Analysis Module:			
Vol/Sat:	0.00 0.33 0.23 0.16 0.31	0.00 0.00 0.00 0.00	0.11 0.00 0.35 0.19
OvAdjV/S:	****	****	****
Crit Moves:	*****	*****	*****

Health Club within the Shops at Rossmoor  
Existing (2016) Full Occupancy  
Saturday Peak Hour

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.841  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 77 Level Of Service: D  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0	1	0	1
Lanes:	1	0	2	1	0	1	0	1

Volume Module:  
 Base Vol: 291 1223 108 92 1063 151 119 83 243 173 89 88  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 291 1223 108 92 1063 151 119 83 243 173 89 88  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 307 1290 114 97 1121 159 126 88 256 182 94 93  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 307 1290 114 97 1121 159 126 88 256 182 94 93  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 307 1290 114 97 1121 159 126 88 256 182 94 93

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.76 0.24 1.00 2.63 0.37 1.00 0.25 0.75 1.00 0.50  
 Final Sat: 1700 4686 414 1700 4466 634 1700 433 1267 1700 855 845

Capacity Analysis Module:  
 Vol/Sat: 0.18 0.28 0.28 0.06 0.25 0.25 0.07 0.20 0.20 0.11 0.11 0.11  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Health Club within the Shops at Rossmoor  
Existing (2016) Full Occupancy  
Saturday Peak Hour

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.654  
 Loss Time (sec): 45 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 45 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	2	0	2	1	0	1	0	2
Lanes:	2	0	2	1	0	1	0	2

Volume Module:  
 Base Vol: 362 1592 172 17 1376 69 102 2 398 174 35 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 362 1592 172 17 1376 69 102 2 398 174 35 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 391 1717 186 18 1484 74 110 2 429 188 38 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 391 1717 186 18 1484 74 110 2 429 188 38 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 391 1717 186 18 1484 74 110 2 429 188 38 5  
 OrLAdjVol: \*\*\*\*\*

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.71 0.29 1.00 2.86 0.14 0.98 0.02 2.00 1.62 0.33 0.05  
 Final Sat: 3400 4603 497 1700 4856 284 1667 33 3400 2764 556 79

Capacity Analysis Module:  
 Vol/Sat: 0.11 0.37 0.37 0.01 0.31 0.31 0.07 0.07 0.13 0.07 0.07 0.07  
 OrLAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.632  
 Loss Time (sec): 43 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 47 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 111 1374 44 17 1496 120 167 8 96 63 7 12  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 111 1374 44 17 1496 120 167 8 96 63 7 12  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 113 1402 45 17 1527 122 170 8 98 64 7 12  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 113 1402 45 17 1527 122 170 8 98 64 7 12  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 113 1402 45 17 1527 122 170 8 98 64 7 12

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.91 0.09 1.00 2.78 0.22 1.00 0.08 0.92 0.90 0.10  
 Final Sat.: 1700 4942 158 1700 4721 379 1700 131 1569 1530 170 1700

Capacity Analysis Module:  
 Vol/Sat: 0.07 0.28 0.28 0.01 0.32 0.32 0.10 0.06 0.06 0.04 0.04 0.01  
 Crit Moves: \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.673  
 Loss Time (sec): 47 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 47 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 203 1410 15 25 1398 229 188 4 151 19 2 14  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 203 1410 15 25 1398 229 188 4 151 19 2 14  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 208 1448 15 26 1435 235 193 4 155 20 2 14  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 208 1448 15 26 1435 235 193 4 155 20 2 14  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 208 1448 15 26 1435 235 193 4 155 20 2 14

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00 2.58 0.42 1.00 0.03 0.97 1.00 0.13 0.87  
 Final Sat.: 1700 5046 54 1700 4382 718 1700 44 1656 1700 213 1487

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.29 0.29 0.02 0.33 0.33 0.11 0.09 0.09 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*\*

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection													
Int Delay, s/veh												1	
Intersection LOS												A	
Movement	EBT	EBR	WBL	WBT	NBL	NBR							
Traffic Vol, veh/h	456	1	43	420	4	44							
Future Vol, veh/h	456	1	43	420	4	44							
Conflicting Peds, #/hr	0	0	0	0	0	0							
Sign Control	Free	Free	Free	Free	Stop	Stop							
RT Channelized	-	None	-	None	-	None							
Storage Length	-	-	-	-	0	-							
Veh in Median Storage, #	0	-	-	0	0	-							
Grade, %	0	-	-	0	0	-							
Peak Hour Factor	94	94	94	94	94	94							
Heavy Vehicles, %	2	2	2	2	2	2							
Mvmt Flow	485	1	46	447	4	47							
Major/Minor													
Major1												Minor1	
Conflicting Flow All	0	0	486	0	801	243							
Stage 1	-	-	-	-	486	-							
Stage 2	-	-	-	-	315	-							
Critical Hwy	-	-	4.14	-	6.84	6.94							
Critical Hwy Stg 1	-	-	-	-	5.84	-							
Critical Hwy Stg 2	-	-	-	-	3.52	3.32							
Follow-up Hwy	-	-	2.22	-	3.52	7.68							
Pot Cap-1 Maneuver	-	-	1073	-	322	-							
Stage 1	-	-	-	-	584	-							
Stage 2	-	-	-	-	713	-							
Platoon blocked, %	-	-	-	-	-	-							
Mov Cap-1 Maneuver	-	-	1073	-	304	768							
Mov Cap-2 Maneuver	-	-	-	-	304	-							
Stage 1	-	-	-	-	584	-							
Stage 2	-	-	-	-	672	-							
Approach													
EB												WB	NB
HCM Control Delay, s												10.8	B
HCM LOS													
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT								
Capacity (veh/h)	674	-	-	1073	-								
HCM Lane V/C Ratio	0.076	-	-	0.043	-								
HCM Control Delay (s)	10.8	-	-	8.5	0.2								
HCM Lane LOS	B	-	-	A	A								
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-								

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection																	
Int Delay, s/veh												8.8					
Intersection LOS												A					
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBR	WBT	WBR	NBU	NBL	NBR					
Traffic Vol, veh/h	0	35	4	38	0	3	5	5	5	0	38	177					
Future Vol, veh/h	0	35	4	38	0	3	5	5	5	0	38	177					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92					
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2					
Mvmt Flow	0	38	4	41	0	3	5	5	5	0	41	192					
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2					
Approach																	
EB												WB	NB				
Opposing Approach	WB												EB	SB			
Opposing Lanes	1												1	2			
Conflicting Approach Left	SB												NB	EB			
Conflicting Lanes Left	2												2	1			
Conflicting Approach Right	NB												SB	WB			
Conflicting Lanes Right	2												2	1			
HCM Control Delay	8.6												8.2	8.9			
HCM LOS	A												A	A			
Lane																	
NBLn1												NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	
Vol Left, %	30%												0%	45%	23%	6%	0%
Vol Thru, %	70%												93%	5%	38%	94%	85%
Vol Right, %	0%												7%	49%	38%	0%	15%
Sign Control	Stop												Stop	Stop	Stop	Stop	
Traffic Vol by Lane	127												96	77	13	125	139
LT Vol	38												0	35	3	7	0
Through Vol	89												89	4	5	118	118
RT Vol	0												7	38	5	0	21
Lane Flow Rate	138												104	84	14	135	151
Geometry Grp	7												7	2	2	7	7
Degree of Utl (X)	0.198												0.144	0.115	0.02	0.189	0.204
Departure Headway (Ht)	5.182												4.979	4.926	5.055	5.024	4.889
Convergence, Y/N	Yes												Yes	Yes	Yes	Yes	Yes
Cap	693												719	727	706	715	735
Service Time	2.914												2.712	2.961	3.1	2.755	2.62
HCM Lane V/C Ratio	0.199												0.145	0.116	0.02	0.189	0.205
HCM Control Delay	9.2												8.6	8.6	8.2	8.9	8.9
HCM Lane LOS	A												A	A	A	A	A
HCM 95th %tile Q	0.7												0.5	0.4	0.1	0.7	0.8

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection		Intersection Delay, s/veh			
Intersection LOS		SBL	SBT	SBR	SBR
Traffic Vol, veh/h	0	7	235	21	21
Future Vol, veh/h	0	7	235	21	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	0	8	255	23	23
Number of Lanes	0	0	2	0	0

Approach	SB	SB
Opposing Approach	NB	NB
Opposing Lanes	2	2
Conflicting Approach Left	WB	WB
Conflicting Lanes Left	1	1
Conflicting Approach Right	EB	EB
Conflicting Lanes Right	1	1
HCM Control Delay	8.9	8.9
HCM LOS	A	A

Lane

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection		Intersection Delay, s/veh 9.7													
Intersection LOS		A													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	42	42	63	0	18	51	43	0	47	130	29	0	45	161
Future Vol, veh/h	0	42	42	63	0	18	51	43	0	47	130	29	0	45	161
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	47	47	70	0	20	57	48	0	52	144	32	0	50	179
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.8	9.5	9.7	9.8
HCM LOS	A	A	A	A

Lane

HCM 2010 AWSC Existing + Full Occupancy Saturday Peak Hour  
 11: Montecito Road & Bradbury Road 02/22/2017

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔				↔					↔
Traffic Vol, veh/h	0	1	15	4	0	115	20	69	0	3	71	94
Future Vol, veh/h	0	1	15	4	0	115	20	69	0	3	71	94
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	15	4	0	119	21	71	0	3	73	97
Number of Lanes	0	0	1	0	0	1	1	1	0	0	0	2

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	WB	SB	SB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	8.7	9.3	9.3	8.6	8.6
HCM LOS	A	A	A	A	A

Lane	NBLn1	NBLn2	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	5%	0%	85%	0%	44%	0%
Vol Thru, %	92%	27%	75%	15%	0%	56%	96%	0%	0%
Vol Right, %	0%	73%	20%	0%	100%	0%	4%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	130	20	135	69	81	47		
LT Vol	3	0	1	115	0	36	0		
Through Vol	36	36	15	20	0	45	45		
RT Vol	0	94	4	0	69	0	2		
Lane Flow Rate	40	134	21	139	71	84	48		
Geometry Grp	7	7	6	7	7	7	7		
Degree of Utl (X)	0.059	0.177	0.031	0.221	0.091	0.129	0.071		
Departure Headway (Hd)	5.33	4.779	5.453	5.729	4.599	5.54	5.286		
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Cap	671	749	654	626	777	646	676		
Service Time	3.069	2.518	3.509	3.472	2.341	3.281	3.027		
HCM Lane V/C Ratio	0.06	0.179	0.032	0.222	0.091	0.13	0.071		
HCM Control Delay	8.4	8.6	8.7	10.1	7.8	9.1	8.4		
HCM Lane LOS	A	A	A	B	A	A	A		
HCM 95th-tile Q	0.2	0.6	0.1	0.8	0.3	0.4	0.2		

HCM 2010 AWSC Existing + Full Occupancy Saturday Peak Hour  
 11: Montecito Road & Bradbury Road 02/22/2017

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↔	
Traffic Vol, veh/h	0	36	90	2
Future Vol, veh/h	0	36	90	2
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	37	93	2
Number of Lanes	0	0	2	0

Approach	SB	SB	SB	A
Opposing Approach	NB	NB	NB	A
Opposing Lanes	2	2	2	2
Conflicting Approach Left	WB	WB	WB	A
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	EB	EB	EB	A
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.8	8.8	8.8
HCM LOS	A	A	A	A

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	82	16	0	10	118	0	26	17			
Future Vol, veh/h	0	82	16	0	10	118	0	26	17			
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	90	18	0	11	130	0	29	19			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach												
	EB	WB	WB	EB	NB	NB						
Opposing Approach	WB	EB										
Opposing Lanes	1	1										
Conflicting Approach Left	0	NB	EB									
Conflicting Lanes Left	1	1										
Conflicting Approach Right	NB	0	WB									
Conflicting Lanes Right	1	0	1									
HCM Control Delay	7.6	8	7.6									
HCM LOS	A	A	A									

Lane												
	NBLn1	EBLn1	WBLn1	NBLn1								
Vol Left, %	60%	0%	8%									
Vol Thru, %	0%	84%	92%									
Vol Right, %	40%	16%	0%									
Sign Control	Stop	Stop	Stop									
Traffic Vol by Lane	43	98	128									
LT Vol	26	0	10									
Through Vol	0	82	118									
RT Vol	17	16	0									
Lane Flow Rate	47	108	141									
Geometry Grp	1	1	1									
Degree of Utlr (X)	0.057	0.12	0.161									
Departure Headway (Hd)	4.353	4.025	4.114									
Convergence, Y/N	Yes	Yes	Yes									
Cap	828	883	866									
Service Time	2.353	2.086	2.165									
HCM Lane V/C Ratio	0.057	0.122	0.163									
HCM Control Delay	7.6	7.6	8									
HCM Lane LOS	A	A	A									
HCM 95th-ile Q	0.2	0.4	0.6									

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection														
Intersection Delay, s/veh 18														
Intersection LOS C														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	21	100	36	0	214	93	106	0	43	64	215	0	96
Future Vol, veh/h	0	21	100	36	0	214	93	106	0	43	64	215	0	96
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.92	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	106	38	0	228	99	113	0	46	68	229	0	102
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	1

Approach													
	EB	EB	WB	WB	EB	NB	NB	SB	SB				
Opposing Approach	WB	WB	EB	EB									
Opposing Lanes	1	1	2	1									
Conflicting Approach Left	SB	SB	NB	EB									
Conflicting Lanes Left	1	1	2	1									
Conflicting Approach Right	NB	SB	WB	WB									
Conflicting Lanes Right	1	1	1	1									
HCM Control Delay	11.1	24	24	16.3									
HCM LOS	B	C	C	B									

Lane												
	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1							
Vol Left, %	13%	30%	0%	52%	53%							
Vol Thru, %	20%	70%	58%	23%	33%							
Vol Right, %	67%	0%	42%	26%	13%							
Sign Control	Stop	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	322	71	86	413	160							
LT Vol	43	21	0	214	96							
Through Vol	64	50	50	93	60							
RT Vol	215	0	36	106	24							
Lane Flow Rate	343	76	91	439	191							
Geometry Grp	2	7	7	5	2							
Degree of Utlr (X)	0.561	0.151	0.172	0.735	0.352							
Departure Headway (Hd)	5.894	7.205	6.753	6.026	6.61							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes							
Cap	610	497	530	598	544							
Service Time	3.941	4.963	4.511	4.071	4.665							
HCM Lane V/C Ratio	0.562	0.153	0.172	0.734	0.351							
HCM Control Delay	16.3	11.3	10.9	24	13.2							
HCM Lane LOS	C	B	B	C	B							
HCM 95th-ile Q	3.5	0.5	0.6	6.3	1.6							

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection										
Intersection Delay, s/veh		16								
Intersection LOS		C								
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT	SBT
Traffic Vol, veh/h	0	132	394	0	69	101	0	339	52	52
Future Vol, veh/h	0	132	394	0	69	101	0	339	52	52
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	136	406	0	71	104	0	349	54	54
Number of Lanes	0	1	1	0	1	0	0	0	1	1
<b>Approach</b>										
	WB	WB		NB	NB	SB	SB	SB	SB	SB
Opposing Approach	0	0	0	0	0	0	0	0	0	0
Opposing Lanes	0	0	0	0	0	0	0	0	0	0
Conflicting Approach Left	NB	NB	NB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	0	0	0	0	0	0	0
Conflicting Approach Right	SB	SB	SB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Right	1	1	1	2	2	2	2	2	2	2
HCM Control Delay	15.4	15.4	15.4	10.9	10.9	18.9	18.9	18.9	18.9	18.9
HCM LOS	C	C	C	B	B	C	C	C	C	C
<b>Lane</b>										
	NBLn1	WBLn1	WBLn2	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1
Vol Left, %	0%	100%	0%	0%	87%	0%	0%	0%	0%	0%
Vol Thru, %	41%	0%	0%	13%	0%	0%	0%	0%	0%	0%
Vol Right, %	59%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	132	394	391	339	339	339	339	339	339
LT Vol	0	132	0	0	0	0	0	0	0	0
Through Vol	69	0	0	0	52	52	52	52	52	52
RT Vol	101	0	394	0	0	0	0	0	0	0
Lane Flow Rate	175	136	406	403	339	339	339	339	339	339
Geometry Grp	2	7	7	2	2	2	2	2	2	2
Degree of Util (X)	0.275	0.253	0.617	0.647	0.617	0.617	0.617	0.617	0.617	0.617
Departure Headway (Hd)	5.656	6.685	5.468	5.777	5.468	5.468	5.777	5.468	5.777	5.777
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	633	538	658	625	625	625	625	625	625	625
Service Time	3.709	4.429	3.212	3.819	3.819	3.819	3.819	3.819	3.819	3.819
HCM Lane V/C Ratio	0.276	0.253	0.617	0.645	0.617	0.617	0.617	0.617	0.617	0.617
HCM Control Delay	10.9	11.7	16.7	18.9	18.9	18.9	18.9	18.9	18.9	18.9
HCM Lane LOS	B	B	C	C	C	C	C	C	C	C
HCM 95th-ile Q	1.1	1	4.3	4.7	4.7	4.7	4.7	4.7	4.7	4.7

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection										
Intersection Delay, s/veh		2.4								
Movement	EBT	EBR	WBL	WBT	NBL	NBR	EBT	EBR	WBL	WBT
Traffic Vol, veh/h	99	0	44	123	5	39	99	0	44	123
Future Vol, veh/h	99	0	44	123	5	39	99	0	44	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0	-	-	-	-
Veh in Median Storage, #	0	0	0	0	0	0	0	0	0	0
Grade, %	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	108	0	48	134	5	42	108	0	48	134
<b>Major/Minor</b>										
	Major1	Major2	Major2	Minor1	Minor1	Minor1	Major1	Major2	Major2	Minor1
Conflicting Flow All	0	0	108	0	337	108	0	0	108	0
Stage 1	-	-	-	-	229	-	-	-	-	-
Stage 2	-	-	-	-	6.42	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	6.42	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	3.518	-	-	-	-	-
Pot Cap-1 Maneuver	-	-	1483	-	658	-	-	-	-	-
Stage 1	-	-	-	-	916	-	-	-	-	-
Stage 2	-	-	-	-	809	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1483	-	635	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	635	-	-	-	-	-
Stage 1	-	-	-	-	916	-	-	-	-	-
Stage 2	-	-	-	-	781	-	-	-	-	-
<b>Approach</b>										
	EB	WB	WB	NB	NB	NB	EB	WB	WB	NB
HCM Control Delay, s	0	0	2	2	9.2	9.2	0	2	2	9.2
HCM LOS					A	A				A
<b>Minor Lane/Major Mvmt</b>										
	NBLn1	EBT	EBR	WBL	WBT	WBT	NBLn1	EBT	EBR	WBL
Capacity (veh/h)	896	-	-	1483	-	-	896	-	-	1483
HCM Lane V/C Ratio	0.053	-	-	0.032	-	-	0.053	-	-	0.032
HCM Control Delay (s)	9.2	-	-	7.5	0	0	9.2	-	-	7.5
HCM Lane LOS	A	-	-	A	A	A	A	-	-	A
HCM 95th-ile Q(veh)	0.2	-	-	0.1	-	-	0.2	-	-	0.1



HCM 2010 Signalized Intersection Summary  
 1.: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	87	28	16	696	44	533	14	1068	166	438	1455	72
Traffic Volume (veh/h)	87	28	16	696	44	533	14	1068	166	438	1455	72
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	96	31	18	799	0	0	15	1163	182	481	1599	79
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	861	0	384	30	1234	384	704	3250	1012
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.27	0.43	0.43
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	96	0	49	799	0	0	15	1163	182	481	1599	79
Grp Sat Flow(s), veh/h/ln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.7	10.8	26.8	25.1	3.2
Cycle Q Clear(g.c), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.7	10.8	26.8	25.1	3.2
Prop In Lane	1.00	0.00	0.37	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	861	0	384	30	1234	384	704	3250	1012
V/C Ratio(X)	1.08	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.68	0.49	0.08
Avail Cap(c.a), veh/h	89	0	87	861	0	384	30	1234	384	704	3250	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.6	34.2	18.5	12.3
Incr Delay (d2), s/veh	119.6	0.0	7.8	15.4	0.0	0.0	12.7	15.1	4.1	2.0	0.4	0.1
Initial Q Delay(d3), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	5.6	0.0	1.6	13.7	0.0	0.0	0.6	13.2	5.2	13.5	11.9	1.5
LnGrp Delay(d), s/veh	172.3	0.0	58.9	56.1	0.0	0.0	66.3	55.9	39.8	36.2	18.9	12.4
LnGrp LOS	F	E	E	E	E	E	E	E	D	D	B	B
Approach Vol, veh/h	145			799			1360				2159	
Approach Delay, s/veh	134.0			56.1			53.9				22.5	
Approach LOS	F			E			D				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	49.4	32.5		10.2	5.8	76.1		32.5				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 27		* 5.5	5.0	51.7		27.5				
Max Q Clear Time (g_c+I), s	28.8	26.7		7.5	2.9	27.1		26.2				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	14.6		0.5				
Intersection Summary	41.7											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
 2.: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	10	11	5	367	53	561	110	1211	348	335	1581	465
Traffic Volume (veh/h)	10	11	5	367	53	561	110	1211	348	335	1581	465
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	12	6	408	0	662	122	1346	0	372	1757	517
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	47	50	42	891	0	795	527	1855	578	306	1872	583
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.31	0.73	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	11	12	6	408	0	662	122	1346	0	372	1757	517
Grp Sat Flow(s), veh/h/ln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.7	0.7	0.4	10.7	0.0	21.8	2.9	16.7	0.0	19.0	36.7	33.7
Cycle Q Clear(g.c), s	0.7	0.7	0.4	10.7	0.0	21.8	2.9	16.7	0.0	19.0	36.7	33.7
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	47	50	42	891	0	795	527	1855	578	306	1872	583
V/C Ratio(X)	0.23	0.24	0.14	0.46	0.00	0.83	0.23	0.73	0.00	1.21	0.94	0.89
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	527	1855	578	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.58	0.58	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	52.4	52.3	34.8	0.0	39.0	33.3	11.7	0.0	45.5	33.5	32.6
Incr Delay (d2), s/veh	2.5	2.5	1.5	0.4	0.0	3.8	0.1	1.5	0.0	12.5	10.6	17.9
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(50%) veh/ln	0.4	0.2	0.2	5.3	0.0	9.9	1.4	7.7	0.0	19.7	18.9	17.5
LnGrp Delay(d), s/veh	54.9	54.9	53.8	35.2	0.0	42.8	33.5	13.2	0.0	168.0	44.1	50.5
LnGrp LOS	D	D	D	D	D	D	C	B		F	D	D
Approach Vol, veh/h	29			1070			1468				2646	
Approach Delay, s/veh	54.7			39.9			14.9				62.8	
Approach LOS	D			D			B				E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	43.0	45.9		7.6	22.6	46.3		33.4				
Change Period (Y+Rc), s	4.0	5.8		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	26.7	* 26.7		* 5.0	5.0	* 41		39.0				
Max Q Clear Time (g_c+I), s	18.7	18.7		2.7	4.9	38.7		23.8				
Green Ext Time (p_c), s	0.0	5.1		0.0	0.0	1.8		3.9				
Intersection Summary	44.5											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.634  
 Loss Time (sec): 43 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 43 Level Of Service: B  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	2	0	1	0	2	1	0	2
Lanes:	2	0	1	0	1	0	2	1

Volume Module:  
 Base Vol: 378 1670 47 4 1333 46 106 3 568 65 13 2  
 Growth 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  
 Initial Base: 378 1670 47 4 1333 46 106 3 568 65 13 2  
 User 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  
 PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88  
 PHF Volume: 430 1900 53 5 1516 52 121 3 646 74 15 2  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 430 1900 53 5 1516 52 121 3 646 74 15 2  
 PCE 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  
 MLF 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  
 Final Volume: 430 1900 53 5 1516 52 121 3 646 74 15 2  
 OvlAdjVol: 430 1900 53 5 1516 52 121 3 646 74 15 2

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.92 0.08 1.00 2.90 0.10 0.97 0.03 2.00 1.63 0.32 0.05  
 Final Sat.: 3400 4960 140 1700 4930 170 1653 47 3400 2763 552 85

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.38 0.38 0.00 0.31 0.31 0.07 0.07 0.19 0.03 0.03 0.03  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.816  
 Loss Time (sec): 70 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 70 Level Of Service: D  
 Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	0	0	3	0	0	0	0	0
Lanes:	0	0	3	0	0	0	0	1

Volume Module:  
 Base Vol: 0 1475 305 304 1679 0 0 0 0 702 0 614  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 0 1475 305 304 1679 0 0 0 0 702 0 614  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91  
 PHF Volume: 0 1624 336 335 1849 0 0 0 0 773 0 676  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1624 336 335 1849 0 0 0 0 773 0 676  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 0 1624 336 335 1849 0 0 0 0 773 0 676  
 OvlAdjVol: 0 1624 336 335 1849 0 0 0 0 773 0 676

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.32 0.20 0.10 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.40  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.503  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 34 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1
Volume Module:	56	1638	31	21
Base Vol:	1.00	1.00	1.00	1.00
Growth Adj:	1.00	1.00	1.00	1.00
Initial Base:	56	1638	31	21
User Adj:	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90
PHF Volume:	62	1812	28	23
Reduced Vol:	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00
Final Volume:	62	1812	28	23

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.94 0.06 1.00  
 Final Sat.: 1700 5005 92 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.04 0.36 0.01 0.30  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.548  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 36 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1
Volume Module:	76	1599	15	19
Base Vol:	1.00	1.00	1.00	1.00
Growth Adj:	1.00	1.00	1.00	1.00
Initial Base:	76	1599	15	19
User Adj:	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92
PHF Volume:	83	1748	16	21
Reduced Vol:	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00
Final Volume:	83	1748	16	21

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00  
 Final Sat.: 1700 5053 47 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.05 0.35 0.01 0.31  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.733  
 Loss Time (sec): 10 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 55 Level of Service: C  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1  
 Volume Module:  
 Base Vol: 146 1532 26 14 1341 155 270 18 97 70 22 23  
 Growth 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  
 Initial Base: 146 1532 26 14 1341 155 270 18 97 70 22 23  
 User 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  
 PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94  
 PHF Volume: 156 1639 28 15 1434 166 289 19 104 75 24 25  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 156 1639 28 15 1434 166 289 19 104 75 24 25  
 PCE 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  
 M/F 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  
 Final Volume: 156 1639 28 15 1434 166 289 19 104 75 24 25  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 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  
 Final Sat: 1700 5015 85 1700 4572 528 1700 266 1434 1293 407 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.09 0.33 0.33 0.01 0.31 0.31 0.17 0.07 0.07 0.04 0.06 0.01  
 Crit Moves: \*\*\*\*

Intersection	EBT		EBR		WBL		WBR		NBL	NBR
Int Delay, s/veh	1.3									
Movement	606	4	28	404	8	70				
Traffic Vol, veh/h	606	4	28	404	8	70				
Future Vol, veh/h	0	0	0	0	0	0				
Conflicting Peds. #/hr	Free	Free	Free	Free	Stop	Stop				
Sign Control	-	-	-	-	-	-				
RT Channelized	-	-	-	-	-	-				
Storage Length	0	0	0	0	0	0				
Veh in Median Storage, #	0	0	0	0	0	0				
Grade, %	0	0	0	0	0	0				
Peak Hour Factor	79	79	79	79	79	79				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	767	5	35	511	10	89				
Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	0	0	772	0	1097	386				
Stage 1	-	-	-	-	770	-				
Stage 2	-	-	-	-	327	-				
Critical Hdwy	-	-	4.14	-	6.84	6.94				
Critical Hdwy Stg 1	-	-	-	-	5.84	-				
Critical Hdwy Stg 2	-	-	-	-	5.84	-				
Follow-up Hdwy	-	-	2.22	-	3.52	3.32				
Pot Cap-1 Maneuver	-	-	839	-	207	612				
Stage 1	-	-	-	-	417	-				
Stage 2	-	-	-	-	703	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	839	-	195	612				
Mov Cap-2 Maneuver	-	-	-	-	417	-				
Stage 1	-	-	-	-	662	-				
Stage 2	-	-	-	-	-	-				
Approach	EB	WB	WB	NB	NB					
HCM Control Delay, s	0	0	0.8		13.9					
HCM LOS			B		B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBR					
Capacity (veh/h)	502	-	-	839	-					
HCM Lane V/C Ratio	0.197	-	-	0.042	-					
HCM Control Delay (s)	13.9	-	-	9.5	0.2					
HCM Lane LOS	B	-	-	A	A					
HCM 95th %ile Q(veh)	0.7	-	-	0.1	-					

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection												
Intersection Delay, s/veh											11.4	
Intersection LOS											B	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBR	WBU	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	54	7	126	0	2	4	1	0	108	168	2
Future Vol, veh/h	0	54	7	126	0	2	4	1	0	108	168	2
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	68	9	159	0	3	5	1	0	137	213	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2

Approach												
Approach	EB	WB	WB	WB	NB	NB						
Opposing Approach	WB	EB	WB	EB	NB	SB						
Opposing Lanes	1		1		2							
Conflicting Approach Left	SB	NB	NB	EB	EB	1						
Conflicting Lanes Left	2		2		WB							
Conflicting Approach Right	NB	SB	SB	WB	WB	1						
Conflicting Lanes Right	2		2		1							
HCM Control Delay	11.4		9.4		11.8							
HCM LOS	B		A		B							

Lane												
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2						
Vol Left, %	56%	0%	29%	29%	0%	0%						
Vol Thru, %	44%	96%	4%	57%	100%	78%						
Vol Right, %	0%	2%	67%	14%	0%	22%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	192	86	187	7	191	123						
LT Vol	108	0	54	2	0	0						
Through Vol	84	84	7	4	191	96						
RT Vol	0	2	126	1	0	27						
Lane Flow Rate	243	109	237	9	242	155						
Geometry Grp	7	7	2	2	7	7						
Degree of Utl (X)	0.407	0.173	0.355	0.015	0.384	0.239						
Departure Headway (Hd)	6.027	5.726	5.4	6.239	5.707	5.551						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	598	627	668	573	632	647						
Service Time	3.754	3.463	3.431	4.287	3.434	3.278						
HCM Lane V/C Ratio	0.406	0.174	0.355	0.016	0.383	0.24						
HCM Control Delay	12.8	9.7	11.4	9.4	12	10						
HCM Lane LOS	B	A	B	A	B	A						
HCM 95th-tile Q	2	0.6	1.6	0	1.8	0.9						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR		
Traffic Vol, veh/h	0	0	287	27		
Future Vol, veh/h	0	0	287	27		
Peak Hour Factor	0.92	0.79	0.79	0.79		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	0	363	34		
Number of Lanes	0	0	2	0		

Approach	
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	11.2
HCM LOS	B

Lane	
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HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Existing Full Occupancy + Project AM Peak Hour  
 02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh			4.1	
Intersection LOS			A	
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	74	133	2
Future Vol, veh/h	0	74	133	2
Peak Hour Factor	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	94	168	3
Number of Lanes	0	0	2	0
Approach	SB	SB		
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	12			
HCM LOS	B			

HCM 2010 AWSC  
 1.2: West Road & Rossmoor Center Way  
 12/1/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	0	99	10	0	6	86	0	7	12
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	99	10	0	6	86	0	7	12
Future Vol, veh/h	0	99	10	0	6	86	0	7	12
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	12	0	7	101	0	8	14
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	EB	WB	WB	EB	NB	NB	EB	
Opposing Approach	WB								
Opposing Lanes	1								
Conflicting Approach Left	EB								
Conflicting Lanes Left	0								
Conflicting Approach Right	NB								
Conflicting Lanes Right	1								
HCM Control Delay	7.7								
HCM LOS	A								
Lane	NBU	EBU	NBU	WBU	WBU	NBU			
Vol Left, %	37%	0%	7%						
Vol Thru, %	0%	91%	93%						
Vol Right, %	63%	9%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	19	109	92						
LT Vol	7	0	6						
Through Vol	0	99	86						
RT Vol	12	10	0						
Lane Flow Rate	22	128	108						
Geometry Grp	1	1	1						
Degree of Util (X)	0.026	0.142	0.123						
Departure Headway (Hd)	4.133	3.999	4.082						
Convergence, Y/N	Yes	Yes	Yes						
Cap	871	894	876						
Service Time	2.133	2.034	2.118						
HCM Lane V/C Ratio	0.025	0.143	0.123						
HCM Control Delay	7.2	7.7	7.7						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.1	0.5	0.4						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection Delay, s/veh 8.9															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	35	121	14	0	73	81	51	0	13	16	31	0	59	16
Future Vol, veh/h	0	35	121	14	0	73	81	51	0	13	16	31	0	59	16
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	130	15	0	78	87	55	0	14	17	33	0	63	17
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1

Approach		EB	WB	NB	SB
Opposing Approach	WB	EB	WB	NB	SB
Opposing Lanes	1	2	2	1	1
Conflicting Approach Left	SB	NB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2	1
Conflicting Approach Right	NB	SB	WB	WB	EB
Conflicting Lanes Right	1	1	1	1	2
HCM Control Delay	8.7	9.4	8.2	8.2	8.8
HCM LOS	A	A	A	A	A

Lane		NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %		22%	37%	0%	36%	66%
Vol Thru, %		27%	63%	81%	40%	18%
Vol Right, %		52%	0%	19%	25%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	96	75	205	90	59
LT Vol	13	35	0	73	59	
Through Vol	16	61	61	81	16	
RT Vol	31	0	14	51	15	
Lane Flow Rate	65	103	80	220	97	
Geometry Grp	2	7	7	5	2	
Degree of Utl (X)	0.085	0.151	0.111	0.28	0.134	
Departure Headway (Hd)	4.744	5.301	4.984	4.573	4.991	
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	
Cap	752	676	718	785	716	
Service Time	2.79	3.039	2.722	2.608	3.035	
HCM Lane V/C Ratio	0.086	0.152	0.111	0.28	0.135	
HCM Control Delay	8.2	9	8.3	9.4	8.8	
HCM Lane LOS	A	A	A	A	A	
HCM 95th-tile Q	0.3	0.5	0.4	1.1	0.5	

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection Delay, s/veh 7.8														
Intersection LOS A														
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT				
Traffic Vol, veh/h	0	71	37	0	16	32	0	28	15	15				
Future Vol, veh/h	0	71	37	0	16	32	0	28	15	15				
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87	0.87				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	82	43	0	18	37	0	32	17	17				
Number of Lanes	0	1	1	0	1	0	0	0	0	1				

Approach		WB	NB	SB
Opposing Approach	WB	WB <td>NB <td>SB</td> </td>	NB <td>SB</td>	SB
Opposing Lanes	0	1	1	1
Conflicting Approach Left	NB	NB	WB	WB
Conflicting Lanes Left	1	0	0	2
Conflicting Approach Right	SB	WB	WB	0
Conflicting Lanes Right	1	2	2	0
HCM Control Delay	8.1	7.1	7.1	7.7
HCM LOS	A	A	A	A

Lane		NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %		0%	100%	0%	65%
Vol Thru, %		33%	0%	0%	35%
Vol Right, %		67%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	71	37	43	28
LT Vol	0	71	0	28	
Through Vol	16	0	0	15	
RT Vol	32	0	37	0	
Lane Flow Rate	55	82	43	49	
Geometry Grp	2	7	7	2	
Degree of Utl (X)	0.06	0.118	0.047	0.061	
Departure Headway (Hd)	3.897	5.216	4.014	4.428	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	924	685	885	814	
Service Time	1.899	2.97	1.768	2.43	
HCM Lane V/C Ratio	0.06	0.12	0.049	0.06	
HCM Control Delay	7.1	8.7	7	7.7	
HCM Lane LOS	A	A	A	A	
HCM 95th-tile Q	0.2	0.4	0.1	0.2	



Intersection	Major1		Major2		Minor1	
Int Delay, s/veh	EBT	EBR	WBL	WBT	NBL	NBR
Movement	110	0	32	95	0	34
Traffic Vol, veh/h	110	0	32	95	0	34
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	Free	Free	Free	Free	Stop	Stop
Sign Control	-	None	-	None	-	None
RT Channelized	-	-	-	-	-	-
Storage Length	0	-	0	-	0	-
Veh in Median Storage, #	0	-	0	-	0	-
Grade, %	89	89	89	89	89	89
Peak Hour Factor	2	2	2	2	2	2
Heavy Vehicles, %	124	0	36	107	0	38
Mvmt Flow						
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	124	0	303	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	179	-
Critical Hwy	-	-	4.12	-	6.42	6.22
Critical Hwy Stg 1	-	-	-	-	5.42	-
Critical Hwy Stg 2	-	-	-	-	5.42	-
Follow-up Hwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1463	-	689	927
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	852	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1463	-	671	927
Mov Cap-2 Maneuver	-	-	-	-	671	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	830	-
Approach	EB	WB	WB	WB	NB	NB
HCM Control Delay, s	0		1.9		9.1	
HCM LOS			A		A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	927	-	-	1463	-	
HCM Lane V/C Ratio	0.041	-	-	0.025	-	
HCM Control Delay (s)	9.1	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %ile Q(veh)	0.1	-	-	0.1	-	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4TB										
Traffic Volume (veh/h)	166	30	20	321	35	529	11	1457	361	529	1074	127
Future Volume (veh/h)	166	30	20	321	35	529	11	1457	361	529	1074	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	171	31	21	357	0	0	11	1502	372	545	1107	131
Adj No. of Lanes	0	2	0	2	0	0	1	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	416	0	186	23	1593	496	582	3279	1021
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.66	1.00	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1593	1774	5085	1593	1774	5085	1593
Grp Volume(v), veh/h	171	0	52	357	0	0	11	1502	372	545	1107	131
Grp Sat Flow(s), veh/h	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.7	23.2	30.1	0.0	0.0
Cycle Q Clear(g.c), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.7	23.2	30.1	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	416	0	186	23	1593	496	582	3279	1021
V/C Ratio(X)	1.34	0.00	0.42	0.86	0.00	0.00	0.48	0.94	0.75	0.94	0.34	0.13
Avail Cap(c.a), veh/h	127	0	125	426	0	190	81	1600	498	582	3279	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.8	33.9	17.9	0.0	0.0
Incr Delay (d2), s/veh	197.2	0.0	2.2	15.6	0.0	0.0	14.6	12.5	10.0	20.8	0.2	0.2
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(50%), veh/h	10.8	0.0	1.6	6.2	0.0	0.0	0.4	16.6	11.5	17.6	0.1	0.1
LnGrp Delay(d), s/veh	248.3	0.0	51.0	63.2	0.0	0.0	68.5	49.3	43.9	38.7	0.2	0.2
LnGrp LOS	F	D	D	E	E	E	D	D	D	D	A	A
Approach Vol, veh/h	223				357			1885				1783
Approach Delay, s/veh	202.3				63.2			48.3				12.0
Approach LOS	F				E			D				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	41.9	40.3		12.6	5.4	76.7		18.7				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+H), s	32.1	33.7		9.9	2.7	2.0		12.9				
Green Ext Time (p_c), s	0.5	0.8		0.0	0.0	13.6		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay	42.4											
HCM 2010 LOS	D											
Notes												

12/1/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	79	72	87	195	15	663	41	1560	555	323	1460	373
Future Volume (veh/h)	79	72	87	195	15	663	41	1560	555	323	1460	373
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Obs.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	81	74	90	201	0	714	42	1608	0	333	1505	385
Adj No. of Lanes	1	1	1	2	0	2	2	2	3	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	81	85	72	930	0	830	491	1890	588	242	1775	563
Arrive On Green	0.05	0.05	0.05	0.26	0.00	0.26	0.29	0.74	0.00	0.14	0.35	0.36
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	81	74	90	201	0	714	42	1608	0	333	1505	385
Grp Sat Flow(s), veh/h/m/1774	1863	1863	1863	1863	0	1863	1721	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.0	4.3	5.0	4.9	0.0	23.6	1.0	24.3	0.0	15.0	30.1	23.0
Cycle Q Clear(g.s), s	5.0	4.3	5.0	4.9	0.0	23.6	1.0	24.3	0.0	15.0	30.1	23.0
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	85	72	930	0	830	491	1890	588	242	1775	563
V/C Ratio(X)	1.00	0.87	1.25	0.22	0.00	0.86	0.09	0.85	0.00	1.38	0.85	0.70
Avail Cap(c), veh/h	81	85	72	1258	0	1123	491	1890	588	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.53	0.53	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	31.8	0.0	38.7	34.1	12.0	0.0	47.5	33.1	30.8	37.9
Incr Delay (d2), s/veh	101.5	58.3	187.7	0.1	0.0	5.3	0.0	2.8	0.0	193.3	5.2	7.1
Initial Q Delay(Q3), 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(50%), veh/ln	3.6	5.9	2.4	0.0	10.9	0.5	11.2	0.0	20.3	14.9	11.1	11.1
LnGrp Delay(d), s/veh	151.0	110.5	240.2	31.9	0.0	44.0	34.1	14.8	0.0	240.8	38.3	37.9
LnGrp LOS	F	F	F	C	D	C	B	B	F	D	D	D
Approach Vol, veh/h	245			915					1650			2223
Approach Delay, s/veh	172.5			41.3					15.3			68.6
Approach LOS	F			D					B			E
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	46.7	9.7	21.5	44.2								
Change Period (Y+Rc), s	4.0	5.8	*4.7	5.8	*5.8							
Max Green Setting (Gmax), s	30.7	*5.0	*4.1									
Max Q Clear Time (g_c+I+I), s	26.3	7.0	3.0	32.1	25.6							
Green Ext Time (p_c), s	0.0	3.4	0.0	1.7	6.3							

Intersection Summary	51.2
HCM 2010 Ctrl Delay	D
HCM 2010 LOS	D
Notes	

Existing Full Occ + P PM Mon Feb 20, 2017 15:13:32 Page 2-1  
 Health Club within the Shops at Rossmore  
 Existing (2016) Full Occupancy Plus Project  
 PM Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.804  
 Loss Time (sec): 18 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 68 Level Of Service: D  
 Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Protected Protected Permitted  
 Rights: Ovl Include Include Ovl  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 2 0 0 1  
 Volume Module: 0 1737 544 641 1625 0 0 0 0 540 0 469  
 Base Vol: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Growth Adj: 0 1737 544 641 1625 0 0 0 0 540 0 469  
 Initial Base: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 User Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 1778 557 656 1663 0 0 0 0 553 0 480  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1778 557 656 1663 0 0 0 0 553 0 480  
 PCE 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  
 MLF 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  
 Final Volume: 0 1778 557 656 1663 0 0 0 0 553 0 480  
 OvlAdjVol: 0 1778 557 656 1663 0 0 0 0 553 0 480  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.00 0.35 0.33 0.19 0.33 0.00 0.00 0.00 0.00 0.16 0.00 0.28  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.757  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 58 Level Of Service: C  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0	1	0	1
Lanes:	1	0	2	1	0	1	0	1

Volume Module:  
 Base Vol: 205 1448 84 78 1406 94 100 28 185 139 47 59  
 Growth 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  
 Initial Base: 205 1448 84 78 1406 94 100 28 185 139 47 59  
 User 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  
 PHE Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 217 1531 89 82 1486 99 106 30 196 147 50 62  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 217 1531 89 82 1486 99 106 30 196 147 50 62  
 PCE 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  
 MLF 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  
 Final Volume: 217 1531 89 82 1486 99 106 30 196 147 50 62

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.84 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56  
 Final Sat.: 1700 4820 280 1700 4780 320 1700 223 1477 1700 754 946

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.32 0.32 0.05 0.31 0.31 0.06 0.13 0.13 0.09 0.07 0.07  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.727  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 54 Level Of Service: C  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	2	0	2	1	0	0	1	0
Lanes:	2	0	2	1	0	0	1	0

Volume Module:  
 Base Vol: 410 1675 132 5 1691 66 86 0 388 193 31 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 410 1675 132 5 1691 66 86 0 388 193 31 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHE Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 441 1801 142 5 1818 71 92 0 417 208 33 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 441 1801 142 5 1818 71 92 0 417 208 33 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 441 1801 142 5 1818 71 92 0 417 208 33 5  
 OrLAdjVol: 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.78 0.22 1.00 2.89 0.11 1.00 0.00 2.00 1.69 0.27 0.04  
 Final Sat.: 3400 4727 373 1700 4908 192 1700 0 3400 2866 460 74

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.38 0.38 0.00 0.37 0.37 0.05 0.00 0.12 0.07 0.07 0.07  
 OrLAdjV/S: 0.00  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.690  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 49 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound L - T - R L - T - R L - T - R  
 Movement: L - T - R L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 130 1528 57 19 1730 170 162 9 88 48 3 11  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 130 1528 57 19 1730 170 162 9 88 48 3 11  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 134 1570 59 20 1778 175 166 9 90 49 3 11  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 134 1570 59 20 1778 175 166 9 90 49 3 11  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 134 1570 59 20 1778 175 166 9 90 49 3 11

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.69 0.11 1.00 2.73 0.27 1.00 0.09 0.91 0.94 0.06 1.00  
 Final Sat.: 1700 4917 183 1700 4644 456 1700 158 1542 1600 100 1700

Capacity Analysis Module:  
 Vol/Sat: 0.08 0.32 0.32 0.01 0.38 0.38 0.10 0.06 0.06 0.03 0.03 0.01  
 Crit Moves: \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.733  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 54 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 192 1535 24 36 1576 222 208 1 155 15 1 16  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 192 1535 24 36 1576 222 208 1 155 15 1 16  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 203 1624 25 38 1668 235 220 1 164 16 1 17  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 203 1624 25 38 1668 235 220 1 164 16 1 17  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 203 1624 25 38 1668 235 220 1 164 16 1 17

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.95 0.05 1.00 2.63 0.37 1.00 0.01 0.99 1.00 0.06 0.94  
 Final Sat.: 1700 5021 79 1700 4470 630 1700 11 1689 1700 100 1600

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.32 0.32 0.02 0.37 0.37 0.13 0.10 0.10 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*\*

12/1/2016

12/1/2016

8: Yellowtail Drive & Saint Cloud Drive

Intersection										
Int Delay, s/veh										1.2
<b>Movement</b>										
Traffic Vol, veh/h	446	7	53	457	NBL	NBR				
Future Vol, veh/h	446	7	53	457	3	49				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	0				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	90	90	90	90	90	90				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	496	8	59	508	3	54				
<b>Major/Minor</b>										
Major1	0	0	503	0	871	252				
Stage 1	-	-	-	-	499	-				
Stage 2	-	-	-	-	372	-				
Critical Hdwy	-	-	4.14	-	6.84	6.94				
Critical Hdwy Stg 1	-	-	-	-	5.84	-				
Critical Hdwy Stg 2	-	-	-	-	5.84	-				
Follow-up Hdwy	-	-	2.22	-	3.52	3.32				
Pot Cap-1 Maneuver	-	-	1058	-	290	748				
Stage 1	-	-	-	-	575	-				
Stage 2	-	-	-	-	667	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1058	-	267	748				
Mov Cap-2 Maneuver	-	-	-	-	267	-				
Stage 1	-	-	-	-	575	-				
Stage 2	-	-	-	-	615	-				
<b>Approach</b>										
EB	0	WB	NB							
HCM/Control Delay, s	1.2									
HCM LOS	B									
<b>Minor Lane/Major Mvmt</b>										
NBLn1	EBT	EBR	WBL	WBT						
Capacity (veh/h)	678	-	-	1058						
HCM Lane V/C Ratio	0.085	-	-	0.056						
HCM Control Delay (s)	10.8	-	-	8.6	0.3					
HCM Lane LOS	B	-	-	A	A					
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-					

12/1/2016

12/1/2016

9: Montecito Road & Copa De Oro Drive/Project Driveway

Intersection											
Int Delay, s/veh										9.6	
<b>Intersection LOS</b>											
A											
<b>Movement</b>											
Traffic Vol, veh/h	0	30	5	47	0	3	6	10	0	67	217
Future Vol, veh/h	0	30	5	47	0	3	6	10	0	67	217
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	6	56	0	4	7	12	0	80	258
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2
<b>Approach</b>											
EB	WB	WB	NB								
Opposing Approach	WB	EB	SB								
Opposing Lanes	1	1	2								
Conflicting Approach Left	SB	NB	EB								
Conflicting Lanes Left	2	2	1								
Conflicting Approach Right	NB	SB	WB								
Conflicting Lanes Right	2	2	1								
HCM Control Delay	9.1	8.6	8.6	10							
HCM LOS	A	A	A	A							
<b>Lane</b>											
NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2						
Vol Left, %	38%	0%	37%	16%	6%	0%					
Vol Thru, %	62%	96%	6%	32%	94%	73%					
Vol Right, %	0%	4%	57%	53%	0%	27%					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop					
Traffic Vol by Lane	176	113	82	19	125	162					
LT Vol	67	0	30	3	7	0					
Through Vol	109	109	5	6	118	118					
RT Vol	0	4	47	10	0	44					
Lane Flow Rate	209	134	98	23	149	193					
Geometry Grp	7	7	2	2	7	7					
Degree of Utl (X)	0.311	0.191	0.141	0.033	0.215	0.267					
Departure Headway (Ht)	5.353	5.136	5.189	5.31	5.205	4.965					
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes					
Cap	669	696	687	668	688	717					
Service Time	3.106	2.889	3.25	3.388	2.956	2.736					
HCM Lane V/C Ratio	0.312	0.193	0.143	0.034	0.217	0.269					
HCM Control Delay	10.5	9.1	9.1	8.6	9.4	9.6					
HCM Lane LOS	B	A	A	A	A	A					
HCM 95th %tile Q	1.3	0.7	0.5	0.1	0.8	1.1					

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR		
Traffic Vol, veh/h	0	7	236	44		
Future Vol, veh/h	0	7	236	44		
Peak Hour Factor	0.92	0.84	0.84	0.84		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	8	281	52		
Number of Lanes	0	0	2	0		
Approach	SB		SB			
Opposing Approach	NB		SB			
Opposing Lanes	2		2			
Conflicting Approach Left	WB		EB			
Conflicting Lanes Left	1		1			
Conflicting Approach Right	EB		WB			
Conflicting Lanes Right	1		1			
HCM Control Delay	9.5		A			
HCM LOS	A		A			

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection Delay, s/veh10.3																
Intersection LOS																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR	
Traffic Vol, veh/h	0	42	37	55	0	38	41	73	0	30	132	29	0	46	181	
Future Vol, veh/h	0	42	37	55	0	38	41	73	0	30	132	29	0	46	181	
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.92	0.84	0.84	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	50	44	65	0	45	49	87	0	36	157	35	0	55	215	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	
Approach	EB		WB		WB		NB		NB		SB		SB		SB	
Opposing Approach	WB		EB		EB		SB		SB		NB		NB		NB	
Opposing Lanes	1		1		1		2		2		2		2		2	
Conflicting Approach Left	SB		NB		NB		EB		WB		WB		WB		WB	
Conflicting Lanes Left	2		2		2		1		1		1		1		1	
Conflicting Approach Right	NB		SB		SB		WB		WB		EB		EB		EB	
Conflicting Lanes Right	2		2		2		1		1		1		1		1	
HCM Control Delay	10.3		10.4		10.4		10		10		10.5		10.5		10.5	
HCM LOS	B		B		B		A		A		B		B		B	
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2									
Vol Left, %	31%	0%	31%	25%	34%	0%	0%									
Vol Thru, %	69%	69%	28%	27%	66%	69%	69%									
Vol Right, %	0%	31%	41%	48%	0%	31%	0%									
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop									
Traffic Vol by Lane	96	95	134	152	137	131	0									
LT Vol	30	0	42	38	46	0	0									
RT Vol	0	29	55	73	0	40	0									
Lane Flow Rate	114	113	160	181	162	155	0									
Geometry Grp	7	7	2	2	7	7	7									
Degree of Util (X)	0.193	0.18	0.243	0.271	0.27	0.241	0.241									
Departure Headway (Hd)	6.09	5.715	5.479	5.388	5.983	5.595	5.595									
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes									
Cap	590	628	654	666	601	642	642									
Service Time	3.827	3.452	3.518	3.425	3.718	3.329	3.329									
HCM Lane V/C Ratio	0.193	0.18	0.245	0.272	0.27	0.241	0.241									
HCM Control Delay	10.3	9.7	10.3	10.4	10.9	10.1	10.1									
HCM Lane LOS	B	A	B	B	B	B	B									
HCM 95th-ile Q	0.7	0.7	0.9	1.1	1.1	0.9	0.9									

HCM 2010 AWSC Existing Full Occupancy + Project PM Peak Hour  
 1.1: Montecito Road & Bradbury Road 02/22/2017

Intersection													
Intersection Delay, s/veh	10.1												
Intersection LOS	B												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations	0	1	17	2	0	148	25	64	0	5	105	106	
Traffic Vol, veh/h	0	1	17	2	0	148	25	64	0	5	105	106	
Future Vol, veh/h	0.92	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.92	0.87	0.87	0.87	
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2	
Heavy Vehicles, %	0	1	20	2	0	170	29	74	0	6	121	122	
Mvmt Flow	0	0	1	0	0	1	1	1	0	0	2	0	
Number of Lanes													

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	EB	SB	SB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	9.4	A	11	B	9.5
HCM LOS	A				

Lane	NBLn1	NBLn2	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	5%	86%	0%	39%	0%	0%
Vol Thru, %	91%	33%	85%	14%	0%	61%	95%	95%
Vol Right, %	0%	67%	10%	0%	100%	0%	5%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	159	20	173	64	104	66	66
LT Vol	5	0	1	148	0	41	0	0
Through Vol	53	53	17	25	0	63	63	63
RT Vol	0	106	2	0	64	0	3	3
Lane Flow Rate	66	182	23	199	74	120	76	76
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.104	0.259	0.039	0.336	0.101	0.194	0.118	0.118
Departure Headway (Hd)	5.638	5.121	6.116	6.081	4.946	5.829	5.598	5.598
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	630	694	589	587	716	610	634	634
Service Time	3.422	2.905	4.116	3.873	2.737	3.621	3.389	3.389
HCM Lane V/C Ratio	0.105	0.262	0.039	0.339	0.103	0.197	0.12	0.12
HCM Control Delay	9.1	9.7	9.4	12	8.3	10	9.1	9.1
HCM Lane LOS	A	A	A	B	A	A	A	A
HCM 95th-tile Q	0.3	1	0.1	1.5	0.3	0.7	0.4	0.4

HCM 2010 AWSC Existing Full Occupancy + Project PM Peak Hour  
 1.1: Montecito Road & Bradbury Road 02/22/2017

Intersection													
Intersection Delay, s/veh	10.1												
Intersection LOS	B												
Movement	SBU	SBL	SBT	SBR									
Lane Configurations	0	41	126	3									
Traffic Vol, veh/h	0	41	126	3									
Future Vol, veh/h	0.92	0.87	0.87	0.87									
Peak Hour Factor	2	2	2	2									
Heavy Vehicles, %	0	1	20	2									
Mvmt Flow	0	0	1	0									
Number of Lanes													

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.7
HCM LOS	A

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 8.1												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	90	24	0	22	136	0	32	11			
Future Vol, veh/h	0	90	24	0	22	136	0	32	11			
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	100	27	0	24	151	0	36	12			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach												
	EB		WB		EB		NB					
Opposing Approach	WB		EB				0					
Opposing Lanes	1		1				0					
Conflicting Approach Left	0		NB		EB		1					
Conflicting Lanes Left	1		1		1		1					
Conflicting Approach Right	NB				WB		1					
Conflicting Lanes Right	1		0		1		1					
HCM Control Delay	7.8		8.3		7.9		7.9					
HCM LOS	A		A		A		A					

Lane												
	NBLn1		EBLn1		WBLn1		NBLn1					
Vol Left, %	74%		0%		14%		0%					
Vol Thru, %	0%		79%		86%		0%					
Vol Right, %	26%		21%		0%		0%					
Sign Control	Stop		Stop		Stop		Stop					
Traffic Vol by Lane	43		114		158		32					
LT Vol	0		0		22		0					
Through Vol	0		90		136		0					
RT Vol	11		24		0		0					
Lane Flow Rate	48		127		176		48					
Geometry Grp	1		1		1		1					
Degree of Util (X)	0.061		0.142		0.202		0.061					
Departure Headway (Hd)	4.582		4.023		4.141		4.582					
Convergence, Y/N	Yes		Yes		Yes		Yes					
Cap	786		880		858		786					
Service Time	2.582		2.101		2.204		2.582					
HCM Lane V/C Ratio	0.061		0.144		0.205		0.061					
HCM Control Delay	7.9		7.8		8.3		7.9					
HCM Lane LOS	A		A		A		A					
HCM 95th-tile Q	0.2		0.5		0.8		0.2					

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection														
Intersection Delay, s/veh 15.8														
Intersection LOS C														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	22	121	27	0	183	170	84	0	43	44	178	0	75
Future Vol, veh/h	0	22	121	27	0	183	170	84	0	43	44	178	0	75
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	126	28	0	191	177	88	0	45	46	185	0	78
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	1

Approach												
	EB		WB		EB		NB					
Opposing Approach	WB		EB				1					
Opposing Lanes	1		2				1					
Conflicting Approach Left	SB		NB		EB		2					
Conflicting Lanes Left	1		1		2		2					
Conflicting Approach Right	NB				WB		1					
Conflicting Lanes Right	1		1		1		1					
HCM Control Delay	10.4		20.9		13		11.5					
HCM LOS	B		C		B		B					

Lane												
	NBLn1		EBLn1		WBLn1		SBLn1					
Vol Left, %	16%		27%		0%		42%					
Vol Thru, %	17%		73%		69%		39%					
Vol Right, %	67%		0%		31%		19%					
Sign Control	Stop		Stop		Stop		Stop					
Traffic Vol by Lane	285		83		88		437					
LT Vol	43		22		0		183					
Through Vol	44		61		170		34					
RT Vol	178		0		27		84					
Lane Flow Rate	276		86		91		455					
Geometry Grp	2		7		5		2					
Degree of Util (X)	0.433		0.158		0.704		0.251					
Departure Headway (Hd)	5.644		6.603		6.246		5.571					
Convergence, Y/N	Yes		Yes		Yes		Yes					
Cap	632		540		570		646					
Service Time	3.722		4.39		4.034		3.637					
HCM Lane V/C Ratio	0.437		0.159		0.16		0.704					
HCM Control Delay	13		10.6		10.2		20.9					
HCM Lane LOS	B		B		C		B					
HCM 95th-tile Q	2.2		0.6		0.6		5.7					



HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection									
Intersection Delay, s/veh 11.6									
Intersection LOS B									
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	86	292	0	43	65	0	231	54
Future Vol, veh/h	0	86	292	0	43	65	0	231	54
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	97	328	0	48	73	0	260	61
Number of Lanes	0	1	1	0	1	0	0	0	1
Approach	WB		NB		SB		SB		
Opposing Approach	0		SB		NB		NB		
Opposing Lanes	0		1		1		1		
Conflicting Approach Left	NB		WB		WB		2		
Conflicting Lanes Left	1		0		0		2		
Conflicting Approach Right	SB		WB		WB		0		
Conflicting Lanes Right	1		2		2		0		
HCM Control Delay	11.4		9.2		12.9		B		
HCM LOS	B		A		A		B		
Lane	NBLn1 WBLn1 WBLn2		SBLn1		SBLn1				
Vol Left, %	0%		100%		0%		81%		
Vol Thru, %	40%		0%		0%		19%		
Vol Right, %	60%		0%		100%		0%		
Sign Control	Stop		Stop		Stop		Stop		
Traffic Vol by Lane	108	86	292	285					
LT Vol	0	86	0	231					
Through Vol	43	0	0	54					
RT Vol	65	0	292	0					
Lane Flow Rate	121	97	328	320					
Geometry Grp	2		7		7		2		
Degree of Util (X)	0.173		0.165		0.45		0.467		
Departure Headway (Hd)	5.125		6.147		4.936		5.249		
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	704	579	722	679					
Service Time	3.125		3.94		2.728		3.338		
HCM Lane V/C Ratio	0.172		0.168		0.454		0.471		
HCM Control Delay	9.2		10.2		11.8		12.9		
HCM Lane LOS	A		B		B		B		
HCM 95th-tile Q	0.6		0.6		2.3		2.5		

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection									
Int Delay, s/veh 3.2									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Traffic Vol, veh/h	88	1	84	165	4	69			
Future Vol, veh/h	88	1	84	165	4	69			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	93	93	93	93	93	93			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	95	1	90	177	4	74			
Major/Minor	Major1		Major2		Minor1				
Conflicting Flow All	0	0	96	0	453	95			
Stage 1	-	-	-	-	358	-			
Stage 2	-	-	-	-	6.42	6.22			
Critical Hdwy	-	-	4.12	-	5.42	-			
Critical Hdwy Stg 1	-	-	-	-	5.42	-			
Critical Hdwy Stg 2	-	-	-	-	3.518	3.318			
Follow-up Hdwy	-	-	2.218	-	5.65	9.62			
Pot Cap-1 Maneuver	-	-	1498	-	929	-			
Stage 1	-	-	-	-	707	-			
Stage 2	-	-	-	-	527	9.62			
Platoon blocked, %	-	-	-	-	527	-			
Mov Cap-1 Maneuver	-	-	1498	-	527	-			
Mov Cap-2 Maneuver	-	-	-	-	929	-			
Stage 1	-	-	-	-	660	-			
Stage 2	-	-	-	-	-	-			
Approach	EB		WB		NB				
HCM Control Delay, s	0		2.5		9.3				
HCM LOS	A		A		A				
Minor Lane/Major Mvmt	NBLn1		EBT		WBL				
Capacity (veh/h)	920		-		1498				
HCM Lane V/C Ratio	0.085		-		0.06				
HCM Control Delay (s)	9.3		-		7.6				
HCM Lane LOS	A		-		A				
HCM 95th-tile Q(veh)	0.3		-		0.2				

HCM 2010 Signalized Intersection Summary  
 1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB			4								
Traffic Volume (veh/h)	147	26	16	544	37	500	9	1107	272	429	1120	131
Future Volume (veh/h)	147	26	16	544	37	500	9	1107	272	429	1120	131
Number	7	4	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	156	28	17	607	0	0	10	1178	289	456	1191	139
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	679	0	303	21	1317	410	501	2775	864
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.56	1.00	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	156	0	45	607	0	0	10	1178	289	456	1191	139
Grp Sat Flow(s), veh/h/ln	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.6	18.2	25.3	0.0	0.0
Cycle Q Clear(g.c), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.6	18.2	25.3	0.0	0.0
Prop In Lane	1.00	0.00	0.38	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	679	0	303	21	1317	410	501	2775	864
V/C Ratio(X)	1.33	0.00	0.39	0.89	0.00	0.00	0.47	0.89	0.71	0.91	0.43	0.16
Avail Cap(c.a), veh/h	118	0	116	748	0	334	81	1350	420	501	2775	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	0.88
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.4	0.0	0.0	54.0	39.3	37.0	22.7	0.0	0.0
Incr Delay (d2), s/veh	193.4	0.0	2.1	12.4	0.0	0.0	15.3	9.7	9.8	18.8	0.4	0.4
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(50%), veh/ln	9.9	0.0	1.4	10.2	0.0	0.0	0.4	12.6	9.1	14.8	0.1	0.1
LnGrp Delay(d), s/veh	244.8	0.0	51.3	55.8	0.0	0.0	69.3	49.0	46.7	41.5	0.4	0.4
LnGrp LOS	F	D	E	D	E	D	E	D	D	D	A	A
Approach Vol, veh/h	201			607			1477				1786	
Approach Delay, s/veh	201.4			55.8			48.7				10.9	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	36.9	34.3		12.0	5.3	65.8		26.9				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2				
Max Q Clear Time (g_c+I), s	27.3	26.6		9.3	2.6	2.0		20.4				
Green Ext Time (p_c), s	0.6	1.9		0.0	0.0	13.9		0.7				
Intersection Summary	40.7											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	8	7	355	5	581	15	1369	377	266	1321	243
Traffic Volume (veh/h)	9	8	7	355	5	581	15	1369	377	266	1321	243
Future Volume (veh/h)	9	8	7	355	5	581	15	1369	377	266	1321	243
Number	7	4	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	9	8	7	374	0	615	16	1441	0	280	1391	256
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	42	44	37	836	0	746	712	2136	665	242	1694	527
Arrive On Green	0.02	0.02	0.02	0.24	0.00	0.24	0.41	0.84	0.00	0.14	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	9	8	7	374	0	615	16	1441	0	280	1391	256
Grp Sat Flow(s), veh/h/ln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.5	0.5	0.5	9.9	0.0	20.3	0.3	11.5	0.0	15.0	27.6	14.1
Cycle Q Clear(g.c), s	0.5	0.5	0.5	9.9	0.0	20.3	0.3	11.5	0.0	15.0	27.6	14.1
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	42	44	37	836	0	746	712	2136	665	242	1694	527
V/C Ratio(X)	0.21	0.18	0.19	0.45	0.00	0.82	0.02	0.67	0.00	1.16	0.82	0.49
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	712	2136	665	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.66	0.66	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	52.7	52.7	35.9	0.0	39.9	25.7	6.0	0.0	47.5	33.7	29.2
Incr Delay (d2), s/veh	2.5	2.0	2.4	0.4	0.0	3.2	0.0	1.2	0.0	107.0	4.6	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.0	0.2	4.9	0.2	0.0	9.2	0.1	5.3	0.0	14.5	13.6	6.7
LnGrp Delay(d), s/veh	55.2	54.6	55.0	36.3	0.0	43.1	25.7	7.2	0.0	154.5	38.3	32.4
LnGrp LOS	E	D	E	D	D	C	D	C	A	F	D	C
Approach Vol, veh/h	24			989			1457				1927	
Approach Delay, s/veh	55.0			40.5			7.4				54.4	
Approach LOS	D			D			A				D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	52.0	52.0		7.3	26.6	42.4		31.7				
Change Period (Y+Rc), s	4.0	5.8		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	30.7	30.7		* 5.0	5.0	* 4.1		39.0				
Max Q Clear Time (g_c+I), s	13.5	13.5		2.5	2.3	29.6		22.3				
Green Ext Time (p_c), s	0.0	9.0		0.0	0.0	2.0		7.0				
Intersection Summary	35.7											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.660  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 45 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Split Phase Split Phase  
 Rights: Ovl Include Include Ovl Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 2 0 3 0 1 2 0 3 0 1 0 0 2 1 0 1 0 0

Volume Module:  
 Base Vol: 364 1613 172 17 1401 69 102 2 401 174 35 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 364 1613 172 17 1401 69 102 2 401 174 35 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 393 1740 186 18 1511 74 110 2 433 188 38 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 393 1740 186 18 1511 74 110 2 433 188 38 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 393 1740 186 18 1511 74 110 2 433 188 38 5  
 OvlAdjVol: 0 0 0 0 0 0 0 0 0 0 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.71 0.29 1.00 2.86 0.14 0.98 0.02 2.00 1.62 0.33 0.05  
 Final Sat.: 3400 4609 491 1700 4861 239 1667 33 3400 2764 556 79

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.38 0.38 0.01 0.31 0.07 0.07 0.13 0.07 0.07 0.07  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.781  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 63 Level Of Service: C

Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted  
 Rights: Ovl Include Include Ovl  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 0 1

Volume Module:  
 Base Vol: 0 1561 360 516 1480 0 0 0 0 360 0 557  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 0 1561 360 516 1480 0 0 0 0 360 0 557  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 0 1678 387 555 1591 0 0 0 0 387 0 599  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1678 387 555 1591 0 0 0 0 387 0 599  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 0 1678 387 555 1591 0 0 0 0 387 0 599  
 OvlAdjVol: 0 0 0 0 0 0 0 0 0 0 0 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.33 0.23 0.16 0.31 0.00 0.00 0.00 0.00 0.11 0.00 0.35  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.846  
 Loss Time (sec): 79 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 79 Level Of Service: D  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1
Volume Module:	291	1244	108	92
Base Vol:	108	92	1088	151
Growth Adj:	1.00	1.00	1.00	1.00
Initial Base:	291	1244	108	92
User Adj:	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95
PHF Volume:	307	1312	114	97
Reduced Vol:	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00
Final Volume:	307	1312	114	97

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.76 0.24 1.00  
 Final Sat.: 1700 4693 407 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.18 0.28 0.26 0.26  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.705  
 Loss Time (sec): 51 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 51 Level Of Service: C  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1
Volume Module:	224	1410	15	25
Base Vol:	15	25	1398	249
Growth Adj:	1.00	1.00	1.00	1.00
Initial Base:	224	1410	15	25
User Adj:	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97
PHF Volume:	230	1448	15	26
Reduced Vol:	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00
Final Volume:	230	1448	15	26

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00  
 Final Sat.: 1700 5046 54 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.14 0.29 0.29 0.33  
 Crit Moves: \*\*\*\*

Intersection	1	
IntDelay, s/veh	1	
Movement	EBT EBR	WBL WBT
Traffic Vol, veh/h	459 1	43 422
Future Vol, veh/h	459 1	43 422
Conflicting Peds, #/hr	0 0	0 0
Sign Control	Free Free	Free Free
RT Channelized	- None	- None
Storage Length	- -	- -
Veh in Median Storage, #	0 -	0 0
Grade, %	0 -	0 0
Peak Hour Factor	94 94	94 94
Heavy Vehicles, %	2 2	2 2
Mvmt Flow	488 1	46 449
Major/Minor	Major1	Major2
Conflicting Flow All	0 0	489 0
Stage 1	- -	- -
Stage 2	- -	- -
Critical Hdwy	- -	4.14 -
Critical Hdwy Stg 1	- -	7.54 -
Critical Hdwy Stg 2	- -	6.54 -
Follow-up Hdwy	- -	2.22 -
Pot Cap-1 Maneuver	- -	1070 -
Stage 1	- -	- -
Stage 2	- -	- -
Platoon blocked, %	- -	- -
Mov Cap-1 Maneuver	- -	1070 -
Mov Cap-2 Maneuver	- -	- -
Stage 1	- -	- -
Stage 2	- -	- -
Approach	EB	WB
HCM Control Delay, s	0	1
HCM LOS		B
Minor Lane/Major Mvmt	NBLn1	EBT EBR
Capacity (veh/h)	653	- -
HCM Lane V/C Ratio	0.078	- -
HCM Control Delay (s)	11	- -
HCM Lane LOS	B	- -
HCM 95th %ile Q(veh)	0.3	- -

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.636  
 Loss Time (sec): 43 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 43 Level of Service: B  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1  
 Volume Module:  
 Base Vol: 111 1399 44 17 1516 120 167 8 96 63 7 12  
 Growth 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  
 Initial Bse: 111 1399 44 17 1516 120 167 8 96 63 7 12  
 User 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  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 113 1428 45 17 1547 122 170 8 98 64 7 12  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 113 1428 45 17 1547 122 170 8 98 64 7 12  
 PCE 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  
 M/F 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  
 Final Volume: 113 1428 45 17 1547 122 170 8 98 64 7 12  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 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  
 Final Sat.: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.07 0.29 0.29 0.01 0.33 0.33 0.10 0.06 0.06 0.04 0.04 0.01  
 Crit Moves: \*\*\*\*

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh												8.8	
Intersection LOS												A	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBR	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	35	5	38	0	4	6	5	0	38	179	7	7
Future Vol, veh/h	0	35	5	38	0	4	6	5	0	38	179	7	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	5	41	0	4	7	5	0	41	195	8	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0
Approach	EB	WB	WB	WB	WB	WB	WB	WB	NB	NB	NB	NB	NB
Opposing Approach	WB	WB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB
Opposing Lanes	1	1	1	1	1	1	1	1	2	2	2	2	2
Conflicting Approach Left	SB	SB	NB	NB	EB	EB	EB	EB	1	1	1	1	1
Conflicting Lanes Left	2	2	2	2	2	2	2	2	1	1	1	1	1
Conflicting Approach Right	NB	NB	SB	SB	WB	WB	WB	WB	1	1	1	1	1
Conflicting Lanes Right	2	2	2	2	2	2	2	2	1	1	1	1	1
HCM Control Delay	8.6	8.6	8.3	8.3	8.3	8.3	8.3	8.3	8.9	8.9	8.9	8.9	8.9
HCM LOS	A	A	A	A	A	A	A	A	A	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	30%	0%	45%	27%	6%	0%
Vol Thru, %	70%	93%	6%	40%	94%	85%
Vol Right, %	0%	7%	49%	33%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	97	78	15	126	140
LT Vol	38	0	35	4	7	0
Through Vol	90	90	5	6	119	119
RT Vol	0	7	38	5	0	21
Lane Flow Rate	139	105	85	16	136	152
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.2	0.145	0.116	0.023	0.191	0.206
Departure Headway (Hd)	5.194	4.933	4.941	5.105	5.036	4.902
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	692	719	725	699	712	732
Service Time	2.925	2.724	2.977	3.15	2.766	2.632
HCM Lane V/C Ratio	0.201	0.146	0.117	0.023	0.191	0.208
HCM Control Delay	9.2	8.6	8.6	8.3	9	8.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.4	0.1	0.7	0.8

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR	SBU	SBR
Traffic Vol, veh/h	0	7	237	21	0	21
Future Vol, veh/h	0	7	237	21	0	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	258	23	0	23
Number of Lanes	0	0	2	0	0	0
Approach	SB	SB	SB	SB	SB	SB
Opposing Approach	NB	NB	NB	NB	NB	NB
Opposing Lanes	2	2	2	2	2	2
Conflicting Approach Left	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	1	1
Conflicting Approach Right	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1
HCM Control Delay	8.9	8.9	8.9	8.9	8.9	8.9
HCM LOS	A	A	A	A	A	A
Lane	SB	SB	SB	SB	SB	SB

HCM 2010 AWSC  
10: Montecito Road & Mainway Drive/Rossmoor Center Way  
12/1/2016

Intersection	Intersection Delay, s/veh 9.8															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	43	63	0	20	53	45	0	47	130	31	0	46	161	33
Future Vol, veh/h	0	42	43	63	0	20	53	45	0	47	130	31	0	46	161	33
Peak Hour Factor	0.92	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	47	48	70	0	22	59	50	0	52	144	34	0	51	179	37
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				2				2			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	2				2				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	2				2				1				1			
HCM Control Delay	9.9				9.6				9.7				9.9			
HCM LOS	A				A				A				A			

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	NBLn1	NBLn2	SBLn1	SBLn2
Vol Left, %	42%	0%	28%	17%	36%	0%	0%	0%	0%	0%
Vol Thru, %	58%	68%	29%	45%	64%	71%	0%	0%	0%	0%
Vol Right, %	0%	32%	43%	38%	0%	29%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	96	148	118	127	114	0	0	0	0
LT Vol	47	0	42	20	46	0	0	0	0	0
Through Vol	65	65	43	53	81	81	0	0	0	0
RT Vol	0	31	63	45	0	33	0	0	0	0
Lane Flow Rate	124	107	164	131	141	126	0	0	0	0
Geometry Grp	7	7	2	2	7	7	0	0	0	0
Degree of Utl (X)	0.204	0.162	0.234	0.193	0.228	0.191	0	0	0	0
Departure Headway (Hd)	5.904	5.462	5.258	5.291	5.831	5.441	0	0	0	0
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	610	659	687	679	618	662	0	0	0	0
Service Time	3.619	3.177	3.258	3.314	3.545	3.156	0	0	0	0
HCM Lane V/C Ratio	0.203	0.162	0.239	0.193	0.228	0.19	0	0	0	0
HCM Control Delay	10.1	9.2	9.9	9.6	10.3	9.4	0	0	0	0
HCM Lane LOS	B	A	A	A	B	A	0	0	0	0
HCM 95th-ile Q	0.8	0.6	0.9	0.7	0.9	0.7	0	0	0	0

HCM 2010 AWSC  
11: Montecito Road & Bradbury Road  
Existing + Full Occupancy + P Saturday Peak Hour  
02/22/2017

Intersection	Intersection Delay, s/veh 8.9															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR				
Traffic Vol, veh/h	0	1	15	4	0	115	20	69	0	3	73	94				
Future Vol, veh/h	0	1	15	4	0	115	20	69	0	3	73	94				
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	1	15	4	0	119	21	71	0	3	75	97				
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0	2				
Approach	EB				WB				NB							
Opposing Approach	WB				EB				SB							
Opposing Lanes	2				1				2							
Conflicting Approach Left	SB				NB				EB							
Conflicting Lanes Left	2				2				1							
Conflicting Approach Right	NB				SB				WB							
Conflicting Lanes Right	2				2				2							
HCM Control Delay	8.7				9.3				8.6							
HCM LOS	A				A				A							

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	5%	85%	0%	44%	0%
Vol Thru, %	92%	28%	75%	15%	0%	56%	96%	96%
Vol Right, %	0%	72%	20%	0%	100%	0%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	131	20	135	69	82	48	0
LT Vol	37	37	15	20	0	46	46	0
Through Vol	0	94	4	0	69	0	2	0
RT Vol	41	135	21	139	71	84	49	0
Lane Flow Rate	7	7	6	7	7	7	7	7
Geometry Grp	0.06	0.179	0.031	0.222	0.091	0.129	0.072	0
Degree of Utl (X)	5.33	4.785	5.46	5.736	4.605	5.54	5.288	0
Departure Headway (Hd)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	748	653	625	775	646	676	0
Service Time	3.07	2.524	3.517	3.479	2.348	3.032	3.032	0
HCM Lane V/C Ratio	0.061	0.18	0.032	0.222	0.092	0.13	0.072	0
HCM Control Delay	8.4	8.6	8.7	10.1	7.8	9.1	8.4	0
HCM Lane LOS	A	A	A	B	A	A	A	0
HCM 95th-ile Q	0.2	0.6	0.1	0.8	0.3	0.4	0.4	0

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Existing + Full Occupancy + P Saturday Peak Hour  
 02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	36	91	2
Future Vol, veh/h	0	36	91	2
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	37	94	2
Number of Lanes	0	0	2	0
Approach	SB	SB		
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	8.8			
HCM LOS	A			

HCM 2010 AWSC  
 1.2: West Road & Rossmoor Center Way  
 12/1/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	7.8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	82	21	0	10	118	0	32	17
Future Vol, veh/h	0	82	21	0	10	118	0	32	17
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	90	23	0	11	130	0	35	19
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	EB	WB	WB	EB		NB		
Opposing Approach	WB						EB		
Opposing Lanes	1						0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			1		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			1		
HCM Control Delay	7.7			8			7.7		
HCM LOS	A			A			A		
Lane	NBU	NBU	NBU	NBU	NBU	NBU	NBU	NBU	NBU
Vol Left, %	65%	0%	8%						
Vol Thru, %	0%	80%	92%						
Vol Right, %	35%	20%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	49	103	128						
LT Vol	32	0	10						
Through Vol	0	82	118						
RT Vol	17	21	0						
Lane Flow Rate	54	113	141						
Geometry Grp	1	1	1						
Degree of Util (X)	0.066	0.126	0.161						
Departure Headway (Hd)	4.403	4.013	4.131						
Convergence, Y/N	Yes	Yes	Yes						
Cap	818	884	862						
Service Time	2.403	2.08	2.188						
HCM Lane V/C Ratio	0.066	0.128	0.164						
HCM Control Delay	7.7	7.7	8						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.2	0.4	0.6						



HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection														
Intersection Delay, s/veh 22.9														
Intersection LOS C														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBT	SBR
Traffic Vol, veh/h	0	21	150	36	0	214	134	106	0	43	64	215	0	96
Future Vol, veh/h	0	21	150	36	0	214	134	106	0	43	64	215	0	96
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	160	38	0	228	143	113	0	46	68	229	0	102
Number of Lanes	0	0	2	0	0	1	0	0	0	0	1	0	0	0
Approach	EB	WB	WB	EB	NB	NB	WB	WB	NB	NB	WB	WB	SB	SB
Opposing Approach	WB	EB	EB	WB	SB	SB	EB	EB	WB	WB	EB	WB	NB	NB
Opposing Lanes	1	2	2	2	1	1	2	2	1	1	2	2	1	1
Conflicting Approach Left	SB	NB	NB	EB	WB	WB	EB	WB	WB	WB	EB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	2	2	2	2	1	1	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB	WB	EB	WB	WB	WB	EB	WB	WB	WB
Conflicting Lanes Right	1	1	1	1	1	1	2	2	1	1	2	2	1	1
HCM Control Delay	12.1	34.3	34.3	18.4	18.4	18.4	14.4	14.4	18.4	18.4	14.4	14.4	18.4	14.4
HCM LOS	B	D	D	C	C	C	B	B	C	C	B	B	B	B
Lane	NBLn1	EBLn1	EBLn1	EBLn2	WBLn1	WBLn1	SBLn1	SBLn1	NBLn1	NBLn1	WBLn2	WBLn2	SBLn2	SBLn2
Vol Left, %	13%	22%	0%	47%	53%	53%	53%	53%	0%	100%	0%	87%	87%	87%
Vol Thru, %	20%	78%	68%	30%	33%	33%	33%	33%	41%	0%	0%	13%	13%	13%
Vol Right, %	67%	0%	32%	23%	13%	13%	13%	13%	59%	0%	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	322	96	111	454	160	160	160	160	170	132	394	391	391	391
LT Vol	43	21	0	214	96	96	96	96	0	132	0	339	339	339
Through Vol	64	75	75	134	60	60	60	60	69	0	0	52	52	52
RT Vol	215	0	36	106	24	24	24	24	101	0	394	0	0	0
Lane Flow Rate	343	102	118	483	191	191	191	191	175	136	406	403	403	403
Geometry Grp	2	7	7	5	2	2	2	2	2	7	7	2	2	2
Degree of Utl (X)	0.599	0.21	0.232	0.842	0.376	0.376	0.376	0.376	0.275	0.253	0.617	0.647	0.647	0.647
Departure Headway (Hd)	6.3	7.419	7.074	6.274	7.077	7.077	7.077	7.077	5.656	6.685	5.468	5.777	5.777	5.777
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	569	481	505	575	506	506	506	506	633	538	668	625	625	625
Service Time	4.371	5.202	4.856	4.337	5.162	5.162	5.162	5.162	3.709	4.429	3.212	3.819	3.819	3.819
HCM Lane V/C Ratio	0.603	0.212	0.234	0.84	0.377	0.377	0.377	0.377	0.276	0.253	0.617	0.645	0.645	0.645
HCM Control Delay	18.4	12.2	12	34.3	14.4	14.4	14.4	14.4	10.9	11.7	16.7	18.9	18.9	18.9
HCM Lane LOS	C	B	B	D	B	B	B	B	B	B	C	C	C	C
HCM 95th-tile Q	3.9	0.8	0.9	8.9	1.7	1.7	1.7	1.7	1.1	1	4.3	4.7	4.7	4.7

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection													
Intersection Delay, s/veh 16													
Intersection LOS C													
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	132	394	0	69	101	0	339	52	52			
Future Vol, veh/h	0	132	394	0	69	101	0	339	52	52			
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97	0.97			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	136	406	0	71	104	0	349	54	54			
Number of Lanes	0	1	1	0	1	0	0	0	0	1			
Approach	WB	WB	NB	NB	SB	SB	WB	WB	SB	SB			
Opposing Approach	WB	WB	SB	SB	WB	WB	WB	WB	NB	NB			
Opposing Lanes	0	0	1	1	1	1	1	1	1	1			
Conflicting Approach Left	NB	NB	WB	WB	WB	WB	WB	WB	NB	NB			
Conflicting Lanes Left	1	1	0	0	0	0	0	0	2	2			
Conflicting Approach Right	SB	SB	WB	WB	WB	WB	WB	WB	SB	SB			
Conflicting Lanes Right	1	1	2	2	2	2	2	2	0	0			
HCM Control Delay	15.4	15.4	10.9	10.9	18.9	18.9	18.9	18.9	18.9	18.9			
HCM LOS	C	C	B	B	C	C	C	C	C	C			
Lane	NBLn1	WBLn1	WBLn2	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1			
Vol Left, %	0%	100%	0%	87%	87%	87%	87%	87%	87%	87%			
Vol Thru, %	41%	0%	0%	13%	13%	13%	13%	13%	13%	13%			
Vol Right, %	59%	0%	100%	0%	0%	0%	0%	0%	0%	0%			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop			
Traffic Vol by Lane	170	132	394	391	391	391	391	391	391	391			
LT Vol	0	132	0	339	339	339	339	339	339	339			
Through Vol	69	0	0	52	52	52	52	52	52	52			
RT Vol	101	0	394	0	0	0	0	0	0	0			
Lane Flow Rate	175	136	406	403	403	403	403	403	403	403			
Geometry Grp	2	7	7	2	2	2	2	2	2	2			
Degree of Utl (X)	0.275	0.253	0.617	0.647	0.647	0.647	0.647	0.647	0.647	0.647			
Departure Headway (Hd)	5.656	6.685	5.468	5.777	5.777	5.777	5.777	5.777	5.777	5.777			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	633	538	668	625	625	625	625	625	625	625			
Service Time	3.709	4.429	3.212	3.819	3.819	3.819	3.819	3.819	3.819	3.819			
HCM Lane V/C Ratio	0.276	0.253	0.617	0.645	0.645	0.645	0.645	0.645	0.645	0.645			
HCM Control Delay	10.9	11.7	16.7	18.9	18.9	18.9	18.9	18.9	18.9	18.9			
HCM Lane LOS	B	B	C	C	C	C	C	C	C	C			
HCM 95th-tile Q	1.1	1	4.3	4.7	4.7	4.7	4.7	4.7	4.7	4.7			

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection	3.8					
Int Delay, s/veh						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	99	0	85	123	5	89
Future Vol, veh/h	99	0	85	123	5	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	0	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	0	92	134	5	97
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	108	0	426	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	318	-
Critical Hwy	-	-	4.12	-	6.42	6.22
Critical Hwy Stg 1	-	-	-	-	5.42	-
Critical Hwy Stg 2	-	-	-	-	5.42	-
Follow-up Hwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1483	-	585	946
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1483	-	546	946
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	689	-
Approach	EB	WB	WB	WB	NB	NB
HCM Control Delay, s	0	3.1	3.1	3.1	9.5	9.5
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	911	-	-	1483	-	
HCM Lane V/C Ratio	0.112	-	-	0.062	-	
HCM Control Delay (s)	9.5	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-	

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT		WBT			NBT					
Traffic Volume (veh/h)	88	28	16	703	44	539	14	1067	14	1067	14	1467
Future Volume (veh/h)	88	28	16	703	44	539	14	1067	14	1067	14	1467
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	97	31	18	807	0	0	15	1173	185	484	1612	80
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	867	0	387	30	1234	384	734	3337	1039
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.24	0.24	0.24	0.28	0.44	0.44
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	97	0	49	807	0	0	15	1173	185	484	1612	80
Grp Sat Flow(s), veh/h/ln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.5	0.0	3.0	24.5	0.0	0.0	0.9	25.0	11.0	26.5	24.8	3.2
Cycle Q Clear(g.c), s	5.5	0.0	3.0	24.5	0.0	0.0	0.9	25.0	11.0	26.5	24.8	3.2
Prop In Lane	1.00	0.00	0.37	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	867	0	387	30	1234	384	734	3337	1039
V/C Ratio(X)	1.09	0.00	0.56	0.93	0.00	0.00	0.51	0.95	0.48	0.86	0.48	0.08
Avail Cap(c,a), veh/h	89	0	87	867	0	396	81	1234	384	734	3337	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	41.0	35.7	32.9	17.5	11.5
Incr Delay (d2), s/veh	123.2	0.0	7.8	15.9	0.0	0.0	12.7	16.2	4.3	1.6	0.4	0.1
Initial Q Delay(d3), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back(Q(50%)) veh/ln	5.7	0.0	1.6	13.9	0.0	0.0	0.6	13.5	5.3	13.3	11.7	1.4
LnGrp Delay(d), s/veh	175.6	0.0	58.9	56.6	0.0	0.0	66.3	57.2	40.0	34.5	17.9	11.6
LnGrp LOS	F	E	E	E	E	E	E	D	C	C	B	B
Approach Vol, veh/h	146											
Approach Delay, s/veh	136.4											
Approach LOS	F											
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	51.3	32.5	10.2	5.8	78.0	32.7						
Change Period (Y+Rc), s	5.8	* 4.7	4.0	5.8	5.8							
Max Green Setting (Gmax), s	30.0	* 27	* 5.5	5.0	51.7	27.5						
Max Q Clear Time (g_c+H), s	28.5	27.0	7.5	2.9	26.8	26.5						
Green Ext Time (p_c), s	0.3	0.0	0.0	0.0	14.9	0.4						
Intersection Summary	41.7											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

12/1/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	9	11	5	371	54	565	111	1222	351	338	1593	469
Future Volume (veh/h)	9	11	5	371	54	565	111	1222	351	338	1593	469
Number	7	4	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	10	12	6	412	0	668	123	1358	0	376	1770	521
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Cap. veh/h	46	49	41	898	0	802	520	1848	575	306	1875	584
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.30	0.73	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	10	12	6	412	0	668	123	1358	0	376	1770	521
Grp Sat Flow(s), veh/h/m	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Serve(g.s.)	0.6	0.7	0.4	10.8	0.0	22.0	3.0	17.2	0.0	19.0	37.1	34.1
Cycle Q Clear(g.s.)	0.6	0.7	0.4	10.8	0.0	22.0	3.0	17.2	0.0	19.0	37.1	34.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	46	49	41	898	0	802	520	1848	575	306	1875	584
V/C Ratio(X)	0.22	0.25	0.15	0.46	0.00	0.83	0.24	0.73	0.00	1.23	0.94	0.89
Avail Cap(c), veh/h	81	85	72	1258	0	1123	520	1848	575	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.57	0.57	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	52.5	52.4	34.7	0.0	38.9	33.6	11.9	0.0	45.5	33.6
Incr Delay (d2), s/veh	2.3	2.6	1.6	0.4	0.0	3.9	0.1	1.5	0.0	127.6	11.2	18.5
Initial Q Delay(Q3), 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(50%), veh/In0.3	0.4	0.2	0.2	5.3	0.0	10.0	1.4	8.0	0.0	20.1	19.3	17.9
LnGrp Delay(d), s/veh	54.8	55.1	53.9	35.1	0.0	42.8	33.7	13.4	0.0	173.1	44.8	51.2
LnGrp LOS	D	E	D	D	D	C	B	B	F	D	D	D
Approach Vol, veh/h	28	54.7	1080	1481	2667	64.2						
Approach Delay, s/veh	54.7	54.7	39.8	15.1	64.2							
Approach LOS	D	D	D	B	E							
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+R), s	45.8	45.8	7.6	22.4	46.4							
Change Period (Y+R), s	4.0	5.8	* 4.7	5.8	* 5.8							
Max Green Setting (Gmax), s	26.7	26.7	* 5.0	5.0	* 41							
Max Q Clear Time (g_c+d), s	19.2	19.2	2.7	5.0	39.1							
Green Ext Time (p_c), s	0.0	4.9	0.0	0.0	1.5							

Intersection Summary  
 HCM 2010 Ctrl Delay 45.3  
 HCM 2010 LOS D  
 Notes

Health Club within The Shops at Rossmoor TIA 5:00 pm 3/23/2016 Opening Year AM Peak Hour  
 LSA Associates, Inc. - DL  
 Synchro 9 Report  
 Page 3

Opening Year NP AM Mon Feb 20, 2017 15:14:26 Page 2-1  
 Health Club within the Shops at Rossmoor  
 Opening Year (2018) No Project  
 AM Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.822  
 Loss Time (sec): 72 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 72 Level Of Service: D  
 Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Protected Protected Permitted  
 Rights: Ovl Include Include Ovl  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 2 0 0 1  
 Volume Module:  
 Base Vol: 0 1491 308 336 1709 0 0 0 0 709 0 617  
 Growth 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  
 Initial Base: 0 1491 308 336 1709 0 0 0 0 709 0 617  
 User 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  
 PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91  
 PHF Volume: 0 1642 339 370 1882 0 0 0 0 781 0 680  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1642 339 370 1882 0 0 0 0 781 0 680  
 PCE 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  
 MLF 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  
 Final Volume: 0 1642 339 370 1882 0 0 0 0 781 0 680  
 OvlAdjVol: 0 1642 339 370 1882 0 0 0 0 781 0 680  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.00 0.32 0.20 0.11 0.37 0.00 0.00 0.00 0.00 0.23 0.00 0.40  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

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Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.507  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 34 Level Of Service: A

Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:  
 Base Vol: 56 1655 31 21 1424 32 21 4 14 24 2 21  
 Growth 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  
 Initial Base: 56 1655 31 21 1424 32 21 4 14 24 2 21  
 User 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  
 PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90  
 PHF Volume: 62 1831 34 23 1575 35 23 4 15 27 2 23  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 62 1831 34 23 1575 35 23 4 15 27 2 23  
 PCE 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  
 MLF 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  
 FinalVolume: 62 1831 34 23 1575 35 23 4 15 27 2 23

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.94 0.06 1.00 2.93 0.07 1.00 0.22 0.78 1.00 0.09 0.91  
 Final Sat.: 1700 5006 94 1700 4988 112 1700 378 1322 1700 148 1552

Capacity Analysis Module:  
 Vol/Sat: 0.04 0.37 0.37 0.01 0.32 0.32 0.01 0.01 0.01 0.02 0.01 0.01  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.650  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 44 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Split Phase	Split Phase
Rights:	Include	Include	OVI	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	2 0 2 1 0	1 0 2 1 0	0 1 0 0 2	1 0 1 1 0

Volume Module:  
 Base Vol: 381 1687 47 4 1390 53 107 3 573 66 13 2  
 Growth 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  
 Initial Base: 381 1687 47 4 1390 53 107 3 573 66 13 2  
 User 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  
 PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88  
 PHF Volume: 433 1919 53 5 1581 60 122 3 652 75 15 2  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 433 1919 53 5 1581 60 122 3 652 75 15 2  
 PCE 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  
 MLF 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  
 FinalVolume: 433 1919 53 5 1581 60 122 3 652 75 15 2  
 OrLAdjVol: \*\*\*\*\*

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.92 0.08 1.00 2.89 0.11 0.97 0.03 2.00 1.63 0.32 0.05  
 Final Sat.: 3400 4962 138 1700 4913 187 1654 46 3400 2770 546 84

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.39 0.39 0.00 0.32 0.32 0.07 0.07 0.19 0.03 0.03 0.03  
 OrLAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.759  
 Loss Time (sec): 59 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 59 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 147 1548 26 29 1405 172 282 18 98 71 22 29  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 147 1548 26 29 1405 172 282 18 98 71 22 29  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94  
 PHF Volume: 157 1656 28 31 1503 184 302 19 105 76 24 31  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 157 1656 28 31 1503 184 302 19 105 76 24 31  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 157 1656 28 31 1503 184 302 19 105 76 24 31

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.95 0.05 1.00 2.67 0.33 1.00 0.16 0.84 0.76 0.24 1.00  
 Final Sat.: 1700 5016 84 1700 4544 556 1700 264 1436 1298 402 1700

Capacity Analysis Module:  
 Vol/Sat: 0.09 0.33 0.33 0.02 0.33 0.33 0.18 0.07 0.07 0.04 0.06 0.02  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.549  
 Loss Time (sec): 36 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 36 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 66 1627 15 19 1447 71 78 7 79 17 10 39  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 66 1627 15 19 1447 71 78 7 79 17 10 39  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92  
 PHF Volume: 72 1778 16 21 1581 78 85 8 86 19 11 43  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 72 1778 16 21 1581 78 85 8 86 19 11 43  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 72 1778 16 21 1581 78 85 8 86 19 11 43

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.97 0.03 1.00 2.86 0.14 1.00 0.08 0.92 1.00 0.20 0.80  
 Final Sat.: 1700 5053 47 1700 4861 239 1700 138 1562 1700 347 1353

Capacity Analysis Module:  
 Vol/Sat: 0.04 0.35 0.35 0.01 0.33 0.33 0.05 0.06 0.06 0.01 0.03 0.03  
 Crit Moves: \*\*\*\*

12/1/2016

12/1/2016

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

12/1/2016

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection												
Int Delay, s/veh											1.3	
Intersection LOS											B	
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	611	4	28	407	8	71						
Future Vol, veh/h	611	4	28	407	8	71						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	79	79	79	79	79	79						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	773	5	35	515	10	90						
Major/Minor	Major1		Major2		Minor1							
Conflicting Flow All	0	0	778	0	1104	389						
Stage 1	-	-	-	-	776	-						
Stage 2	-	-	-	-	328	-						
Critical Hdwy	-	-	4.14	-	6.84	6.94						
Critical Hdwy Stg 1	-	-	-	-	5.84	-						
Critical Hdwy Stg 2	-	-	-	-	5.84	-						
Follow-up Hdwy	-	-	2.22	-	3.52	3.32						
Pot Cap-1 Maneuver	-	-	834	-	205	610						
Stage 1	-	-	-	-	414	-						
Stage 2	-	-	-	-	702	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	834	-	193	610						
Mov Cap-2 Maneuver	-	-	-	-	193	-						
Stage 1	-	-	-	-	414	-						
Stage 2	-	-	-	-	661	-						
Approach	EB		WB		NB							
HCM Control Delay, s	0		0.8		14							
HCM LOS	B		B		B							
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	500	-	-	834	-							
HCM Lane V/C Ratio	0.2	-	-	0.042	-							
HCM Control Delay (s)	14	-	-	9.5	0.2							
HCM Lane LOS	B	-	-	A	A							
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-							

Intersection												
Int Delay, s/veh											11.5	
Intersection LOS											B	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	55	6	127	0	2	3	1	0	109	169	2
Future Vol, veh/h	0	55	6	127	0	2	3	1	0	109	169	2
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	8	161	0	3	4	1	0	138	214	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0
Approach	EB		WB		WB		WB		NB		NB	
Opposing Approach	WB		EB		EB		SB		SB		SB	
Opposing Lanes	1		1		1		2		2		2	
Conflicting Approach Left	SB		NB		EB		EB		EB		EB	
Conflicting Lanes Left	2		2		2		2		2		1	
Conflicting Approach Right	NB		SB		WB		WB		WB		WB	
Conflicting Lanes Right	2		2		2		2		2		1	
HCM Control Delay	11.4		9.4		11.9		11.9		11.9		11.9	
HCM LOS	B		A		B		B		B		B	
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2						
Vol Left, %	56%	0%	29%	33%	0%	0%						
Vol Thru, %	44%	98%	3%	50%	100%	78%						
Vol Right, %	0%	2%	68%	17%	0%	22%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	194	87	188	6	193	123						
LT Vol	109	0	55	2	0	0						
Through Vol	85	85	6	3	193	96						
RT Vol	0	2	127	1	0	27						
Lane Flow Rate	245	109	238	8	244	156						
Geometry Grp	7	7	2	2	7	7						
Degree of Utl (X)	0.411	0.174	0.358	0.013	0.387	0.241						
Departure Headway (Ht)	6.034	5.733	5.409	6.253	5.714	5.559						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	598	626	666	571	632	646						
Service Time	3.761	3.46	3.439	4.301	3.441	3.286						
HCM Lane V/C Ratio	0.41	0.174	0.357	0.014	0.386	0.241						
HCM Control Delay	12.9	9.7	11.4	9.4	12	10.1						
HCM Lane LOS	B	A	B	A	B	B						
HCM 95th %tile Q	2	0.6	1.6	0	1.8	0.9						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection		Intersection Delay, s/veh			
Intersection LOS		SBL	SBT	SBR	SBR
Movement		SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	289	27	27
Future Vol, veh/h	0	0	289	27	27
Peak Hour Factor	0.92	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	0	0	366	34	34
Number of Lanes	0	0	2	0	0
Approach		SB			
Opposing Approach		NB			
Opposing Lanes		2			
Conflicting Approach Left		WB			
Conflicting Lanes Left		1			
Conflicting Approach Right		EB			
Conflicting Lanes Right		1			
HCM Control Delay		11.3			
HCM LOS		B			
Lane		NB			

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection		Intersection Delay, s/veh																							
Intersection LOS		B						B																	
Movement		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR									
Traffic Vol, veh/h	0	98	62	89	0	13	42	31	0	39	183	21	0	24	205	66									
Future Vol, veh/h	0	98	62	89	0	13	42	31	0	39	183	21	0	24	205	66									
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83									
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2									
Mvmt Flow	0	118	75	107	0	16	51	37	0	47	220	25	0	29	247	80									
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2									
Approach		EB						WB						NB											
Opposing Approach		WB						EB						SB											
Opposing Lanes		1						1						2											
Conflicting Approach Left		SB						NB						EB											
Conflicting Lanes Left		2						2						1											
Conflicting Approach Right		NB						SB						WB											
Conflicting Lanes Right		2						2						1											
HCM Control Delay		13.8						10.4						11.3											
HCM LOS		B						B						B											
Lane		NBUr1				NBLr2				EBU1				WBU1				SBU1				SBLr2			
Vol Left, %		30%				0%				39%				15%				19%				0%			
Vol Thru, %		70%				81%				25%				49%				81%				61%			
Vol Right, %		0%				19%				36%				0%				39%				0%			
Sign Control		Stop				Stop				Stop				Stop				Stop							
Traffic Vol by Lane		131				113				249				86				127				169			
LT Vol		39				0				98				13				24				0			
Through Vol		92				92				62				42				103				103			
RT Vol		0				21				89				31				0				66			
Lane Flow Rate		157				136				300				104				152				203			
Geometry Grp		7				7				2				2				7				7			
Degree of Utlr (X)		0.281				0.232				0.475				0.175				0.267				0.334			
Departure Headway (Hd)		6.436				6.15				5.694				6.072				6.302				5.927			
Convergence, Y/N		Yes				Yes				Yes				Yes				Yes				Yes			
Cap		557				581				630				587				568				605			
Service Time		4.201				3.915				3.752				4.149				4.064				3.689			
HCM Lane V/C Ratio		0.282				0.234				0.476				0.177				0.268				0.336			
HCM Control Delay		11.7				10.8				13.8				10.4				11.4				11.7			
HCM Lane LOS		B				B				B				B				B				B			
HCM 95th-ile Q		1.1				0.9				2.6				0.6				1.1				1.5			

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Opening Year AM Peak Hour  
 02/22/2017

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔				↔				↔	
Traffic Vol, veh/h	0	5	24	2	0	136	18	147	0	0	140	221
Future Vol, veh/h	0	5	24	2	0	136	18	147	0	0	140	221
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	30	3	0	172	23	186	0	0	177	280
Number of Lanes	0	0	1	0	0	1	1	1	0	0	2	0

Approach	EB	WB	WB	NB
Opposing Approach	WB	EB	WB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	NB	EB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	SB	WB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	10.9	12.6	12.6	13.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	16%	88%	0%	53%	0%	0%	0%	0%
Vol Thru, %	100%	17%	77%	12%	0%	47%	97%	0%	0%	97%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	0%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	268	31	154	147	142	69			
LT Vol	0	0	5	136	0	75	0			
Through Vol	93	47	24	18	0	67	67			
RT Vol	0	221	2	0	147	0	2			
Lane Flow Rate	118	339	39	195	186	179	87			
Geometry Grp	7	7	6	7	7	7	7			
Degree of Utl (X)	0.205	0.534	0.079	0.379	0.302	0.335	0.155			
Departure Headway (Hd)	6.257	5.67	7.227	6.994	5.837	6.742	6.462			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	572	634	493	513	614	532	554			
Service Time	4.012	3.425	5.313	4.751	3.593	4.507	4.216			
HCM Lane V/C Ratio	0.206	0.535	0.079	0.38	0.303	0.336	0.157			
HCM Control Delay	10.6	14.8	10.9	14	11.1	12.9	10.4			
HCM Lane LOS	B	B	B	B	B	B	B			
HCM 95th-tile Q	0.8	3.2	0.3	1.8	1.3	1.5	1.5			

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Opening Year AM Peak Hour  
 02/22/2017

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↔	
Traffic Vol, veh/h	0	75	133	2
Future Vol, veh/h	0	75	133	2
Peak Hour Factor	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	95	168	3
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	12.1
HCM LOS	B



HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 7.7												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	100	7	0	6	87	0	4	12			
Future Vol, veh/h	0	100	7	0	6	87	0	4	12			
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	118	8	0	7	102	0	5	14			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach		EB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	0	NB	EB	0		
Conflicting Lanes Left	1	1	1			
Conflicting Approach Right	NB	0	WB	1		
Conflicting Lanes Right	1	0	1	1		
HCM Control Delay	7.7	7.7	7.1	A		
HCM LOS	A	A	A	A		

Lane	NBLn1	EBLn1	WBLn1	NBLn1		
Vol Left, %	25%	0%	6%			
Vol Thru, %	0%	93%	94%			
Vol Right, %	75%	7%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	16	107	93			
LT Vol	4	0	6			
Through Vol	0	100	87			
RT Vol	12	7	0			
Lane Flow Rate	19	126	109			
Geometry Grp	1	1	1			
Degree of Utl (X)	0.021	0.14	0.124			
Departure Headway (Hd)	4.036	4.01	4.075			
Convergence, Y/N	Yes	Yes	Yes			
Cap	892	893	879			
Service Time	2.036	2.04	2.106			
HCM Lane V/C Ratio	0.021	0.141	0.124			
HCM Control Delay	7.1	7.7	7.7			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.1	0.5	0.4			

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection														
Intersection Delay, s/veh 8.7														
Intersection LOS A														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	35	99	14	0	74	59	52	0	13	16	31	0	60
Future Vol, veh/h	0	35	99	14	0	74	59	52	0	13	16	31	0	60
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	106	15	0	80	63	56	0	14	17	33	0	65
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	1

Approach		EB	WB	NB		
Opposing Approach	WB	EB	WB	NB	SB	NB
Opposing Lanes	1	2	1			
Conflicting Approach Left	SB	NB	EB	WB		
Conflicting Lanes Left	1	1	2			
Conflicting Approach Right	NB	SB	WB			
Conflicting Lanes Right	1	1	2			
HCM Control Delay	8.6	9.1	8.1			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1		
Vol Left, %	22%	41%	0%	40%	66%		
Vol Thru, %	27%	59%	78%	32%	18%		
Vol Right, %	52%	0%	22%	28%	16%		
Sign Control	Stop	Stop	Stop	Stop	Stop		
Traffic Vol by Lane	60	85	64	185	91		
LT Vol	13	35	0	74	60		
Through Vol	16	50	50	59	16		
RT Vol	31	0	14	52	15		
Lane Flow Rate	65	91	68	199	98		
Geometry Grp	2	7	7	5	2		
Degree of Utl (X)	0.083	0.134	0.094	0.25	0.133		
Departure Headway (Hd)	4.638	5.301	4.938	4.532	4.889		
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes		
Cap	771	676	725	792	733		
Service Time	2.677	3.035	2.672	2.564	2.924		
HCM Lane V/C Ratio	0.084	0.135	0.094	0.251	0.134		
HCM Control Delay	8.1	8.9	8.2	9.1	8.7		
HCM Lane LOS	A	A	A	A	A		
HCM 95th-tile Q	0.3	0.5	0.3	1	0.5		

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	71	37	0	16	32	0	28	15			
Future Vol, veh/h	0	71	37	0	16	32	0	28	15			
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	82	43	0	18	37	0	32	17			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB		WB		NB		SB					
Opposing Approach	0		0		SB		NB					
Opposing Lanes	0		0		1		1					
Conflicting Approach Left	NB		0		WB		2					
Conflicting Lanes Left	1		0		0		2					
Conflicting Approach Right	SB		WB		0		0					
Conflicting Lanes Right	1		2		0		0					
HCM Control Delay	8.1		7.1		7.7		7.7					
HCM LOS	A		A		A		A					
Lane	NBLn1 WBLn1 WBLn2		SBLn1									
Vol Left, %	0%		100%		0%		65%					
Vol Thru, %	33%		0%		0%		35%					
Vol Right, %	67%		0%		100%		0%					
Sign Control	Stop		Stop		Stop		Stop					
Traffic Vol by Lane	48		71		37		43					
LT Vol	0		71		0		28					
Through Vol	16		0		0		15					
RT Vol	32		0		37		0					
Lane Flow Rate	55		82		43		49					
Geometry Grp	2		7		7		2					
Degree of Util (X)	0.05		0.118		0.047		0.061					
Departure Headway (Hd)	3.897		5.216		4.014		4.428					
Convergence, Y/N	Yes		Yes		Yes		Yes					
Cap	924		685		885		814					
Service Time	1.899		2.97		1.768		2.43					
HCM Lane V/C Ratio	0.05		0.12		0.049		0.06					
HCM Control Delay	7.1		8.7		7		7.7					
HCM Lane LOS	A		A		A		A					
HCM 95th-ile Q	0.2		0.4		0.1		0.2					

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection												
Int Delay, s/veh 0.7												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	111	0	9	96	0	11						
Future Vol, veh/h	111	0	9	96	0	11						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	89	89	89	89	89	89						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	125	0	10	108	0	12						
Major/Minor	Major1		Major2		Minor1							
Conflicting Flow All	0	0	125	0	253	125						
Stage 1	-	-	-	-	128	-						
Stage 2	-	-	-	-	128	-						
Critical Hdwy	-	-	-	-	4.12	-						
Critical Hdwy Stg 1	-	-	-	-	6.42	-						
Critical Hdwy Stg 2	-	-	-	-	5.42	-						
Follow-up Hdwy	-	-	-	-	3.518	-						
Pot Cap-1 Maneuver	-	-	-	-	1462	-						
Stage 1	-	-	-	-	901	-						
Stage 2	-	-	-	-	898	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	-	-	1462	-						
Mov Cap-2 Maneuver	-	-	-	-	731	-						
Stage 1	-	-	-	-	901	-						
Stage 2	-	-	-	-	892	-						
Approach	EB		WB		NB							
HCM Control Delay, s	0		0.6		8.9							
HCM LOS	A		A		A							
Minor Lane/Major Mvmt	NBLn1		EBT		WBL		WBT					
Capacity (veh/h)	926		-		1462		-					
HCM Lane V/C Ratio	0.013		-		0.007		-					
HCM Control Delay (s)	8.9		-		7.5		0					
HCM Lane LOS	A		-		A		A					
HCM 95th-ile Q(veh)	0		-		0		-					

HCM 2010 Signalized Intersection Summary  
 1.: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	188	30	20	324	35	530	11	1464	365	529	1080	128
Traffic Volume (veh/h)	168	30	20	324	35	530	11	1464	365	529	1080	128
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pBT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/h/ln	173	31	21	360	0	0	11	1509	376	545	1113	132
Adj Flow Rate, veh/h	0	2	0	2	0	1	1	3	1	1	3	1
Adj No. of Lanes	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh. %	127	74	50	419	0	187	23	1595	497	583	3284	1023
Cap. veh/h	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.66	1.00	1.00
Arrive On Green	1774	1037	702	3548	0	1583	1774	5085	1583	1774	5085	1583
Sat Flow, veh/h	173	0	52	360	0	0	11	1509	376	545	1113	132
Grp Volume(v), veh/h	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Grp Sat Flow(s), veh/h/ln	7.9	0.0	3.1	11.0	0.0	0.0	0.7	31.9	23.5	30.0	0.0	0.0
Q Serve(g.s), s	7.9	0.0	3.1	11.0	0.0	0.0	0.7	31.9	23.5	30.0	0.0	0.0
Cycle Q Clear(g.c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	1.36	0.00	0.42	0.86	0.00	0.00	0.48	0.95	0.76	0.93	0.34	0.13
Lane Grp Cap(c), veh/h	127	0	125	419	0	187	23	1595	497	583	3284	1023
V/C Ratio(X)	127	0	125	419	0	187	23	1595	497	583	3284	1023
Avail Cap(c.a), veh/h	127	0	125	419	0	187	23	1595	497	583	3284	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.8	34.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	203.5	0.0	2.2	15.9	0.0	0.0	14.6	12.9	10.3	20.3	0.2	0.2
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(50%), veh/ln	11.1	0.0	1.6	6.3	0.0	0.0	0.4	16.7	11.7	17.5	0.1	0.1
LnGrp Delay(d), s/veh	254.5	0.0	51.0	63.5	0.0	0.0	68.5	49.8	44.3	38.1	0.2	0.2
LnGrp LOS	F	D	E	E	D	E	E	D	D	D	A	A
Approach Vol, veh/h	225			360			1886				1790	
Approach Delay, s/veh	207.5			63.5			48.8				11.8	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.0	40.3		12.6	5.4	76.8		18.8				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+I), s	32.0	33.9		9.9	2.7	2.0		13.0				
Green Ext Time (p_c), s	0.5	0.6		0.0	0.0	13.7		0.0				
Intersection Summary	42.9											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
 2.: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	78	73	88	197	15	663	41	1564	561	323	1464	375
Traffic Volume (veh/h)	78	73	88	197	15	663	41	1564	561	323	1464	375
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pBT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/h/ln	80	75	91	203	0	714	42	1612	0	333	1509	387
Adj Flow Rate, veh/h	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh. %	81	85	72	930	0	830	489	1890	588	242	1777	553
Cap. veh/h	0.05	0.05	0.05	0.26	0.00	0.26	0.28	0.74	0.00	0.14	0.35	0.36
Arrive On Green	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Sat Flow, veh/h	80	75	91	203	0	714	42	1612	0	333	1509	387
Grp Volume(v), veh/h	1863	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583
Grp Sat Flow(s), veh/h/ln	5.0	4.4	5.0	4.9	0.0	23.6	1.0	24.5	0.0	15.0	30.2	23.1
Q Serve(g.s), s	5.0	4.4	5.0	4.9	0.0	23.6	1.0	24.5	0.0	15.0	30.2	23.1
Cycle Q Clear(g.c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	0.99	0.89	1.26	0.22	0.00	0.86	0.09	0.85	0.00	1.38	0.85	0.70
Lane Grp Cap(c), veh/h	81	85	72	930	0	830	489	1890	588	242	1777	553
V/C Ratio(X)	81	85	72	930	0	830	489	1890	588	242	1777	553
Avail Cap(c.a), veh/h	81	85	72	930	0	830	489	1890	588	242	1777	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.52	0.52	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	52.5	31.8	0.0	38.7	34.1	12.0	0.0	47.5	33.1	30.8	7.2
Incr Delay (d2), s/veh	97.4	61.6	192.8	0.1	0.0	5.3	0.0	2.8	0.0	193.3	5.3	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(50%), veh/ln	3.7	6.0	2.4	0.0	10.9	0.5	11.2	0.0	20.3	15.0	11.2	0.0
LnGrp Delay(d), s/veh	149.9	113.8	245.3	31.9	0.0	44.0	34.2	14.8	0.0	240.8	38.4	38.0
LnGrp LOS	F	F	F	C	D	C	D	C	B	F	D	D
Approach Vol, veh/h	246			917			1654				2229	
Approach Delay, s/veh	174.2			41.3			15.3				68.5	
Approach LOS	F			D			B				E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	49.0	46.7		9.7	21.4	44.2		34.6				
Change Period (Y+Rc), s	5.8	* 4.0		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+I), s	32.0	33.9		9.9	2.7	2.0		13.0				
Green Ext Time (p_c), s	0.5	0.6		0.0	0.0	13.7		0.0				
Intersection Summary	51.3											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.807  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 68 Level Of Service: D

Street Name: Seal Beach Blvd East Bound West Bound  
 Approach: North Bound South Bound Lampson Ave  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Protected Permitted  
 Rights: Ovl Include Include Ovl  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 0 1

Volume Module:  
 Base Vol: 0 1744 549 640 1628 0 0 0 0 545 0 481  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 0 1744 549 640 1628 0 0 0 0 545 0 481  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 1785 562 655 1666 0 0 0 0 558 0 492  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1785 562 655 1666 0 0 0 0 558 0 492  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 0 1785 562 655 1666 0 0 0 0 558 0 492  
 OvlAdjVol: 0 0 0 0 0 0 0 0 0 0 0 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.00 0.35 0.33 0.19 0.33 0.00 0.00 0.00 0.00 0.16 0.00 0.29  
 OvlAdjV/S: 0.00 0.35 0.33 0.19 0.33 0.00 0.00 0.00 0.00 0.16 0.00 0.29  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.734  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 55 Level Of Service: C

Street Name: Seal Beach Blvd East Bound West Bound  
 Approach: North Bound South Bound St. Cloud Dr  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Protected Include  
 Rights: Ovl Include Include Ovl  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:  
 Base Vol: 410 1691 133 5 1690 70 95 0 389 195 31 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 410 1691 133 5 1690 70 95 0 389 195 31 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 441 1818 143 5 1817 75 102 0 418 210 33 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 441 1818 143 5 1817 75 102 0 418 210 33 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 441 1818 143 5 1817 75 102 0 418 210 33 5  
 OvlAdjVol: 0 0 0 0 0 0 0 0 0 0 0 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.78 0.22 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04  
 Final Sat.: 3400 4728 372 1700 4897 203 1700 0 3400 2870 456 74  
 Capacity Analysis Module:  
 Vol/Sat: 0.13 0.38 0.38 0.00 0.37 0.37 0.06 0.00 0.12 0.07 0.07 0.07  
 OvlAdjV/S: 0.13 0.38 0.38 0.00 0.37 0.37 0.06 0.00 0.12 0.07 0.07 0.07  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.699  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 50 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 161 1591 24 36 1603 192 186 1 131 15 1 16  
 Growth 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  
 Initial Base: 161 1591 24 36 1603 192 186 1 131 15 1 16  
 User 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  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 170 1684 25 38 1696 203 197 1 139 16 1 17  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 170 1684 25 38 1696 203 197 1 139 16 1 17  
 PCE 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  
 MLF 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  
 Final Volume: 170 1684 25 38 1696 203 197 1 139 16 1 17  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.96 0.04 1.00 2.68 0.32 1.00 0.01 0.99 1.00 0.06 0.94  
 Final Sat.: 1700 5024 76 1700 4554 546 1700 13 1687 1700 100 1600  
 Capacity Analysis Module:  
 Vol/Sat: 0.10 0.34 0.02 0.37 0.37 0.12 0.08 0.08 0.01 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.761  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 59 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 207 1470 85 79 1406 95 101 28 187 140 47 60  
 Growth 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  
 Initial Base: 207 1470 85 79 1406 95 101 28 187 140 47 60  
 User 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  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 219 1554 90 84 1486 100 107 30 198 148 50 63  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 219 1554 90 84 1486 100 107 30 198 148 50 63  
 PCE 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  
 MLF 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  
 Final Volume: 219 1554 90 84 1486 100 107 30 198 148 50 63  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.84 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56  
 Final Sat.: 1700 4821 279 1700 4777 323 1700 221 1479 1700 747 953  
 Capacity Analysis Module:  
 Vol/Sat: 0.13 0.32 0.05 0.31 0.31 0.06 0.13 0.13 0.09 0.07 0.07 0.07  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

Intersection	12	
IntDelay, s/veh	12	
Movement	EBT EBR	WBL WBT
Traffic Vol, veh/h	447 7	54 458
Future Vol, veh/h	447 7	54 458
Conflicting Peds, #/hr	0 0	0 0
Sign Control	Free Free	Free Free
RT Channelized	- None	- None
Storage Length	-	-
Veh in Median Storage, #	0	0
Grade, %	0	0
Peak Hour Factor	90 90	90 90
Heavy Vehicles, %	2 2	2 2
Mvmt Flow	497 8	60 509
Major/Minor	Major1	Major2
Conflicting Flow All	0 0	504 0
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	4.14
Critical Hdwy Stg 1	-	6.84
Critical Hdwy Stg 2	-	5.84
Follow-up Hdwy	-	2.22
Pot Cap-1 Maneuver	-	1057
Stage 1	-	-
Stage 2	-	-
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	1057
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-
Approach	EB	WB
HCM Control Delay, s	0	12
HCM LOS		B
Minor Lane/Major Mvmt	NBLn1	EBR WBL WBT
Capacity (veh/h)	677	- 1057
HCM Lane V/C Ratio	0.085	- 0.057
HCM Control Delay (s)	10.8	- 8.6 0.3
HCM Lane LOS	B	- A A
HCM 95th %ile Q(veh)	0.3	- 0.2

Opening Year NP PM Mon Feb 20, 2017 15:14:44 Page 6-1  
 Health Club within the Shops at Rossmore  
 Opening Year (2018) No Project  
 PM Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.698  
 Loss Time (sec): 50 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 50 Level of Service: B  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1  
 Volume Module:  
 Base Vol: 131 1560 58 24 1726 177 173 9 89 48 3 20  
 Growth 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  
 Initial Bse: 131 1560 58 24 1726 177 173 9 89 48 3 20  
 User 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  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 135 1603 60 25 1774 182 178 9 91 49 3 21  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 135 1603 60 25 1774 182 178 9 91 49 3 21  
 PCE 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  
 M/F 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  
 Final Volume: 135 1603 60 25 1774 182 178 9 91 49 3 21  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 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  
 Final Sat: 1700 4917 183 1700 4626 474 1700 156 1544 1600 100 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.08 0.33 0.33 0.01 0.38 0.38 0.10 0.06 0.06 0.03 0.03 0.01  
 Crit Moves: \*\*\*\*

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection	9.6											
Intersection Delay, s/veh	A											
Intersection LOS	A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	30	4	47	0	2	5	10	0	68	216	3
Future Vol, veh/h	0	30	4	47	0	2	5	10	0	68	216	3
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	5	56	0	2	6	12	0	81	257	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0

Approach	EB	WB	WB	NB
Opposing Approach	WB	EB	WB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	WB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	9.1	8.5	8.5	10
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	39%	0%	37%	12%	6%	0%
Vol Thru, %	61%	97%	5%	29%	94%	73%
Vol Right, %	0%	3%	58%	59%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	176	111	81	17	125	162
LT Vol	68	0	30	2	7	0
Through Vol	108	108	4	5	118	118
RT Vol	0	3	47	10	0	44
Lane Flow Rate	210	132	96	20	149	193
Geometry Grp	7	7	2	2	7	7
Degree of Utlr (X)	0.311	0.188	0.139	0.03	0.215	0.266
Departure Headway (Hd)	5.345	5.131	5.178	5.258	5.191	4.972
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	670	696	689	675	689	719
Service Time	3.096	2.883	3.237	3.335	2.942	2.723
HCM Lane V/C Ratio	0.313	0.19	0.139	0.03	0.216	0.268
HCM Control Delay	10.5	9.1	9.1	8.5	9.4	9.5
HCM Lane LOS	B	A	A	A	A	A
HCM 95th-tile Q	1.3	0.7	0.5	0.1	0.8	1.1

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection	9.5					
Intersection Delay, s/veh	A					
Intersection LOS	A					
Movement	SBU	SBL	SBT	SBR	SBU	SBR
Traffic Vol, veh/h	0	7	236	44	0	44
Future Vol, veh/h	0	7	236	44	0	44
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	281	52	0	52
Number of Lanes	0	0	2	0	2	0

Approach	SB	SB
Opposing Approach	NB	NB
Opposing Lanes	2	2
Conflicting Approach Left	WB	WB
Conflicting Lanes Left	1	1
Conflicting Approach Right	EB	EB
Conflicting Lanes Right	1	1
HCM Control Delay	9.5	9.5
HCM LOS	A	A

Lane

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection	Intersection Delay, s/veh 10.3															
Intersection LOS	B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	35	56	0	36	39	72	0	30	133	26	0	44	183	40
Future Vol, veh/h	0	42	35	56	0	36	39	72	0	30	133	26	0	44	183	40
Peak Hour Factor	0.92	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	50	42	67	0	43	46	86	0	36	158	31	0	52	218	48
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				2				2			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	2				2				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	2				2				1				1			
HCM Control Delay	10.2				10.3				9.9				10.5			
HCM LOS	B				B				A				B			

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Opening Year PM Peak Hour  
02/22/2017

Intersection	Intersection Delay, s/veh 10.1															
Intersection LOS	B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR				
Traffic Vol, veh/h	0	1	17	2	0	149	25	65	0	5	104	107				
Future Vol, veh/h	0	1	17	2	0	149	25	65	0	5	104	107				
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.92	0.87	0.87	0.87				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	1	20	2	0	171	29	75	0	6	120	123				
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0	2				
Approach	EB				WB				NB							
Opposing Approach	WB				EB				SB							
Opposing Lanes	2				1				2							
Conflicting Approach Left	SB				NB				EB							
Conflicting Lanes Left	2				2				1							
Conflicting Approach Right	NB				SB				WB							
Conflicting Lanes Right	2				2				2							
HCM Control Delay	9.4				11				9.5							
HCM LOS	A				B				A							

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	5%	0%	86%	0%	40%	0%
Vol Thru, %	91%	33%	85%	14%	0%	0%	60%	95%
Vol Right, %	0%	67%	10%	0%	100%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	159	20	174	65	104	66	66
LT Vol	5	0	1	149	0	41	0	0
Through Vol	52	52	17	25	0	63	63	63
RT Vol	0	107	2	0	65	0	3	3
Lane Flow Rate	66	183	23	200	75	119	75	75
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Util (X)	0.103	0.26	0.039	0.338	0.103	0.193	0.117	0.117
Departure Headway (Hd)	5.644	5.124	6.117	6.08	4.945	5.839	5.606	5.606
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	630	694	589	586	716	609	633	633
Service Time	3.428	2.908	4.117	3.871	2.734	3.629	3.396	3.396
HCM Lane V/C Ratio	0.105	0.264	0.039	0.341	0.105	0.195	0.118	0.118
HCM Control Delay	9.1	9.7	9.4	12	8.3	10	9.1	9.1
HCM Lane LOS	A	A	A	B	A	A	A	A
HCM 95th-ile Q	0.3	1	0.1	1.5	0.3	0.7	0.4	0.4



HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Opening Year PM Peak Hour  
 02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	41	125	3
Future Vol, veh/h	0	41	125	3
Peak Hour Factor	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	47	144	3
Number of Lanes	0	0	2	0
Approach	SB	SB		
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	9.7			
HCM LOS	A			

HCM 2010 AWSC  
 1.2: West Road & Rossmoor Center Way  
 12/1/2016

Intersection	EBU	EBT	EBR	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	8							
Intersection LOS	A							
Movement	EBU	EBT	EBR	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	91	17	0	22	137	0	26
Future Vol, veh/h	0	91	17	0	22	137	0	26
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	0	101	19	0	24	152	0	29
Number of Lanes	0	1	0	0	0	1	0	1
Approach	EB	WB	WB	EB	EB	NB	NB	NB
Opposing Approach	WB							
Opposing Lanes	1					0		
Conflicting Approach Left		NB				EB		
Conflicting Lanes Left	0	1				1		
Conflicting Approach Right	NB					WB		
Conflicting Lanes Right	1					0		1
HCM Control Delay	7.8	8.2				7.8		
HCM LOS	A	A				A		
Lane	NBU	EBU	WBU	NBU				
Vol Left, %	70%	0%	14%					
Vol Thru, %	0%	84%	86%					
Vol Right, %	30%	16%	0%					
Sign Control	Stop	Stop	Stop					
Traffic Vol by Lane	37	108	159					
LT Vol	26	0	22					
Through Vol	0	91	137					
RT Vol	11	17	0					
Lane Flow Rate	41	120	177					
Geometry Grp	1	1	1					
Degree of Utl (X)	0.052	0.135	0.202					
Departure Headway (Hd)	4.536	4.046	4.125					
Convergence, Y/N	Yes	Yes	Yes					
Cap	794	877	864					
Service Time	2.536	2.115	2.18					
HCM Lane V/C Ratio	0.052	0.137	0.205					
HCM Control Delay	7.8	7.8	8.2					
HCM Lane LOS	A	A	A					
HCM 95th-ile Q	0.2	0.5	0.8					

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection Delay, s/veh13.2															
Intersection LOS B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	22	73	27	0	185	107	85	0	43	44	180	0	76	34
Future Vol, veh/h	0	22	73	27	0	185	107	85	0	43	44	180	0	76	34
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	76	28	0	193	111	89	0	45	46	188	0	79	35
Number of Lanes	0	0	2	0	0	1	0	0	0	0	1	0	0	0	1

Approach		EB	WB	NB	SB
Opposing Approach	WB	EB	EB	NB	NB
Opposing Lanes	1	2	2	1	1
Conflicting Approach Left	SB	NB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB	EB
Conflicting Lanes Right	1	1	1	2	2
HCM Control Delay	9.7	16	16	12	10.7
HCM LOS	A	C	C	B	B

Lane		NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %		16%	38%	0%	49%	54%
Vol Thru, %		16%	62%	57%	28%	24%
Vol Right, %		67%	0%	43%	23%	21%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		267	59	64	377	140
LT Vol		43	22	0	185	76
Through Vol		44	37	37	107	34
RT Vol		180	0	27	85	30
Lane Flow Rate		278	61	66	393	146
Geometry Grp		2	7	7	5	2
Degree of Utl (X)		0.408	0.11	0.11	0.59	0.237
Departure Headway (Hd)		5.278	6.478	5.984	5.409	5.85
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		679	551	597	668	611
Service Time		3.333	4.238	3.743	3.454	3.915
HCM Lane V/C Ratio		0.409	0.111	0.111	0.588	0.239
HCM Control Delay		12	10	9.5	16	10.7
HCM Lane LOS		B	A	A	C	B
HCM 95th-ile Q		2	0.4	0.4	3.9	0.9

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection Delay, s/veh11.8														
Intersection LOS B														
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT				
Traffic Vol, veh/h	0	86	295	0	43	66	0	233	55	55				
Future Vol, veh/h	0	86	295	0	43	66	0	233	55	55				
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.92	0.89	0.89	0.89				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	97	331	0	48	74	0	262	62	62				
Number of Lanes	0	1	1	0	1	0	0	0	0	1				

Approach		WB	NB	SB
Opposing Approach	WB	NB	NB	SB
Opposing Lanes	0	1	1	1
Conflicting Approach Left	NB	NB	WB	WB
Conflicting Lanes Left	1	0	2	2
Conflicting Approach Right	SB	WB	WB	0
Conflicting Lanes Right	1	2	2	0
HCM Control Delay	11.5	9.2	13.1	B
HCM LOS	B	A	B	B

Lane		NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %		0%	100%	0%	81%
Vol Thru, %		39%	0%	0%	19%
Vol Right, %		61%	0%	100%	0%
Sign Control		Stop	Stop	Stop	Stop
Traffic Vol by Lane		109	86	295	288
LT Vol		0	86	0	233
Through Vol		43	0	0	55
RT Vol		66	0	295	0
Lane Flow Rate		122	97	331	324
Geometry Grp		2	7	7	2
Degree of Utl (X)		0.175	0.165	0.456	0.473
Departure Headway (Hd)		5.14	6.16	4.949	5.26
Convergence, Y/N		Yes	Yes	Yes	Yes
Cap		702	577	719	676
Service Time		3.14	3.955	2.742	3.35
HCM Lane V/C Ratio		0.174	0.168	0.46	0.479
HCM Control Delay		9.2	10.2	11.9	13.1
HCM Lane LOS		A	B	B	B
HCM 95th-ile Q		0.6	0.6	2.4	2.5

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection	1 2					
Int Delay, s/veh	EBT	EBR	WBL	WBT	NBL	NBR
Movement	89	1	20	167	4	20
Traffic Vol, veh/h	89	1	20	167	4	20
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	Free	Free	Free	Free	Stop	Stop
Sign Control	-	None	-	None	-	None
RT Channelized	-	-	-	-	-	-
Storage Length	0	-	0	0	0	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	93	93	93	93	93	93
Peak Hour Factor	2	2	2	2	2	2
Heavy Vehicles, %	96	1	22	180	4	22
Mvmt Flow						
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	97	0	319	96
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	223	-
Critical Hwy	-	-	4.12	-	6.42	6.22
Critical Hwy Stg 1	-	-	-	-	5.42	-
Critical Hwy Stg 2	-	-	-	-	5.42	-
Follow-up Hwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1496	-	674	960
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	814	-
Platoon blocked, %	-	-	-	-	663	960
Mov Cap-1 Maneuver	-	-	1496	-	663	-
Mov Cap-2 Maneuver	-	-	-	-	928	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0.8	9.2			
HCM LOS		A				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	833	-	-	1496	-	
HCM Lane V/C Ratio	0.029	-	-	0.014	-	
HCM Control Delay (s)	9.2	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %ile Q(veh)	0.1	-	-	0	-	

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4TB			4			4TB			4TB	
Traffic Volume (veh/h)	148	26	16	549	37	504	9	1114	275	428	1126	132
Future Volume (veh/h)	148	26	16	549	37	504	9	1114	275	428	1126	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	157	28	17	612	0	0	10	1185	293	455	1198	140
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	684	0	305	21	1320	411	498	2769	862
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.56	1.00	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	157	0	45	612	0	0	10	1185	293	455	1198	140
Grp Sat Flow(s), veh/h	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.3	0.0	2.7	18.5	0.0	0.0	0.6	24.7	18.5	25.4	0.0	0.0
Cycle Q Clear(g.c), s	7.3	0.0	2.7	18.5	0.0	0.0	0.6	24.7	18.5	25.4	0.0	0.0
Prop In Lane	1.00	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	684	0	305	21	1320	411	498	2769	862
V/C Ratio(X)	1.33	0.00	0.39	0.90	0.00	0.00	0.47	0.90	0.71	0.91	0.43	0.16
Avail Cap(c,a), veh/h	118	0	116	748	0	334	81	1350	420	498	2769	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.3	0.0	0.0	54.0	39.3	37.0	22.9	0.0	0.0
Incr Delay (d2), s/veh	196.7	0.0	2.1	12.7	0.0	0.0	15.3	9.9	10.1	19.6	0.4	0.4
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 Back(Q(50%)) veh/h	10.0	0.0	1.4	10.3	0.0	0.0	0.4	12.7	9.2	14.8	0.1	0.1
LnGrp Delay(d), s/veh	248.1	0.0	51.3	56.0	0.0	0.0	69.3	49.2	47.1	42.5	0.4	0.4
LnGrp LOS	F	D	E	E	E	E	D	D	D	D	A	A
Approach Vol, veh/h	202			612			1488				1793	
Approach Delay, s/veh	204.2			56.0			48.9				11.1	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	36.7	34.3		12.0	5.3	65.7	27.0					
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8	5.8					
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2	23.2					
Max Q Clear Time (g_c+I1), s	27.4	26.7		9.3	2.6	2.0	20.5					
Green Ext Time (p_c), s	0.5	1.8		0.0	0.0	14.0	0.7					
Intersection Summary	41.1											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS												
Notes												

12/1/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	8	8	7	359	5	585	15	1377	381	266	1324	243
Traffic Volume (veh/h)	8	8	7	359	5	585	15	1377	381	266	1324	243
Future Volume (veh/h)	8	8	7	359	5	585	15	1377	381	266	1324	243
Number	7	4	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	8	8	7	378	0	619	16	1449	0	280	1394	256
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Cap. veh/h	41	43	36	841	0	750	708	2132	664	242	1696	528
Arrive On Green	0.02	0.02	0.02	0.24	0.00	0.24	0.41	0.84	0.00	0.14	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	8	8	7	378	0	619	16	1449	0	280	1394	256
Grp Sat Flow(s), veh/h/m/1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.5	0.5	0.5	10.0	0.0	20.4	0.3	11.8	0.0	15.0	27.7	14.1
Cycle Q Clear(g.c), s	0.5	0.5	0.5	10.0	0.0	20.4	0.3	11.8	0.0	15.0	27.7	14.1
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	41	43	36	841	0	750	708	2132	664	242	1696	528
V/C Ratio(X)	0.20	0.19	0.19	0.45	0.00	0.83	0.02	0.68	0.00	1.16	0.82	0.48
Avail Cap(c), veh/h	81	85	72	1258	0	1123	708	2132	664	242	1682	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.66	0.66	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	52.7	52.7	35.8	0.0	39.8	25.8	6.1	0.0	47.5	33.7	28.1
Incr Delay (d2), s/veh	2.3	2.1	2.5	0.4	0.0	3.2	0.0	1.2	0.0	107.0	4.6	3.2
Initial Q Delay(Q3), 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(50%), veh/In0.3	0.3	0.2	0.4	0.9	0.0	0.9	0.1	5.3	0.0	14.5	13.6	6.7
LnGrp Delay(d), s/veh	55.1	54.8	55.3	36.2	0.0	43.0	25.8	7.3	0.0	154.5	38.3	32.3
LnGrp LOS	E	D	E	D	D	C	A	F	D	C	D	C
Approach Vol, veh/h	23	987	1465	1930								
Approach Delay, s/veh	55.0	40.5	7.5	54.4								
Approach LOS	E	D	A	D								
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+R), s	90	519	7.2	28.4	42.5							
Change Period (Y+R), s	4.0	5.8	* 4.7	5.8	* 5.8							
Max Green Setting (Gmax), s	30.7	* 5.0	* 5.0	* 4.1								
Max Q Clear Time (g_c+I+I), s	13.8	2.5	2.3	29.7	22.4							
Green Ext Time (p_c), s	0.0	9.0	0.0	2.0	7.0							

Intersection Summary	35.7
HCM 2010 Ctrl Delay	D
HCM 2010 LOS	D
Notes	

Health Club within the Shops at Rossmoor  
 Opening Year (2018) No Project  
 Saturday Peak Hour

Level of Service Computation Report  
 (Base Volume Alternative)

ICU I (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.794  
 Loss Time (sec): 15 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 65 Level Of Service: C

Street Name: Seal Beach Blvd East Bound Lampson Ave  
 Approach: North Bound South Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control	Protected	Include	Protected	Include	Protected	Permitted
Rights:	Ovl	Include	Ovl	Include	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	2 0 0 0 1	0 0 0 0 1

Volume Module:

Base Vol:	0	1578	364	514	1482	0	0	0	0	364	0	572
Growth 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
Initial Base:	0	1578	364	514	1482	0	0	0	0	364	0	572
User 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
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	1697	391	553	1594	0	0	0	0	391	0	615
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1697	391	553	1594	0	0	0	0	391	0	615
PCE 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
MLF 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
Final Volume:	0	1697	391	553	1594	0	0	0	0	391	0	615
OvAdjVol:												339

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	2.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	5100	1700	3400	5100	0	0	0	0	3400	0	1700

Capacity Analysis Module:

Vol/Sat:	0.00	0.33	0.23	0.16	0.31	0.00	0.00	0.00	0.00	0.12	0.00	0.36
OvAdjV/S:												0.20
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.851  
 Loss Time (sec): 80 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 80 Level Of Service: D  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0	1	0	1
Lanes:	1	0	2	1	0	1	0	1

Volume Module:  
 Base Vol: 294 1278 109 93 1085 152 120 84 245 175 90 89  
 Growth 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  
 Initial Base: 294 1278 109 93 1085 152 120 84 245 175 90 89  
 User 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  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 310 1348 115 98 1145 160 127 89 258 185 95 94  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 310 1348 115 98 1145 160 127 89 258 185 95 94  
 PCE 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  
 MLF 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  
 Final Volume: 310 1348 115 98 1145 160 127 89 258 185 95 94

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Adj: 1.00 2.76 0.24 1.00 2.63 0.37 1.00 0.26 0.74 1.00 0.50 0.50  
 Final Sat: 1700 4699 401 1700 4473 627 1700 434 1266 1700 855 845

Capacity Analysis Module:  
 Vol/Sat: 0.18 0.29 0.29 0.06 0.26 0.26 0.07 0.20 0.20 0.11 0.11 0.11  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.668  
 Loss Time (sec): 46 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 46 Level Of Service: B  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	2	0	2	1	0	1	0	2
Lanes:	2	0	2	1	0	1	0	2

Volume Module:  
 Base Vol: 366 1643 174 17 1398 73 111 2 402 176 35 5  
 Growth 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  
 Initial Base: 366 1643 174 17 1398 73 111 2 402 176 35 5  
 User 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  
 PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 395 1772 188 18 1508 79 120 2 434 190 38 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 395 1772 188 18 1508 79 120 2 434 190 38 5  
 PCE 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  
 MLF 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  
 Final Volume: 395 1772 188 18 1508 79 120 2 434 190 38 5  
 OrLAdjVol: 395 1772 188 18 1508 79 120 2 434 190 38 5

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Adj: 2.00 2.71 0.29 1.00 2.85 0.15 0.98 0.02 2.00 1.63 0.32 0.05  
 Final Sat: 3400 4612 488 1700 4847 253 1670 30 3400 2770 551 79

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.38 0.38 0.01 0.31 0.31 0.07 0.07 0.13 0.07 0.07 0.07  
 OrLAdjV/S: 0.12 0.38 0.38 0.01 0.31 0.31 0.07 0.07 0.13 0.07 0.07 0.07  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.647  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 44 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 112 1430 44 22 1523 126 178 8 97 64 7 21  
 Growth 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  
 Initial Base: 112 1430 44 22 1523 126 178 8 97 64 7 21  
 User 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  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 114 1459 45 22 1554 129 182 8 99 65 7 21  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 114 1459 45 22 1554 129 182 8 99 65 7 21  
 PCE 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  
 MLF 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  
 Final Volume: 114 1459 45 22 1554 129 182 8 99 65 7 21

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.91 0.09 1.00 2.77 0.23 1.00 0.08 0.92 0.90 0.10 1.00  
 Final Sat.: 1700 4948 152 1700 4710 390 1700 130 1570 1532 168 1700

Capacity Analysis Module:  
 Vol/Sat: 0.07 0.29 0.29 0.01 0.33 0.33 0.11 0.06 0.06 0.04 0.04 0.01  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.681  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 48 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 205 1467 15 25 1424 231 190 4 153 19 2 14  
 Growth 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  
 Initial Base: 205 1467 15 25 1424 231 190 4 153 19 2 14  
 User 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  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 210 1506 15 26 1462 237 195 4 157 20 2 14  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 210 1506 15 26 1462 237 195 4 157 20 2 14  
 PCE 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  
 MLF 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  
 Final Volume: 210 1506 15 26 1462 237 195 4 157 20 2 14

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00 2.58 0.42 1.00 0.03 0.97 1.00 0.13 0.87  
 Final Sat.: 1700 5048 52 1700 4388 712 1700 43 1657 1700 213 1487

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.30 0.30 0.02 0.33 0.33 0.11 0.09 0.09 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection															
Int Delay, s/veh												1			
Intersection LOS												A			
Movement	EBT	EBR	WBL	WBT	NBL	NBR									
Traffic Vol, veh/h	461	1	43	424	4	44									
Future Vol, veh/h	461	1	43	424	4	44									
Conflicting Peds, #/hr	0	0	0	0	0	0									
Sign Control	Free	Free	Free	Free	Stop	Stop									
RT Channelized	-	None	-	None	-	None									
Storage Length	-	-	-	-	0	-									
Veh in Median Storage, #	0	-	-	0	0	-									
Grade, %	0	-	-	0	0	-									
Peak Hour Factor	94	94	94	94	94	94									
Heavy Vehicles, %	2	2	2	2	2	2									
Mvmt Flow	490	1	46	451	4	47									
Major/Minor															
Major1												Minor1			
Conflicting Flow All	0	0	491	0	808	246									
Stage 1	-	-	-	-	491	-									
Stage 2	-	-	-	-	317	-									
Critical Hwy	-	-	4.14	-	7.54	6.94									
Critical Hwy Stg 1	-	-	-	-	6.54	-									
Critical Hwy Stg 2	-	-	-	-	6.54	-									
Follow-up Hwy	-	-	2.22	-	3.52	3.32									
Pot Cap-1 Maneuver	-	-	1069	-	272	764									
Stage 1	-	-	-	-	528	-									
Stage 2	-	-	-	-	669	-									
Platoon blocked, %	-	-	-	-	-	-									
Mov Cap-1 Maneuver	-	-	1069	-	260	764									
Mov Cap-2 Maneuver	-	-	-	-	260	-									
Stage 1	-	-	-	-	528	-									
Stage 2	-	-	-	-	631	-									
Approach															
EB												NB			
0												11			
HCM/Control Delay, s															
1												B			
HCM LOS															
Minor Lane/Major Mvmt															
NBLn1												EBT	EBR	WBL	WBT
651												-	-	1069	-
Capacity (veh/h)															
0.078												-	-	0.043	-
HCM Lane V/C Ratio															
11												-	-	8.5	0.2
HCM Control Delay (s)															
B												-	-	A	A
HCM Lane LOS															
0.3												-	-	0.1	-
HCM 95th %tile Q(veh)															

Health Club within The Shops at Rossmoor TIA 5:00 pm 3/23/2016 Opening Year Saturday Peak Hour

LSA Associates, Inc. - DL

Synchro 9 Report Page 12

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection																	
Intersection Delay, s/veh												8.8					
Intersection LOS												A					
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR					
Traffic Vol, veh/h	0	35	4	38	0	3	5	5	0	38	179	7					
Future Vol, veh/h	0	35	4	38	0	3	5	5	0	38	179	7					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92					
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2					
Mvmt Flow	0	38	4	41	0	3	5	5	0	41	195	8					
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2					
Approach																	
EB												WB					
WB												EB					
Opposing Approach	1																
Oposing Lanes	SB																
Conflicting Approach Left	2																
Conflicting Lanes Left	NB																
Conflicting Approach Right	2																
Conflicting Lanes Right	SB																
HCM Control Delay	8.6																
HCM LOS	A																
Lane																	
NBLn1												NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	
Vol Left, %	30%												0%	45%	23%	6%	0%
Vol Thru, %	70%												93%	5%	38%	94%	85%
Vol Right, %	0%												7%	49%	38%	0%	15%
Sign Control	Stop												Stop	Stop	Stop	Stop	
Traffic Vol by Lane	128												97	77	13	126	140
LT Vol	38												0	35	3	7	0
Through Vol	90												90	4	5	119	119
RT Vol	0												7	38	5	0	21
Lane Flow Rate	139												105	84	14	136	152
Geometry Grp	7												7	2	2	7	7
Degree of Utl (X)	0.199												0.145	0.115	0.02	0.19	0.206
Departure Headway (Ht)	5.182												4.981	4.931	5.061	5.025	4.891
Convergence, Y/N	Yes												Yes	Yes	Yes	Yes	Yes
Cap	693												720	726	705	713	734
Service Time	2.915												2.714	2.968	3.107	2.756	2.622
HCM Lane V/C Ratio	0.201												0.146	0.116	0.02	0.191	0.207
HCM Control Delay	9.2												8.6	8.6	8.2	8.9	8.9
HCM Lane LOS	A												A	A	A	A	A
HCM 95th-tile Q	0.7												0.5	0.4	0.1	0.7	0.8

Health Club within The Shops at Rossmoor TIA 5:00 pm 3/23/2016 Opening Year Saturday Peak Hour

LSA Associates, Inc. - DL

Synchro 9 Report Page 13

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection						
Intersection Delay, s/veh 9.7						
Intersection LOS A						
Movement	SBU	SBL	SBT	SBR	SBL	SBR
Traffic Vol, veh/h	0	7	237	21		
Future Vol, veh/h	0	7	237	21		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	8	258	23		
Number of Lanes	0	0	2	0		
Approach	SB	SB	SB	SB	SB	SB
Opposing Approach	NB	NB	NB	NB	NB	NB
Opposing Lanes	2	2	2	2	2	2
Conflicting Approach Left	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	1	1
Conflicting Approach Right	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1
HCM Control Delay	8.9	8.9	8.9	8.9	8.9	8.9
HCM LOS	A	A	A	A	A	A
Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	42%	0%	28%	16%	36%	0%
Vol Thru, %	58%	69%	28%	46%	64%	71%
Vol Right, %	0%	31%	43%	38%	0%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	95	148	113	127	115
LT Vol	47	0	42	18	45	0
Through Vol	66	66	42	52	82	82
RT Vol	0	29	64	43	0	33
Lane Flow Rate	125	105	164	126	141	127
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.204	0.159	0.234	0.184	0.227	0.192
Departure Headway (Hd)	5.886	5.457	5.238	5.287	5.809	5.425
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	613	659	689	681	621	664
Service Time	3.599	3.17	3.238	3.308	3.52	3.136
HCM Lane V/C Ratio	0.204	0.159	0.238	0.185	0.227	0.191
HCM Control Delay	10.1	9.2	9.8	9.5	10.2	9.4
HCM Lane LOS	B	A	A	A	B	A
HCM 95th-ile Q	0.8	0.6	0.9	0.7	0.9	0.7

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection															
Intersection Delay, s/veh 9.7															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	42	42	64	0	18	52	43	0	47	131	29	0	45	163
Future Vol, veh/h	0	42	42	64	0	18	52	43	0	47	131	29	0	45	163
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	47	47	71	0	20	58	48	0	52	146	32	0	50	181
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	2
Approach	EB	EB	WB	WB	EB	EB	NB	NB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach	WB	WB	EB	EB	WB	WB	SB	SB	EB	EB	EB	WB	WB	WB	WB
Opposing Lanes	1	1	2	2	1	1	2	2	1	1	1	1	1	1	1
Conflicting Approach Left	SB	SB	NB	NB	EB	EB	WB	WB	EB	EB	WB	WB	WB	WB	WB
Conflicting Lanes Left	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1
Conflicting Approach Right	NB	NB	SB	SB	WB	WB	EB	EB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Right	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1
HCM Control Delay	9.8	9.8	9.5	9.5	9.7	9.7	9.8	9.8	9.7	9.8	9.8	9.8	9.8	9.8	9.8
HCM LOS	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	42%	0%	28%	16%	36%	0%									
Vol Thru, %	58%	69%	28%	46%	64%	71%									
Vol Right, %	0%	31%	43%	38%	0%	29%									
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop									
Traffic Vol by Lane	113	95	148	113	127	115									
LT Vol	47	0	42	18	45	0									
Through Vol	66	66	42	52	82	82									
RT Vol	0	29	64	43	0	33									
Lane Flow Rate	125	105	164	126	141	127									
Geometry Grp	7	7	2	2	7	7									
Degree of Util (X)	0.204	0.159	0.234	0.184	0.227	0.192									
Departure Headway (Hd)	5.886	5.457	5.238	5.287	5.809	5.425									
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes									
Cap	613	659	689	681	621	664									
Service Time	3.599	3.17	3.238	3.308	3.52	3.136									
HCM Lane V/C Ratio	0.204	0.159	0.238	0.185	0.227	0.191									
HCM Control Delay	10.1	9.2	9.8	9.5	10.2	9.4									
HCM Lane LOS	B	A	A	A	B	A									
HCM 95th-ile Q	0.8	0.6	0.9	0.7	0.9	0.7									



HCM 2010 AWSC  
 11: Montecito Road & Bradbury Road  
 Opening Year Saturday Peak Hour  
 02/22/2017

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0	1	15	4	0	116	20	70	0	3	72	95
Traffic Vol, veh/h	0	1	15	4	0	116	20	70	0	3	72	95
Future Vol, veh/h	0	1	15	4	0	116	20	70	0	3	72	95
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	15	4	0	120	21	72	0	3	74	98
Number of Lanes	0	0	1	0	0	1	1	1	0	0	0	2

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	WB	NB	SB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	8.7	8.7	9.3	8.6	8.6
HCM LOS	A	A	A	A	A

Lane	NBLn1	NBLn2	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	5%	0%	85%	0%	44%	0%
Vol Thru, %	92%	27%	75%	15%	0%	56%	96%	0%	0%
Vol Right, %	0%	73%	20%	0%	100%	0%	4%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	131	20	136	70	82	48	0	0
LT Vol	3	0	1	116	0	36	0	0	0
Through Vol	36	36	15	20	0	46	46	0	0
RT Vol	0	95	4	0	70	0	2	0	0
Lane Flow Rate	40	135	21	140	72	84	49	0	0
Geometry Grp	7	7	6	7	7	7	7	7	7
Degree of Utl (X)	0.06	0.18	0.031	0.223	0.092	0.129	0.072	0.129	0.072
Departure Headway (Hd)	5.335	4.785	5.462	5.737	4.606	5.544	5.292	5.544	5.292
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	748	652	775	645	675	645	675	645
Service Time	3.074	2.525	3.521	3.481	2.35	3.288	3.036	3.288	3.036
HCM Lane V/C Ratio	0.06	0.18	0.032	0.224	0.093	0.13	0.073	0.13	0.073
HCM Control Delay	8.4	8.6	8.7	10.1	7.8	9.1	8.4	9.1	8.4
HCM Lane LOS	A	A	A	B	A	A	A	A	A
HCM 95th-ile Q	0.2	0.7	0.1	0.8	0.3	0.4	0.2	0.4	0.2

HCM 2010 AWSC  
 11: Montecito Road & Bradbury Road  
 Opening Year Saturday Peak Hour  
 02/22/2017

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations	0	36	91	2
Traffic Vol, veh/h	0	36	91	2
Future Vol, veh/h	0	36	91	2
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	37	94	2
Number of Lanes	0	0	2	0

Approach	SB	SB	SB	A
Opposing Approach	NB	NB	NB	A
Opposing Lanes	2	2	2	2
Conflicting Approach Left	WB	WB	WB	A
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	EB	EB	EB	A
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.8	8.8	8.8
HCM LOS	A	A	A	A

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	83	16	0	10	119	0	26	17			
Future Vol, veh/h	0	83	16	0	10	119	0	26	17			
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	91	18	0	11	131	0	29	19			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach												
	EB	WB	WB	EB	NB	NB						
Opposing Approach	WB	EB	EB	WB	NB	NB						
Opposing Lanes	1	1	1	1	0	0						
Conflicting Approach Left	0	NB	NB	EB	WB	WB						
Conflicting Lanes Left	0	1	1	1	1	1						
Conflicting Approach Right	NB	0	0	0	WB	WB						
Conflicting Lanes Right	1	0	0	0	1	1						
HCM Control Delay	7.7	8	8	8	7.6	7.6						
HCM LOS	A	A	A	A	A	A						

Lane												
	NBLn1	EBLn1	WBLn1	WBLn1	NBLn1	NBLn1						
Vol Left, %	60%	0%	8%	0%	0%	0%						
Vol Thru, %	0%	84%	92%	0%	40%	92%						
Vol Right, %	40%	16%	0%	0%	40%	92%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	43	99	129	26	0	10						
LT Vol	26	0	10	0	0	0						
Through Vol	0	83	119	17	16	0						
RT Vol	17	16	0	0	0	0						
Lane Flow Rate	47	109	142	47	109	142						
Geometry Grp	1	1	1	1	1	1						
Degree of Util (X)	0.057	0.122	0.162	0.057	0.122	0.162						
Departure Headway (Hd)	4.359	4.027	4.115	4.359	4.027	4.115						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	826	882	866	826	882	866						
Service Time	2.359	2.088	2.167	2.359	2.088	2.167						
HCM Lane V/C Ratio	0.057	0.124	0.164	0.057	0.124	0.164						
HCM Control Delay	7.6	7.7	8	7.6	7.7	8						
HCM Lane LOS	A	A	A	A	A	A						
HCM 95th-tile Q	0.2	0.4	0.6	0.2	0.4	0.6						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection														
Intersection Delay, s/veh 18.5														
Intersection LOS C														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	21	101	36	0	216	94	107	0	43	65	217	0	97
Future Vol, veh/h	0	21	101	36	0	216	94	107	0	43	65	217	0	97
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.92	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	107	38	0	230	100	114	0	46	69	231	0	103
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	1

Approach													
	EB	WB	WB	EB	NB	NB	SB	SB	EB	NB	NB	SB	SB
Opposing Approach	WB	EB	EB	WB	NB	NB	SB	SB	EB	NB	NB	SB	NB
Opposing Lanes	1	1	1	1	2	2	1	1	1	1	1	1	1
Conflicting Approach Left	SB	SB	SB	NB	EB	EB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	2	2	1	1	1	1	1	1	1
Conflicting Approach Right	NB	0	0	0	WB	WB	EB	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right	1	0	0	0	1	1	1	1	1	1	1	1	1
HCM Control Delay	11.1	24.9	24.9	24.9	16.6	16.6	13.4	13.4	13.4	13.4	13.4	13.4	13.4
HCM LOS	B	C	C	C	C	C	B	B	B	B	B	B	B

Lane													
	NBLn1	EBLn1	EBLn1	WBLn1	WBLn1	SBLn1	SBLn1						
Vol Left, %	13%	29%	0%	52%	53%	53%	53%						
Vol Thru, %	20%	71%	58%	23%	34%	34%	34%						
Vol Right, %	67%	0%	42%	26%	13%	13%	13%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	325	72	87	417	162	162	162						
LT Vol	43	21	0	216	97	97	97						
Through Vol	65	51	51	94	61	61	61						
RT Vol	217	0	36	107	24	24	24						
Lane Flow Rate	346	76	92	444	194	194	194						
Geometry Grp	2	7	7	5	2	2	2						
Degree of Util (X)	0.569	0.153	0.174	0.747	0.358	0.358	0.358						
Departure Headway (Hd)	5.929	7.248	6.799	6.058	6.652	6.652	6.652						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	609	494	526	594	540	540	540						
Service Time	3.98	5.009	4.559	4.103	4.711	4.711	4.711						
HCM Lane V/C Ratio	0.568	0.154	0.175	0.747	0.359	0.359	0.359						
HCM Control Delay	16.6	11.3	11	24.9	13.4	13.4	13.4						
HCM Lane LOS	C	B	B	C	B	B	B						
HCM 95th-tile Q	3.6	0.5	0.6	6.6	1.6	1.6	1.6						

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection										
Intersection Delay, s/veh 16.3										
Intersection LOS C										
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT	SBT
Traffic Vol, veh/h	0	133	398	0	70	102	0	342	53	53
Future Vol, veh/h	0	133	398	0	70	102	0	342	53	53
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	137	410	0	72	105	0	353	55	55
Number of Lanes	0	1	1	0	1	1	0	0	0	1
Approach	WB		WB		NB	NB	SB	SB		
Opposing Approach	0		0		SB	SB	NB	NB		
Opposing Lanes	0		0		1	1	WB	WB		
Conflicting Approach Left	1		1		0	0	2	2		
Conflicting Lanes Left	1		1		0	0	2	2		
Conflicting Approach Right	1		1		0	0	0	0		
Conflicting Lanes Right	1		1		0	0	0	0		
HCM Control Delay	15.7		15.7		11	11	19.3	19.3		
HCM LOS	C		C		B	B	C	C		
Lane	NBLn1 WBLn1 WBLn2		NBLn1 WBLn2		SBLn1					
Vol Left, %	0%		100%		0%	87%				
Vol Thru, %	41%		0%		0%	13%				
Vol Right, %	59%		0%		100%	0%				
Sign Control	Stop		Stop		Stop	Stop				
Traffic Vol by Lane	172		133		398	395				
LT Vol	0		133		0	342				
Through Vol	70		0		0	53				
RT Vol	102		0		398	0				
Lane Flow Rate	177		137		410	407				
Geometry Grp	2		7		7	2				
Degree of Util (X)	0.28		0.256		0.626	0.656				
Departure Headway (Hd)	5.683		6.709		5.492	5.798				
Convergence, Y/N	Yes		Yes		Yes	Yes				
Cap	629		535		656	623				
Service Time	3.738		4.453		3.236	3.841				
HCM Lane V/C Ratio	0.281		0.256		0.625	0.653				
HCM Control Delay	11		11.8		17	19.3				
HCM Lane LOS	B		B		C	C				
HCM 95th-ile Q	1.1		1		4.4	4.8				

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection										
Int Delay, s/veh 2.4										
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h	100	0	44	124	5	39				
Future Vol, veh/h	100	0	44	124	5	39				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	92	92	92	92	92	92				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	109	0	48	135	5	42				
Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	0	0	109	0	339	109				
Stage 1	-	-	-	-	230	-				
Stage 2	-	-	-	-	6.42	-				
Critical Hdwy	-	-	4.12	-	6.42	6.22				
Critical Hdwy Stg 1	-	-	-	-	5.42	-				
Critical Hdwy Stg 2	-	-	-	-	5.42	-				
Follow-up Hdwy	-	-	2.218	-	3.518	3.318				
Pot Cap-1 Maneuver	-	-	1481	-	657	945				
Stage 1	-	-	-	-	916	-				
Stage 2	-	-	-	-	808	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1481	-	634	945				
Mov Cap-2 Maneuver	-	-	-	-	634	-				
Stage 1	-	-	-	-	916	-				
Stage 2	-	-	-	-	780	-				
Approach	EB		WB		NB	NB				
HCM Control Delay, s	0		2		9.2					
HCM LOS	A		A		A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT					
Capacity (veh/h)	895	-	-	1481	-					
HCM Lane V/C Ratio	0.053	-	-	0.032	-					
HCM Control Delay (s)	9.2	-	-	7.5	0					
HCM Lane LOS	A	-	-	A	A					
HCM 95th-ile Q(veh)	0.2	-	-	0.1	-					

HCM 2010 Signalized Intersection Summary  
1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	88	28	16	703	44	542	14	1069	168	444	1469	73
Traffic Volume (veh/h)	88	28	16	703	44	542	14	1069	168	444	1469	73
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	97	31	18	807	0	0	15	1175	185	488	1614	80
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	867	0	387	30	1234	384	763	3392	1056
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.28	0.45	0.45
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5065	1583	1774	5065	1583
Grp Volume(v), veh/h	97	0	49	807	0	0	15	1175	185	488	1614	80
Grp Sat Flow(s), veh/h/ln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s)	5.5	0.0	3.0	24.5	0.0	0.0	0.9	25.0	11.0	26.5	24.5	3.2
Cycle Q Clear(g, c), s	5.5	0.0	3.0	24.5	0.0	0.0	0.9	25.0	11.0	26.5	24.5	3.2
Prop In Lane	1.00	0.00	0.37	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	867	0	387	30	1234	384	763	3392	1056
V/C Ratio(X)	1.09	0.00	0.56	0.93	0.00	0.00	0.51	0.95	0.48	0.65	0.48	0.08
Avail Cap(c, a), veh/h	89	0	87	867	0	396	81	1234	384	763	3392	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	41.0	35.7	32.1	16.9	11.0
Incr Delay (d2), s/veh	123.2	0.0	7.8	15.9	0.0	0.0	12.7	16.4	4.3	1.4	0.4	0.1
Initial Q Delay(d3), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	5.7	0.0	1.6	13.9	0.0	0.0	0.6	13.6	5.3	13.3	11.7	1.4
LnGrp Delay(d), s/veh	175.6	0.0	58.9	56.6	0.0	0.0	66.3	57.4	40.0	33.6	17.3	11.1
LnGrp LOS	F	E	E	E	E	E	E	D	C	B	B	B
Approach Vol, veh/h	146			807				1375			2182	
Approach Delay, s/veh	136.4			56.6				55.2			20.7	
Approach LOS	F			E				E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6			8				
Phs Duration (G+Y+Rc), s	52.5	32.5	10.2	5.8	79.2			32.7				
Change Period (Y+Rc), s	3.0	* 5.8	* 4.7	4.0	5.8			5.8				
Max Green Setting (Gmax), s	30.0	* 27	* 7.5	5.0	51.7			27.5				
Max Q Clear Time (g_c+I), s	28.5	27.0	7.5	2.9	26.5			28.5				
Green Ext Time (p_c), s	0.3	0.0	0.0	0.0	15.0			0.4				
Intersection Summary	41.4											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	10	11	5	371	54	569	111	1227	351	341	1599	470
Traffic Volume (veh/h)	10	11	5	371	54	569	111	1227	351	341	1599	470
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	12	6	412	0	672	123	1363	0	379	1777	522
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	47	50	42	903	0	806	513	1839	573	306	1876	584
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.30	0.72	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5065	1583	1774	5065	1583
Grp Volume(v), veh/h	11	12	6	412	0	672	123	1363	0	379	1777	522
Grp Sat Flow(s), veh/h/ln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g, s)	0.7	0.7	0.4	10.8	0.0	22.1	3.0	17.6	0.0	19.0	37.3	34.1
Cycle Q Clear(g, c), s	0.7	0.7	0.4	10.8	0.0	22.1	3.0	17.6	0.0	19.0	37.3	34.1
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	47	50	42	903	0	806	513	1839	573	306	1876	584
V/C Ratio(X)	0.23	0.24	0.14	0.46	0.00	0.83	0.24	0.74	0.00	1.24	0.95	0.89
Avail Cap(c, a), veh/h	81	85	72	1258	0	1123	513	1839	573	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.57	0.57	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	52.3	34.6	0.0	38.8	33.9	12.1	0.0	45.5	33.7	32.7	
Incr Delay (d2), s/veh	2.5	2.5	1.5	0.4	0.0	4.0	0.1	1.6	0.0	13.15	11.6	18.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	0.4	0.2	5.3	0.0	10.1	1.4	8.1	0.0	20.5	19.5	18.0	
LnGrp Delay(d), s/veh	54.9	54.9	53.8	35.0	0.0	42.8	34.0	13.7	0.0	177.0	45.3	51.3
LnGrp LOS	D	D	D	C	D	C	B	C	B	F	D	D
Approach Vol, veh/h	29			1084				1486			2678	
Approach Delay, s/veh	54.7			39.8				15.4			65.1	
Approach LOS	D			D				B			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6			8				
Phs Duration (G+Y+Rc), s	53.0	45.6	7.6	22.2	46.4			33.8				
Change Period (Y+Rc), s	4.0	5.8	* 4.7	5.8	* 5.8			5.8				
Max Green Setting (Gmax), s	30.0	* 27	* 7.5	5.0	51.7			27.5				
Max Q Clear Time (g_c+I), s	28.5	27.0	7.5	2.9	26.5			28.5				
Green Ext Time (p_c), s	0.3	0.0	0.0	0.0	15.0			0.4				
Intersection Summary	45.8											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.653  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 45 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	Ovl	Include	Ovl	Include	Ovl	Include	Ovl	Include
Min. Green:	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1	0	2	1	0

Volume Module:  
 Base Vol: 382 1698 47 4 1401 53 107 3 574 66 13 2  
 Growth 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  
 Initial Base: 382 1698 47 4 1401 53 107 3 574 66 13 2  
 User 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  
 PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88  
 PHF Volume: 435 1932 53 5 1594 60 122 3 653 75 15 2  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 435 1932 53 5 1594 60 122 3 653 75 15 2  
 PCE 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  
 MLF 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  
 Final Volume: 435 1932 53 5 1594 60 122 3 653 75 15 2  
 OvlAdjVol: 218

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.92 0.08 1.00 2.89 0.11 0.97 0.03 2.00 1.63 0.32 0.05  
 Final Sat.: 3400 4963 137 1700 4914 186 1654 46 3400 2770 546 84

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.39 0.39 0.00 0.32 0.32 0.07 0.07 0.19 0.03 0.03 0.03  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.826  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 73 Level Of Service: D  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	Ovl	Include	Ovl	Include	Ovl	Include	Ovl	Include
Min. Green:	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	3	0	1	2	0	3	0

Volume Module:  
 Base Vol: 0 1501 308 339 1719 0 0 0 0 709 0 620  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 0 1501 308 339 1719 0 0 0 0 709 0 620  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91  
 PHF Volume: 0 1653 339 373 1893 0 0 0 0 781 0 683  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1653 339 373 1893 0 0 0 0 781 0 683  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 0 1653 339 373 1893 0 0 0 0 781 0 683  
 OvlAdjVol: 496

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.32 0.20 0.11 0.37 0.00 0.00 0.00 0.00 0.23 0.00 0.40  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.566  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 37 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 77 1627 15 19 1447 82 89 7 90 17 10 39  
 Growth 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  
 Initial Base: 77 1627 15 19 1447 82 89 7 90 17 10 39  
 User 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  
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92  
 PHF Volume: 84 1778 16 21 1581 90 97 8 98 19 11 43  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 84 1778 16 21 1581 90 97 8 98 19 11 43  
 PCE 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  
 MLF 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  
 Final Volume: 84 1778 16 21 1581 90 97 8 98 19 11 43  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00 2.84 0.16 1.00 0.07 0.93 1.00 0.20 0.80  
 Final Sat.: 1700 5053 47 1700 4626 274 1700 123 1577 1700 347 1353  
 Capacity Analysis Module:  
 Vol/Sat: 0.05 0.35 0.35 0.01 0.33 0.33 0.06 0.06 0.06 0.01 0.03 0.03  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.509  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 34 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 56 1666 31 21 1435 32 21 4 14 24 2 21  
 Growth 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  
 Initial Base: 56 1666 31 21 1435 32 21 4 14 24 2 21  
 User 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  
 PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90  
 PHF Volume: 62 1843 34 23 1587 35 23 4 15 27 2 23  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 62 1843 34 23 1587 35 23 4 15 27 2 23  
 PCE 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  
 MLF 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  
 Final Volume: 62 1843 34 23 1587 35 23 4 15 27 2 23  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.95 0.05 1.00 2.93 0.07 1.00 0.22 0.78 1.00 0.09 0.91  
 Final Sat.: 1700 5007 93 1700 4989 111 1700 378 1322 1700 148 1552  
 Capacity Analysis Module:  
 Vol/Sat: 0.04 0.37 0.37 0.01 0.32 0.32 0.01 0.01 0.01 0.02 0.01 0.01  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

Intersection	1.3					
Int Delay, s/veh						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	612	4	28	408	8	71
Future Vol, veh/h	612	4	28	408	8	71
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	775	5	35	516	10	90
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	780	0	1106	390
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	-	-	4.14	-	7.54	6.94
Critical Hdwy Stg 1	-	-	-	-	6.54	-
Critical Hdwy Stg 2	-	-	-	-	6.54	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	833	-	165	609
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	658	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	833	-	158	609
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	WB	NB	NB	
HCM Control Delay, s	0	0	0.8	14.7	14.7	B
HCM LOS						
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	472	-	-	833	-	
HCM Lane V/C Ratio	0.212	-	-	0.043	-	
HCM Control Delay (s)	14.7	-	-	9.5	0.2	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %ile Q(veh)	0.8	-	-	0.1	-	

Opening Year WP AM Mon Feb 20, 2017 15:25:53 Page 6-1  
 Health Club within the Shops at Rossmore  
 Opening Year (2018) Plus Project  
 AM Peak Hour

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.761  
 Loss Time (sec): 10 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 59 Level of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1  
 \*\*\*\*\*  
 Volume Module:  
 Base Vol: 147 1559 26 29 1416 172 282 18 98 71 22 29  
 Growth 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  
 Initial Bse: 147 1559 26 29 1416 172 282 18 98 71 22 29  
 User 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  
 PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94  
 PHF Volume: 157 1667 28 31 1514 184 302 19 105 76 24 31  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 157 1667 28 31 1514 184 302 19 105 76 24 31  
 PCE 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  
 M/F 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  
 Final Volume: 157 1667 28 31 1514 184 302 19 105 76 24 31  
 \*\*\*\*\*  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 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  
 Lanes: 1.00 2.95 0.05 1.00 2.68 0.52 1.00 0.16 0.84 0.76 0.24 1.00  
 Final Sat: 1700 5016 84 1700 4548 552 1700 264 1436 1298 402 1700  
 \*\*\*\*\*  
 Capacity Analysis Module:  
 Vol/Sat: 0.09 0.33 0.33 0.02 0.33 0.33 0.18 0.07 0.07 0.04 0.06 0.02  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection												
Intersection Delay, s/veh											11.6	
Intersection LOS											B	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	55	7	127	0	2	4	1	0	109	170	2
Future Vol, veh/h	0	55	7	127	0	2	4	1	0	109	170	2
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	9	161	0	3	5	1	0	138	215	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0

Approach	EB	WB	WB	NB
Opposing Approach	WB	EB	WB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	EB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	WB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	11.5	9.4	9.4	12
HCM LOS	B	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	56%	0%	29%	29%	0%	0%
Vol Thru, %	44%	98%	4%	57%	100%	78%
Vol Right, %	0%	2%	67%	14%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	87	189	7	193	124
LT Vol	109	0	55	2	0	0
Through Vol	85	85	7	4	193	97
RT Vol	0	2	127	1	0	27
Lane Flow Rate	246	110	239	9	245	157
Geometry Grp	7	7	2	2	7	7
Degree of Utl (X)	0.412	0.176	0.36	0.015	0.389	0.242
Departure Headway (Hd)	6.045	5.744	5.42	6.269	5.725	5.571
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	597	626	665	570	629	645
Service Time	3.772	3.471	3.451	4.317	3.452	3.297
HCM Lane V/C Ratio	0.412	0.176	0.359	0.016	0.39	0.243
HCM Control Delay	13	9.7	11.5	9.4	12.1	10.1
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	2	0.6	1.6	0	1.8	0.9

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR	SBR	SBR
Traffic Vol, veh/h	0	0	290	27	0	27
Future Vol, veh/h	0	0	290	27	0	27
Peak Hour Factor	0.92	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	367	34	0	34
Number of Lanes	0	0	2	0	2	0

Approach	SB	SB
Opposing Approach	NB	NB
Opposing Lanes	2	2
Conflicting Approach Left	WB	WB
Conflicting Lanes Left	1	1
Conflicting Approach Right	EB	EB
Conflicting Lanes Right	1	1
HCM Control Delay	11.3	11.3
HCM LOS	B	B

Lane



Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Intersection Delay, s/veh	12.9															
Intersection LOS	B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	0	5	24	2	0	136	18	147	0	0	141	221	0	25	205	66
Traffic Vol, veh/h	0	5	24	2	0	136	18	147	0	0	141	221	0	25	205	66
Future Vol, veh/h	0	5	24	2	0	136	18	147	0	0	141	221	0	25	205	66
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	118	76	107	0	17	52	39	0	47	220	27	0	30	247	80
Number of Lanes	0	0	1	0	0	1	0	0	0	0	2	0	0	0	0	2
Approach	EB	WB	WB	EB	NB	NB	SB	SB	NB	SB	SB	NB	SB	SB	NB	SB
Opposing Approach	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
Opposing Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Left	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Lanes Left	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Approach Right	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Lanes Right	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
HCM Control Delay	13.9	10.5	11.3	11.3	11.3	11.6	11.6	11.6	11.3	11.3	11.6	11.6	11.6	11.6	11.6	11.6
HCM LOS	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	30%	0%	39%	16%	20%	0%	0%	0%
Vol Thru, %	70%	81%	25%	48%	80%	61%	53%	0%
Vol Right, %	0%	19%	36%	36%	0%	39%	47%	97%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	114	250	89	128	169	142	69
LT Vol	39	0	98	14	25	0	75	0
Through Vol	92	92	63	43	103	103	67	67
RT Vol	0	22	89	32	0	66	0	0
Lane Flow Rate	157	137	301	107	154	203	180	87
Geometry Grp	7	7	2	2	7	7	7	7
Degree of Utl (X)	0.282	0.234	0.478	0.181	0.27	0.335	0.337	0.157
Departure Headway (Hd)	6.458	6.168	5.712	6.088	6.327	5.948	6.746	6.466
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	555	580	630	585	565	603	532	554
Service Time	4.223	3.933	3.77	4.165	4.089	3.71	4.509	4.219
HCM Lane V/C Ratio	0.283	0.236	0.478	0.183	0.273	0.337	0.338	0.157
HCM Control Delay	11.8	10.8	13.9	10.5	11.4	11.7	12.9	10.4
HCM Lane LOS	B	B	B	B	B	B	B	B
HCM 95th-ile Q	1.2	0.9	2.6	0.7	1.1	1.5	1.5	0.6

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Intersection Delay, s/veh	12.9															
Intersection LOS	B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	0	5	24	2	0	136	18	147	0	0	141	221	0	25	205	66
Traffic Vol, veh/h	0	5	24	2	0	136	18	147	0	0	141	221	0	25	205	66
Future Vol, veh/h	0	5	24	2	0	136	18	147	0	0	141	221	0	25	205	66
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	118	76	107	0	17	52	39	0	47	220	27	0	30	247	80
Number of Lanes	0	0	1	0	0	1	0	0	0	0	2	0	0	0	0	2
Approach	EB	WB	WB	EB	NB	NB	SB	SB	NB	SB	SB	NB	SB	SB	NB	SB
Opposing Approach	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
Opposing Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Left	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Lanes Left	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Approach Right	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Lanes Right	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
HCM Control Delay	13.9	10.5	11.3	11.3	11.3	11.6	11.6	11.6	11.3	11.3	11.6	11.6	11.6	11.6	11.6	11.6
HCM LOS	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	30%	0%	39%	16%	20%	0%	0%	0%
Vol Thru, %	70%	81%	25%	48%	80%	61%	53%	0%
Vol Right, %	0%	19%	36%	36%	0%	39%	47%	97%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	114	250	89	128	169	142	69
LT Vol	39	0	98	14	25	0	75	0
Through Vol	92	92	63	43	103	103	67	67
RT Vol	0	22	89	32	0	66	0	0
Lane Flow Rate	157	137	301	107	154	203	180	87
Geometry Grp	7	7	2	2	7	7	7	7
Degree of Utl (X)	0.282	0.234	0.478	0.181	0.27	0.335	0.337	0.157
Departure Headway (Hd)	6.458	6.168	5.712	6.088	6.327	5.948	6.746	6.466
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	555	580	630	585	565	603	532	554
Service Time	4.223	3.933	3.77	4.165	4.089	3.71	4.509	4.219
HCM Lane V/C Ratio	0.283	0.236	0.478	0.183	0.273	0.337	0.338	0.157
HCM Control Delay	11.8	10.8	13.9	10.5	11.4	11.7	12.9	10.4
HCM Lane LOS	B	B	B	B	B	B	B	B
HCM 95th-ile Q	1.2	0.9	2.6	0.7	1.1	1.5	1.5	0.6

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road

Opening Year + Project AM Peak Hour  
 02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	75	134	2
Future Vol, veh/h	0	75	134	2
Peak Hour Factor	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	95	170	3
Number of Lanes	0	0	2	0
Approach	SB	SB		
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	12.1			
HCM LOS	B			

HCM 2010 AWSC  
 1.2: West Road & Rossmoor Center Way

12/1/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	7.7								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	100	10	0	6	87	0	7	12
Future Vol, veh/h	0	100	10	0	6	87	0	7	12
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	118	12	0	7	102	0	8	14
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	WB	WB	EB			NB		
Opposing Approach	WB			EB					
Opposing Lanes	1			1			0		
Conflicting Approach Left		NB			EB				
Conflicting Lanes Left	0	1			1				
Conflicting Approach Right	NB					WB			
Conflicting Lanes Right	1				0	1			
HCM Control Delay	7.7			7.7			7.2		
HCM LOS	A			A			A		
Lane	NBU	EBU	NB	WBU	WB	NB			
Vol Left, %	37%	0%	6%						
Vol Thru, %	0%	91%	94%						
Vol Right, %	63%	9%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	19	110	93						
LT Vol	7	0	6						
Through Vol	0	100	87						
RT Vol	12	10	0						
Lane Flow Rate	22	129	109						
Geometry Grp	1	1	1						
Degree of Util (X)	0.026	0.144	0.124						
Departure Headway (Hd)	4.139	4	4.083						
Convergence, Y/N	Yes	Yes	Yes						
Cap	870	894	875						
Service Time	2.139	2.035	2.12						
HCM Lane V/C Ratio	0.025	0.144	0.125						
HCM Control Delay	7.2	7.7	7.7						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.1	0.5	0.4						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection															
Intersection Delay, s/veh 8.9															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	35	122	14	0	74	82	52	0	13	16	31	0	60	16
Future Vol, veh/h	0	35	122	14	0	74	82	52	0	13	16	31	0	60	16
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	131	15	0	80	88	56	0	14	17	33	0	65	17
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1

Approach		EB	WB	NB	SB
Opposing Approach	WB	EB	WB	NB	SB
Opposing Lanes	1	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB	WB
Conflicting Lanes Left	1	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB	EB
Conflicting Lanes Right	1	1	1	2	2
HCM Control Delay	8.7	9.4	8.2	8.8	8.8
HCM LOS	A	A	A	A	A

Lane		NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %		22%	36%	0%	36%	66%
Vol Thru, %		27%	64%	81%	39%	18%
Vol Right, %		52%	0%	19%	25%	16%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		60	96	75	208	91
LT Vol		13	35	0	74	60
Through Vol		16	61	61	82	16
RT Vol		31	0	14	52	15
Lane Flow Rate		65	103	81	224	98
Geometry Grp		2	7	7	5	2
Degree of Utl (X)		0.085	0.152	0.112	0.284	0.136
Departure Headway (Hd)		4.757	5.307	4.992	4.577	5.004
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		750	675	717	783	714
Service Time		2.803	3.045	2.73	2.613	3.047
HCM Lane V/C Ratio		0.087	0.153	0.113	0.286	0.137
HCM Control Delay		8.2	9	8.4	9.4	8.8
HCM Lane LOS		A	A	A	A	A
HCM 95th-tile Q		0.3	0.5	0.4	1.2	0.5

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection														
Intersection Delay, s/veh 7.8														
Intersection LOS A														
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT				
Traffic Vol, veh/h	0	71	37	0	16	32	0	28	15	15				
Future Vol, veh/h	0	71	37	0	16	32	0	28	15	15				
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87	0.87				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	82	43	0	18	37	0	32	17	17				
Number of Lanes	0	1	1	0	1	0	0	0	0	1				

Approach		WB	NB	SB
Opposing Approach	WB <td>NB <td>SB <td>SB</td> </td></td>	NB <td>SB <td>SB</td> </td>	SB <td>SB</td>	SB
Opposing Lanes	0	1	1	1
Conflicting Approach Left	NB	WB	WB	WB
Conflicting Lanes Left	1	0	2	2
Conflicting Approach Right	SB	WB	WB	WB
Conflicting Lanes Right	1	2	2	0
HCM Control Delay	8.1	7.1	7.1	7.7
HCM LOS	A	A	A	A

Lane		NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %		0%	100%	0%	65%
Vol Thru, %		33%	0%	0%	35%
Vol Right, %		67%	0%	100%	0%
Sign Control		Stop	Stop	Stop	Stop
Traffic Vol by Lane		48	71	37	43
LT Vol		0	71	0	28
Through Vol		16	0	0	15
RT Vol		32	0	37	0
Lane Flow Rate		55	82	43	49
Geometry Grp		2	7	7	2
Degree of Utl (X)		0.06	0.118	0.047	0.061
Departure Headway (Hd)		3.897	5.216	4.014	4.428
Convergence, Y/N		Yes	Yes	Yes	Yes
Cap		924	685	885	814
Service Time		1.899	2.97	1.768	2.43
HCM Lane V/C Ratio		0.06	0.12	0.049	0.06
HCM Control Delay		7.1	8.7	7	7.7
HCM Lane LOS		A	A	A	A
HCM 95th-tile Q		0.2	0.4	0.1	0.2

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection	Major1		Major2		Minor1	
Int Delay, s/veh	EBT	EBR	WBL	WBT	NBL	NBR
Movement	111	0	32	96	0	34
Traffic Vol, veh/h	111	0	32	96	0	34
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	Free	Free	Free	Free	Stop	Stop
Sign Control	-	None	-	None	-	None
RT Channelized	-	-	-	-	-	-
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	89	89	89	89	89	89
Peak Hour Factor	2	2	2	2	2	2
Heavy Vehicles, %	125	0	36	108	0	38
Mvmt Flow						
Major/Minor	Major1	Major2	Major2	Major2	Minor1	Minor1
Conflicting Flow All	0	0	125	0	305	125
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	180	-
Critical Hwy	-	-	4.12	-	6.42	6.22
Critical Hwy Stg 1	-	-	-	-	5.42	-
Critical Hwy Stg 2	-	-	-	-	5.42	-
Follow-up Hwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1462	-	687	926
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	851	-
Platoon blocked, %	-	-	-	-	669	926
Mov Cap-1 Maneuver	-	-	1462	-	669	-
Mov Cap-2 Maneuver	-	-	-	-	669	-
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	829	-
Approach	EB	WB	WB	WB	NB	NB
HCM Control/Delay, s	0		1.9		9.1	
HCM LOS			A		A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	926	-	-	1462	-	
HCM Lane V/C Ratio	0.041	-	-	0.025	-	
HCM Control/Delay (s)	9.1	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %ile Q(veh)	0.1	-	-	0.1	-	

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4TB			4			4TB				
Traffic Volume (veh/h)	168	30	20	324	35	537	11	1471	365	537	1085	128
Future Volume (veh/h)	168	30	20	324	35	537	11	1471	365	537	1085	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	173	31	21	360	0	0	11	1516	376	554	1119	132
Adj No. of Lanes	0	2	0	2	0	0	1	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	419	0	187	23	1596	497	597	324	1035
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.31	0.67	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1593	1774	5085	1593	1774	5085	1593
Grp Volume(v), veh/h	173	0	52	360	0	0	11	1516	376	554	1119	132
Grp Sat Flow(s), veh/h	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.9	0.0	3.1	11.0	0.0	0.0	0.7	32.1	23.5	30.0	0.0	0.0
Cycle Q Clear(g.c), s	7.9	0.0	3.1	11.0	0.0	0.0	0.7	32.1	23.5	30.0	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	419	0	187	23	1596	497	597	324	1035
V/C Ratio(X)	1.36	0.00	0.42	0.86	0.00	0.00	0.48	0.95	0.76	0.93	0.34	0.13
Avail Cap(c,a), veh/h	127	0	125	426	0	190	81	1600	498	597	3324	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.9	34.0	16.9	0.0	0.0
Incr Delay (d2), s/veh	203.5	0.0	2.2	15.9	0.0	0.0	14.6	13.4	10.3	19.0	0.2	0.2
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 Back(Q)(50%) veh/h	11.1	0.0	1.6	6.3	0.0	0.0	0.4	17.0	11.7	17.3	0.1	0.1
LnGrp Delay(d), s/veh	254.5	0.0	51.0	63.5	0.0	0.0	68.5	50.3	44.2	35.9	0.2	0.2
LnGrp LOS	F	D	E	E	D	D	E	D	D	D	A	A
Approach Vol, veh/h	225			360			1903				1805	
Approach Delay, s/veh	207.5			63.5			49.2				11.2	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	42.8	40.3		12.6	5.4	77.7		18.8				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+I1), s	32.0	34.1		9.9	2.7	2.0		13.0				
Green Ext Time (p_c), s	0.5	0.5		0.0	0.0	13.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	42.7											
HCM 2010 LOS	D											
Notes												

12/1/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	80	73	88	197	15	694	41	1578	561	329	1477	377
Traffic Volume (veh/h)	80	73	88	197	15	694	41	1578	561	329	1477	377
Future Volume (veh/h)	7	0	4	14	3	8	18	5	2	12	1	6
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob.) veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Adj Flow Rate, veh/h	82	75	91	203	0	725	42	1627	0	339	1523	389
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	81	85	72	942	0	840	472	1873	583	242	1785	566
Arrive On Green	0.05	0.05	0.05	0.27	0.00	0.27	0.27	0.74	0.00	0.14	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	82	75	91	203	0	725	42	1627	0	339	1523	389
Grp Sat Flow(s), veh/h/m/1774	1863	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.0	4.4	5.0	4.9	0.0	24.0	1.0	25.8	0.0	15.0	30.5	23.3
Cycle Q Clear(g.s), s	5.0	4.4	5.0	4.9	0.0	24.0	1.0	25.8	0.0	15.0	30.5	23.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	85	72	942	0	840	472	1873	583	242	1785	566
V/C Ratio(X)	1.02	0.89	1.26	0.22	0.00	0.86	0.09	0.87	0.00	1.40	0.85	0.70
Avail Cap(c), veh/h	81	85	72	1258	0	1123	472	1873	583	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.52	0.52	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	31.5	0.0	38.5	34.8	12.6	0.0	47.5	33.1	30.7	30.7
Incr Delay (d2), s/veh	104.9	61.6	192.8	0.1	0.0	5.5	0.0	3.1	0.0	203.6	5.4	7.2
Initial Q Delay(Q3), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/lt	3.7	6.0	2.4	0.0	11.1	0.5	12.0	0.0	21.0	15.1	11.3	11.3
LnGrp Delay(d), s/veh	157.6	113.8	245.3	31.6	0.0	44.0	34.8	15.7	0.0	251.1	38.5	37.9
LnGrp LOS	F	F	F	C	D	C	B	F	D	F	D	D
Approach Vol, veh/h	248	1765	928	1669	0	1669	16.2	70.4	0	2251	70.4	0
Approach Delay, s/veh	F	F	D	B	B	E						
Approach LOS	F	F	D	B	B	E						
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	46.3	9.7	20.9	44.4	35.0							
Change Period (Y+Rc), s	4.0	5.8	5.8	5.8	5.8							
Max Green Setting (Gmax), s	30.7	5.0	5.0	30.7	30.0							
Max Q Clear Time (g_c+I+g), s	27.8	7.0	3.0	32.5	26.0							
Green Ext Time (p_c), s	0.0	2.4	0.0	1.6	6.1							

Intersection Summary	52.5
HCM 2010 Ctrl Delay	D
HCM 2010 LOS	D
Notes	

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.814  
 Loss Time (sec): 70 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 70 Level Of Service: D  
 Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Protected Protected Permitted  
 Rights: Ovl Ovl Ovl Ovl Ovl Ovl  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 0 0 2 0 0 1  
 Volume Module: 0 1771 549 647 1649 0 0 0 0 545 0 490  
 Base Vol: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Growth 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  
 Initial Base: 0 1771 549 647 1649 0 0 0 0 545 0 490  
 User 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  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 1813 562 662 1688 0 0 0 0 558 0 502  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1813 562 662 1688 0 0 0 0 558 0 502  
 PCE 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  
 MLF 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  
 Final Volume: 0 1813 562 662 1688 0 0 0 0 558 0 502  
 OvlAdjVol: 0 1813 562 662 1688 0 0 0 0 558 0 502  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.00 0.36 0.33 0.19 0.33 0.00 0.00 0.00 0.00 0.16 0.00 0.30  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.766  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 60 Level Of Service: C  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Protected	Include	Protected	Include
Rights:	0	0	0	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0	1	0	1
Lanes:	1	0	2	1	0	1	0	1

Volume Module:  
 Base Vol: 207 1503 85 79 1431 95 101 28 187 140 47 60  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 207 1503 85 79 1431 95 101 28 187 140 47 60  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHE Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 219 1589 90 84 1513 100 107 30 198 148 50 63  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 219 1589 90 84 1513 100 107 30 198 148 50 63  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 219 1589 90 84 1513 100 107 30 198 148 50 63

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.84 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56  
 Final Sat.: 1700 4827 273 1700 4783 317 1700 221 1479 1700 747 953

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.33 0.33 0.05 0.32 0.32 0.06 0.13 0.13 0.09 0.07 0.07  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.740  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 56 Level Of Service: C  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Protected	Include	Split Phase	Split Phase
Rights:	0	0	0	0	OVI	Include
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	2	0	2	1	0	1
Lanes:	2	0	2	1	0	1

Volume Module:  
 Base Vol: 414 1724 133 5 1715 70 95 0 392 195 31 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 414 1724 133 5 1715 70 95 0 392 195 31 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHE Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 445 1854 143 5 1844 75 102 0 422 210 33 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 445 1854 143 5 1844 75 102 0 422 210 33 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 445 1854 143 5 1844 75 102 0 422 210 33 5  
 OriAdjVol: 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.79 0.21 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04  
 Final Sat.: 3400 4735 365 1700 4900 200 1700 0 3400 2870 456 74

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.39 0.39 0.00 0.38 0.38 0.06 0.00 0.12 0.07 0.07 0.07  
 OriAdjV/S: 0.00  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.705  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 51 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0

Volume Module:  
 Base Vol: 131 1584 58 24 1758 177 173 9 89 48 3 20  
 Growth 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  
 Initial Base: 131 1584 58 24 1758 177 173 9 89 48 3 20  
 User 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  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 135 1628 60 25 1807 182 178 9 91 49 3 21  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 135 1628 60 25 1807 182 178 9 91 49 3 21  
 PCE 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  
 MLF 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  
 Final Volume: 135 1628 60 25 1807 182 178 9 91 49 3 21

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Lanes: 1.00 2.89 0.11 1.00 2.73 0.27 1.00 0.09 0.91 0.94 0.06 1.00  
 Final Sat.: 1700 4920 180 1700 4633 467 1700 156 1544 1600 100 1700

Capacity Analysis Module:  
 Vol/Sat: 0.08 0.33 0.33 0.01 0.39 0.39 0.10 0.06 0.06 0.03 0.03 0.01  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.741  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 56 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0

Volume Module:  
 Base Vol: 194 1591 24 36 1603 224 210 1 156 15 1 16  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 194 1591 24 36 1603 224 210 1 156 15 1 16  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 205 1684 25 38 1696 237 222 1 165 16 1 17  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 205 1684 25 38 1696 237 222 1 165 16 1 17  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 205 1684 25 38 1696 237 222 1 165 16 1 17

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.96 0.04 1.00 2.63 0.37 1.00 0.01 0.99 1.00 0.06 0.94  
 Final Sat.: 1700 5024 76 1700 4475 625 1700 11 1689 1700 100 1600

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.34 0.02 0.38 0.38 0.13 0.10 0.10 0.01 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection	1 2											
Int Delay, s/veh	A											
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	450	7	54	462	3	49						
Future Vol, veh/h	450	7	54	462	3	49						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	90	90	90	90	90	90						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	500	8	60	513	3	54						
Major/Minor	Major1	Major2	Minor1									
Conflicting Flow All	0	0	508	0	881	254						
Stage 1	-	-	-	-	504	-						
Stage 2	-	-	-	-	377	-						
Critical Hdwy	-	-	4.14	-	6.84	6.94						
Critical Hdwy Stg 1	-	-	-	-	5.84	-						
Critical Hdwy Stg 2	-	-	-	-	5.84	-						
Follow-up Hdwy	-	-	2.22	-	3.52	3.32						
Pot Cap-1 Maneuver	-	-	1053	-	286	745						
Stage 1	-	-	-	-	572	-						
Stage 2	-	-	-	-	663	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	1053	-	263	745						
Mov Cap-2 Maneuver	-	-	-	-	263	-						
Stage 1	-	-	-	-	572	-						
Stage 2	-	-	-	-	610	-						
Approach	EB	WB	NB									
HCM Control Delay, s	0	1.2	10.8									
HCM LOS	B											
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	674	-	-	1063	-							
HCM Lane V/C Ratio	0.086	-	-	0.057	-							
HCM Control Delay (s)	10.8	-	-	8.6	0.3							
HCM Lane LOS	B	-	-	A	A							
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection	9.6											
Intersection Delay, s/veh	A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBR	NBU	NBL	NBT	NBR	
Traffic Vol, veh/h	0	30	5	47	0	3	6	10	0	68	219	
Future Vol, veh/h	0	30	5	47	0	3	6	10	0	68	219	
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	36	6	56	0	4	7	12	0	81	261	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	
Approach	EB	WB	WB				NB					
Opposing Approach	WB	EB	EB				SB					
Oposing Lanes	1	1	1				2					
Conflicting Approach Left	SB	NB	EB				EB					
Conflicting Lanes Left	2	2	2				1					
Conflicting Approach Right	NB	SB	WB				WB					
Conflicting Lanes Right	2	2	2				1					
HCM Control Delay	9.1	8.6	8.6				10					
HCM LOS	A	A	A				A					
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2						
Vol Left, %	38%	0%	37%	16%	6%	0%						
Vol Thru, %	62%	96%	6%	32%	94%	73%						
Vol Right, %	0%	4%	57%	53%	0%	27%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	178	114	82	19	126	163						
LT Vol	68	0	30	3	7	0						
Through Vol	110	110	5	6	119	119						
RT Vol	0	4	47	10	0	44						
Lane Flow Rate	211	135	98	23	150	194						
Geometry Grp	7	7	2	2	7	7						
Degree of Utl (X)	0.314	0.193	0.141	0.033	0.217	0.269						
Departure Headway (Ht)	5.357	5.139	5.2	5.323	5.208	4.99						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	668	696	685	667	687	718						
Service Time	3.11	2.892	3.261	3.4	2.959	2.741						
HCM Lane V/C Ratio	0.316	0.194	0.143	0.034	0.218	0.27						
HCM Control Delay	10.6	9.1	9.1	8.6	9.4	9.6						
HCM Lane LOS	B	A	A	A	A	A						
HCM 95th %tile Q	1.3	0.7	0.5	0.1	0.8	1.1						



HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR	SBL	SBR
Traffic Vol, veh/h	0	7	238	44		
Future Vol, veh/h	0	7	238	44		
Peak Hour Factor	0.92	0.84	0.84	0.84		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	8	283	52		
Number of Lanes	0	0	2	0		
Approach						
Approach	SB	SB				
Opposing Approach	NB					
Opposing Lanes	2					
Conflicting Approach Left	WB					
Conflicting Lanes Left	1					
Conflicting Approach Right	EB					
Conflicting Lanes Right	1					
HCM Control Delay	9.5					
HCM LOS	A					
Lane						
Lane	NB	SB				

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection															
Intersection Delay, s/veh10.4															
Intersection LOS															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	42	37	56	0	38	41	74	0	30	133	29	0	46	183
Future Vol, veh/h	0	42	37	56	0	38	41	74	0	30	133	29	0	46	183
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	50	44	67	0	45	49	88	0	36	158	35	0	55	218
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2
Approach															
Approach	EB	EB	WB	WB	NB	NB	SB	SB							
Opposing Approach	WB	WB	EB	EB	SB	SB									
Opposing Lanes	1	1	1	1	2	2									
Conflicting Approach Left	SB	SB	NB	NB	EB	EB									
Conflicting Lanes Left	2	2	2	2	1	1									
Conflicting Approach Right	NB	NB	SB	SB	WB	WB									
Conflicting Lanes Right	2	2	2	2	1	1									
HCM Control Delay	10.3		10.5		10									10.6	
HCM LOS	B		B		A									B	
Lane															
Lane	NBUr1	NBLr2	EBLr1	WBLr1	SBLr1	SBLr2									
Vol Left, %	31%	0%	31%	25%	33%	0%									
Vol Thru, %	69%	70%	27%	27%	67%	70%									
Vol Right, %	0%	30%	41%	48%	0%	30%									
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop									
Traffic Vol by Lane	97	96	135	153	138	132									
LT Vol	30	0	42	38	46	0									
Through Vol	67	67	37	41	92	92									
RT Vol	0	29	56	74	0	40									
Lane Flow Rate	115	114	161	182	164	157									
Geometry Grp	7	7	2	2	7	7									
Degree of Util (X)	0.195	0.181	0.245	0.273	0.272	0.244									
Departure Headway (Hd)	6.101	5.728	5.487	5.397	5.992	5.606									
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes									
Cap	588	626	654	665	599	640									
Service Time	3.839	3.466	3.529	3.437	3.727	3.342									
HCM Lane V/C Ratio	0.196	0.182	0.246	0.274	0.274	0.245									
HCM Control Delay	10.3	9.7	10.3	10.5	11	10.2									
HCM Lane LOS	B	A	B	B	B	B									
HCM 95th-ile Q	0.7	0.7	1	1.1	1.1	1									

HCM 2010 AWSC  
 11: Montecito Road & Bradbury Road

Opening Year + Project PM Peak Hour  
 02/22/2017

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0	1	17	2	0	149	25	65	0	5	106	107
Traffic Vol, veh/h	0	1	17	2	0	149	25	65	0	5	106	107
Future Vol, veh/h	0	1	17	2	0	149	25	65	0	5	106	107
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	20	2	0	171	29	75	0	6	122	123
Number of Lanes	0	0	1	0	0	1	1	1	0	0	2	0

Approach	EB	WB	WB	NB
Opposing Approach	WB	EB	WB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	9.4	A	11	9.6
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	5%	86%	0%	39%	0%	0%
Vol Thru, %	91%	33%	85%	14%	0%	61%	95%	0%
Vol Right, %	0%	67%	10%	0%	100%	0%	5%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	160	20	174	65	105	67	67
LT Vol	5	0	1	149	0	41	0	0
Through Vol	53	53	17	25	0	64	64	64
RT Vol	0	107	2	0	65	0	3	3
Lane Flow Rate	67	184	23	200	75	120	76	76
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.105	0.262	0.039	0.338	0.103	0.195	0.119	0.119
Departure Headway (Hd)	5.648	5.132	6.13	6.091	4.956	5.841	5.611	5.611
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	629	683	588	586	714	609	633	633
Service Time	3.431	2.914	4.13	3.883	2.747	3.63	3.4	3.4
HCM Lane V/C Ratio	0.107	0.266	0.039	0.341	0.105	0.197	0.12	0.12
HCM Control Delay	9.1	9.8	9.4	12	8.3	10.1	9.2	9.2
HCM Lane LOS	A	A	A	B	A	B	A	A
HCM 95th-tile Q	0.4	1	0.1	1.5	0.3	0.7	0.4	0.4

HCM 2010 AWSC  
 11: Montecito Road & Bradbury Road

Opening Year + Project PM Peak Hour  
 02/22/2017

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations	0	41	127	3
Traffic Vol, veh/h	0	41	127	3
Future Vol, veh/h	0	41	127	3
Peak Hour Factor	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	47	146	3
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.8
HCM LOS	A

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 8.1												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	91	24	0	22	137	0	32	11			
Future Vol, veh/h	0	91	24	0	22	137	0	32	11			
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	101	27	0	24	152	0	36	12			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach												
Opposing Approach												
Opposing Lanes												
Conflicting Approach Left												
Conflicting Lanes Left												
Conflicting Approach Right												
Conflicting Lanes Right												
HCM Control Delay												
HCM LOS												
Approach	EB	WB	EB	NB								
Opposing Approach	WB	EB										
Opposing Lanes	1	1										
Conflicting Approach Left	0	NB	EB									
Conflicting Lanes Left	0	1	1									
Conflicting Approach Right	NB	0	WB									
Conflicting Lanes Right	1	0	1									
HCM Control Delay	7.8	8.3	7.9									
HCM LOS	A	A	A									

Lane												
NBLn1 EBLn1 WBLn1												
Vol Left, %												
Vol Thru, %												
Vol Right, %												
Sign Control												
Traffic Vol by Lane												
LT Vol												
Through Vol												
RT Vol												
Lane Flow Rate												
Geometry Grp												
Degree of Util (X)												
Departure Headway (Hd)												
Convergence, Y/N												
Cap												
Service Time												
HCM Lane V/C Ratio												
HCM Control Delay												
HCM Lane LOS												
HCM 95th-tile Q												
NBLn1	74%	0%	14%									
Vol Left, %	0%	79%	86%									
Vol Thru, %	26%	21%	0%									
Vol Right, %	Stop	Stop	Stop									
Sign Control	43	115	159									
Traffic Vol by Lane	32	0	22									
LT Vol	0	91	137									
Through Vol	11	24	0									
RT Vol	48	128	177									
Lane Flow Rate	1	1	1									
Geometry Grp	0.061	0.143	0.203									
Degree of Util (X)	4.585	4.025	4.142									
Departure Headway (Hd)	Yes	Yes	Yes									
Convergence, Y/N	786	879	859									
Cap	2.585	2.103	2.205									
Service Time	0.061	0.146	0.206									
HCM Lane V/C Ratio	7.9	7.8	8.3									
HCM Control Delay	A	A	A									
HCM Lane LOS	0.2	0.5	0.8									
HCM 95th-tile Q												

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection														
Intersection Delay, s/veh 16.1														
Intersection LOS C														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	22	122	27	0	185	171	85	0	43	44	180	0	76
Future Vol, veh/h	0	22	122	27	0	185	171	85	0	43	44	180	0	76
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	127	28	0	193	178	89	0	45	46	188	0	79
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	1

Approach												
Opposing Approach												
Opposing Lanes												
Conflicting Approach Left												
Conflicting Lanes Left												
Conflicting Approach Right												
Conflicting Lanes Right												
HCM Control Delay												
HCM LOS												
Approach	EB	WB	EB	NB								
Opposing Approach	WB	EB										
Opposing Lanes	1	2										
Conflicting Approach Left	SB	NB	EB									
Conflicting Lanes Left	1	1	2									
Conflicting Approach Right	NB	SB	WB									
Conflicting Lanes Right	1	1	1									
HCM Control Delay	10.5	21.5	13.2									
HCM LOS	B	C	B									

Lane												
NBLn1 EBLn1 EBLn2 WBLn1 SBLn1												
Vol Left, %												
Vol Thru, %												
Vol Right, %												
Sign Control												
Traffic Vol by Lane												
LT Vol												
Through Vol												
RT Vol												
Lane Flow Rate												
Geometry Grp												
Degree of Util (X)												
Departure Headway (Hd)												
Convergence, Y/N												
Cap												
Service Time												
HCM Lane V/C Ratio												
HCM Control Delay												
HCM Lane LOS												
HCM 95th-tile Q												
NBLn1	16%	27%	0%	42%								
Vol Left, %	16%	73%	69%	39%								
Vol Thru, %	67%	0%	31%	19%								
Vol Right, %	Stop	Stop	Stop	Stop								
Sign Control	267	83	88	441								
Traffic Vol by Lane	43	22	0	185								
LT Vol	44	61	61	171								
Through Vol	180	0	27	85								
RT Vol	278	86	92	459								
Lane Flow Rate	2	7	7	5								
Geometry Grp	0.438	0.159	0.16	0.713								
Degree of Util (X)	5.663	6.628	6.273	5.589								
Departure Headway (Hd)	Yes	Yes	Yes	Yes								
Convergence, Y/N	629	537	567	643								
Cap	3.753	4.426	4.072	3.663								
Service Time	0.442	0.16	0.162	0.714								
HCM Lane V/C Ratio	13.2	10.7	10.3	21.5								
HCM Control Delay	B	B	C	B								
HCM Lane LOS	2.2	0.6	0.6	5.9								
HCM 95th-tile Q												

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection										
Intersection Delay, s/veh 11.8										
Intersection LOS B										
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT	SBT
Traffic Vol, veh/h	0	86	295	0	43	66	0	233	55	55
Future Vol, veh/h	0	86	295	0	43	66	0	233	55	55
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	97	331	0	48	74	0	262	62	62
Number of Lanes	0	1	1	0	1	0	0	0	0	1
Approach	WB		NB		SB		SB			
Opposing Approach	0		SB		NB		NB			
Opposing Lanes	0		1		1		1			
Conflicting Approach Left	NB		WB		WB		WB			
Conflicting Lanes Left	1		0		2		2			
Conflicting Approach Right	SB		WB		WB		WB			
Conflicting Lanes Right	1		2		0		0			
HCM Control Delay	11.5		9.2		13.1		13.1			
HCM LOS	B		A		B		B			
Lane	NBLn1 WBLn1 WBLn2		SBLn1		SBLn1		SBLn1			
Vol Left, %	0%		100%		0%		81%			
Vol Thru, %	39%		0%		19%		0%			
Vol Right, %	61%		0%		100%		0%			
Sign Control	Stop		Stop		Stop		Stop			
Traffic Vol by Lane	109		86		295		288			
LT Vol	0		86		0		233			
Through Vol	43		0		0		55			
RT Vol	66		0		295		0			
Lane Flow Rate	122		97		331		324			
Geometry Grp	2		7		7		2			
Degree of Util (X)	0.175		0.165		0.456		0.473			
Departure Headway (Hd)	5.14		6.16		4.949		5.26			
Convergence, Y/N	Yes		Yes		Yes		Yes			
Cap	702		577		719		676			
Service Time	3.14		3.955		2.742		3.35			
HCM Lane V/C Ratio	0.174		0.168		0.46		0.479			
HCM Control Delay	9.2		10.2		11.9		13.1			
HCM Lane LOS	A		B		B		B			
HCM 95th-tile Q	0.6		0.6		2.4		2.5			

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection										
Int Delay, s/veh 3.2										
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h	89	1	84	167	4	69				
Future Vol, veh/h	89	1	84	167	4	69				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	93	93	93	93	93	93				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	96	1	90	180	4	74				
Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	0	0	97	0	456	96				
Stage 1	-	-	-	-	96	-				
Stage 2	-	-	-	-	360	-				
Critical Hdwy	-	-	4.12	-	6.42	6.22				
Critical Hdwy Stg 1	-	-	-	-	5.42	-				
Critical Hdwy Stg 2	-	-	-	-	5.42	-				
Follow-up Hdwy	-	-	2.218	-	3.518	3.318				
Pot Cap-1 Maneuver	-	-	1496	-	562	960				
Stage 1	-	-	-	-	928	-				
Stage 2	-	-	-	-	706	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1496	-	524	960				
Mov Cap-2 Maneuver	-	-	-	-	524	-				
Stage 1	-	-	-	-	928	-				
Stage 2	-	-	-	-	659	-				
Approach	EB		WB		NB					
HCM Control Delay, s	0		2.5		9.3					
HCM LOS	A		A		A					
Minor Lane/Major Mvmt	NBLn1		EBT		WBL					
Capacity (veh/h)	918		-		1496					
HCM Lane V/C Ratio	0.086		-		0.06					
HCM Control Delay (s)	9.3		-		7.6					
HCM Lane LOS	A		-		A					
HCM 95th-tile Q(veh)	0.3		-		0.2					

HCM 2010 Signalized Intersection Summary  
 1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB			4								
Traffic Volume (veh/h)	148	26	16	549	37	509	9	1118	275	437	1131	132
Future Volume (veh/h)	148	26	16	549	37	509	9	1118	275	437	1131	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	157	28	17	612	0	0	10	1189	293	465	1203	140
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	684	0	305	21	1321	411	497	2769	862
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.56	1.00	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	157	0	45	612	0	0	10	1189	293	465	1203	140
Grp Sat Flow(s), veh/h/ln	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.3	0.0	2.7	18.5	0.0	0.0	0.6	24.8	18.5	26.6	0.0	0.0
Cycle Q Clear(g.c), s	7.3	0.0	2.7	18.5	0.0	0.0	0.6	24.8	18.5	26.6	0.0	0.0
Prop In Lane	1.00	0.00	0.38	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	684	0	305	21	1321	411	497	2769	862
V/C Ratio(X)	1.33	0.00	0.39	0.90	0.00	0.47	0.90	0.71	0.94	0.43	0.16	0.16
Avail Cap(c.a), veh/h	118	0	116	748	0	334	81	1350	420	497	2769	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	0.88
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.3	0.0	0.0	54.0	39.3	37.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	196.7	0.0	2.1	12.7	0.0	0.0	15.3	10.0	10.1	23.0	0.4	0.4
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(50%), veh/ln	10.0	0.0	1.4	10.3	0.0	0.0	0.4	12.9	9.2	15.8	0.1	0.1
LnGrp Delay(d), s/veh	248.1	0.0	51.3	56.0	0.0	0.0	69.3	49.4	47.0	46.3	0.4	0.4
LnGrp LOS	F	D	E	D	E	D	E	D	D	D	A	A
Approach Vol, veh/h	202			612			1492				1808	
Approach Delay, s/veh	204.2			56.0			49.0				12.2	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	36.6	34.4		12.0	5.3	65.7		27.0				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2				
Max Q Clear Time (g_c+I), s	28.6	26.8		9.3	2.6	2.0		20.5				
Green Ext Time (p_c), s	0.3	1.7		0.0	0.0	14.2		0.7				
Intersection Summary	415											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	8	7	359	5	592	15	1386	381	272	1338	245
Traffic Volume (veh/h)	9	8	7	359	5	592	15	1386	381	272	1338	245
Future Volume (veh/h)	9	8	7	359	5	592	15	1386	381	272	1338	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	9	8	7	378	0	626	16	1459	0	286	1408	258
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	42	44	37	848	0	757	691	2117	659	242	1706	531
Arrive On Green	0.02	0.02	0.02	0.24	0.00	0.24	0.40	0.83	0.00	0.14	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	9	8	7	378	0	626	16	1459	0	286	1408	258
Grp Sat Flow(s), veh/h/ln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.5	0.5	0.5	10.0	0.0	20.6	0.3	12.4	0.0	15.0	28.0	14.2
Cycle Q Clear(g.c), s	0.5	0.5	0.5	10.0	0.0	20.6	0.3	12.4	0.0	15.0	28.0	14.2
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	42	44	37	848	0	757	691	2117	659	242	1706	531
V/C Ratio(X)	0.21	0.18	0.19	0.45	0.00	0.83	0.02	0.69	0.00	1.18	0.83	0.49
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	691	2117	659	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.65	0.65	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	52.7	52.7	35.6	0.0	39.7	26.4	6.4	0.0	47.5	33.6	29.0
Incr Delay (d2), s/veh	2.5	2.0	2.4	0.4	0.0	3.3	0.0	1.2	0.0	116.1	4.7	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3	0.3	0.2	4.9	0.0	9.4	0.1	5.6	0.0	15.1	13.8	6.7
LnGrp Delay(d), s/veh	55.2	54.6	55.0	36.0	0.0	43.0	26.4	7.6	0.0	163.6	38.3	32.2
LnGrp LOS	E	D	E	D	D	D	C	A	F	D	D	C
Approach Vol, veh/h	24			1004			1475				1952	
Approach Delay, s/veh	55.0			40.4			7.8				55.8	
Approach LOS	D			D			A				E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	49.0	51.6		7.3	27.9	42.7		32.1				
Change Period (Y+Rc), s	4.0	* 4.0		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	30.7	* 30.7		* 5.0	5.0	* 41		39.0				
Max Q Clear Time (g_c+I), s	14.4	14.4		2.5	2.3	30.0		22.6				
Green Ext Time (p_c), s	0.0	8.8		0.0	2.0	6.9		3.7				
Intersection Summary	36.5											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.673  
 Loss Time (sec): 17 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 47 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 2 0 2 1 0 1 0 2 1 0 0 2 1 0 1 0 0

Volume Module:  
 Base Vol: 368 1664 174 17 1423 73 111 2 405 176 35 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 368 1664 174 17 1423 73 111 2 405 176 35 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 397 1795 188 18 1535 79 120 2 437 190 38 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 397 1795 188 18 1535 79 120 2 437 190 38 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 397 1795 188 18 1535 79 120 2 437 190 38 5  
 OvlAdjVol: 40

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.72 2.88 1.00 2.85 0.15 0.98 0.02 2.00 1.63 0.32 0.05  
 Final Sat.: 3400 4617 483 1700 4851 249 1670 30 3400 2770 551 79

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.39 0.39 0.01 0.32 0.32 0.07 0.07 0.13 0.07 0.07 0.07  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.802  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 67 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted  
 Rights: Include Include Include Ovl  
 Min. Green: 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 2 0 0 0 1

Volume Module:  
 Base Vol: 0 1595 364 521 1503 0 0 0 0 364 0 578  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 0 1595 364 521 1503 0 0 0 0 364 0 578  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
 PHF Volume: 0 1715 391 560 1616 0 0 0 0 391 0 622  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1715 391 560 1616 0 0 0 0 391 0 622  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 0 1715 391 560 1616 0 0 0 0 391 0 622  
 OvlAdjVol: 341

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.34 0.23 0.16 0.32 0.00 0.00 0.00 0.00 0.12 0.00 0.37  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.856  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 82 Level Of Service: D  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Protected Permitted Permitted  
 Rights: Include Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0  
 \*\*\*\*\*  
 Volume Module:  
 Base Vol: 294 1299 109 93 1110 152 120 84 245 175 90 89  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 294 1299 109 93 1110 152 120 84 245 175 90 89  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
 PHF Volume: 310 1370 115 98 1171 160 127 89 258 185 95 94  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 310 1370 115 98 1171 160 127 89 258 185 95 94  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 310 1370 115 98 1171 160 127 89 258 185 95 94  
 \*\*\*\*\*  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.77 0.23 1.00 2.64 0.36 1.00 0.26 0.74 1.00 0.50 0.50  
 Final Sat.: 1700 4705 395 1700 4486 614 1700 434 1266 1700 855 845  
 \*\*\*\*\*  
 Capacity Analysis Module:  
 Vol/Sat: 0.18 0.29 0.29 0.06 0.26 0.26 0.07 0.20 0.20 0.11 0.11 0.11  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.713  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 52 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Protected Permitted Permitted  
 Rights: Include Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0  
 \*\*\*\*\*  
 Volume Module:  
 Base Vol: 226 1467 15 25 1424 251 215 4 178 19 2 14  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 226 1467 15 25 1424 251 215 4 178 19 2 14  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
 PHF Volume: 232 1506 15 26 1462 258 221 4 183 20 2 14  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 232 1506 15 26 1462 258 221 4 183 20 2 14  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 232 1506 15 26 1462 258 221 4 183 20 2 14  
 \*\*\*\*\*  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00 2.55 0.45 1.00 0.02 0.98 1.00 0.13 0.87  
 Final Sat.: 1700 5048 52 1700 4336 764 1700 37 1663 1700 213 1487  
 \*\*\*\*\*  
 Capacity Analysis Module:  
 Vol/Sat: 0.14 0.30 0.30 0.02 0.34 0.34 0.13 0.11 0.11 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

Intersection		EBT		EBR		WBL		WBT		NBL		NBR	
IntDelay, s/veh		1											
<b>Movement</b>													
Traffic Vol, veh/h		464	1	43	426	4	44						
Future Vol, veh/h		464	1	43	426	4	44						
Conflicting Peds. #/hr		0	0	0	0	0	0						
Sign Control		Free	Free	Free	Free	Stop	Stop						
RT Channelized		-	None	-	None	-	None						
Storage Length		-	-	-	-	0	0						
Veh in Median Storage, #		0	-	0	0	0	0						
Grade, %		0	-	0	0	0	0						
Peak Hour Factor		94	94	94	94	94	94						
Heavy Vehicles, %		2	2	2	2	2	2						
Mvmt Flow		494	1	46	453	4	47						
<b>Major/Minor</b>													
		Major1		Major2		Minor1							
Conflicting Flow All		0	0	495	0	812	247						
Stage 1		-	-	-	-	494	-						
Stage 2		-	-	-	-	318	-						
Critical Hdwy		-	-	4.14	-	6.84	6.94						
Critical Hdwy Stg 1		-	-	-	-	5.84	-						
Critical Hdwy Stg 2		-	-	-	-	5.84	-						
Follow-up Hdwy		-	-	2.22	-	3.52	3.32						
Pot Cap-1 Maneuver		-	-	1065	-	317	763						
Stage 1		-	-	-	-	579	-						
Stage 2		-	-	-	-	710	-						
Platoon blocked, %		-	-	-	-	-	-						
Mov Cap-1 Maneuver		-	-	1065	-	299	763						
Mov Cap-2 Maneuver		-	-	-	-	299	-						
Stage 1		-	-	-	-	579	-						
Stage 2		-	-	-	-	669	-						
<b>Approach</b>													
		EB	WB	WB	NB	NB							
HCM Control Delay, s		0	1	1	10.8	10.8							
HCM LOS					B	B							
<b>Minor Lane/Major Mvmt</b>													
		NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)		668	-	-	1065	-							
HCM Lane V/C Ratio		0.076	-	-	0.043	-							
HCM Control Delay (s)		10.8	-	-	8.5	0.2							
HCM Lane LOS		B	-	-	A	A							
HCM 95th %ile Q(veh)		0.2	-	-	0.1	-							

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.651  
 Loss Time (sec): 45 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 45 Level of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1  
 \*\*\*\*\*  
 Volume Module:  
 Base Vol: 112 1455 44 22 1543 126 178 8 97 64 7 21  
 Growth 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 1.00 1.00 1.00 1.00  
 Initial Bse: 112 1455 44 22 1543 126 178 8 97 64 7 21  
 User 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 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 114 1485 45 22 1574 129 182 8 99 65 7 21  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 114 1485 45 22 1574 129 182 8 99 65 7 21  
 PCE 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 1.00 1.00 1.00 1.00  
 M/F 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 1.00 1.00 1.00 1.00  
 Final Volume: 114 1485 45 22 1574 129 182 8 99 65 7 21  
 \*\*\*\*\*  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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 1.00 1.00 1.00 1.00  
 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 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.91 0.09 2.00 2.77 0.23 1.00 0.08 0.92 0.90 0.10 1.00  
 Final Sat: 1700 4950 150 1700 4715 385 1700 130 1570 1532 168 1700  
 \*\*\*\*\*  
 Capacity Analysis Module:  
 Vol/Sat: 0.07 0.30 0.30 0.01 0.33 0.33 0.11 0.06 0.06 0.04 0.04 0.04 0.01  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*



HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection	8.8															
Intersection Delay, s/veh	A															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR				
Traffic Vol, veh/h	0	35	5	38	0	4	6	5	0	38	181	7				
Future Vol, veh/h	0	35	5	38	0	4	6	5	0	38	181	7				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	38	5	41	0	4	7	5	0	41	197	8				
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2				
Approach	EB		WB				WB		NB		NB					
Opposing Approach	WB		EB				EB		SB		SB					
Opposing Lanes	1		1				1		2		2					
Conflicting Approach Left	SB		NB				EB		EB		EB					
Conflicting Lanes Left	2		2				2		1		1					
Conflicting Approach Right	NB		SB				WB		WB		WB					
Conflicting Lanes Right	2		2				2		1		1					
HCM Control Delay	8.6		8.3				8.3		8.9		8.9					
HCM LOS	A		A				A		A		A					

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	EBLn2	NBLn2	WBLn2	SBLn2					
Vol Left, %	30%	0%	45%	27%	6%	0%	0%	0%	0%	0%					
Vol Thru, %	70%	93%	6%	40%	94%	85%	0%	0%	0%	0%					
Vol Right, %	0%	7%	49%	33%	0%	15%	0%	0%	0%	0%					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop					
Traffic Vol by Lane	129	98	78	15	127	141	0	0	0	0					
LT Vol	38	0	35	4	7	0	0	0	0	0					
Through Vol	91	91	5	6	120	120	0	0	0	0					
RT Vol	0	7	38	5	0	21	0	0	0	0					
Lane Flow Rate	140	106	85	16	138	153	0	0	0	0					
Geometry Grp	7	7	2	2	7	7	0	0	0	0					
Degree of Util (X)	0.202	0.147	0.117	0.023	0.192	0.208	0	0	0	0					
Departure Headway (Hd)	5.194	4.985	4.949	5.113	5.038	4.905	0	0	0	0					
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes					
Cap	691	717	723	698	712	732	0	0	0	0					
Service Time	2.928	2.729	2.987	3.161	2.77	2.637	0	0	0	0					
HCM Lane V/C Ratio	0.203	0.148	0.118	0.023	0.194	0.209	0	0	0	0					
HCM Control Delay	9.2	8.6	8.6	8.3	9	8.9	0	0	0	0					
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A					
HCM 95th-tile Q	0.8	0.5	0.4	0.1	0.7	0.8	0	0	0	0					

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection	8.8															
Intersection Delay, s/veh	A															
Intersection LOS	A															
Movement	SBU	SBL	SBT	SBR												
Traffic Vol, veh/h	0	7	239	21												
Future Vol, veh/h	0	7	239	21												
Peak Hour Factor	0.92	0.92	0.92	0.92												
Heavy Vehicles, %	2	2	2	2												
Mvmt Flow	0	8	260	23												
Number of Lanes	0	0	2	0												
Approach	SB															
Opposing Approach	NB															
Opposing Lanes	2															
Conflicting Approach Left	WB															
Conflicting Lanes Left	1															
Conflicting Approach Right	EB															
Conflicting Lanes Right	1															
HCM Control Delay	8.9															
HCM LOS	A															
Lane																

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection	Intersection Delay, s/veh 9.8															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	43	64	0	20	54	45	0	47	131	31	0	46	163	33
Future Vol, veh/h	0	42	43	64	0	20	54	45	0	47	131	31	0	46	163	33
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	47	48	71	0	22	60	50	0	52	146	34	0	51	181	37
Number of Lanes	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				2				2			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	2				2				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	2				2				1				1			
HCM Control Delay	9.9				9.6				9.8				9.9			
HCM LOS	A				A				A				A			

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Opening Year + P Saturday Peak Hour  
02/22/2017

Intersection	Intersection Delay, s/veh 9															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR				
Traffic Vol, veh/h	0	1	15	4	0	116	20	70	0	3	74	95				
Future Vol, veh/h	0	1	15	4	0	116	20	70	0	3	74	95				
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	1	15	4	0	120	21	72	0	3	76	98				
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0	2				
Approach	EB				WB				NB							
Opposing Approach	WB				EB				SB							
Opposing Lanes	2				1				2							
Conflicting Approach Left	SB				NB				EB							
Conflicting Lanes Left	2				2				1							
Conflicting Approach Right	NB				SB				WB							
Conflicting Lanes Right	2				2				2							
HCM Control Delay	8.7				9.4				8.6							
HCM LOS	A				A				A							

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	7%	0%	5%	0%	85%	0%	44%	0%
Vol Thru, %	93%	28%	75%	15%	0%	0%	56%	96%
Vol Right, %	0%	72%	20%	0%	100%	0%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	132	20	136	70	82	48	48
LT Vol	3	0	1	116	0	36	0	0
Through Vol	37	37	15	20	0	46	46	46
RT Vol	0	95	4	0	70	0	2	2
Lane Flow Rate	41	136	21	140	72	85	49	49
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.061	0.181	0.031	0.224	0.092	0.13	0.073	0.073
Departure Headway (Hd)	5.336	4.791	5.47	5.744	4.612	5.547	5.297	5.297
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	670	747	651	624	774	645	675	675
Service Time	3.077	2.532	3.529	3.488	2.356	3.29	3.04	3.04
HCM Lane V/C Ratio	0.061	0.182	0.032	0.224	0.093	0.132	0.073	0.073
HCM Control Delay	8.4	8.6	8.7	10.2	7.8	9.1	8.5	8.5
HCM Lane LOS	A	A	A	B	A	A	A	A
HCM 95th-ile Q	0.2	0.7	0.1	0.9	0.3	0.4	0.4	0.2

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road

Opening Year + P Saturday Peak Hour  
 02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	36	92	2
Future Vol, veh/h	0	36	92	2
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	37	95	2
Number of Lanes	0	0	2	0
Approach	SB	SB		
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	8.9			
HCM LOS	A			

HCM 2010 AWSC  
 1.2: West Road & Rossmoor Center Way

12/1/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	7.8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	83	21	0	10	119	0	32	17
Future Vol, veh/h	0	83	21	0	10	119	0	32	17
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	91	23	0	11	131	0	35	19
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	EB	WB	WB	EB	EB	NB	NB	
Opposing Approach	WB								
Opposing Lanes	1						0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			1		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			1		
HCM Control Delay	7.7			8			7.7		
HCM LOS	A			A			A		
Lane	NBU	NBU	NBU	NBU	NBU	NBU	NBU	NBU	NBU
Vol Left, %	65%	0%	8%						
Vol Thru, %	0%	80%	92%						
Vol Right, %	35%	20%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	49	104	129						
LT Vol	32	0	10						
Through Vol	0	83	119						
RT Vol	17	21	0						
Lane Flow Rate	54	114	142						
Geometry Grp	1	1	1						
Degree of Util (X)	0.066	0.127	0.163						
Departure Headway (Hd)	4.409	4.015	4.131						
Convergence, Y/N	Yes	Yes	Yes						
Cap	817	883	862						
Service Time	2.409	2.083	2.189						
HCM Lane V/C Ratio	0.066	0.129	0.165						
HCM Control Delay	7.7	7.7	8						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.2	0.4	0.6						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection															
Intersection Delay, s/veh23.7															
Intersection LOS C															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	21	151	36	0	216	135	107	0	43	65	217	0	97	61
Future Vol, veh/h	0	21	151	36	0	216	135	107	0	43	65	217	0	97	61
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	161	38	0	230	144	114	0	46	69	231	0	103	65
Number of Lanes	0	0	2	0	0	1	0	0	0	0	0	1	0	0	1
Approach	EB	WB	WB	EB	NB	NB	WB	WB	NB	NB	WB	WB	SB	SB	SB
Opposing Approach	WB	EB	EB	WB	SB	SB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Opposing Lanes	1	2	2	2	1	1	1	1	2	2	2	2	1	1	1
Conflicting Approach Left	SB	NB	NB	NB	EB	EB	NB	NB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1
Conflicting Approach Right	NB	SB	SB	SB	WB	WB	WB	WB	EB	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
HCM Control Delay	12.2	18.9	18.9	35.9	18.9	18.9	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
HCM LOS	B	E	E	E	C	C	B	B	B	B	B	B	B	B	B
Lane	NBLn1	EBLn1	EBLn1	EBLn2	WBLn1	WBLn1	SBLn1	SBLn1	NBLn1	NBLn1	WBLn2	WBLn2	SBLn2	SBLn2	SBLn2
Vol Left, %	13%	22%	0%	47%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%
Vol Thru, %	20%	78%	68%	29%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%
Vol Right, %	67%	0%	32%	23%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	325	97	112	458	162	162	162	162	162	162	162	162	162	162	162
LT Vol	43	21	0	216	97	97	97	97	97	97	97	97	97	97	97
Through Vol	65	76	76	135	61	61	61	61	61	61	61	61	61	61	61
RT Vol	217	0	36	107	24	24	24	24	24	24	24	24	24	24	24
Lane Flow Rate	346	103	119	487	194	194	194	194	194	194	194	194	194	194	194
Geometry Grp	2	7	7	5	2	2	2	2	2	2	2	2	2	2	2
Degree of Utl (X)	0.609	0.213	0.235	0.854	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383
Departure Headway (Hd)	6.338	7.468	7.124	6.309	7.124	7.124	7.124	7.124	7.124	7.124	7.124	7.124	7.124	7.124	7.124
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	567	478	501	570	501	501	501	501	501	501	501	501	501	501	501
Service Time	4.415	5.257	4.913	4.378	5.216	5.216	5.216	5.216	5.216	5.216	5.216	5.216	5.216	5.216	5.216
HCM Lane V/C Ratio	0.61	0.215	0.238	0.854	0.387	0.387	0.387	0.387	0.387	0.387	0.387	0.387	0.387	0.387	0.387
HCM Control Delay	18.9	12.3	12.1	35.9	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
HCM Lane LOS	C	B	B	E	B	B	B	B	B	B	B	B	B	B	B
HCM 95th-ile Q	4.1	0.8	0.9	9.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection														
Intersection Delay, s/veh16.3														
Intersection LOS C														
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT				
Traffic Vol, veh/h	0	133	398	0	70	102	0	342	53	53				
Future Vol, veh/h	0	133	398	0	70	102	0	342	53	53				
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97	0.97				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	137	410	0	72	105	0	353	55	55				
Number of Lanes	0	1	1	0	1	0	0	0	0	1				
Approach	WB	WB	NB	NB	SB	SB	WB	WB	SB	SB				
Opposing Approach	WB	WB	SB	SB	WB	WB	WB	WB	SB	SB				
Opposing Lanes	0	0	1	1	1	1	1	1	1	1				
Conflicting Approach Left	NB	NB	WB	WB	WB	WB	WB	WB	NB	NB				
Conflicting Lanes Left	1	1	0	0	0	0	0	0	2	2				
Conflicting Approach Right	SB	SB	WB	WB	WB	WB	WB	WB	SB	SB				
Conflicting Lanes Right	1	1	2	2	2	2	2	2	0	0				
HCM Control Delay	15.7	15.7	11	11	19.3	19.3	19.3	19.3	19.3	19.3				
HCM LOS	C	C	B	B	C	C	C	C	C	C				
Lane	NBLn1	WBLn1	WBLn2	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1				
Vol Left, %	0%	100%	0%	87%	87%	87%	87%	87%	87%	87%				
Vol Thru, %	41%	0%	0%	13%	13%	13%	13%	13%	13%	13%				
Vol Right, %	59%	0%	100%	0%	0%	0%	0%	0%	0%	0%				
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop				
Traffic Vol by Lane	172	133	398	395	395	395	395	395	395	395				
LT Vol	0	133	0	342	342	342	342	342	342	342				
Through Vol	70	0	0	53	53	53	53	53	53	53				
RT Vol	102	0	398	0	0	0	0	0	0	0				
Lane Flow Rate	177	137	410	407	407	407	407	407	407	407				
Geometry Grp	2	7	7	2	2	2	2	2	2	2				
Degree of Utl (X)	0.28	0.256	0.626	0.656	0.656	0.656	0.656	0.656	0.656	0.656				
Departure Headway (Hd)	5.683	6.709	5.492	5.798	5.798	5.798	5.798	5.798	5.798	5.798				
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
Cap	629	535	666	623	623	623	623	623	623	623				
Service Time	3.738	4.453	3.236	3.841	3.841	3.841	3.841	3.841	3.841	3.841				
HCM Lane V/C Ratio	0.281	0.256	0.625	0.653	0.653	0.653	0.653	0.653	0.653	0.653				
HCM Control Delay	11	11.8	17	19.3	19.3	19.3	19.3	19.3	19.3	19.3				
HCM Lane LOS	B	B	C	C	C	C	C	C	C	C				
HCM 95th-ile Q	1.1	1	4.4	4.8	4.8	4.8	4.8	4.8	4.8	4.8				

Intersection	3.8					
Int Delay, s/veh						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	100	0	85	124	5	89
Future Vol, veh/h	100	0	85	124	5	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	109	0	92	135	5	97
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	109	0	429	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	320	-
Critical Hwy	-	-	4.12	-	6.42	6.22
Critical Hwy Stg 1	-	-	-	-	5.42	-
Critical Hwy Stg 2	-	-	-	-	5.42	-
Follow-up Hwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1481	-	583	945
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	736	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1481	-	544	945
Mov Cap-2 Maneuver	-	-	-	-	544	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	687	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	3.1	9.5			
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	909	-	-	1481	-	
HCM Lane V/C Ratio	0.112	-	-	0.062	-	
HCM Control Delay (s)	9.5	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %ile Q(veh)	0.4	-	-	0.2	-	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	31	18	762	48	584	15	1156	182	477	1591	79
Future Volume (veh/h)	95	31	18	762	48	584	15	1156	182	477	1591	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	31	18	796	0	0	15	1156	182	477	1591	79
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	859	0	383	30	1232	384	674	3161	984
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.25	0.42	0.42
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	95	0	49	796	0	0	15	1156	182	477	1591	79
Grp Sat Flow(s), veh/h	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.5	0.0	3.0	24.1	0.0	0.0	0.9	24.5	10.8	26.9	25.4	3.3
Cycle Q Clear(g.c), s	5.5	0.0	3.0	24.1	0.0	0.0	0.9	24.5	10.8	26.9	25.4	3.3
Prop In Lane	1.00	0.00	0.37	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	859	0	383	30	1232	384	674	3161	984
V/C Ratio(X)	1.07	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.71	0.50	0.08
Avail Cap(c.a), veh/h	89	0	87	887	0	396	81	1234	384	674	3161	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.7	35.5	19.6	13.1
Incr Delay (d2), s/veh	116.2	0.0	7.8	15.2	0.0	0.0	12.7	14.5	4.2	2.6	0.4	0.1
Initial Q Delay(d3), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	5.5	0.0	1.6	13.6	0.0	0.0	0.6	13.1	5.2	13.7	12.0	1.5
LnGrp Delay(d), s/veh	169.1	0.0	58.9	55.9	0.0	0.0	66.3	55.4	39.8	38.0	20.0	13.2
LnGrp LOS	F	E	E	E	E	E	E	D	D	D	B	B
Approach Vol, veh/h	144	1363										
Approach Delay, s/veh	131.6	55.9										
Approach LOS	F	E										
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	6	8					
Phs Duration (G+Y+Rc), s	47.6	32.5	10.2	5.8	74.2	32.4						
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8	5.8						
Max Green Setting (Gmax), s	30.0	* 27	* 5.5	5.0	51.7	27.5						
Max Q Clear Time (g_c+H), s	28.9	26.5	7.5	2.9	27.4	26.1						
Green Ext Time (p_c), s	0.2	0.1	0.0	0.0	14.4	0.5						
Intersection Summary	42.1											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

12/5/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	10	12	5	402	58	612	120	1324	381	366	1726	508
Future Volume (veh/h)	10	12	5	402	58	612	120	1324	381	366	1726	508
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	10	12	5	402	0	651	120	1324	0	366	1726	508
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
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
Cap. veh/h	45	48	40	879	0	784	547	1879	585	306	1866	581
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.32	0.74	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	10	12	5	402	0	651	120	1324	0	366	1726	508
Grp SatFlow(s),veh/h/m174	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s.)	0.6	0.7	0.3	10.6	0.0	21.4	2.8	15.6	0.0	19.0	35.8	32.9
Cycle Q Clear(g.s.)	0.6	0.7	0.3	10.6	0.0	21.4	2.8	15.6	0.0	19.0	35.8	32.9
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	45	48	40	879	0	784	547	1879	585	306	1866	581
V/C Ratio(X)	0.22	0.25	0.12	0.46	0.00	0.83	0.22	0.70	0.00	1.19	0.93	0.87
Avail Cap(c), veh/h	81	85	72	1258	0	1123	547	1879	585	306	1866	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.59	0.59	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.6	52.4	35.1	0.0	39.2	32.5	11.1	0.0	45.5	33.4	32.5
Incr Delay (d2), s/veh	2.4	2.7	1.4	0.4	0.0	3.7	0.1	1.3	0.0	11.50	9.3	16.7
Initial Q Delay(Q3), 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(50%), veh/ln	0.3	0.4	0.2	5.2	0.0	9.8	1.3	7.1	0.0	19.1	18.2	17.1
LnGrp Delay(d), s/veh	54.9	55.3	53.7	35.5	0.0	42.9	32.6	12.4	0.0	160.5	42.7	48.1
LnGrp LOS	D	E	D	D	D	C	B	F	D	D	D	D
Approach Vol, veh/h	27	54.9	1063	1444	400	14.1	2600	60.5				
Approach Delay, s/veh	D	D	D	D	B	B	E					
Approach LOS	D	D	D	D	B	B	E					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+R), s	46.5	46.5	7.5	23.3	46.2							
Change Period (Y+R), s	4.0	5.8	* 4.7	5.8	* 5.8							
Max Green Setting (Gmax), s	26.7	* 5.0	* 5.0	* 41	39.0							
Max Q Clear Time (g_c+d), s	17.6	2.7	4.8	37.8	23.4							
Green Ext Time (p_c), s	0.0	5.6	0.0	0.0	2.6							

Intersection Summary  
 HCM 2010 Ctrl Delay 43.2  
 HCM 2010 LOS D  
 Notes

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.809  
 Loss Time (sec): 69 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 69 Level Of Service: D

Street Name: Seal Beach Blvd East Bound Lampson Ave  
 Approach: North Bound South Bound West Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R L - I - R

Control	Protected	Include	Protected	Include	Protected	Permitted
Rights:	Ovl	Include	Ovl	Include	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	2 0 0 0 1	0 0 0 0 1

Volume Module:  
 Base Vol: 0 1614 334 361 1849 0 0 0 0 0 769 0 668  
 Growth 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  
 Initial Base: 0 1614 334 361 1849 0 0 0 0 0 769 0 668  
 User 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  
 PHF 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  
 PHF Volume: 0 1614 334 361 1849 0 0 0 0 0 769 0 668  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1614 334 361 1849 0 0 0 0 0 769 0 668  
 PCE 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  
 MLF 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  
 Final Volume: 0 1614 334 361 1849 0 0 0 0 0 769 0 668  
 OvlAdjVol: 0 1614 334 361 1849 0 0 0 0 0 769 0 487

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.32 0.20 0.11 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.39  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.498  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 33 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1	0 1 0 2	1 0 1 0	1 0 0 1

Volume Module:  
 Base Vol: 59 1794 34 23 1539 33 21 4 15 26 2 23  
 Growth 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  
 Initial Base: 59 1794 34 23 1539 33 21 4 15 26 2 23  
 User 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  
 PHF 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  
 PHF Volume: 59 1794 34 23 1539 33 21 4 15 26 2 23  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 59 1794 34 23 1539 33 21 4 15 26 2 23  
 PCE 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  
 MLF 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  
 FinalVolume: 59 1794 34 23 1539 33 21 4 15 26 2 23

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.92 0.06 1.00 2.94 0.06 1.00 0.21 0.79 1.00 0.08 0.92  
 Final Sat.: 1700 5005 95 1700 4993 107 1700 358 1342 1700 136 1564

Capacity Analysis Module:  
 Vol/Sat: 0.03 0.36 0.36 0.01 0.31 0.31 0.01 0.01 0.01 0.02 0.01 0.01  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.623  
 Loss Time (sec): 42 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 42 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Split Phase	Split Phase
Rights:	Include	Include	OVI	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	2 0 2 1	0 1 0 2	0 1 0 0	1 0 1 0

Volume Module:  
 Base Vol: 413 1826 51 4 1501 57 116 3 621 71 14 2  
 Growth 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  
 Initial Base: 413 1826 51 4 1501 57 116 3 621 71 14 2  
 User 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  
 PHF 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  
 PHF Volume: 413 1826 51 4 1501 57 116 3 621 71 14 2  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 413 1826 51 4 1501 57 116 3 621 71 14 2  
 PCE 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  
 MLF 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  
 FinalVolume: 413 1826 51 4 1501 57 116 3 621 71 14 2  
 OriAdjVol: \*\*\*\*\*

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.92 0.08 1.00 2.89 0.11 0.97 0.03 2.00 1.63 0.32 0.05  
 Final Sat.: 3400 4961 139 1700 4913 187 1657 43 3400 2775 547 78

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.37 0.37 0.00 0.31 0.31 0.07 0.07 0.18 0.03 0.03 0.03  
 OriAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.766  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 60 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Include	Permitted
Rights:	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 160 1676 28 30 1516 185 305 20 106 77 24 31  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 160 1676 28 30 1516 185 305 20 106 77 24 31  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 160 1676 28 30 1516 185 305 20 106 77 24 31  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 160 1676 28 30 1516 185 305 20 106 77 24 31  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 160 1676 28 30 1516 185 305 20 106 77 24 31

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.95 0.05 1.00 2.67 0.33 1.00 0.16 0.84 0.76 0.24 1.00  
 Final Sat.: 1700 5016 84 1700 4545 955 1700 270 1430 1296 404 1700

Capacity Analysis Module:  
 Vol/Sat: 0.09 0.33 0.33 0.02 0.33 0.33 0.18 0.07 0.07 0.05 0.06 0.02  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.544  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 36 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Include	Permitted
Rights:	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 71 1761 16 21 1562 77 84 8 85 19 11 43  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 71 1761 16 21 1562 77 84 8 85 19 11 43  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 71 1761 16 21 1562 77 84 8 85 19 11 43  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 71 1761 16 21 1562 77 84 8 85 19 11 43  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 71 1761 16 21 1562 77 84 8 85 19 11 43

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.97 0.03 1.00 2.86 0.14 1.00 0.09 0.91 1.00 0.20 0.80  
 Final Sat.: 1700 5054 46 1700 4860 240 1700 146 1554 1700 346 1354

Capacity Analysis Module:  
 Vol/Sat: 0.04 0.35 0.35 0.01 0.32 0.32 0.05 0.05 0.05 0.01 0.03 0.03  
 Crit Moves: \*\*\*\*\*



HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/5/2016

Intersection	1 2													
Int Delay, s/veh	10.4													
Intersection LOS	B													
Movement	EBT	EBR	WBL	WBT	NBL	NBR								
Traffic Vol, veh/h	662	4	31	441	9	77								
Future Vol, veh/h	662	4	31	441	9	77								
Conflicting Peds, #/hr	0	0	0	0	0	0								
Sign Control	Free	Free	Free	Free	Stop	Stop								
RT Channelized	-	None	-	None	-	None								
Storage Length	-	-	-	-	0	-								
Veh in Median Storage, #	0	-	-	0	0	-								
Grade, %	0	-	-	0	0	-								
Peak Hour Factor	100	100	100	100	100	100								
Heavy Vehicles, %	2	2	2	2	2	2								
Mvmt Flow	662	4	31	441	9	77								
Major/Minor	Major1	Major2	Minor1											
Conflicting Flow All	0	0	666	0	947	333								
Stage 1	-	-	-	-	664	-								
Stage 2	-	-	-	-	283	-								
Critical Hwy	-	-	4.14	-	6.84	6.94								
Critical Hwy Stg 1	-	-	-	-	5.84	-								
Critical Hwy Stg 2	-	-	-	-	5.84	-								
Follow-up Hwy	-	-	2.22	-	3.52	3.32								
Pot Cap-1 Maneuver	-	-	919	-	259	663								
Stage 1	-	-	-	-	474	-								
Stage 2	-	-	-	-	740	-								
Platoon blocked, %	-	-	-	-	-	-								
Mov Cap-1 Maneuver	-	-	919	-	247	663								
Mov Cap-2 Maneuver	-	-	-	-	247	-								
Stage 1	-	-	-	-	474	-								
Stage 2	-	-	-	-	707	-								
Approach	EB	WB	NB											
HCM Control Delay, s	0	0.8	12.5											
HCM LOS	B													
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT									
Capacity (veh/h)	564	-	-	919	-									
HCM Lane V/C Ratio	0.152	-	-	0.034	-									
HCM Control Delay (s)	12.5	-	-	9.1	0.2									
HCM Lane LOS	B	-	-	A	A									
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-									

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection	10.4													
Intersection Delay, s/veh	10.4													
Intersection LOS	B													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR		
Traffic Vol, veh/h	0	59	7	138	0	2	3	1	0	118	183	2		
Future Vol, veh/h	0	59	7	138	0	2	3	1	0	118	183	2		
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		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	59	7	138	0	2	3	1	0	118	183	2		
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2		
Approach	EB	WB	WB						NB					
Opposing Approach	WB	EB	EB						SB					
Opposing Lanes	1	1	1						2					
Conflicting Approach Left	SB	EB	NB						EB					
Conflicting Lanes Left	2	2	2						1					
Conflicting Approach Right	NB	SB	SB						WB					
Conflicting Lanes Right	2	2	2						1					
HCM Control Delay	10.2	8.9	8.9						10.7					
HCM LOS	B	A	A						B					
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2								
Vol Left, %	56%	0%	29%	33%	0%	0%								
Vol Thru, %	44%	98%	3%	50%	100%	78%								
Vol Right, %	0%	2%	68%	17%	0%	22%								
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	210	94	204	6	209	134								
LT Vol	118	0	59	2	0	0								
Through Vol	92	92	7	3	209	104								
RT Vol	0	2	138	1	0	30								
Lane Flow Rate	210	94	204	6	209	134								
Geometry Grp	7	7	2	2	7	7								
Degree of Utl (X)	0.332	0.14	0.288	0.01	0.313	0.195								
Departure Headway (Hr)	5.706	5.407	5.074	5.86	5.395	5.237								
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes								
Cap	624	656	702	614	659	678								
Service Time	3.499	3.199	3.148	3.86	3.185	3.027								
HCM Lane V/C Ratio	0.337	0.143	0.291	0.01	0.317	0.198								
HCM Control Delay	11.4	9.1	10.2	8.9	10.7	9.3								
HCM Lane LOS	B	A	B	A	B	A								
HCM 95th %tile Q	1.5	0.5	1.2	0	1.3	0.7								

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection		Intersection Delay, s/veh			
Intersection LOS		SBL	SBT	SBR	SBR
Movement		SBU	SBL	SBT	SBR
Traffic Vol, veh/h		0	0	313	30
Future Vol, veh/h		0	0	313	30
Peak Hour Factor		1.00	1.00	1.00	1.00
Heavy Vehicles, %		2	2	2	2
Mvmt Flow		0	0	313	30
Number of Lanes		0	0	2	0
Approach		SB			
Opposing Approach		NB			
Opposing Lanes		2			
Conflicting Approach Left		WB			
Conflicting Lanes Left		1			
Conflicting Approach Right		EB			
Conflicting Lanes Right		1			
HCM Control Delay		10.2			
HCM LOS		B			
Lane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/5/2016

Intersection		Intersection Delay, s/veh															
Intersection LOS		B					11										
Movement		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR	
Traffic Vol, veh/h		0	106	67	96	0	14	46	34	0	43	198	23	0	26	222	
Future Vol, veh/h		0	106	67	96	0	14	46	34	0	43	198	23	0	26	222	
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	1.00	1.00	1.00	
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow		0	106	67	96	0	14	46	34	0	43	198	23	0	26	222	
Number of Lanes		0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	
Approach		EB					WB			NB			SB				
Opposing Approach		WB					EB			SB			NB				
Opposing Lanes		1					1			2			2				
Conflicting Approach Left		SB					NB			EB			WB				
Conflicting Lanes Left		2					2			1			1				
Conflicting Approach Right		NB					SB			WB			EB				
Conflicting Lanes Right		2					2			1			1				
HCM Control Delay		12.3					9.9			10.5			10.7				
HCM LOS		B					A			B			B				
Lane		NBUr1		NBLr2		EBU1		WBU1		SBUr1		SBLr2					
Vol Left, %		30%		0%		39%		15%		19%		0%					
Vol Thru, %		70%		81%		25%		49%		81%		61%					
Vol Right, %		0%		19%		36%		0%		39%		0%					
Sign Control		Stop		Stop		Stop		Stop		Stop		Stop					
Traffic Vol by Lane		142		122		269		94		137		182					
LT Vol		43		0		106		14		26		0					
Through Vol		99		99		67		46		111		111					
RT Vol		0		23		96		34		0		71					
Lane Flow Rate		142		122		269		94		137		182					
Geometry Grp		7		7		2		2		7		7					
Degree of Utlr (X)		0.244		0.2		0.409		0.151		0.231		0.288					
Departure Headway (Hd)		6.192		5.904		5.478		5.774		6.07		5.697					
Convergence, Y/N		Yes		Yes		Yes		Yes		Yes		Yes					
Cap		579		608		666		619		592		630					
Service Time		3.936		3.648		3.519		3.826		3.811		3.438					
HCM Lane V/C Ratio		0.245		0.201		0.41		0.152		0.231		0.289					
HCM Control Delay		10.9		10.1		12.3		9.9		10.6		10.7					
HCM Lane LOS		B		B		A		B		A		B					
HCM 95th-ile Q		1		0.7		2		0.5		0.9		1.2					

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Future Year AM Peak Hour  
 02/22/2017

Intersection													
Intersection Delay, s/veh	11.3												
Intersection LOS	B												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations	0	5	26	2	0	148	20	160	0	0	152	240	
Traffic Vol, veh/h	0	5	26	2	0	148	20	160	0	0	152	240	
Future Vol, veh/h	0	5	26	2	0	148	20	160	0	0	152	240	
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	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	5	26	2	0	148	20	160	0	0	152	240	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0	

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	WB	EB	WB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	10.3	11.2	11.2	11.6	11.6
HCM LOS	B	B	B	B	B

Lane	NBLn1	NBLn2	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	15%	88%	0%	53%	0%	0%
Vol Thru, %	100%	17%	79%	12%	0%	47%	97%	0%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	291	33	168	160	153	74	74
LT Vol	0	0	5	148	0	81	0	0
Through Vol	101	51	26	20	0	72	72	72
RT Vol	0	240	2	0	160	0	2	2
Lane Flow Rate	101	291	33	168	160	153	74	74
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.168	0.433	0.062	0.311	0.245	0.272	0.126	0.126
Departure Headway (Hd)	5.951	5.365	6.757	6.669	5.516	6.394	6.106	6.106
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	603	671	529	539	651	562	587	587
Service Time	3.687	3.101	4.812	4.407	3.254	4.133	3.845	3.845
HCM Lane V/C Ratio	0.167	0.434	0.062	0.312	0.246	0.272	0.126	0.126
HCM Control Delay	9.9	12.2	10.3	12.4	10	11.5	9.7	9.7
HCM Lane LOS	A	B	B	B	A	B	A	A
HCM 95th-tile Q	0.6	2.2	0.2	1.3	1	1.1	0.4	0.4

HCM 2010 AWSC  
 1.1: Montecito Road & Bradbury Road  
 Future Year AM Peak Hour  
 02/22/2017

Intersection													
Intersection Delay, s/veh	11.3												
Intersection LOS	B												

Movement	SBU	SBL	SBT	SBR
Lane Configurations	0	81	144	2
Traffic Vol, veh/h	0	81	144	2
Future Vol, veh/h	0	81	144	2
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	81	144	2
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.9
HCM LOS	B

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/5/2016

Intersection												
Intersection Delay, s/veh 7.6												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	108	8	0	7	94	0	4	13			
Future Vol, veh/h	0	108	8	0	7	94	0	4	13			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	108	8	0	7	94	0	4	13			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach	EB	WB	WB	EB	NB	NB						
Opposing Approach	WB	EB							0			
Opposing Lanes	1	1							0			
Conflicting Approach Left	0	NB							1			
Conflicting Lanes Left	1	1							1			
Conflicting Approach Right	NB	WB							1			
Conflicting Lanes Right	1	0							1			
HCM Control Delay	7.6	7.6							7.1			
HCM LOS	A	A							A			
Lane	NBLn1	EBLn1	WBLn1	NBLn1								
Vol Left, %	24%	0%	7%									
Vol Thru, %	0%	93%	93%									
Vol Right, %	76%	7%	0%									
Sign Control	Stop	Stop	Stop									
Traffic Vol by Lane	17	116	101									
LT Vol	4	0	7									
Through Vol	0	108	94									
RT Vol	13	8	0									
Lane Flow Rate	17	116	101									
Geometry Grp	1	1	1									
Degree of Util (X)	0.018	0.129	0.114									
Departure Headway (Hd)	3,832	3,998	4,064									
Convergence, Y/N	Yes	Yes	Yes									
Cap	904	897	882									
Service Time	1,985	2,024	2,092									
HCM Lane V/C Ratio	0.019	0.129	0.115									
HCM Control Delay	7.1	7.6	7.6									
HCM Lane LOS	A	A	A									
HCM 95th-ile Q	0.1	0.4	0.4									

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection														
Intersection Delay, s/veh 8.7														
Intersection LOS A														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	38	107	15	0	80	64	56	0	14	18	34	0	65
Future Vol, veh/h	0	38	107	15	0	80	64	56	0	14	18	34	0	65
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	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	107	15	0	80	64	56	0	14	18	34	0	65
Number of Lanes	0	0	2	0	0	0	1	0	0	1	0	0	0	1
Approach	EB	EB	WB	WB	EB	NB	NB	SB	SB					
Opposing Approach	WB	WB	EB	EB										
Opposing Lanes	1	1	2	2										
Conflicting Approach Left	SB	NB	NB	EB										
Conflicting Lanes Left	1	1	1	2										
Conflicting Approach Right	NB	SB	WB	WB										
Conflicting Lanes Right	1	1	1	2										
HCM Control Delay	8.6	8.6	9.1	8.1										
HCM LOS	A	A	A	A										
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1									
Vol Left, %	21%	42%	0%	40%	66%									
Vol Thru, %	27%	58%	78%	32%	18%									
Vol Right, %	52%	0%	22%	28%	16%									
Sign Control	Stop	Stop	Stop	Stop	Stop									
Traffic Vol by Lane	66	92	69	200	99									
LT Vol	14	38	0	80	65									
Through Vol	18	54	54	64	18									
RT Vol	34	0	15	56	16									
Lane Flow Rate	66	92	68	200	99									
Geometry Grp	2	7	7	5	2									
Degree of Util (X)	0.085	0.135	0.094	0.252	0.135									
Departure Headway (Hd)	4,646	5,311	4,948	4,541	4,898									
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes									
Cap	770	674	723	790	732									
Service Time	2,685	3,046	2,682	2,573	2,933									
HCM Lane V/C Ratio	0.086	0.136	0.094	0.253	0.135									
HCM Control Delay	8.1	8.9	8.2	9.1	8.7									
HCM Lane LOS	A	A	A	A	A									
HCM 95th-ile Q	0.3	0.5	0.3	1	0.5									

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection										
Intersection Delay, s/veh 7.7										
Intersection LOS A										
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT	SBT
Traffic Vol, veh/h	0	74	41	0	18	33	0	31	16	16
Future Vol, veh/h	0	74	41	0	18	33	0	31	16	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	74	41	0	18	33	0	31	16	16
Number of Lanes	0	1	1	0	1	0	0	0	0	1
Approach	WB		NB		SB		SB		SB	
Opposing Approach	0		SB		NB		NB		1	
Conflicting Lanes	0		1		1		1		1	
Conflicting Approach Left	NB		0		WB		2		2	
Conflicting Lanes Left	1		0		WB		2		2	
Conflicting Approach Right	SB		WB		0		0		0	
Conflicting Lanes Right	1		2		2		2		2	
HCM Control Delay	8		7.1		7.7		A		A	
HCM LOS	A		A		A		A		A	
Lane	NBLn1 WBLn1 WBLn2		SBLn1		SBLn1		SBLn1		SBLn1	
Vol Left, %	0%		100%		0%		66%		66%	
Vol Thru, %	35%		0%		0%		34%		34%	
Vol Right, %	65%		0%		100%		0%		0%	
Sign Control	Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	51	74	41	47	47	47	47	47	47	47
LT Vol	0		74		0		31		31	
Through Vol	18		0		0		16		16	
RT Vol	33		0		41		0		0	
Lane Flow Rate	51	74	41	47	47	47	47	47	47	47
Geometry Grp	2		7		7		2		2	
Degree of Util (X)	0.055		0.107		0.046		0.067		0.067	
Departure Headway (Hd)	3.884		5.204		4.003		4.402		4.402	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes	
Cap	928		687		890		818		818	
Service Time	1.884		2.953		1.75		2.404		2.404	
HCM Lane V/C Ratio	0.055		0.108		0.046		0.067		0.067	
HCM Control Delay	7.1		8.6		6.9		7.7		7.7	
HCM Lane LOS	A		A		A		A		A	
HCM 95th-tile Q	0.2		0.4		0.1		0.2		0.2	

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/5/2016

Intersection										
Int Delay, s/veh 0.8										
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h	120	0	10	104	0	12				
Future Vol, veh/h	120	0	10	104	0	12				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	0				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	100	100	100	100	100	100				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	120	0	10	104	0	12				
Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	0	0	120	0	244	120				
Stage 1	-	-	-	-	120	-				
Stage 2	-	-	-	-	124	-				
Critical Hdwy	-	-	4.12	-	6.42	6.22				
Critical Hdwy Stg 1	-	-	-	-	5.42	-				
Critical Hdwy Stg 2	-	-	-	-	5.42	-				
Follow-up Hdwy	-	-	2.218	-	3.518	3.318				
Platoon blocked, %	-	-	1468	-	744	931				
Stage 1	-	-	-	-	905	-				
Stage 2	-	-	-	-	902	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1468	-	739	931				
Mov Cap-2 Maneuver	-	-	-	-	739	-				
Stage 1	-	-	-	-	905	-				
Stage 2	-	-	-	-	896	-				
Approach	EB		WB		NB					
HCM Control Delay, s	0		0.7		8.9					
HCM LOS	A		A		A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	NBR				
Capacity (veh/h)	931	-	-	1468	-	-				
HCM Lane V/C Ratio	0.013	-	-	0.007	-	-				
HCM Control Delay (s)	8.9	-	-	7.5	0	0				
HCM Lane LOS	A	-	-	A	A	A				
HCM 95th-tile Q(veh)	0	-	-	0	-	-				

12/5/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	84	79	95	214	16	739	45	1695	608	350	1587	406
Future Volume (veh/h)	84	79	95	214	16	739	45	1695	608	350	1587	406
Number	7	4	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	84	79	95	214	0	750	45	1695	0	350	1587	406
Adj No. of Lanes	1	1	1	2	0	2	2	2	3	1	1	3
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. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	93	98	83	955	0	853	111	1741	542	296	2424	755
Arrive On Green	0.05	0.05	0.05	0.27	0.00	0.27	0.06	0.68	0.00	0.17	0.48	0.48
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	84	79	95	214	0	750	45	1695	0	350	1587	406
Grp Sat Flow(s), veh/h/ln	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.7	5.0	6.3	5.6	0.0	27.2	1.5	37.8	0.0	20.0	28.5	21.7
Cycle Q Clear(g.c), s	5.7	5.0	6.3	5.6	0.0	27.2	1.5	37.8	0.0	20.0	28.5	21.7
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	83	98	83	955	0	853	111	1741	542	296	2424	755
V/C Ratio(X)	0.90	0.81	1.14	0.22	0.00	0.88	0.40	0.97	0.00	1.18	0.65	0.94
Avail Cap(c.a), veh/h	93	98	83	1189	0	1061	172	1741	542	296	2424	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.00	1.00	2.00	2.00	0.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.48	0.48	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	56.3	56.8	34.1	0.0	42.0	55.0	18.4	0.0	50.0	23.9	22.1
Incr Delay (d2), s/veh	62.3	37.7	142.5	0.1	0.0	7.3	1.1	9.9	0.0	111.7	1.4	2.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.3	6.1	2.8	0.0	0.0	12.7	0.7	18.5	0.0	18.9	13.5	10.0
LnGrp Delay(d), s/veh	119.9	93.9	199.3	34.2	0.0	49.3	56.1	28.3	0.0	161.7	25.3	24.8
LnGrp LOS	F	F	F	C	D	E	C	C	F	C	C	C
Approach Vol, veh/h	258	140.8	140.8	964	46.0	29.1	1740	2343	45.6	45.6	45.6	45.6
Approach Delay, s/veh	140.8	140.8	140.8	D	D	C	C	D	D	D	D	D
Approach LOS	F	F	F	D	D	C	C	D	D	D	D	D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.3	46.9	46.9	11.0	7.9	63.0	38.1	8				
Change Period (Y+Rc), s	5.8	5.8	5.8	* 4.7	4.0	5.8	5.8	5.8				
Max Green Setting (Gmax), s	38.0	* 39	38.0	* 6.3	6.0	47.2	40.2	40.2				
Max Q Clear Time (g_c+I), s	0.6	0.0	0.0	8.8	2.8	2.0	14.6	14.6				
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	0.0	15.2	0.0	3.1				
Intersection Summary	47.0											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

12/5/2016  
 HCM 2010 Signalized Intersection Summary  
 1: Seal Beach Boulevard & I-405 SB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	182	33	22	351	38	574	12	1587	395	573	1170	139
Future Volume (veh/h)	182	33	22	351	38	574	12	1587	395	573	1170	139
Number	7	4	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	182	33	22	378	0	0	12	1587	395	573	1170	139
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
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. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	130	77	51	426	0	190	24	1632	508	615	3401	1059
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.32	0.32	0.69	1.00	1.00
Sat Flow, veh/h	1774	1044	696	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	182	0	55	378	0	0	12	1587	395	573	1170	139
Grp Sat Flow(s), veh/h/ln	1774	0	1740	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	8.8	0.0	3.6	12.6	0.0	0.0	0.8	37.0	27.1	33.6	0.0	0.0
Cycle Q Clear(g.c), s	8.8	0.0	3.6	12.6	0.0	0.0	0.8	37.0	27.1	33.6	0.0	0.0
Prop In Lane	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	130	0	128	426	0	190	24	1632	508	615	3401	1059
V/C Ratio(X)	1.40	0.00	0.43	0.89	0.00	0.00	0.49	0.97	0.78	0.93	0.34	0.13
Avail Cap(c.a), veh/h	130	0	128	426	0	190	24	1632	508	615	3401	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.84	0.84
Uniform Delay (d), s/veh	55.6	0.0	53.2	52.0	0.0	0.0	58.8	40.2	36.9	17.2	0.0	0.0
Incr Delay (d2), s/veh	219.3	0.0	2.3	19.8	0.0	0.0	14.6	16.7	11.1	18.7	0.2	0.2
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(50%), veh/ln	12.2	0.0	1.8	7.4	0.0	0.0	0.5	19.9	13.4	19.1	0.1	0.1
LnGrp Delay(d), s/veh	274.9	0.0	55.5	71.8	0.0	0.0	73.3	56.9	48.0	35.9	0.2	0.2
LnGrp LOS	F	E	E	E	E	E	E	D	D	D	A	A
Approach Vol, veh/h	237	1994	1994	378	71.8	55.2	11.1	1882	11.1	11.1	11.1	11.1
Approach Delay, s/veh	224.0	71.8	71.8	E	E	E	B	B	B	B	B	B
Approach LOS	F	E	E	E	E	E	B	B	B	B	B	B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	47.4	44.3	44.3	13.5	5.6	86.1	20.2	8				
Change Period (Y+Rc), s	5.8	* 5.8	5.8	* 4.7	4.0	5.8	5.8	5.8				
Max Green Setting (Gmax), s	38.0	* 39	38.0	* 6.3	6.0	47.2	40.2	40.2				
Max Q Clear Time (g_c+I), s	0.6	0.0	0.0	8.8	2.8	2.0	14.6	14.6				
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	0.0	15.2	0.0	3.1				
Intersection Summary	47.0											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Level Of Service Computation Report  
ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
\*\*\*\*\*  
Intersection #4 Seal Beach Blvd/St. Cloud Dr  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.738  
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 55 Level Of Service: C  
\*\*\*\*\*  
Street Name: Seal Beach Blvd St. Cloud Dr  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include Ovl Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0  
Volume Module:  
Base Vol: 445 1829 145 5 1831 75 102 0 422 211 34 5  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Base: 445 1829 145 5 1831 75 102 0 422 211 34 5  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 445 1829 145 5 1831 75 102 0 422 211 34 5  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 445 1829 145 5 1831 75 102 0 422 211 34 5  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 445 1829 145 5 1831 75 102 0 422 211 34 5  
OvlAdjVol: 0  
Saturation Flow Module:  
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 2.00 2.78 0.22 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04  
Final Sat.: 3400 4725 375 1700 4899 201 1700 0 3400 2870 462 68  
Capacity Analysis Module:  
Vol/Sat: 0.13 0.39 0.39 0.00 0.37 0.06 0.00 0.12 0.07 0.07 0.07  
OvlAdjV/S: 0.00  
Crit Moves: \*\*\*\*

Level Of Service Computation Report  
ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
\*\*\*\*\*  
Intersection #3 Seal Beach Blvd/Lampson Ave  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.848  
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 79 Level Of Service: D  
\*\*\*\*\*  
Street Name: Seal Beach Blvd Lampson Ave  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Protected Protected Permitted  
Rights: Include Include Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 2 0 0 0 1  
Volume Module:  
Base Vol: 0 1888 596 694 1763 0 0 0 0 591 0 519  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Base: 0 1888 596 694 1763 0 0 0 0 591 0 519  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 0 1888 596 694 1763 0 0 0 0 591 0 519  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1888 596 694 1763 0 0 0 0 591 0 519  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 1888 596 694 1763 0 0 0 0 591 0 519  
OvlAdjVol: 0  
Saturation Flow Module:  
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 2.00 0.00 1.00  
Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.37 0.35 0.20 0.35 0.00 0.00 0.00 0.00 0.17 0.00 0.31  
OvlAdjV/S: 0.00  
Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.776  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 62 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 222 1590 92 85 1522 102 108 31 203 152 51 65  
 Growth 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  
 Initial Base: 222 1590 92 85 1522 102 108 31 203 152 51 65  
 User 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  
 PHF 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  
 PHF Volume: 222 1590 92 85 1522 102 108 31 203 152 51 65  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 222 1590 92 85 1522 102 108 31 203 152 51 65  
 PCE 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  
 MLF 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  
 Final Volume: 222 1590 92 85 1522 102 108 31 203 152 51 65  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.84 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56  
 Final Sat.: 1700 4821 279 1700 4780 320 1700 225 1475 1700 747 953  
 Capacity Analysis Module:  
 Vol/Sat: 0.13 0.33 0.33 0.05 0.32 0.32 0.06 0.14 0.14 0.09 0.07 0.07  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.713  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 52 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 174 1720 26 39 1735 208 201 1 142 16 1 18  
 Growth 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  
 Initial Base: 174 1720 26 39 1735 208 201 1 142 16 1 18  
 User 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  
 PHF 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  
 PHF Volume: 174 1720 26 39 1735 208 201 1 142 16 1 18  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 174 1720 26 39 1735 208 201 1 142 16 1 18  
 PCE 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  
 MLF 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  
 Final Volume: 174 1720 26 39 1735 208 201 1 142 16 1 18  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.96 0.04 1.00 2.68 0.32 1.00 0.01 0.99 1.00 0.05 0.95  
 Final Sat.: 1700 5024 76 1700 4554 546 1700 12 1688 1700 89 1611  
 Capacity Analysis Module:  
 Vol/Sat: 0.10 0.34 0.34 0.02 0.38 0.38 0.12 0.08 0.08 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*



Intersection	12					
Int Delay, s/veh	12					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	485	8	58	496	3	54
Future Vol, veh/h	485	8	58	496	3	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	485	8	58	496	3	54
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	493	0	853	247
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	364	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1067	-	298	753
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1067	-	276	753
Mov Cap-2 Maneuver	-	-	-	-	582	-
Stage 1	-	-	-	-	623	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	WB	NB		
HCM Control Delay, s	0	12	12	10.7		
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	690	-	-	1067	-	
HCM Lane V/C Ratio	0.083	-	-	0.054	-	
HCM Control Delay (s)	10.7	-	-	8.6	0.3	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %ile Q(veh)	0.3	-	-	0.2	-	

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.730  
 Loss Time (sec): 54 Average Delay (ssec/veh): xxxxxx  
 Optimal Cycle: 54 Level of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted Permitted  
 Rights: Include Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1  
 Volume Module:  
 Base Vol: 142 1686 62 26 1868 191 186 10 96 53 3 21  
 Growth 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  
 Initial Bse: 142 1686 62 26 1868 191 186 10 96 53 3 21  
 User 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  
 PHF 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  
 PHF Volume: 142 1686 62 26 1868 191 186 10 96 53 3 21  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 142 1686 62 26 1868 191 186 10 96 53 3 21  
 PCE 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  
 M/F 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  
 Final Volume: 142 1686 62 26 1868 191 186 10 96 53 3 21  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Lanes: 1.00 2.69 0.11 1.00 2.72 0.28 1.00 0.09 0.91 0.95 0.05 1.00  
 Final Sat.: 1700 4919 181 1700 4627 473 1700 160 1540 1609 91 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.08 0.34 0.02 0.40 0.40 0.11 0.06 0.06 0.03 0.03 0.01  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection													
Intersection Delay, s/veh 9.3													
Intersection LOS A													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	NBR
Traffic Vol, veh/h	0	33	4	51	0	2	5	11	0	73	234	3	3
Future Vol, veh/h	0	33	4	51	0	2	5	11	0	73	234	3	3
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	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	33	4	51	0	2	5	11	0	73	234	3	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0
Approach	EB	WB	WB	WB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Opposing Approach	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
Opposing Lanes	1	1	1	1	2	2	2	2	2	2	2	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Conflicting Lanes Left	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Approach Right	NB	SB	SB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Right	2	2	2	2	2	2	2	2	2	2	2	2	2
HCM Control Delay	8.8	8.8	8.3	8.3	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
HCM LOS	A	A	A	A	A	A	A	A	A	A	A	A	A

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection													
Intersection Delay, s/veh													
Intersection LOS													
Movement	SBU	SBL	SBT	SBR	SBU	SBL	SBT	SBR	SBU	SBL	SBT	SBR	SBR
Traffic Vol, veh/h	0	8	256	48	0	8	256	48	0	8	256	48	48
Future Vol, veh/h	0	8	256	48	0	8	256	48	0	8	256	48	48
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	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	256	48	0	8	256	48	0	8	256	48	48
Number of Lanes	0	0	2	0	0	0	2	0	0	0	2	0	0
Approach	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Opposing Lanes	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Approach Left	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Right	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1	1	1	1	1	1	1	1
HCM Control Delay	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
HCM LOS	A	A	A	A	A	A	A	A	A	A	A	A	A
Lane	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/5/2016

Intersection	Intersection Delay, s/veh 9.8															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	46	38	60	0	39	43	78	0	33	144	28	0	48	198	44
Future Vol, veh/h	0	46	38	60	0	39	43	78	0	33	144	28	0	48	198	44
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	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	46	38	60	0	39	43	78	0	33	144	28	0	48	198	44
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				2				2			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	2				2				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	2				2				1				1			
HCM Control Delay	9.7				9.7				9.6				10			
HCM LOS	A				A				A				A			

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection	Intersection Delay, s/veh 9.9															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR				
Traffic Vol, veh/h	0	1	19	2	0	162	27	70	0	5	113	116				
Future Vol, veh/h	0	1	19	2	0	162	27	70	0	5	113	116				
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				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	1	19	2	0	162	27	70	0	5	113	116				
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0	2				
Approach	EB				WB				NB							
Opposing Approach	WB				EB				SB							
Opposing Lanes	2				1				2							
Conflicting Approach Left	SB				NB				EB							
Conflicting Lanes Left	2				2				1							
Conflicting Approach Right	NB				SB				WB							
Conflicting Lanes Right	2				2				2							
HCM Control Delay	9.2				10.7				9.3							
HCM LOS	A				B				A							

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	45	136	3
Future Vol, veh/h	0	45	136	3
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	45	136	3
Number of Lanes	0	0	2	0
Approach	SB			
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	9.5			
HCM LOS	A			

HCM 2010 AWSC

12: West Road & Rossmore Center Way

12/5/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	99	19	0	24	149	0	28	12
Future Vol, veh/h	0	99	19	0	24	149	0	28	12
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	99	19	0	24	149	0	28	12
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	WB		WB		EB	NB		
Opposing Approach	WB			EB					
Opposing Lanes	1			1			0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			1		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			1		
HCM Control Delay	7.7			8.2			7.8		
HCM LOS	A			A			A		
Lane	NBU	EBU	NB	WBU	WB	NB			
Vol Left, %	70%	0%	14%						
Vol Thru, %	0%	84%	86%						
Vol Right, %	30%	16%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	40	118	173						
LT Vol	28	0	24						
Through Vol	0	99	149						
RT Vol	12	19	0						
Lane Flow Rate	40	118	173						
Geometry Grp	1	1	1						
Degree of Util (X)	0.05	0.132	0.198						
Departure Headway (Hd)	4.521	4.039	4.122						
Convergence, Y/N	Yes	Yes	Yes						
Cap	797	879	865						
Service Time	2.521	2.105	2.173						
HCM Lane V/C Ratio	0.05	0.134	0.2						
HCM Control Delay	7.8	7.7	8.2						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.2	0.5	0.7						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection Delay, s/veh13.9															
Intersection LOS B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	24	79	30	0	200	116	92	0	47	48	195	0	82	37
Future Vol, veh/h	0	24	79	30	0	200	116	92	0	47	48	195	0	82	37
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	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	79	30	0	200	116	92	0	47	48	195	0	82	37
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1
Approach	EB	WB	WB	EB	NB	NB	SB	SB	EB	NB	NB	SB	SB	EB	SB
Opposing Approach	WB	EB	EB	WB	SB	SB	NB	NB	EB	WB	WB	EB	SB	EB	SB
Opposing Lanes	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Left	SB	NB	NB	EB	EB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Approach Right	NB	SB	SB	WB	WB	WB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
HCM Control Delay	9.9	17.2	17.2	17.2	12.5	12.5	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
HCM LOS	A	C	C	C	B	B	B	B	B	B	B	B	B	B	B
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3	SBLn4	NBLn1	NBLn2	NBLn3	NBLn4	NBLn5	NBLn6	NBLn7
Vol Left, %	16%	38%	0%	49%	54%				0%	100%	0%	81%			
Vol Thru, %	17%	62%	57%	28%	24%				40%	0%	0%	19%			
Vol Right, %	67%	0%	43%	23%	22%				60%	0%	100%	0%			
Sign Control	Stop	Stop	Stop	Stop	Stop				Stop	Stop	Stop	Stop			
Traffic Vol by Lane	290	64	70	408	152				117	91	320	312			
LT Vol	47	24	0	200	82				0	91	0	253			
Through Vol	48	40	40	116	37				47	0	0	59			
RT Vol	195	0	30	92	33				70	0	320	0			
Lane Flow Rate	290	64	70	408	152				117	91	320	312			
Geometry Grp	2	7	7	5	2				2	7	7	2			
Degree of Utl (X)	0.433	0.116	0.118	0.622	0.252				0.162	0.155	0.436	0.452			
Departure Headway (Hd)	5.375	6.59	6.09	5.491	5.963				4.974	6.113	4.902	5.211			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes				Yes	Yes	Yes	Yes			
Cap	667	541	585	657	599				711	582	726	686			
Service Time	3.439	4.362	3.861	3.545	4.037				3.073	3.894	2.683	3.291			
HCM Lane V/C Ratio	0.435	0.118	0.12	0.621	0.254				0.165	0.156	0.441	0.455			
HCM Control Delay	12.5	10.2	9.7	17.2	11.1				9.1	10	11.5	12.6			
HCM Lane LOS	B	B	A	C	B				A	A	B	B			
HCM 95th-tile Q	2.2	0.4	0.4	4.3	1				0.6	0.5	2.2	2.4			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection Delay, s/veh11.4														
Intersection LOS B														
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR				
Traffic Vol, veh/h	0	91	320	0	47	70	0	253	59					
Future Vol, veh/h	0	91	320	0	47	70	0	253	59					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	91	320	0	47	70	0	253	59					
Number of Lanes	0	1	1	0	1	0	0	0	0	1				
Approach	WB	WB	NB	NB	SB	SB	SB	NB	SB	SB				
Opposing Approach	WB	WB	NB	NB	SB	SB	NB	NB	NB	NB				
Opposing Lanes	0	0	1	1	1	1	1	1	1	1				
Conflicting Approach Left	NB	NB	WB	WB	WB	WB	WB	WB	WB	WB				
Conflicting Lanes Left	1	1	0	0	0	0	0	0	0	0				
Conflicting Approach Right	SB	SB	WB	WB	WB	WB	WB	WB	WB	WB				
Conflicting Lanes Right	1	1	2	2	2	2	2	2	2	2				
HCM Control Delay	11.2	11.2	9.1	9.1	12.6	12.6	12.6	12.6	12.6	12.6				
HCM LOS	B	B	A	A	B	B	B	B	B	B				
Lane	NBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3	SBLn4	SBLn5	SBLn6	SBLn7				
Vol Left, %	0%	100%	0%	81%										
Vol Thru, %	40%	0%	0%	19%										
Vol Right, %	60%	0%	100%	0%										
Sign Control	Stop	Stop	Stop	Stop										
Traffic Vol by Lane	117	91	320	312										
LT Vol	0	91	0	253										
Through Vol	47	0	0	59										
RT Vol	70	0	320	0										
Lane Flow Rate	117	91	320	312										
Geometry Grp	2	7	7	2										
Degree of Utl (X)	0.162	0.155	0.436	0.452										
Departure Headway (Hd)	4.974	6.113	4.902	5.211										
Convergence, Y/N	Yes	Yes	Yes	Yes										
Cap	711	582	726	686										
Service Time	3.073	3.894	2.683	3.291										
HCM Lane V/C Ratio	0.165	0.156	0.441	0.455										
HCM Control Delay	9.1	10	11.5	12.6										
HCM Lane LOS	A	A	B	B										
HCM 95th-tile Q	0.6	0.5	2.2	2.4										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	1	1	9	1	1	9	1	1	9	1	1
Traffic Volume (veh/h)	9	8	389	5	633	16	1492	413	287	1434	264	264
Future Volume (veh/h)	9	8	389	5	633	16	1492	413	287	1434	264	264
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	9	8	389	0	636	16	1492	0	287	1434	264	264
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
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
Cap. veh/h	44	46	39	861	0	768	663	2093	662	242	1724	537
Arrive On Green	0.02	0.02	0.02	0.24	0.00	0.24	0.39	0.82	0.00	0.14	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	9	8	389	0	636	16	1492	0	287	1434	264	264
Grp SatFlow(s),veh/h/m	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g.s), s	0.5	0.5	0.5	10.3	0.0	20.9	0.3	13.8	0.0	15.0	28.6	14.5
Cycle Q Clear(g.c), s	0.5	0.5	0.5	10.3	0.0	20.9	0.3	13.8	0.0	15.0	28.6	14.5
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	44	46	39	861	0	768	663	2093	662	242	1724	537
V/C Ratio(X)	0.20	0.19	0.20	0.45	0.00	0.83	0.02	0.71	0.00	1.19	0.83	0.49
Avail Cap(c), veh/h	81	85	72	1258	0	1123	663	2093	662	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.63	0.63	0.63	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	52.5	52.6	35.4	0.0	39.5	27.4	6.9	0.0	47.5	33.5	28.8
Incr Delay (d2), s/veh	2.2	2.0	2.5	0.4	0.0	3.5	0.0	1.3	0.0	117.6	4.9	3.2
Initial Q Delay(Q3), 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(50%), veh/In	0.3	0.3	0.3	5.1	0.0	9.5	0.2	6.3	0.0	15.2	14.1	6.9
LnGrp Delay(d), s/veh	54.8	54.6	55.0	35.8	0.0	42.9	27.4	8.3	0.0	165.1	38.3	32.0
LnGrp LOS	D	E	D	D	D	C	C	A	F	D	C	C
Approach Vol, veh/h	26	54.8	1025	402	1508	8.5	55.8					
Approach Delay, s/veh	D	D	D	D	A	A	E					
Approach LOS	D	D	D	D	A	A	E					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+R), s	90	51.1	7.4	27.0	43.1							
Change Period (Y+R), s	4.0	5.8	*4.7	5.8	*5.8							
Max Green Setting (Gmax), s	30.7	*5.0	*41									
Max Q Clear Time (g_c+I), s	15.8	2.5	2.3	30.6	22.9							
Green Ext Time (p_c), s	0.0	8.5	0.0	2.1	6.7							

Intersection Summary  
 HCM 2010 Ctrl Delay 36.6  
 HCM 2010 LOS D  
 Notes

Level of Service Computation Report  
 Method (Base Volume Alternative)

ICU I (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.799  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 66 Level Of Service: C

Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R

Control	Protected	Include	Protected	Include	Protected	Permitted
Rights:	Ovl	Include	Ovl	Include	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	2 0 0 0 1	0 0 0 0 1

Volume Module:  
 Base Vol: 0 1707 394 557 1605 0 0 0 0 394 0 619  
 Growth 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  
 Initial Base: 0 1707 394 557 1605 0 0 0 0 394 0 619  
 User 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  
 PHF 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  
 PHF Volume: 0 1707 394 557 1605 0 0 0 0 394 0 619  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1707 394 557 1605 0 0 0 0 394 0 619  
 PCE 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  
 MLF 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  
 Final Volume: 0 1707 394 557 1605 0 0 0 0 394 0 619  
 OvlAdjVol: 0 1707 394 557 1605 0 0 0 0 394 0 341

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.33 0.23 0.16 0.31 0.00 0.00 0.00 0.00 0.12 0.00 0.36  
 OvlAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.870  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 87 Level Of Service: D  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1	0 1 0 2	1 0 1 0	1 0 0 1

Volume Module:  
 Base Vol: 316 1382 118 101 1175 164 128 91 266 189 97 96  
 Growth 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  
 Initial Base: 316 1382 118 101 1175 164 128 91 266 189 97 96  
 User 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  
 PHF 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  
 PHF Volume: 316 1382 118 101 1175 164 128 91 266 189 97 96  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 316 1382 118 101 1175 164 128 91 266 189 97 96  
 PCE 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  
 MUF 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  
 FinalVolume: 316 1382 118 101 1175 164 128 91 266 189 97 96

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.76 0.24 1.00 2.63 0.37 1.00 0.25 0.75 1.00 0.50 0.50  
 Final Sat.: 1700 4699 401 1700 4475 625 1700 433 1267 1700 854 846

Capacity Analysis Module:  
 Vol/Sat: 0.19 0.29 0.26 0.26 0.26 0.26 0.26 0.26 0.26 0.26 0.26 0.26  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.669  
 Loss Time (sec): 46 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 46 Level Of Service: B  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Split Phase	Split Phase
Rights:	Include	Include	OVI	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	2 0 2 1	1 0 2 1	0 1 0 0	2 1 0 1

Volume Module:  
 Base Vol: 396 1775 188 19 1513 79 120 2 436 191 38 5  
 Growth 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  
 Initial Base: 396 1775 188 19 1513 79 120 2 436 191 38 5  
 User 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  
 PHF 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  
 PHF Volume: 396 1775 188 19 1513 79 120 2 436 191 38 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 396 1775 188 19 1513 79 120 2 436 191 38 5  
 PCE 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  
 MUF 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  
 FinalVolume: 396 1775 188 19 1513 79 120 2 436 191 38 5  
 OrLAdjVol: 396 1775 188 19 1513 79 120 2 436 191 38 5

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.71 0.29 1.00 2.85 0.15 0.98 0.02 2.00 1.64 0.32 0.04  
 Final Sat.: 3400 4612 488 1700 4847 253 1672 28 3400 2775 552 73

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.38 0.38 0.01 0.31 0.31 0.07 0.07 0.13 0.07 0.07 0.07  
 OrLAdjV/S: 0.12 0.38 0.38 0.01 0.31 0.31 0.07 0.07 0.13 0.07 0.07 0.07  
 Crit Moves: \*\*\*\*



Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.680  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 48 Level Of Service: B  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 122 1545 48 24 1647 136 192 9 105 69 8 22  
 Growth 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  
 Initial Base: 122 1545 48 24 1647 136 192 9 105 69 8 22  
 User 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  
 PHF 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  
 PHF Volume: 122 1545 48 24 1647 136 192 9 105 69 8 22  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 122 1545 48 24 1647 136 192 9 105 69 8 22  
 PCE 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  
 MLF 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  
 Final Volume: 122 1545 48 24 1647 136 192 9 105 69 8 22

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Adj: 1.00 2.91 0.09 1.00 2.77 0.23 1.00 0.08 0.92 0.10 1.00 1.00  
 Final Sat.: 1700 4946 154 1700 4711 389 1700 134 1566 1523 177 1700

Capacity Analysis Module:  
 Vol/Sat: 0.07 0.31 0.31 0.01 0.35 0.35 0.11 0.07 0.07 0.04 0.05 0.01  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.713  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 52 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 222 1585 16 27 1540 251 206 4 165 21 2 15  
 Growth 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  
 Initial Base: 222 1585 16 27 1540 251 206 4 165 21 2 15  
 User 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  
 PHF 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  
 PHF Volume: 222 1585 16 27 1540 251 206 4 165 21 2 15  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 222 1585 16 27 1540 251 206 4 165 21 2 15  
 PCE 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  
 MLF 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  
 Final Volume: 222 1585 16 27 1540 251 206 4 165 21 2 15

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Adj: 1.00 2.97 0.03 1.00 2.58 0.42 1.00 0.02 0.98 1.00 0.12 0.88  
 Final Sat.: 1700 5049 51 1700 4385 715 1700 40 1660 1700 200 1500

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.31 0.31 0.02 0.35 0.35 0.12 0.10 0.10 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*\*

12/5/2016

8: Yellowtail Drive & Saint Cloud Drive

12/5/2016

Intersection											
Int Delay, s/veh											1
Intersection LOS											A
Movement	EBT	EBR	WBL	WBT	NBL	NBR					
Traffic Vol, veh/h	499	1	47	460	4	48					
Future Vol, veh/h	499	1	47	460	4	48					
Conflicting Peds, #/hr	0	0	0	0	0	0					
Sign Control	Free	Free	Free	Free	Stop	Stop					
RT Channelized	-	None	-	None	-	None					
Storage Length	-	-	-	-	0	-					
Veh in Median Storage, #	0	-	-	0	0	-					
Grade, %	0	-	-	0	0	-					
Peak Hour Factor	100	100	100	100	100	100					
Heavy Vehicles, %	2	2	2	2	2	2					
Mvmt Flow	499	1	47	460	4	48					
<b>Major/Minor</b>											
Major1	Major2					Minor1					
Conflicting Flow All	0	0	500	0	824	250					
Stage 1	-	-	-	-	500	-					
Stage 2	-	-	-	-	324	-					
Critical Hwy	-	-	4.14	-	6.84	6.94					
Critical Hwy Stg 1	-	-	-	-	5.84	-					
Critical Hwy Stg 2	-	-	-	-	5.84	-					
Follow-up Hwy	-	-	2.22	-	3.52	3.32					
Pot Cap-1 Maneuver	-	-	1060	-	311	750					
Stage 1	-	-	-	-	575	-					
Stage 2	-	-	-	-	705	-					
Platoon blocked, %	-	-	-	-	-	-					
Mov Cap-1 Maneuver	-	-	1060	-	292	750					
Mov Cap-2 Maneuver	-	-	-	-	292	-					
Stage 1	-	-	-	-	575	-					
Stage 2	-	-	-	-	663	-					
<b>Approach</b>											
EB	WB					NB					
0	1					10.8					
HCM/Control Delay, s											
HCM LOS											B
<b>Minor Lane/Major Mvmt</b>											
NBLn1	EBT	EBR	WBL	WBT							
669	-	-	1060	-							
Capacity (veh/h)											
HCM Lane V/C Ratio	0.078	-	0.044	-							
HCM Control Delay (s)	10.8	-	8.6	0.2							
HCM Lane LOS	B	-	A	A							
HCM 95th %tile Q(veh)	0.3	-	0.1	-							

12/5/2016

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection												
Int Delay, s/veh											8.8	
Intersection LOS											A	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	38	4	41	0	3	5	5	0	41	194	8
Future Vol, veh/h	0	38	4	41	0	3	5	5	0	41	194	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	4	41	0	3	5	5	0	41	194	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2
<b>Approach</b>												
EB	WB					NB						
WB	EB					SB						
Opposing Approach												
Opposing Lanes	1											
Conflicting Approach Left	SB											
Conflicting Lanes Left	2											
Conflicting Approach Right	NB											
Conflicting Lanes Right	2											
HCM Control Delay	8.6											
HCM LOS	A											
<b>Lane</b>												
NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2					
30%	0%	46%	23%	6%	0%							
Vol Left, %	70%	92%	5%	38%	94%	85%						
Vol Thru, %	0%	8%	49%	38%	0%	15%						
Vol Right, %	Stop	Stop	Stop	Stop	Stop	Stop						
Sign Control	138	105	83	13	137	152						
Traffic Vol by Lane	41	0	38	3	8	0						
LT Vol	97	97	4	5	129	129						
Through Vol	0	8	41	5	0	23						
RT Vol	138	105	83	13	136	152						
Lane Flow Rate												
Geometry Grp	7											
Degree of Utl (X)	0.198	0.145	0.114	0.018	0.19	0.206						
Departure Headway (Ht)	5.178	4.975	4.931	5.06	5.021	4.885						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	693	721	726	706	715	735						
Service Time	2.908	2.705	2.964	3.104	2.751	2.614						
HCM Lane V/C Ratio	0.199	0.146	0.114	0.018	0.19	0.207						
HCM Control Delay	9.2	8.6	8.6	8.2	8.9	8.9						
HCM Lane LOS	A	A	A	A	A	A						
HCM 95th %tile Q	0.7	0.5	0.4	0.1	0.7	0.8						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection		SBL		SBT		SBR	
Intersection Delay, s/veh		SBL		SBT		SBR	
Intersection LOS		SBL		SBT		SBR	
Movement		SBU	SBL	SBT	SBR		
Traffic Vol, veh/h		0	8	257	23		
Future Vol, veh/h		0	8	257	23		
Peak Hour Factor		1.00	1.00	1.00	1.00		
Heavy Vehicles, %		2	2	2	2		
Mvmt Flow		0	8	257	23		
Number of Lanes		0	0	2	0		
Approach		SB	SB				
Opposing Approach		NB	NB				
Opposing Lanes		2	2				
Conflicting Approach Left		WB	WB				
Conflicting Lanes Left		1	1				
Conflicting Approach Right		EB	EB				
Conflicting Lanes Right		1	1				
HCM Control Delay		8.9	8.9				
HCM LOS		A	A				
Lane							

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/5/2016

Intersection		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
Intersection Delay, s/veh		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
Intersection LOS		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
Movement		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h		0	46	46	69	0	20	56	47	0	51	142	32	0	49	176	36
Future Vol, veh/h		0	46	46	69	0	20	56	47	0	51	142	32	0	49	176	36
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	1.00	1.00	1.00	1.00
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow		0	46	46	69	0	20	56	47	0	51	142	32	0	49	176	36
Number of Lanes		0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2
Approach		EB	EB	WB	WB	EB	EB	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach		WB	WB	EB	EB	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
Opposing Lanes		1	1	2	2	1	1	2	2	1	1	1	1	2	2	2	2
Conflicting Approach Left		SB	SB	NB	NB	EB	EB	WB	WB								
Conflicting Lanes Left		2	2	2	2	1	1	2	2								
Conflicting Approach Right		NB	NB	SB	SB	WB	WB	EB	EB								
Conflicting Lanes Right		2	2	2	2	1	1	2	2								
HCM Control Delay		9.7	9.7	9.4	9.4	9.6	9.6	9.7	9.7								
HCM LOS		A	A	A	A	A	A	A	A								
Lane		NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2										
Vol Left, %		42%	0%	29%	16%	36%	0%										
Vol Thru, %		58%	69%	29%	46%	64%	71%										
Vol Right, %		0%	31%	43%	38%	0%	29%										
Sign Control		Stop	Stop	Stop	Stop	Stop	Stop										
Traffic Vol by Lane		122	103	161	123	137	124										
LT Vol		51	0	46	20	49	0										
Through Vol		71	71	46	56	88	88										
RT Vol		0	32	69	47	0	36										
Lane Flow Rate		122	103	161	123	137	124										
Geometry Grp		7	7	2	2	7	7										
Degree of Util (X)		0.195	0.152	0.227	0.176	0.216	0.182										
Departure Headway (Hd)		5.751	5.32	5.086	5.147	5.68	5.294										
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes	Yes										
Cap		617	665	699	689	625	670										
Service Time		3.55	3.119	3.175	3.243	3.477	3.09										
HCM Lane V/C Ratio		0.198	0.155	0.23	0.179	0.219	0.185										
HCM Control Delay		10	9.1	9.7	9.4	10.1	9.3										
HCM Lane LOS		A	A	A	A	B	A										
HCM 95th-ile Q		0.7	0.5	0.9	0.6	0.8	0.7										

HCM 2010 AWSC  
1.1: Montecito Road & Bradbury Road

02/22/2017

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0	1	16	4	0	126	22	76	0	3	78	103
Traffic Vol, veh/h	0	1	16	4	0	126	22	76	0	3	78	103
Future Vol, veh/h	0	1	16	4	0	126	22	76	0	3	78	103
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	16	4	0	126	22	76	0	3	78	103
Number of Lanes	0	0	1	0	0	1	1	1	0	0	2	0

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	WB	SB	SB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	8.8	8.8	9.5	8.7	8.7
HCM LOS	A	A	A	A	A

Lane	NBLn1	NBLn2	NBLn1	EBLn1	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	7%	0%	85%	5%	44%	0%	0%	0%	0%
Vol Thru, %	93%	27%	76%	15%	56%	96%	0%	0%	0%
Vol Right, %	0%	73%	19%	0%	100%	4%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	42	142	21	148	76	88	51	0	0
LT Vol	3	0	1	126	0	39	0	0	0
Through Vol	39	39	16	22	0	49	49	0	0
RT Vol	0	103	4	0	76	0	2	0	0
Lane Flow Rate	42	142	21	148	76	88	51	0	0
Geometry Grp	7	7	6	7	7	7	7	7	7
Degree of Utl (X)	0.063	0.19	0.032	0.237	0.098	0.137	0.076	0.076	0.076
Departure Headway (Hd)	5.375	4.828	5.522	5.773	4.642	5.591	5.34	5.34	5.34
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	665	741	644	620	768	640	669	669	669
Service Time	3.121	2.573	3.59	3.524	2.393	3.339	3.088	3.088	3.088
HCM Lane V/C Ratio	0.063	0.192	0.033	0.239	0.099	0.138	0.076	0.076	0.076
HCM Control Delay	8.5	8.7	8.8	10.3	7.9	9.2	8.5	8.5	8.5
HCM Lane LOS	A	A	A	B	A	A	A	A	A
HCM 95th-ile Q	0.2	0.7	0.1	0.9	0.3	0.5	0.2	0.2	0.2

HCM 2010 AWSC  
1.1: Montecito Road & Bradbury Road

02/22/2017

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations	0	39	98	2
Traffic Vol, veh/h	0	39	98	2
Future Vol, veh/h	0	39	98	2
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	39	98	2
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.9
HCM LOS	A

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/5/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	90	18	0	11	129	0	28	19			
Future Vol, veh/h	0	90	18	0	11	129	0	28	19			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	90	18	0	11	129	0	28	19			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach												
Opposing Approach												
Opposing Lanes												
Conflicting Approach Left												
Conflicting Lanes Left												
Conflicting Approach Right												
Conflicting Lanes Right												
HCM Control Delay												
HCM LOS												
Approach	EB	WB	WB	EB	NB	NB						
Opposing Approach	WB	EB	1	0								
Opposing Lanes	1	1	0	0								
Conflicting Approach Left	0	NB	1	1								
Conflicting Lanes Left	0	1	1	1								
Conflicting Approach Right	NB	0	0	1								
Conflicting Lanes Right	1	0	0	1								
HCM Control Delay	7.6	7.6	8	8	7.6							
HCM LOS	A	A	A	A	A							

Lane												
NBLn1 EBLn1 WBLn1												
Vol Left, %												
Vol Thru, %												
Vol Right, %												
Sign Control												
Traffic Vol by Lane												
LT Vol												
Through Vol												
RT Vol												
Lane Flow Rate												
Geometry Grp												
Degree of Util (X)												
Departure Headway (Hd)												
Convergence, Y/N												
Cap												
Service Time												
HCM Lane V/C Ratio												
HCM Control Delay												
HCM Lane LOS												
HCM 95th-tile Q												
NBLn1	60%	0%	8%	0	90	129	0	11	129	0	28	19
Vol Left, %	0%	83%	92%	0%	83%	92%	0%	17%	0%			
Vol Thru, %	40%	17%	0%	47	108	140	28	0	11			
Vol Right, %	Stop	Stop	Stop	0	90	129	19	18	0			
Sign Control	Stop	Stop	Stop	47	108	140	28	0	11			
Traffic Vol by Lane	28	0	11	0	90	129	19	18	0			
LT Vol	0	90	129	19	18	0	47	108	140			
Through Vol	1	1	1	0.057	0.121	0.16	4.346	4.022	4.114			
RT Vol	0.057	0.121	0.16	4.346	4.022	4.114	0.057	0.122	0.161			
Lane Flow Rate	Yes	Yes	Yes	829	883	867	0.2	0.4	0.6			
Geometry Grp	Yes	Yes	Yes	829	883	867	0.2	0.4	0.6			
Degree of Util (X)	2.346	2.083	2.166	0.057	0.122	0.161	0.2	0.4	0.6			
Departure Headway (Hd)	2.346	2.083	2.166	0.057	0.122	0.161	0.2	0.4	0.6			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Service Time	2.346	2.083	2.166	0.057	0.122	0.161	0.2	0.4	0.6			
HCM Lane V/C Ratio	0.057	0.122	0.161	0.057	0.122	0.161	0.2	0.4	0.6			
HCM Control Delay	7.6	7.6	8	7.6	7.6	8	7.6	7.6	8			
HCM Lane LOS	A	A	A	A	A	A	A	A	A			
HCM 95th-tile Q	0.2	0.4	0.6	0.2	0.4	0.6	0.2	0.4	0.6			

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection														
Intersection Delay, s/veh 19.5														
Intersection LOS C														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	23	110	39	0	234	102	116	0	47	70	235	0	105
Future Vol, veh/h	0	23	110	39	0	234	102	116	0	47	70	235	0	105
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	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	110	39	0	234	102	116	0	47	70	235	0	105
Number of Lanes	0	0	2	0	0	0	1	0	0	1	0	0	0	1

Approach												
Opposing Approach												
Opposing Lanes												
Conflicting Approach Left												
Conflicting Lanes Left												
Conflicting Approach Right												
Conflicting Lanes Right												
HCM Control Delay												
HCM LOS												
Approach	EB	WB	WB	EB	NB	NB						
Opposing Approach	WB	EB	2	1								
Opposing Lanes	1	1	0	0								
Conflicting Approach Left	0	NB	1	1								
Conflicting Lanes Left	0	1	1	1								
Conflicting Approach Right	NB	0	0	1								
Conflicting Lanes Right	1	0	0	1								
HCM Control Delay	11.3	11.3	26.8	26.8	17.3							
HCM LOS	B	B	D	D	C							

Lane												
NBLn1 EBLn1 EBLn2 WBLn1 SBLn1												
Vol Left, %												
Vol Thru, %												
Vol Right, %												
Sign Control												
Traffic Vol by Lane												
LT Vol												
Through Vol												
RT Vol												
Lane Flow Rate												
Geometry Grp												
Degree of Util (X)												
Departure Headway (Hd)												
Convergence, Y/N												
Cap												
Service Time												
HCM Lane V/C Ratio												
HCM Control Delay												
HCM Lane LOS												
HCM 95th-tile Q												
NBLn1	13%	29%	0%	52%	53%							
Vol Left, %	20%	71%	59%	23%	34%							
Vol Thru, %	67%	0%	41%	26%	13%							
Vol Right, %	Stop	Stop	Stop	Stop	Stop							
Sign Control	352	78	94	452	197							
Traffic Vol by Lane	47	23	0	234	105							
LT Vol	70	55	55	102	66							
Through Vol	235	0	39	116	26							
RT Vol	352	78	94	452	197							
Lane Flow Rate	2	7	7	5	2							
Geometry Grp	0.587	0.159	0.18	0.769	0.369							
Degree of Util (X)	6.005	7.336	6.887	6.124	6.743							
Departure Headway (Hd)	Yes	Yes	Yes	Yes	Yes							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes							
Cap	588	488	519	592	532							
Service Time	4.06	5.103	4.654	4.173	4.808							
HCM Lane V/C Ratio	0.589	0.16	0.181	0.764	0.37							
HCM Control Delay	17.3	11.5	11.2	26.8	13.7							
HCM Lane LOS	C	B	B	D	B							
HCM 95th-tile Q	3.8	0.6	0.7	7	1.7							

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection										
Intersection Delay, s/veh 17.9										
Intersection LOS C										
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT	SBT
Traffic Vol, veh/h	0	140	431	0	76	108	0	371	57	57
Future Vol, veh/h	0	140	431	0	76	108	0	371	57	57
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	140	431	0	76	108	0	371	57	57
Number of Lanes	0	1	1	0	1	1	0	0	0	1
Approach	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Opposing Approach	0	0	0	0	0	0	0	0	0	0
Opposing Lanes	0	0	0	0	0	0	0	0	0	0
Conflicting Approach Left	0	0	0	0	0	0	0	0	0	0
Conflicting Lanes Left	1	1	1	0	0	0	0	0	0	0
Conflicting Approach Right	0	0	0	0	0	0	0	0	0	0
Conflicting Lanes Right	1	1	1	0	0	0	0	0	0	0
HCM Control Delay	17.3	17.3	17.3	11.3	11.3	11.3	21.5	21.5	21.5	21.5
HCM LOS	C	C	C	B	B	B	C	C	C	C
Lane	NBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3	SB	SB	SB	SB
Vol Left, %	0%	100%	0%	0%	87%	0%	0	0	0	0
Vol Thru, %	41%	0%	0%	13%	0%	0%	0	0	0	0
Vol Right, %	59%	0%	100%	0%	0%	0%	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	184	140	431	428	0	0	0	0	0	0
LT Vol	0	140	0	371	0	0	0	0	0	0
Through Vol	76	0	0	57	0	0	0	0	0	0
RT Vol	108	0	431	0	0	0	0	0	0	0
Lane Flow Rate	184	140	431	428	0	0	0	0	0	0
Geometry Grp	2	7	7	2	2	2	2	2	2	2
Degree of Util (X)	0.297	0.265	0.669	0.699	0.669	0.669	0.669	0.669	0.669	0.669
Departure Headway (Hd)	5.808	6.805	5.587	5.883	5.883	5.883	5.883	5.883	5.883	5.883
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	616	528	647	612	612	612	612	612	612	612
Service Time	3.87	4.555	3.336	3.934	3.934	3.934	3.934	3.934	3.934	3.934
HCM Lane V/C Ratio	0.299	0.265	0.666	0.699	0.666	0.666	0.666	0.666	0.666	0.666
HCM Control Delay	11.3	12	19	21.5	21.5	21.5	21.5	21.5	21.5	21.5
HCM Lane LOS	B	B	C	C	C	C	C	C	C	C
HCM 95th-ile Q	1.2	1.1	5.1	5.6	5.6	5.6	5.6	5.6	5.6	5.6

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/5/2016

Intersection										
Int Delay, s/veh 2.4										
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h	108	0	48	135	5	43				
Future Vol, veh/h	108	0	48	135	5	43				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	100	100	100	100	100	100				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	108	0	48	135	5	43				
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3	Minor4				
Conflicting Flow All	0	0	108	0	339	108				
Stage 1	-	-	-	-	231	-				
Stage 2	-	-	-	-	231	-				
Critical Hdwy	-	-	4.12	-	7.12	6.22				
Critical Hdwy Stg 1	-	-	-	-	6.12	-				
Critical Hdwy Stg 2	-	-	-	-	6.12	-				
Follow-up Hdwy	-	-	2.218	-	3.518	3.318				
Pot Cap-1 Maneuver	-	-	1483	-	615	946				
Stage 1	-	-	-	-	897	-				
Stage 2	-	-	-	-	772	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1483	-	599	946				
Mov Cap-2 Maneuver	-	-	-	-	599	-				
Stage 1	-	-	-	-	897	-				
Stage 2	-	-	-	-	745	-				
Approach	EB	WB	NB	NB	NB	NB				
HCM Control Delay, s	0	2	2	2	9.3	A				
HCM LOS										
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	NBR				
Capacity (veh/h)	892	-	-	1483	-	-				
HCM Lane V/C Ratio	0.054	-	-	0.032	-	-				
HCM Control Delay (s)	9.3	-	-	7.5	0	0				
HCM Lane LOS	A	-	-	A	A	A				
HCM 95th %ile Q(veh)	0.2	-	-	0.1	-	-				

HCM 2010 Signalized Intersection Summary  
 1.: Seal Beach Boulevard & I-405 SB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	95	31	18	762	48	587	15	1158	182	481	1593	79
Traffic Volume (veh/h)	95	31	18	762	48	587	15	1158	182	481	1593	79
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pBT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	31	18	796	0	0	15	1158	182	481	1593	79
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
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. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	859	0	383	30	1233	384	685	3223	1003
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.26	0.42	0.42
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	95	0	49	796	0	0	15	1158	182	481	1593	79
Grp Sat Flow(s), veh/h/ln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.5	0.0	3.0	24.1	0.0	0.0	0.9	24.6	10.8	26.9	25.1	3.3
Cycle Q Clear(g.c), s	5.5	0.0	3.0	24.1	0.0	0.0	0.9	24.6	10.8	26.9	25.1	3.3
Prop In Lane	1.00	0.00	0.37	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	859	0	383	30	1233	384	685	3223	1003
V/C Ratio(X)	1.07	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.69	0.49	0.08
Avail Cap(c.a), veh/h	89	0	87	887	0	396	81	1234	384	685	3223	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.74
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.74	0.74	0.74
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.7	34.6	18.8	12.5
Incr Delay (d2), s/veh	116.2	0.0	7.8	15.2	0.0	0.0	12.7	14.7	4.2	2.2	0.4	0.1
Initial Q Delay(d3), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	5.5	0.0	1.6	13.6	0.0	0.0	0.6	13.1	5.2	13.6	11.9	1.5
LnGrp Delay(d), s/veh	169.1	0.0	58.9	55.9	0.0	0.0	66.3	55.6	39.8	36.8	19.2	12.6
LnGrp LOS	F	E	E	E	E	E	E	E	D	D	B	B
Approach Vol, veh/h	144			796			1355				2153	
Approach Delay, s/veh	131.6			55.9			53.6				22.9	
Approach LOS	F			E			D				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+Rc), s	48.9	32.5	10.2	5.8	75.5							
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8							
Max Green Setting (Gmax), s	30.0	* 27	* 5.5	5.0	51.7							
Max Q Clear Time (g_c+I), s	28.9	26.6	7.5	2.9	27.1							
Green Ext Time (p_c), s	0.2	0.1	0.0	0.0	14.6							
Intersection Summary	41.7											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
 2.: Seal Beach Boulevard & I-405 NB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	11	12	5	402	58	616	120	1329	381	1732	509	
Traffic Volume (veh/h)	11	12	5	402	58	616	120	1329	381	1732	509	
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pBT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	12	5	402	0	655	120	1329	0	369	1732	509
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
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. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	46	49	41	883	0	788	540	1870	582	306	1867	581
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.31	0.74	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	11	12	5	402	0	655	120	1329	0	369	1732	509
Grp Sat Flow(s), veh/h/ln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.7	0.7	0.3	10.6	0.0	21.5	2.8	15.9	0.0	19.0	36.0	33.0
Cycle Q Clear(g.c), s	0.7	0.7	0.3	10.6	0.0	21.5	2.8	15.9	0.0	19.0	36.0	33.0
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	46	49	41	883	0	788	540	1870	582	306	1867	581
V/C Ratio(X)	0.24	0.25	0.12	0.46	0.00	0.83	0.22	0.71	0.00	1.20	0.93	0.88
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	540	1870	582	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.58	0.58	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.3	35.0	39.1	0.0	39.1	32.8	11.3	0.0	45.5	33.4	32.5
Incr Delay (d2), s/veh	2.6	2.6	1.3	0.4	0.0	3.7	0.1	1.4	0.0	18.7	9.5	16.8
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(50%) veh/ln	0.4	0.2	0.2	5.2	0.0	9.8	1.3	7.4	0.0	19.4	18.5	17.1
LnGrp Delay(d), s/veh	55.1	55.1	53.6	35.4	0.0	42.8	32.9	12.7	0.0	164.2	42.9	49.2
LnGrp LOS	E	E	D	D	D	D	C	B	F	D	D	D
Approach Vol, veh/h	28			1057			1449				2610	
Approach Delay, s/veh	54.8			40.0			14.3				61.3	
Approach LOS	D			D			B				E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+Rc), s	46.3	46.3	7.6	23.1	46.2							
Change Period (Y+Rc), s	5.8	* 4.7	* 5.8	5.8	* 5.8							
Max Green Setting (Gmax), s	26.7	* 26.7	* 5.0	5.0	41							
Max Q Clear Time (g_c+I), s	26.7	26.7	2.7	4.8	38.0							
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	2.4							
Intersection Summary	43.7											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.813  
 Loss Time (sec): 70 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 70 Level Of Service: D

Street Name: Seal Beach Blvd East Bound West Bound  
 Approach: North Bound South Bound Lampson Ave  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted  
 Rights: Ovl Include Include Ovl  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 0 1

Volume Module:  
 Base Vol: 0 1624 334 364 1859 0 0 0 0 0 769 0 671  
 Growth 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  
 Initial Base: 0 1624 334 364 1859 0 0 0 0 769 0 671  
 User 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  
 PHF 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  
 PHF Volume: 0 1624 334 364 1859 0 0 0 0 769 0 671  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1624 334 364 1859 0 0 0 0 769 0 671  
 PCE 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  
 MLF 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  
 Final Volume: 0 1624 334 364 1859 0 0 0 0 769 0 671  
 OvlAdjVol: 0 0 0 0 0 0 0 0 0 0 0 0 489

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.32 0.20 0.11 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.39  
 OvlAdjV/S: 0.00 0.32 0.20 0.11 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.39  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.625  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 42 Level Of Service: B

Street Name: Seal Beach Blvd East Bound West Bound  
 Approach: North Bound South Bound St. Cloud Dr  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected  
 Rights: Include Include Ovl  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:  
 Base Vol: 414 1837 51 4 1512 57 116 3 622 71 14 2  
 Growth 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  
 Initial Base: 414 1837 51 4 1512 57 116 3 622 71 14 2  
 User 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  
 PHF 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  
 PHF Volume: 414 1837 51 4 1512 57 116 3 622 71 14 2  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 414 1837 51 4 1512 57 116 3 622 71 14 2  
 PCE 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  
 MLF 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  
 Final Volume: 414 1837 51 4 1512 57 116 3 622 71 14 2  
 OvlAdjVol: 0 0 0 0 0 0 0 0 0 0 0 0 208

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.92 0.08 1.00 2.89 0.11 0.97 0.03 2.00 1.63 0.32 0.05  
 Final Sat.: 3400 4962 138 1700 4915 185 1657 43 3400 2775 547 78

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.37 0.37 0.00 0.31 0.31 0.07 0.07 0.18 0.03 0.03 0.03  
 OvlAdjV/S: 0.12 0.37 0.37 0.00 0.31 0.31 0.07 0.07 0.18 0.03 0.03 0.03  
 Crit Moves: \*\*\*\*



Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.501  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 33 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 59 1805 34 23 1550 33 21 4 15 26 2 23  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 59 1805 34 23 1550 33 21 4 15 26 2 23  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 59 1805 34 23 1550 33 21 4 15 26 2 23  
 Reduct Vol: 0 0 0 0 0 0 0 0  
 Reduced Vol: 59 1805 34 23 1550 33 21 4 15 26 2 23  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 59 1805 34 23 1550 33 21 4 15 26 2 23  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.94 0.06 1.00 2.94 0.06 1.00 0.21 0.79 1.00 0.08 0.92  
 Final Sat.: 1700 5006 94 1700 4994 106 1700 358 1342 1700 136 1564  
 Capacity Analysis Module:  
 Vol/Sat: 0.03 0.36 0.36 0.01 0.31 0.31 0.01 0.01 0.01 0.02 0.01 0.01  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.559  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 37 Level Of Service: A  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0  
 Volume Module:  
 Base Vol: 82 1761 16 21 1562 88 95 8 96 19 11 43  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 82 1761 16 21 1562 88 95 8 96 19 11 43  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 82 1761 16 21 1562 88 95 8 96 19 11 43  
 Reduct Vol: 0 0 0 0 0 0 0 0  
 Reduced Vol: 82 1761 16 21 1562 88 95 8 96 19 11 43  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 82 1761 16 21 1562 88 95 8 96 19 11 43  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.97 0.03 1.00 2.84 0.16 1.00 0.08 0.92 1.00 0.20 0.80  
 Final Sat.: 1700 5054 46 1700 4628 272 1700 131 1569 1700 346 1354  
 Capacity Analysis Module:  
 Vol/Sat: 0.05 0.35 0.35 0.01 0.32 0.32 0.06 0.06 0.06 0.01 0.03 0.03  
 Crit Moves: \*\*\*\*  
 \*\*\*\*\*

Intersection	12											
Int Delay, s/veh												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	663	4	31	442	9	77						
Future Vol, veh/h	663	4	31	442	9	77						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	100	100	100	100	100	100						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	663	4	31	442	9	77						
Major/Minor	Major1						Major2					
Conflicting Flow All	0						0					
Stage 1	-						-					
Stage 2	-						-					
Critical Hdwy	-						4.14					
Critical Hdwy Stg 1	-						7.54					
Critical Hdwy Stg 2	-						6.54					
Follow-up Hdwy	-						2.22					
Pot Cap-1 Maneuver	-						919					
Stage 1	-						-					
Stage 2	-						-					
Platoon blocked, %	-						-					
Mov Cap-1 Maneuver	-						919					
Mov Cap-2 Maneuver	-						-					
Stage 1	-						-					
Stage 2	-						-					
Approach	EB						WB					
HCM Control Delay, s	0						0.8					
HCM LOS							B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	539	-	-	919	-							
HCM Lane V/C Ratio	0.16	-	-	0.034	-							
HCM Control Delay (s)	12.9	-	-	9.1	0.2							
HCM Lane LOS	B	-	-	A	A							
HCM 95th %ile Q(veh)	0.6	-	-	0.1	-							

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.769  
 Loss Time (sec): 60 Average Delay (s/veh): xxxxxx  
 Optimal Cycle: 60 Level of Service: C  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R  
 Control: Protected Protected Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1  
 Volume Module:  
 Base Vol: 160 1687 28 30 1527 185 305 20 106 77 24 31  
 Growth 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  
 Initial Bse: 160 1687 28 30 1527 185 305 20 106 77 24 31  
 User 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  
 PHF 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  
 PHF Volume: 160 1687 28 30 1527 185 305 20 106 77 24 31  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 160 1687 28 30 1527 185 305 20 106 77 24 31  
 PCE 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  
 M/F 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  
 Final Volume: 160 1687 28 30 1527 185 305 20 106 77 24 31  
 Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 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  
 Lanes: 1.00 2.95 0.05 1.00 2.68 0.52 1.00 0.16 0.84 0.76 0.24 1.00  
 Final Sat: 1700 5017 83 1700 4549 551 1700 270 1430 1296 404 1700  
 Capacity Analysis Module:  
 Vol/Sat: 0.09 0.34 0.34 0.02 0.34 0.34 0.18 0.07 0.07 0.05 0.06 0.02  
 Crit Moves: \*\*\*\*

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection												
Intersection Delay, s/veh											10.4	
Intersection LOS											B	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	59	8	138	0	2	4	1	0	118	184	2
Future Vol, veh/h	0	59	8	138	0	2	4	1	0	118	184	2
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	59	8	138	0	2	4	1	0	118	184	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2
Approach	EB		WB		WB		NB		NB		SB	
Opposing Approach	WB		EB		EB		SB		SB		EB	
Opposing Lanes	1		1		1		2		2		2	
Conflicting Approach Left	SB		NB		EB		EB		EB		1	
Conflicting Lanes Left	2		2		2		2		2		1	
Conflicting Approach Right	NB		SB		WB		WB		WB		1	
Conflicting Lanes Right	2		2		2		2		2		1	
HCM Control Delay	10.2		8.9		8.9		10.7		10.7		B	
HCM LOS	B		A		A		B		B		B	

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	56%	0%	29%	29%	0%	0%
Vol Thru, %	44%	96%	4%	57%	100%	78%
Vol Right, %	0%	2%	67%	14%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	210	94	205	7	209	135
LT Vol	118	0	59	2	0	0
Through Vol	92	92	8	4	209	105
RT Vol	0	2	138	1	0	30
Lane Flow Rate	210	94	205	7	209	135
Geometry Grp	7	7	2	2	7	7
Degree of Utlr (X)	0.333	0.141	0.289	0.011	0.314	0.196
Departure Headway (Hd)	5.716	5.417	5.083	5.872	5.405	5.248
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	624	655	701	613	659	677
Service Time	3.504	3.205	3.156	3.872	3.191	3.033
HCM Lane V/C Ratio	0.337	0.144	0.292	0.011	0.317	0.199
HCM Control Delay	11.4	9.1	10.2	8.9	10.7	9.3
HCM Lane LOS	B	A	B	A	B	A
HCM 95th-tile Q	1.5	0.5	1.2	0	1.3	0.7

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR		
Traffic Vol, veh/h	0	0	314	30		
Future Vol, veh/h	0	0	314	30		
Peak Hour Factor	1.00	1.00	1.00	1.00		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	0	314	30		
Number of Lanes	0	0	2	0		
Approach	SB		SB			
Opposing Approach	NB		NB			
Opposing Lanes	2		2			
Conflicting Approach Left	WB		WB			
Conflicting Lanes Left	1		1			
Conflicting Approach Right	EB		EB			
Conflicting Lanes Right	1		1			
HCM Control Delay	10.2		10.2			
HCM LOS	B		B			

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/5/2016

Intersection		Intersection Delay, s/veh 11.1														
Intersection LOS		B														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	106	68	96	0	15	47	35	0	43	198	24	0	27	222	71
Future Vol, veh/h	0	106	68	96	0	15	47	35	0	43	198	24	0	27	222	71
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	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	106	68	96	0	15	47	35	0	43	198	24	0	27	222	71
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2
Approach	EB	WB	WB	EB	WB	WB	EB	WB	NB	NB	WB	WB	SB	SB	SB	SB
Opposing Approach	WB	EB	WB	EB	WB	WB	EB	WB	SB	SB	WB	WB	SB	NB	NB	NB
Opposing Lanes	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
Conflicting Approach Left	SB	NB	NB	EB	WB	WB	EB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB	WB	EB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Right	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
HCM Control Delay	12.4	9.9	9.9	10.6	10.6	10.6	10.8	10.8	10.6	10.6	10.6	10.8	10.8	10.8	10.8	10.8
HCM LOS	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection		Intersection Delay, s/veh 11.3														
Intersection LOS		B														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	5	26	2	0	148	20	160	0	0	153	240	0	0	153	240
Future Vol, veh/h	0	5	26	2	0	148	20	160	0	0	153	240	0	0	153	240
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	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	26	2	0	148	20	160	0	0	153	240	0	0	153	240
Number of Lanes	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Approach	EB	WB	WB	EB	WB	WB	EB	WB	NB	NB	WB	WB	SB	SB	SB	SB
Opposing Approach	WB	EB	WB	EB	WB	WB	EB	WB	SB	SB	WB	WB	SB	NB	NB	NB
Opposing Lanes	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
Conflicting Approach Left	SB	NB	NB	EB	WB	WB	EB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB	WB	EB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Right	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
HCM Control Delay	10.3	11.3	11.3	11.3	11.3	11.3	11.6	11.6	10.3	10.3	10.3	11.6	11.6	11.6	11.6	11.6
HCM LOS	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

HCM 2010 AWSC

1.1: Montecito Road & Bradbury Road

02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	81	145	2
Future Vol, veh/h	0	81	145	2
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	81	145	2
Number of Lanes	0	0	2	0
Approach	SB	SB		
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	10.9			
HCM LOS	B			

HCM 2010 AWSC

1.2: West Road & Rossmore Center Way

12/5/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	7.6								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	108	11	0	7	94	0	7	13
Future Vol, veh/h	0	108	11	0	7	94	0	7	13
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	108	11	0	7	94	0	7	13
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	EB	WB	WB	EB		NB		
Opposing Approach	WB						EB		
Opposing Lanes	1						0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			1		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			1		
HCM Control Delay	7.6			7.6			7.2		
HCM LOS	A			A			A		
Lane	NBU	EBU	NBU	WBU	WBU	NBU			
Vol Left, %	35%	0%	7%						
Vol Thru, %	0%	91%	93%						
Vol Right, %	65%	9%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	20	119	101						
LT Vol	7	0	7						
Through Vol	0	108	94						
RT Vol	13	11	0						
Lane Flow Rate	20	119	101						
Geometry Grp	1	1	1						
Degree of Util (X)	0.022	0.132	0.114						
Departure Headway (Hd)	3.989	3.99	4.072						
Convergence, Y/N	Yes	Yes	Yes						
Cap	862	897	879						
Service Time	2.083	2.018	2.102						
HCM Lane V/C Ratio	0.023	0.133	0.115						
HCM Control Delay	7.2	7.6	7.6						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.1	0.5	0.4						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 9																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR	
Traffic Vol, veh/h	0	38	130	15	0	80	87	56	0	14	18	34	0	65	18	
Future Vol, veh/h	0	38	130	15	0	80	87	56	0	14	18	34	0	65	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	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	38	130	15	0	80	87	56	0	14	18	34	0	65	18	
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	
Approach																
Opposing Approach	WB		EB		WB		EB		NB		SB		NB		SB	
Opposing Lanes	1		2		1		2		1		2		1		2	
Conflicting Approach Left	SB		NB		EB		WB		WB		WB		WB		WB	
Conflicting Lanes Left	1		1		2		2		1		1		2		2	
Conflicting Approach Right	NB		SB		WB		EB		EB		EB		EB		EB	
Conflicting Lanes Right	1		1		1		1		2		2		2		2	
HCM Control Delay	8.7		9.4		8.3		8.9		8.9		8.9		8.9		8.9	
HCM LOS	A		A		A		A		A		A		A		A	
Lane																
Vol Left, %	21%		37%		0%		36%		66%		11%		11%		11%	
Vol Thru, %	27%		63%		81%		39%		18%		0%		0%		34%	
Vol Right, %	52%		0%		19%		25%		16%		0%		0%		0%	
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	66	103	80	223	99	14	38	0	80	65	18	65	65	87	18	18
LT Vol	18		65		87		18		18		18		18		18	
RT Vol	34		0		15		56		16		16		16		16	
Lane Flow Rate	66		103		80		223		99		99		99		99	
Geometry Grp	2		7		7		5		2		2		2		2	
Degree of Utl (X)	0.087		0.152		0.111		0.284		0.138		0.138		0.138		0.138	
Departure Headway (Hd)	4.754		5.315		4.997		4.583		5.004		5.004		5.004		5.004	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Cap	750		674		716		783		715		715		715		715	
Service Time	2.803		3.055		2.738		2.62		3.049		3.049		3.049		3.049	
HCM Lane V/C Ratio	0.088		0.153		0.112		0.285		0.138		0.138		0.138		0.138	
HCM Control Delay	8.3		9		8.4		9.4		8.9		8.9		8.9		8.9	
HCM Lane LOS	A		A		A		A		A		A		A		A	
HCM 95th-tile Q	0.3		0.5		0.4		1.2		0.5		0.5		0.5		0.5	

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection																
Intersection Delay, s/veh 7.7																
Intersection LOS A																
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT						
Traffic Vol, veh/h	0	74	41	0	18	33	0	31	16	16						
Future Vol, veh/h	0	74	41	0	18	33	0	31	16	16						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2						
Mvmt Flow	0	74	41	0	18	33	0	31	16	16						
Number of Lanes	0	1	1	0	1	0	0	0	0	1						
Approach																
Opposing Approach	WB		NB		NB		SB		SB		NB		NB		SB	
Opposing Lanes	0		1		1		1		1		1		1		1	
Conflicting Approach Left	NB		WB		WB		WB		WB		WB		WB		WB	
Conflicting Lanes Left	1		0		0		2		2		2		2		2	
Conflicting Approach Right	SB		WB		WB		WB		WB		WB		WB		WB	
Conflicting Lanes Right	1		2		2		2		2		2		2		2	
HCM Control Delay	8		7.1		7.1		7.7		7.7		7.7		7.7		7.7	
HCM LOS	A		A		A		A		A		A		A		A	
Lane																
Vol Left, %	0%		100%		0%		66%		66%		66%		66%		66%	
Vol Thru, %	35%		0%		0%		34%		34%		34%		34%		34%	
Vol Right, %	65%		0%		100%		0%		0%		0%		0%		0%	
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	51	74	41	47	18	0	0	16	16	16	16	16	16	16	16	16
LT Vol	0		74		0		31		31		31		31		31	
Through Vol	18		0		0		16		16		16		16		16	
RT Vol	33		0		41		0		0		0		0		0	
Lane Flow Rate	51		74		41		47		47		47		47		47	
Geometry Grp	2		7		7		2		2		2		2		2	
Degree of Utl (X)	0.055		0.107		0.046		0.067		0.067		0.067		0.067		0.067	
Departure Headway (Hd)	3.884		5.204		4.003		4.402		4.402		4.402		4.402		4.402	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Cap	928		687		890		818		818		818		818		818	
Service Time	1.884		2.953		1.75		2.404		2.404		2.404		2.404		2.404	
HCM Lane V/C Ratio	0.055		0.108		0.046		0.067		0.067		0.067		0.067		0.067	
HCM Control Delay	7.1		8.6		6.9		7.7		7.7		7.7		7.7		7.7	
HCM Lane LOS	A		A		A		A		A		A		A		A	
HCM 95th-tile Q	0.2		0.4		0.1		0.2		0.2		0.2		0.2		0.2	

Intersection	1.9					
Int Delay, s/veh	EBT	EBR	WBL	WBT	NBL	NBR
Movement	120	0	33	104	0	35
Traffic Vol, veh/h	120	0	33	104	0	35
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	Free	Free	Free	Free	Stop	Stop
Sign Control	-	None	-	None	-	None
RT Channelized	-	-	-	-	-	-
Storage Length	0	-	0	0	0	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	100	100	100	100	100	100
Peak Hour Factor	2	2	2	2	2	2
Heavy Vehicles, %	120	0	33	104	0	35
Mvmt Flow						
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	120	0	290	120
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	170	-
Critical Hwy	-	-	4.12	-	6.42	6.22
Critical Hwy Stg 1	-	-	-	-	5.42	-
Critical Hwy Stg 2	-	-	-	-	5.42	-
Follow-up Hwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1468	-	701	931
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1468	-	684	931
Mov Cap-2 Maneuver	-	-	-	-	684	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	839	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.8	9			
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	931	-	-	1468	-	
HCM Lane V/C Ratio	0.038	-	-	0.022	-	
HCM Control Delay (s)	9	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4TB			4			4TB			4TB	
Traffic Volume (veh/h)	182	33	22	351	38	581	12	1594	395	581	1175	139
Future Volume (veh/h)	182	33	22	351	38	581	12	1594	395	581	1175	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	182	33	22	378	0	12	1594	395	581	1175	139	
Adj No. of Lanes	0	2	0	2	0	1	3	1	1	1	3	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	130	77	51	426	0	190	24	1632	508	626	3431	1068
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.32	0.32	0.71	1.00	1.00
Sat Flow, veh/h	1774	1044	696	3548	0	1593	1774	5085	1593	1774	5085	1593
Grp Volume(v), veh/h	182	0	55	378	0	0	12	1594	395	581	1175	139
Grp Sat Flow(s), veh/h	1774	0	1740	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	8.8	0.0	3.6	12.6	0.0	0.0	37.2	27.1	33.6	0.0	0.0	0.0
Cycle Q Clear(g.c), s	8.8	0.0	3.6	12.6	0.0	0.0	37.2	27.1	33.6	0.0	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	130	0	128	426	0	190	24	1632	508	626	3431	1068
V/C Ratio(X)	1.40	0.00	0.43	0.89	0.00	0.00	0.49	0.98	0.78	0.93	0.34	0.13
Avail Cap(c,a), veh/h	130	0	128	426	0	190	24	1632	508	626	3431	1068
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	0.0	53.2	52.0	0.0	0.0	58.8	40.3	36.9	16.4	0.0	0.0
Incr Delay (d2), s/veh	219.3	0.0	2.3	19.8	0.0	0.0	14.6	17.4	11.1	17.9	0.2	0.2
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 Back(Q(50%)) veh/h	12.2	0.0	1.8	7.4	0.0	0.0	0.5	20.1	13.4	18.9	0.1	0.1
LnGrp Delay(d), s/veh	274.9	0.0	55.5	71.8	0.0	0.0	73.3	57.8	48.0	34.3	0.2	0.2
LnGrp LOS	F	E	E	E	E	E	D	C	A	A	A	A
Approach Vol, veh/h	237			378			2001				1895	
Approach Delay, s/veh	224.0	F		71.8	E		55.9				10.7	
Approach LOS												
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	48.1	44.3		13.5	5.6	86.8	20.2					
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8	5.8					
Max Green Setting (Gmax), s	38.0	* 39		* 8.8	5.0	71.5	14.4					
Max Q Clear Time (g_c+H), s	35.6	39.2		10.8	2.8	2.0	14.6					
Green Ext Time (p_c), s	0.6	0.0		0.0	0.0	15.4	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	47.1											
HCM 2010 LOS	D											
Notes												

12/5/2016  
 HCM 2010 Signalized Intersection Summary  
 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	86	79	95	214	16	750	45	1709	608	356	1600	408
Future Volume (veh/h)	86	79	95	214	16	750	45	1709	608	356	1600	408
Number	7	4	0	14	3	8	18	5	2	12	1	6
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	86	79	95	214	0	761	45	1709	0	356	1600	408
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
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
Cap. veh/h	93	98	83	967	0	863	111	1725	537	296	2408	750
Arrive On Green	0.05	0.05	0.05	0.27	0.00	0.27	0.06	0.68	0.00	0.17	0.47	0.47
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	86	79	95	214	0	761	45	1709	0	356	1600	408
Grp Sat Flow(s), veh/h/m/1774	1863	1863	1863	1863	0	1863	1721	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.8	5.0	6.3	5.6	0.0	27.6	1.5	39.6	0.0	20.0	29.0	21.9
Cycle Q Clear(g.c), s	5.8	5.0	6.3	5.6	0.0	27.6	1.5	39.6	0.0	20.0	29.0	21.9
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	98	83	967	0	863	111	1725	537	296	2408	750
V/C Ratio(X)	0.92	0.81	1.14	0.22	0.00	0.88	0.40	0.99	0.00	1.20	0.66	0.54
Avail Cap(c), veh/h	93	98	83	1189	0	1061	172	1725	537	296	2408	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	0.48	0.48	0.48	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.6	56.3	56.8	33.8	0.0	41.8	55.0	19.1	0.0	50.0	24.3	22.4
Incr Delay (d2), s/veh	68.6	37.7	142.5	0.1	0.0	7.6	1.1	12.9	0.0	119.4	1.5	2.8
Initial Q Delay(Q3), 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(50%), veh/14.6	3.6	6.1	2.7	0.0	13.0	0.7	19.8	0.0	19.6	13.8	10.1	10.1
LnGrp Delay(d), s/veh	125.2	93.9	199.3	33.9	0.0	49.4	56.1	32.1	0.0	169.4	25.7	25.2
LnGrp LOS	F	F	F	F	D	E	C	C	F	C	C	C
Approach Vol, veh/h	280	142.8	142.8	975	460	1754	32.7	47.3	47.3	2364	47.3	2364
Approach Delay, s/veh	142.8	142.8	142.8	975	460	1754	32.7	47.3	47.3	2364	47.3	2364
Approach LOS	F	F	F	D	D	C	C	C	C	D	D	D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Change Period (Y+R), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2
Max Q Clear Time (g_c-d2), s	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary  
 HCM 2010 Ctrl Delay 46.9  
 HCM 2010 LOS D  
 Notes

Level of Service Computation Report  
 (Base Volume Alternative)

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.855  
 Loss Time (sec): 82 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 82 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - I - R L - I - R L - I - R L - I - R

Control	Protected	Include	Protected	Include	Protected	Permitted
Rights:	Ovl	Include	Ovl	Include	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	2 0 0 0 1	2 0 0 0 1

Volume Module:

Base Vol:	0 1915	596	701 1784	0	0	0	591	0	528
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Base:	0 1915	596	701 1784	0	0	0	591	0	528
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0 1915	596	701 1784	0	0	0	591	0	528
Reduced Vol:	0 0	0	0	0	0	0	0	0	0
Reduced Vol:	0 1915	596	701 1784	0	0	0	591	0	528
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0 1915	596	701 1784	0	0	0	591	0	528
OvAdjVol:	0 1915	596	701 1784	0	0	0	591	0	528

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	2.00	3.00	0.00	0.00	0.00	2.00
Final Sat.:	0	5100	1700	3400	5100	0	0	0	3400

Capacity Analysis Module:

Vol/Sat:	0.00	0.38	0.35	0.21	0.35	0.00	0.00	0.00	0.17
OvAdjV/S:	0.00	0.38	0.35	0.21	0.35	0.00	0.00	0.00	0.17
Crit Moves:	0.00	0.38	0.35	0.21	0.35	0.00	0.00	0.00	0.17



Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.781  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 63 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 0 1	1 0 0 1 0

Volume Module:  
 Base Vol: 222 1623 92 85 1547 102 108 31 203 152 51 65  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 222 1623 92 85 1547 102 108 31 203 152 51 65  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 222 1623 92 85 1547 102 108 31 203 152 51 65  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 222 1623 92 85 1547 102 108 31 203 152 51 65  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 222 1623 92 85 1547 102 108 31 203 152 51 65

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 1.00 2.84 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56  
 Final Sat.: 1700 4826 274 1700 4785 315 1700 225 1475 1700 747 953

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.34 0.34 0.05 0.32 0.32 0.06 0.14 0.14 0.09 0.07 0.07  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.744  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 56 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd St. Cloud Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Split Phase	Split Phase
Rights:	Include	Include	OVI	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	2 0 2 1 0	1 0 2 1 0	0 1 0 0 2	1 0 1 1 0

Volume Module:  
 Base Vol: 449 1862 145 5 1856 75 102 0 425 211 34 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 449 1862 145 5 1856 75 102 0 425 211 34 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 449 1862 145 5 1856 75 102 0 425 211 34 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 449 1862 145 5 1856 75 102 0 425 211 34 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 449 1862 145 5 1856 75 102 0 425 211 34 5  
 OriAdjVol: \*\*\*\*\*

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.78 0.22 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04  
 Final Sat.: 3400 4732 368 1700 4902 198 1700 0 3400 2870 462 68

Capacity Analysis Module:  
 Vol/Sat: 0.13 0.39 0.39 0.00 0.38 0.38 0.06 0.00 0.13 0.07 0.07 0.07  
 OriAdjV/S: \*\*\*\*\*  
 Crit Moves: \*\*\*\*\*  
 \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.736  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 55 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd-Los Alamitos Blvd East Bound Bradbury Rd West Bound  
 Approach: North Bound South Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Include	Permitted
Rights:	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 142 1710 62 26 1900 191 186 10 96 53 3 21  
 Growth 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  
 Initial Base: 142 1710 62 26 1900 191 186 10 96 53 3 21  
 User 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  
 PHF 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  
 PHF Volume: 142 1710 62 26 1900 191 186 10 96 53 3 21  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 142 1710 62 26 1900 191 186 10 96 53 3 21  
 PCE 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  
 MLF 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  
 Final Volume: 142 1710 62 26 1900 191 186 10 96 53 3 21

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Adj: 1.00 2.90 0.10 1.00 2.73 0.27 1.00 0.09 0.91 0.95 0.05 1.00  
 Final Sat.: 1700 4922 178 1700 4634 466 1700 160 1540 1609 91 1700

Capacity Analysis Module:  
 Vol/Sat: 0.08 0.35 0.35 0.02 0.41 0.41 0.11 0.06 0.06 0.03 0.03 0.01  
 Crit Moves: \*\*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 \*\*\*\*\*  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.753  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 58 Level Of Service: C  
 \*\*\*\*\*  
 Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Include	Permitted
Rights:	0	0	0	0	0
Min. Green:	4.0	4.0	4.0	4.0	4.0
Y+R:	1	0	2	1	0
Lanes:	1	0	2	1	0

Volume Module:  
 Base Vol: 207 1720 26 39 1735 240 225 1 167 16 1 18  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 207 1720 26 39 1735 240 225 1 167 16 1 18  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 207 1720 26 39 1735 240 225 1 167 16 1 18  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 207 1720 26 39 1735 240 225 1 167 16 1 18  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 207 1720 26 39 1735 240 225 1 167 16 1 18

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.96 0.04 1.00 2.64 0.36 1.00 0.01 0.99 1.00 0.05 0.95  
 Final Sat.: 1700 5024 76 1700 4480 620 1700 10 1690 1700 89 1611

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.34 0.34 0.02 0.39 0.39 0.13 0.10 0.10 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*\*

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/5/2016

Intersection		1 2									
Int Delay, s/veh											
Movement	EBT	EBR	WBL	WBT	NBL	NBR					
Traffic Vol, veh/h	488	8	58	500	3	54					
Future Vol, veh/h	488	8	58	500	3	54					
Conflicting Peds, #/hr	0	0	0	0	0	0					
Sign Control	Free	Free	Free	Free	Stop	Stop					
RT Channelized	-	None	-	None	-	None					
Storage Length	-	-	-	-	0	0					
Veh in Median Storage, #	0	-	-	0	0	0					
Grade, %	0	-	-	0	0	0					
Peak Hour Factor	100	100	100	100	100	100					
Heavy Vehicles, %	2	2	2	2	2	2					
Mvmt Flow	488	8	58	500	3	54					
Major/Minor	Major1	Major2	Minor1								
Conflicting Flow All	0	0	496	0	858	248					
Stage 1	-	-	-	-	492	-					
Stage 2	-	-	-	-	366	-					
Critical Hwy	-	-	4.14	-	6.84	6.94					
Critical Hwy Stg 1	-	-	-	-	5.84	-					
Critical Hwy Stg 2	-	-	-	-	5.84	-					
Follow-up Hwy	-	-	2.22	-	3.52	3.32					
Pot Cap-1 Maneuver	-	-	1064	-	296	762					
Stage 1	-	-	-	-	580	-					
Stage 2	-	-	-	-	672	-					
Platoon blocked, %	-	-	-	-	-	-					
Mov Cap-1 Maneuver	-	-	1064	-	274	762					
Mov Cap-2 Maneuver	-	-	-	-	274	-					
Stage 1	-	-	-	-	580	-					
Stage 2	-	-	-	-	622	-					
Approach	EB	WB	NB								
HCM/Control Delay, s	0	1.2	10.7		B						
HCM LOS											
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT						
Capacity (veh/h)	689	-	-	1064	-						
HCM Lane V/C Ratio	0.083	-	-	0.065	-						
HCM Control Delay (s)	10.7	-	-	8.6	0.3						
HCM Lane LOS	B	-	-	A	A						
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection		9.3										
Intersection Delay, s/veh												
Intersection LOS		A										
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	33	5	51	0	3	6	11	0	73	237	4
Future Vol, veh/h	0	33	5	51	0	3	6	11	0	73	237	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	33	5	51	0	3	6	11	0	73	237	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2
Approach	EB	WB	WB		WB		NB		NB			
Opposing Approach	WB	EB	EB		SB		SB		SB			
Opposing Lanes	1	1	1		1		1		2			
Conflicting Approach Left	SB	SB	NB		EB		EB		EB			
Conflicting Lanes Left	2	2	2		2		1		1			
Conflicting Approach Right	NB	SB	SB		WB		WB		WB			
Conflicting Lanes Right	2	2	2		2		1		1			
HCM Control Delay	8.9	8.4	8.4		9.6		9.6		A			
HCM LOS	A	A	A		A		A		A			
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2						
Vol Left, %	38%	0%	37%	15%	6%	0%						
Vol Thru, %	62%	97%	6%	30%	94%	73%						
Vol Right, %	0%	3%	57%	65%	0%	27%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	192	123	89	20	137	177						
LT Vol	73	0	33	3	8	0						
Through Vol	119	119	5	6	129	129						
RT Vol	0	4	51	11	0	48						
Lane Flow Rate	192	122	89	20	137	177						
Geometry Grp	7	7	2	2	7	7						
Degree of Utl (X)	0.281	0.173	0.125	0.029	0.195	0.242						
Departure Headway (Ht)	5.287	5.072	5.075	5.162	5.136	4.916						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	678	706	704	690	697	729						
Service Time	3.028	2.813	3.124	3.223	2.877	2.657						
HCM Lane V/C Ratio	0.283	0.173	0.126	0.029	0.197	0.243						
HCM Control Delay	10.1	8.9	8.9	8.4	9.1	9.2						
HCM Lane LOS	B	A	A	A	A	A						
HCM 95th %tile Q	1.2	0.6	0.4	0.1	0.7	0.9						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection		SBL		SBT		SBR	
Intersection Delay, s/veh		SBL		SBT		SBR	
Intersection LOS		SBL		SBT		SBR	
Movement		SBU	SBL	SBT	SBR		
Traffic Vol, veh/h		0	8	258	48		
Future Vol, veh/h		0	8	258	48		
Peak Hour Factor		1.00	1.00	1.00	1.00		
Heavy Vehicles, %		2	2	2	2		
Mvmt Flow		0	8	258	48		
Number of Lanes		0	0	2	0		
Approach		SB	SB				
Opposing Approach		NB	NB				
Opposing Lanes		2	2				
Conflicting Approach Left		WB	WB				
Conflicting Lanes Left		1	1				
Conflicting Approach Right		EB	EB				
Conflicting Lanes Right		1	1				
HCM Control Delay		9.2	9.2				
HCM LOS		A	A				
Lane							

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/5/2016

Intersection		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
Intersection Delay, s/veh		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
Intersection LOS		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
Movement		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h		0	46	40	60	0	41	45	80	0	33	144	31	0	50	198	44
Future Vol, veh/h		0	46	40	60	0	41	45	80	0	33	144	31	0	50	198	44
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	1.00	1.00	1.00	1.00
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow		0	46	40	60	0	41	45	80	0	33	144	31	0	50	198	44
Number of Lanes		0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach		EB	EB	WB	WB	EB	EB	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach		WB	WB	EB	EB	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
Opposing Lanes		1	1	2	2	1	1	2	2	1	1	2	2	1	1	2	2
Conflicting Approach Left		SB	SB	NB	NB	EB	EB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left		2	2	2	2	2	2	1	1	1	1	2	2	1	1	2	2
Conflicting Approach Right		NB	NB	SB	SB	WB	WB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right		2	2	2	2	2	2	1	1	1	1	2	2	1	1	2	2
HCM Control Delay		9.8	9.8	9.9	9.9	9.6	9.6	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
HCM LOS		A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B
Lane		NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2										
Vol Left, %		31%	0%	32%	25%	34%	0%										
Vol Thru, %		69%	70%	27%	27%	66%	69%										
Vol Right, %		0%	30%	41%	48%	0%	31%										
Sign Control		Stop	Stop	Stop	Stop	Stop	Stop										
Traffic Vol by Lane		105	103	146	166	149	143										
LT Vol		33	0	46	41	50	0										
Through Vol		72	72	40	45	99	99										
RT Vol		0	31	60	80	0	44										
Lane Flow Rate		105	103	146	166	149	143										
Geometry Grp		7	7	2	2	7	7										
Degree of Util (X)		0.173	0.159	0.215	0.241	0.242	0.217										
Departure Headway (Hd)		5.933	5.56	5.31	5.221	5.838	5.451										
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes	Yes										
Cap		606	646	676	689	617	659										
Service Time		3.66	3.288	3.34	3.25	3.562	3.174										
HCM Lane V/C Ratio		0.173	0.159	0.216	0.241	0.241	0.217										
HCM Control Delay		9.9	9.3	9.8	9.9	10.4	9.7										
HCM Lane LOS		A	A	A	A	B	A										
HCM 95th-ile Q		0.6	0.6	0.8	0.9	0.9	0.8										

HCM 2010 AWSC  
1.1: Montecito Road & Bradbury Road

02/22/2017

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔				↔					↔
Traffic Vol, veh/h	0	1	19	2	0	162	27	70	0	5	115	116
Future Vol, veh/h	0	1	19	2	0	162	27	70	0	5	115	116
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	19	2	0	162	27	70	0	5	115	116
Number of Lanes	0	1	0	0	0	1	1	1	0	0	0	2

Approach	EB	EB	WB	NB
Opposing Approach	WB	EB	WB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	EB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	9.3	10.7	9.4	9.4
HCM LOS	A	B	A	A

Lane	NBLn1	NBLn2	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	86%	0%	39%	0%	0%
Vol Thru, %	92%	33%	86%	14%	0%	61%	96%	0%
Vol Right, %	0%	67%	9%	0%	100%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	174	22	189	70	114	72	0
LT Vol	5	0	1	162	0	45	0	0
Through Vol	58	58	19	27	0	69	69	0
RT Vol	0	116	2	0	70	0	3	0
Lane Flow Rate	62	174	22	189	70	114	72	0
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.097	0.244	0.037	0.316	0.095	0.183	0.111	0.111
Departure Headway (Hd)	5.76	5.063	6.025	6.027	4.891	5.768	5.54	5.54
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	638	703	598	592	725	617	642	642
Service Time	3.35	2.837	4.025	3.808	2.672	3.548	3.32	3.32
HCM Lane V/C Ratio	0.097	0.248	0.037	0.319	0.097	0.185	0.112	0.112
HCM Control Delay	9	9.5	9.3	11.6	8.2	9.9	9	9
HCM Lane LOS	A	A	A	B	A	A	A	A
HCM 95th-ile Q	0.3	1	0.1	1.3	0.3	0.7	0.4	0.4

HCM 2010 AWSC  
1.1: Montecito Road & Bradbury Road

02/22/2017

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↔	
Traffic Vol, veh/h	0	45	138	3
Future Vol, veh/h	0	45	138	3
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	45	138	3
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.6
HCM LOS	A

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/5/2016

Intersection												
Intersection Delay, s/veh 8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	99	26	0	24	149	0	34	12			
Future Vol, veh/h	0	99	26	0	24	149	0	34	12			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	99	26	0	24	149	0	34	12			
Number of Lanes	0	1	0	0	0	1	0	1	0			

Approach												
Opposing Approach												
Opposing Lanes												
Conflicting Approach Left												
Conflicting Lanes Left												
Conflicting Approach Right												
Conflicting Lanes Right												
HCM Control Delay												
HCM LOS												
Approach	EB	WB	EB	NB								
Opposing Approach	WB	EB										
Opposing Lanes	1	1										
Conflicting Approach Left	0	NB	EB									
Conflicting Lanes Left	0	1	1									
Conflicting Approach Right	NB	WB										
Conflicting Lanes Right	1	0	1									
HCM Control Delay	7.8	8.2	7.9	A								
HCM LOS	A	A	A									

Lane												
Vol Left, %												
Vol Thru, %												
Vol Right, %												
Sign Control												
Traffic Vol by Lane												
LT Vol												
Through Vol												
RT Vol												
Lane Flow Rate												
Geometry Grp												
Degree of Util (X)												
Departure Headway (Hd)												
Convergence, Y/N												
Cap												
Service Time												
HCM Lane V/C Ratio												
HCM Control Delay												
HCM Lane LOS												
HCM 95th-tile Q												
NBLn1	EBLn1	WBLn1	NBLn1									
Vol Left, %	74%	0%	14%									
Vol Thru, %	0%	79%	86%									
Vol Right, %	26%	21%	0%									
Sign Control	Stop	Stop	Stop									
Traffic Vol by Lane	46	125	173									
LT Vol	34	0	24									
Through Vol	0	99	149									
RT Vol	12	26	0									
Lane Flow Rate	46	125	173									
Geometry Grp	1	1	1									
Degree of Util (X)	0.058	0.14	0.199									
Departure Headway (Hd)	4.569	4.021	4.137									
Convergence, Y/N	Yes	Yes	Yes									
Cap	788	881	860									
Service Time	2.569	2.094	2.196									
HCM Lane V/C Ratio	0.058	0.142	0.201									
HCM Control Delay	7.9	7.8	8.2									
HCM Lane LOS	A	A	A									
HCM 95th-tile Q	0.2	0.5	0.7									

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection														
Intersection Delay, s/veh 17.3														
Intersection LOS C														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	24	128	30	0	200	180	92	0	47	48	195	0	82
Future Vol, veh/h	0	24	128	30	0	200	180	92	0	47	48	195	0	82
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	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	128	30	0	200	180	92	0	47	48	195	0	82
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	1

Approach												
Opposing Approach												
Opposing Lanes												
Conflicting Approach Left												
Conflicting Lanes Left												
Conflicting Approach Right												
Conflicting Lanes Right												
HCM Control Delay												
HCM LOS												
Approach	EB	WB	EB	NB								
Opposing Approach	WB	EB										
Opposing Lanes	1	2										
Conflicting Approach Left	SB	NB	EB									
Conflicting Lanes Left	1	1	2									
Conflicting Approach Right	NB	WB										
Conflicting Lanes Right	1	1	1									
HCM Control Delay	10.7	23.6	13.8	B								
HCM LOS	B	C	B									

Lane													
Vol Left, %													
Vol Thru, %													
Vol Right, %													
Sign Control													
Traffic Vol by Lane													
LT Vol													
Through Vol													
RT Vol													
Lane Flow Rate													
Geometry Grp													
Degree of Util (X)													
Departure Headway (Hd)													
Convergence, Y/N													
Cap													
Service Time													
HCM Lane V/C Ratio													
HCM Control Delay													
HCM Lane LOS													
HCM 95th-tile Q													
NBLn1	EBLn1	EBLn2	WBLn1	SBLn1									
Vol Left, %	16%	27%	0%	42%	54%								
Vol Thru, %	17%	73%	68%	36%	24%								
Vol Right, %	67%	0%	32%	19%	22%								
Sign Control	Stop	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	290	88	94	472	152								
LT Vol	47	24	0	200	82								
Through Vol	48	64	64	180	37								
RT Vol	195	0	30	92	33								
Lane Flow Rate	290	88	94	472	152								
Geometry Grp	2	7	7	5	2								
Degree of Util (X)	0.464	0.167	0.169	0.744	0.275								
Departure Headway (Hd)	5.864	6.852	6.485	5.672	6.502								
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes								
Cap	618	525	556	632	555								
Service Time	3.864	4.564	4.196	3.765	4.509								
HCM Lane V/C Ratio	0.469	0.168	0.169	0.747	0.274								
HCM Control Delay	13.8	10.9	10.5	23.6	12								
HCM Lane LOS	B	B	B	C	B								
HCM 95th-tile Q	2.5	0.6	0.6	6.6	1.1								

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection										
Intersection Delay, s/veh 11.4										
Intersection LOS B										
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT	SBT
Traffic Vol, veh/h	0	91	320	0	47	70	0	253	59	59
Future Vol, veh/h	0	91	320	0	47	70	0	253	59	59
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	91	320	0	47	70	0	253	59	59
Number of Lanes	0	1	1	0	1	0	0	0	0	1
Approach	WB		WB		NB	SB		SB		SB
Opposing Approach	0		0		SB	NB		NB		NB
Opposing Lanes	0		0		1	1		1		1
Conflicting Approach Left	NB		NB		WB		WB		WB	
Conflicting Lanes Left	1		1		0		0		2	
Conflicting Approach Right	SB		SB		WB		WB		WB	
Conflicting Lanes Right	1		1		2		2		0	
HCM Control Delay	11.2		9.1		12.6		12.6		B	
HCM LOS	B		A		A		B		B	
Lane	NBLn1 WBLn1 WBLn2		SBLn1		SBLn1		SBLn1		SBLn1	
Vol Left, %	0%		100%		0%		81%		0%	
Vol Thru, %	40%		0%		0%		19%		0%	
Vol Right, %	60%		0%		100%		0%		0%	
Sign Control	Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	117	91	320	312	117	91	320	312	117	91
LT Vol	0		91		0		253		0	
Through Vol	47		0		0		59		0	
RT Vol	70		0		320		0		0	
Lane Flow Rate	117	91	320	312	117	91	320	312	117	91
Geometry Grp	2		7		7		2		2	
Degree of Util (X)	0.162		0.155		0.436		0.452		0.452	
Departure Headway (Hd)	4.974		6.113		4.902		5.211		5.211	
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	711	582	726	686	711	582	726	686	711	582
Service Time	3.073		3.894		2.683		3.291		3.291	
HCM Lane V/C Ratio	0.165		0.156		0.441		0.455		0.455	
HCM Control Delay	9.1		10		11.5		12.6		12.6	
HCM Lane LOS	A		A		B		B		B	
HCM 95th-tile Q	0.6		0.5		2.2		2.4		2.4	

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/5/2016

Intersection										
Intersection Delay, s/veh 3										
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h	96	1	86	181	4	71				
Future Vol, veh/h	96	1	86	181	4	71				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	100	100	100	100	100	100				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	96	1	86	181	4	71				
Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	0	0	97	0	450	97				
Stage 1	-	-	-	-	97	-				
Stage 2	-	-	-	-	353	-				
Critical Hdwy	-	-	4.12	-	6.42	6.22				
Critical Hdwy Stg 1	-	-	-	-	5.42	-				
Critical Hdwy Stg 2	-	-	-	-	5.42	-				
Follow-up Hdwy	-	-	2.218	-	3.518	3.318				
Pot Cap-1 Maneuver	-	-	1496	-	567	969				
Stage 1	-	-	-	-	927	-				
Stage 2	-	-	-	-	711	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1496	-	531	969				
Mov Cap-2 Maneuver	-	-	-	-	531	-				
Stage 1	-	-	-	-	927	-				
Stage 2	-	-	-	-	665	-				
Approach	EB		WB		NB					
HCM Control Delay, s	0		2.4		9.3					
HCM LOS	A		A		A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT					
Capacity (veh/h)	919	-	-	1496	-					
HCM Lane V/C Ratio	0.082	-	-	0.057	-					
HCM Control Delay (s)	9.3	-	-	7.6	0					
HCM Lane LOS	A	-	-	A	A					
HCM 95th-tile Q(veh)	0.3	-	-	0.2	-					

HCM 2010 Signalized Intersection Summary  
 1.: Seal Beach Boulevard & I-405 SB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	161	28	18	596	41	550	10	1211	298	472	1225	143
Traffic Volume (veh/h)	161	28	18	596	41	550	10	1211	298	472	1225	143
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pBt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/h/ln	161	28	18	625	0	0	10	1211	298	472	1225	143
Adj Flow Rate, veh/h	0	2	0	2	0	1	1	3	1	1	3	1
Adj No. of Lanes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh. %	118	70	45	694	0	310	21	1330	414	489	2753	857
Cap. veh/h	0.07	0.07	0.07	0.20	0.00	0.00	0.01	0.26	0.26	0.37	0.72	0.72
Arrive On Green	1774	1061	682	3548	0	1583	1774	5085	1583	1774	5085	1583
Sat Flow, veh/h	161	0	46	625	0	0	10	1211	298	472	1225	143
Grp Volume(v), veh/h	1774	0	1742	1774	0	1583	1774	1695	1583	1774	1695	1583
Grp Sat Flow(s), veh/h/ln	7.3	0.0	2.8	18.9	0.0	0.0	0.6	25.4	18.8	28.7	10.9	3.2
Q Serve(g, s)	7.3	0.0	2.8	18.9	0.0	0.0	0.6	25.4	18.8	28.7	10.9	3.2
Cycle Q Clear(g, c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	1.37	0.00	0.40	0.90	0.00	0.00	0.47	0.91	0.72	0.97	0.44	0.17
Lane Grp Cap(c), veh/h	118	0	116	694	0	310	21	1330	414	489	2753	857
V/C Ratio(X)	118	0	116	748	0	334	81	1350	420	489	2753	857
Avail Cap(c, a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Upstream Filter(I)	51.4	0.0	49.2	43.2	0.0	0.0	54.0	39.4	37.0	34.3	8.6	7.5
Uniform Delay (d), s/veh	210.2	0.0	2.2	13.4	0.0	0.0	15.3	10.9	10.3	29.3	0.5	0.4
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	10.4	0.0	1.4	10.6	0.0	0.0	0.4	13.2	9.4	17.9	5.0	1.4
%ile BackOfQ(50%), veh/ln	261.5	0.0	51.4	56.5	0.0	0.0	69.3	50.3	47.3	63.6	9.0	7.9
LnGrp Delay(d), s/veh	F	D	E	E	E	E	D	D	D	E	A	A
LnGrp LOS	F	D	E	E	E	E	D	D	D	E	A	A
Approach Vol, veh/h	207			625			1519			1840		
Approach Delay, s/veh	214.8			56.5			49.8			22.9		
Approach LOS	F			E			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	36.1	34.6		12.0	5.3	65.4		27.3				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2				
Max Q Clear Time (g_c+I), s	30.7	27.4		9.3	2.6	12.9		20.9				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	13.9		0.6				
Intersection Summary	47.2											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary  
 2.: Seal Beach Boulevard & I-405 NB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	10	9	8	389	5	640	16	1501	413	293	1448	266
Traffic Volume (veh/h)	10	9	8	389	5	640	16	1501	413	293	1448	266
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pBt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/h/ln	161	28	18	625	0	0	10	1211	298	472	1225	143
Adj Flow Rate, veh/h	0	2	0	2	0	1	1	3	1	1	3	1
Adj No. of Lanes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh. %	45	48	40	868	0	775	647	2079	647	242	1733	540
Cap. veh/h	0.03	0.03	0.03	0.24	0.00	0.24	0.38	0.82	0.00	0.14	0.34	0.34
Arrive On Green	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Sat Flow, veh/h	10	9	8	389	0	643	16	1501	0	293	1448	266
Grp Volume(v), veh/h	1774	0	1742	1774	0	1583	1721	1695	1583	1774	1695	1583
Grp Sat Flow(s), veh/h/ln	7.3	0.0	2.8	18.9	0.0	0.0	0.6	25.4	18.8	28.7	10.9	3.2
Q Serve(g, s)	7.3	0.0	2.8	18.9	0.0	0.0	0.6	25.4	18.8	28.7	10.9	3.2
Cycle Q Clear(g, c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	1.37	0.00	0.40	0.90	0.00	0.00	0.47	0.91	0.72	0.97	0.44	0.17
Lane Grp Cap(c), veh/h	118	0	116	694	0	310	21	1330	414	489	2753	857
V/C Ratio(X)	118	0	116	748	0	334	81	1350	420	489	2753	857
Avail Cap(c, a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Upstream Filter(I)	51.4	0.0	49.2	43.2	0.0	0.0	54.0	39.4	37.0	34.3	8.6	7.5
Uniform Delay (d), s/veh	210.2	0.0	2.2	13.4	0.0	0.0	15.3	10.9	10.3	29.3	0.5	0.4
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	10.4	0.0	1.4	10.6	0.0	0.0	0.4	13.2	9.4	17.9	5.0	1.4
%ile BackOfQ(50%), veh/ln	261.5	0.0	51.4	56.5	0.0	0.0	69.3	50.3	47.3	63.6	9.0	7.9
LnGrp Delay(d), s/veh	F	D	E	E	E	E	D	D	D	E	A	A
LnGrp LOS	F	D	E	E	E	E	D	D	D	E	A	A
Approach Vol, veh/h	27			1032			1517			2007		
Approach Delay, s/veh	54.7			40.2			8.9			57.4		
Approach LOS	D			D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	36.1	34.6		12.0	5.3	65.4		27.3				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2				
Max Q Clear Time (g_c+I), s	30.7	27.4		9.3	2.6	12.9		20.9				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	13.9		0.6				
Intersection Summary	37.4											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS	D											
Notes												



Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #3 Seal Beach Blvd/Lampson Ave  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.806  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 68 Level Of Service: D

Street Name: Seal Beach Blvd East Bound West Bound  
 Approach: North Bound South Bound Lampson Ave  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Protected	Protected	Protected	Permitted
Rights:	Ovl	Include	Include	Ovl	Ovl
Min. Green:	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	0

Volume Module:  
 Base Vol: 0 1724 394 564 1626 0 0 0 0 394 0 625  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 0 1724 394 564 1626 0 0 0 0 394 0 625  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 0 1724 394 564 1626 0 0 0 0 394 0 625  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 1724 394 564 1626 0 0 0 0 394 0 625  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 0 1724 394 564 1626 0 0 0 0 394 0 625  
 OvlAdjVol: 0 0 0 0 0 0 0 0 0 0 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
 Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:  
 Vol/Sat: 0.00 0.34 0.23 0.17 0.32 0.00 0.00 0.00 0.00 0.12 0.00 0.37  
 OvlAdjV/S: 0.00 0.34 0.23 0.17 0.32 0.00 0.00 0.00 0.00 0.12 0.00 0.37  
 Crit Moves: \*\*\*\*

Level of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #4 Seal Beach Blvd/St. Cloud Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.675  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 47 Level Of Service: B

Street Name: Seal Beach Blvd East Bound West Bound  
 Approach: North Bound South Bound St. Cloud Dr  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Protected	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Include	Include	Ovl	Include	Include
Min. Green:	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1	0	2

Volume Module:  
 Base Vol: 398 1796 188 19 1538 79 120 2 439 191 38 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 398 1796 188 19 1538 79 120 2 439 191 38 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 398 1796 188 19 1538 79 120 2 439 191 38 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 398 1796 188 19 1538 79 120 2 439 191 38 5  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 398 1796 188 19 1538 79 120 2 439 191 38 5  
 OvlAdjVol: 0 0 0 0 0 0 0 0 0 0 0

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Lanes: 2.00 2.72 2.88 1.00 2.85 0.15 0.98 0.02 2.00 1.64 0.32 0.04  
 Final Sat.: 3400 4617 483 1700 4851 249 1672 28 3400 2775 552 73

Capacity Analysis Module:  
 Vol/Sat: 0.12 0.39 0.39 0.01 0.32 0.32 0.07 0.07 0.13 0.07 0.07 0.07  
 OvlAdjV/S: 0.12 0.39 0.39 0.01 0.32 0.32 0.07 0.07 0.13 0.07 0.07 0.07  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.875  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 89 Level Of Service: D

Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:  
 Base Vol: 316 1403 118 101 1200 164 128 91 266 189 97 96  
 Growth 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  
 Initial Base: 316 1403 118 101 1200 164 128 91 266 189 97 96  
 User 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  
 PHF 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  
 PHF Volume: 316 1403 118 101 1200 164 128 91 266 189 97 96  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 316 1403 118 101 1200 164 128 91 266 189 97 96  
 PCE 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  
 MLF 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  
 Final Volume: 316 1403 118 101 1200 164 128 91 266 189 97 96

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 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  
 Adj: 1.00 2.77 0.23 1.00 2.64 0.36 1.00 0.25 0.75 1.00 0.50 0.50  
 Final Sat.: 1700 4704 396 1700 4487 613 1700 433 1267 1700 854 846

Capacity Analysis Module:  
 Vol/Sat: 0.19 0.30 0.30 0.06 0.27 0.27 0.08 0.21 0.21 0.11 0.11 0.11  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.744  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 56 Level Of Service: C

Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:  
 Base Vol: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 243 1585 16 27 1540 271 231 4 190 21 2 15

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.97 0.03 1.00 2.55 0.45 1.00 0.02 0.98 1.00 0.12 0.88  
 Final Sat.: 1700 5049 51 1700 4337 763 1700 35 1665 1700 200 1500

Capacity Analysis Module:  
 Vol/Sat: 0.14 0.31 0.31 0.02 0.36 0.36 0.14 0.11 0.11 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #5 Seal Beach Blvd/Towne Center Dr  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.875  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 89 Level Of Service: D

Street Name: Seal Beach Blvd Towne Center Dr  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:  
 Base Vol: 316 1403 118 101 1200 164 128 91 266 189 97 96  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 316 1403 118 101 1200 164 128 91 266 189 97 96  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 316 1403 118 101 1200 164 128 91 266 189 97 96  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 316 1403 118 101 1200 164 128 91 266 189 97 96  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 316 1403 118 101 1200 164 128 91 266 189 97 96

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.77 0.23 1.00 2.64 0.36 1.00 0.25 0.75 1.00 0.50 0.50  
 Final Sat.: 1700 4704 396 1700 4487 613 1700 433 1267 1700 854 846

Capacity Analysis Module:  
 Vol/Sat: 0.19 0.30 0.30 0.06 0.27 0.27 0.08 0.21 0.21 0.11 0.11 0.11  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.744  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 56 Level Of Service: C

Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:  
 Base Vol: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 243 1585 16 27 1540 271 231 4 190 21 2 15

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.97 0.03 1.00 2.55 0.45 1.00 0.02 0.98 1.00 0.12 0.88  
 Final Sat.: 1700 5049 51 1700 4337 763 1700 35 1665 1700 200 1500

Capacity Analysis Module:  
 Vol/Sat: 0.14 0.31 0.31 0.02 0.36 0.36 0.14 0.11 0.11 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*

Level Of Service Computation Report  
 ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)  
 Intersection #6 Seal Beach Blvd/Rossmoor Center Way  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.744  
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 56 Level Of Service: C

Street Name: Seal Beach Blvd Rossmoor Center Way  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Include	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:  
 Base Vol: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Base: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 243 1585 16 27 1540 271 231 4 190 21 2 15  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Volume: 243 1585 16 27 1540 271 231 4 190 21 2 15

Saturation Flow Module:  
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
 Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Adj: 1.00 2.97 0.03 1.00 2.55 0.45 1.00 0.02 0.98 1.00 0.12 0.88  
 Final Sat.: 1700 5049 51 1700 4337 763 1700 35 1665 1700 200 1500

Capacity Analysis Module:  
 Vol/Sat: 0.14 0.31 0.31 0.02 0.36 0.36 0.14 0.11 0.11 0.01 0.01 0.01  
 Crit Moves: \*\*\*\*



HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection	8.8												
Intersection Delay, s/veh	A												
Intersection LOS	A												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBR	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	38	5	41	0	4	6	5	0	41	196	8	8
Future Vol, veh/h	0	38	5	41	0	4	6	5	0	41	196	8	8
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	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	5	41	0	4	6	5	0	41	196	8	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0

Approach	EB	WB	WB	NB
Opposing Approach	WB	EB	WB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	EB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	WB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.6	8.3	8.3	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	29%	0%	45%	27%	6%	0%
Vol Thru, %	71%	92%	6%	40%	94%	85%
Vol Right, %	0%	8%	49%	33%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	139	106	84	15	138	153
LT Vol	41	0	38	4	8	0
Through Vol	98	98	5	6	130	130
RT Vol	0	8	41	5	0	23
Lane Flow Rate	139	106	84	15	138	152
Geometry Grp	7	7	2	2	7	7
Degree of Utlr (X)	0.2	0.147	0.115	0.021	0.192	0.208
Departure Headway (Hd)	5.19	4.988	4.947	5.111	5.035	4.899
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	692	719	724	698	714	734
Service Time	2.919	2.717	2.982	3.156	2.762	2.626
HCM Lane V/C Ratio	0.201	0.147	0.116	0.021	0.193	0.207
HCM Control Delay	9.2	8.6	8.6	8.3	9	8.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.4	0.1	0.7	0.8

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection	8.8												
Intersection Delay, s/veh	A												
Intersection LOS	A												
Movement	SBU	SBL	SBT	SBR									
Traffic Vol, veh/h	0	8	259	23									
Future Vol, veh/h	0	8	259	23									
Peak Hour Factor	1.00	1.00	1.00	1.00									
Heavy Vehicles, %	2	2	2	2									
Mvmt Flow	0	8	259	23									
Number of Lanes	0	0	2	0									

Approach	SB	SB
Opposing Approach	NB	NB
Opposing Lanes	2	2
Conflicting Approach Left	WB	WB
Conflicting Lanes Left	1	1
Conflicting Approach Right	EB	EB
Conflicting Lanes Right	1	1
HCM Control Delay	8.9	8.9
HCM LOS	A	A

Lane

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/5/2016

Intersection	Intersection Delay, s/veh 9.7															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	46	47	69	0	22	58	49	0	51	142	34	0	50	176	36
Future Vol, veh/h	0	46	47	69	0	22	58	49	0	51	142	34	0	50	176	36
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	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	46	47	69	0	22	58	49	0	51	142	34	0	50	176	36
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2
Approach	EB			WB			NB			SB						
Opposing Approach	WB			EB			NB			SB						
Opposing Lanes	1			1			2			2						
Conflicting Approach Left	SB			NB			EB			WB						
Conflicting Lanes Left	2			2			1			1						
Conflicting Approach Right	NB			SB			WB			EB						
Conflicting Lanes Right	2			2			1			1						
HCM Control Delay	9.8			9.5			9.6			9.8						
HCM LOS	A			A			A			A						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection	Intersection Delay, s/veh 9.1															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR				
Traffic Vol, veh/h	0	1	16	4	0	126	22	76	0	3	80	103				
Future Vol, veh/h	0	1	16	4	0	126	22	76	0	3	80	103				
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				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	1	16	4	0	126	22	76	0	3	80	103				
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0	2				
Approach	EB			WB			NB			SB						
Opposing Approach	WB			EB			NB			SB						
Opposing Lanes	2			1			2			2						
Conflicting Approach Left	SB			NB			EB			WB						
Conflicting Lanes Left	2			2			1			1						
Conflicting Approach Right	NB			SB			WB			EB						
Conflicting Lanes Right	2			2			2			2						
HCM Control Delay	8.8			9.5			8.7			8.7						
HCM LOS	A			A			A			A						

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	7%	0%	5%	5%	85%	0%	44%	0%
Vol Thru, %	93%	28%	76%	15%	0%	56%	96%	96%
Vol Right, %	0%	72%	19%	0%	100%	0%	4%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	43	143	21	148	76	89	52	52
LT Vol	3	0	1	126	0	39	0	0
Through Vol	40	40	16	22	0	50	50	50
RT Vol	0	103	4	0	76	0	2	2
Lane Flow Rate	43	143	21	148	76	88	52	52
Geometry Grp	7	7	6	7	7	7	7	7
Degree of Utl (X)	0.064	0.192	0.032	0.238	0.098	0.137	0.076	0.076
Departure Headway (Hd)	5.376	4.833	5.532	5.783	4.652	5.593	5.343	5.343
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	665	739	644	620	768	639	668	668
Service Time	3.122	2.579	3.596	3.529	2.398	3.342	3.093	3.093
HCM Lane V/C Ratio	0.065	0.194	0.033	0.239	0.099	0.138	0.078	0.078
HCM Control Delay	8.5	8.7	8.8	10.3	7.9	9.2	8.5	8.5
HCM Lane LOS	A	A	A	B	A	A	A	A
HCM 95th-ile Q	0.2	0.7	0.1	0.9	0.3	0.5	0.2	0.2

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection	SBU	SBL	SBT	SBR
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	39	99	2
Future Vol, veh/h	0	39	99	2
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	39	99	2
Number of Lanes	0	0	2	0
Approach	SB			
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	2			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	8.9			
HCM LOS	A			

HCM 2010 AWSC

12: West Road & Rossmore Center Way

12/5/2016

Intersection	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Intersection Delay, s/veh	7.8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	90	23	0	11	129	0	34	19
Future Vol, veh/h	0	90	23	0	11	129	0	34	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	90	23	0	11	129	0	34	19
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB	WB		WB		EB	NB		
Opposing Approach	WB			EB					
Opposing Lanes	1			1			0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			1		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			1		
HCM Control Delay	7.7			8			7.7		
HCM LOS	A			A			A		
Lane	NBU	EBU	NBU	WBU	WBU	NBU			
Vol Left, %	64%	0%	8%						
Vol Thru, %	0%	80%	92%						
Vol Right, %	36%	20%	0%						
Sign Control	Stop	Stop	Stop						
Traffic Vol by Lane	53	113	140						
LT Vol	34	0	11						
Through Vol	0	90	129						
RT Vol	19	23	0						
Lane Flow Rate	53	113	140						
Geometry Grp	1	1	1						
Degree of Util (X)	0.065	0.126	0.161						
Departure Headway (Hd)	4.394	4.01	4.128						
Convergence, Y/N	Yes	Yes	Yes						
Cap	820	885	862						
Service Time	2.394	2.078	2.186						
HCM Lane V/C Ratio	0.065	0.128	0.162						
HCM Control Delay	7.7	7.7	8						
HCM Lane LOS	A	A	A						
HCM 95th-ile Q	0.2	0.4	0.6						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 25																
Intersection LOS C																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR	
Traffic Vol, veh/h	0	23	160	39	0	234	143	116	0	47	70	235	0	105	66	26
Future Vol, veh/h	0	23	160	39	0	234	143	116	0	47	70	235	0	105	66	26
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	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	160	39	0	234	143	116	0	47	70	235	0	105	66	26
Number of Lanes	0	0	2	0	0	0	1	0	0	0	0	1	0	0	0	1
Approach																
	EB	WB	EB	WB	EB	WB	EB	WB	NB	NB	SB	SB	NB	NB	SB	SB
Opposing Approach	WB	EB	WB	EB	WB	EB	WB	EB	SB	SB	EB	EB	WB	NB	NB	WB
Opposing Lanes	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Conflicting Approach Left	SB	NB	SB	NB	SB	NB	SB	NB	WB	WB	EB	EB	WB	WB	EB	EB
Conflicting Lanes Left	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Right	NB	SB	NB	SB	NB	SB	NB	SB	WB	WB	EB	EB	WB	WB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HCM Control Delay	12.3	38.6	12.3	38.6	12.3	38.6	12.3	38.6	19.7	19.7	15	15	15	15	15	15
HCM LOS	B	E	B	E	B	E	B	E	C	C	B	B	B	B	B	B
Lane																
	NBLn1	EBLn1	EBLn1	EBLn2	WBLn1	WBLn1	WBLn1	WBLn1	NBLn1	NBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1
Vol Left, %	13%	22%	0%	47%	53%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	20%	78%	67%	29%	34%	67%	29%	34%	0%	0%	0%	0%	0%	0%	0%	0%
Vol Right, %	67%	0%	33%	24%	13%	67%	0%	13%	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	352	103	119	493	197	352	103	119	493	197	352	103	119	493	197	352
LT Vol	47	23	0	234	105	47	23	0	234	105	47	23	0	234	105	47
Through Vol	70	80	80	143	66	70	80	80	143	66	70	80	80	143	66	70
RT Vol	235	0	39	116	26	235	0	39	116	26	235	0	39	116	26	235
Lane Flow Rate	352	103	119	493	197	352	103	119	493	197	352	103	119	493	197	352
Geometry Grp	2	7	7	5	2	2	7	7	5	2	2	7	7	5	2	2
Degree of Utl (X)	0.625	0.216	0.238	0.872	0.394	0.625	0.216	0.238	0.872	0.394	0.625	0.216	0.238	0.872	0.394	0.625
Departure Headway (Hd)	6.397	7.551	7.201	6.365	7.196	6.397	7.551	7.201	6.365	7.196	6.397	7.551	7.201	6.365	7.196	6.397
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	560	473	495	567	496	560	473	495	567	496	560	473	495	567	496	560
Service Time	4.479	5.347	4.996	4.439	5.293	4.479	5.347	4.996	4.439	5.293	4.479	5.347	4.996	4.439	5.293	4.479
HCM Lane V/C Ratio	0.629	0.218	0.24	0.869	0.397	0.629	0.218	0.24	0.869	0.397	0.629	0.218	0.24	0.869	0.397	0.629
HCM Control Delay	19.7	12.4	12.3	38.6	15	19.7	12.4	12.3	38.6	15	19.7	12.4	12.3	38.6	15	19.7
HCM Lane LOS	C	B	B	E	B	C	B	B	E	B	C	B	B	E	B	C
HCM 95th-ile Q	4.3	0.8	0.9	9.8	1.9	4.3	0.8	0.9	9.8	1.9	4.3	0.8	0.9	9.8	1.9	4.3

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection																
Intersection Delay, s/veh 17.9																
Intersection LOS C																
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR						
Traffic Vol, veh/h	0	140	431	0	76	108	0	371	57	0						
Future Vol, veh/h	0	140	431	0	76	108	0	371	57	0						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2						
Mvmt Flow	0	140	431	0	76	108	0	371	57	0						
Number of Lanes	0	1	1	0	1	0	0	0	0	1						
Approach																
	WB	WB	NB	NB	SB	SB	NB	SB	SB	SB						
Opposing Approach	0	0	1	1	1	1	1	1	1	1						
Opposing Lanes	0	0	1	1	1	1	1	1	1	1						
Conflicting Approach Left	NB	NB	0	0	WB	WB	0	0	0	0						
Conflicting Lanes Left	1	1	0	0	2	2	0	0	0	0						
Conflicting Approach Right	SB	SB	WB	WB	0	0	0	0	0	0						
Conflicting Lanes Right	1	1	2	2	0	0	0	0	0	0						
HCM Control Delay	17.3	17.3	11.3	11.3	21.5	21.5	0	0	0	0						
HCM LOS	C	C	B	B	C	C	C	C	C	C						
Lane																
	NBLn1	WBLn1	WBLn2	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1						
Vol Left, %	0%	100%	0%	87%	41%	0%	0%	13%	59%	0%	100%	0%	0%	0%	0%	0%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	184	140	431	428	184	140	431	428	184	140	431	428	184	140	431	428
LT Vol	0	140	0	371	0	0	0	0	0	0	0	0	0	0	0	0
Through Vol	76	0	0	57	76	0	0	57	76	0	0	57	76	0	0	57
RT Vol	108	0	431	0	108	0	431	0	108	0	431	0	108	0	431	0
Lane Flow Rate	184	140	431	428	184	140	431	428	184	140	431	428	184	140	431	428
Geometry Grp	2	7	7	2	2	7	7	2	2	7	7	2	2	7	7	2
Degree of Utl (X)	0.297	0.265	0.669	0.699	0.297	0.265	0.669	0.699	0.297	0.265	0.669	0.699	0.297	0.265	0.669	0.699
Departure Headway (Hd)	5.805	6.805	5.587	5.883	5.805	6.805	5.587	5.883	5.805	6.805	5.587	5.883	5.805	6.805	5.587	5.883
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	616	528	647	612	616	528	647	612	616	528	647	612	616	528	647	612
Service Time	3.87	4.555	3.336	3.934	3.87	4.555	3.336	3.934	3.87	4.555	3.336	3.934	3.87	4.555	3.336	3.934
HCM Lane V/C Ratio	0.299	0.265	0.666	0.699	0.299	0.265	0.666	0.699	0.299	0.265	0.666	0.699	0.299	0.265	0.666	0.699
HCM Control Delay	11.3	12	19	21.5	11.3	12	19	21.5	11.3	12	19	21.5	11.3	12	19	21.5
HCM Lane LOS	B	B	C	C	B	B	C	C	B	B	C	C	B	B	C	C
HCM 95th-ile Q	1.2	1.1	5.1	5.6	1.2	1.1	5.1	5.6	1.2	1.1	5.1	5.6	1.2	1.1	5.1	5.6

Intersection		EBT		EBR		WBL		WBT		NBL		NBR	
Int Delay, s/veh		3.7											
<b>Movement</b>													
Traffic Vol, veh/h	108	0	89	135	5	83	5	83	5	83	5	83	83
Future Vol, veh/h	108	0	89	135	5	83	5	83	5	83	5	83	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None	-	None	-	None	-	None	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	0	0	-	-	0	0	-	-	-
Grade, %	0	-	-	-	0	0	-	-	0	0	-	-	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	108	0	89	135	5	83	5	83	5	83	5	83	83
<b>Major/Minor</b>													
Major1	Major2											Minor1	
Conflicting Flow All	0	0	108	0	421	108	0	421	108	0	421	108	108
Stage 1	-	-	-	-	108	-	-	108	-	-	108	-	-
Stage 2	-	-	-	-	313	-	-	313	-	-	313	-	-
Critical Hwy	-	-	-	-	4.12	-	-	4.12	-	-	4.12	-	-
Critical Hwy Stg 1	-	-	-	-	6.42	-	-	6.42	-	-	6.42	-	-
Critical Hwy Stg 2	-	-	-	-	5.42	-	-	5.42	-	-	5.42	-	-
Follow-up Hwy	-	-	-	-	2.218	-	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	-	1483	-	-	1483	-	-	1483	-	-
Stage 1	-	-	-	-	916	-	-	916	-	-	916	-	-
Stage 2	-	-	-	-	741	-	-	741	-	-	741	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	1483	-	-	1483	-	-	1483	-	-
Mov Cap-2 Maneuver	-	-	-	-	551	-	-	551	-	-	551	-	-
Stage 1	-	-	-	-	916	-	-	916	-	-	916	-	-
Stage 2	-	-	-	-	693	-	-	693	-	-	693	-	-
<b>Approach</b>													
EB	WB											NB	
HCM Control Delay, s	0											9.4	
HCM LOS	A											A	
<b>Minor Lane/Major Mvmt</b>													
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT								
Capacity (veh/h)	913	-	-	1483	-								
HCM Lane V/C Ratio	0.107	-	-	0.06	-								
HCM Control Delay (s)	9.4	-	-	7.6	0								
HCM Lane LOS	A	-	-	A	A								
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-								



**APPENDIX C**

**ROADWAY LOS WORKSHEETS**

MULTILANE HIGHWAYS WORKSHEET(Direction 1)													
<table border="0"> <tr> <td><b>Application</b></td> <td>Operational (LOS)</td> <td>Design (N)</td> <td>Planning (p)</td> </tr> <tr> <td><b>Input</b></td> <td>FFS, LOS, N</td> <td>FFS, LOS, N</td> <td>FFS, LOS, N</td> </tr> <tr> <td><b>Current</b></td> <td>LOS, S, D</td> <td>M, S, D</td> <td>% S, D</td> </tr> </table>		<b>Application</b>	Operational (LOS)	Design (N)	Planning (p)	<b>Input</b>	FFS, LOS, N	FFS, LOS, N	FFS, LOS, N	<b>Current</b>	LOS, S, D	M, S, D	% S, D
<b>Application</b>	Operational (LOS)	Design (N)	Planning (p)										
<b>Input</b>	FFS, LOS, N	FFS, LOS, N	FFS, LOS, N										
<b>Current</b>	LOS, S, D	M, S, D	% S, D										
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<b>General Information</b>	NP LSA Associates, Inc. 11/23/2016 All Peak Hour Health Club within the Shops at Rossmoor	Seal Beach Boulevard I405 NB Ramps to Lampson Ave 2016-Current Occupancy											
<b>Site Information</b>	Highway/Direction to Travel From/To Jurisdiction Analysis Year												
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<b>Speed Inputs</b>	Lane Width, LW (ft) Total Lateral Clearance, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	f <sub>hw</sub> (mi/h) f <sub>LC</sub> (mi/h) f <sub>A</sub> (mi/h) f <sub>M</sub> (mi/h) FFS (mi/h)	12.0 12.0 0 45.0 45.0										
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<b>Operations</b>	Operational (LOS) Flow Rate, v <sub>p</sub> (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	Required Number of Lanes, N Flow Rate, v <sub>p</sub> (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS	748 45.0 16.6 B										

MULTILANE HIGHWAYS WORKSHEET(Direction 2)													
<table border="0"> <tr> <td><b>Application</b></td> <td>Operational (LOS)</td> <td>Design (N)</td> <td>Planning (p)</td> </tr> <tr> <td><b>Input</b></td> <td>FFS, LOS, N</td> <td>FFS, LOS, N</td> <td>FFS, LOS, N</td> </tr> <tr> <td><b>Current</b></td> <td>LOS, S, D</td> <td>M, S, D</td> <td>% S, D</td> </tr> </table>		<b>Application</b>	Operational (LOS)	Design (N)	Planning (p)	<b>Input</b>	FFS, LOS, N	FFS, LOS, N	FFS, LOS, N	<b>Current</b>	LOS, S, D	M, S, D	% S, D
<b>Application</b>	Operational (LOS)	Design (N)	Planning (p)										
<b>Input</b>	FFS, LOS, N	FFS, LOS, N	FFS, LOS, N										
<b>Current</b>	LOS, S, D	M, S, D	% S, D										
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<b>Calc Speed Adj and FFS</b>	f <sub>hw</sub> (mi/h) f <sub>LC</sub> (mi/h) f <sub>A</sub> (mi/h) f <sub>M</sub> (mi/h) FFS (mi/h)	12.0 12.0 0 45.0 45.0											
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MULTILANE HIGHWAYS WORKSHEET(Direction 1)																			
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																			
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Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.0  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 1.000  
 Two-way flow rate, (note-1) vp 1563 pc/h  
 Highest directional split proportion (note-2) 953  
 Base percent time-spent-following, BPTSf 74.7 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 74.7 %

Level of Service and Other Performance Measures  
 Level of service, LOS D  
 Volume to capacity ratio, v/c 0.49  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMTf60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/23/2016  
 Analysis Time Period AM Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction 2016-Current Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

		Input Data	
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.71
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length	Access points/mi	8 /mi
	Up/down		

Two-way hourly volume, V 61 / 39 veh/h  
 Directional split 61 / 39 %

		Average Travel Speed
Grade adjustment factor, fg		1.00
PCE for trucks, ET		1.1
PCE for RVs, ER		1.0
Heavy-vehicle adjustment factor,		0.998
Two-way flow rate, (note-1) vp		1567 pc/h
Highest directional split proportion (note-2)		956 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 22.8 mi/h



Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/23/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction 2016-Current Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	ft	Peak-hour factor, PHF	0.73	%
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Recreational vehicles	4	%
Segment length	0.0	mi	% No-passing zones	0	%
Terrain type	Level	mi	Access points/mi	8	/mi
Grade:	Up/down	%			

Two-way hourly volume, V 834 veh/h  
 Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00	mi/h
PCE for trucks, ET	1.7*	veh/h
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.986	pc/h
Two-way flow rate, (note-1) vp	1158	pc/h
Highest directional split proportion (note-2)	706	
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	35	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h
Free-flow speed, FFS	35.0	mi/h
Adjustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	26.0	mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1145 pc/h  
 Highest directional split proportion (note-2) 698  
 Base percent time-spent-following, BPTSF 63.4 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 63.4 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.36
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 632 pc/h  
 Highest directional split proportion (note-2) 360  
 Base percent time-spent-following, BPTSf 42.6 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PFSF 42.6 %

Level of Service and Other Performance Measures

Level of service, LOS B  
 Volume to capacity ratio, v/c 0.20  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:  
 Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/23/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction 2016-Current Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.85	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 536 veh/h  
 Directional split 57 / 43 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	633 pc/h
Highest directional split proportion (note-2)	361 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.1 mi/h

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/23/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction  
 Analysis Year 2016-Current Occupancy  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.81	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 54 / 46 vch/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	760
Highest directional split proportion (note-2)	410
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 29.1 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 758 pc/h  
 Highest directional split proportion (note-2) 409  
 Base percent time-spent-following, BPTSF 48.6 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
 Percent time-spent-following, PTSF 48.6 %

Level of Service and Other Performance Measures

Level of service, LOS B  
 Volume to capacity ratio, v/c 0.24  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period AM Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2016-Current Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

		Input Data	
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.82
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length	Access points/mi	8 /mi
	Up/down		

Two-way hourly volume, V 250 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.7  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.986  
 Two-way flow rate, (note-1) vp 309 pc/h  
 Highest directional split proportion (note-2) 167 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 27.6 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 305 pc/h  
 Highest directional split proportion (note-2) 165  
 Base percent time-spent-following, BPTSF 23.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.4  
 Percent time-spent-following, PTSF 23.9 %

Level of Service and Other Performance Measures

Level of service, LOS A  
 Volume to capacity ratio, v/c 0.10  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																									
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Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction  
 Analysis Year 2016-Current Occupancy  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.91	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 987 veh/h  
 Directional split 51 / 49 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.996 pc/h  
 Two-way flow rate, (note-1) vp 1089 pc/h  
 Highest directional split proportion (note-2) 555

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.5 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1087 pc/h  
 Highest directional split proportion (note-2) 554  
 Base percent time-spent-following, BPTSF 61.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 61.5 %

Level of Service and Other Performance Measures

Level of service, LOS C  
 Volume to capacity ratio, v/c 0.34  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period PM Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction 2016-Current Occupancy  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	Peak-hour factor, PHF	0.87
Shoulder width	6.0 ft	% Trucks and buses	2 %
Lane width	12.0 ft	% Recreational vehicles	4 %
Segment length	0.0 mi	% No-passing zones	0 %
Terrain type	Level	Access points/mi	8 /mi
Grade:	Length		
	Up/down		

Two-way hourly volume, V 53 / 47 %  
Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	798
Highest directional split proportion (note-2)	423 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h

Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	28.8 mi/h

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	789 pc/h
Highest directional split proportion (note-2)	418
Base percent time-spent-following, BPTSF	50.0 %
Adj. for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	50.0 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.25
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction  
 Analysis Year 2016-Current Occupancy  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.80	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 495 veh/h  
 Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	621
Highest directional split proportion (note-2)	348
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.2 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 620 pc/h  
 Highest directional split proportion (note-2) 347  
 Base percent time-spent-following, BPTSF 42.0 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 42.0 %

Level of Service and Other Performance Measures

Level of service, LOS B  
 Volume to capacity ratio, v/c 0.19  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction  
 Analysis Year 2016-Current Occupancy  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 498 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	610
Highest directional split proportion (note-2)	329
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.3 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 609 pc/h  
 Highest directional split proportion (note-2) 329  
 Base percent time-spent-following, BPTSF 41.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 41.5 %

Level of Service and Other Performance Measures

Level of service, LOS B  
 Volume to capacity ratio, v/c 0.19  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 553 pc/h  
 Highest directional split proportion (note-2) 299  
 Base percent time-spent-following, BPTSF 38.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 38.5 %

Level of Service and Other Performance Measures  
 Level of service, LOS A  
 Volume to capacity ratio, v/c 0.17  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2016-Current Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data  
 Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.83  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 458 veh/h  
 Directional split 54 / 46 %

Average Travel Speed  
 Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.7  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.986  
 Two-way flow rate, (note-1) vp 560 pc/h  
 Highest directional split proportion (note-2) 302 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.7 mi/h

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																														
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																						
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Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction  
 Analysis Year 2016-Current Occupancy  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.91	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 966 veh/h  
 Directional split 52 / 48 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.996 pc/h  
 Two-way flow rate, (note-1) vp 1066 pc/h  
 Highest directional split proportion (note-2) 554 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.7 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1064 pc/h  
 Highest directional split proportion (note-2) 553  
 Base percent time-spent-following, BPTSF 60.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 60.8 %

Level of Service and Other Performance Measures

Level of service, LOS C  
 Volume to capacity ratio, v/c 0.33  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction 2016-Current Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	Peak-hour factor, PHF	0.93
Shoulder width	6.0 ft	% Trucks and buses	2 %
Lane width	12.0 ft	% Recreational vehicles	4 %
Segment length	0.0 mi	% No-passing zones	0 %
Terrain type	Level	Access points/mi	8 /mi
Grade:	Length		
	Up/down		

Two-way hourly volume, V 678 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	739 pc/h
Highest directional split proportion (note-2)	399 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 29.3 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 730 pc/h  
 Highest directional split proportion (note-2) 394  
 Base percent time-spent-following, BPTSF 47.4 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 47.4 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.23
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction 2016-Current Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.93	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 459 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	499
Highest directional split proportion (note-2)	269
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 31.1 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 493 pc/h  
 Highest directional split proportion (note-2) 266  
 Base percent time-spent-following, BPTSF 35.2 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTSF 35.3 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Mainway Dr to Bradbury Rd  
Jurisdiction  
Analysis Year 2016-Current Occupancy  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.86	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 414 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.7  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, 0.986  
Two-way flow rate, (note-1) vp 488 pc/h  
Highest directional split proportion (note-2) 264 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 31.2 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 482 pc/h  
Highest directional split proportion (note-2) 260  
Base percent time-spent-following, BPTSF 34.5 %  
Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
Percent time-spent-following, PTSF 34.7 %

Level of Service and Other Performance Measures

Level of service, LOS A  
Volume to capacity ratio, v/c 0.15  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction 2016-Current Occupancy  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 503 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	616
Highest directional split proportion (note-2)	333
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 30 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 25.2 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 615 pc/h  
Highest directional split proportion (note-2) 332  
Base percent time-spent-following, BPTSF 41.8 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 41.8 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																					
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																	
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																							
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LOS: B	Design LOS: B																						



Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Saint Cloud Drive  
From/To Seal Beach Blvd to Yellowtail  
Jurisdiction 2016-Existing Full Occupancy  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.71	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 1110 veh/h  
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate, (note-1) vp	1567 pc/h
Highest directional split proportion (note-2)	956 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 22.8 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.0  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 1.000  
Two-way flow rate, (note-1) vp 1563 pc/h  
Highest directional split proportion (note-2) 953  
Base percent time-spent-following, BPTSF 74.7 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 74.7 %

Level of Service and Other Performance Measures

Level of service, LOS D  
Volume to capacity ratio, v/c 0.49  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction 2016-Existing Full Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.73	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 838 veh/h  
 Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	1164
Highest directional split proportion (note-2)	710
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.0 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1150 pc/h  
 Highest directional split proportion (note-2) 702  
 Base percent time-spent-following, BPTSF 63.6 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 63.6 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.36
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Copa de Oro Dr to Mainway Dr  
Jurisdiction 2016-Existing Full Occupancy  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.85	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 541 veh/h  
Directional split 57 / 43 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	639
Highest directional split proportion (note-2)	364
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 30.0 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fhv 0.998  
Two-way flow rate, (note-1) vp 638 pc/h  
Highest directional split proportion (note-2) 364  
Base percent time-spent-following, BPTSF 42.9 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 42.9 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Mainway Dr to Bradbury Rd  
Jurisdiction  
Analysis Year 2016-Existing Full Occupancy  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.81	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 615 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	762
Highest directional split proportion (note-2)	411
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.1 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 761 pc/h  
Highest directional split proportion (note-2) 411  
Base percent time-spent-following, BPTSF 48.8 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 48.8 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction 2016-Existing Full Occupancy  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 250 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	309
Highest directional split proportion (note-2)	167
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 30 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 27.6 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 305 pc/h  
Highest directional split proportion (note-2) 165  
Base percent time-spent-following, BPTSF 23.5 %  
Adj. for directional distribution and no-passing zones, fd/np 0.4 %  
Percent time-spent-following, PFSF 23.9 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.10
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
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MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																																																																																																																																														
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Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period PM Peak Hour  
Highway Saint Cloud Drive  
From/To Seal Beach Blvd to Yellowtail  
Jurisdiction  
Analysis Year 2016-Existing Full Occupancy  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.91	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 987 veh/h  
Directional split 51 / 49 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	1089 pc/h
Highest directional split proportion (note-2)	555 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM	35	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 26.5 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 1087 pc/h  
Highest directional split proportion (note-2) 554  
Base percent time-spent-following, BPTSF 61.5 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 61.5 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.34
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period PM Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction 2016-Existing Full Occupancy  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.87	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 689 veh/h  
Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	803
Highest directional split proportion (note-2)	426
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 28.8 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 794 pc/h  
Highest directional split proportion (note-2) 421  
Base percent time-spent-following, BPTSF 50.2 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PFSF 50.2 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.25
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value



Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 611 pc/h  
 Highest directional split proportion (note-2) 330  
 Base percent time-spent-following, BPTSF 41.6 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 41.6 %

Level of Service and Other Performance Measures  
 Level of service, LOS B  
 Volume to capacity ratio, v/c 0.19  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction  
 Analysis Year 2016-Existing Full Occupancy  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 500 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	612
Highest directional split proportion (note-2)	330
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.3 mi/h

Phone:  
E-Mail:

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period PM Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction 2016-Existing Full Occupancy  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.83	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 458 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	560
Highest directional split proportion (note-2)	302
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 30 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS	30.0	mi/h
Adjustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	25.7	mi/h

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	553
Highest directional split proportion (note-2)	299
Base percent time-spent-following, BPTSF	38.5
Adj. for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PFSF	38.5
	%

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.17
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																			
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Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 1064 pc/h  
 Highest directional split proportion (note-2) 553  
 Base percent time-spent-following, BPTSF 60.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 60.8 %

Level of Service and Other Performance Measures  
 Level of service, LOS C  
 Volume to capacity ratio, v/c 0.33  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction 2016-Existing Full Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

		Input Data	
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.91
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length	Access points/mi	8
	Up/down		/mi

Two-way hourly volume, V 966 veh/h  
 Directional split 52 / 48 %

		Average Travel Speed
Grade adjustment factor, fg		1.00
PCE for trucks, ET		1.2
PCE for RVs, ER		1.0
Heavy-vehicle adjustment factor,		0.996
Two-way flow rate, (note-1) vp		1066 pc/h
Highest directional split proportion (note-2)		554 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.7 mi/h

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction 2016-Existing Full Occupancy  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.93	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 683 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	745 pc/h
Highest directional split proportion (note-2)	402 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.2 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 736 pc/h  
Highest directional split proportion (note-2) 397 %  
Base percent time-spent-following, BPTSF 47.6 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PTSF 47.6 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.23
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value



Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Copa de Oro Dr to Mainway Dr  
Jurisdiction 2016-Existing Full Occupancy  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.93	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 465 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	507
Highest directional split proportion (note-2)	274
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 31.1 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 501 pc/h  
Highest directional split proportion (note-2) 271  
Base percent time-spent-following, BPTSF 35.6 %  
Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
Percent time-spent-following, PFSF 35.7 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Mainway Dr to Bradbury Rd  
Jurisdiction  
Analysis Year 2016-Existing Full Occupancy  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.86	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 416 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	490
Highest directional split proportion (note-2)	265
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 31.2 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 485 pc/h  
Highest directional split proportion (note-2) 262  
Base percent time-spent-following, BPTSF 34.7 %  
Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
Percent time-spent-following, PTSF 34.8 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.15
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2016-Existing Full Occupancy  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 503 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	616
Highest directional split proportion (note-2)	333
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, V<sub>f</sub> 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.2 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 615 pc/h  
 Highest directional split proportion (note-2) 332  
 Base percent time-spent-following, BPTSF 41.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 41.8 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



MULTILANE HIGHWAYS WORKSHEET(Direction 1)																							
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																						
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Speed, S (mi/h): 45.0	Flow Rate, v <sub>p</sub> (poh):																						
D (pc/mi/ln): 15.0	Max Service Flow Rate (pc/h/ln):																						
LOS: B	Design LOS:																						

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																							
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LOS: B	Design LOS:																						

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.0  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 1.000  
 Two-way flow rate, (note-1) vp 1566 pc/h  
 Highest directional split proportion (note-2) 955  
 Base percent time-spent-following, BPTSF 74.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PFSF 74.8 %

Level of Service and Other Performance Measures  
 Level of service, LOS D  
 Volume to capacity ratio, v/c 0.49  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period AM Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction 2016-Existing Full Occupancy+P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

		Input Data	
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.71
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length	Access points/mi	8 /mi
	Up/down		

Two-way hourly volume, V 61 / 39 vch/h  
 Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.998  
 Two-way flow rate, (note-1) vp 1569 pc/h  
 Highest directional split proportion (note-2) 957 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, V<sub>f</sub> 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 22.8 mi/h

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction 2016-Existing Full Occupancy+P  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.73	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 840 veh/h  
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	1167 pc/h
Highest directional split proportion (note-2)	712 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM	35	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h

Free-flow speed, FFS	35.0	mi/h
Adjustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	25.9	mi/h

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	1153 pc/h
Highest directional split proportion (note-2)	703
Base percent time-spent-following, BPTSF	63.7 %
Adj. for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	63.7 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.36
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction 2016-Existing Full Occupancy+P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.85	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 543 veh/h  
 Directional split 57 / 43 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	641
Highest directional split proportion (note-2)	365
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.0 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 640 pc/h  
 Highest directional split proportion (note-2) 365  
 Base percent time-spent-following, BPTSF 43.0 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 43.0 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Mainway Dr to Bradbury Rd  
Jurisdiction  
Analysis Year 2016-Existing Full Occupancy+P  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.81	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 617 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	765 pc/h
Highest directional split proportion (note-2)	413 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.1 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 763 pc/h  
Highest directional split proportion (note-2) 412  
Base percent time-spent-following, BPTSF 48.9 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PFSF 48.9 %

Level of Service and Other Performance Measures

Level of service, LOS B  
Volume to capacity ratio, v/c 0.24  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction 2016-Existing Full Occupancy+P  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 276 veh/h  
Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	341
Highest directional split proportion (note-2)	181
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM	30	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h

Free-flow speed, FFS 30.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 27.4 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 337 pc/h  
Highest directional split proportion (note-2) 179  
Base percent time-spent-following, BPTSF 25.6 %  
Adj. for directional distribution and no-passing zones, fd/np 0.3  
Percent time-spent-following, PTSF 25.9 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.11
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																			
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period PM Peak Hour  
Highway Saint Cloud Drive  
From/To Seal Beach Blvd to Yellowtail  
Jurisdiction 2016-Existing Full Occupancy+P  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.91	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 994 veh/h  
Directional split 51 / 49 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	1097 pc/h
Highest directional split proportion (note-2)	559 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 26.5 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 1094 pc/h  
Highest directional split proportion (note-2) 558  
Base percent time-spent-following, BPTSF 61.8 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 61.8 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.34
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction 2016-Existing Full Occupancy+P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.87	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 696 veh/h  
 Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	811
Highest directional split proportion (note-2)	430
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 28.7 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 802 pc/h  
 Highest directional split proportion (note-2) 425  
 Base percent time-spent-following, BPTSF 50.6 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
 Percent time-spent-following, PFSF 50.6 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.25
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period PM Peak Hour  
Highway Montecito Road  
From/To Copa de Oro Dr to Mainway Dr  
Jurisdiction 2016-Existing Full Occupancy+P  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.80	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 505 veh/h  
Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	634
Highest directional split proportion (note-2)	355
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 30.1 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 633 pc/h  
Highest directional split proportion (note-2) 354  
Base percent time-spent-following, BPTSF 42.7 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 42.7 %

Level of Service and Other Performance Measures

Level of service, LOS B  
Volume to capacity ratio, v/c 0.20  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction 2016-Existing Full Occupancy+P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 504 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	617
Highest directional split proportion (note-2)	333
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.2 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 616 pc/h  
 Highest directional split proportion (note-2) 333  
 Base percent time-spent-following, BPTSF 41.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 41.8 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2016-Existing Full Occupancy+P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.83	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 522 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	631
Highest directional split proportion (note-2)	341
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, V<sub>f</sub> 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS	30.0	mi/h
Adjustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	25.1	mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 630 pc/h  
 Highest directional split proportion (note-2) 340  
 Base percent time-spent-following, BPTSF 42.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 42.5 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																	
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Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Saint Cloud Drive  
From/To Seal Beach Blvd to Yellowtail  
Jurisdiction 2016-Existing Full Occupancy+P  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.91	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 971 veh/h  
Directional split 52 / 48 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	1071 pc/h
Highest directional split proportion (note-2)	557 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, V<sub>f</sub> 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h  
Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 26.7 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 1069 pc/h  
Highest directional split proportion (note-2) 556  
Base percent time-spent-following, BPTSF 60.9 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PTSF 60.9 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.33
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction 2016-Existing Full Occupancy+P  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.93	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 688 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	750
Highest directional split proportion (note-2)	405
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.2 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 741 pc/h  
Highest directional split proportion (note-2) 400  
Base percent time-spent-following, BPTSF 47.9 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 47.9 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.23
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction 2016-Existing Full Occupancy+P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.93	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 469 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	511
Highest directional split proportion (note-2)	276
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, V<sub>f</sub> 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 31.0 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 505 pc/h  
 Highest directional split proportion (note-2) 273  
 Base percent time-spent-following, BPTSF 35.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1  
 Percent time-spent-following, PFSF 35.9 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction  
 Analysis Year 2016-Existing Full Occupancy+P  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.86	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 419 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	494
Highest directional split proportion (note-2)	267
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 31.2 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 488 pc/h  
 Highest directional split proportion (note-2) 264  
 Base percent time-spent-following, BPTSF 34.9 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTSF 35.0 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.15
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 677 pc/h  
 Highest directional split proportion (note-2) 366  
 Base percent time-spent-following, BPTSf 44.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 44.8 %

Level of Service and Other Performance Measures  
 Level of service, LOS B  
 Volume to capacity ratio, v/c 0.21  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2016-Existing Full Occupancy+P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

Input Data  
 Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.82  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 554 veh/h  
 Directional split 54 / 46 %

Average Travel Speed  
 Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.996  
 Two-way flow rate, (note-1) vp 678 pc/h  
 Highest directional split proportion (note-2) 366 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, V 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 24.7 mi/h

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																																															
<table border="0"> <tr> <td> <table border="0"> <tr> <td>Input</td> <td>FFS, H, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> </tr> <tr> <td>Application</td> <td>Operational (LOS)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> </tr> <tr> <td>Current</td> <td>LOS, S, D</td> <td>H, S, D</td> <td>% S, D</td> <td>% S, D</td> <td>LOS, S, D</td> <td>H, S, D</td> <td>% S, D</td> <td>% S, D</td> <td>% S, D</td> </tr> </table> </td> <td> <table border="0"> <tr> <td>Output</td> <td>FFS, H, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> </tr> <tr> <td>Application</td> <td>Operational (LOS)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> </tr> <tr> <td>Current</td> <td>LOS, S, D</td> <td>H, S, D</td> <td>% S, D</td> <td>% S, D</td> <td>LOS, S, D</td> <td>H, S, D</td> <td>% S, D</td> <td>% S, D</td> <td>% S, D</td> </tr> </table> </td> </tr> </table>		<table border="0"> <tr> <td>Input</td> <td>FFS, H, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> </tr> <tr> <td>Application</td> <td>Operational (LOS)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> </tr> <tr> <td>Current</td> <td>LOS, S, D</td> <td>H, S, D</td> <td>% S, D</td> <td>% S, D</td> <td>LOS, S, D</td> <td>H, S, D</td> <td>% S, D</td> <td>% S, D</td> <td>% S, D</td> </tr> </table>	Input	FFS, H, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	Application	Operational (LOS)	Design (N)	Design (N)	Design (N)	Design (N)	Design (N)	Design (N)	Design (N)	Design (N)	Current	LOS, S, D	H, S, D	% S, D	% S, D	LOS, S, D	H, S, D	% S, D	% S, D	% S, D	<table border="0"> <tr> <td>Output</td> <td>FFS, H, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> <td>FFS, LOS, %</td> </tr> <tr> <td>Application</td> <td>Operational (LOS)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> <td>Design (N)</td> </tr> <tr> <td>Current</td> <td>LOS, S, D</td> <td>H, S, D</td> <td>% S, D</td> <td>% S, D</td> <td>LOS, S, D</td> <td>H, S, D</td> <td>% S, D</td> <td>% S, D</td> <td>% S, D</td> </tr> </table>	Output	FFS, H, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	Application	Operational (LOS)	Design (N)	Design (N)	Design (N)	Design (N)	Design (N)	Design (N)	Design (N)	Design (N)	Current	LOS, S, D	H, S, D	% S, D	% S, D	LOS, S, D	H, S, D	% S, D	% S, D	% S, D
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<table border="0"> <tr> <td><b>Flow Inputs</b></td> <td>                     Volume, V (veh/h)    1799                      AADT(veh/h)    1799                      Peak-Hour Factor, PHF    0.78                      %Trucks and Buses, P<sub>T</sub>    0                      %RVs, P<sub>R</sub>    0                      Peak-Hour Prop of AADT (veh/h)    0                      Peak-Hour Direction Prop, D    Level                      DDHV (veh/h)    0.00                      Length (mi)    0.00                      Driver Type Adjustment    1.00                      Up/Down %    0.00                      Number of Lanes    3                 </td> </tr> <tr> <td><b>Calculate Flow Adjustments</b></td> <td>                     E<sub>R</sub>    1.00                      E<sub>T</sub>    1.5                      f<sub>hv</sub>    1.000                 </td> </tr> <tr> <td><b>Speed Inputs</b></td> <td>                     Lane Width, LW (ft)    12.0                      Total Lateral Clearance, LC (ft)    12.0                      Access Points, A (A/mi)    0                      Median Type, M    45.0                      FFS (measured)    45.0                      Base Free-Flow Speed, BFFS    45.0                 </td> </tr> <tr> <td><b>Operations</b></td> <td>                     Operational (LOS)    Design (N)                      Flow Rate, v<sub>p</sub> (pc/h/ln)    Required Number of Lanes, N                      Speed, S (mi/h)    45.0                      D (pc/mi/ln)    17.1                      LOS    B                 </td> </tr> </table>		<b>Flow Inputs</b>	Volume, V (veh/h)    1799 AADT(veh/h)    1799 Peak-Hour Factor, PHF    0.78 %Trucks and Buses, P <sub>T</sub> 0 %RVs, P <sub>R</sub> 0 Peak-Hour Prop of AADT (veh/h)    0 Peak-Hour Direction Prop, D    Level DDHV (veh/h)    0.00 Length (mi)    0.00 Driver Type Adjustment    1.00 Up/Down %    0.00 Number of Lanes    3	<b>Calculate Flow Adjustments</b>	E <sub>R</sub> 1.00 E <sub>T</sub> 1.5 f <sub>hv</sub> 1.000	<b>Speed Inputs</b>	Lane Width, LW (ft)    12.0 Total Lateral Clearance, LC (ft)    12.0 Access Points, A (A/mi)    0 Median Type, M    45.0 FFS (measured)    45.0 Base Free-Flow Speed, BFFS    45.0	<b>Operations</b>	Operational (LOS)    Design (N) Flow Rate, v <sub>p</sub> (pc/h/ln)    Required Number of Lanes, N Speed, S (mi/h)    45.0 D (pc/mi/ln)    17.1 LOS    B																																																						
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Peak-Hour Direction Prop, D	Level																																							
DDHV (veh/h)	0.00																																							
Driver Type Adjustment	0.00																																							
Driver Type Adjustment	1.00																																							
Number of Lanes	3																																							
<b>Calculate Flow Adjustments</b>																																								
f <sub>p</sub>	1.00																																							
E <sub>R</sub>	1.2																																							
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Lane Width, LW (ft)	12.0																																							
Total Lateral Clearance, LC (ft)	12.0																																							
Access Points, A (A/mi)	0																																							
Median Type, M																																								
FFS (measured)	45.0																																							
Base Free-Flow Speed, BFFS	45.0																																							
<b>Operations</b>																																								
Operational (LOS)																																								
Flow Rate, v <sub>p</sub> (pc/h/ln)	533																																							
Speed, S (mi/h)	45.0																																							
D (pc/mi/ln)	11.8																																							
LOS	B																																							
<b>Design (N)</b>																																								
Required Number of Lanes, N																																								
Flow Rate, v <sub>p</sub> (pc/h)																																								
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E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Saint Cloud Drive  
From/To Seal Beach Blvd to Yellowtail  
Jurisdiction  
Analysis Year 2018 - Opening Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.71	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 1125 veh/h  
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate, (note-1) vp	1588
Highest directional split proportion (note-2)	969

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h  
Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 22.7 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.0  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 1.000  
Two-way flow rate, (note-1) vp 1585 pc/h  
Highest directional split proportion (note-2) 967  
Base percent time-spent-following, BPTSF 75.2 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 75.2 %

Level of Service and Other Performance Measures

Level of service, LOS D  
Volume to capacity ratio, v/c 0.50  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction 2018 - Opening Year  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.73	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 846 veh/h  
 Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00	
PCE for trucks, ET	1.7*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.986	pc/h
Two-way flow rate, (note-1) vp	1175	pc/h
Highest directional split proportion (note-2)	717	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.9 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1161 pc/h  
 Highest directional split proportion (note-2) 708  
 Base percent time-spent-following, BPTSF 64.0 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
 Percent time-spent-following, PTSF 64.0 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.37
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Copa de Oro Dr to Mainway Dr  
Jurisdiction 2018 - Opening Year  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.85	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 546 veh/h  
Directional split 57 / 43 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	645 pc/h
Highest directional split proportion (note-2)	368 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 30.0 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 644 pc/h  
Highest directional split proportion (note-2) 367  
Base percent time-spent-following, BPTSF 43.2 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 43.2 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Mainway Dr to Bradbury Rd  
Jurisdiction  
Analysis Year 2018 - Opening Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.81	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 621 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	770 pc/h
Highest directional split proportion (note-2)	416 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.0 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fhv 0.998  
Two-way flow rate, (note-1) vp 768 pc/h  
Highest directional split proportion (note-2) 415  
Base percent time-spent-following, BPTSF 49.1 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PTSF 49.1 %

Level of Service and Other Performance Measures

Level of service, LOS B  
Volume to capacity ratio, v/c 0.24  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period AM Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction 2018 - Opening Year  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 253 veh/h  
Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	313
Highest directional split proportion (note-2)	166
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 30 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 27.6 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 309 pc/h  
Highest directional split proportion (note-2) 164  
Base percent time-spent-following, BPTSF 23.8 %  
Adj. for directional distribution and no-passing zones, fd/np 0.3 %  
Percent time-spent-following, PTSF 24.1 %

Level of Service and Other Performance Measures

Level of service, LOS A  
Volume to capacity ratio, v/c 0.10  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.





MULTILANE HIGHWAYS WORKSHEET(Direction 1)																									
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Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction  
 Analysis Year 2018 - Opening Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.91	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 1003 veh/h  
 Directional split 51 / 49 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	1107 pc/h
Highest directional split proportion (note-2)	565 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.4 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 1104 pc/h  
 Highest directional split proportion (note-2) 563  
 Base percent time-spent-following, BPTSF 62.1 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 62.1 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.35
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period PM Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction 2018 - Opening Year  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.87	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 696 veh/h  
Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	811
Highest directional split proportion (note-2)	430
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 28.7 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 802 pc/h  
Highest directional split proportion (note-2) 425  
Base percent time-spent-following, BPTSF 50.6 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PTSF 50.6 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.25
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction 2018 - Opening Year  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.80	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 505 veh/h  
 Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	634 pc/h
Highest directional split proportion (note-2)	355 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.1 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 633 pc/h  
 Highest directional split proportion (note-2) 354  
 Base percent time-spent-following, BPTSF 42.7 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 42.7 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction  
 Analysis Year 2018 - Opening Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 505 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	618
Highest directional split proportion (note-2)	334
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.2 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 617 pc/h  
 Highest directional split proportion (note-2) 333  
 Base percent time-spent-following, BPTSF 41.9 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 41.9 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period PM Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2018 - Opening Year  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.83	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 463 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	566
Highest directional split proportion (note-2)	306
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.6 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 559 pc/h  
 Highest directional split proportion (note-2) 302  
 Base percent time-spent-following, BPTSF 38.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PFSF 38.9 %

Level of Service and Other Performance Measures

Level of service, LOS A  
 Volume to capacity ratio, v/c 0.18  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																							
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Phone:  
E-Mail:

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Saint Cloud Drive  
From/To Seal Beach Blvd to Yellowtail  
Jurisdiction 2018 - Opening Year  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data  
Highway class Class 2  
Shoulder width 6.0 ft Peak-hour factor, PHF 0.91  
Lane width 12.0 ft % Trucks and buses 2 %  
Segment length 0.0 mi % Recreational vehicles 4 %  
Terrain type Level % No-passing zones 0 %  
Grade: Length mi Access points/mi 8 /mi  
Up/down %

Two-way hourly volume, V 982 veh/h  
Directional split 52 / 48 %

Average Travel Speed  
Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.2  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, 0.996 pc/h  
Two-way flow rate, (note-1) vp 1083 pc/h  
Highest directional split proportion (note-2) 563 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h  
Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 26.6 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 1081 pc/h  
Highest directional split proportion (note-2) 562  
Base percent time-spent-following, BPTSF 61.3 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTF 61.3 %

Level of Service and Other Performance Measures

Level of service, LOS C  
Volume to capacity ratio, v/c 0.34  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 743 pc/h  
 Highest directional split proportion (note-2) 401  
 Base percent time-spent-following, BPTSf 48.0 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 48.0 %

Level of Service and Other Performance Measures  
 Level of service, LOS B  
 Volume to capacity ratio, v/c 0.23  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.  
 \* These items have been entered or edited to override calculated value

Phone:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction 2018 - Opening Year  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data  
 Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.93  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 690 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.7\*  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.986  
 Two-way flow rate, (note-1) vp 752 pc/h  
 Highest directional split proportion (note-2) 406 pc/h  
 Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 29.2 mi/h

Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/28/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Copa de Oro Dr to Mainway Dr  
Jurisdiction  
Analysis Year 2018 - Opening Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.93	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 470 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	512
Highest directional split proportion (note-2)	276
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 31.0 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 506 pc/h  
Highest directional split proportion (note-2) 273  
Base percent time-spent-following, BPTSF 35.9 %  
Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
Percent time-spent-following, PTSF 36.0 %

Level of Service and Other Performance Measures

Level of service, LOS A  
Volume to capacity ratio, v/c 0.16  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction  
 Analysis Year 2018 - Opening Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.86	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 420 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	495
Highest directional split proportion (note-2)	267
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 31.2 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 489 pc/h  
 Highest directional split proportion (note-2) 264  
 Base percent time-spent-following, BPTSF 34.9 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTSF 35.0 %

Level of Service and Other Performance Measures

Level of service, LOS A  
 Volume to capacity ratio, v/c 0.15  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 621 pc/h  
 Highest directional split proportion (note-2) 335  
 Base percent time-spent-following, BPTSF 42.1 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 42.1 %

Level of Service and Other Performance Measures

Level of service, LOS B  
 Volume to capacity ratio, v/c 0.19  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/28/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2018 - Opening Year  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 508 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	622 pc/h
Highest directional split proportion (note-2)	336 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, V<sub>f</sub> 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.2 mi/h

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LOS: B	Design LOS:																					

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period AM Peak Hour  
Highway Saint Cloud Drive  
From/To Seal Beach Blvd to Yellowtail  
Jurisdiction  
Analysis Year 2018 - Opening Year + P  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.71	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 1127 veh/h  
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate, (note-1) vp	1590 pc/h
Highest directional split proportion (note-2)	970 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h  
Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 22.7 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.0  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 1.000  
Two-way flow rate, (note-1) vp 1587 pc/h  
Highest directional split proportion (note-2) 968  
Base percent time-spent-following, BPTSF 75.2 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PTSF 75.2 %

Level of Service and Other Performance Measures

Level of service, LOS	D
Volume to capacity ratio, v/c	0.50
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction 2018 - Opening Year + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.73	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 848 veh/h  
 Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00	
PCE for trucks, ET	1.7*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.986	pc/h
Two-way flow rate, (note-1) vp	1178	pc/h
Highest directional split proportion (note-2)	719	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM	35	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.9 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1164 pc/h  
 Highest directional split proportion (note-2) 710  
 Base percent time-spent-following, BPTSF 64.1 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 64.1 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.37
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction 2018 - Opening Year + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.85	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 548 veh/h  
 Directional split 57 / 43 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	647
Highest directional split proportion (note-2)	369
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.0 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 646 pc/h  
 Highest directional split proportion (note-2) 368  
 Base percent time-spent-following, BPTSF 43.3 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 43.3 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Mainway Dr to Bradbury Rd  
Jurisdiction  
Analysis Year 2018 - Opening Year + P  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.81	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 54 / 46 vch/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	772
Highest directional split proportion (note-2)	417
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.0 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 771 pc/h  
Highest directional split proportion (note-2) 416  
Base percent time-spent-following, BPTSF 49.2 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 49.2 %

Level of Service and Other Performance Measures

Level of service, LOS B  
Volume to capacity ratio, v/c 0.24  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2018 - Opening Year + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 279 veh/h  
 Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	345
Highest directional split proportion (note-2)	183
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 27.3 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 341 pc/h  
 Highest directional split proportion (note-2) 181  
 Base percent time-spent-following, BPTSF 25.9 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.2 %  
 Percent time-spent-following, PTF 26.1 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.11
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																																																																																																																																																																																																													
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(LOS)    <input type="checkbox"/> Des. (N)    <input type="checkbox"/> Plan. (vp)         </td> </tr> <tr> <td colspan="2"> <table border="0"> <tr> <td colspan="2"><b>Flow Inputs</b></td> </tr> <tr> <td>Volume, V (veh/h)</td> <td>2337</td> </tr> <tr> <td>AADT(veh/h)</td> <td></td> </tr> <tr> <td>Peak-Hour Factor, PHF</td> <td>0.93</td> </tr> <tr> <td>% Trucks and Buses, P<sub>T</sub></td> <td>0</td> </tr> <tr> <td>% RVs, P<sub>R</sub></td> <td>0</td> </tr> <tr> <td>Peak-Hour Prop of AADT (veh/h)</td> <td></td> </tr> <tr> <td>Peak-Hour Direction Prop, D</td> <td></td> </tr> <tr> <td>DDHV (veh/h)</td> <td></td> </tr> <tr> <td>Driver Type Adjustment</td> <td>1.00</td> </tr> <tr> <td>Level</td> <td></td> </tr> <tr> <td>Grade</td> <td>0.00</td> </tr> <tr> <td>Up/Down %</td> <td>0.00</td> </tr> <tr> <td>Number of Lanes</td> <td>3</td> </tr> </table> </td> </tr> <tr> <td colspan="2"> <table border="0"> <tr> <td colspan="2"><b>Calculate Flow Adjustments</b></td> </tr> <tr> <td>E<sub>p</sub></td> <td>1.00</td> </tr> <tr> <td>E<sub>T</sub></td> <td>1.5</td> </tr> <tr> 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Agency or Company: LSA Associates, Inc.	From/To: St. Cloud Drive to Town Center																																																														
Date Performed: 11/29/2016	Jurisdiction:																																																														
Analysis Time Period: PM Peak Hour	Analysis Year: 2018 - Opening Year + P																																																														
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E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction  
 Analysis Year 2018 - Opening Year + P  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2			
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.91
Lane width	12.0	ft	% Trucks and buses	2
Segment length	0.0	mi	% Recreational vehicles	4
Terrain type	Level		% No-passing zones	0
Grade:	Length	mi	Access points/mi	8
	Up/down	%		

Two-way hourly volume, V 1010 veh/h  
 Directional split 51 / 49 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	1114 pc/h
Highest directional split proportion (note-2)	568 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, V<sub>f</sub> 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.4 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1112 pc/h  
 Highest directional split proportion (note-2) 567  
 Base percent time-spent-following, BPTSF 62.4 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 62.4 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.35
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction 2018 - Opening Year + P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.87	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 703 veh/h  
 Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	819
Highest directional split proportion (note-2)	434
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 28.6 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 810 pc/h  
 Highest directional split proportion (note-2) 429  
 Base percent time-spent-following, BPTSF 50.9 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 50.9 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.26
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value



Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction 2018 - Opening Year + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.80	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 510 veh/h  
 Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	640
Highest directional split proportion (note-2)	358
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.0 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 639 pc/h  
 Highest directional split proportion (note-2) 358  
 Base percent time-spent-following, BPTSF 43.0 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 43.0 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction  
 Analysis Year 2018 - Opening Year + P  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 509 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	623
Highest directional split proportion (note-2)	336
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.2 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 622 pc/h  
 Highest directional split proportion (note-2) 336  
 Base percent time-spent-following, BPTSF 42.1 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PFSF 42.1 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction 2018 - Opening Year + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.83	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 527 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	637
Highest directional split proportion (note-2)	344
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.1 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 636 pc/h  
 Highest directional split proportion (note-2) 343  
 Base percent time-spent-following, BPTSF 42.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 42.8 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

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Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction  
 Analysis Year 2018 - Opening Year + P  
 Description Health Club within the Shops at Rossmoor

		Input Data	
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.91
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length	Access points/mi	8 /mi
	Up/down		

Two-way hourly volume, V 987 veh/h  
 Directional split 52 / 48 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.996 pc/h  
 Two-way flow rate, (note-1) vp 1089 pc/h  
 Highest directional split proportion (note-2) 566 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.5 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1087 pc/h  
 Highest directional split proportion (note-2) 565  
 Base percent time-spent-following, BPTSF 61.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 61.5 %

Level of Service and Other Performance Measures

Level of service, LOS C  
 Volume to capacity ratio, v/c 0.34  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction 2018 - Opening Year + P  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.93	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 695 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00	
PCE for trucks, ET	1.7*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.986	pc/h
Two-way flow rate, (note-1) vp	758	pc/h
Highest directional split proportion (note-2)	409	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h  
Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.1 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 749 pc/h  
Highest directional split proportion (note-2) 404  
Base percent time-spent-following, BPTSF 48.2 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PTSF 48.2 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 511 pc/h  
 Highest directional split proportion (note-2) 276  
 Base percent time-spent-following, BPTSf 36.2 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1  
 Percent time-spent-following, PTF 36.3 %

Level of Service and Other Performance Measures  
 Level of service, LOS A  
 Volume to capacity ratio, v/c 0.16  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis  
 NP  
 LSA Associates, Inc.  
 11/29/2016  
 Sat Peak Hour  
 Montecito Road  
 Copa de Oro Dr to Mainway Dr  
 2018 - Opening Year + P  
 Health Club within the Shops at Rossmoor

Input Data  
 Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.93  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 474 veh/h  
 Directional split 54 / 46 %

Average Travel Speed  
 Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.7  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.986  
 Two-way flow rate, (note-1) vp 517 pc/h  
 Highest directional split proportion (note-2) 279 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 31.0 mi/h

Phone:  
E-Mail:

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction  
 Analysis Year 2018 - Opening Year + P  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.86	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 423 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	499
Highest directional split proportion (note-2)	269
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 31.1 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 493 pc/h  
 Highest directional split proportion (note-2) 266  
 Base percent time-spent-following, BPTSF 35.2 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTF 35.3 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period Sat Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction 2018 - Opening Year + P  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.82	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 559 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	684
Highest directional split proportion (note-2)	369
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 30 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 24.7 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 683 pc/h  
Highest directional split proportion (note-2) 369  
Base percent time-spent-following, BPTSF 45.1 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PTSF 45.1 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.21
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																					
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																			
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MULTILANE HIGHWAYS WORKSHEET(Direction 1)																			
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<b>Application</b>	Operational (LOS)	Design (N)	Design (M)	Planning (LOS)	Planning (M)														
<b>Input</b>	FFS, H, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %														
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<input checked="" type="checkbox"/> Oper. (LOS) <input type="checkbox"/> Des. (N) <input type="checkbox"/> Plan. (vp)																			
<b>Flow Inputs</b> Volume, V (veh/h): 1916 AADT(veh/h): 1916 Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P <sub>T</sub> : 0 %RVs, P <sub>R</sub> : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3		<b>Calculate Flow Adjustments</b> $f_p$ : 1.00 $E_R$ : 1.2 $E_T$ : 1.5 $f_{HV}$ : 1.000																	
<b>Speed Inputs</b> Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0		<b>Calc Speed Adj and FFS</b> $f_{w}$ (mi/h): $f_{LC}$ (mi/h): $f_A$ (mi/h): $f_M$ (mi/h): FFS (mi/h): 45.0																	
<b>Operations</b> Operational (LOS): Flow Rate, $v_p$ (pc/h/ln): 638 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.2 LOS: B		<b>Design</b> Design (N): Required Number of Lanes, N: Flow Rate, $v_p$ (pc/h): Max Service Flow Rate (pc/h/ln): Design LOS: B																	

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																			
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<b>Application</b>	Operational (LOS)	Design (N)	Design (M)	Planning (LOS)	Planning (M)														
<b>Input</b>	FFS, H, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %														
<b>Output</b>	LOS, S, D	M, S, D	% S, D	LOS, S, D	M, S, D														
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<input checked="" type="checkbox"/> Oper. (LOS) <input type="checkbox"/> Des. (N) <input type="checkbox"/> Plan. (vp)																			
<b>Flow Inputs</b> Volume, V (veh/h): 1572 AADT(veh/h): 1572 Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P <sub>T</sub> : 0 %RVs, P <sub>R</sub> : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3		<b>Calculate Flow Adjustments</b> $f_p$ : 1.00 $E_R$ : 1.2 $E_T$ : 1.5 $f_{HV}$ : 1.000																	
<b>Speed Inputs</b> Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0		<b>Calc Speed Adj and FFS</b> $f_{w}$ (mi/h): $f_{LC}$ (mi/h): $f_A$ (mi/h): $f_M$ (mi/h): FFS (mi/h): 45.0																	
<b>Operations</b> Operational (LOS): Flow Rate, $v_p$ (pc/h/ln): 524 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.6 LOS: B		<b>Design</b> Design (N): Required Number of Lanes, N: Flow Rate, $v_p$ (pc/h): Max Service Flow Rate (pc/h/ln): Design LOS: B																	







Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period AM Peak Hour  
Highway Saint Cloud Drive  
From/To Seal Beach Blvd to Yellowtail  
Jurisdiction Future (2035) Buildout  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	1.00	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 1219 veh/h  
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate, (note-1) vp	1221 pc/h
Highest directional split proportion (note-2)	745 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 25.5 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.0  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 1.000  
Two-way flow rate, (note-1) vp 1219 pc/h  
Highest directional split proportion (note-2) 744  
Base percent time-spent-following, BPTSF 65.8 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 65.8 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.38
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction Future (2035) Buildout  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2  
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00  
Lane width 12.0 ft % Trucks and buses 2 %  
Segment length 0.0 mi % Recreational vehicles 4 %  
Terrain type Level % No-passing zones 0 %  
Grade: Length mi Access points/mi 8 /mi  
Up/down %

Two-way hourly volume, V 917 veh/h  
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.7\*  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, 0.986  
Two-way flow rate, (note-1) vp 930 pc/h  
Highest directional split proportion (note-2) 567 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 27.8 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 919 pc/h  
Highest directional split proportion (note-2) 561  
Base percent time-spent-following, BPTSF 55.4 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PTSF 55.4 %

Level of Service and Other Performance Measures

Level of service, LOS C  
Volume to capacity ratio, v/c 0.29  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 593 pc/h  
 Highest directional split proportion (note-2) 338  
 Base percent time-spent-following, BPTSF 40.6 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PFSF 40.6 %

Level of Service and Other Performance Measures

Level of service, LOS B  
 Volume to capacity ratio, v/c 0.19  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:  
 Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	1.00	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 592 veh/h  
 Directional split 57 / 43 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	600
Highest directional split proportion (note-2)	342
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h

Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	30.3
	mi/h



Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	1.00	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 673 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	676
Highest directional split proportion (note-2)	365
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 29.8 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 674 pc/h  
 Highest directional split proportion (note-2) 364  
 Base percent time-spent-following, BPTSF 44.7 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 44.7 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.21
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period AM Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction Future (2035) Buildout  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	6.0	ft	Peak-hour factor, PHF	1.00
Shoulder width		12.0	ft	% Trucks and buses	2
Lane width		0.0	mi	% Recreational vehicles	4
Segment length	Level			% No-passing zones	0
Terrain type			mi	Access points/mi	8
Grade:	Up/down		%		

Two-way hourly volume, V 274 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	278
Highest directional split proportion (note-2)	150

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 30 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h  
Free-flow speed, FFS 30.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 27.8 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 275 pc/h  
Highest directional split proportion (note-2) 149  
Base percent time-spent-following, BPTSF 21.5 %  
Adj. for directional distribution and no-passing zones, fd/np 0.5  
Percent time-spent-following, PFSF 21.9 %

Level of Service and Other Performance Measures

Level of service, LOS A  
Volume to capacity ratio, v/c 0.09  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																																																																																																																																																																														
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(vp)         </td> </tr> <tr> <td colspan="2"> <table border="0"> <tr> <td><b>Flow Inputs</b></td> <td>2501</td> <td>Peak-Hour Factor, PHF</td> <td>1.00</td> </tr> <tr> <td>Volume, V (veh/h)</td> <td></td> <td>%Trucks and Buses, P<sub>T</sub></td> <td>0</td> </tr> <tr> <td>AADT(veh/h)</td> <td></td> <td>%RVs, P<sub>R</sub></td> <td>0</td> </tr> <tr> <td>Peak-Hour Prop of AADT (veh/h)</td> <td></td> <td>Level</td> <td></td> </tr> <tr> <td>Peak-Hour Direction Prop, D</td> <td></td> <td>General Terrain:</td> <td></td> </tr> <tr> <td>DDHV (veh/h)</td> <td></td> <td>Length (mi)</td> <td>0.00</td> </tr> <tr> <td>Driver Type Adjustment</td> <td>1.00</td> <td>Grade</td> <td>0.00</td> </tr> <tr> <td></td> <td></td> <td>Up/Down %</td> <td>0.00</td> </tr> <tr> <td></td> <td></td> <td>Number of Lanes</td> <td>3</td> </tr> </table> </td> </tr> <tr> <td colspan="2"> <table border="0"> <tr> <td><b>Calculate Flow Adjustments</b></td> <td></td> <td>E<sub>R</sub></td> <td>1.2</td> </tr> <tr> <td>f<sub>p</sub></td> <td>1.00</td> <td>E<sub>T</sub></td> <td>1.000</td> </tr> <tr> <td>f<sub>T</sub></td> <td>1.5</td> <td></td> <td></td> </tr> </table> </td> </tr> <tr> <td colspan="2"> <table border="0"> <tr> <td><b>Speed Inputs</b></td> <td></td> <td><b>Calc Speed Adj and FFS</b></td> <td></td> </tr> <tr> <td>Lane Width, LW (ft)</td> <td>12.0</td> <td>f<sub>w</sub> (mi/h)</td> <td></td> </tr> <tr> <td>Total Lateral Clearance, LC (ft)</td> <td>12.0</td> <td>f<sub>LC</sub> (mi/h)</td> <td></td> </tr> <tr> <td>Access Points, A (A/mi)</td> <td>0</td> <td>f<sub>A</sub> (mi/h)</td> <td></td> </tr> <tr> <td>Median Type, M</td> <td></td> <td>f<sub>M</sub> (mi/h)</td> <td></td> </tr> <tr> <td>FFS (measured)</td> <td>45.0</td> <td>FFS (mi/h)</td> <td>45.0</td> </tr> <tr> <td>Base Free-Flow Speed, BFFS</td> <td></td> <td></td> <td></td> </tr> </table> </td> </tr> <tr> <td colspan="2"> <table border="0"> <tr> <td><b>Operations</b></td> <td></td> <td><b>Design</b></td> <td></td> </tr> <tr> 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E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	Peak-hour factor, PHF	1.00
Shoulder width	6.0 ft	% Trucks and buses	2 %
Lane width	12.0 ft	% Recreational vehicles	4 %
Segment length	0.0 mi	% No-passing zones	0 %
Terrain type	Level	Access points/mi	8 /mi
Grade:	Up/down		

Two-way hourly volume, V 1087 veh/h  
 Directional split 51 / 49 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	1091 pc/h
Highest directional split proportion (note-2)	556 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.5 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 1089 pc/h  
 Highest directional split proportion (note-2) 555  
 Base percent time-spent-following, BPTSF 61.6 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
 Percent time-spent-following, PTSF 61.6 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.34
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



Phone:  
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Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period PM Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction Future (2035) Buildout  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	Peak-hour factor, PHF	1.00
Shoulder width	6.0 ft	% Trucks and buses	2 %
Lane width	12.0 ft	% Recreational vehicles	4 %
Segment length	0.0 mi	% No-passing zones	0 %
Terrain type	Level	Access points/mi	8 /mi
Grade:	Up/down		

Two-way hourly volume, V 754 veh/h  
Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	765 pc/h
Highest directional split proportion (note-2)	405 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.1 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 756 pc/h  
Highest directional split proportion (note-2) 401  
Base percent time-spent-following, BPTSF 48.5 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 48.5 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	6.0	ft	Peak-hour factor, PHF	1.00
Shoulder width		12.0	ft	% Trucks and buses	2
Lane width		0.0	mi	% Recreational vehicles	4
Segment length	Level			% No-passing zones	0
Terrain type			mi	Access points/mi	8
Grade:	Up/down		%		

Two-way hourly volume, V 547 veh/h  
 Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	555
Highest directional split proportion (note-2)	311

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.7 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 548 pc/h  
 Highest directional split proportion (note-2) 307  
 Base percent time-spent-following, BPTSF 38.2 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTSF 38.3 %

Level of Service and Other Performance Measures

Level of service, LOS A  
 Volume to capacity ratio, v/c 0.17  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 548 pc/h  
 Highest directional split proportion (note-2) 296  
 Base percent time-spent-following, BPTSf 38.2 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTF 38.3 %

Level of Service and Other Performance Measures  
 Level of service, LOS A  
 Volume to capacity ratio, v/c 0.17  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data  
 Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 1.00  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 547 veh/h  
 Directional split 54 / 46 %

Average Travel Speed  
 Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.7  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.986  
 Two-way flow rate, (note-1) vp 555 pc/h  
 Highest directional split proportion (note-2) 300 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.7 mi/h

Phone:  
E-Mail:

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Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	6.0	ft	Peak-hour factor, PHF	1.00
Shoulder width		12.0	ft	% Trucks and buses	2
Lane width		0.0	mi	% Recreational vehicles	4
Segment length			Level	% No-passing zones	0
Terrain type				Access points/mi	8
Grade:					/mi
					%
					Up/down

Two-way hourly volume, V 502 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	509
Highest directional split proportion (note-2)	275
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.1 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 503 pc/h  
 Highest directional split proportion (note-2) 272  
 Base percent time-spent-following, BPTSF 35.7 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1  
 Percent time-spent-following, PTSF 35.8 %

Level of Service and Other Performance Measures

Level of service, LOS A  
 Volume to capacity ratio, v/c 0.16  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																																																																																														
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Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	6.0	ft	Peak-hour factor, PHF	1.00
Shoulder width		12.0	ft	% Trucks and buses	2
Lane width		0.0	mi	% Recreational vehicles	4
Segment length	Level			% No-passing zones	0
Terrain type			mi	Access points/mi	8
Grade:	Up/down		%		

Two-way hourly volume, V 1064 veh/h  
 Directional split 52 / 48 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	1068 pc/h
Highest directional split proportion (note-2)	555 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.7 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 1066 pc/h  
 Highest directional split proportion (note-2) 554  
 Base percent time-spent-following, BPTSF 60.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 60.8 %

Level of Service and Other Performance Measures

Level of service, LOS	C
Volume to capacity ratio, v/c	0.33
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction Future (2035) Buildout  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	Peak-hour factor, PHF	1.00
Shoulder width	6.0 ft	% Trucks and buses	2 %
Lane width	12.0 ft	% Recreational vehicles	4 %
Segment length	0.0 mi	% No-passing zones	0 %
Terrain type	Level	Access points/mi	8 /mi
Grade:	Length		
	Up/down		

Two-way hourly volume, V 747 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	757 pc/h
Highest directional split proportion (note-2)	409 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.1 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 748 pc/h  
Highest directional split proportion (note-2) 404  
Base percent time-spent-following, BPTSF 48.2 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0 %  
Percent time-spent-following, PFSF 48.2 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	6.0	ft	Peak-hour factor, PHF	1.00
Shoulder width		12.0	ft	% Trucks and buses	2
Lane width		0.0	mi	% Recreational vehicles	4
Segment length	Level			% No-passing zones	0
Terrain type			mi	Access points/mi	8
Grade:	Up/down		%		

Two-way hourly volume, V 509 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	516
Highest directional split proportion (note-2)	279

pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 31.0 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 510 pc/h  
 Highest directional split proportion (note-2) 275  
 Base percent time-spent-following, BPTSF 36.1 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTSF 36.2 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

veh-mi  
veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Mainway Dr to Bradbury Rd  
Jurisdiction Future (2035) Buildout  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2	6.0	ft	Peak-hour factor, PHF	1.00
Shoulder width		12.0	ft	% Trucks and buses	2
Lane width		0.0	mi	% Recreational vehicles	4
Segment length			Level	% No-passing zones	0
Terrain type			mi	Access points/mi	8
Grade:			%		
	Up/down				

Two-way hourly volume, V 455 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	461
Highest directional split proportion (note-2)	249

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h  
Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 31.4 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 456 pc/h  
Highest directional split proportion (note-2) 246  
Base percent time-spent-following, BPTSF 33.0 %  
Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
Percent time-spent-following, PTSF 33.2 %

Level of Service and Other Performance Measures

Level of service, LOS A  
Volume to capacity ratio, v/c 0.14  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction Future (2035) Buildout  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	Peak-hour factor, PHF	1.00
Shoulder width	6.0 ft	% Trucks and buses	2 %
Lane width	12.0 ft	% Recreational vehicles	4 %
Segment length	0.0 mi	% No-passing zones	0 %
Terrain type	Level	Access points/mi	8 /mi
Grade:	Length		
	Up/down		

Two-way hourly volume, V 551 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	559 pc/h
Highest directional split proportion (note-2)	302 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.7 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 552 pc/h  
 Highest directional split proportion (note-2) 298  
 Base percent time-spent-following, BPTSF 38.4 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 38.5 %

Level of Service and Other Performance Measures

Level of service, LOS A  
 Volume to capacity ratio, v/c 0.17  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																														
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																														
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Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.0  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 1.000  
 Two-way flow rate, (note-1) vp 1221 pc/h  
 Highest directional split proportion (note-2) 745  
 Base percent time-spent-following, BPTSF 65.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 65.8 %

Level of Service and Other Performance Measures  
 Level of service, LOS C  
 Volume to capacity ratio, v/c 0.38  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:  
 Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data  
 Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 1.00  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 1221 veh/h  
 Directional split 61 / 39 %

Average Travel Speed  
 Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.998  
 Two-way flow rate, (note-1) vp 1223 pc/h  
 Highest directional split proportion (note-2) 746 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 25.5 mi/h



Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period AM Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction Future (2035) Buildout + P  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2  
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00  
Lane width 12.0 ft % Trucks and buses 2 %  
Segment length 0.0 mi % Recreational vehicles 4 %  
Terrain type Level % No-passing zones 0 %  
Grade: Length mi Access points/mi 8 /mi  
Up/down %

Two-way hourly volume, V 919 veh/h  
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.7\*  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, 0.986  
Two-way flow rate, (note-1) vp 932 pc/h  
Highest directional split proportion (note-2) 569 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 27.8 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 921 pc/h  
Highest directional split proportion (note-2) 562  
Base percent time-spent-following, BPTSF 55.5 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTF 55.5 %

Level of Service and Other Performance Measures

Level of service, LOS C  
Volume to capacity ratio, v/c 0.29  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 595 pc/h  
 Highest directional split proportion (note-2) 339  
 Base percent time-spent-following, BPTSf 40.7 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 40.7 %

Level of Service and Other Performance Measures

Level of service, LOS B  
 Volume to capacity ratio, v/c 0.19  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMTf60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:

E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 1.00  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 594 veh/h  
 Directional split 57 / 43 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.996 pc/h  
 Two-way flow rate, (note-1) vp 596 pc/h  
 Highest directional split proportion (note-2) 340 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed: - mi/h  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS

35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.4 mi/h



Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 676 pc/h  
 Highest directional split proportion (note-2) 365  
 Base percent time-spent-following, BPTSf 44.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 44.8 %

Level of Service and Other Performance Measures  
 Level of service, LOS B  
 Volume to capacity ratio, v/c 0.21  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:  
 Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data  
 Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 1.00  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 675 veh/h  
 Directional split 54 / 46 %

Average Travel Speed  
 Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.996  
 Two-way flow rate, (note-1) vp 678 pc/h  
 Highest directional split proportion (note-2) 366 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 29.7 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 301 pc/h  
 Highest directional split proportion (note-2) 160  
 Base percent time-spent-following, BPTSf 23.2 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.3 %  
 Percent time-spent-following, PTF 23.6 %

Level of Service and Other Performance Measures  
 Level of service, LOS A  
 Volume to capacity ratio, v/c 0.09  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period AM Peak Hour  
 Highway Rossmoor Center Way  
 From/To Montecito Rd to E. Internal  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	Peak-hour factor, PHF	1.00
Shoulder width	6.0 ft	% Trucks and buses	2 %
Lane width	12.0 ft	% Recreational vehicles	4 %
Segment length	0.0 mi	% No-passing zones	0 %
Terrain type	Level	Access points/mi	8 /mi
Grade:	Length		
	Up/down		

Two-way hourly volume, V 300 veh/h  
 Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	304 pc/h
Highest directional split proportion (note-2)	161 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 30 mi/h  
 Observed volume, V<sub>f</sub> 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 27.6 mi/h

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																										
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<table border="0"> <tr> <td><b>Flow Inputs</b></td> <td>Peak-Hour Factor, PHF: 1.00</td> </tr> <tr> <td>Volume, V (veh/h): 2528</td> <td>% Trucks and Buses, P<sub>T</sub>: 0</td> </tr> <tr> <td>AADT(veh/h): 0</td> <td>% RVs, P<sub>R</sub>: 0</td> </tr> <tr> <td>Peak-Hour Prop of AADT (veh/h):</td> <td>Level: 0.00</td> </tr> <tr> <td>Peak-Hour Direction Prop, D:</td> <td>General Terrain: 0.00</td> </tr> <tr> <td>DDHV (veh/h):</td> <td>Length (mi): 0.00</td> </tr> <tr> <td>Driver Type Adjustment: 1.00</td> <td>Grade: 0.00</td> </tr> <tr> <td></td> <td>Up/Down %: 0.00</td> </tr> <tr> <td></td> <td>Number of Lanes: 3</td> </tr> </table>		<b>Flow Inputs</b>	Peak-Hour Factor, PHF: 1.00	Volume, V (veh/h): 2528	% Trucks and Buses, P <sub>T</sub> : 0	AADT(veh/h): 0	% RVs, P <sub>R</sub> : 0	Peak-Hour Prop of AADT (veh/h):	Level: 0.00	Peak-Hour Direction Prop, D:	General Terrain: 0.00	DDHV (veh/h):	Length (mi): 0.00	Driver Type Adjustment: 1.00	Grade: 0.00		Up/Down %: 0.00		Number of Lanes: 3							
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Input	FFS, H, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %	FFS, LOS, %																																																						
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Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 1096 pc/h  
 Highest directional split proportion (note-2) 559  
 Base percent time-spent-following, BPTSf 61.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTF 61.8 %

Level of Service and Other Performance Measures  
 Level of service, LOS C  
 Volume to capacity ratio, v/c 0.34  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMTf60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:  
 Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

		Input Data	
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	1.00
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length	Access points/mi	8 /mi
	Up/down		

Two-way hourly volume, V 1094 veh/h  
 Directional split 51 / 49 %

		Average Travel Speed
Grade adjustment factor, fg	1.00	
PCE for trucks, ET	1.2	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.996	
Two-way flow rate, (note-1) vp	1098	pc/h
Highest directional split proportion (note-2)	560	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.5 mi/h

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period PM Peak Hour  
Highway Montecito Road  
From/To Yellowtail Dr to Copa de Oro D  
Jurisdiction Future (2035) Buildout + P  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2  
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00  
Lane width 12.0 ft % Trucks and buses 2 %  
Segment length 0.0 mi % Recreational vehicles 4 %  
Terrain type Level % No-passing zones 0 %  
Grade: Length mi Access points/mi 8 /mi  
Up/down %

Two-way hourly volume, V 761 veh/h  
Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.7\*  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, 0.986  
Two-way flow rate, (note-1) vp 772 pc/h  
Highest directional split proportion (note-2) 409 pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 35 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 29.0 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 763 pc/h  
Highest directional split proportion (note-2) 404  
Base percent time-spent-following, BPTSF 48.9 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PTSF 48.9 %

Level of Service and Other Performance Measures

Level of service, LOS B  
Volume to capacity ratio, v/c 0.24  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 553 pc/h  
 Highest directional split proportion (note-2) 310  
 Base percent time-spent-following, BPTSF 38.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTSF 38.6 %

Level of Service and Other Performance Measures  
 Level of service, LOS A  
 Volume to capacity ratio, v/c 0.17  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:  
 Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Copa de Oro Dr to Mainway Dr  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

		Input Data	
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	1.00
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length	Access points/mi	8 /mi
	Up/down		

Two-way hourly volume, V 552 veh/h  
 Directional split 56 / 44 %

		Average Travel Speed
Grade adjustment factor, fg		1.00
PCE for trucks, ET		1.7
PCE for RVs, ER		1.0
Heavy-vehicle adjustment factor,		0.986
Two-way flow rate, (note-1) vp	560	pc/h
Highest directional split proportion (note-2)	314	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.7 mi/h

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period PM Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year Health Club within the Shops at Rossmoor  
 Description

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	1.00	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 551 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	559
Highest directional split proportion (note-2)	302
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 30.7 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 552 pc/h  
 Highest directional split proportion (note-2) 298  
 Base percent time-spent-following, BPTSF 38.4 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 38.5 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.17
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period PM Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction Future (2035) Buildout + P  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	1.00	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 566 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	574
Highest directional split proportion (note-2)	310
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
Field measured speed, SFM 30 mi/h  
Observed volume, Vf 0 veh/h  
Estimated Free-Flow Speed:  
Base free-flow speed, BFFS - mi/h  
Adj. for lane and shoulder width, fLS - mi/h  
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h  
Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 25.5 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 567 pc/h  
Highest directional split proportion (note-2) 306  
Base percent time-spent-following, BPTSF 39.2 %  
Adj. for directional distribution and no-passing zones, fd/np 0.0  
Percent time-spent-following, PFSF 39.3 %

Level of Service and Other Performance Measures

Level of service, LOS A  
Volume to capacity ratio, v/c 0.18  
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



MULTILANE HIGHWAYS WORKSHEET(Direction 1)																																																																																																																																																																																																																																		
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																																					
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Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 1071 pc/h  
 Highest directional split proportion (note-2) 557  
 Base percent time-spent-following, BPTSF 61.0 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 61.0 %

Level of Service and Other Performance Measures  
 Level of service, LOS C  
 Volume to capacity ratio, v/c 0.34  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

Notes:  
 1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.  
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
 E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Saint Cloud Drive  
 From/To Seal Beach Blvd to Yellowtail  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data  
 Highway class Class 2  
 Shoulder width 6.0 ft Peak-hour factor, PHF 1.00  
 Lane width 12.0 ft % Trucks and buses 2 %  
 Segment length 0.0 mi % Recreational vehicles 4 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 8 /mi  
 Up/down %

Two-way hourly volume, V 1069 veh/h  
 Directional split 52 / 48 %

Average Travel Speed  
 Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.996  
 Two-way flow rate, (note-1) vp 1073 pc/h  
 Highest directional split proportion (note-2) 558 pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h  
 Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 26.7 mi/h

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Yellowtail Dr to Copa de Oro D  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2	6.0	ft	Peak-hour factor, PHF	1.00	
Shoulder width		12.0	ft	% Trucks and buses	2	%
Lane width		0.0	mi	% Recreational vehicles	4	%
Segment length	Level			% No-passing zones	0	%
Terrain type			mi	Access points/mi	8	/mi
Grade:	Up/down		%			

Two-way hourly volume, V 752 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	763
Highest directional split proportion (note-2)	412

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 29.1 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fhv 0.998  
 Two-way flow rate, (note-1) vp 754 pc/h  
 Highest directional split proportion (note-2) 407  
 Base percent time-spent-following, BPTSF 48.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PFSF 48.5 %

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
  2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- \* These items have been entered or edited to override calculated value

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period Sat Peak Hour  
Highway Montecito Road  
From/To Copa de Oro Dr to Mainway Dr  
Jurisdiction Future (2035) Buildout + P  
Analysis Year Health Club within the Shops at Rossmoor  
Description

Input Data

Highway class	Class 2	6.0	ft	Peak-hour factor, PHF	1.00
Shoulder width		12.0	ft	% Trucks and buses	2
Lane width		0.0	mi	% Recreational vehicles	4
Segment length			Level	% No-passing zones	0
Terrain type				Access points/mi	8
Grade:					%
Up/down					/mi

Two-way hourly volume, V 513 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	520 pc/h
Highest directional split proportion (note-2)	281 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM	35	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 31.0 mi/h

Grade adjustment factor, fg 1.00  
PCE for trucks, ET 1.1  
PCE for RVs, ER 1.0  
Heavy-vehicle adjustment factor, fHV 0.998  
Two-way flow rate, (note-1) vp 514 pc/h  
Highest directional split proportion (note-2) 278  
Base percent time-spent-following, BPTSF 36.4 %  
Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
Percent time-spent-following, PTSF 36.4 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
 Agency/Co. LSA Associates, Inc.  
 Date Performed 11/29/2016  
 Analysis Time Period Sat Peak Hour  
 Highway Montecito Road  
 From/To Mainway Dr to Bradbury Rd  
 Jurisdiction Future (2035) Buildout + P  
 Analysis Year  
 Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	1.00	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 458 veh/h  
 Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	464
Highest directional split proportion (note-2)	251
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM 35 mi/h  
 Observed volume, Vf 0 veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS - mi/h  
 Adj. for lane and shoulder width, fLS - mi/h  
 Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 31.4 mi/h

Grade adjustment factor, fg 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.998  
 Two-way flow rate, (note-1) vp 459 pc/h  
 Highest directional split proportion (note-2) 248  
 Base percent time-spent-following, BPTSF 33.2 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.1 %  
 Percent time-spent-following, PTSF 33.3 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.14
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:  
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP  
Agency/Co. LSA Associates, Inc.  
Date Performed 11/29/2016  
Analysis Time Period Sat Peak Hour  
Highway Rossmoor Center Way  
From/To Montecito Rd to E. Internal  
Jurisdiction Future (2035) Buildout + P  
Analysis Year  
Description Health Club within the Shops at Rossmoor

Input Data

Highway class	Class 2				
Shoulder width	6.0	ft	Peak-hour factor, PHF	1.00	
Lane width	12.0	ft	% Trucks and buses	2	%
Segment length	0.0	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	0	%
Grade:	Length	mi	Access points/mi	8	/mi
	Up/down	%			

Two-way hourly volume, V 602 veh/h  
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	604
Highest directional split proportion (note-2)	326
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM	30	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h

Free-flow speed, FFS 30.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h  
Average travel speed, ATS 25.3 mi/h

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	603
Highest directional split proportion (note-2)	326
Base percent time-spent-following, BPTSF	41.1
Adj. for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTF	41.1
	%

Level of Service and Other Performance Measures

Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.



## **APPENDIX D**

### **ACCIDENT DATA**



**REPORT 8 - TOTAL COLLISIONS**

01/01/2015 thru 12/31/2015

Total Count: 177

Jurisdiction(s): Seal Beach

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd 10TH ST		Distance (ft) 450	Direction N	Secondary Rd OCEAN AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 361	Collision Date 20150317	Time 1619	Day TUE																
Primary Collision Factor STRTNG BCKNG		Violation 22106	Collision Type HIT OBJECT		Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20150918																	
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With OTHER MV			Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	23	F	W			BACKING	S	A	0000	DODGE	2010	-	-	-	-	-	G								
2	DRVR	30	M	A			STOPPED	S	C	0000	HONDA	2006	-	-	-	-	-	W								
Primary Rd 10TH ST		Distance (ft) 57	Direction S	Secondary Rd PACIFIC COAST		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 002	Type 0	CalTrans	Badge 362	Collision Date 20150827	Time 1702	Day THU																
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type SIDESWIPE		Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160109																	
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With PKD MV			Lighting DAYLIGHT	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int																
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	53	F	A	HNBD		ENT TRAF	-	A	0800	TOYOT	2014	-	3	N	-	M	G								
2	PRKD	998	-		HNBD		PARKED	W	C	0200	HARLE	2013	-	3	N	-	-	-								
Primary Rd 11TH ST		Distance (ft) 8	Direction N	Secondary Rd OCEAN AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 361	Collision Date 20150819	Time 1648	Day WED																
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type HIT OBJECT		Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160104																	
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With FIXED OBJ			Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	47	F	H	HBD-UI		BACKING	N	-	0000	GMC	2000	A	-	-	-	G	-								
2	PRKD	998	-			null		-	-	0000	CHEVR	2005	-	-	-	-	-	-								
Primary Rd 12TH ST		Distance (ft) 325	Direction S	Secondary Rd LANDING		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 362	Collision Date 20150416	Time 0933	Day THU																
Primary Collision Factor STRTNG BCKNG		Violation 22106	Collision Type REAR END		Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20151002																	
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With PKD MV			Lighting DAYLIGHT	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int																
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	41	M	A	HNBD		BACKING	N	A	0100	FORD	2005	-	3	N	-	M	G								
2	PRKD	998	-		HNBD		PARKED	S	A	0100	VOLKS	1965	-	3	N	-	-	-								

Primary Rd 14TH ST Distance (ft) 7 Direction S Secondary Rd SEAL WY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 257 Collision Date 20150329 Time 2132 Day SUN																										
Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150916																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	M	W	HNBD		BACKING	N	D	2200	FORD	2006	-	3	N	-	M	G	PASS		15	F	3	0	M	G
Primary Rd 1ST ST Distance (ft) 325 Direction N Secondary Rd MARINA DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 300 Collision Date 20150125 Time 1455 Day SUN																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150812																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	37	F	O	HNBD		PROC ST	N	A	0000	TOYOT	2007	-	-	N	-	-	-								
Primary Rd 1ST ST Distance (ft) 574 Direction S Secondary Rd PCH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans Badge 362 Collision Date 20150619 Time 1224 Day FRI																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20151110																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With PKD MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	29	M	W	HNBD		RGT TURN	W	F	2600	GMC	2000	-	3	N	-	M	G								
2	PRKD	998	-		HNBD		PARKED	-	A	0100	HYUND	2010	-	3	N	-	-	-								
Primary Rd 5TH ST Distance (ft) 209 Direction S Secondary Rd PACIFIC COAST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 257 Collision Date 20150113 Time 1748 Day TUE																										
Primary Collision Factor LANE CHANGE Violation 21658A Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20150807																										
Weather1 RAINING Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With PKD MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	85	F	W	HBD-NUI		PROC ST	N	A	0700	LEXUS	2012	-	3	N	-	L	G	PASS		86	F	3	0	L	G
2	PRKD	998	-			null		N	A	0100	JAGUA	2014	-	-	-	-	-	-								
Primary Rd 6TH ST Distance (ft) 295 Direction N Secondary Rd OCEAN AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 423 Collision Date 20151205 Time 0957 Day SAT																										
Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type AUTO/PED Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160120																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With PED Lighting DAYLIGHT Ped Action IN RD, Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	43	M	B	HNBD		BACKING	W	A	0000	FORD	1997	-	-	N	-	G	-								
2	PRKD	998	-				STOPPED	S	A	0000	FORD	2002	-	-	N	-	-	-								
3	PED	44	M	H	HNBD		STOPPED	-	N	0000	-	-	-	N	-	-	-	PED	OTH VIS	44	M	9	3	-	-	-

Primary Rd 6TH ST Distance (ft) 3 Direction N Secondary Rd OCEAN AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 423 Collision Date 20151205 Time 0855 Day SAT													
Primary Collision Factor UNKNOWN Violation Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160225													
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With PKD MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1 DRVR 998 - IMP UNK IMP UNK OTHER - M 0000 - - - M - - -													
2 PRKD 998 - PARKED S A 0000 FORD 2007 - - N - - -													
Primary Rd ALMOND AV Distance (ft) 0 Direction Secondary Rd ALMOND NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 257 Collision Date 20151221 Time 2052 Day MON													
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160225													
Weather1 CLOUDY Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 17 M O HNBD LFT TURN N A 0100 HONDA 2002 - 3 M - M G													
Primary Rd ALMOND AV Distance (ft) 0 Direction Secondary Rd BLUEBELL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20151023 Time 1551 Day FRI													
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160201													
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 22 M W HNBD PROC ST - A 0700 FORD 2003 - 3 N - L G													
Primary Rd ALMOND AV Distance (ft) 33 Direction E Secondary Rd DAHLIA CIR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20151230 Time 1317 Day WED													
Primary Collision Factor UNKNOWN Violation Collision Type HEAD-ON Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160121													
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1 DRVR 87 M W HNBD PROC ST E A 0000 CHEVR 2007 - - M - G - DRVR OTH VIS 87 M 1 0 W -													
Primary Rd ALMOND AV Distance (ft) 246 Direction E Secondary Rd JASMIN CIR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 191 Collision Date 20150614 Time 1059 Day SUN													
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20151110													
Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 60 F H HNBD PROC ST E - 0000 TOYOT 2006 - - N - G -													

Primary Rd ALMOND AV Distance (ft) 60 Direction E Secondary Rd ROSE ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20150520 Time 1221 Day WED																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20151021																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With PKD MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	85	F	W			PROC ST	E	A	0000	MERCU	1997	-	-	-	-	G									
2	PRKD	998	-				PARKED	-	A	0000	CADIL	1989	-	-	-	-	-									
Primary Rd ASTER Distance (ft) 0 Direction Secondary Rd ALMOND NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 152 Collision Date 20150324 Time 2315 Day TUE																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20150918																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	M		HNBD		PROC ST	S	A	0000	MITSU	2015	-	-	-	-	G									
Primary Rd BALBOA DR Distance (ft) 255 Direction Secondary Rd DRIFTWOOD AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist 7 Beat 007 Type 0 CalTrans Badge 174 Collision Date 20150118 Time 0545 Day SUN																										
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20150801																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	27	M			DRUG	PROC ST	N	A	0000	BMW	2004	-	-	-	-	L									
2	PRKD	998	-				PARKED	-	A	0000	HONDA	2011	-	-	-	-	-									
Primary Rd BIRCHWOOD AV Distance (ft) 200 Direction W Secondary Rd DAISY ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20150903 Time 2007 Day THU																										
Primary Collision Factor DRVR ALC DRG Violation 212005 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20151124																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With BICYCLE Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	BICY	49	-	H	HBD-UI		PROC ST	E	L	0400	-	2011	-	3	N	-	-	BICY	COMP PN	49	M	1	1	P	W	
2	DRVR	50	M	H	HNBD		PROC ST	E	A	0100	INFIN	2006	-	3	N	-	M	G								
Primary Rd BOLSA AV Distance (ft) 0 Direction Secondary Rd BAYSIDE DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20150404 Time 0404 Day SAT																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20151002																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	16	M	H	HNBD		UNS TURN	E	A	0000	NISSA	2014	-	-	A	22350	-	G	PASS		16	F	3	0	G	-



<b>Primary Rd</b> CENTER AV <b>Distance (ft)</b> 0 <b>Direction</b> <b>Secondary Rd</b> 11TH ST <b>NCIC</b> 3020 <b>State Hwy?</b> N <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> <b>Beat</b> <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 362 <b>Collision Date</b> 20150116 <b>Time</b> 1141 <b>Day</b> FRI <b>Primary Collision Factor</b> R-O-W AUTO <b>Violation</b> 21802A <b>Collision Type</b> BROADSIDE <b>Severity</b> PDO <b>#Killed</b> 0 <b>#Injured</b> 0 <b>Tow Away?</b> N <b>Process Date</b> 20150801 <b>Weather1</b> CLEAR <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> NO UNUSL CND <b>Rdwy Cond2</b> <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> OTHER MV <b>Lighting</b> DAYLIGHT <b>Ped Action</b> <b>Cntrl Dev</b> FNCTNG <b>Loc Type</b> <b>Ramp/Int</b>																											
<b>Party Info</b>														<b>Victim Info</b>													
<b>Party</b>	<b>Type</b>	<b>Age</b>	<b>Sex</b>	<b>Race</b>	<b>Sobriety1</b>	<b>Sobriety2</b>	<b>Move Pre</b>	<b>Dir</b>	<b>SW Veh</b>	<b>CHP Veh</b>	<b>Make</b>	<b>Year</b>	<b>SP Info</b>	<b>OAF1</b>	<b>Viol</b>	<b>OAF2</b>	<b>Safety Equip</b>	<b>ROLE</b>	<b>Ext Of Inj</b>	<b>AGE</b>	<b>Sex</b>	<b>Seat Pos</b>	<b>Safety</b>	<b>EQUIP</b>	<b>Ejected</b>		
1F	DRVR	60	M	O	HNBD		PROC ST	-	A	0100	FORD	2001	-	3	N	-	M	G									
2	DRVR	62	M	W	HNBD		PROC ST	W	A	0700	TOYOT	1970	-	3	N	-	M	G									
<b>Primary Rd</b> CENTRAL AV <b>Distance (ft)</b> 60 <b>Direction</b> W <b>Secondary Rd</b> 3RD ST <b>NCIC</b> 3020 <b>State Hwy?</b> Y <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> 09011 <b>Beat</b> Y0620 <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 361 <b>Collision Date</b> 20150901 <b>Time</b> 0620 <b>Day</b> TUE <b>Primary Collision Factor</b> IMPROP TURN <b>Violation</b> 22107 <b>Collision Type</b> SIDESWIPE <b>Severity</b> PDO <b>#Killed</b> 0 <b>#Injured</b> 0 <b>Tow Away?</b> N <b>Process Date</b> 20160120 <b>Weather1</b> CLEAR <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> NO UNUSL CND <b>Rdwy Cond2</b> <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> PKD MV <b>Lighting</b> DAYLIGHT <b>Ped Action</b> <b>Cntrl Dev</b> NT PRS/FCR Loc Type <b>Ramp/Int</b>																											
<b>Party Info</b>														<b>Victim Info</b>													
<b>Party</b>	<b>Type</b>	<b>Age</b>	<b>Sex</b>	<b>Race</b>	<b>Sobriety1</b>	<b>Sobriety2</b>	<b>Move Pre</b>	<b>Dir</b>	<b>SW Veh</b>	<b>CHP Veh</b>	<b>Make</b>	<b>Year</b>	<b>SP Info</b>	<b>OAF1</b>	<b>Viol</b>	<b>OAF2</b>	<b>Safety Equip</b>	<b>ROLE</b>	<b>Ext Of Inj</b>	<b>AGE</b>	<b>Sex</b>	<b>Seat Pos</b>	<b>Safety</b>	<b>EQUIP</b>	<b>Ejected</b>		
1F	DRVR	20	M	W			PROC ST	E	A	0000	TOYOT	2014	-	-	-	-	G	-									
2	PRKD	998	-				PARKED	-	D	0000	CHEVR	2010	-	-	-	-	-	-									
3	PRKD	998	-				PARKED	-	A	0000	NISSA	2005	-	-	-	-	-	-									
4	PRKD	998	-				PARKED	-	A	0000	AUDI	2015	-	-	-	-	-	-									
<b>Primary Rd</b> CENTRAL AV <b>Distance (ft)</b> 90 <b>Direction</b> E <b>Secondary Rd</b> 6TH ST <b>NCIC</b> 3020 <b>State Hwy?</b> N <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> <b>Beat</b> ROVER <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 178 <b>Collision Date</b> 20150101 <b>Time</b> 1917 <b>Day</b> THU <b>Primary Collision Factor</b> UNSAFE SPEED <b>Violation</b> 22350 <b>Collision Type</b> SIDESWIPE <b>Severity</b> PDO <b>#Killed</b> 0 <b>#Injured</b> 0 <b>Tow Away?</b> Y <b>Process Date</b> 20150807 <b>Weather1</b> CLEAR <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> NO UNUSL CND <b>Rdwy Cond2</b> <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> PKD MV <b>Lighting</b> DARK - ST <b>Ped Action</b> <b>Cntrl Dev</b> NT PRS/FCR Loc Type <b>Ramp/Int</b>																											
<b>Party Info</b>														<b>Victim Info</b>													
<b>Party</b>	<b>Type</b>	<b>Age</b>	<b>Sex</b>	<b>Race</b>	<b>Sobriety1</b>	<b>Sobriety2</b>	<b>Move Pre</b>	<b>Dir</b>	<b>SW Veh</b>	<b>CHP Veh</b>	<b>Make</b>	<b>Year</b>	<b>SP Info</b>	<b>OAF1</b>	<b>Viol</b>	<b>OAF2</b>	<b>Safety Equip</b>	<b>ROLE</b>	<b>Ext Of Inj</b>	<b>AGE</b>	<b>Sex</b>	<b>Seat Pos</b>	<b>Safety</b>	<b>EQUIP</b>	<b>Ejected</b>		
1F	DRVR	31	F	W	HBD-UNK		PROC ST	E	-	0000	PONTI	1999	A	-	N	-	G	-									
2	PRKD	998	-				PARKED	E	-	0000	DODGE	2010	A	-	N	-	-	-									
<b>Primary Rd</b> CENTRAL AV <b>Distance (ft)</b> 0 <b>Direction</b> <b>Secondary Rd</b> 8TH ST <b>NCIC</b> 3020 <b>State Hwy?</b> N <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> 3 <b>Beat</b> SOUTH <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 313 <b>Collision Date</b> 20150112 <b>Time</b> 1610 <b>Day</b> MON <b>Primary Collision Factor</b> UNSAFE SPEED <b>Violation</b> 22350 <b>Collision Type</b> BROADSIDE <b>Severity</b> PDO <b>#Killed</b> 0 <b>#Injured</b> 0 <b>Tow Away?</b> N <b>Process Date</b> 20150817 <b>Weather1</b> CLEAR <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> NO UNUSL CND <b>Rdwy Cond2</b> <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> OTHER MV <b>Lighting</b> DAYLIGHT <b>Ped Action</b> <b>Cntrl Dev</b> NT PRS/FCR Loc Type <b>Ramp/Int</b>																											
<b>Party Info</b>														<b>Victim Info</b>													
<b>Party</b>	<b>Type</b>	<b>Age</b>	<b>Sex</b>	<b>Race</b>	<b>Sobriety1</b>	<b>Sobriety2</b>	<b>Move Pre</b>	<b>Dir</b>	<b>SW Veh</b>	<b>CHP Veh</b>	<b>Make</b>	<b>Year</b>	<b>SP Info</b>	<b>OAF1</b>	<b>Viol</b>	<b>OAF2</b>	<b>Safety Equip</b>	<b>ROLE</b>	<b>Ext Of Inj</b>	<b>AGE</b>	<b>Sex</b>	<b>Seat Pos</b>	<b>Safety</b>	<b>EQUIP</b>	<b>Ejected</b>		
1F	DRVR	24	F	W	HNBD		PROC ST	N	-	0000	VOLVO	2000	A	-	N	-	G	-									
2	DRVR	24	F	W	HNBD		PROC ST	W	-	0000	BMW	2013	A	-	N	-	G	-	PASS		998	M	3	3	G	-	
<b>Primary Rd</b> COLLEGE PARK DR <b>Distance (ft)</b> 473 <b>Direction</b> W <b>Secondary Rd</b> HARVARD LN <b>NCIC</b> 3020 <b>State Hwy?</b> N <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> 3 <b>Beat</b> 006 <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 363 <b>Collision Date</b> 20150503 <b>Time</b> 1941 <b>Day</b> SUN <b>Primary Collision Factor</b> UNKNOWN <b>Violation</b> 23103B <b>Collision Type</b> OVERTURNED <b>Severity</b> INJURY <b>#Killed</b> 0 <b>#Injured</b> 1 <b>Tow Away?</b> Y <b>Process Date</b> 20150610 <b>Weather1</b> CLEAR <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> HOLES <b>Rdwy Cond2</b> LOOSE MATRL <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> NON-CLSN <b>Lighting</b> DUSK/DAWN <b>Ped Action</b> <b>Cntrl Dev</b> NT PRS/FCR Loc Type <b>Ramp/Int</b>																											
<b>Party Info</b>														<b>Victim Info</b>													
<b>Party</b>	<b>Type</b>	<b>Age</b>	<b>Sex</b>	<b>Race</b>	<b>Sobriety1</b>	<b>Sobriety2</b>	<b>Move Pre</b>	<b>Dir</b>	<b>SW Veh</b>	<b>CHP Veh</b>	<b>Make</b>	<b>Year</b>	<b>SP Info</b>	<b>OAF1</b>	<b>Viol</b>	<b>OAF2</b>	<b>Safety Equip</b>	<b>ROLE</b>	<b>Ext Of Inj</b>	<b>AGE</b>	<b>Sex</b>	<b>Seat Pos</b>	<b>Safety</b>	<b>EQUIP</b>	<b>Ejected</b>		
1F	DRVR	18	M	W	HNBD		RGT TURN	N	C	0200	FORD	2001	-	3	A	22350	-	G	M	DRVR	COMP PN	18	M	1	0	G	-

Primary Rd DEL MONTE DR		Distance (ft) 45	Direction N	Secondary Rd MCKINNEY WY		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 298	Collision Date 20151230	Time 1441	Day WED																
Primary Collision Factor UNKNOWN		Violation	Collision Type HEAD-ON	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20160506																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1	DRVR	72	F	W	IMP UNK	IMP UNK	PROC ST	N	A	0000	MAZDA	2016	-	-	N	-	G	-	DRVR	OTH VIS	72	F	1	0	G	-
2	PRKD	998	-	-	-	-	PARKED	N	A	0000	FORD	2016	-	-	N	-	-	-	-	-	-	-	-	-	-	-
3	PRKD	998	-	-	-	-	PARKED	N	A	0000	TOYOT	1997	-	-	N	-	-	-	-	-	-	-	-	-	-	-
Primary Rd DOLPHIN ST		Distance (ft) 17	Direction N	Secondary Rd OCEAN AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans	Badge 178	Collision Date 20150127	Time 1822	Day TUE																
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20150803																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	70	F	W	IMP UNK	IMP UNK	PROC ST	N	D	0000	FORD	2006	-	-	N	-	G	-	-	-	-	-	-	-	-	
2	PRKD	998	-	-	-	-	PARKED	N	A	0000	HONDA	2011	-	-	N	-	-	-	-	-	-	-	-	-	-	
3	PRKD	998	-	-	-	-	PARKED	N	A	0000	MERCE	2002	-	-	N	-	-	-	-	-	-	-	-	-	-	
Primary Rd ELECTRIC AV		Distance (ft) 13	Direction W	Secondary Rd 11TH ST		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans	Badge 178	Collision Date 20150820	Time 2218	Day THU																
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160104																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With FIXED OBJ	Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	18	M	W	DRUG	DRUG	PROC ST	N	A	0000	LINCO	2003	-	-	N	-	G	-	-	-	-	-	-	-	-	
Primary Rd ELECTRIC AV		Distance (ft) 357	Direction E	Secondary Rd MAIN ST		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 002	Type 0	CalTrans	Badge 362	Collision Date 20150904	Time 1511	Day FRI																
Primary Collision Factor STRTNG BCKNG		Violation 22106	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160120																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	66	F	W	HNBD	HNBD	BACKING	-	A	0100	TOYOT	2005	-	3	N	-	M	G	-	-	-	-	-	-	-	
2	PRKD	998	-	-	HNBD	HNBD	PARKED	-	A	0100	DODGE	2008	-	3	N	-	-	-	-	-	-	-	-	-	-	
Primary Rd ELECTRIC AV		Distance (ft) 0	Direction	Secondary Rd MARINE		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 002	Type 0	CalTrans	Badge 362	Collision Date 20151231	Time 1141	Day THU																
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160217																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	67	M	W	HBD-UI	HBD-UI	PARKING	-	D	2200	CHEVR	2003	-	3	A	22350	-	M	G	-	-	-	-	-	-	
2	DRVR	60	F	H	HNBD	HNBD	PARKED	-	A	0100	TOYOT	2002	-	3	N	-	M	G	-	-	-	-	-	-	-	

Primary Rd <b>FIR AV</b> Distance (ft) <b>58</b> Direction <b>W</b> Secondary Rd <b>OLEANDER</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat <b>006</b> Type <b>0</b> CalTrans Badge <b>422</b> Collision Date <b>20150205</b> Time <b>2049</b> Day <b>THU</b> Primary Collision Factor <b>UNSAFE SPEED</b> Violation <b>22350</b> Collision Type <b>REAR END</b> Severity <b>PDO</b> #Killed <b>0</b> #Injured <b>0</b> Tow Away? <b>Y</b> Process Date <b>20150826</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface <b>DRY</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>PKD MV</b> Lighting <b>DARK - ST</b> Ped Action Cntrl Dev <b>FNCTNG</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	39	M	W	HNBD		LFT TURN	W	A	0000	BMW	2009	-	-	A	23123	F	G	M							
2	PRKD	998	-		HNBD		PARKED	-	A	0000	FORD	2008	-	-	N		-	-	-							
Primary Rd <b>FIR AV</b> Distance (ft) <b>100</b> Direction <b>E</b> Secondary Rd <b>ROSE ST</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat Type <b>0</b> CalTrans Badge <b>298</b> Collision Date <b>20150719</b> Time <b>1709</b> Day <b>SUN</b> Primary Collision Factor <b>UNSAFE SPEED</b> Violation <b>22350</b> Collision Type <b>REAR END</b> Severity <b>PDO</b> #Killed <b>0</b> #Injured <b>0</b> Tow Away? <b>Y</b> Process Date <b>20151218</b> Weather1 <b>RAINING</b> Weather2 Rdwy Surface <b>WET</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>OTHER OBJ</b> Lighting <b>DAYLIGHT</b> Ped Action Cntrl Dev <b>FNCTNG</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	M	W	HNBD		LFT TURN	E	-	0000	FORD	2002	-	-	N		G	-								
2	PRKD	998	-				PARKED	-	-	0000	-	1987	-	-	N		-	-	-							
Primary Rd <b>FIRST ST</b> Distance (ft) <b>51</b> Direction <b>S</b> Secondary Rd <b>MARINA DR</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat <b>SOUTH</b> Type <b>0</b> CalTrans Badge <b>365</b> Collision Date <b>20151205</b> Time <b>0021</b> Day <b>SAT</b> Primary Collision Factor <b>DRVR ALC DRG</b> Violation <b>23152A</b> Collision Type <b>HIT OBJECT</b> Severity <b>PDO</b> #Killed <b>0</b> #Injured <b>0</b> Tow Away? <b>Y</b> Process Date <b>20160225</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface <b>DRY</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>FIXED OBJ</b> Lighting <b>DARK - ST</b> Ped Action Cntrl Dev <b>FNCTNG</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	101	M	W	HBD-UI		PROC ST	S	A	0000	ACURA	2006	-	-	N		G	-								
Primary Rd <b>IRIS ST</b> Distance (ft) <b>107</b> Direction <b>N</b> Secondary Rd <b>HAZELNUT AV</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat <b>206</b> Type <b>0</b> CalTrans Badge <b>368</b> Collision Date <b>20150104</b> Time <b>2111</b> Day <b>SUN</b> Primary Collision Factor <b>DRVR ALC DRG</b> Violation <b>23152A</b> Collision Type <b>SIDESWIPE</b> Severity <b>PDO</b> #Killed <b>0</b> #Injured <b>0</b> Tow Away? <b>N</b> Process Date <b>20150807</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface <b>DRY</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>PKD MV</b> Lighting <b>DARK - ST</b> Ped Action Cntrl Dev <b>FNCTNG</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	F	W	HBD-UI		PROC ST	S	-	0000	HONDA	1999	-	-	A		G	-								
2	PRKD	998	-				STOPPED	N	-	0000	JEEP	2000	-	-	A		-	-	-							
Primary Rd <b>LAMPSON</b> Distance (ft) <b>0</b> Direction Secondary Rd <b>CANDLEBERRY</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat <b>00N</b> Type <b>0</b> CalTrans Badge <b>152</b> Collision Date <b>20151209</b> Time <b>1629</b> Day <b>WED</b> Primary Collision Factor <b>UNSAFE SPEED</b> Violation <b>22350</b> Collision Type <b>HIT OBJECT</b> Severity <b>INJURY</b> #Killed <b>0</b> #Injured <b>1</b> Tow Away? <b>Y</b> Process Date <b>20160121</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface <b>DRY</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>FIXED OBJ</b> Lighting <b>DAYLIGHT</b> Ped Action Cntrl Dev <b>FNCTNG</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	27	F	W	HNBD		RGT TURN	W	A	0000	JEEP	1991	-	-	N		-	-	-	DRVR	OTH VIS	27	-	1	3	-



Primary Rd LAMPSON		Distance (ft) 1	Direction W	Secondary Rd HEATHER		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 314	Collision Date 20151208	Time 2151	Day TUE															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160225																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	36	F	H	HBD-UI	LFT TURN	N	A	0000	VOLKS	2014	-	-	-	-	G	-	-	-	-	-	-	-	-	
Primary Rd LAMPSON AV		Distance (ft) 75	Direction E	Secondary Rd BASSWOOD AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist 19	Beat 006	Type 0	CalTrans	Badge 174	Collision Date 20150124	Time 1000	Day SAT															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20150801																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	39	F		HNBD	PROC ST	E	A	0000	MAZDA	2005	-	-	N	-	G	-	-	-	-	-	-	-	-	
2	DRVR	42	M	W	HNBD	STOPPED	E	A	0000	HONDA	2000	-	-	N	-	G	-	-	-	-	-	-	-	-	
3	DRVR	46	F	H	HNBD	STOPPED	E	A	0000	VOLKS	2007	-	-	N	-	G	-	-	-	-	-	-	-	-	
Primary Rd LAMPSON AV		Distance (ft) 0	Direction	Secondary Rd HEATHER		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20150508	Time 1357	Day FRI															
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 4	Tow Away? Y	Process Date 20150610																	
Weather1 CLOUDY	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	44	M	A	HNBD	PROC ST	-	A	0700	FORD	2014	-	3	M	N	L	G	DRVR	OTH VIS	44	M	1	3	L	G
2	DRVR	45	F	O	HNBD	LFT TURN	-	A	0700	TOYOT	2015	-	3	N	-	L	G	DRVR	COMP PN	45	F	1	0	L	G
3	DRVR	61	F	O	HNBD	STOPPED	W	A	0700	HYUND	2010	-	3	N	-	M	G	DRVR	COMP PN	61	F	1	3	M	G
Primary Rd LAMPSON AV		Distance (ft) 38	Direction E	Secondary Rd HEATHER ST		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist 20	Beat NORTH	Type 0	CalTrans	Badge 313	Collision Date 20150104	Time 1903	Day SUN															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20150304																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	67	F	W	HNBD	PROC ST	W	A	0100	NISSA	1997	-	3	N	-	M	G	DRVR	COMP PN	67	F	1	0	M	G
2	DRVR	19	M	W	HNBD	STOPPED	W	A	0100	TOYOT	2002	-	3	N	-	M	G	PASS		998	M	3	0	M	G
Primary Rd LAMPSON AV		Distance (ft) 0	Direction	Secondary Rd HEATHER ST		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20151218	Time 1438	Day FRI															
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160225																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	40	F	O	HNBD	LFT TURN	-	A	0100	VOLKS	2013	-	3	N	-	M	G	-	-	-	-	-	-	-	
2	DRVR	49	F	O	HNBD	PROC ST	-	A	0100	TOYOT	2015	-	3	N	-	M	G	-	-	-	-	-	-	-	

Primary Rd LAMPSON AV Distance (ft) 0 Direction Secondary Rd OLD RANCH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 006 Type 0 CalTrans Badge 422 Collision Date 20150113 Time 2027 Day TUE Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150801 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	17	M	W	HNBD		PROC ST	E	A	0000	TOYOT	2014	-	-	F	-	G									
2	DRVR	27	M	H	HNBD		LFT TURN	N	A	0000	NISSA	2005	-	-	N	-	G									
Primary Rd LAMPSON AV Distance (ft) 0 Direction Secondary Rd TULIP NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20150321 Time 1052 Day SAT Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150918 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	17	M	W	HNBD		PROC ST	-	A	0800	DODGE	1994	-	3	N	-	M	G								
2	DRVR	68	F	W	HNBD		STOPPED	-	A	0700	BUICK	2010	-	3	N	-	M	G	PASS		74	M	3	0	M	G
																			PASS		14	M	6	0	M	G
Primary Rd LAMPSON ST Distance (ft) 0 Direction Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20150804 Time 1343 Day TUE Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160104 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 CONS ZONE Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	53	M	W	HNBD		U-TURN	S	A	0000	DODGE	2014	-	-	N	-	G									
2	DRVR	58	M	W	HNBD		LFT TURN	S	A	0000	FORD	2003	-	-	N	-	-									
Primary Rd MAIN ST Distance (ft) 47 Direction S Secondary Rd ELECTRIC NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans Badge 362 Collision Date 20150626 Time 1556 Day FRI Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20151110 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	M	H	IMP UNK	IMP UNK	BACKING	E	D	2200	DODGE	2007	-	3	N	-	M	G								
2	DRVR	22	F	H	HNBD		PROC ST	N	A	0100	FORD	2008	-	3	N	-	M	G	PASS		5	F	5	0	M	Q
Primary Rd MAIN ST Distance (ft) 220 Direction N Secondary Rd OCEAN AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans Badge 362 Collision Date 20150306 Time 0924 Day FRI Primary Collision Factor UNKNOWN Violation Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150918 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	40	F	W	HNBD		PROC ST	N	A	0700	JEEP	2012	-	3	N	-	M	G								
2	DRVR	998	M	W	HNBD		STOPPED	N	A	0100	CHEVR	2000	-	3	N	-	M	G								

Primary Rd MAIN ST		Distance (ft) 30	Direction S	Secondary Rd PACIFIC COAST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 33.18	Side of Hwy N
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat TRAFF	Type 0	CalTrans 12	Badge 298	Collision Date 20150416	Time 2153	Day THU
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161202		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0					
Hit and Run		Motor Vehicle Involved With	Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type H	Ramp/Int -			
Party Info										Victim Info
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F DRVR 24 F HNBD PROC ST W A 0000 SATUR 2006 - - F - - G -										
2 DRVR 24 F HNBD STOPPED W A 0000 AUDI 2014 - - N - - G -										
Primary Rd MAIN ST		Distance (ft) 25	Direction W	Secondary Rd PCH	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 006	Type 0	CalTrans	Badge 422	Collision Date 20150509	Time 2243	Day SAT
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20151014		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0					
Hit and Run		Motor Vehicle Involved With FIXED OBJ	Lighting DARK - ST	Ped Action	Cntrl Dev	Loc Type	Ramp/Int			
Party Info										Victim Info
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F DRVR 77 M W HNBD PROC ST N - 0000 TOYOT 1999 - - F - - G M										
Primary Rd MARINA AV		Distance (ft) 0	Direction	Secondary Rd 5TH ST	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy
City Seal Beach	County Orange	Population 4	Rpt Dist SOUTH	Beat 001	Type 0	CalTrans	Badge 304	Collision Date 20150824	Time 1848	Day MON
Primary Collision Factor NOT STATED		Violation	Collision Type AUTO/PED	Severity INJURY	#Killed 0	#Injured 2	Tow Away? N	Process Date 20151124		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0					
Hit and Run		Motor Vehicle Involved With PED	Lighting DUSK/DAWN	Ped Action X-WLK AT	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int			
Party Info										Victim Info
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F DRVR 50 - W HNBD PROC ST W B 0101 FORD 2006 - 3 A 21950 K M G										
2 PED 63 F W HNBD PROC ST S N 6000 - - 3 - - - -	PED SEVERE	63	F	0	0	P	-			
3 PED 74 F W HNBD PROC ST S N 6000 - - 3 - - - -	PED SEVERE	74	F	0	0	P	-			
Primary Rd MARINA DR		Distance (ft) 500	Direction W	Secondary Rd 1ST ST	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy
City Seal Beach	County Orange	Population 4	Rpt Dist Q	Beat	Type 0	CalTrans	Badge 257	Collision Date 20150726	Time 1925	Day SUN
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20151218		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0					
Hit and Run		Motor Vehicle Involved With FIXED OBJ	Lighting DUSK/DAWN	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int			
Party Info										Victim Info
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F DRVR 31 F W HBD-UI PROC ST W A 0100 NISSA 2014 - 1 A 22350 - M G										
Primary Rd MARINA DR		Distance (ft) 0	Direction	Secondary Rd 5TH ST	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 002	Type 0	CalTrans	Badge 362	Collision Date 20150509	Time 1323	Day SAT
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20151014		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0					
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int			
Party Info										Victim Info
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F DRVR 79 F W HNBD UNS TURN - A 0700 HONDA 2000 - 3 N - - N G										
2 PRKD 998 - HNBD PARKED N A 0100 NISSA 2013 - 3 N - - - -										
3 PRKD 998 - HNBD PARKED N A 0100 TOYOT 2013 - 3 N - - - -										

Include State Highways cases

Primary Rd <b>MARINA DR</b> Distance (ft) <b>0</b> Direction Secondary Rd <b>CARVEL AV</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat Type <b>0</b> CalTrans Badge <b>300</b> Collision Date <b>20150721</b> Time <b>1223</b> Day <b>TUE</b> Primary Collision Factor <b>IMPROP TURN</b> Violation <b>22107</b> Collision Type <b>BROADSIDE</b> Severity <b>PDO</b> #Killed <b>0</b> #Injured <b>0</b> Tow Away? <b>N</b> Process Date <b>20160809</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>OTHER MV</b> Lighting <b>DAYLIGHT</b> Ped Action Cntrl Dev <b>NT FNCT</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	23	F	O			U-TURN	S	-	0000	MAZDA	2011	-	-	N	-	G	-								
2	DRVR	36	F	H			PROC ST	W	-	0000	JEEP	2014	-	-	N	-	G	-								
Primary Rd <b>NORTHGATE RD</b> Distance (ft) <b>20</b> Direction <b>W</b> Secondary Rd <b>NORTHGATE</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat Type <b>0</b> CalTrans Badge <b>362</b> Collision Date <b>20150123</b> Time <b>1642</b> Day <b>FRI</b> Primary Collision Factor <b>WRONG SIDE</b> Violation <b>21650</b> Collision Type <b>SIDESWIPE</b> Severity <b>PDO</b> #Killed <b>0</b> #Injured <b>0</b> Tow Away? <b>N</b> Process Date <b>20150801</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface <b>DRY</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>OTHER MV</b> Lighting <b>DAYLIGHT</b> Ped Action Cntrl Dev <b>NT PRS/FCTR</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	57	F	W	HNBD		PASSING	E	A	0000	TOYOT	1994	-	-	N	-	G	-								
2	DRVR	68	F	W	HNBD		PROC ST	E	A	0000	TOYOT	2005	-	-	N	-	G	-								
Primary Rd <b>NORTHGATE RD</b> Distance (ft) <b>185</b> Direction <b>W</b> Secondary Rd <b>SEAL BEACH BL</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat Type <b>0</b> CalTrans Badge <b>361</b> Collision Date <b>20150316</b> Time <b>1149</b> Day <b>MON</b> Primary Collision Factor <b>R-O-W AUTO</b> Violation <b>21804A</b> Collision Type <b>REAR END</b> Severity <b>PDO</b> #Killed <b>0</b> #Injured <b>0</b> Tow Away? <b>Y</b> Process Date <b>20150918</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface <b>DRY</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>OTHER MV</b> Lighting <b>DAYLIGHT</b> Ped Action Cntrl Dev <b>NT PRS/FCTR</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	83	F	W			ENT TRAF	S	A	0000	TOYOT	2007	-	-	-	-	G	-								
2	DRVR	35	M	A			PROC ST	S	A	0000	KIA	2013	-	-	-	-	G	-								
Primary Rd <b>OCEAN AV</b> Distance (ft) <b>0</b> Direction Secondary Rd <b>8TH ST</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist <b>1</b> Beat <b>007</b> Type <b>0</b> CalTrans Badge <b>174</b> Collision Date <b>20150816</b> Time <b>1555</b> Day <b>SUN</b> Primary Collision Factor <b>R-O-W AUTO</b> Violation <b>21802A</b> Collision Type <b>SIDESWIPE</b> Severity <b>PDO</b> #Killed <b>0</b> #Injured <b>0</b> Tow Away? <b>N</b> Process Date <b>20160104</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface <b>DRY</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>OTHER MV</b> Lighting <b>DAYLIGHT</b> Ped Action Cntrl Dev <b>FNCTNG</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	26	F	H	HNBD		PROC ST	S	A	0000	NISSA	2012	-	-	A	12500	-	G	-							
2	DRVR	49	F	W	HNBD		RGT TURN	E	A	0000	JEEP	2014	-	-	N	-	G	-								
Primary Rd <b>OCEAN AV</b> Distance (ft) <b>0</b> Direction Secondary Rd <b>MAIN ST</b> NCIC <b>3020</b> State Hwy? <b>N</b> Route Postmile Prefix Postmile Side of Hwy City <b>Seal Beach</b> County <b>Orange</b> Population <b>4</b> Rpt Dist Beat <b>001</b> Type <b>0</b> CalTrans Badge <b>362</b> Collision Date <b>20150606</b> Time <b>1153</b> Day <b>SAT</b> Primary Collision Factor <b>UNKNOWN</b> Violation <b>22517A</b> Collision Type <b>SIDESWIPE</b> Severity <b>INJURY</b> #Killed <b>0</b> #Injured <b>1</b> Tow Away? <b>N</b> Process Date <b>20151110</b> Weather1 <b>CLEAR</b> Weather2 Rdwy Surface <b>DRY</b> Rdwy Cond1 <b>NO UNUSL CND</b> Rdwy Cond2 Spec Cond <b>0</b> Hit and Run Motor Vehicle Involved With <b>BICYCLE</b> Lighting <b>DAYLIGHT</b> Ped Action Cntrl Dev <b>FNCTNG</b> Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	72	M	W	HNBD		PARKED	-	A	0700	HYUND	2012	-	3	N	-	M	G								
2	BICY	66	M	H	HNBD		RGT TURN	W	L	0400	-	-	3	A	21201	-	-	-	BICY	COMP PN 66	M	1	1	M	G	



Primary Rd OCEAN AV Distance (ft) 0 Direction Secondary Rd MAIN ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy														City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 362 Collision Date 20150725 Time 1722 Day SAT												
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20150919														Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0												
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	M	H		DRUG	PROC ST	-	D	2200	JEEP	1998	-	3	A	22350	-	M	G							
2	DRVR	38	F	W	HNBD		STOPPED	-	A	0700	HONDA	2008	-	3	N	-	N	G	DRVR	COMP PN	38	F	1	0	N	G
																		PASS		38	M	3	0	M	G	
																		PASS		9	M	4	0	M	Q	
Primary Rd OCEAN AV Distance (ft) 0 Direction Secondary Rd MAIN ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy														City Seal Beach County Orange Population 4 Rpt Dist 2 Beat 007 Type 0 CalTrans Badge 174 Collision Date 20151209 Time 1626 Day WED												
Primary Collision Factor UNKNOWN Violation Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160225														Weather1 FOG Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0												
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	71	M	A	HNBD		RGT TURN	W	A	0000	LEXUS	2005	-	-	N	-	G	-	PASS		64	F	3	0	G	-
2	DRVR	63	M	W	HNBD		PROC ST	W	A	0000	TOYOT	2010	-	-	N	-	G	-								
Primary Rd PACIFIC COAST Distance (ft) 0 Direction Secondary Rd 10TH ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 33.141 Side of Hwy S														City Seal Beach County Orange Population 4 Rpt Dist 10 Beat Type 0 CalTrans 12 Badge 155 Collision Date 20150619 Time 0731 Day FRI												
Primary Collision Factor R-O-W AUTO Violation 21802A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20161202														Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0												
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type I Ramp/Int 5																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	62	F	W	HNBD		ENT TRAF	S	A	0100	FORD	2009	-	3	-	-	M	C								
2	DRVR	39	F		HNBD		PROC ST	E	A	0100	NISSA	2015	-	3	N	-	M	C								
Primary Rd PACIFIC COAST Distance (ft) 0 Direction Secondary Rd 12TH ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 33.01 Side of Hwy N														City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans 12 Badge 362 Collision Date 20150530 Time 0723 Day SAT												
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20161109														Weather1 CLOUDY Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0												
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	M	W	HNBD		PROC ST	-	A	0100	HONDA	2000	-	3	N	-	M	G								
2	DRVR	33	M	W	HNBD		PROC ST	-	C	0200	HARLE	2011	-	3	N	-	P	W	DRVR	OTH VIS	33	M	1	1	P	W
Primary Rd PACIFIC COAST Distance (ft) 118 Direction N Secondary Rd 1ST ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 33.64 Side of Hwy N														City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans 12 Badge 362 Collision Date 20150515 Time 1247 Day FRI												
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161202														Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0												
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -																										
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	26	M	W	HNBD		LFT TURN	N	A	0100	LINCO	2002	-	3	N	-	M	G								

Primary Rd	PACIFIC COAST	Distance (ft)	0	Direction		Secondary Rd	24TH ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	31.46	Side of Hwy	S
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 002	Type	0	CalTrans	12	Badge	352	Collision Date	20150514	Time	1649	Day	THU
Primary Collision Factor	DRVR ALC DRG	Violation	23152A	Collision Type	HIT OBJECT	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20161202				
Weather1	RAINING	Weather2		Rdwy Surface	WET	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run	MSDMNR	Motor Vehicle Involved With	FIXED OBJ	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FNCTNG	Loc Type	H	Ramp/Int	-						

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	34	M	W	HBD-UI		PROC ST	-	A	0100	ACURA	2003	-	3	A	22107	-	M	G							

Primary Rd	PACIFIC COAST	Distance (ft)	73	Direction	S	Secondary Rd	5TH ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.41	Side of Hwy	N
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	257	Collision Date	20150330	Time	2144	Day	MON
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160922				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action		Cntrl Dev	FNCTNG	Loc Type	H	Ramp/Int	-						

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	20	M	H	HNBD		PROC ST	W	A	0100	BMW	1999	-	3	N	-	M	G								
2	DRVR	19	F	H	HNBD		STOPPED	W	A	0100	TOYOT	2015	-	3	N	-	M	G	PASS		19	F	3	0	M	G
																			PASS		18	M	4	0	P	G
																			PASS		16	M	5	0	P	G
																			PASS		18	M	6	0	P	G
3	DRVR	76	F	W	HNBD		STOPPED	W	A	0100	TOYOT	2013	-	3	N	-	M	G								

Primary Rd	PACIFIC COAST	Distance (ft)	120	Direction	W	Secondary Rd	ANDERSON ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	31.13	Side of Hwy	S
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 007	Type	0	CalTrans	12	Badge	363	Collision Date	20150101	Time	2316	Day	THU
Primary Collision Factor	DRVR ALC DRG	Violation	23152A	Collision Type	OVERTURNED	Severity	PDO	#Killed	0	#Injured	0	Tow Away?		Process Date	20160922				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	FIXED OBJ	Lighting	DARK - ST	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type	H	Ramp/Int	-						

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	47	M	H	HBD-UI		PROC ST	E	A	0000	DODGE	2001	-	-	-	-	G	M								

Primary Rd	PACIFIC COAST	Distance (ft)	0	Direction		Secondary Rd	ANDERSON ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	31.1	Side of Hwy	N
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 007	Type	0	CalTrans	12	Badge	363	Collision Date	20150227	Time	2252	Day	FRI
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	OTHER	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20161025				
Weather1	CLOUDY	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	NON-CLSN	Lighting	DARK - ST	Ped Action		Cntrl Dev	FNCTNG	Loc Type	H	Ramp/Int	-						

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	M	A	HNBD		PROC ST	N	-	0000	SUZUK	2006	-	3	M	-	M	W	PASS	OTH VIS	20	F	9	1	-	Y

Primary Rd	PACIFIC COAST	Distance (ft)	335	Direction	W	Secondary Rd	ANDERSON ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	31.17	Side of Hwy	N
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 007	Type	0	CalTrans	12	Badge	363	Collision Date	20150418	Time	2132	Day	SAT
Primary Collision Factor	R-O-W AUTO	Violation	21804A	Collision Type	BROADSIDE	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?		Process Date	20161109				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type	H	Ramp/Int	-						

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	M	B	HNBD		ENT TRAF	N	C	0000	KAWA	2012	-	-	N	-	W	-	DRVR	OTH VIS	32	M	1	1	W	-



PASS	20	F	6	0	M	C
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Primary Rd PACIFIC COAST Distance (ft) 145 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 3.69 Side of Hwy N  
 City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans 12 Badge 191 Collision Date 20150422 Time 0811 Day WED  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20161109  
 Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	45	M	W	HNBD		PROC ST	W	A	0000	TOYOT	1997	-	A	21750	-	L	-	DRVR	OTH VIS	45	M	1	3	L	-
2	DRVR	39	F	O	HNBD		STOPPED	W	D	0000	TOYOT	2004	-	-	-	-	G	-								

Primary Rd PACIFIC COAST Distance (ft) 82 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.7 Side of Hwy S  
 City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans 12 Badge 362 Collision Date 20150510 Time 1323 Day SUN  
 Primary Collision Factor DRVR ALC|DRG Violation 23152A Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161202  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	36	F	W	HBD-UI		PROC ST	S	A	0100	MAZDA	2014	-	3	A	22350	-	L	G							
2	DRVR	24	M	H	HNBD		STOPPED	-	D	2200	DODGE	2004	-	3	N	-	M	G	PASS		18	F	3	0	M	G
																			PASS		0	M	5	0	P	Q

Primary Rd PCH Distance (ft) 30 Direction E Secondary Rd 5TH ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 33.41 Side of Hwy S  
 City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans 12 Badge 152 Collision Date 20150423 Time 1817 Day THU  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20161109  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	58	M	W	HNBD		PROC ST	E	-	0000	NISSA	2002	-	3	F	-	M	G								
2	DRVR	61	M	W	HNBD		SLOWING	E	-	0000	TOYOT	2005	-	3	N	-	M	G	PASS	COMP PN	55	F	2	0	M	G

Primary Rd ROAD B Distance (ft) 215 Direction S Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20151106 Time 1137 Day FRI  
 Primary Collision Factor WRONG SIDE Violation 21650 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160210  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int -

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	64	M	W	HNBD		RGT TURN	-	A	0100	HYUND	2014	-	3	M	-	M	G								
2	DRVR	26	M	A	HNBD		PROC ST	-	A	0100	HONDA	2012	-	3	N	-	M	G								

Primary Rd RT 1 Distance (ft) 40 Direction E Secondary Rd 16TH ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.81 Side of Hwy S  
 City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans 12 Badge 361 Collision Date 20150414 Time 0902 Day TUE  
 Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20161202  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	80	F	W		PHYS	PROC ST	E	A	0000	TOYOT	2004	-	-	-	-	G	-								
2	PRKD	998	-	-			PARKED	-	A	0000	FORD	2009	-	-	-	-	-	-								
3	PRKD	998	-	-			PARKED	-	A	0000	CADIL	2007	-	-	-	-	-	-								



Primary Rd	RT 1	Distance (ft)	620	Direction	N	Secondary Rd	1ST ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.74	Side of Hwy	N	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	ROVER	Type	0	CalTrans	12	Badge	178	Collision Date	20150218	Time	0736	Day	WED
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160922			
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0						
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		NT PRS/FCTR		Loc Type	H		Ramp/Int -		

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	43	M	W	HNBD		PROC ST	N	A	0000	LEXUS	2006	-	-	M	-	G	-								
2	DRVR	39	M	H	HNBD		STOPPED	N	D	0000	CHEVR	1996	-	-	N	-	G	-								

Primary Rd	RT 1	Distance (ft)	25	Direction	E	Secondary Rd	1ST ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	3.36	Side of Hwy	N	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	361	Collision Date	20150316	Time	1431	Day	MON	
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160922			
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0						
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		FNCTNG		Loc Type	H		Ramp/Int -		

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	60	M	W			PROC ST	W	A	0000	TOYOT	2000	-	-	-	-	G	-								
2	DRVR	19	F	O			STOPPED	W	A	0000	HONDA	2008	-	-	-	-	G	-								

Primary Rd	RT 1	Distance (ft)	45	Direction	W	Secondary Rd	MAIN ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.2	Side of Hwy	S	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	313	Collision Date	20150112	Time	1141	Day	MON	
Primary Collision Factor	DRVR ALG DRG		Violation	23152E	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160922			
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0						
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		FNCTNG		Loc Type	H		Ramp/Int -		

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	20	M	W		DRUG	PROC ST	E	F	0000	FORD	2000	-	-	A	22350	-	G	-							
2	DRVR	51	M	W	HNBD		STOPPED	E	A	0000	FORD	1991	-	-	N	-	G	-								

Primary Rd	RT 1	Distance (ft)	345	Direction	E	Secondary Rd	MARINER DR	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	31.37	Side of Hwy	S	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	361	Collision Date	20150223	Time	1048	Day	MON	
Primary Collision Factor	IMPROP TURN		Violation	22107	Collision Type	SIDESWIPE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20161025			
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0						
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		NT PRS/FCTR		Loc Type	H		Ramp/Int -		

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	90	M	W	HNBD		LFT TURN	S	A	0000	HONDA	-	-	-	-	-	G	-	DRVR	COMP PN	90	M	1	3	G	-
																			PASS		65	M	3	3	G	-
																			PASS		66	F	4	3	G	-
2	DRVR	53	M	H	HNBD		PROC ST	W	A	0000	JEEP	2014	-	-	-	-	G	-								
3	DRVR	66	M	W	HNBD		PROC ST	E	A	0000	TOYOT	1998	-	-	-	-	G	-								
4	DRVR	32	M	W	HNBD		STOPPED	E	A	0000	FORD	1998	-	-	-	-	G	-								

Primary Rd	RT 1	Distance (ft)	471	Direction	W	Secondary Rd	MARINER DR	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.36	Side of Hwy	N	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	300	Collision Date	20150629	Time	0834	Day	MON	
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20161202			
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0						
Hit and Run	Motor Vehicle Involved With				NON-CLSN		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		NT PRS/FCTR		Loc Type	H		Ramp/Int -		

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	23	F		HNBD		SLOWING	N	-	0000	VOLKS	2012	-	-	N	-	G	-								

Include State Highways cases

Report Run On: 12/12/2016

2	DRVR	54	M		HNBD	PROC ST	N	-	0000	TOYOT 2013	-	-	N	-	G	-
3	DRVR	22	F		HNBD	PROC ST	N	-	0000	CHEVR 2003	-	-	A	-	G	-

Primary Rd RT 1 Distance (ft) 2309 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.28 Side of Hwy S  
 City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans 12 Badge 314 Collision Date 20150207 Time 1816 Day SAT  
 Primary Collision Factor NOT DRIVER Violation Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160922  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type H Ramp/Int -

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	28	M	O	HNBD	PROC ST	E	A	0000	TOYOT	2010	-	-	N	-	G	-	PASS		7	M	6	0	G	-
																		PASS		3	M	4	0	G	-

Primary Rd RT 1 Distance (ft) 2309 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.28 Side of Hwy S  
 City Seal Beach County Orange Population 4 Rpt Dist Beat TRAFFI Type 0 CalTrans 12 Badge 314 Collision Date 20150207 Time 1817 Day SAT  
 Primary Collision Factor NOT DRIVER Violation Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160922  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type H Ramp/Int -

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	36	M	H	HNBD	PROC ST	E	A	0000	BMW	2000	-	-	N	-	G	-								

Primary Rd RT 1 Distance (ft) 243 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.67 Side of Hwy N  
 City Seal Beach County Orange Population 4 Rpt Dist 6 Beat SOUTH Type 0 CalTrans 12 Badge 313 Collision Date 20150314 Time 1823 Day SAT  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160922  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	F	W	HNBD	PROC ST	W	A	0000	HYUND	2012	-	-	N	-	G	-								
2	DRVR	17	M	W	HNBD	STOPPED	W	D	0000	TOYOT	2013	-	-	N	-	G	-								

Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.73 Side of Hwy S  
 City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans 12 Badge 178 Collision Date 20150623 Time 1732 Day TUE  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161202  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	F	W	HNBD	PROC ST	S	-	0000	KIA	2013	-	-	N	-	G	-								
2	DRVR	22	M	O	HNBD	STOPPED	S	-	0000	SCION	2006	-	-	N	-	G	-	PASS		27	F	3	0	G	-
3	DRVR	32	M	W	HNBD	PROC ST	S	-	0000	TOYOT	2013	-	-	N	-	G	-								

Primary Rd RT 405 Distance (ft) 200 Direction S Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? Y Route 405 Postmile Prefix - Postmile 22.6 Side of Hwy N  
 City Seal Beach County Orange Population 4 Rpt Dist Beat 044 Type 0 CalTrans 12 Badge 19290 Collision Date 20150606 Time 1823 Day SAT  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161202  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type H Ramp/Int -

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	M	W	HNBD	PROC ST	N	D	2200	FORD	2012	-	3	N	-	M	G	PASS		17	M	3	0	M	G
																		PASS		16	F	4	0	M	G
																		PASS		17	F	6	0	M	G

Include State Highways cases

Report Run On: 12/12/2016

2	DRVR	50	M	W	HNBD	STOPPED	N	A	0100	TOYOT 2014	-	3	N	-	M	G	PASS	45	F	3	0	M	G
3	DRVR	60	M	W	HNBD	STOPPED	N	A	0700	TOYOT 1997	-	3	N	-	M	G	PASS	52	F	3	0	M	G

Primary Rd		SAINT ANDREWS		Distance (ft)	0	Direction		Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	298	Collision Date	20150809	Time	1000	Day SUN						
Primary Collision Factor		STOP SGN SIG		Violation	21453A	Collision Type	BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160104							
Weather1		CLOUDY		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0										
Hit and Run				Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type	Ramp/Int									
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	43	M	W	HNBD		PROC ST	S	D	0000	FORD	2008	-	N	-	G	-	DRVR	COMP PN	47	-	1	0	M	G
2	DRVR	77	M	W	HNBD		LFT TURN	N	A	0000	NISSA	2010	-	N	-	G	-	PASS	OTH VIS	15	M	2	0	L	G

Primary Rd		SEAL BEACH		Distance (ft)	150	Direction	N	Secondary Rd		BOLSA		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy							
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	152	Collision Date	20150422	Time	1746	Day WED							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20151002								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0											
Hit and Run				Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type	Ramp/Int										
Party Info																	Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	47	F	H	HNBD		PROC ST	S	A	0100	BMW	2012	-	3	F	-	L	G	DRVR	COMP PN	47	-	1	0	M	G
2	DRVR	19	F	W	HNBD		STOPPED	S	A	0100	HONDA	2002	-	3	N	-	M	G								
3	DRVR	51	M	W	HNBD		STOPPED	S	A	0100	NISSA	2005	-	3	N	-	M	G								
4	DRVR	55	M	W	HNBD		STOPPED	S	A	0100	DODGE	2006	-	3	N	-	M	G								

Primary Rd		SEAL BEACH		Distance (ft)	120	Direction	N	Secondary Rd		NORTH GATE		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy							
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	152	Collision Date	20151117	Time	0841	Day TUE							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20160618								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0											
Hit and Run				Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type	Ramp/Int										
Party Info																	Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	91	F	H	HNBD		SLOWING	S	A	0100	BUICK	1998	-	3	F	-	M	G								
2	DRVR	71	F	H	HNBD		STOPPED	S	A	0100	NISSA	2011	-	3	N	-	M	G	DRVR	COMP PN	71	F	1	0	M	G
3	DRVR	48	F	H	HNBD		STOPPED	S	A	0100	DODGE	2008	-	3	N	-	M	G								
4	DRVR	54	F	H	HNBD		STOPPED	S	-	0000	NISSA	2012	-	3	N	-	M	G								

Primary Rd		SEAL BEACH		Distance (ft)	0	Direction		Secondary Rd		RT 405		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy							
City		Seal Beach		County	Orange	Population	4	Rpt Dist	10	Beat	Type	0	CalTrans	Badge	155	Collision Date	20150717	Time	1257	Day FRI						
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20151217								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0											
Hit and Run				Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type	Ramp/Int										
Party Info																	Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	F	H	HNBD		PROC ST	N	A	0100	HONDA	2005	-	3	A	22350	F	G	-							
2	DRVR	44	M	H	HNBD		PROC ST	-	-	0000	PORSC	2006	-	3	-	-	G	-								

<b>Primary Rd</b> SEAL BEACH BL	<b>Distance (ft)</b> 15	<b>Direction</b> S	<b>Secondary Rd</b> 1PLYMOUTH	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b>	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 361	<b>Collision Date</b> 20150303	<b>Time</b> 0830 <b>Day</b> TUE
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> HIT OBJECT	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> Y	<b>Process Date</b> 20150921		
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	20	M	W	HNBD		SLOWING	N	-	0000	HONDA	2008	A	-	-	-	G								
2	DRVR	69	F	A	HNBD		STOPPED	-	-	0000	BMW	2014	A	-	-	-	G								

<b>Primary Rd</b> SEAL BEACH BL	<b>Distance (ft)</b> 109	<b>Direction</b> S	<b>Secondary Rd</b> ADOLFO LOPEZ	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> SOUTH	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 365	<b>Collision Date</b> 20151030	<b>Time</b> 2159 <b>Day</b> FRI
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> REAR END	<b>Severity</b> INJURY	<b>#Killed</b> 0	<b>#Injured</b> 1	<b>Tow Away?</b> Y	<b>Process Date</b> 20151210		
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DARK - ST	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	44	M	H	HNBD		PROC ST	S	D	0000	NISSA	2012	-	-	F	-	G	DRVR	COMP PN	44	M	1	0	G	-
2	DRVR	53	M	H	HNBD		STOPPED	S	I	0000	OTHER	2001	-	-	N	-	G	PASS		57	M	9	0	-	-
																		PASS		998	-	9	3	-	-

<b>Primary Rd</b> SEAL BEACH BL	<b>Distance (ft)</b> 0	<b>Direction</b>	<b>Secondary Rd</b> APOLLO	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> 002	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 362	<b>Collision Date</b> 20150510	<b>Time</b> 1627 <b>Day</b> SUN
<b>Primary Collision Factor</b> LANE CHANGE	<b>Violation</b> 21658A	<b>Collision Type</b> SIDESWIPE	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> Y	<b>Process Date</b> 20151022		
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	50	M	W	HNBD		CHANG LN	S	A	0100	VOLKS	1996	-	3	N	-	M	G								
2	DRVR	28	M	W	HNBD		PROC ST	-	A	0100	HONDA	2013	-	3	N	-	M	G	PASS		18	F	3	0	M	G
																		PASS		18	F	4	0	M	G	
																		PASS		18	M	6	0	M	G	

<b>Primary Rd</b> SEAL BEACH BL	<b>Distance (ft)</b> 20	<b>Direction</b> N	<b>Secondary Rd</b> BOLSA	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> 00S	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 152	<b>Collision Date</b> 20150827	<b>Time</b> 0922 <b>Day</b> THU
<b>Primary Collision Factor</b> IMPROP TURN	<b>Violation</b> 22107	<b>Collision Type</b> BROADSIDE	<b>Severity</b> INJURY	<b>#Killed</b> 0	<b>#Injured</b> 1	<b>Tow Away?</b> N	<b>Process Date</b> 20150917		
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> CONS ZONE	<b>Rdwy Cond2</b> REDUCED RD	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> BICYCLE	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	63	F	H	HNBD		RGT TURN	S	A	0000	NISSA	1997	-	-	F	-	G								
2	BICY	63	M	W	HNBD		PROC ST	S	L	0000	-	-	-	N	-	-	-	BICY	COMP PN	63	M	1	1	W	-

<b>Primary Rd</b> SEAL BEACH BL	<b>Distance (ft)</b> 35	<b>Direction</b> S	<b>Secondary Rd</b> BOLSA AV	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> ROVER	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 178	<b>Collision Date</b> 20150203	<b>Time</b> 1926 <b>Day</b> TUE
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> REAR END	<b>Severity</b> INJURY	<b>#Killed</b> 0	<b>#Injured</b> 2	<b>Tow Away?</b> Y	<b>Process Date</b> 20150316		
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DARK - ST	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	70	M	W	HNBD		PROC ST	S	A	0000	PORSC	2006	-	-	N	-	G								
2	DRVR	68	F	W	HNBD		PROC ST	S	A	0000	TOYOT	2004	-	-	N	-	G	DRVR	COMP PN	68	F	1	0	-	G



PASS	COMP PN 76	F	3	0	-	G
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Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd BRADBURY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20151226 Time 1231 Day SAT  
 Primary Collision Factor STOP SGN|SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160217  
 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	55	F	H	HNBD		PROC ST	-	A	0700	CHEVR	1997	-	3	N	-	L M								
2	DRVR	22	F	O	HNBD		LFT TURN	-	D	2200	FORD	2008	-	3	N	-	M G	PASS		23	M	3	0	M	G

Primary Rd SEAL BEACH BL Distance (ft) 75 Direction Secondary Rd ELECTRIC AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20150128 Time 0747 Day WED  
 Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20150812  
 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	66	M	W			LFT TURN	S	A	0000	CHEVR	2015	-	-	-	-	G -								
2	DRVR	48	M	W			PROC ST	N	A	0000	TOYOT	2013	-	-	-	-	G -								

Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd ELECTRIC AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20150713 Time 1852 Day MON  
 Primary Collision Factor UNKNOWN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20151217  
 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	69	F	W	HNBD		PROC ST	S	A	0100	NISSA	1997	-	-	N	-	L -								
2	DRVR	53	F	W	HNBD		LFT TURN	E	A	0700	LAND	2009	-	-	N	-	L -								

Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd LAMPSON AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat 206 Type 0 CalTrans Badge 368 Collision Date 20150111 Time 1950 Day SUN  
 Primary Collision Factor STOP SGN|SIG Violation 21453A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20150316  
 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	52	M	A		PHYS	PROC ST	N	A	0000	FORD	2013	-	-	-	-	G -	DRVR	COMP PN 52	52	M	1	0	G	-
2	DRVR	31	M	A	HNBD		LFT TURN	E	A	0000	HONDA	1995	-	-	-	-	G -	PASS	COMP PN 28	28	F	3	0	G	-
																		PASS		5	F	5	0	Q	-

Primary Rd SEAL BEACH BL Distance (ft) 110 Direction S Secondary Rd LAMPSON AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20151006 Time 1933 Day TUE  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20160618  
 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	81	F	W	HNBD		PROC ST	N	-	0000	FORD	2011	-	-	N	-	L -	DRVR	OTH VIS	81	F	1	0	G	L
2	DRVR	47	F	W	HNBD		STOPPED	N	-	0000	TOYOT	2004	-	-	N	-	G -	DRVR	COMP PN 47	47	F	1	0	G	M

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd MARLIN NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 152 Collision Date 20151104 Time 0720 Day WED																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160210																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	16	F	W	HNBD		PROC ST	-	A	0000	HONDA	2007	-	-	F	-	G	-							
2	DRVR	17	F	W	HNBD		STOPPED	-	A	0000	FORD	1994	-	-	N	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 183 Direction N Secondary Rd NORTH GATE NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 006 Type 0 CalTrans Badge Collision Date 20150204 Time 2124 Day WED																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Process Date 20150826																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	F	A	HNBD		PROC ST	S	A	0000	LEXUS	2000	-	-	F	-	G	M							
2	DRVR	63	M	W	HNBD		STOPPED	S	D	0000	FORD	2004	-	-	N	-	G	M							
Primary Rd SEAL BEACH BL Distance (ft) 65 Direction N Secondary Rd NORTH GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 257 Collision Date 20150804 Time 0002 Day TUE																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20151230																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	26	F	W	HNBD		PROC ST	S	A	0100	MERCE	1984	-	3	A	14601	-	M	G						
2	DRVR	24	F	W	HNBD		STOPPED	S	A	0700	JEEP	2014	-	3	N	-	M	G							
3	DRVR	45	F	H	HNBD		STOPPED	S	D	2200	TOYOT	2000	-	3	A	12500	N	M	G						
Primary Rd SEAL BEACH BL Distance (ft) 150 Direction N Secondary Rd NORTHGATE NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 152 Collision Date 20150117 Time 0625 Day SAT																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160428																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	36	M	H	HNBD		SLOWING	S	A	0100	FORD	2000	-	3	A	22350	F	M	G						
2	DRVR	46	M	O	HNBD		STOPPED	S	A	0100	CHRY	2013	-	3	N	-	M	G	DRVR	COMP PN 46	-	1	0	M	G
Primary Rd SEAL BEACH BL Distance (ft) 445 Direction W Secondary Rd NORTHGATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20151027 Time 0811 Day TUE																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160203																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	42	F	W	HNBD		STOPPED	S	-	0000	HONDA	2011	A	-	-	-	G	-							
2	DRVR	62	F	O	HNBD		STOPPED	S	-	0000	TOYOT	2003	A	-	-	-	G	-							
3	DRVR	41	F	W	HNBD		STOPPED	-	-	0000	LEXUS	2006	A	-	-	-	G	-							
4	DRVR	42	F	W	HNBD		STOPPED	S	-	0000	FORD	2013	A	-	-	-	G	-							

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL Distance (ft) 667 Direction N Secondary Rd NORTHGATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20151129 Time 1354 Day SUN																									
Primary Collision Factor LANE CHANGE Violation 21658A Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160209																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	30	F	H	HNBD		CHANG LN	-	A	0700	JEEP	1998	-	3	N	-	M G	PASS		33	M	3	0	M	G
2	DRVR	58	M	W	HNBD		PROC ST	S	A	0100	MERCE	2010	-	3	N	-	M G								
Primary Rd SEAL BEACH BL Distance (ft) 359 Direction S Secondary Rd OAK RANCH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist 21 Beat NORTH Type 0 CalTrans Badge 313 Collision Date 20151129 Time 2038 Day SUN																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160922																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	16	M	W	HNBD		PROC ST	N	A	0000	GMC	2003	-	-	N	-	G -								
2	DRVR	17	M	W	HNBD		PROC ST	N	A	0000	LEXUS	1999	-	-	N	-	G -								
Primary Rd SEAL BEACH BL Distance (ft) 500 Direction E Secondary Rd OLD RANCH PKWY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 106 Type 0 CalTrans Badge 251 Collision Date 20150113 Time 1408 Day TUE																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20150806																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	69	F	W	HNBD		CHANG LN	S	-	0000	LEXUS	2001	-	D	N	-	G -								
2	DRVR	41	F	W	HNBD		SLOWING	E	-	0000	MERCE	2011	-	D	N	-	G -								
Primary Rd SEAL BEACH BL Distance (ft) 145 Direction S Secondary Rd OLD RANCH PKY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20150101 Time 2146 Day THU																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160531																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	M	H	HNBD		U-TURN	S	-	0000	TOYOT	2014	A	-	N	-	G -								
2	DRVR	23	M	W	HNBD		PROC ST	S	-	0000	JEEP	2011	A	-	N	-	G -								
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd OLD RANCH PKY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20150826 Time 1154 Day WED																									
Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160104																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With BICYCLE Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	BICY	27	M	A			PROC ST	N	L	0000	-	-	-	-	-	-	-								
2	DRVR	53	F	W		null		E	-	0000	TOYOT	2009	-	-	-	-	G -								

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL Distance (ft) 53 Direction S Secondary Rd OLD RANCH PKY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20151113 Time 1504 Day FRI																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160209																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	F	O	HNBD		PROC ST	-	A	0100	FORD	2008	-	3	N	-	M	G								
2	DRVR	69	F	W	HNBD		STOPPED	E	A	0100	HYUND	2015	-	2	N	-	M	G								
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd PACIFIC COAST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.721 Side of Hwy N																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans 12 Badge 362 Collision Date 20150319 Time 0959 Day THU																										
Primary Collision Factor LANE CHANGE Violation 21658A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160922																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type I Ramp/Int 5																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	77	F	W	HNBD		LFT TURN	-	A	0800	TOYOT	2004	-	3	N	-	M	G								
2	DRVR	32	M	W	HNBD		LFT TURN	-	A	0100	HONDA	1996	-	3	N	-	B	G								
Primary Rd SEAL BEACH BL Distance (ft) 40 Direction N Secondary Rd PACIFIC COAST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 361 Collision Date 20150818 Time 1516 Day TUE																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160104																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	55	M	W	HNBD		PROC ST	S	D	0000	DODGE	2004	-	-	-	-	G	-								
2	DRVR	54	M	W	HNBD		STOPPED	S	A	0000	BMW	2011	-	-	-	-	G	-								
Primary Rd SEAL BEACH BL Distance (ft) 385 Direction N Secondary Rd PCH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 152 Collision Date 20150805 Time 0546 Day WED																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160726																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	57	M	W	IMP UNK	IMP UNK	PROC ST	N	A	0100	CHRY	1998	-	3	F	-	L	G	DRVR	OTH VIS	57	M	1	0	L	G
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd PCH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 206 Type 0 CalTrans Badge 368 Collision Date 20151004 Time 0028 Day SUN																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160201																										
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	44	M	W	IMP UNK	IMP UNK	PROC ST	S	A	0000	NISSA	2005	-	-	-	-	G	-								
2	DRVR	20	M	H	HNBD		PROC ST	S	A	0000	TOYOT	2010	-	-	-	-	G	-								



Include State Highways cases

Primary Rd	SEAL BEACH BL	Distance (ft)	10	Direction	N	Secondary Rd	PLYMOUTH	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	429	Collision Date	20151220	Time	1107	Day	SUN
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20160126	
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run			
Hit and Run	Motor Vehicle Involved With			OTHER MV	Lighting	DAYLIGHT		Ped Action			Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int					

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	66	F	W	HNBD		PROC ST	S	A	0000	-	2014	-	-	G	-	G	-								
2	DRVR	51	F	A	HNBD		STOPPED	S	A	0000	BMW	2011	-	-	G	-	G	-	DRVR	COMP PN 51	F	1	3	-	-	
																			PASS	COMP PN 15	F	3	3	G	-	
3	DRVR	74	F	W	HNBD		STOPPED	S	A	0000	DODGE	2015	-	-	G	-	G	-								
4	DRVR	34	M	W	HNBD		STOPPED	S	A	0000	TOYOT	2013	-	-	G	-	G	-								
5	DRVR	58	F	W	HNBD		STOPPED	S	A	0000	BMW	2003	-	-	G	-	G	-								

Primary Rd	SEAL BEACH BL	Distance (ft)	105	Direction	S	Secondary Rd	RD C	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	241	Type	0	CalTrans	Badge	251	Collision Date	20151023	Time	1849	Day	FRI
Primary Collision Factor	WRONG SIDE		Violation	21651A	Collision Type	HIT OBJECT		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160201	
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run			
Hit and Run	Motor Vehicle Involved With			FIXED OBJ	Lighting	DUSK/DAWN		Ped Action			Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int					

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	67	M		HNBD		PROC ST	N	A	0000	GMC	2003	-	-	N	-	G	-								

Primary Rd	SEAL BEACH BL	Distance (ft)	42	Direction	N	Secondary Rd	ROSSMOOR	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	429	Collision Date	20151228	Time	1151	Day	MON
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	N	Process Date	20160322	
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run			
Hit and Run	Motor Vehicle Involved With			OTHER MV	Lighting	DAYLIGHT		Ped Action			Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int					

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	M	W	HNBD		PROC ST	S	A	0000	FORD	1998	-	-	G	-	G	-	DRVR	COMP PN 75	M	1	3	G	-	
2	DRVR	75	M	W	HNBD		STOPPED	S	A	0000	TOYOT	2006	-	-	G	-	G	-								

Primary Rd	SEAL BEACH BL	Distance (ft)	0	Direction		Secondary Rd	ROSSMOOR	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	001	Type	0	CalTrans	Badge	362	Collision Date	20150514	Time	1446	Day	THU
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	N	Process Date	20151014	
Weather1	RAINING		Weather2		Rdwy Surface	WET		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run			
Hit and Run	Motor Vehicle Involved With			OTHER MV	Lighting	DAYLIGHT		Ped Action			Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int					

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	84	F	W	HNBD		PROC ST	N	A	0100	KIA	2013	-	3	N	-	M	G								
2	DRVR	66	M	O	HNBD		STOPPED	-	A	0100	AUDI	2014	-	3	N	-	M	G								

Primary Rd	SEAL BEACH BL	Distance (ft)	212	Direction	N	Secondary Rd	ROSSMOOR	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy		
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	Badge	362	Collision Date	20151101	Time	0710	Day	SUN	
Primary Collision Factor	IMPROP TURN		Violation	22107	Collision Type	SIDESWIPE		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160209		
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run				
Hit and Run	MSDMNR			Motor Vehicle Involved With	OTHER MV	Lighting	DUSK/DAWN		Ped Action			Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int					

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	34	M	H	IMP UNK	IMP UNK	CHANG LN	N	A	0100	CHEVR	2014	-	3	N	-	M	G								
2	DRVR	43	F	H	HNBD		PROC ST	N	A	0100	VOLVO	2003	-	3	N	-	M	G								

Primary Rd	SEAL BEACH BL	Distance (ft)	35	Direction	S	Secondary Rd	ROSSMOOR	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans		Badge	257	Collision Date	20151015	Time	1925 Day THU						
Primary Collision Factor	LANE CHANGE		Violation	21658A	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160129									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int	

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	55	F	A	HNBD		CHANG LN	S	A	0100	LEXUS	2005	-	3	A	22350	N	M	G							
2	DRVR	47	M	A	HNBD		STOPPED	S	I	2000	NABOR	2001	-	3	N		M	C								

Primary Rd	SEAL BEACH BL	Distance (ft)	345	Direction	N	Secondary Rd	RT 1	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	6	Beat	007	Type	0	CalTrans		Badge	174	Collision Date	20150315	Time	1230 Day SUN						
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20160428									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int	

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	M	W	HNBD		PROC ST	S	A	0000	TOYOT	2012	-	-	F		G	-	PASS	COMP PN 7	M	4	0	Q	-	
2	DRVR	49	F	W	HNBD		STOPPED	S	A	0000	MITSU	2013	-	-	N		G	-	PASS	COMP PN 9	F	6	0	G	-	
3	DRVR	51	M	W	HNBD		STOPPED	S	A	0000	VOLKS	2014	-	-	N		G	-	PASS		50	F	3	0	G	-

Primary Rd	SEAL BEACH BL	Distance (ft)	18	Direction	N	Secondary Rd	SAINT ANDREWS	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	PATRO	Type	0	CalTrans		Badge	314	Collision Date	20150928	Time	1923 Day MON						
Primary Collision Factor	STOP SGN SIG		Violation	21453A	Collision Type	BROADSIDE	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20151124									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int	

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	36	F	H			PROC ST	S	A	0000	NISSA	2015	-	-	N		G	-	PASS		25	F	6	0	G	-
2	DRVR	67	F	W			LFT TURN	W	A	0000	HONDA	2008	-	-	N		G	-	DRVR	COMP PN 67	F	1	0	G	-	

Primary Rd	SEAL BEACH BL	Distance (ft)	0	Direction		Secondary Rd	SAINT ANDREWS	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	001	Type	0	CalTrans		Badge	362	Collision Date	20151114	Time	1838 Day SAT						
Primary Collision Factor	STOP SGN SIG		Violation	21453A	Collision Type	BROADSIDE	Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20160209									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int	

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	F	H	HNBD		PROC ST	S	A	0100	HONDA	2008	-	3	N		L	G	DRVR	COMP PN 25	F	1	0	L	G
2	DRVR	61	F	W	HNBD		LFT TURN	-	A	0100	TOYOT	2013	-	3	N		L	G	DRVR	COMP PN 61	F	1	0	L	G

Primary Rd	SEAL BEACH BL	Distance (ft)	0	Direction		Secondary Rd	SAINT ANDREWS	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	00N	Type	0	CalTrans		Badge	317	Collision Date	20150516	Time	1637 Day SAT						
Primary Collision Factor	STOP SGN SIG		Violation	21453A	Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20151022									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int	

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	F	A	HNBD		PROC ST	S	A	0100	TOYOT	2010	-	3	N		M	G								
2	DRVR	83	F	W		null		W	A	0100	CHEVR	2013	-	-	-		M	G								

Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd SAINT ANDREWS	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist 11	Beat	Type 0	CalTrans	Badge 368	Collision Date 20151219	Time 2009	Day SAT														
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 3	Tow Away? Y	Process Date 20160121																
Weather1 CLOUDY	Weather2	Rdwy Surface WET	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	74	F	W	HNBD	PROC ST	N	A	0100	NISSA	2015	- 3	-	-	L	G	DRVR	COMP PN 74	74	F	1	0	L	G
2	DRVR	63	M	W	HNBD	STOPPED	N	D	2200	TOYOT	2008	- 3	-	-	M	G	DRVR	COMP PN 63	63	M	1	0	M	G
																	PASS	COMP PN 59	59	F	3	0	M	G
Primary Rd SEAL BEACH BL		Distance (ft) 65	Direction S	Secondary Rd SAINT CLOUD DR	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist 20	Beat	Type 0	CalTrans	Badge 313	Collision Date 20151114	Time 1742	Day SAT														
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160209																
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	88	F	W	HNBD	PROC ST	N	A	0000	TOYOT	2008	- -	-	-	G	-								
2	DRVR	61	F	W	HNBD	STOPPED	N	A	0000	FORD	2006	- -	N	-	G	-	PASS		66	M	3	3	G	-
Primary Rd SEAL BEACH BL		Distance (ft) 104	Direction S	Secondary Rd ST CLOUD ST	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 304	Collision Date 20151208	Time 1450	Day TUE														
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160225																
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	79	M	W	HNBD	PROC ST	N	A	0000	CHEVR	2014	- -	F	-	G	-								
2	DRVR	52	F	W	HNBD	STOPPED	N	A	0000	SUBAR	2013	- -	N	-	G	-								
3	DRVR	53	F		HNBD	STOPPED	N	A	0000	MERCE	2000	- -	N	-	G	-								
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd TOWN CENTER	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 362	Collision Date 20151217	Time 1643	Day THU														
Primary Collision Factor IMPED TRAFFIC		Violation 22526A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160225																
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DUSK/DAWN	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	M	W	HNBD	PROC ST	E	A	0700	ACURA	2013	- 3	N	-	N	G	PASS		36	F	3	0	L	G
2	DRVR	35	M	W	HNBD	PROC ST	-	A	0100	CHEVR	2015	- 3	N	-	M	G								
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd TOWN CENTER DR	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 257	Collision Date 20150804	Time 2015	Day TUE														
Primary Collision Factor OTHER HAZ		Violation 21451A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160104																
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	54	F	B	HNBD	PROC ST	-	A	0100	HONDA	2006	- 3	N	-	L	G								
2	DRVR	70	F	W	HNBD	PROC ST	E	A	0100	TOYOT	2010	- 3	N	-	L	G	PASS		71	M	3	0	L	G

Primary Rd		SEAL BEACH BL		Distance (ft)	292	Direction	N	Secondary Rd		TOWN CENTER DR NCIC 3020		State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	001	Type	0	CalTrans	Badge	362	Collision Date	20150815	Time	1240	Day	SAT					
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20160104									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int										
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	F	W	HNBD		PROC ST	-	A	0100	SATUR	2002	-	3	N	-	L	G	DRVR	OTH VIS	18	F	1	0	L	G
																			PASS		20	M	6	0	M	G
																			PASS		18	M	3	0	P	G
2	DRVR	57	F	W	HNBD		STOPPED	S	A	0800	HONDA	2013	-	3	N	-	M	G	PASS		11	F	3	0	M	G
3	DRVR	19	F	O	HNBD		STOPPED	S	A	0700	LEXUS	2001	-	3	N	-	M	G								
Primary Rd		SEAL BEACH BL		Distance (ft)	0	Direction		Secondary Rd		TOWN CENTER DR NCIC 3020		State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	304	Collision Date	20151021	Time	1748	Day	WED					
Primary Collision Factor		NOT STATED		Violation		Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20151120									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DUSK/DAWN	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int										
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	25	M	W	HNBD		PROC ST	S	-	0000	HYUND	2014	A	-	N	-	M	G								
2	DRVR	27	F	H	HNBD		LFT TURN	N	-	0000	FORD	2010	A	-	N	-	M	-								
Primary Rd		SEAL BEACH BL		Distance (ft)	68	Direction	S	Secondary Rd		WESTMINSTER AV NCIC 3020		State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	365	Collision Date	20150522	Time	1826	Day	FRI					
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	HIT OBJECT	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20150626									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int										
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	54	M	W	HNBD		RGT TURN	S	-	0000	HONDA	2001	-	2	N	-	G	-	DRVR	COMP PN	54	M	1	1	G	-
Primary Rd		SEAL BEACH BL		Distance (ft)	446	Direction	S	Secondary Rd		WESTMINSTER AV NCIC 3020		State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	ROVER	Type	0	CalTrans	Badge	178	Collision Date	20150603	Time	1805	Day	WED					
Primary Collision Factor		LANE CHANGE		Violation	21658A	Collision Type	SIDESWIPE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20151110									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int										
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	F	W	HNBD		PASSING	N	-	0000	TOYOT	2007	-	-	N	-	G	-								
2	DRVR	41	F	W	HNBD		CHANG LN	N	-	0000	INFIN	2014	-	-	N	-	G	-	PASS		3	M	4	0	Q	-
																			PASS		6	M	6	0	Q	-
Primary Rd		SEAL BEACH BL		Distance (ft)	190	Direction	S	Secondary Rd		WESTMINSTER AV NCIC 3020		State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	Badge	298	Collision Date	20150712	Time	1547	Day	SUN					
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	OTHER	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20150825									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With		OTHER OBJ		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int										
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	51	M	B	HNBD		SLOWING	N	C	0000	YAMAH	2002	-	-	N	-	W	-	DRVR	COMP PN	51	M	1	0	W	-



Primary Rd SEAL BEACH BL		Distance (ft) 25	Direction N	Secondary Rd WESTMINSTER AV NCIC 3020		State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 300	Collision Date 20150810	Time 0017	Day MON									
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160809											
Weather1 CLEAR	Weather2	Rdwy Surface	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 18 F H	HBD-UI		PROC ST	N	A	0000	DODGE 2009	- -	A 23136	- G -	PASS		20	M	3	0	G	-
Primary Rd SEAL BEACH BL		Distance (ft) 40	Direction N	Secondary Rd WESTMINSTER AV NCIC 3020		State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 365	Collision Date 20151114	Time 0343	Day SAT									
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160209											
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 24 M W	HBD-UI		LFT TURN	N	A	0000	HONDA 2006	- -	A 22107	- G -	PASS							
Primary Rd SEAL BEACH BL		Distance (ft) 60	Direction N	Secondary Rd WESTMINSTER AV NCIC 3020		State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist 11	Beat	Type 0	CalTrans	Badge 368	Collision Date 20151219	Time 1848	Day SAT									
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type OVERTURNED	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20160121											
Weather1 CLOUDY	Weather2	Rdwy Surface WET	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 19 M H	HNBD		PROC ST	N	D	2200	NISSA 2008	- 3	- -	L G	PASS	COMP PN	19	F	3	0	L	G
Primary Rd SEAL BEACH BL		Distance (ft) 500	Direction N	Secondary Rd WESTMINSTER BL NCIC 3020		State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 423	Collision Date 20150121	Time 1915	Day WED									
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 2	Tow Away?	Process Date 20150304											
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 65 M W	HNBD		LFT TURN	W	A	0000	CHRYSL 1997	- -	N -	G -	PASS		50	F	3	0	G	-
2	DRVR 55 M W	HNBD		PROC ST	S	C	0000	HARLE 2010	- -	N -	W -	DRVR	SEVERE	55	M	1	0	W	-
												PASS	SEVERE	49	F	2	1	Y	-
Primary Rd SEAL BEACH BL		Distance (ft) 15	Direction N	Secondary Rd WESTMINSTER BL NCIC 3020		State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 361	Collision Date 20150121	Time 0655	Day WED									
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20150812											
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DUSK/DAWN	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 54 M W	HNBD		PROC ST	S	A	0000	TOYOT 2007	- -	- -	G -								
2	DRVR 34 M W	HNBD		STOPPED	S	A	0000	FORD 2013	- -	- -	G -								

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL Distance (ft) 48 Direction S Secondary Rd WESTMINSTER BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat PATRO Type 0 CalTrans Badge 314 Collision Date 20150216 Time 0057 Day MON																										
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20150820																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	53	F	W	HBD-UI		RGT TURN	N	A	0000	TOYOT	2002	-	-	-	-	G	-								
Victim Info																										
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction S Secondary Rd WESTMINSTER BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 007 Type 0 CalTrans Badge 363 Collision Date 20150412 Time 2241 Day SUN																										
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160719																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	M	H	HBD-UI		PROC ST	S	-	0000	TOYOT	2012	A	-	A	22350	-	G	M							
Victim Info																										
Primary Rd SEAL BEACH BL Distance (ft) 336 Direction S Secondary Rd WESTMINSTER BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 423 Collision Date 20151211 Time 0939 Day FRI																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160225																										
Weather1 CLEAR Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	42	M	H	HNBD		RAN OFF RD	S	D	0000	CHEVR	1991	-	-	K	-	G	-	PASS		34	M	3	0	G	-
Victim Info																										
Primary Rd SEAL BEACH BL Distance (ft) 97 Direction S Secondary Rd WESTMINSTER BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 362 Collision Date 20151224 Time 1423 Day THU																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160121																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	56	M	W	HNBD		PROC ST	S	C	0200	HONDA	2015	-	3	N	-	P	W	DRVR	OTH VIS	56	M	1	1	P	W
Victim Info																										
Primary Rd SOUTHSORE Distance (ft) 350 Direction N Secondary Rd BOLSA NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 362 Collision Date 20150207 Time 1202 Day SAT																										
Primary Collision Factor UNKNOWN Violation Collision Type OTHER Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150825																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With PKD MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	PRKD	998	-	HNBD			PARKING	S	A	0700	TOYOT	2012	-	3	N	-	-	-								
2	PRKD	998	-	HNBD			PARKING	S	A	0100	TOYOT	1999	-	3	N	-	-	-								

Primary Rd <b>ST CLOUD</b>		Distance (ft) <b>150</b>	Direction <b>S</b>	Secondary Rd <b>DRUID LN</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>Beat</b>	Type <b>0</b>	CalTrans	Badge <b>361</b>	Collision Date <b>20150728</b>	Time <b>0643</b>	Day <b>TUE</b>																
Primary Collision Factor <b>IMPROP TURN</b>		Violation <b>22107</b>	Collision Type <b>HEAD-ON</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>N</b>	Process Date <b>20151207</b>																	
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>FIXED OBJ</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev <b>NT PRS/FCTR</b>	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	88	M	A	HNBD		RAN OFF RD	W	-	0000	NISSA	2002	-	-	-	-	G								
Primary Rd <b>WESTMINSTER AV</b>		Distance (ft) <b>0</b>	Direction	Secondary Rd <b>APOLLO</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>Beat</b>	Type <b>0</b>	CalTrans	Badge <b>362</b>	Collision Date <b>20150730</b>	Time <b>1601</b>	Day <b>THU</b>																
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>REAR END</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>Y</b>	Process Date <b>20151207</b>																	
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>OTHER MV</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev <b>FNCTNG</b>	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	38	F	W	HNBD		PROC ST	E	A	0100	CHRY	2004	-	3	N	-	L	G							
2	DRVR	31	M	H	HNBD		STOPPED	E	A	0100	VOLVO	2001	-	3	N	-	L	G							
Primary Rd <b>WESTMINSTER AV</b>		Distance (ft) <b>30</b>	Direction <b>E</b>	Secondary Rd <b>APOLLO</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>WOC</b>	Beat <b>00N</b>	Type <b>0</b>	CalTrans	Badge <b>152</b>	Collision Date <b>20151118</b>	Time <b>0710</b>	Day <b>WED</b>															
Primary Collision Factor <b>UNKNOWN</b>		Violation	Collision Type <b>HIT OBJECT</b>	Severity <b>INJURY</b>	#Killed <b>0</b>	#Injured <b>2</b>	Tow Away? <b>N</b>	Process Date <b>20151221</b>																	
Weather1		Weather2	Rdwy Surface	Rdwy Cond1	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>BICYCLE</b>		Lighting	Ped Action	Cntrl Dev <b>NT PRS/FCTR</b>	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	BICY	45	M		HNBD		PROC ST	W	L	0400	-	-	3	M	-	-	-	BICY	OTH VIS	45	-	1	1	P	W
2	BICY	31	M		HNBD		PROC ST	W	L	0400	-	-	3	N	-	-	-	BICY	COMP PN	31	M	1	1	P	W
Primary Rd <b>WESTMINSTER AV</b>		Distance (ft) <b>1104</b>	Direction <b>W</b>	Secondary Rd <b>BOLSA CHICA</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>Beat</b>	Type <b>0</b>	CalTrans	Badge <b>362</b>	Collision Date <b>20150725</b>	Time <b>1016</b>	Day <b>SAT</b>																
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>REAR END</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>Y</b>	Process Date <b>20151207</b>																	
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>OTHER MV</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev <b>FNCTNG</b>	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	F	H	HNBD		PROC ST	-	A	0100	CHEVR	2013	-	3	N	-	L	G							
2	DRVR	19	F	W	HNBD		STOPPED	-	A	0100	MERCE	2005	-	3	N	-	M	G							
Primary Rd <b>WESTMINSTER AV</b>		Distance (ft) <b>78</b>	Direction <b>W</b>	Secondary Rd <b>BOLSA CHICA</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>Beat</b>	Type <b>0</b>	CalTrans	Badge <b>362</b>	Collision Date <b>20151016</b>	Time <b>0722</b>	Day <b>FRI</b>																
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>REAR END</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>N</b>	Process Date <b>20160204</b>																	
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>OTHER MV</b>		Lighting <b>DUSK/DAWN</b>	Ped Action	Cntrl Dev <b>FNCTNG</b>	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	62	M	W	HNBD		PROC ST	E	A	0700	KIA	2014	-	3	N	-	M	G							
2	DRVR	48	M	H	HNBD		STOPPED	-	D	2200	CHEVR	2002	-	3	N	-	M	G							

Primary Rd WESTMINSTER AV Distance (ft) 4484 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 006 Type 0 CalTrans Badge 363 Collision Date 20150117 Time 0236 Day SAT																									
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150801																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	23	F	B	HBD-UI		PROC ST	E	A	0000	HONDA	2004	-	-	A	22350	G G M	PASS		18	M	3	0	G	-
2	DRVR	39	M		HNBD		STOPPED	-	A	0000	TOYOT	2002	-	-	G	-	G M	PASS		21	M	5	0	G	-
Primary Rd WESTMINSTER AV Distance (ft) 180 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 006 Type 0 CalTrans Badge 363 Collision Date 20150314 Time 1814 Day SAT																									
Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150918																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 CONS ZONE Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	24	M	W	HNBD		BACKING	W	D	0000	DODGE	1998	-	-	N	-	- G								
Primary Rd WESTMINSTER AV Distance (ft) 530 Direction E Secondary Rd ISLAND VILLAGE NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20150716 Time 0248 Day THU																									
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20151218																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	M	W	HBD-UI		PROC ST	E	A	0000	PONTI	2008	-	-	A	22107	- M -	PASS		25	M	3	0	M	-
Primary Rd WESTMINSTER AV Distance (ft) 0 Direction Secondary Rd KITTS NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20150306 Time 1623 Day FRI																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20150918																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	O	HNBD		PROC ST	W	A	0700	SUBAR	1998	-	3	N	-	M G								
2	DRVR	48	M	W	HNBD		PARKING	-	C	0200	TRIUM	2001	-	3	N	-	P W								
Primary Rd WESTMINSTER AV Distance (ft) 786 Direction E Secondary Rd KITTS NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans Badge 362 Collision Date 20151022 Time 0635 Day THU																									
Primary Collision Factor LANE CHANGE Violation 21658A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160201																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	52	M	W	HNBD		CHANG LN	E	A	0100	CHEVR	1995	-	3	N	-	M G								
2	DRVR	21	F	H	HNBD		PROC ST	-	A	0100	HONDA	2006	-	3	N	-	M G								



Primary Rd WESTMINSTER AV		Distance (ft) 0	Direction	Secondary Rd KITTS HWY	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 422	Collision Date 20150327	Time 1225	Day FRI														
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 2	Tow Away? Y	Process Date 20160428																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With MV ON OTHER RD		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	70	M	W	HNBD	PROC ST	E	A	0000	CHRY	2003	-	-	F	-	G M	DRVR	COMP PN 69	69	M	1	0	G	-
2	DRVR	56	F	H	HNBD	LFT TURN	N	A	0000	NISSA	1999	-	-	N	-	G M	DRVR	COMP PN 56	56	F	1	0	G	-
Primary Rd WESTMINSTER AV		Distance (ft) 575	Direction E	Secondary Rd KITTS RD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat TRAFFI	Type 0	CalTrans	Badge 246	Collision Date 20150527	Time 1828	Day WED														
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20151021																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	62	M	W	HNBD	PROC ST	W	A	0000	MITSU	2010	-	-	N	-	M -								
2	DRVR	64	F	A	HNBD	PROC ST	W	A	0000	LEXUS	2005	-	-	N	-	M -								
Primary Rd WESTMINSTER AV		Distance (ft) 315	Direction E	Secondary Rd ROAD B	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 246	Collision Date 20150217	Time 2340	Day TUE														
Primary Collision Factor DRVR ALG DRG		Violation 23152A	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20150820																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With FIXED OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	26	F	W	HBD-UI	PROC ST	E	A	0000	KIA	2012	-	-	A	22107	-	L -							
Primary Rd WESTMINSTER AV		Distance (ft) 740	Direction E	Secondary Rd ROAD C	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist 11	Beat 006	Type 0	CalTrans	Badge 174	Collision Date 20150315	Time 1508	Day SUN														
Primary Collision Factor UNKNOWN		Violation	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20150422																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	85	F	W	HNBD	U-TURN	E	A	0000	NISSA	2006	-	-	N	-	G -								
2	DRVR	45	M	W	HNBD	PROC ST	E	C	0000	HARLE	2007	-	-	N	-	W -	DRVR	OTH VIS	45	M	1	1	W	-
Primary Rd WESTMINSTER AV		Distance (ft) 15	Direction E	Secondary Rd SEAL BEACH	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00N	Type 0	CalTrans	Badge 152	Collision Date 20150107	Time 1205	Day WED														
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20150312																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	32	M		HNBD	SLOWING	W	A	0000	TOYOT	2011	-	-	F	-	G -								
2	DRVR	71	F		HNBD	STOPPED	W	A	0000	NISSA	2001	-	-	N	-	G -	DRVR	COMP PN 71	71	-	1	0	G	-

Primary Rd	WESTMINSTER AV	Distance (ft)	185	Direction	E	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans		Badge	257	Collision Date	20150218	Time	1811 Day WED
Primary Collision Factor	DRVR ALC DRG	Violation	23152E	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20150820				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	27	F	W		DRUG	PROC ST	W	A	0100	TOYOT	2007	- 3	A	22350	-	L G								
2	DRVR	41	F	W	HNBD		STOPPED	W	A	0100	HYUND	2015	- 3	N		-	M G								
3	DRVR	35	M	W	HNBD		STOPPED	W	A	0100	HONDA	2010	- 3	N		-	M G								

Primary Rd	WESTMINSTER AV	Distance (ft)	0	Direction		Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	WOC	Beat		Type	0	CalTrans		Badge	362	Collision Date	20150219	Time	1645 Day THU
Primary Collision Factor	UNKNOWN	Violation	23100B	Collision Type	SIDESWIPE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20150820				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	46	M	A	HNBD		LFT TURN	-	A	0100	NISSA	2014	- 3	A	21658	-	M G								
2	DRVR	84	F	W	HNBD		RGT TURN	E	A	0700	TOYOT	2002	- 3	N		-	M G	PASS		47	-	9	3	-	-

Primary Rd	WESTMINSTER AV	Distance (ft)	1320	Direction	W	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans		Badge	152	Collision Date	20150311	Time	0109 Day WED
Primary Collision Factor	IMPROP TURN	Violation	22107	Collision Type	HEAD-ON	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20150422				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	H	HNBD		LFT TURN	W	-	0000	HONDA	1996	A -	F		-	L -								
2	DRVR	59	F	W	HNBD		PROC ST	E	-	0000	NISSA	2013	A -	N		-	L -	DRVR	COMP PN	59	-	1	0	G	-

Primary Rd	WESTMINSTER AV	Distance (ft)	900	Direction	W	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans		Badge	298	Collision Date	20150517	Time	1547 Day SUN
Primary Collision Factor	R-O-W AUTO	Violation	21804A	Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20151021				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	31	M	H	HNBD		LFT TURN	N	A	0000	DODGE	2010	- -	N		-	G -	PASS		40	F	3	0	G	-
																		PASS		4	M	6	0	G	-
																		PASS		2	M	4	0	G	-
2	DRVR	81	M	W	HNBD		PROC ST	E	A	0000	HONDA	1990	- -	N		-	G -								

Primary Rd	WESTMINSTER AV	Distance (ft)	70	Direction	E	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	NORTT	Type	0	CalTrans		Badge	246	Collision Date	20150518	Time	1751 Day MON
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20151019				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	46	M	H	HNBD		PROC ST	W	-	0000	GMC	1984	- D	N		-	X P								
2	DRVR	40	M	W	HNBD		STOPPED	W	-	0000	TOYOT	2007	A -	N		-	M -	PASS		4	F	5	0	Q	-

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd WESTMINSTER AV		Distance (ft) 0	Direction	Secondary Rd SEAL BEACH BL	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20150605	Time 1314	Day FRI															
Primary Collision Factor LANE CHANGE		Violation 21658A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away?	Process Date 20151110																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	75	F	O	HNBD	RGT TURN	-	A	0100	HYUND	2014	-	3	N	-	M	G								
2	DRVR	52	F	W	HNBD	LFT TURN	-	D	2200	DODGE	1999	-	3	N	-	M	G								
Primary Rd WESTMINSTER AV		Distance (ft) 395	Direction W	Secondary Rd SEAL BEACH BL	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 246	Collision Date 20150614	Time 1732	Day SUN															
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20151110																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	73	F	W	HNBD	LFT TURN	N	A	0100	FORD	2008	-	-	N	-	L	G								
2	DRVR	23	M	H	HNBD	PROC ST	W	A	0100	BMW	2007	-	-	N	-	L	-	PASS		21	F	3	0	G	-
Primary Rd WESTMINSTER AV		Distance (ft) 630	Direction W	Secondary Rd SEAL BEACH BL	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 300	Collision Date 20150615	Time 1135	Day MON															
Primary Collision Factor R-O-W AUTO		Violation 21804A	Collision Type SIDESWIPE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20160620																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With MV ON OTHER RD		Lighting DAYLIGHT	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	73	M		HNBD	RGT TURN	W	-	0000	HONDA	2014	A	-	-	-	G	-	DRVR	OTH VIS	73	M	1	0	G	-
2	DRVR	22	F		HNBD	PROC ST	W	-	0000	FORD	2010	A	-	-	-	G	-								
Primary Rd WESTMINSTER AV		Distance (ft) 406	Direction W	Secondary Rd SEAL BEACH BL	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 361	Collision Date 20150707	Time 1311	Day TUE															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away?	Process Date 20151217																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	72	F	W	HNBD	LFT TURN	N	-	0000	TOYOT	2011	-	-	-	-	G	-								
2	DRVR	70	M	W	HNBD	PROC ST	W	-	0000	FORD	2001	-	-	-	-	G	-								
Primary Rd WESTMINSTER AV		Distance (ft) 492	Direction E	Secondary Rd SEAL BEACH BL	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist 11	Beat NORTH	Type 0	CalTrans	Badge 313	Collision Date 20150801	Time 1724	Day SAT															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20150917																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	24	M	W	HNBD	PROC ST	E	C	0000	HARLE	2015	-	-	N	-	W	-	DRVR	COMP PN	24	M	1	0	G	-
2	DRVR	44	M	B	HNBD	STOPPED	E	A	0000	MERCE	2010	-	-	N	-	G	-								

Primary Rd WESTMINSTER AV Distance (ft) 12 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 365 Collision Date 20150813 Time 1819 Day THU																										
Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160726																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	63	M	W	HNBD		PROC ST	W	E	0000	FORD	1997	-	-	E	-	G	-								
2	DRVR	54	F	B	HNBD		STOPPED	W	E	0000	GMC	1995	-	-	N	-	G	-	DRVR	COMP PN 54	F	1	0	G	-	
Primary Rd WESTMINSTER AV Distance (ft) 108 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans Badge 362 Collision Date 20151003 Time 1639 Day SAT																										
Primary Collision Factor LANE CHANGE Violation 21658A Collision Type OVERTURNED Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20151125																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	998	-		IMP UNK	IMP UNK	CHANG LN	W	D	2200	OTHER	-	3	L	-	-	-	-								
2	DRVR	72	M	W	HNBD		PROC ST	-	C	0200	HARLE	2008	-	3	L	-	P	W	DRVR	OTH VIS	72	M	1	1	P	W
Primary Rd WESTMINSTER AV Distance (ft) 94 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 106 Type 0 CalTrans Badge 251 Collision Date 20151007 Time 1048 Day WED																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160201																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	F	W	HNBD		PROC ST	W	A	0000	FORD	2004	-	-	F	-	G	-								
2	DRVR	38	M	W	HNBD		STOPPED	W	D	0000	DODGE	2013	-	-	-	-	G	-								
Primary Rd WESTMINSTER AV Distance (ft) 200 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 152 Collision Date 20151028 Time 1642 Day WED																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160201																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	F		HNBD		SLOWING	W	-	0000	MAZDA	2002	-	-	F	-	L	G								
2	DRVR	61	F		HNBD		STOPPED	W	-	0000	HONDA	2008	-	-	N	-	M	G								
3	DRVR	29	F		HNBD		STOPPED	W	-	0000	FORD	2014	-	-	N	-	M	G								
Primary Rd WESTMINSTER AV Distance (ft) 940 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist 11 Beat ROVER Type 0 CalTrans Badge 368 Collision Date 20151107 Time 2124 Day SAT																										
Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20151215																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	62	F	W	HNBD		LFT TURN	S	A	0100	MAZDA	2002	-	-	N	-	L	G	DRVR	COMP PN 62	F	1	0	L	G	
2	DRVR	20	F	W	HNBD		PROC ST	E	A	0100	HONDA	2013	-	-	N	-	L	G	DRVR	COMP PN 20	F	1	0	L	G	



Include State Highways cases

Report Run On: 12/12/2016

Primary Rd WESTMINSTER BL Distance (ft) 25 Direction W Secondary Rd APOLLO NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20150310 Time 0917 Day TUE Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20150918 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	65	M	W	HNBD		PROC ST	E	D	0000	CHEVR	1998	-	-	-	-	-	G							
2	DRVR	44	F	W	HNBD		STOPPED	E	A	0000	LEXUS	2012	-	-	-	-	-	G							
Primary Rd WESTMINSTER BL Distance (ft) 1800 Direction W Secondary Rd BOLSA CHICA NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20151110 Time 1736 Day TUE Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160209 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	43	M	O			PROC ST	E	A	0000	LEXUS	2014	-	-	-	-	G								
2	DRVR	52	M	W			SLOWING	E	A	0000	KIA	2012	-	-	-	-	G								
Primary Rd WESTMINSTER BL Distance (ft) 235 Direction E Secondary Rd ROAD B NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 002 Type 0 CalTrans Badge 362 Collision Date 20151101 Time 0823 Day SUN Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160210 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	88	M	W	HNBD		UNS TURN	-	A	0100	CHEVR	2007	-	3	N	-	M	G							
Primary Rd WESTMINSTER BL Distance (ft) 370 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20150217 Time 1130 Day TUE Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20150317 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	69	M	W	HNBD		RGT TURN	W	A	0000	TOYOT	1993	-	-	-	-	G								
2	DRVR	22	F	H	HNBD		PROC ST	W	A	0000	HONDA	1988	-	-	-	-	G	DRVR	COMP PN 22	F	1	3	G	-	



**REPORT 8 - TOTAL COLLISIONS**

01/01/2016 thru 12/01/2016

Total Count: 110

Jurisdiction(s): Seal Beach

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd 1 POWER SPUR		Distance (ft) 0	Direction	Secondary Rd ST CLOUD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20160916	Time 1544	Day FRI															
Primary Collision Factor R-O-W PED		Violation 21950A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20161007																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PED	Lighting DAYLIGHT	Ped Action X-WLK AT	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																		
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	49	F	W	HNBD	RGT TURN	E	A	0700	INFIN	2013	A	-	N	-	M	G								
2	PED	89	M	W	HNBD	PROC ST	N	N	6000	-	-	-	N	-	P	-	PED	COMP PN 89	M	1	0	P	-		
Primary Rd 10TH ST		Distance (ft) 335	Direction S	Secondary Rd RT 1	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 241	Type 0	CalTrans	Badge 251	Collision Date 20160926	Time 1958	Day MON															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20161108																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																		
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	64	M	W	HNBD	RGT TURN	N	A	0000	HYUND	2016	-	-	-	-	G	-								
2	PRKD	998	-	-	HNBD	PARKED	N	A	0000	MERCE	2013	-	-	-	-	-	-								
Primary Rd 17TH ST		Distance (ft) 254	Direction N	Secondary Rd ELECTRIC AV	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 241	Type 0	CalTrans	Badge 251	Collision Date 20161117	Time 1836	Day THU															
Primary Collision Factor STRTNG BCKNG		Violation 22106	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20161207																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																		
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	64	M	W	HNBD	BACKING	S	A	0000	HONDA	2007	-	-	A	22350	-	G	-							
2	PRKD	998	-	-	-	-	-	A	0000	FORD	2002	-	-	-	-	-	-								
3	PRKD	998	-	-	-	-	-	A	0000	HONDA	2010	-	-	-	-	-	-								
Primary Rd 1ST ST		Distance (ft) 14	Direction S	Secondary Rd OCEAN AV	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 365	Collision Date 20160212	Time 0313	Day FRI															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160315																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With FIXED OBJ	Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																		
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	30	F	H	HBD-UI	U-TURN	S	A	0000	CHEVR	2006	-	-	A	22107	-	G	-							

Primary Rd 7TH ST Distance (ft) 150 Direction S Secondary Rd ELECTRIC NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat PATRO Type 0 CalTrans Badge 314 Collision Date 20160626 Time 1729 Day SUN																									
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160830																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved WithNON-CLSN Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	M	W	HBD-UNK		PROC ST	S	A	0000	FIAT	2012	-	-	-	-	G	-							
2	PRKD	998	-					S	-	0000	VOLKS	2011	-	-	N	-	-	-							
3	PRKD	998	-			null		S	-	0000	CHEVR	2014	-	-	-	-	-	-							
Primary Rd ALLEY Distance (ft) 0 Direction N Secondary Rd MAIN ST 308 NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist 3020 Beat SOUTH Type 0 CalTrans Badge 429 Collision Date 20160110 Time 1227 Day SUN																									
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160324																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run MSDMNR Motor Vehicle Involved WithFIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	F	W	HBD-UI		RGT TURN	E	D	2200	CHEVR	2006	-	-	A	22107	-	M	G						
Primary Rd ALLEY Distance (ft) 7 Direction S Secondary Rd RT 1 NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 940 Type 0 CalTrans Badge 251 Collision Date 20160807 Time 1705 Day SUN																									
Primary Collision Factor NOT STATED Violation Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20161129																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved WithFIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	48	M	W	HNBD		LFT TURN	N	A	0000	CHEVR	2015	-	-	-	-	G	-							
Primary Rd ANDERSON Distance (ft) 161 Direction S Secondary Rd RT 1 NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20161025 Time 2147 Day TUE																									
Primary Collision Factor STOP SGN SIG Violation 22450A Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved WithFIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	M	W	HBD-UI		PROC ST	W	A	0000	MITSU	2002	-	-	A	22350	-	G	-						
Primary Rd BALBOA DR Distance (ft) 0 Direction Secondary Rd COASTLINE DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 368 Collision Date 20160306 Time 0422 Day SUN																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160413																									
Weather1 RAINING Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved WithFIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	M	W	HNBD		PROC ST	S	A	0100	HONDA	2011	-	3	E	-	M	G							

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd <b>BAYSIDE DR</b>		Distance (ft) <b>132</b>	Direction <b>S</b>	Secondary Rd <b>CORAL PL</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>SOUTH</b>	Type <b>0</b>	CalTrans	Badge <b>431</b>	Collision Date <b>20160429</b>	Time <b>0003</b>	Day <b>FRI</b>																
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>HIT OBJECT</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>Y</b>	Process Date <b>20160601</b>																		
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																				
Hit and Run		Motor Vehicle Involved With <b>PKD MV</b>		Lighting <b>DARK - ST</b>	Ped Action	Cntrl Dev <b>FUNCTNG</b>	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	29	F	W		FATG	PROC ST	N	-	0000	TOYOT	2001	A	-	F	-	G	-								
2	PRKD	998	-				PARKED	-	-	0000	TOYOT	2013	-	-	-	-	-	-								
Primary Rd <b>BOLSA</b>		Distance (ft) <b>30</b>	Direction <b>W</b>	Secondary Rd <b>SILVER SHOALS</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>PATRO</b>	Type <b>0</b>	CalTrans	Badge <b>314</b>	Collision Date <b>20160626</b>	Time <b>2256</b>	Day <b>SUN</b>																
Primary Collision Factor <b>DRVR ALC DRG</b>		Violation <b>23152A</b>	Collision Type <b>OVERTURNED</b>	Severity <b>INJURY</b>	#Killed <b>0</b>	#Injured <b>1</b>	Tow Away? <b>Y</b>	Process Date <b>20160817</b>																		
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																				
Hit and Run		Motor Vehicle Involved With <b>NON-CLSN</b>		Lighting <b>DARK - ST</b>	Ped Action	Cntrl Dev <b>FUNCTNG</b>	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	M	W	HBD-UNK		PROC ST	N	-	0000	HARLE	1990	-	2	A	-	W	-	DRVR	SEVERE	28	M	1	1	W	-
Primary Rd <b>BOLSA AV</b>		Distance (ft) <b>17</b>	Direction <b>W</b>	Secondary Rd <b>ISLAND VIEW DR</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>SOUTH</b>	Type <b>0</b>	CalTrans	Badge <b>246</b>	Collision Date <b>20160422</b>	Time <b>1404</b>	Day <b>FRI</b>																
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>REAR END</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>Y</b>	Process Date <b>20160531</b>																		
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																				
Hit and Run		Motor Vehicle Involved With <b>OTHER MV</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev <b>FUNCTNG</b>	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	F	W	HNBD		PROC ST	E	A	0100	KIA	2014	-	3	N	-	M	G								
2	DRVR	69	F	W	HNBD		STOPPED	E	A	0100	HONDA	2007	-	3	N	-	M	G								
Primary Rd <b>CANDLEBERRY AV</b>		Distance (ft) <b>752</b>	Direction <b>E</b>	Secondary Rd <b>FUCHSIA ST</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>3</b>	Beat <b>NORTH</b>	Type <b>0</b>	CalTrans	Badge <b>313</b>	Collision Date <b>20160716</b>	Time <b>0400</b>	Day <b>SAT</b>																
Primary Collision Factor <b>DRVR ALC DRG</b>		Violation <b>23152A</b>	Collision Type <b>REAR END</b>	Severity <b>INJURY</b>	#Killed <b>0</b>	#Injured <b>1</b>	Tow Away? <b>Y</b>	Process Date <b>20160816</b>																		
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																				
Hit and Run		Motor Vehicle Involved With <b>PKD MV</b>		Lighting <b>DARK - ST</b>	Ped Action	Cntrl Dev <b>NT PRS/FCTR</b>	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	M	A	HBD-UI		PROC ST	E	A	0000	HONDA	2013	-	-	N	-	G	-	DRVR	COMP PN	25	M	1	0	G	-
2	PRKD	998	-			null		-	-	0000	CHEVR	2010	-	-	-	-	-	-								
Primary Rd <b>CENTRAL AV</b>		Distance (ft) <b>0</b>	Direction	Secondary Rd <b>7TH ST</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>002</b>	Type <b>0</b>	CalTrans	Badge <b>362</b>	Collision Date <b>20160115</b>	Time <b>2025</b>	Day <b>FRI</b>																
Primary Collision Factor <b>IMPROP TURN</b>		Violation <b>22107</b>	Collision Type <b>SIDESWIPE</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>N</b>	Process Date <b>20160325</b>																		
Weather1 <b>CLEAR</b>		Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																				
Hit and Run		Motor Vehicle Involved With <b>PKD MV</b>		Lighting <b>DARK - ST</b>	Ped Action	Cntrl Dev <b>FUNCTNG</b>	Loc Type	Ramp/Int																		
Party Info											Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	57	M	W	HNBD		RGT TURN	W	A	0700	CHEVR	2015	-	3	N	-	M	G								
2	PRKD	998	-		HNBD		PARKED	-	D	2200	TOYOT	2002	-	3	N	-	-	-								



Primary Rd <b>CENTRAL AV</b>		Distance (ft) <b>33</b>	Direction <b>E</b>	Secondary Rd <b>7TH ST</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>7</b>	Beat <b>SOUTH</b>	Type <b>0</b>	CalTrans	Badge <b>246</b>	Collision Date <b>20160905</b>	Time <b>1524</b>	Day <b>MON</b>																
Primary Collision Factor <b>IMPROP TURN</b>		Violation <b>22107</b>	Collision Type <b>SIDESWIPE</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>N</b>	Process Date <b>20161011</b>																		
Weather1 <b>CLEAR</b>		Weather2		Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run <b>MSDMNR</b>		Motor Vehicle Involved With <b>PKD MV</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev	<b>NT PRS/FCTR</b>		Loc Type		Ramp/Int															
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	M	H	HBD-UNK		UNS TURN	W	A	0100	HONDA	2010	-	1	N	-	M	G								
2	PRKD	998	-				PARKED	W	D	2200	TOYOT	2002	-	-	-	-	-									
Primary Rd <b>COASTLINE DR</b>		Distance (ft) <b>122</b>	Direction <b>W</b>	Secondary Rd <b>MARVISTA AV</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>7</b>	Beat <b>007</b>	Type <b>0</b>	CalTrans	Badge <b>174</b>	Collision Date <b>20160612</b>	Time <b>2310</b>	Day <b>SUN</b>																
Primary Collision Factor <b>DRVR ALC DRG</b>		Violation <b>23152A</b>	Collision Type <b>REAR END</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>Y</b>	Process Date <b>20160721</b>																		
Weather1 <b>CLEAR</b>		Weather2		Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>PKD MV</b>		Lighting <b>DARK - ST</b>	Ped Action	Cntrl Dev	<b>FNCTNG</b>		Loc Type		Ramp/Int															
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	M	W	HBD-UI		LFT TURN	S	A	0100	FORD	2013	-	-	A	22350	-	G								
2	PRKD	998	-				PARKED	-	A	0100	LEXUS	2004	-	-	N	-	-									
3	PRKD	998	-				PARKED	-	A	0100	INFIN	2013	-	-	N	-	-									
Primary Rd <b>ELDORADO</b>		Distance (ft) <b>265</b>	Direction <b>N</b>	Secondary Rd <b>CANOE BROOK</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>7</b>	Beat <b>001</b>	Type <b>0</b>	CalTrans	Badge <b>362</b>	Collision Date <b>20160114</b>	Time <b>1556</b>	Day <b>THU</b>																
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>OVERTURNED</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>Y</b>	Process Date <b>20160317</b>																		
Weather1 <b>CLEAR</b>		Weather2		Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>FIXED OBJ</b>		Lighting <b>DUSK/DAWN</b>	Ped Action	Cntrl Dev	<b>FNCTNG</b>		Loc Type		Ramp/Int															
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	72	F	W	HNBD	FATG	PROC ST	S	A	0100	HONDA	2003	-	3	A	N	L	G								
Primary Rd <b>ELECTRIC AV</b>		Distance (ft) <b>78</b>	Direction <b>E</b>	Secondary Rd <b>12TH ST</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>4</b>	Beat <b>007</b>	Type <b>0</b>	CalTrans	Badge <b>174</b>	Collision Date <b>20160610</b>	Time <b>2114</b>	Day <b>FRI</b>																
Primary Collision Factor <b>DRVR ALC DRG</b>		Violation <b>23152A</b>	Collision Type <b>HIT OBJECT</b>	Severity <b>INJURY</b>	#Killed <b>0</b>	#Injured <b>1</b>	Tow Away? <b>Y</b>	Process Date <b>20160817</b>																		
Weather1 <b>CLEAR</b>		Weather2		Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>FIXED OBJ</b>		Lighting <b>DARK - ST</b>	Ped Action	Cntrl Dev	<b>FNCTNG</b>		Loc Type		Ramp/Int															
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	M	H		DRUG	RAN OFF RD	E	A	0000	HONDA	1994	-	-	A	22107	-	B	-							
Primary Rd <b>ELECTRIC AV</b>		Distance (ft) <b>158</b>	Direction <b>W</b>	Secondary Rd <b>MAIN ST</b>		NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy															
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist <b>7</b>	Beat <b>SOUTH</b>	Type <b>0</b>	CalTrans	Badge <b>304</b>	Collision Date <b>20160721</b>	Time <b>1206</b>	Day <b>THU</b>																
Primary Collision Factor <b>STRNG BCKNG</b>		Violation <b>22106</b>	Collision Type <b>OTHER</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>N</b>	Process Date <b>20161010</b>																		
Weather1 <b>CLEAR</b>		Weather2		Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>																			
Hit and Run		Motor Vehicle Involved With <b>OTHER MV</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev	<b>NT PRS/FCTR</b>		Loc Type		Ramp/Int															
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	52	F	W	HNBD		BACKING	E	A	0000	VOLVO	2006	-	-	F	-	M	-								
2	DRVR	46	M	W	HNBD		RGT TURN	S	A	0000	TOYOT	2016	-	-	N	-	M	-	PASS		38	M	6	0	G	-

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd <b>GOLDEN RAIN</b>		Distance (ft) <b>0</b>	Direction	Secondary Rd <b>CANOE BROOK</b>	NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy																
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>001</b>	Type <b>0</b>	CalTrans	Badge <b>362</b>	Collision Date <b>20160229</b>	Time <b>0114</b>	Day <b>MON</b>																
Primary Collision Factor <b>OTHER IMPROP DRV</b>		Violation	Collision Type <b>SIDESWIPE</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>N</b>	Process Date <b>20160413</b>																		
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>	Hit and Run																				
Motor Vehicle Involved With <b>PKD MV</b>		Lighting <b>DARK - NO</b>	Ped Action	Cntrl Dev <b>FUNCTNG</b>	Loc Type	Ramp/Int																				
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	56	M	W	HBD-UI		PROC ST	S	A	0100	TOYOT	2008	-	3	N	-	M	G								
2	PRKD	998	-		HNBD		PARKED	S	A	0100	NISSA	2009	-	3	N	-	-	-								
Primary Rd <b>HEATHER ST</b>		Distance (ft) <b>0</b>	Direction	Secondary Rd <b>HEATHER ST 3960</b>	NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy																
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>NORTH</b>	Type <b>0</b>	CalTrans	Badge <b>246</b>	Collision Date <b>20160422</b>	Time <b>0847</b>	Day <b>FRI</b>																
Primary Collision Factor <b>STRNG BKNG</b>		Violation <b>22106</b>	Collision Type <b>HIT OBJECT</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>N</b>	Process Date <b>20160531</b>																		
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>	Hit and Run																				
Motor Vehicle Involved With <b>FIXED OBJ</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev <b>NT PRS/FCTR</b>	Loc Type	Ramp/Int																				
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	46	M	H	HNBD		BACKING	E	I	1100	ISUZU	2005	-	3	N	-	M	G								
Primary Rd <b>LAMPSON</b>		Distance (ft) <b>108</b>	Direction <b>E</b>	Secondary Rd <b>BASSWOOD</b>	NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy																
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>3020</b>	Type <b>0</b>	CalTrans	Badge <b>361</b>	Collision Date <b>20160708</b>	Time <b>1336</b>	Day <b>FRI</b>																
Primary Collision Factor <b>IMPROP TURN</b>		Violation <b>22107</b>	Collision Type <b>SIDESWIPE</b>	Severity <b>INJURY</b>	#Killed <b>0</b>	#Injured <b>1</b>	Tow Away? <b>N</b>	Process Date <b>20160816</b>																		
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>	Hit and Run																				
Motor Vehicle Involved With <b>BICYCLE</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev <b>NT PRS/FCTR</b>	Loc Type	Ramp/Int																				
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	49	M	H	HNBD		RGT TURN	E	D	0000	CHEVR	1992	-	-	-	-	G	-								
2	BICY	59	F	W	HNBD		RAN OFF RD	E	L	0000	-	-	-	-	-	-	-	BICY	OTH VIS	59	-	9	3	-	-	-
Primary Rd <b>LAMPSON</b>		Distance (ft) <b>1164</b>	Direction <b>E</b>	Secondary Rd <b>OLD RANCH PLZ</b>	NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy																
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>NORTH</b>	Type <b>0</b>	CalTrans	Badge <b>429</b>	Collision Date <b>20160112</b>	Time <b>0722</b>	Day <b>TUE</b>																
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>REAR END</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>N</b>	Process Date <b>20160323</b>																		
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>	Hit and Run																				
Motor Vehicle Involved With <b>OTHER MV</b>		Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev <b>NT PRS/FCTR</b>	Loc Type	Ramp/Int																				
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	M	W	HNBD		PROC ST	W	A	0100	MAZDA	2012	A	-	F	-	M	G								
2	DRVR	29	M	H	HNBD		PROC ST	W	F	2600	OTHER	2002	A	-	N	-	M	G								
Primary Rd <b>LAMPSON AV</b>		Distance (ft) <b>74</b>	Direction <b>W</b>	Secondary Rd <b>BASSWOOD ST</b>	NCIC <b>3020</b>	State Hwy? <b>N</b>	Route	Postmile Prefix	Postmile	Side of Hwy																
City <b>Seal Beach</b>	County <b>Orange</b>	Population <b>4</b>	Rpt Dist	Beat <b>NORTH</b>	Type <b>0</b>	CalTrans	Badge <b>432</b>	Collision Date <b>20161017</b>	Time <b>0715</b>	Day <b>MON</b>																
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>SIDESWIPE</b>	Severity <b>PDO</b>	#Killed <b>0</b>	#Injured <b>0</b>	Tow Away? <b>Y</b>	Process Date <b>20161208</b>																		
Weather1 <b>RAINING</b>	Weather2	Rdwy Surface <b>WET</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond <b>0</b>	Hit and Run																				
Motor Vehicle Involved With <b>FIXED OBJ</b>		Lighting <b>DUSK/DAWN</b>	Ped Action	Cntrl Dev <b>FUNCTNG</b>	Loc Type	Ramp/Int																				
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	16	M	A	HNBD		LFT TURN	W	A	0700	CHEVR	2004	-	3	N	-	M	G								

Primary Rd LAMPSON AV		Distance (ft) 0	Direction	Secondary Rd CANDLEBERRY	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20160115	Time 1110	Day FRI																
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160323																		
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																										
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	21	M	H	HNBD	PROC ST	-	I	1100	ISUZU	2014	-	1	A	23123	-	M	G	PASS		29	M	2	0	M	G
2	DRVR	78	F	W	HNBD	LFT TURN	-	A	0100	LEXUS	2005	-	3	N	-	M	G	PASS		28	M	3	0	M	G	
Primary Rd LAMPSON AV		Distance (ft) 238	Direction W	Secondary Rd CANDLEBERRY AV	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 141	Type 0	CalTrans	Badge 251	Collision Date 20160520	Time 1456	Day FRI																
Primary Collision Factor UNKNOWN		Violation	Collision Type HIT OBJECT	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20160719																		
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																										
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1	DRVR	60	F	A	IMP UNK	IMP UNK	PROC ST	E	A	0000	TOYOT	2009	-	-	-	G	-	DRVR	SEVERE	60	F	1	0	L	-	
Primary Rd LAMPSON AV		Distance (ft) 1174	Direction W	Secondary Rd HEATHER	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 141	Type 0	CalTrans	Badge 251	Collision Date 20160527	Time 0657	Day FRI																
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160719																		
Weather1 CLOUDY		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																										
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	22	F	H	HNBD	PROC ST	W	A	0000	VOLKS	2002	-	-	-	-	L	-									
Primary Rd LAMPSON AV		Distance (ft) 0	Direction	Secondary Rd HEATHER AV	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist 20	Beat 006	Type 0	CalTrans	Badge 174	Collision Date 20160123	Time 1617	Day SAT																
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type SIDESWIPE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20160322																		
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																										
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	43	M	W	HNBD	U-TURN	W	A	0000	JEEP	2013	-	-	N	-	G	-									
2	DRVR	69	F	W	HNBD	PROC ST	E	A	0000	SUBAR	2015	-	-	N	-	G	-	DRVR	COMP PN	69	F	1	0	G	-	
Primary Rd LAMPSON AV		Distance (ft) 38	Direction E	Secondary Rd SEAL BEACH BL	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans	Badge 178	Collision Date 20160809	Time 1807	Day TUE																
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20161010																		
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With BICYCLE		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																										
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	53	M	W	HNBD	RGT TURN	E	-	0000	-	-	-	N	-	W	-	DRVR	OTH VIS	53	M	1	1	W	-		
2	DRVR	30	M	O	HNBD	RGT TURN	E	-	0000	AUDI	2013	-	-	N	-	G	-									

Primary Rd MAIN ST		Distance (ft) 0	Direction	Secondary Rd CENTRAL AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 362	Collision Date 20160307	Time 1219	Day MON															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type SIDESWIPE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20160412																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With BICYCLE		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	68	F	W	HNBD	PARKING	-	A	0700	CHEVR	2012	-	3	N	-	M	G								
2	BICY	69	M	O	HNBD	PROC ST	-	L	0400	-	-	3	A	21755	N	-	-	BICY	OTH VIS	69	-	1	1	P	V
Primary Rd MAIN ST		Distance (ft) 0	Direction	Secondary Rd MAIN ST 215		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20160720	Time 1132	Day WED															
Primary Collision Factor STRTNG BKNG		Violation 22106	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160909																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	47	M	W	HNBD	BACKING	E	A	0700	TOYOT	1997	-	3	N	-	M	G								
2	DRVR	55	M	W	HNBD	STOPPED	S	I	0900	FREIG	2005	-	3	N	-	M	G								
Primary Rd N BOUND SEAL		Distance (ft) 273	Direction S	Secondary Rd PACIFIC COAST		NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 300	Collision Date 20161003	Time 0240	Day MON															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161208																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	29	F		HBD-UI	PROC ST	N	A	0000	HYUND	2014	-	-	A	22350	-	G	-							
Primary Rd NORTH GATE RD		Distance (ft) 0	Direction	Secondary Rd NORTH GATE RD		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 246	Collision Date 20160714	Time 1637	Day THU															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160816																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	75	M	W	HNBD	PROC ST	W	A	0000	FORD	2012	-	-	N	-	G	-								
2	DRVR	62	M	W	HNBD	LFT TURN	W	A	0000	CHEVR	2006	-	-	N	-	G	-								
Primary Rd OCEAN ALLEY		Distance (ft) 122	Direction N	Secondary Rd OCEAN AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans	Badge 178	Collision Date 20161019	Time 2329	Day WED															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type OTHER	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161208																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With PKD MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	37	F	H	HBD-UI	BACKING	E	A	0000	CHRY	2001	-	-	N	-	G	-								
2	PRKD	998	-			PARKED	E	A	0000	INFIN	2005	-	-	N	-	-	-								



Primary Rd <b>PACIFIC COAST</b>		Distance (ft) 0	Direction	Secondary Rd <b>1ST ST</b>		NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population 4	Rpt Dist	Beat <b>002</b>	Type 0	CalTrans	Badge 362	Collision Date <b>20160202</b>	Time <b>0727</b>	Day <b>TUE</b>															
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type	Severity <b>PDO</b>	#Killed 0	#Injured 0	Tow Away? Y	Process Date <b>20160317</b>																	
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With	Lighting <b>DUSK/DAWN</b>	Ped Action	Cntrl Dev	Loc Type	Ramp/Int																		
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	F	O	HNBD	PROC ST	N	A	0100	TOYOT	2008	-	3	N	-	L	A								
2	DRVR	67	F	W	HNBD	STOPPED	S	A	0700	ACURA	2004	-	3	N	-	M	G								
Primary Rd <b>PACIFIC COAST</b>		Distance (ft) 0	Direction	Secondary Rd <b>MARINA DR</b>		NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population 4	Rpt Dist	Beat <b>SOUTH</b>	Type 0	CalTrans	Badge 422	Collision Date <b>20161008</b>	Time <b>0532</b>	Day <b>SAT</b>															
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>HEAD-ON</b>	Severity <b>PDO</b>	#Killed 0	#Injured 0	Tow Away? Y	Process Date <b>20161208</b>																	
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With <b>FIXED OBJ</b>	Lighting <b>DARK - ST</b>	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	20	M	H	HNBD	OPPOS LN	W	A	0000	HONDA	1995	-	-	A	-	G	-								
Primary Rd <b>ROSSMOOR</b>		Distance (ft) 60	Direction <b>W</b>	Secondary Rd <b>SEAL BEACH BL</b>		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 298	Collision Date <b>20161021</b>	Time <b>1446</b>	Day <b>FRI</b>															
Primary Collision Factor <b>IMPROP TURN</b>		Violation <b>22107</b>	Collision Type <b>HEAD-ON</b>	Severity <b>INJURY</b>	#Killed 0	#Injured 1	Tow Away? Y	Process Date <b>20161207</b>																	
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With <b>OTHER MV</b>	Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	89	F	W	HNBD	RGT TURN	W	A	0000	TOYOT	2001	-	-	N	-	H	-	DRVR	OTH VIS	89	F	1	0	H	-
2	DRVR	54	F	B	HNBD	PROC ST	E	A	0000	CADIL	2012	-	-	N	-	G	-								
Primary Rd <b>RT 1</b>		Distance (ft) 172	Direction <b>S</b>	Secondary Rd <b>10TH ST</b>		NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population 4	Rpt Dist	Beat <b>SOUTH</b>	Type 0	CalTrans	Badge 246	Collision Date <b>20161129</b>	Time <b>0720</b>	Day <b>TUE</b>															
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>REAR END</b>	Severity <b>PDO</b>	#Killed 0	#Injured 0	Tow Away? N	Process Date <b>20161207</b>																	
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With <b>OTHER MV</b>	Lighting <b>DAYLIGHT</b>	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	39	M	W	HNBD	PROC ST	S	A	0100	NISSA	2015	-	3	N	-	L	G								
2	DRVR	29	M	W	HNBD	STOPPED	S	A	0700	JEEP	1996	-	3	N	-	M	G								
3	DRVR	31	F	W	HNBD	STOPPED	S	A	0100	TOYOT	2012	-	3	N	-	M	G								
Primary Rd <b>RT 1</b>		Distance (ft) 0	Direction	Secondary Rd <b>13TH ST</b>		NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City <b>Seal Beach</b>	County <b>Orange</b>	Population 4	Rpt Dist 6	Beat <b>007</b>	Type 0	CalTrans	Badge 174	Collision Date <b>20161021</b>	Time <b>1839</b>	Day <b>FRI</b>															
Primary Collision Factor <b>UNSAFE SPEED</b>		Violation <b>22350</b>	Collision Type <b>REAR END</b>	Severity <b>INJURY</b>	#Killed 0	#Injured 1	Tow Away? Y	Process Date <b>20161208</b>																	
Weather1 <b>CLEAR</b>	Weather2	Rdwy Surface <b>DRY</b>	Rdwy Cond1 <b>NO UNUSL CND</b>	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With <b>OTHER MV</b>	Lighting <b>DUSK/DAWN</b>	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	17	F	W	HNBD	SLOWING	N	A	0000	NISSA	2010	-	-	N	-	G	-	DRVR	COMP PN	44	F	1	0	G	-
2	DRVR	44	F	W	HNBD	STOPPED	N	A	0000	DODGE	2013	-	-	N	-	G	-								

Primary Rd RT 1		Distance (ft) 0	Direction	Secondary Rd 8TH ST	NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00S	Type 0	CalTrans	Badge 317	Collision Date 20160608	Time 1320	Day WED														
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 3	Tow Away? Y	Process Date 20160816																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	31	F	W	HNBD	LFT TURN	S	-	0000	FORD	2008	A	-	A	-	-	DRVR	COMP PN 31	31	F	1	0	G	-
2	DRVR	20	F	W	HNBD	PROC ST	E	-	0000	NISSA	2002	A	-	A	22350	-	DRVR	COMP PN 20	20	F	1	3	-	-
Primary Rd RT 1		Distance (ft) 24	Direction E	Secondary Rd 8TH ST	NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 298	Collision Date 20161118	Time 1313	Day FRI														
Primary Collision Factor UNKNOWN		Violation	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161207																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	23	F		HNBD	LFT TURN	S	A	0000	HONDA	2010	-	-	N	-	G	PASS		1	M	6	3	G	-
2	DRVR	68	F		HNBD	PROC ST	E	A	0000	JAGUA	2006	-	-	N	-	G	PASS		4	F	4	3	G	-
Primary Rd RT 1		Distance (ft) 291	Direction N	Secondary Rd ANDERSON ST	NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans	Badge 178	Collision Date 20161018	Time 2203	Day TUE														
Primary Collision Factor R-O-W AUTO		Violation 21801B	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20161207																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	F	W	HNBD	PROC ST	E	A	0000	FORD	1998	-	-	N	-	G								
2	DRVR	40	M	H	HBD-NUI	MERGING	E	A	0000	FORD	1995	-	-	N	-	G	DRVR	COMP PN 40	40	M	1	0	G	-
Primary Rd RT 1		Distance (ft) 631	Direction S	Secondary Rd MARINER DR	NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist 12	Beat 007	Type 0	CalTrans	Badge 174	Collision Date 20160925	Time 2249	Day SUN														
Primary Collision Factor R-O-W AUTO		Violation 21804A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 4	Tow Away? Y	Process Date 20161208																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	27	F	W	HNBD	LFT TURN	W	A	0000	VOLKS	2013	-	-	N	-	G	DRVR	OTH VIS	27	F	1	0	L	-
																	PASS		29	M	3	0	G	-
																	PASS	COMP PN 29	29	M	4	0	G	-
																	PASS	OTH VIS	28	F	6	0	G	-
2	DRVR	23	F	W	HNBD	PROC ST	N	A	0000	FORD	2010	-	-	N	-	G	DRVR	OTH VIS	23	F	1	0	L	-

Primary Rd RT 1		Distance (ft) 827	Direction N	Secondary Rd PHILLIPS ST	NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00S	Type 0	CalTrans	Badge 191	Collision Date 20160723	Time 0906	Day SAT									
Primary Collision Factor NOT DRIVER		Violation	Collision Type HIT OBJECT	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20161007											
Weather1 CLOUDY	Weather2	Rdwy Surface DRY	Rdwy Cond1 OBSTR ON RD	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With	Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	BICY 47 F	HNBD		PROC ST	N	-	0000	- - -	- - -	E	- - -	BICY	COMP PN 47	F	9	3	-	-	-
Primary Rd SEAL BEACH BL		Distance (ft) 710	Direction N	Secondary Rd BOLSA AV	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20160329	Time 0613	Day TUE									
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type HIT OBJECT	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20160412											
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With FIXED OBJ	Lighting DARK - ST	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 33 F W	HNBD		PROC ST	S	A	0700	JEEP 2005	- 3	N	- M G	DRVR	COMP PN 33	F	1	0	M	G	
Primary Rd SEAL BEACH BL		Distance (ft) 566	Direction S	Secondary Rd BRADBURY	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 429	Collision Date 20160228	Time 1849	Day SUN									
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20160412											
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DARK - ST	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 76 M W	HNBD		LFT TURN	N	A	0000	MERCE 1983	- -	N	- G -								
2	DRVR 32 F W	HNBD		PROC ST	S	A	0000	BMW 2013	- -	N	- G -	DRVR	COMP PN 32	F	1	3	G	-	
3	DRVR 52 F W	HNBD		STOPPED	E	A	0000	CHEVR 2002	- -	N	- G -								
Primary Rd SEAL BEACH BL		Distance (ft) 1320	Direction S	Secondary Rd BRADBURY	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00N	Type 0	CalTrans	Badge 152	Collision Date 20160928	Time 1443	Day WED									
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161007											
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 44 M W	HNBD		SLOWING	S	A	0100	FORD 2012	- 3	A	22350 F M G								
2	DRVR 16 F	HNBD		STOPPED	S	A	0100	HONDA 2008	- 3	N	- L G								
3	DRVR 78 M	HNBD		STOPPED	S	A	0800	CHRY 2001	- 3	N	- M G								
Primary Rd SEAL BEACH BL		Distance (ft) 120	Direction S	Secondary Rd BRADBURY RD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 106	Type 0	CalTrans	Badge 251	Collision Date 20160622	Time 1123	Day WED									
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160722											
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0														
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int											
Party Info										Victim Info									
Party Type	Age Sex Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1 Viol	OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR 42 F W	HNBD		PROC ST	S	-	0000	FORD 1998	- -	-	- G -								
2	DRVR 36 F H	HNBD		RGT TURN	S	-	0000	FORD 2008	- -	-	- G -								
3	DRVR 27 M H	HNBD		STOPPED	-	-	0000	BMW 2002	- -	-	- G -								

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL Distance (ft) 65 Direction S Secondary Rd BRADBURY RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 191 Collision Date 20160729 Time 1737 Day FRI Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161010 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	F	W			LFT TURN	N	A	0000	DODGE	2013	-	-	-	-	G	-							
2	DRVR	76	M	W			PROC ST	N	A	0000	LEXUS	2011	-	-	-	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd GOLDEN RAIN NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 362 Collision Date 20160120 Time 1352 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160317 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	17	M	W	HNBD		PROC ST	-	A	0700	TOYOT	2009	-	3	N	-	M	G							
2	DRVR	998	F	W	HNBD		STOPPED	-	A	0700	JEEP	2014	-	3	N	-	M	G							
Primary Rd SEAL BEACH BL Distance (ft) 50 Direction N Secondary Rd GOLDEN RAIN NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20160715 Time 1201 Day FRI Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160930 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	48	F	B			SLOWING	S	A	0000	FORD	2001	-	-	-	-	G	-							
2	DRVR	44	M	W			STOPPED	S	A	0000	TOYOT	2008	-	-	-	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 27 Direction S Secondary Rd LAMPSON AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 141 Type 0 CalTrans Badge 251 Collision Date 20160715 Time 1424 Day FRI Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160816 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	72	M	W	HNBD		PROC ST	W	A	0000	FORD	1980	-	-	-	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 560 Direction S Secondary Rd LANDING NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20160303 Time 1806 Day THU Primary Collision Factor HAZ PARKING Violation 22515A Collision Type AUTO/PED Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160418 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With PED Lighting DUSK/DAWN Ped Action IN RD, Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	PED	53	F	W	IMP UNK	IMP UNK	STOPPED	-	-	0000	-	-	-	-	-	-	-	PED	COMP PN	54	F	9	3	-	-
2	OTHR	998	-	-			BACKING	S	B	0000	LEXUS	1994	-	-	-	-	-								



Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL Distance (ft) 10 Direction S Secondary Rd LANDING AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 317 Collision Date 20161016 Time 1724 Day SUN																											
Primary Collision Factor LANE CHANGE Violation 21658A Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208																											
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With PKD MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	33	M	H	HNBD		PROC ST	S	A	0000	DODGE	2005	-	-	A	23123	-	M	-								
2	PRKD	998	-		HNBD		PARKED	W	A	0000	DODGE	1994	-	-	N		-	-									
Primary Rd SEAL BEACH BL Distance (ft) 452 Direction S Secondary Rd N GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 16-2030 Collision Date 20160927 Time 0845 Day TUE																											
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161007																											
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	65	M	W	HNBD		PROC ST	S	A	0100	TOYOT	2015	-	3	N		-	L	G								
Primary Rd SEAL BEACH BL Distance (ft) 55 Direction N Secondary Rd NORTH GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20160304 Time 1224 Day FRI																											
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160315																											
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	65	F	W	HNBD		PROC ST	S	A	0100	TOYOT	2014	-	3	N		-	M	G								
2	DRVR	48	F	W	HNBD		STOPPED	S	A	0700	HYUND	2014	-	3	N		-	M	G								
Primary Rd SEAL BEACH BL Distance (ft) 545 Direction N Secondary Rd NORTH GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 432 Collision Date 20161011 Time 0628 Day TUE																											
Primary Collision Factor TOO CLOSE Violation 21703 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208																											
Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	24	F	W	HNBD		PROC ST	S	A	0100	BMW	2003	-	3	A	22350	-	M	G								
2	DRVR	42	F	H	HNBD		STOPPED	S	A	0100	TOYOT	2014	-	3	N		-	M	G								
3	DRVR	49	M	H	HNBD		STOPPED	S	A	0100	HONDA	2016	-	3	N		-	M	G								
Primary Rd SEAL BEACH BL Distance (ft) 300 Direction N Secondary Rd NORTHGATE NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 152 Collision Date 20160707 Time 1039 Day THU																											
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20161025																											
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	65	F	W	HNBD		SLOWING	S	A	0000	NISSA	2003	-	-	F		-	G	-	DRVR	OTH VIS	65	-	1	0	L	-
2	DRVR	61	M	W	HNBD		STOPPED	S	A	0000	CADIL	2016	-	-	N		-	G	-								

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL Distance (ft) 325 Direction N Secondary Rd NORTHGATE BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160120 Time 1242 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160317 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	39	F	W	HNBD		PROC ST	-	A	0100	HONDA	2009	-	3	N	-	M G								
2	DRVR	54	F	W	HNBD		STOPPED	-	A	0700	CHEVR	2004	-	3	N	-	M G								
Primary Rd SEAL BEACH BL Distance (ft) 122 Direction S Secondary Rd NORTHGATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 362 Collision Date 20160107 Time 0651 Day THU Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160324 Weather1 CLOUDY Weather2 Rdw Surface WET Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With PKD MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	M	H	HNBD		LFT TURN	-	A	0100	NISSA	2008	-	3	N	-	M G	PASS		19	M	3	0	M	G
																		PASS		19	M	5	0	M	G
																		PASS		25	M	6	0	M	G
2	PRKD	998	-		HNBD		PARKED	S	I	2000	OTHER	2007	-	3	N	-	-								
Primary Rd SEAL BEACH BL Distance (ft) 462 Direction N Secondary Rd NORTHGATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 007 Type 0 CalTrans Badge 430 Collision Date 20160116 Time 1533 Day SAT Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160323 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With NON-CLSN Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	28	M	W	HNBD		PROC ST	S	C	0200	KAWA	2011	-	3	N	-	P W	DRVR	OTH VIS	28	M	1	1	P	W
2	DRVR	57	M	H	HNBD		STOPPED	S	D	2200	CHEVR	1997	-	3	N	-	M G	PASS		30	M	3	0	M	G
Primary Rd SEAL BEACH BL Distance (ft) 45 Direction N Secondary Rd OLD RANCH PKWY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 191 Collision Date 20160118 Time 1428 Day MON Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160317 Weather1 CLOUDY Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	58	M	O	HNBD		PROC ST	S	A	0000	TOYOT	2000	-	-	-	-	-								
2	DRVR	90	F	W	HNBD		STOPPED	S	A	0000	DODGE	2014	-	-	-	-	-								
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd OLD RANCH PKWY NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20161012 Time 2228 Day WED Primary Collision Factor R-O-W AUTO Violation 21453C Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	F	W	HNBD		LFT TURN	S	A	0000	HONDA	2016	-	-	N	-	G -								
2	DRVR	23	F	W	HNBD		LFT TURN	W	A	0000	NISSA	2006	-	-	N	-	- G								

Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd OLD RANCH PKY	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 365	Collision Date 20160123	Time 0234	Day SAT														
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 2	Tow Away? Y	Process Date 20160322																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	M	W	HNBD	PROC ST	N	A	0000	MERCE	2016	-	A	14601	F	G	-	DRVR	COMP PN 27	M	1	0	G	-
2	DRVR	54	M	W	HNBD	PROC ST	E	A	0000	TOYOT	2014	-	N	-	G	-	DRVR	COMP PN 54	M	1	0	G	-	
Primary Rd SEAL BEACH BL		Distance (ft) 82	Direction N	Secondary Rd OLD RANCH PKY	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 431	Collision Date 20160509	Time 0624	Day MON														
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20160719																
Weather1 CLOUDY		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	F	H	HNBD	PROC ST	S	A	0000	CHRY	2005	-	N	-	G	-	DRVR	OTH VIS	21	F	1	0	G	-
2	DRVR	32	M	A	HNBD	STOPPED	S	A	0000	HONDA	2013	-	N	-	G	-								
Primary Rd SEAL BEACH BL		Distance (ft) 220	Direction N	Secondary Rd OLD RANCH PKY	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NA	Type 0	CalTrans	Badge 246	Collision Date 20160824	Time 0833	Day WED														
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20161010																
Weather1 CLOUDY		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	F	W	HNBD	PROC ST	S	A	0100	TOYOT	2016	-	3	N	-	L	G	DRVR	COMP PN 33	F	1	0	L	C
2	DRVR	42	F	O	HNBD	STOPPED	N	A	0700	KIA	2011	-	3	N	-	M	G							
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd OLD RANCH RD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist NA	Beat ONA	Type 0	CalTrans	Badge 317	Collision Date 20160630	Time 2311	Day THU														
Primary Collision Factor UNKNOWN		Violation 21435A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160816																
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	30	F	W	HNBD	PROC ST	N	A	0000	MAZDA	2012	-	-	F	-	-	-							
2	DRVR	22	M	W	HNBD	LFT TURN	E	A	0000	TOYOT	2013	-	-	N	-	-	PASS		22	M	3	0	G	-
Primary Rd SEAL BEACH BL		Distance (ft) 379	Direction N	Secondary Rd PACIFIC COAST	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 300	Collision Date 20160918	Time 1523	Day SUN														
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161108																
Weather1 CLEAR		Weather2	Rdwy Surface	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																	
Motor Vehicle Involved With FIXED OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	32	M	O	HBD-UI	PROC ST	N	A	0000	HONDA	2015	-	A	23152	-	G	-							

Primary Rd SEAL BEACH BL Distance (ft) 245 Direction S Secondary Rd PLYMOUTH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 191 Collision Date 20160912 Time 1147 Day MON																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161007																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	F				PROC ST	N	A	0000	VOLKS	2005	-	-	A	21703	-	B	-						
2	DRVR	76	M				PROC ST	N	A	0000	TOYOT	2005	-	-	-	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 12 Direction N Secondary Rd PLYMOUTH DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 178 Collision Date 20160518 Time 1702 Day WED																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160719																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	32	F	W			PROC ST	N	A	0000	HONDA	2010	-	-	N	-	G	-							
2	DRVR	33	F	W			RGT TURN	N	A	0000	KIA	2015	-	-	N	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd PLYMOUTH DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20161123 Time 0923 Day WED																									
Primary Collision Factor UNKNOWN Violation Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161207																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	87	F				PROC ST	N	A	0100	PONTI	1992	-	3	N	-	M	G							
2	DRVR	46	F	W			LFT TURN	E	A	0700	SUBAR	2016	-	3	N	-	M	G							
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd PLYMOUTH DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20161129 Time 1427 Day TUE																									
Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161207																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	85	M	W			PROC ST	N	A	0700	BUICK	2011	-	3	N	-	L	G							
2	DRVR	82	M	A			PROC ST	W	A	0700	LEXUS	2000	-	3	N	-	M	G							
Primary Rd SEAL BEACH BL Distance (ft) 30 Direction N Secondary Rd RD C NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20160703 Time 1845 Day SUN																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160816																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	50	F	B			RGT TURN	S	A	0000	MERCE	2000	-	-	N	-	G	-							
2	DRVR	53	F	W			PROC ST	S	A	0000	MERCE	2008	-	-	N	-	G	-							



Primary Rd SEAL BEACH BL Distance (ft) 450 Direction S Secondary Rd ROAD C NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 191 Collision Date 20160912 Time 1703 Day MON Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161007 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	F				PROC ST	N	A	0000	HYUND	2014	-	-	A	21658	-	G	-							
2	DRVR	60	M				PROC ST	N	A	0000	HONDA	2012	-	-	-	-	G	-								
Primary Rd SEAL BEACH BL Distance (ft) 350 Direction N Secondary Rd RT 1 NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 152 Collision Date 20160614 Time 1412 Day TUE Primary Collision Factor NOT DRIVER Violation Collision Type REAR END Severity INJURY #Killed 0 #Injured 3 Tow Away? Y Process Date 20160829 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	76	M	W			PROC ST	S	A	0000	CHEVR	2002	-	-	N	-	G	-	DRVR	OTH VIS	77	M	1	0	G	-
2	DRVR	26	F	W			STOPPED	S	A	0000	FORD	2008	-	-	N	-	G	-	DRVR	COMP PN 26	F	1	0	G	-	
																			PASS	COMP PN 998	-	3	0	G	-	
3	DRVR	38	F	W			STOPPED	S	A	0000	MAZDA	2010	-	-	N	-	G	-								
4	DRVR	60	F	W			STOPPED	S	A	0000	DODGE	2006	-	-	N	-	G	-								
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd RT 405 NCIC 3020 State Hwy? Y Route 405 Postmile Prefix Postmile Side of Hwy N City Seal Beach County Orange Population 4 Rpt Dist Beat 006 Type 0 CalTrans 12 Badge 368 Collision Date 20160424 Time 2121 Day SUN Primary Collision Factor UNKNOWN Violation Collision Type OVERTURNED Severity FATAL #Killed 1 #Injured 0 Tow Away? Y Process Date 20160729 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With NON-CLSN Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type R Ramp/Int 4																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	62	M	W	IMP UNK	IMP UNK	PROC ST	N	C	0200	HARLE	2012	-	-	L	-	P	W	DRVR	KILLED	62	M	1	1	P	W
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd RT 405 NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 191 Collision Date 20160731 Time 1245 Day SUN Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161010 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run MSDMNR Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	998	-		IMP UNK	IMP UNK	LFT TURN	-	A	0000	-	-	-	-	A	20002	-	-								
2	DRVR	21	F	W			PROC ST	N	A	0000	TOYOT	2012	-	-	-	-	G	-								
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd RT 405 NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 368 Collision Date 20160922 Time 0357 Day THU Primary Collision Factor UNKNOWN Violation Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20161007 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	55	M	W			PROC ST	N	A	0100	NISSA	2008	-	3	-	-	L	G	DRVR	COMP PN 55	M	1	0	L	G	
2	DRVR	52	M	W			LFT TURN	W	A	0100	FORD	2016	-	3	-	-	L	G	DRVR	COMP PN 52	M	1	0	L	G	

<b>Primary Rd</b> SEAL BEACH BL <b>Distance (ft)</b> 207 <b>Direction</b> S <b>Secondary Rd</b> SAINT ANDREWS <b>NCIC</b> 3020 <b>State Hwy?</b> N <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> <b>Beat</b> ROVER <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 178 <b>Collision Date</b> 20160322 <b>Time</b> 2002 <b>Day</b> TUE <b>Primary Collision Factor</b> OTHER EQPMNT <b>Violation</b> 24002A <b>Collision Type</b> OTHER <b>Severity</b> PDO <b>#Killed</b> 0 <b>#Injured</b> 0 <b>Tow Away?</b> N <b>Process Date</b> 20160413 <b>Weather1</b> CLEAR <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> NO UNUSL CND <b>Rdwy Cond2</b> <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> OTHER OBJ <b>Lighting</b> DARK - ST <b>Ped Action</b> <b>Cntrl Dev</b> NT PRS/FCTR <b>Loc Type</b> <b>Ramp/Int</b>													
<b>Party Info</b> <b>Victim Info</b> <b>Party</b> <b>Type</b> <b>Age</b> <b>Sex</b> <b>Race</b> <b>Sobriety1</b> <b>Sobriety2</b> <b>Move Pre</b> <b>Dir</b> <b>SW Veh</b> <b>CHP Veh</b> <b>Make</b> <b>Year</b> <b>SP Info</b> <b>OAF1</b> <b>Viol</b> <b>OAF2</b> <b>Safety Equip</b> <b>ROLE</b> <b>Ext Of Inj</b> <b>AGE</b> <b>Sex</b> <b>Seat Pos</b> <b>Safety</b> <b>EQUIP</b> <b>Ejected</b> 1F DRVR 50 M W HNBD PROC ST S A 0000 CHEVR 2001 - - N - - G - DRVR OTH VIS 90 - 1 0 L - 2 DRVR 58 M W HNBD PROC ST S D 0000 NISSA 2015 - - N - - G - DRVR OTH VIS 90 - 1 0 L -													
<b>Primary Rd</b> SEAL BEACH BL <b>Distance (ft)</b> 342 <b>Direction</b> N <b>Secondary Rd</b> TOWN CENTER DR <b>NCIC</b> 3020 <b>State Hwy?</b> N <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> <b>Beat</b> 00N <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 152 <b>Collision Date</b> 20160921 <b>Time</b> 1241 <b>Day</b> WED <b>Primary Collision Factor</b> IMPROP TURN <b>Violation</b> 22107 <b>Collision Type</b> BROADSIDE <b>Severity</b> INJURY <b>#Killed</b> 0 <b>#Injured</b> 2 <b>Tow Away?</b> Y <b>Process Date</b> 20161007 <b>Weather1</b> CLEAR <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> NO UNUSL CND <b>Rdwy Cond2</b> <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> OTHER MV <b>Lighting</b> DAYLIGHT <b>Ped Action</b> <b>Cntrl Dev</b> FNCTNG <b>Loc Type</b> <b>Ramp/Int</b>													
<b>Party Info</b> <b>Victim Info</b> <b>Party</b> <b>Type</b> <b>Age</b> <b>Sex</b> <b>Race</b> <b>Sobriety1</b> <b>Sobriety2</b> <b>Move Pre</b> <b>Dir</b> <b>SW Veh</b> <b>CHP Veh</b> <b>Make</b> <b>Year</b> <b>SP Info</b> <b>OAF1</b> <b>Viol</b> <b>OAF2</b> <b>Safety Equip</b> <b>ROLE</b> <b>Ext Of Inj</b> <b>AGE</b> <b>Sex</b> <b>Seat Pos</b> <b>Safety</b> <b>EQUIP</b> <b>Ejected</b> 1F DRVR 90 M W HNBD LFT TURN S - 0000 ACURA 2007 A - F - - L - DRVR OTH VIS 90 - 1 0 L - 2 DRVR 90 M W HNBD PROC ST S - 0000 VOLKS 1996 A - N - - L - DRVR OTH VIS 90 - 1 0 L -													
<b>Primary Rd</b> SEAL BEACH BL <b>Distance (ft)</b> 0 <b>Direction</b> <b>Secondary Rd</b> TOWNE CENTER <b>NCIC</b> 3020 <b>State Hwy?</b> N <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> 19 <b>Beat</b> 006 <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 257 <b>Collision Date</b> 20160409 <b>Time</b> 2024 <b>Day</b> SAT <b>Primary Collision Factor</b> IMPROP TURN <b>Violation</b> 22107 <b>Collision Type</b> SIDESWIPE <b>Severity</b> PDO <b>#Killed</b> 0 <b>#Injured</b> 0 <b>Tow Away?</b> N <b>Process Date</b> 20160531 <b>Weather1</b> CLOUDY <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> NO UNUSL CND <b>Rdwy Cond2</b> <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> OTHER MV <b>Lighting</b> DARK - NO <b>Ped Action</b> <b>Cntrl Dev</b> FNCTNG <b>Loc Type</b> <b>Ramp/Int</b>													
<b>Party Info</b> <b>Victim Info</b> <b>Party</b> <b>Type</b> <b>Age</b> <b>Sex</b> <b>Race</b> <b>Sobriety1</b> <b>Sobriety2</b> <b>Move Pre</b> <b>Dir</b> <b>SW Veh</b> <b>CHP Veh</b> <b>Make</b> <b>Year</b> <b>SP Info</b> <b>OAF1</b> <b>Viol</b> <b>OAF2</b> <b>Safety Equip</b> <b>ROLE</b> <b>Ext Of Inj</b> <b>AGE</b> <b>Sex</b> <b>Seat Pos</b> <b>Safety</b> <b>EQUIP</b> <b>Ejected</b> 1F DRVR 92 M W HBD-NUI LFT TURN W A 0100 HONDA 2008 - 3 A 21461 - M B 2 DRVR 35 F O HNBD LFT TURN W D 2200 FORD 2014 - 3 N - - M G													
<b>Primary Rd</b> SEAL BEACH BL <b>Distance (ft)</b> 145 <b>Direction</b> S <b>Secondary Rd</b> TOWNE CENTER <b>NCIC</b> 3020 <b>State Hwy?</b> N <b>Route</b> <b>Postmile Prefix</b> <b>Postmile</b> <b>Side of Hwy</b> <b>City</b> Seal Beach <b>County</b> Orange <b>Population</b> 4 <b>Rpt Dist</b> 19 <b>Beat</b> 006 <b>Type</b> 0 <b>CalTrans</b> <b>Badge</b> 174 <b>Collision Date</b> 20161104 <b>Time</b> 1942 <b>Day</b> FRI <b>Primary Collision Factor</b> DRVR ALC DRG <b>Violation</b> 23152A <b>Collision Type</b> REAR END <b>Severity</b> INJURY <b>#Killed</b> 0 <b>#Injured</b> 1 <b>Tow Away?</b> Y <b>Process Date</b> 20161208 <b>Weather1</b> CLEAR <b>Weather2</b> <b>Rdwy Surface</b> DRY <b>Rdwy Cond1</b> NO UNUSL CND <b>Rdwy Cond2</b> <b>Spec Cond</b> 0 <b>Hit and Run</b> <b>Motor Vehicle Involved With</b> OTHER MV <b>Lighting</b> DUSK/DAWN <b>Ped Action</b> <b>Cntrl Dev</b> FNCTNG <b>Loc Type</b> <b>Ramp/Int</b>													
<b>Party Info</b> <b>Victim Info</b> <b>Party</b> <b>Type</b> <b>Age</b> <b>Sex</b> <b>Race</b> <b>Sobriety1</b> <b>Sobriety2</b> <b>Move Pre</b> <b>Dir</b> <b>SW Veh</b> <b>CHP Veh</b> <b>Make</b> <b>Year</b> <b>SP Info</b> <b>OAF1</b> <b>Viol</b> <b>OAF2</b> <b>Safety Equip</b> <b>ROLE</b> <b>Ext Of Inj</b> <b>AGE</b> <b>Sex</b> <b>Seat Pos</b> <b>Safety</b> <b>EQUIP</b> <b>Ejected</b> 1F DRVR 52 M W HBD-UI PROC ST S A 0000 SUBAR 2014 - - F - - L - 2 DRVR 39 M W HNBD STOPPED S A 0000 TOYOT 2006 - - N - - G - PASS 11 F 9 0 G - 3 DRVR 48 F W HNBD STOPPED S A 0000 TOYOT 2014 - - N - - G - DRVR COMP PN 48 F 1 0 G - PASS 82 F 3 0 G - PASS 14 F 4 0 G - PASS 93 F 6 0 G - PASS 14 M 7 0 G - 4 DRVR 45 F W HNBD STOPPED S A 0000 INFIN 2013 - - N - - G - PASS 9 M 4 0 G -													

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd TOWNE CENTER NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20160310 Time 1545 Day THU																									
Primary Collision Factor UNKNOWN Violation Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160413																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	86	F	W		PHYS	PROC ST	S	A	0100	TOYOT	2001	-	3	N	-	M G								
2	DRVR	42	F	W	HNBD		PROC ST	E	A	0700	CHEVR	2007	-	3	N	-	M G	PASS		8	F	4	0	P	Q
																		PASS		6	F	0	0	P	Q
Primary Rd SEAL BEACH BL Distance (ft) 86 Direction S Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 365 Collision Date 20160304 Time 2110 Day FRI																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160317																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	52	F	W	HNBD		PROC ST	N	A	0000	MAZDA	2007	-	-	N	-	- G	DRVR	COMP PN	52	F	1	0	-	G
Primary Rd SEAL BEACH BL Distance (ft) 235 Direction S Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20160305 Time 1340 Day SAT																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160315																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	71	M	W	HNBD		PROC ST	S	A	0100	TOYOT	1995	-	3	N	-	M G								
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160725 Time 1340 Day MON																									
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160822																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	65	F	W		DRUG	PROC ST	E	A	0700	HONDA	2003	-	3	A	22350	- M G								
2	DRVR	43	F	W	HNBD		STOPPED	-	A	0100	TOYOT	2014	-	3	N	-	M G								
3	DRVR	61	M	W	HNBD		STOPPED	-	D	2200	CHEVR	2004	-	3	N	-	M G	PASS		25	M	3	0	M	G
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20160829 Time 0827 Day MON																									
Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20161012																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	F	A	HNBD		PROC ST	W	A	0100	TOYOT	2003	-	3	N	-	M G								
2	DRVR	28	M	W	HNBD		PROC ST	S	I	1100	FORD	2010	-	3	N	-	M G								

<b>Primary Rd</b> SEAL BEACH BL	<b>Distance (ft)</b> 158	<b>Direction</b> S	<b>Secondary Rd</b> WESTMINSTER AV	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> SOUTH	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 246	<b>Collision Date</b> 20161121	<b>Time</b> 0832 <b>Day</b> MON
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> SIDESWIPE	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> Y	<b>Process Date</b> 20161208		
<b>Weather1</b> CLOUDY	<b>Weather2</b>	<b>Rdwy Surface</b> WET	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	M	H	HNBD		PROC ST	S	D	2200	TOYOT	1994	-	3	N	-	P G									
2	DRVR	22	F	W	HNBD		PROC ST	S	A	0100	SUBAR	2014	-	3	N	-	M G									

<b>Primary Rd</b> WESTMINSTER	<b>Distance (ft)</b> 388	<b>Direction</b> W	<b>Secondary Rd</b> SEAL BEACH BL	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b> 3020	<b>Beat</b> NORTH	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 429	<b>Collision Date</b> 20160117	<b>Time</b> 1755 <b>Day</b> SUN
<b>Primary Collision Factor</b> IMPROP TURN	<b>Violation</b> 22107	<b>Collision Type</b> SIDESWIPE	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> Y	<b>Process Date</b> 20160317		
<b>Weather1</b> CLOUDY	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DARK - ST	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	74	F	H	HNBD		LFT TURN	E	A	0100	HONDA	2006	-	3	N	-	L G									
2	DRVR	21	M	W	HBD-NUI		PROC ST	W	A	0100	MAZDA	2012	-	3	N	-	L G	PASS		22	M	6	0	P	G	
																		PASS		22	M	4	0	P	G	
																		PASS		25	M	3	0	L	G	

<b>Primary Rd</b> WESTMINSTER AV	<b>Distance (ft)</b> 4593	<b>Direction</b> W	<b>Secondary Rd</b> BOLSA CHICA RD	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> 106	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 251	<b>Collision Date</b> 20160519	<b>Time</b> 1147 <b>Day</b> THU
<b>Primary Collision Factor</b> NOT DRIVER	<b>Violation</b>	<b>Collision Type</b> OTHER	<b>Severity</b> INJURY	<b>#Killed</b> 0	<b>#Injured</b> 1	<b>Tow Away?</b> Y	<b>Process Date</b> 20160719		
<b>Weather1</b> CLOUDY	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> NON-CLSN	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	56	M	W	HNBD		PROC ST	E	C	0000	OTHER	1999	-	-	-	-	W -	DRVR	OTH VIS	56	M	1	1	W	-

<b>Primary Rd</b> WESTMINSTER AV	<b>Distance (ft)</b> 1285	<b>Direction</b> W	<b>Secondary Rd</b> BOLSA CHICA RD	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> ROVER	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 178	<b>Collision Date</b> 20160616	<b>Time</b> 1816 <b>Day</b> THU
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> REAR END	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> Y	<b>Process Date</b> 20160720		
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0				
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>			

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	F	H	HNBD		PROC ST	E	-	0000	TOYOT	2000	-	-	N	-	L -	PASS		20	F	3	0	G	-
2	DRVR	38	M	H	HNBD		STOPPED	E	-	0000	NISSA	2006	-	-	N	-	G -	PASS		4	F	4	0	Q	-
																		PASS		7	F	5	0	G	-
																		PASS		1	F	6	0	Q	-
3	DRVR	26	M	W	HNBD		STOPPED	E	-	0000	TOYOT	2016	-	-	N	-	G -								
4	DRVR	35	M	W	HNBD		PROC ST	E	-	0000	MERCE	2005	-	-	N	-	G -								



<b>Primary Rd</b> WESTMINSTER AV	<b>Distance (ft)</b> 2289	<b>Direction</b> W	<b>Secondary Rd</b> BOLSA CHICA RD	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>	
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> SOUTH	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 304	<b>Collision Date</b> 20160721	<b>Time</b> 1510	<b>Day</b> THU
<b>Primary Collision Factor</b> IMPROP TURN	<b>Violation</b> 22107	<b>Collision Type</b> SIDESWIPE	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> Y	<b>Process Date</b> 20161010			
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0					
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> NT PRS/FCTR	<b>Loc Type</b>	<b>Ramp/Int</b>				

Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	58	F	W	HNBD		CHANG LN	E	A	0000	SMART	2010	-	-	-	-	M	-							
2	DRVR	37	M	W	HNBD		PROC ST	E	A	0000	HONDA	2004	-	-	A	22350	-	M	-						

<b>Primary Rd</b> WESTMINSTER AV	<b>Distance (ft)</b> 203	<b>Direction</b> W	<b>Secondary Rd</b> BOLSA CHICA RD	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>	
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b>	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 361	<b>Collision Date</b> 20160820	<b>Time</b> 1113	<b>Day</b> SAT
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> HEAD-ON	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> Y	<b>Process Date</b> 20161129			
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0					
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> FIXED OBJ	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> NT PRS/FCTR	<b>Loc Type</b>	<b>Ramp/Int</b>				

Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	M	W	IMP UNK	IMP UNK	RAN OFF RD	E	A	0000	JEEP	1997	-	-	-	-	G	-							
2	DRVR	49	M	H		null		E	-	0000	GMC	2015	-	-	-	-	G	-							

<b>Primary Rd</b> WESTMINSTER AV	<b>Distance (ft)</b> 3615	<b>Direction</b> W	<b>Secondary Rd</b> BOLSA CHICA RD	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>	
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b> 14	<b>Beat</b> 007	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 174	<b>Collision Date</b> 20160820	<b>Time</b> 1738	<b>Day</b> SAT
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> REAR END	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> N	<b>Process Date</b> 20161010			
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0					
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DUSK/DAWN	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>				

Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	M	H	HNBD		SLOWING	E	A	0000	TOYOT	2005	-	-	N	-	G	-							
2	DRVR	69	M	W	HNBD		SLOWING	E	A	0000	CHRY	2016	-	-	N	-	G	-							
																		PASS		35	F	6	0	G	-
																		PASS		31	M	3	0	G	-
																		PASS		55	F	4	0	G	-

<b>Primary Rd</b> WESTMINSTER AV	<b>Distance (ft)</b> 580	<b>Direction</b> W	<b>Secondary Rd</b> BOLSA CHICA RD	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>	
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> SOUTH	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 246	<b>Collision Date</b> 20161003	<b>Time</b> 0801	<b>Day</b> MON
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> REAR END	<b>Severity</b> INJURY	<b>#Killed</b> 0	<b>#Injured</b> 1	<b>Tow Away?</b> Y	<b>Process Date</b> 20161207			
<b>Weather1</b> CLEAR	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0					
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>				

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	50	F	B	HNBD		SLOWING	E	A	0700	LEXUS	1999	-	3	N	-	M	G								
2	DRVR	55	F	W	HNBD		STOPPED	E	A	0700	BMW	2011	-	3	N	-	M	G	DRVR	COMP PN	55	F	1	0	M	G

<b>Primary Rd</b> WESTMINSTER AV	<b>Distance (ft)</b> 1014	<b>Direction</b> W	<b>Secondary Rd</b> BOLSA CHICA RD	<b>NCIC</b> 3020	<b>State Hwy?</b> N	<b>Route</b>	<b>Postmile Prefix</b>	<b>Postmile</b>	<b>Side of Hwy</b>	
<b>City</b> Seal Beach	<b>County</b> Orange	<b>Population</b> 4	<b>Rpt Dist</b>	<b>Beat</b> NORTH	<b>Type</b> 0	<b>CalTrans</b>	<b>Badge</b> 432	<b>Collision Date</b> 20161012	<b>Time</b> 0725	<b>Day</b> WED
<b>Primary Collision Factor</b> UNSAFE SPEED	<b>Violation</b> 22350	<b>Collision Type</b> REAR END	<b>Severity</b> PDO	<b>#Killed</b> 0	<b>#Injured</b> 0	<b>Tow Away?</b> Y	<b>Process Date</b> 20161208			
<b>Weather1</b> CLOUDY	<b>Weather2</b>	<b>Rdwy Surface</b> DRY	<b>Rdwy Cond1</b> NO UNUSL CND	<b>Rdwy Cond2</b>	<b>Spec Cond</b> 0					
<b>Hit and Run</b>	<b>Motor Vehicle Involved With</b> OTHER MV	<b>Lighting</b> DAYLIGHT	<b>Ped Action</b>	<b>Cntrl Dev</b> FNCTNG	<b>Loc Type</b>	<b>Ramp/Int</b>				

Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	28	M	W	HNBD		PROC ST	W	A	0700	JEEP	2004	-	3	N	-	M	G							
2	DRVR	58	F	W	HNBD		PROC ST	W	A	0100	SUBAR	2011	-	3	N	-	M	G							

Primary Rd	WESTMINSTER AV	Distance (ft)	222	Direction	W	Secondary Rd	KITTS	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	PATRO	Type	0	CalTrans		Badge	314	Collision Date	20160524	Time	1817 Day TUE
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20160719	
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run		Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int			

Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	O	HNBD		PROC ST	W	A	0000	FORD	2002	-	-	N	-	G	-	DRVR	COMP PN 21	M	1	0	G	-
2	DRVR	33	M	O	HNBD		STOPPED	W	A	0000	HONDA	2006	-	-	N	-	G	-	DRVR	COMP PN 33	M	1	0	G	-
3	DRVR	26	M	O	HNBD		STOPPED	W	A	0000	HONDA	2015	-	-	N	-	G	-							

Primary Rd	WESTMINSTER AV	Distance (ft)	233	Direction	W	Secondary Rd	KITTS HWY	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	11	Beat	SOUTH	Type	0	CalTrans		Badge	313	Collision Date	20160502	Time	1159 Day MON
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20160719	
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run		Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int			

Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	90	M	W	HNBD		PROC ST	E	A	0000	LINCO	2012	-	-	F	-	G	-	DRVR	OTH VIS	90	M	1	0	G	-
2	DRVR	22	M	H	HNBD		STOPPED	E	A	0000	TOYOT	2003	-	-	N	-	G	-								

Primary Rd	WESTMINSTER AV	Distance (ft)	0	Direction		Secondary Rd	KITTS RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	141	Type	0	CalTrans		Badge	251	Collision Date	20160713	Time	1619 Day WED
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160816	
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run		Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int			

Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	M	W	HNBD		PROC ST	W	A	0000	FORD	2001	-	-	G	-	G	-							
2	DRVR	43	M	O	HNBD		STOPPED	W	A	0000	VOLKS	2015	-	-	-	-	G	-							
3	DRVR	38	F	W	HNBD		STOPPED	W	A	0000	FORD	2016	-	-	-	-	G	-							

Primary Rd	WESTMINSTER AV	Distance (ft)	108	Direction	W	Secondary Rd	KITTS RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans		Badge	246	Collision Date	20160714	Time	1416 Day THU
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20160816	
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run		Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int			

Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	20	M	O	HNBD		PROC ST	E	A	0000	TOYOT	2005	-	-	N	-	L	-							
2	DRVR	82	M	W	HNBD		SLOWING	E	A	0000	HYUND	2016	-	-	N	-	M	-	DRVR	COMP PN 82	M	1	0	M	-
																			PASS	COMP PN 66	F	3	0	M	-

Primary Rd	WESTMINSTER AV	Distance (ft)	70	Direction	W	Secondary Rd	KITTS RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans		Badge	361	Collision Date	20160910	Time	1708 Day SAT
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	2	Tow Away?	N	Process Date	20161007	
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run		Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int			

Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	63	F	W	HNBD		PROC ST	E	-	0000	TOYOT	2011	A	-	-	-	G	-							
2	DRVR	23	M	W	HNBD		STOPPED	E	-	0000	FORD	2002	A	-	-	-	G	-	DRVR	COMP PN 24	M	1	0	G	-

3	DRVR	26	M	W	HNBD	STOPPED	W	-	0000	NISSA	2006	A	-	-	-	G	-	PASS	COMP PN 14	M	3	0	G	-
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Primary Rd WESTMINSTER AV Distance (ft) 25 Direction W Secondary Rd KITTS RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 152 Collision Date 20160921 Time 0957 Day WED  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20161007  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info																	Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	45	M	W	HNBD		PROC ST	E	-	0000	TOYOT	2008	A	-	A	23123	-	L	-							
2	DRVR	43	M	W	HNBD		STOPPED	E	-	0000	TOYOT	2014	A	-	F	-	G	-	DRVR	COMP PN 43	-	1	0	G	-	

Primary Rd WESTMINSTER AV Distance (ft) 700 Direction E Secondary Rd ROAD B NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20160308 Time 1810 Day TUE  
 Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160412  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int

Party Info																	Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	86	M	W	HNBD		LFT TURN	N	A	0000	HONDA	2008	-	-	N	-	-	L	-							
2	DRVR	50	F	A	HNBD		PROC ST	E	A	0000	SATUR	2004	-	-	N	-	-	L	DRVR	COMP PN 50	F	1	0	-	G	

Primary Rd WESTMINSTER AV Distance (ft) 368 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist 11 Beat ROVER Type 0 CalTrans Badge 368 Collision Date 20160226 Time 1758 Day FRI  
 Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? N Process Date 20160315  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int

Party Info																	Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	92	M	W	HNBD		LFT TURN	E	M	9500	OTHER	2015	-	3	-	-	M	B	DRVR	OTH VIS	92	M	1	0	M	B
2	DRVR	41	M	W	HNBD		PROC ST	W	A	0100	CHEVR	2006	-	3	-	-	M	G	PASS	OTH VIS	63	F	3	0	M	B

Primary Rd WESTMINSTER AV Distance (ft) 776 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160301 Time 1537 Day TUE  
 Primary Collision Factor STRTNGJCKNG Violation 22106 Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160323  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info																	Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	67	M	W	HBD-NUI		PARKING	N	D	2200	CHEVR	2003	-	3	N	-	M	G	DRVR	OTH VIS	67	M	1	0	M	G
2	PRKD	998	-	-	HNBD		PARKED	N	A	0800	TOYOT	2004	-	3	N	-	-	-								
3	DRVR	33	M	W	HNBD		PROC ST	-	A	0100	NISSA	2001	-	3	N	-	L	G								

Primary Rd WESTMINSTER AV Distance (ft) 500 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 317 Collision Date 20160406 Time 0655 Day WED  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160531  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info																	Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	23	F	W	HNBD		PROC ST	W	A	0000	HYUND	2004	-	-	N	-	G	-								
2	DRVR	40	F	W	HNBD		STOPPED	W	A	0000	AUDI	2015	-	-	N	-	G	-	PASS		8	M	3	0	G	-

PASS	14	F	9	3	-	-
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Primary Rd WESTMINSTER AV Distance (ft) 43 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 431 Collision Date 20160706 Time 1607 Day WED  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160816  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	F	H	HNBD		STOPPED	E	D	0000	CHEVR	2001	-	N	-	G	-								
2	DRVR	49	F	A	HNBD		STOPPED	E	A	0000	AUDI	2003	-	N	-	G	-	DRVR	COMP PN	49	F	1	0	G	-

Primary Rd WESTMINSTER AV Distance (ft) 353 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20160727 Time 1555 Day WED  
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160819  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	23	M	W	HNBD		PROC ST	W	A	0800	NISSA	2015	-	3	N	-	M	G								
2	DRVR	70	M	W	HNBD		STOPPED	W	A	0100	MERCE	2001	-	3	N	-	M	G	DRVR	COMP PN	70	M	1	0	M	G
3	DRVR	32	F	H	HNBD		STOPPED	W	D	2200	FORD	1997	-	3	N	-	M	G	PASS		37	F	3	0	M	G

Primary Rd WESTMINSTER AV Distance (ft) 956 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 361 Collision Date 20160826 Time 1005 Day FRI  
 Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20161013  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	83	F	A	HNBD		RGT TURN	S	A	0000	FORD	1998	-	-	-	-	G	-							
2	DRVR	45	M	W	HNBD		PROC ST	E	A	0000	HONDA	1997	-	-	-	-	G	-							

Primary Rd WESTMINSTER AV Distance (ft) 255 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy  
 City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20160926 Time 0713 Day MON  
 Primary Collision Factor R-O-W AUTO Violation 21804A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161011  
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0  
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	F	W	HNBD		RGT TURN	N	A	0700	JEEP	2015	-	3	N	-	M	G							
2	DRVR	56	M	W	HNBD		PROC ST	E	I	1100	FORD	2013	-	3	N	-	M	G							

**APPENDIX E**

**SIMTRAFFIC QUEUING AND ARTERIAL PERFORMANCE  
WORKSHEETS**

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T	
Maximum Queue (ft)	141	108	55	77	133	145	115	132	9	60	198	223	
Average Queue (ft)	61	37	12	25	51	32	34	34	0	22	58	68	
95th Queue (ft)	113	78	37	54	103	93	88	94	5	54	141	167	
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)					80					50	150		
Storage Blk Time (%)					7	0					3	1	
Queuing Penalty (veh)					40	0					1	0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	258	79
Average Queue (ft)	81	10
95th Queue (ft)	186	50
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	13	0
Queuing Penalty (veh)	9	0

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR	
Maximum Queue (ft)	342	125	135	43	224	236	281	254	66	185	212	267	
Average Queue (ft)	191	56	61	15	111	92	113	121	14	80	98	128	
95th Queue (ft)	299	102	115	42	192	194	222	227	43	156	184	233	
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)					60	360					205		
Storage Blk Time (%)					14	0					0		
Queuing Penalty (veh)					3	0					0		



Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	44	105	111	55	114	90	47
Average Queue (ft)	19	51	52	29	53	37	17
95th Queue (ft)	45	84	88	41	89	67	34
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	48	53	31
Average Queue (ft)	31	32	14
95th Queue (ft)	43	45	39
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	58	64	104	67	72
Average Queue (ft)	34	30	53	29	33
95th Queue (ft)	51	51	89	53	60
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	237	119	43	30	174	440	442	435	116	145	394	432
Average Queue (ft)	125	42	11	9	113	142	117	106	10	38	113	135
95th Queue (ft)	213	81	34	27	190	341	317	308	76	95	256	288
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)	0											
Queuing Penalty (veh)	1											
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					22	11		17		0	6	
Queuing Penalty (veh)					114	17		4		1	2	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	460	250
Average Queue (ft)	153	52
95th Queue (ft)	311	160
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	30	4
Queuing Penalty (veh)	57	22

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	250	121	108	32	208	182	181	209	60	236	281	328
Average Queue (ft)	115	52	44	8	97	46	54	58	18	69	104	141
95th Queue (ft)	194	95	90	31	176	122	133	145	47	166	204	256
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			6							1		
Queuing Penalty (veh)			1							0		



Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	36	100	58	52	77	62	41
Average Queue (ft)	14	53	30	26	36	31	14
95th Queue (ft)	39	87	53	43	57	51	32
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	54	65	45
Average Queue (ft)	33	35	21
95th Queue (ft)	44	51	47
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	45	54	199	125	75
Average Queue (ft)	28	28	97	58	41
95th Queue (ft)	48	50	165	92	65
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	200	111	59	39	174	270	201	123	27	108	230	253
Average Queue (ft)	113	45	14	10	98	87	65	53	2	25	86	99
95th Queue (ft)	185	87	42	31	168	197	140	111	12	67	174	199
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)	0											
Queuing Penalty (veh)	0											
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					18	3		8			1	
Queuing Penalty (veh)					85	5		1			0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	266	202
Average Queue (ft)	112	44
95th Queue (ft)	213	116
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	22	5
Queuing Penalty (veh)	50	21

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	206	107	124	40	125	188	182	196	51	160	196	262
Average Queue (ft)	109	47	51	10	72	70	84	89	19	77	108	152
95th Queue (ft)	183	86	98	34	119	146	162	171	45	144	181	243
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			7	0						0		
Queuing Penalty (veh)			1	0						0		

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	35	82	56	45	58	52	34
Average Queue (ft)	15	42	30	22	30	27	10
95th Queue (ft)	41	69	53	41	46	44	29
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	53	54	54
Average Queue (ft)	31	34	25
95th Queue (ft)	46	47	49
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	72	59	180	119	93
Average Queue (ft)	33	31	97	68	51
95th Queue (ft)	56	52	156	103	81
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T	
Maximum Queue (ft)	147	112	59	70	136	148	109	111	17	59	224	262	
Average Queue (ft)	67	39	15	27	53	40	39	35	1	18	76	86	
95th Queue (ft)	128	82	43	58	107	102	90	88	10	50	178	206	
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)					80					50	150		
Storage Blk Time (%)					7	1					4		1
Queuing Penalty (veh)					36	1					1		0

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	263	204
Average Queue (ft)	97	16
95th Queue (ft)	222	84
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	14	0
Queuing Penalty (veh)	12	0

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR	
Maximum Queue (ft)	397	138	151	48	233	206	244	252	60	168	197	259	
Average Queue (ft)	203	50	64	15	106	95	114	122	13	74	99	131	
95th Queue (ft)	339	97	125	42	190	194	225	229	41	142	183	236	
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)					60	360					205		
Storage Blk Time (%)					13	0						0	
Queuing Penalty (veh)					3	0						0	

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	35	115	99	70	116	67	43
Average Queue (ft)	20	53	47	32	55	36	17
95th Queue (ft)	45	94	79	52	91	59	37
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	44	63	36
Average Queue (ft)	30	34	14
95th Queue (ft)	43	50	39
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	56	55	117	50	61
Average Queue (ft)	33	31	57	30	34
95th Queue (ft)	50	49	96	47	54
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	244	123	47	38	174	471	451	440	117	160	410	420
Average Queue (ft)	152	51	10	9	124	159	129	109	10	40	128	156
95th Queue (ft)	240	96	34	29	198	373	329	308	68	104	275	310
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)	2											
Queuing Penalty (veh)	4											
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					27	12		19		0	7	
Queuing Penalty (veh)					138	23		5		0	3	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	451	250
Average Queue (ft)	163	77
95th Queue (ft)	317	195
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	36	8
Queuing Penalty (veh)	81	44

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	234	128	106	49	244	157	195	194	55	285	346	379
Average Queue (ft)	124	49	40	10	103	45	56	63	17	71	111	154
95th Queue (ft)	203	95	83	37	192	121	142	157	45	178	229	290
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			5	0						1		
Queuing Penalty (veh)			1	0						0		

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	39	132	73	50	72	65	49
Average Queue (ft)	14	56	33	26	36	31	16
95th Queue (ft)	40	98	56	42	57	53	37
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	58	64	53
Average Queue (ft)	33	36	26
95th Queue (ft)	48	52	49
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	62	61	222	116	99
Average Queue (ft)	35	33	121	59	44
95th Queue (ft)	56	53	200	93	75
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			1		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	227	141	52	38	174	311	233	140	33	111	217	252
Average Queue (ft)	122	56	14	10	103	92	59	50	3	26	91	106
95th Queue (ft)	200	103	41	28	176	226	138	108	18	72	184	213
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)	0	0										
Queuing Penalty (veh)	1	0										
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					23	3		8	0		2	
Queuing Penalty (veh)					110	6		1	0		0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	294	224
Average Queue (ft)	119	47
95th Queue (ft)	228	124
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	23	4
Queuing Penalty (veh)	57	19

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	228	96	120	44	161	181	202	230	62	173	234	305
Average Queue (ft)	106	48	47	10	75	59	74	82	15	73	105	160
95th Queue (ft)	184	88	96	35	133	140	159	174	46	145	196	257
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			6	0						0		
Queuing Penalty (veh)			1	0						0		



Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	36	77	58	32	55	60	24
Average Queue (ft)	17	43	33	23	30	26	10
95th Queue (ft)	43	67	55	39	43	43	26
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	61	62	63
Average Queue (ft)	31	34	27
95th Queue (ft)	49	49	51
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	60	72	206	149	95
Average Queue (ft)	33	36	109	69	49
95th Queue (ft)	53	59	172	113	81
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)			0		0
Queuing Penalty (veh)			0		0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	146	74	42	80	150	100	107	113	15	80	248	300
Average Queue (ft)	64	29	11	24	56	29	35	34	1	18	74	88
95th Queue (ft)	121	58	34	57	115	77	90	88	9	52	187	220
Link Distance (ft)	231		160	160		822	822	822			1063	1063
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		150			250				50	150		
Storage Blk Time (%)	0							4		0	2	
Queuing Penalty (veh)	0							1		0	0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	325	170
Average Queue (ft)	98	21
95th Queue (ft)	237	107
Link Distance (ft)	1063	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	14	0
Queuing Penalty (veh)	12	1

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	LTR	LTR
Maximum Queue (ft)	64	92	64	56	71
Average Queue (ft)	38	45	29	30	26
95th Queue (ft)	58	77	55	53	50
Link Distance (ft)	210	231	231	286	152
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	LTR	LTR
Maximum Queue (ft)	89	215	68	144	73
Average Queue (ft)	43	99	34	62	35
95th Queue (ft)	73	180	58	106	64
Link Distance (ft)	210	231	231	286	152
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	239	195	50	27	281	288	267	241	74	140	238	244
Average Queue (ft)	134	75	10	8	127	69	68	64	4	35	113	135
95th Queue (ft)	231	168	33	26	224	187	181	172	42	89	205	222
Link Distance (ft)	231		160	160		822	822	822			1063	1063
Upstream Blk Time (%)	2											
Queuing Penalty (veh)	7											
Storage Bay Dist (ft)		150			250				50	150		
Storage Blk Time (%)	12	0			1	1		13		0	5	
Queuing Penalty (veh)	19	1			3	3		3		0	2	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	323	245
Average Queue (ft)	147	51
95th Queue (ft)	251	140
Link Distance (ft)	1063	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	33	4
Queuing Penalty (veh)	74	21

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	240	195	57	26	252	169	124	124	24	92	213	233
Average Queue (ft)	129	77	14	9	116	56	53	50	3	21	93	107
95th Queue (ft)	223	168	43	26	210	120	105	103	15	60	190	214
Link Distance (ft)	231		160	160		822	822	822			1063	1063
Upstream Blk Time (%)	1											
Queuing Penalty (veh)	6											
Storage Bay Dist (ft)		150			250				50	150		
Storage Blk Time (%)	6	0			0	0		9			2	
Queuing Penalty (veh)	10	0			1	0		1			0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	238	210
Average Queue (ft)	121	44
95th Queue (ft)	223	112
Link Distance (ft)	1063	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	26	3
Queuing Penalty (veh)	65	14

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	LTR	LTR
Maximum Queue (ft)	93	169	85	148	112
Average Queue (ft)	50	89	38	74	44
95th Queue (ft)	80	145	64	120	83
Link Distance (ft)	210	231	231	286	152
Upstream Blk Time (%)		0			0
Queuing Penalty (veh)		0			0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	50	135	114	70	111	71	47
Average Queue (ft)	23	55	54	32	53	34	17
95th Queue (ft)	50	101	92	52	85	58	38
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	55	66	31
Average Queue (ft)	33	32	13
95th Queue (ft)	42	51	38
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	63	60	105	60	60
Average Queue (ft)	32	31	51	28	34
95th Queue (ft)	50	50	85	54	56
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					



Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	43	101	68	38	64	56	49
Average Queue (ft)	17	52	33	25	36	30	17
95th Queue (ft)	43	84	57	39	55	51	40
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	54	68	62
Average Queue (ft)	33	38	26
95th Queue (ft)	45	57	51
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	57	55	202	122	96
Average Queue (ft)	33	33	116	55	43
95th Queue (ft)	50	50	189	90	73
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	44	80	63	36	55	57	46
Average Queue (ft)	16	45	32	23	31	26	13
95th Queue (ft)	43	71	57	39	45	43	33
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	67	66	60
Average Queue (ft)	32	34	27
95th Queue (ft)	49	51	52
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	62	66	172	133	107
Average Queue (ft)	36	36	103	66	50
95th Queue (ft)	55	56	164	107	85
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

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**Arterial Level of Service: NB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	16.6	47.9	0.32	23.8	C
Towne Center Drive	II	45	11.8	1.2	13.0	0.11	30.1	B
Plymouth Drive	II	45	18.7	1.9	20.6	0.17	30.1	B
Bradbury Road	II	45	23.5	10.6	34.1	0.22	22.8	C
Orangewood Avenue	II	40	51.0	24.3	75.3	0.57	27.1	C
Farquhar Avenue	II	35	29.8	3.6	33.4	0.25	27.0	C
Katella Avenue	II	35	29.7	32.5	62.2	0.25	14.4	E
Total	II		195.8	90.7	286.5	1.88	23.6	C

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**Arterial Level of Service: SB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	60.4	95.5	0.33	12.3	F
Farquhar Avenue	II	35	29.7	4.5	34.2	0.25	26.3	C
Orangewood Avenue	II	35	29.8	6.1	35.9	0.25	25.1	C
Bradbury Road	II	45	45.3	9.5	54.8	0.57	37.2	A
Rossmoor Center Way	II	45	23.5	4.8	28.3	0.22	27.5	C
Towne Center Drive	II	45	18.7	0.8	19.5	0.17	31.7	B
Saint Cloud Drive	II	45	11.8	17.1	28.9	0.11	13.5	E
Total	II		193.9	103.2	297.1	1.89	22.9	C

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**Arterial Level of Service: NB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	17.0	48.3	0.32	23.6	C
Towne Center Drive	II	45	11.8	4.7	16.5	0.11	23.7	C
Plymouth Drive	II	45	18.7	7.1	25.8	0.17	24.0	C
Bradbury Road	II	45	23.5	2.4	25.9	0.22	30.0	B
Orangewood Avenue	II	40	51.0	4.6	55.6	0.57	36.7	A
Farquhar Avenue	II	35	29.8	8.3	38.1	0.25	23.7	C
Katella Avenue	II	35	29.7	29.6	59.3	0.25	15.1	E
Total	II		195.8	73.7	269.5	1.88	25.1	C

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**Arterial Level of Service: SB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	75.7	110.8	0.33	10.6	F
Farquhar Avenue	II	35	29.7	3.4	33.1	0.25	27.1	C
Orangewood Avenue	II	35	29.8	3.6	33.4	0.25	27.0	C
Bradbury Road	II	45	45.3	6.8	52.1	0.57	39.1	A
Rossmoor Center Way	II	45	23.5	7.8	31.3	0.22	24.8	C
Towne Center Drive	II	45	18.7	6.1	24.8	0.17	25.0	C
Saint Cloud Drive	II	45	11.8	27.0	38.8	0.11	10.1	F
Total	II		193.9	130.4	324.3	1.89	21.0	D

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**Arterial Level of Service: NB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	22.9	54.2	0.32	21.0	D
Towne Center Drive	II	45	11.8	12.7	24.5	0.11	16.0	E
Plymouth Drive	II	45	18.7	4.2	22.9	0.17	27.0	C
Bradbury Road	II	45	23.5	5.8	29.3	0.22	26.5	C
Orangewood Avenue	II	40	51.0	1.3	52.3	0.57	39.0	A
Farquhar Avenue	II	35	29.8	4.7	34.5	0.25	26.1	C
Katella Avenue	II	35	29.7	23.0	52.7	0.25	17.0	D
Total	II		195.8	74.6	270.4	1.88	25.0	C

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**Arterial Level of Service: SB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	34.7	69.8	0.33	16.8	E
Farquhar Avenue	II	35	29.7	4.4	34.1	0.25	26.3	C
Orangewood Avenue	II	35	29.8	2.3	32.1	0.25	28.1	B
Bradbury Road	II	45	45.3	4.3	49.6	0.57	41.1	A
Rossmoor Center Way	II	45	23.5	7.3	30.8	0.22	25.2	C
Towne Center Drive	II	45	18.7	12.3	31.0	0.17	20.0	D
Saint Cloud Drive	II	45	11.8	34.0	45.8	0.11	8.5	F
Total	II		193.9	99.3	293.2	1.89	23.2	C

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**Arterial Level of Service: NB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	16.7	48.0	0.32	23.7	C
Towne Center Drive	II	45	11.8	1.2	13.0	0.11	30.1	B
Plymouth Drive	II	45	18.7	2.0	20.7	0.17	29.9	B
Bradbury Road	II	45	23.5	12.2	35.7	0.22	21.8	D
Orangewood Avenue	II	40	51.0	23.1	74.1	0.57	27.5	C
Farquhar Avenue	II	35	29.8	3.6	33.4	0.25	27.0	C
Katella Avenue	II	35	29.7	33.0	62.7	0.25	14.3	E
Total	II		195.8	91.8	287.6	1.88	23.5	C

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**Arterial Level of Service: SB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	62.1	97.2	0.33	12.0	F
Farquhar Avenue	II	35	29.7	4.5	34.2	0.25	26.3	C
Orangewood Avenue	II	35	29.8	6.1	35.9	0.25	25.1	C
Bradbury Road	II	45	45.3	10.7	56.0	0.57	36.4	A
Rossmoor Center Way	II	45	23.5	4.9	28.4	0.22	27.4	C
Towne Center Drive	II	45	18.7	0.9	19.6	0.17	31.6	B
Saint Cloud Drive	II	45	11.8	16.0	27.8	0.11	14.1	E
Total	II		193.9	105.2	299.1	1.89	22.7	C

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**Arterial Level of Service: NB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	17.2	48.5	0.32	23.5	C
Towne Center Drive	II	45	11.8	4.6	16.4	0.11	23.9	C
Plymouth Drive	II	45	18.7	7.1	25.8	0.17	24.0	C
Bradbury Road	II	45	23.5	2.6	26.1	0.22	29.8	B
Orangewood Avenue	II	40	51.0	4.2	55.2	0.57	36.9	A
Farquhar Avenue	II	35	29.8	8.6	38.4	0.25	23.5	C
Katella Avenue	II	35	29.7	29.9	59.6	0.25	15.1	E
Total	II		195.8	74.2	270.0	1.88	25.1	C

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**Arterial Level of Service: SB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	83.3	118.4	0.33	9.9	F
Farquhar Avenue	II	35	29.7	3.5	33.2	0.25	27.0	C
Orangewood Avenue	II	35	29.8	3.5	33.3	0.25	27.1	C
Bradbury Road	II	45	45.3	6.7	52.0	0.57	39.2	A
Rossmoor Center Way	II	45	23.5	9.2	32.7	0.22	23.8	C
Towne Center Drive	II	45	18.7	6.1	24.8	0.17	25.0	C
Saint Cloud Drive	II	45	11.8	27.7	39.5	0.11	9.9	F
Total	II		193.9	140.0	333.9	1.89	20.4	D

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**Arterial Level of Service: NB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	23.2	54.5	0.32	20.9	D
Towne Center Drive	II	45	11.8	12.8	24.6	0.11	15.9	E
Plymouth Drive	II	45	18.7	4.5	23.2	0.17	26.7	C
Bradbury Road	II	45	23.5	6.6	30.1	0.22	25.8	C
Orangewood Avenue	II	40	51.0	1.4	52.4	0.57	38.9	A
Farquhar Avenue	II	35	29.8	5.0	34.8	0.25	25.9	C
Katella Avenue	II	35	29.7	23.1	52.8	0.25	17.0	D
Total	II		195.8	76.6	272.4	1.88	24.8	C

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**Arterial Level of Service: SB Seal Beach Boulevard**


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Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	35.0	70.1	0.33	16.7	E
Farquhar Avenue	II	35	29.7	4.4	34.1	0.25	26.3	C
Orangewood Avenue	II	35	29.8	2.4	32.2	0.25	28.0	C
Bradbury Road	II	45	45.3	4.5	49.8	0.57	40.9	A
Rossmoor Center Way	II	45	23.5	8.4	31.9	0.22	24.4	C
Towne Center Drive	II	45	18.7	13.0	31.7	0.17	19.5	D
Saint Cloud Drive	II	45	11.8	37.5	49.3	0.11	7.9	F
Total	II		193.9	105.2	299.1	1.89	22.7	C



APPENDIX F  
ORANGE COUNTY TRAFFIC ENGINEERING  
ROSSMOOR TRAFFIC STUDY



## ORANGE COUNTY TRAFFIC ENGINEERING

**STAFF REPORT OF:** September 26, 2016

**SUPERVISORIAL DISTRICT:** 2

**SUBJECT:** Rossmoor Traffic Study

**LOCATION:** Rossmoor; T.B. 796-H4

**INVESTIGATOR:** Deepthi Arabolu

### **BACKGROUND**

At the May 21, 2015 Orange County Traffic Committee meeting, a request to remove time based parking restrictions on both sides of Foster Road/Hedwig Road between Druid Lane and Wallingsford Road was agendized and discussed by the Committee. This request to remove parking restrictions was initiated by the Rossmoor Homeowners Association due to inconvenience to residents fronting Foster Road/Hedwig Road. The Committee voted to maintain the current time based parking restrictions and to conduct a more comprehensive study in collaboration with the Rossmoor Homeowners Association, the Los Alamitos Unified School District and other stakeholders. This traffic study and the information below outlines research conducted and additional information collected by OC Public Works/Traffic Engineering staff as part of the OC Traffic Committee recommendation.

### **EXISTING CONDITIONS**

The Rossmoor community is bound by the San Gabriel (I-605) Freeway to the west, by the San Diego (I-405) Freeway to the south, by Katella Avenue to the north, and Seal Beach/Los Alamitos Boulevard to the east. On the north, access to the community is limited to one location at Wallingsford Road off Katella Avenue, and on the east, access is available from Seal Beach/Los Alamitos Boulevard at six locations: Hedwig Road, Orangewood Avenue, Rossmoor Way, Bradbury Road, Rossmoor Center Way, and Saint Cloud Drive. Freeway access to the I-605 and I-405 freeways is limited to the Katella Avenue interchange and the Seal Beach/Los Alamitos Boulevard interchange.

Wallingsford Road between Katella Avenue and Hedwig Road is a fully improved, residential collector street with one travel lane in each direction separated by a centerline stripe. Wallingsford Road has a posted speed limit of 25 mph. The intersection of Wallingsford Road and Katella Avenue is controlled by a traffic signal operated and maintained by the City of Los

Alamitos; the intersection of Wallingsford Road and Hedwig Road is controlled by an all-way stop. Three residential streets intersect the segment of Wallingsford Road between Katella Ave and Hedwig Road; all are controlled by stop signs. Currently, parking is prohibited on the west side of Wallingsford Road; on the east side, parking is also prohibited except for a segment fronting an apartment complex near the intersection of Hedwig Road which has restricted parking between the hours of 7am to 9 am excluding weekends and holidays.

Within the community, Hedwig Road, Foster Road, and Yellowtail Drive form a loop road that runs through the entire Rossmoor community. These streets are fully improved, residential collector streets with one travel lane in each direction separated by a centerline stripe and a posted speed limit of 25 mph. Hedwig Road begins at Los Alamitos Boulevard and changes its name to Foster Road at Donnis Road. Westerly of Donnis Road, Foster Road continues as a residential collector street southerly through the community. At the south end of this segment, Foster Road again changes its name to Yellowtail Drive at Druid Lane, and ends at its intersection with Saint Cloud Drive. Foster Road is centrally located within the community and provides the primary access to the northerly half of Rossmoor. All streets intersecting Hedwig Road/Foster Road/Yellowtail Drive are residential streets controlled by stop signs. Of these intersections, Copa de Oro Drive, Main Way Drive, Bostonian Drive, Shakespeare Drive, and Wallingsford Road are all-way stop controlled intersections.

On the west side of Foster Road between Bostonian Drive and Shakespeare Drive, there are two elementary schools, Lee Elementary and Weaver Elementary. Another school, Hopkinson Elementary, is located west of Foster Road with access from Kensington Road and Gertrude Drive. Rossmoor Park occupies the south side of Foster Road/Hedwig Road between Kerth Drive and Pemberton Road. There are assigned school crossing guards located on Foster Road at the intersections of Gertrude Drive, Bostonian Drive, and Shakespeare Drive; in addition, there is an assigned school crossing guard located at the intersection of Gertrude Drive at Kensington Road. Between Druid Lane and Wallingsford Road, parking is prohibited between the hours of 7:30 am to 9:30 am on school days on the easterly side of Foster Road/Hedwig Road and between 2:30 pm to 4:30 pm on school days on the westerly side of Foster Road/Hedwig Road. Foster Road/Hedwig Road between Druid Lane and Wallingsford Road is currently signed as a Bike Route; the parking lanes are striped and marked for bike usage during the parking restrictions period.

Orangewood Avenue, Montecito Road, and Saint Cloud Drive form a loop road that intersects Seal Beach/Los Alamitos Boulevard at two locations. These streets are fully improved, residential collector streets with two travel lanes in each direction separated by a centerline stripe and have a posted speed limit of 35 mph. All streets intersecting Orangewood Avenue/Montecito Road/Saint Cloud Drive are controlled by stop signs. Of these intersections, Shakespeare Drive, Bostonian Drive, Bradbury Road, Main Way Drive/Rossmoor Center Way, and Copa de Oro Drive are all-way stop controlled intersections. The intersections of Los Alamitos Boulevard at Orangewood Avenue, Rossmoor Way, Bradbury Road, Rossmoor Center

Way, and Saint Cloud Drive are controlled by traffic signals that are operated and maintained by the City of Los Alamitos and/or the City of Seal Beach. Rossmoor Elementary School is located on the east side of Montecito Road between Bostonian Drive and Shakespeare Drive; school access is available from the local streets of Bostonian Drive and Shakespeare Drive. There are assigned school crossing guards located on Montecito Road at the intersections of Bostonian Drive and at Shakespeare Drive. Parking is allowed on both sides of Orangewood Avenue/Montecito Road/Saint Cloud Drive.

Rossmoor Way between Bostonian Drive/Shakespeare Drive and Los Alamitos Boulevard has a posted speed limit of 25 mph and is a fully improved, residential collector street with two travel lanes in each direction divided by a landscaped raised median. Weatherby Road is the only street that intersects Rossmoor Way within this segment and is stop controlled. Rossmoor Way at Los Alamitos Boulevard is controlled by a traffic signal that is operated and maintained by the City of Los Alamitos; Rossmoor Way intersects Shakespeare Drive/Bostonian Drive at a "T" intersection controlled by a stop sign. There is an assigned school crossing guard located on Rossmoor Way at the intersection of Shakespeare Drive/Bostonian Drive. Parking is allowed on both sides of Rossmoor Way.

Bradbury Road between Montecito Road and Seal Beach/Los Alamitos Boulevard has a posted speed limit of 25 mph and is a fully improved, residential collector street with one travel lane in each direction separated by a Two-Way Left Turn Lane (TWLTL). The intersection of Bradbury Road and Seal Beach/Los Alamitos Boulevard is controlled by a traffic signal operated and maintained by the City of Los Alamitos; the intersection of Bradbury Road and Montecito Road is controlled by an all-way stop. Four residential streets intersect this segment of Bradbury Road and all are controlled by stop signs. Parking is allowed on both sides of Bradbury Road and the parking lanes are striped.

Rossmoor Center Way between Montecito Road and Seal Beach Boulevard has a posted speed limit of 25 mph and is a fully improved street with one travel lane in each direction separated by a centerline stripe. Rossmoor Center Way primarily provides access to the Rossmoor Shopping Center. The intersection of Rossmoor Center Way and Seal Beach Boulevard is controlled by a traffic signal operated and maintained by the City of Seal Beach; Rossmoor Center Way intersects Montecito Road at a "T" intersection controlled by an all-way stop. Parking is prohibited on both sides of Rossmoor Center Way.

Ruth Elaine Drive, Martha Ann Drive, and Druid Lane form a loop road that runs through the entire Rossmoor community and intersects Wallingsford Road and Saint Cloud Drive. These streets are fully improved, residential collector streets with a posted speed limit of 25 mph, and one travel lane in each direction separated by a centerline stripe. Ruth Elaine begins at Wallingsford Road and changes its name to Martha Ann Drive east of Donnis Road. Martha Ann Drive continues as a residential collector street southerly through the west side of the community. At the south end of this segment, Martha Ann Drive changes its name to Druid

Lane near Foster Road/Yellowtail Drive and ends at its intersection with Saint Cloud Drive. Ruth Elaine Drive at Wallingsford Road is controlled by a stop sign with traffic on Ruth Elaine stopping for Wallingsford Road traffic. Ruth Elaine Drive has only one minor intersecting street, Donnis Road, controlled by a stop sign. None of the streets that intersect Martha Ann Drive are controlled by stop signs except for Piedmont Avenue, Shakespeare Drive, Bostonian Drive, and Main Way Drive. Piedmont Avenue is stop controlled at Martha Ann Drive; Shakespeare Drive, Bostonian Drive and Main Way Drive are all all-way stop controlled at their intersection with Martha Ann Drive. The four-way intersection at Druid Lane and Foster Road/Yellowtail Drive is controlled by a two-way stop control with traffic on Druid Lane stopping for Foster Road/Yellowtail Drive traffic. All streets intersecting Druid Lane are uncontrolled. Druid Lane at Saint Cloud Drive is controlled by a stop sign with traffic on Druid Lane stopping for Saint Cloud Drive traffic. Parking is allowed on both sides of Ruth Elaine Drive/Martha Ann Drive/Druid Lane.

### **DEMOGRAPHICS**

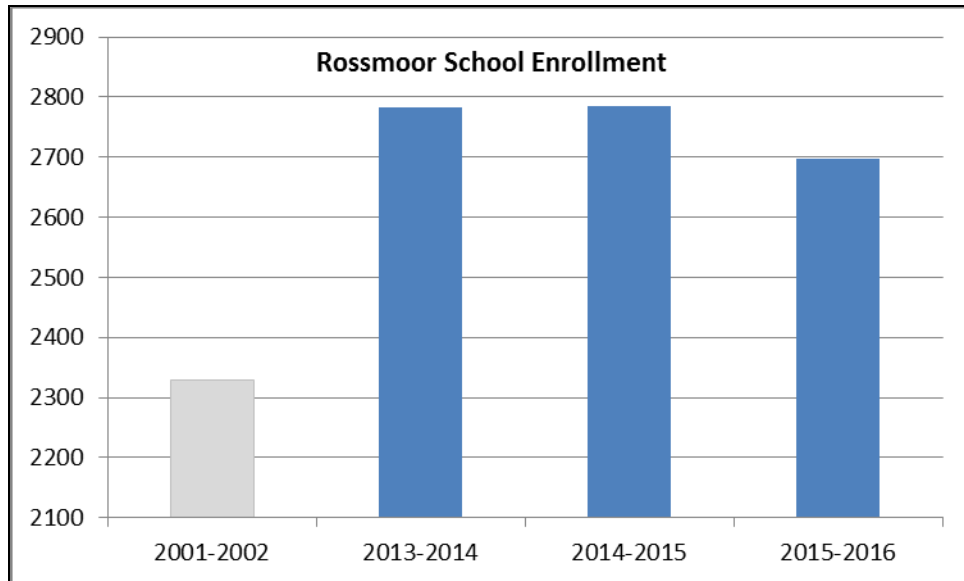
Rossmoor is a self-contained community with a population of 10,244 as of the 2010 United States Census; the approximate number of household units was 3,710 with an average family size of three persons per family. There were approximately 2,550 children living in Rossmoor. The projected total daily trips generated by the community are approximately 42,000 vehicles, consistent with the 38,000 total daily inbound and outbound trips measured most recently in 2015 at the seven entrances to the community.

### **SCHOOL ENROLLMENT**

The Los Alamitos Unified School District (LAUSD) serves the Rossmoor community. Currently there are four elementary schools located within the boundaries of Rossmoor: Hopkinson, Lee, Rossmoor, and Weaver. With the exception of Weaver Elementary which is a year-round school, all the elementary schools in Rossmoor are on a nine month academic year calendar.. Based on the LAUSD provided school enrollment data for the Rossmoor schools, the current year's school enrollment within Rossmoor has increased by approximately 16% since 2002. However, enrollment numbers have remained consistent over the past 3 years.

The school enrollment data is tabulated and graphed below:

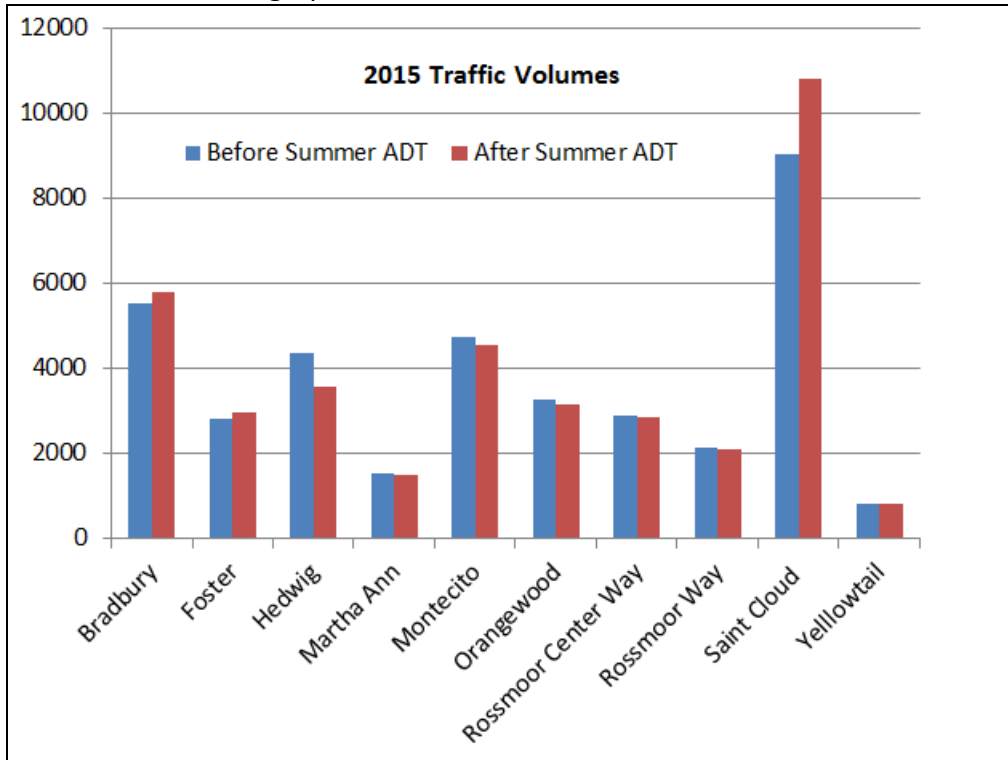
Rossmoor School Enrollment				
School	School Year			
	2001-2002	2013-2014	2014-2015	2015-2016
Hopkinson	637	694	711	703
Lee	617	659	683	659
Rossmoor	618	712	676	650
Weaver	458	717	716	685
<b>Total</b>	<b>2,330</b>	<b>2,782</b>	<b>2,786</b>	<b>2,697</b>



**TRAFFIC DATA (VOLUMES / SPEEDS)**

Vehicular volume counts and speed profiles have been conducted over the last 15 years at several locations on the residential collector streets within the Rossmoor community. A summary of this data is tabulated and shown in Table 1 of the Appendix. The table includes available historical data from 2002 traffic counts, 2015 Traffic Flow Map counts, and a 2013 Engineering & Traffic Survey data. A review of vehicular volumes conducted before and after the summer of 2015 shows that overall, there has been no significant change in vehicular volumes with the exception of two streets, Saint Cloud Drive and Hedwig Road. Volumes increased on Saint Cloud Drive by 20%; while volumes on Hedwig Road decreased by 18%. These changes may be the result of changes in demographics and new school year traffic patterns.

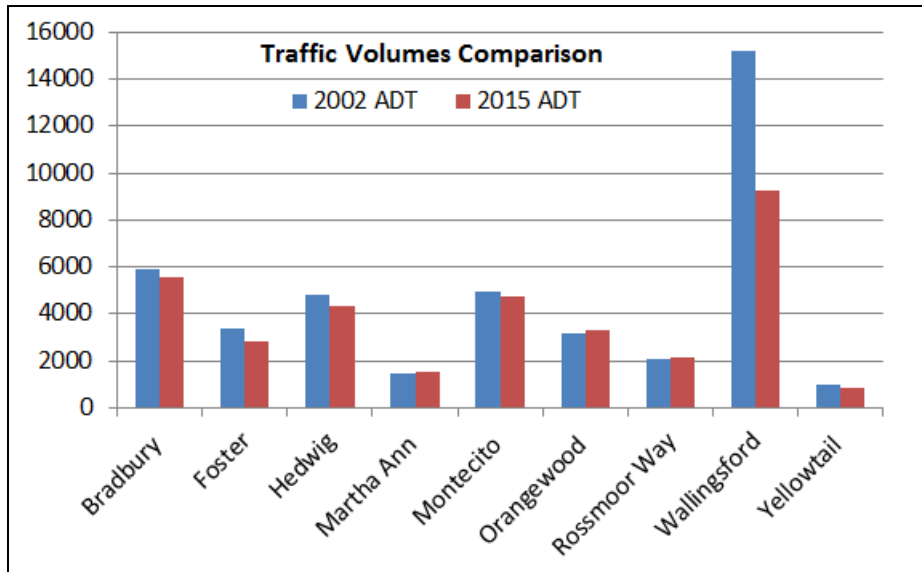
The 2015 traffic volumes are graphed below:



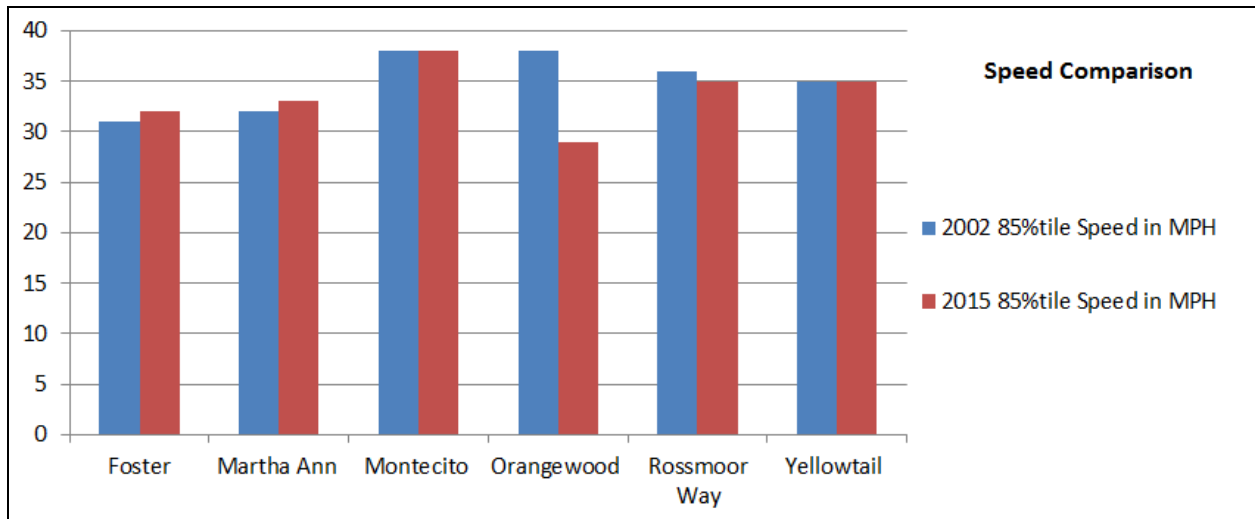
Current traffic volumes were also compared to available historical data from 2002. Overall the traffic volumes in Rossmoor have remained relatively constant over the 13-year period with the exception of Wallingsford Road which experienced a 39% decrease in vehicular volume. Taking in consideration the overall consistency of traffic volumes and the increase in school enrollment experienced since 2002, it can be inferred that more people are driving less to school and are walking, carpooling, or being bussed to school instead.



The comparison of traffic volumes between 2002 and 2015 is graphed below:



Current prevailing speeds were compared to available historical data from 2002. Based on the data, the prevailing speeds have remained relatively constant over the years with the exception of Orangewood Avenue which experienced a 9 mph decrease in speed. The prevailing speeds on the Rossmoor residential collector streets are comparable to other collector streets within the County. The following graph illustrates the speed comparison between 2002 and 2015:



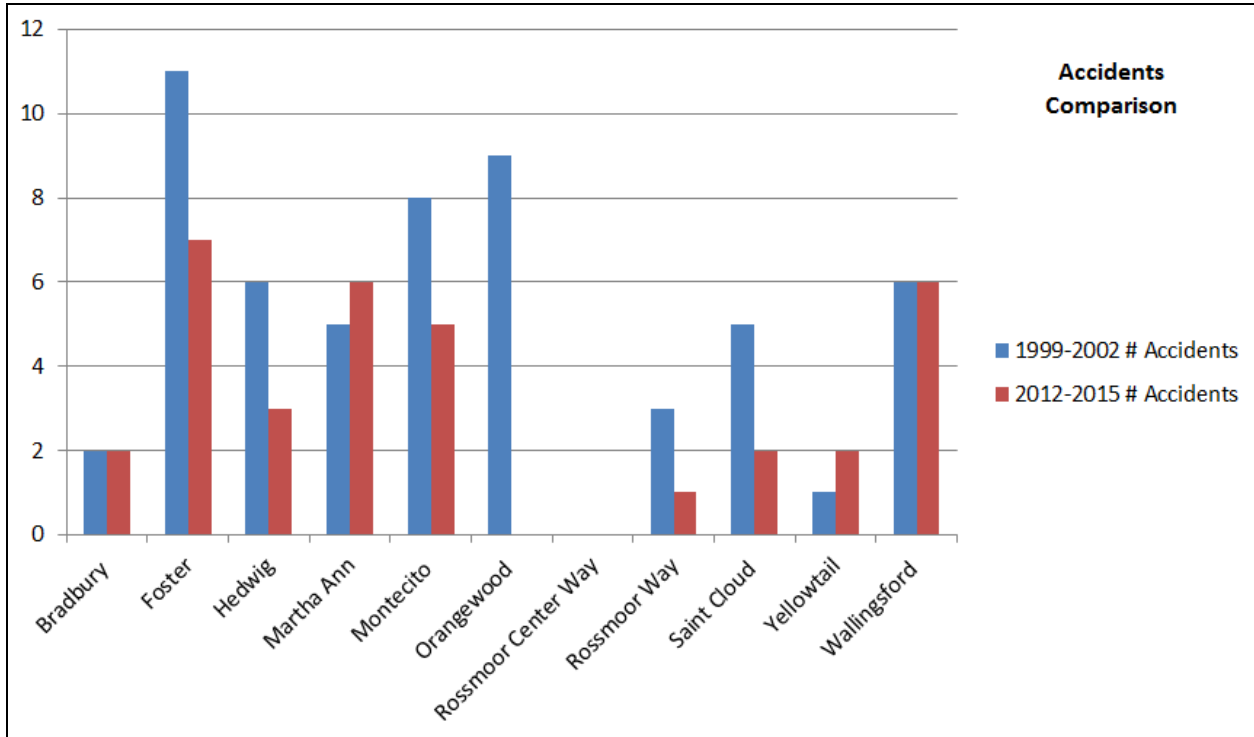
**ACCIDENT DATA**

We reviewed collision data for the last three year period on eleven primary collector streets within Rossmoor:

<b>Traffic Collision Records: 12/31/2012 to 12/31/2015</b>		
<b>Street Name</b>	<b>No. of Accidents</b>	<b>No. of Ped/Bike Accidents</b>
Bradbury Road	2	0
Foster Road	7	1
Hedwig Road	3	0
Martha Ann Drive	6	0
Montecito Road	5	1
Orangewood Avenue	0	0
Rossmoor Center Way	0	0
Rossmoor Way	1	0
Saint Cloud Drive	2	0
Yellowtail Drive	2	0
Wallingsford Road	6	1
<b>Total</b>	<b>34</b>	<b>3</b>

For a historical perspective, the above three year collision data was compared with the 2002 three year collision data (12/31/1999 to 12/31/2002).

The following graphs illustrate the resulting comparisons for the two periods:

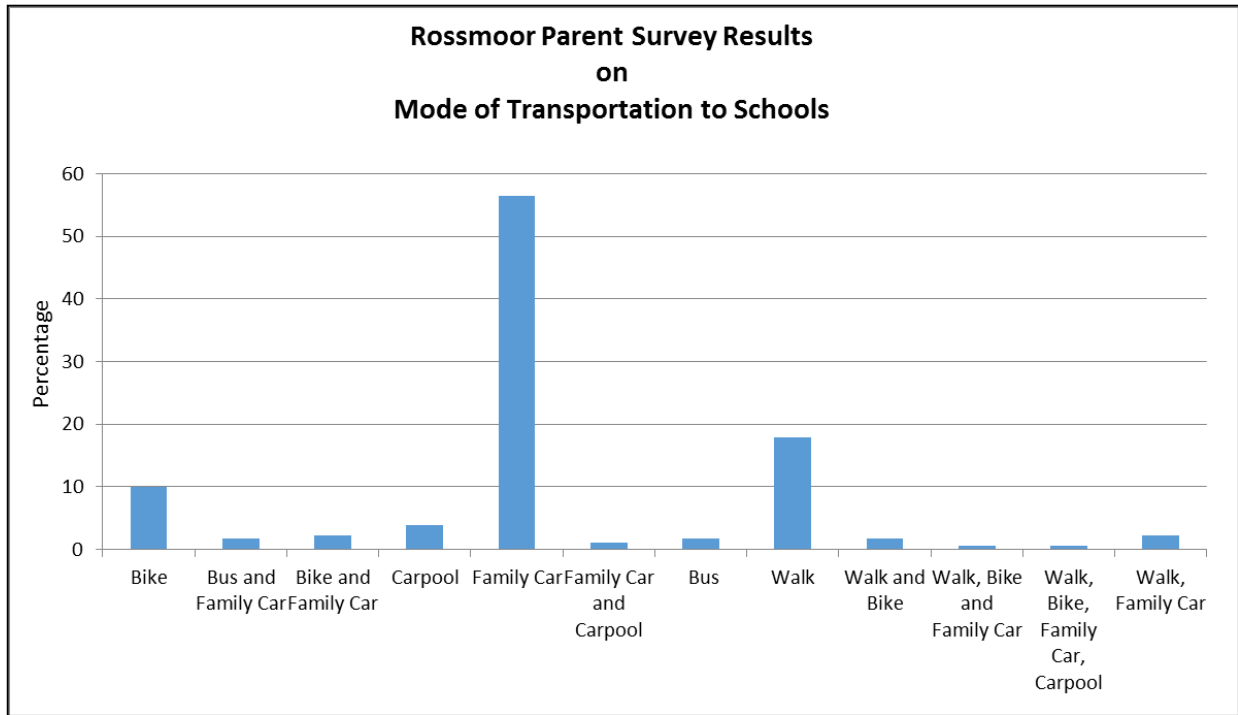


The total number of accidents has declined from 56 to 34 based on the collision data. The total number of pedestrian/bicycle related accidents has also decreased from 6 to 3. Therefore, the relative accident rate has declined within the community. It can be inferred that traffic safety has improved within Rossmoor despite the increased school enrollment.

**ROSSMOOR PARENT ROUTE TO SCHOOL SURVEY**

In collaboration with Traffic Engineering, LAUSD conducted a school survey of parents from all four schools within Rossmoor to determine their typical mode of transportation to school. A total of 203 parents responded to the LAUSD survey with information; 24 responded that they do not live within walking distance to school therefore no mode of transportation was provided in the response. A summary of the 179 responses to the school survey data is tabulated in the Appendix, Table 2.

The following graph illustrates the percentage of transportation modes to school:



The survey results show that a majority of parents (56%, 101) drive their children to school in their personal vehicle, followed by 18% (32) who walk to school, and 10% (18) who bike to school. All other modes of transportation or combination of modes shown in the graph are considered negligible.

Additionally, LAUSD also conducted a survey that focused on Rossmoor children attending Oak Middle School, located outside of the Rossmoor community, north of Katella Avenue. All of the Rossmoor parents with children exclusively biking or walking to Oak Middle School were requested to take this survey.

Following are the results of the 9 parents that responded to this survey:

Rossmoor Residents attending Oak Middle School	
Student Id	Walking or Biking Route
1	Donnie Ann/ Wallingsford
2	Weatherby/ Wallingsford
3	Bostonian/ Montecito/ Harrisburg/ Wallingsford
4	Donnie Ann/ Wallingsford
5	Bradbury/ Seal Beach/ Katella
6	Montecito/ Bradbury/ Weatherby/ Hedwig/ Wallingsford/ Katella
7	Foster/ Hedwig/ Wallingsford
8	Donovan/ Shakespeare/ Foster/ Hedwig/ Wallingsford
9	Foster/ Donnis/ Quail Run/ Wallingsford

The survey indicated only 4 of the 9 children are walking or biking to school along Foster Road/ Hedwig Road to attend Oak Middle School.

**CONCLUSIONS**

In summary, on the basis of existing and historical volume, speed, and collision data, traffic in the Rossmoor community shows an overall decline in vehicular volumes, speed, and collisions. However, through analysis of prior studies, data collection, field observations and community input, OC Public Works/ Traffic Engineering staff has developed the following alternatives for traffic operational improvements and enhancements to potentially mitigate existing community concerns related to traffic congestion created by peak school student drop-off and pick-up periods, parking availability, and bicycle safety.

**Foster Road/ Hedwig Road:**

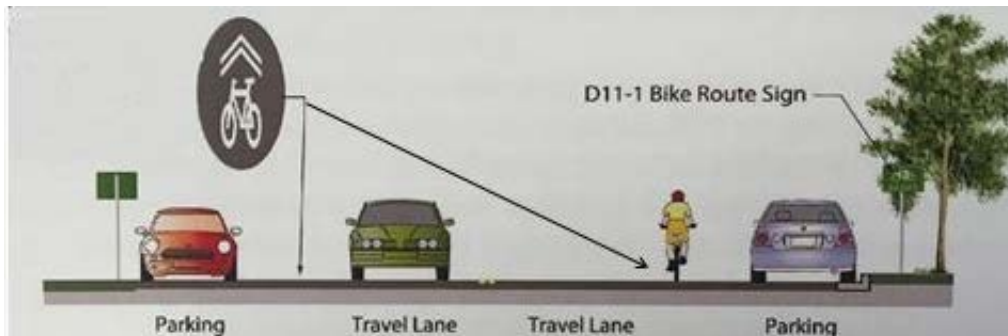
Foster/ Hedwig Road is the only roadway in the Rossmoor community that currently has time based parking restrictions on the roadway. These restrictions work in coordination with the striped parking lanes to facilitate bicycle traffic. On school days, parking is prohibited between the hours of 7:30 am to 9:30 am on the easterly side of Foster Road/Hedwig Road and between 2:30 pm to 4:30 pm on school days on the westerly side of Foster Road/Hedwig Road. The parking restrictions were originally implemented to provide Rossmoor children attending Oak Middle School, located outside of the Rossmoor community, unimpeded bicycle lanes when traveling to and from school; however, our field reviews along Foster and Hedwig Road performed over a period of several days during the morning and afternoon school peak hours confirmed that the parking lanes are under-utilized as bicycle lanes. Only two children were observed biking along these lanes. Other children were also observed biking but utilizing the

sidewalks instead of the bicycle lanes and were fewer in numbers. This observation is consistent with the Los Alamitos Unified School District’s survey results that indicated only four children bike and walk to Oak Middle School along Foster and Hedwig Roads.

Observed speeds on Foster/ Hedwig Road are higher than the prima facie speed limit of 25 mph. However, the lack of speed related accidents and excellent safety record within the community demonstrates that motorists are interpreting the road conditions and safely travel at speeds higher than the posted speed limit.

Alternatives:

1. **DO NOTHING:** Maintain the current time period parking restrictions between the hours of 7:30 am to 9:30 am on the easterly side of Foster Road/Hedwig Road and between 2:30 pm to 4:30 pm on school days on the westerly side of Foster Road/Hedwig Road. This alternative does not address the concerns expressed by the Rossmoor Home Owners Association (RHA).
2. **SHARE THE ROAD & PARKING:** This alternative would remove existing time based parking restrictions on either side of Foster / Hedwig Road and install “Shared Lane Markings” to assist bicyclists during all times with lateral positioning in lanes. This alternative was originally requested by the RHA with the addition of bicycle markings on the traveled way to raise bicycle traffic awareness. This alternative does not address bicycle safety concerns raised by the Parent-Teacher Association (PTA).

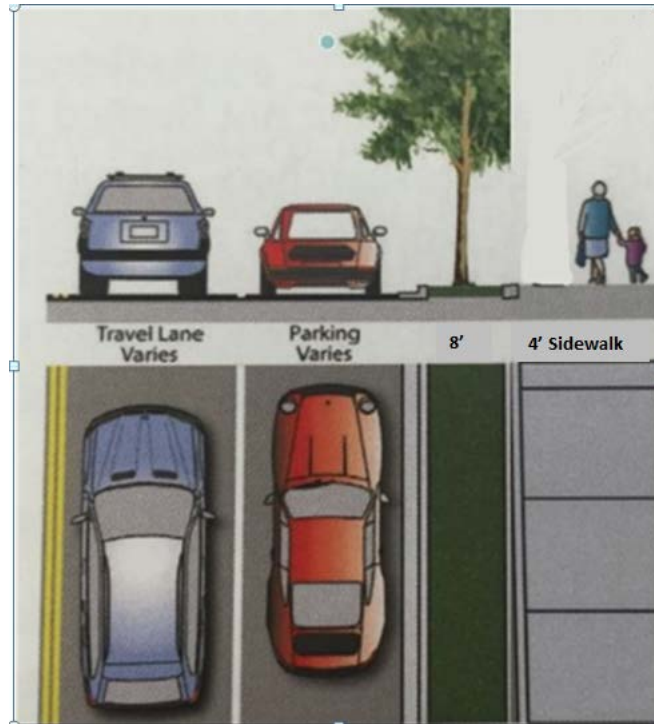


Alternative 2

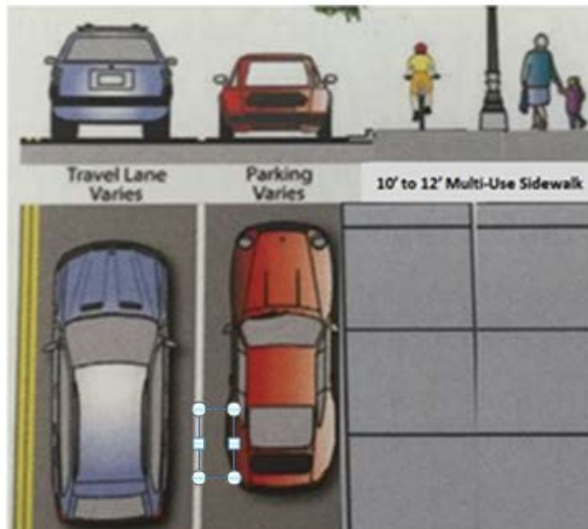
3. **MULTI-USE SIDEWALK:** This alternative would widen the existing sidewalk on both the sides of Foster/ Hedwig Road to a multi-use 10’ to 12’ wide sidewalk that could accommodate both pedestrians and bicyclists. This alternative contains removal of the 8’ existing parkway on both sides of Foster/ Hedwig Road. All existing trees, shrubs and greenery would have to

be eliminated to build a multi-use sidewalk that could accommodate both pedestrian and bike traffic.

The figures below illustrate the existing condition and the proposed scenario:



**Existing Condition**



**Proposed Condition**  
(Remove Existing Parkway)

Martha Ann Drive:

24 hour speed data indicates prevailing speeds are higher than the posted speed limit on Martha Anna. However, there has been only one speed-related accident over the past 3 years on Martha Ann. Furthermore, based on the location of Martha Ann with respect to the Rossmoor Community layout, it is evident that the majority of traffic the roadway carries are residents living on Ruth Elaine, Martha Anna, Druid Lane and other Rossmoor streets; Therefore, people driving on this street are in fact mostly Rossmoor residents.

Alternatives:

**INSTALLATION OF PAINTED PARKING LANES:** This alternative would install parking lanes on both sides of Ruth Elaine, Martha Anna, and Druid Lane. The striped parked lanes are recommended as a traffic calming measure to help reduce driver speeds by creating side friction due to parked cars. This striping helps in giving a visual impression of a reduced width travel lane which has been shown to slow vehicles down while travelling along a roadway. This method has proven successful in other areas of the county.

**ESTABLISH BICYCLE LANES ON MARTHA ANN DRIVE:** Unlike Foster/ Hedwig Road, Martha Ann does not serve as primary access within Rossmoor. Martha Ann marks the outside perimeter of the Rossmoor community on its west side and collects the majority of its traffic from residents living on Martha Ann or adjacent blocks and nearby streets. Based on the location of the schools with respect to Martha Ann, it is not a convenient route for children to bicycle to and from their respective schools. Relocation of bicycle lanes from Foster/ Hedwig Roadways to Martha Ann Drive is not a convenient alternative for bicycle users.



**APPENDIX**

<b>Table 1. Traffic Data (Volumes/Speeds)</b>				
<b>Street Name</b>	<b>Location Limits</b>	<b>Date</b>	<b>ADT Volume</b>	<b>85% MPH</b>
Bradbury Road	Montecito Rd. to Los Alamitos Blvd.	2002	5,874	
Bradbury Road	Montecito Rd. to Los Alamitos Blvd.	06/02/15	5,438	37
Bradbury Road	Montecito Rd. to Los Alamitos Blvd.	06/03/15	5,654	37
Bradbury Road	Montecito Rd. to Los Alamitos Blvd.	07/29/15	4,509	36
Bradbury Road	Montecito Rd. to Los Alamitos Blvd.	07/30/15	5,208	36
Bradbury Road	Montecito Rd. to Los Alamitos Blvd.	10/13/15	5,581	34
Bradbury Road	Montecito Rd. to Los Alamitos Blvd.	10/14/15	5,982	34
Foster Road	Druid Ln. to Tigertail Dr.	2002	613	31
Foster Road	Druid Ln. to Tigertail Dr.	06/02/15	428	32
Foster Road	Druid Ln. to Tigertail Dr.	06/03/15	426	31
Foster Road	Druid Ln. to Tigertail Dr.	07/29/15	343	29
Foster Road	Druid Ln. to Tigertail Dr.	07/30/15	345	29
Foster Road	Druid Ln. to Tigertail Dr.	10/13/15	412	34
Foster Road	Druid Ln. to Tigertail Dr.	10/14/15	435	34
Foster Road	Engel Dr. to Blume Dr.	2002	2,170	31
Foster Road	Engel Dr. to Blume Dr.	06/02/15	1,759	30
Foster Road	Engel Dr. to Blume Dr.	06/03/15	1,798	30
Foster Road	Engel Dr. to Blume Dr.	07/29/15	1,166	29
Foster Road	Engel Dr. to Blume Dr.	07/30/15	1,262	29
Foster Road	Engel Dr. to Blume Dr.	10/13/15	1,784	34
Foster Road	Engel Dr. to Blume Dr.	10/14/15	1,842	34
Foster Road	Kempton Dr. to Oak Knoll Dr.	2002	2,170	31
Foster Road	Kempton Dr. to Oak Knoll Dr.	06/02/15	2,711	33
Foster Road	Kempton Dr. to Oak Knoll Dr.	06/03/15	2,774	32
Foster Road	Kempton Dr. to Oak Knoll Dr.	07/29/15	2,019	30
Foster Road	Kempton Dr. to Oak Knoll Dr.	07/30/15	2,106	31
Foster Road	Kempton Dr. to Oak Knoll Dr.	10/13/15	2,506	36
Foster Road	Kempton Dr. to Oak Knoll Dr.	10/14/15	2,701	35
Foster Road	Piedmont Ave. to Channing Wy.	2002	3,740	31
Foster Road	Piedmont Ave. to Channing Wy.	06/02/13	3,211	32
Foster Road	Piedmont Ave. to Channing Wy.	06/03/15	3,155	33
Foster Road	Piedmont Ave. to Channing Wy.	07/29/15	2,290	32

<b>Table 1. Traffic Data (Volumes/Speeds) Continued</b>				
<b>Street Name</b>	<b>Location Limits</b>	<b>Date</b>	<b>ADT Volume</b>	<b>85% MPH</b>
Foster Road	Piedmont Ave. to Channing Wy.	07/30/15	2,427	33
Foster Road	Piedmont Ave. to Channing Wy.	10/13/15	3,050	35
Foster Road	Piedmont Ave. to Channing Wy.	10/14/15	3,252	35
Foster Road	Silverwood Dr. to Shakespeare Dr.	2002	5,345	31
Foster Road	Silverwood Dr. to Shakespeare Dr.	06/02/15	4,489	30
Foster Road	Silverwood Dr. to Shakespeare Dr.	06/03/15	4,354	30
Foster Road	Silverwood Dr. to Shakespeare Dr.	07/29/15	3,083	30
Foster Road	Silverwood Dr. to Shakespeare Dr.	07/30/15	3,284	30
Foster Road	Silverwood Dr. to Shakespeare Dr.	10/13/15	4,404	33
Foster Road	Silverwood Dr. to Shakespeare Dr.	10/14/15	4,518	33
Foster Road	Chesney Dr. to Kerth Dr.	2002	6,075	32
Foster Road	Chesney Dr. to Kerth Dr.	06/02/15	4,414	32
Foster Road	Chesney Dr. to Kerth Dr.	06/03/15	4,471	32
Foster Road	Chesney Dr. to Kerth Dr.	07/29/15	3,770	31
Foster Road	Chesney Dr. to Kerth Dr.	07/30/15	3,938	31
Foster Road	Chesney Dr. to Kerth Dr.	10/13/15	5,306	34
Foster Road	Chesney Dr. to Kerth Dr.	10/14/15	5,424	34
Hedwig Road	Wallingsford Rd. to Los Alamitos Blvd.	2002	4,786	
Hedwig Road	Wallingsford Rd. to Los Alamitos Blvd.	06/02/15	4,348	
Hedwig Road	Wallingsford Rd. to Los Alamitos Blvd.	06/03/15	4,357	
Hedwig Road	Wallingsford Rd. to Los Alamitos Blvd.	07/29/15	3,154	
Hedwig Road	Wallingsford Rd. to Los Alamitos Blvd.	07/30/15	3,439	
Hedwig Road	Wallingsford Rd. to Los Alamitos Blvd.	10/13/15	3,559	
Hedwig Road	Wallingsford Rd. to Los Alamitos Blvd.	10/14/15	No Data	
Martha Ann Drive	Gertrude Dr. to Mainway Dr.	2002	743	31
Martha Ann Drive	Gertrude Dr. to Mainway Dr.	06/02/15	854	31
Martha Ann Drive	Gertrude Dr. to Mainway Dr.	06/03/15	880	31
Martha Ann Drive	Gertrude Dr. to Mainway Dr.	07/29/15	538	32
Martha Ann Drive	Gertrude Dr. to Mainway Dr.	07/30/15	504	32
Martha Ann Drive	Gertrude Dr. to Mainway Dr.	10/13/15	728	35
Martha Ann Drive	Gertrude Dr. to Mainway Dr.	10/14/15	734	35
Martha Ann Drive	Piedmont Ave. to Channing Wy.	2002	1,493	34
Martha Ann Drive	Piedmont Ave. to Channing Wy.	06/02/15	1,690	32
Martha Ann Drive	Piedmont Ave. to Channing Wy.	06/03/15	1,643	31
Martha Ann Drive	Piedmont Ave. to Channing Wy.	07/29/15	1,010	33

<b>Table 1. Traffic Data (Volumes/Speeds) Continued</b>				
<b>Street Name</b>	<b>Location Limits</b>	<b>Date</b>	<b>ADT Volume</b>	<b>85% MPH</b>
Martha Ann Drive	Piedmont Ave. to Channing Wy.	07/30/15	970	33
Martha Ann Drive	Piedmont Ave. to Channing Wy.	10/13/15	1,613	39
Martha Ann Drive	Piedmont Ave. to Channing Wy.	10/14/15	1,677	38
Martha Ann Drive	Chesney Dr. to Ruth Elaine Dr.	2002	2,064	33
Martha Ann Drive	Chesney Dr. to Ruth Elaine Dr.	06/02/15	2,099	30
Martha Ann Drive	Chesney Dr. to Ruth Elaine Dr.	06/03/15	2,067	30
Martha Ann Drive	Chesney Dr. to Ruth Elaine Dr.	07/29/15	1,469	30
Martha Ann Drive	Chesney Dr. to Ruth Elaine Dr.	07/30/15	1,391	29
Martha Ann Drive	Chesney Dr. to Ruth Elaine Dr.	10/13/15	2,063	33
Martha Ann Drive	Chesney Dr. to Ruth Elaine Dr.	10/14/15	2,113	34
Montecito Road	Copa de Oro to Rossmoor Center Wy.	2002	6,099	38
Montecito Road	Rossmoor Center Wy. To Bradbury Rd.	12/17/13		35
Montecito Road	Rossmoor Center Wy. To Bradbury Rd.	03/05/15	5,847	
Montecito Road	Rossmoor Center Wy. To Bradbury Rd.	10/13/15	5,817	37
Montecito Road	Rossmoor Center Wy. To Bradbury Rd.	10/14/15	5,671	37
Montecito Road	Bostonian Dr. to Shakespeare Dr.	2002	3,765	38
Montecito Road	Bostonian Dr. to Shakespeare Dr.	03/05/15	3,610	
Montecito Road	Bostonian Dr. to Shakespeare Dr.	10/13/15	3,424	38
Montecito Road	Bostonian Dr. to Shakespeare Dr.	10/14/15	3,376	37
Orangewood Avenue	Shakespeare Dr. to Weatherby Rd.	2002	2,693	38
Orangewood Avenue	Shakespeare Dr. to Los Alamitos Blvd.	03/05/15	3,289	
Orangewood Avenue	Shakespeare Dr. to Weatherby Rd.	10/13/15	3,148	29
Orangewood Avenue	Shakespeare Dr. to Weatherby Rd.	10/14/15	2,868	28
Orangewood Avenue	Weatherby Rd. to Los Alamitos Blvd.	2002	3,692	
Orangewood Avenue	Weatherby Rd. to Los Alamitos Blvd.	07/29/15	1,974	
Orangewood Avenue	Weatherby Rd. to Los Alamitos Blvd.	07/30/15	2,008	
Orangewood Avenue	Weatherby Rd. to Los Alamitos Blvd.	10/13/15	3,361	
Orangewood Avenue	Weatherby Rd. to Los Alamitos Blvd.	10/14/15	3,291	
Rossmoor Center Way	Montecito Rd. to Seal Beach Blvd.	2002		
Rossmoor Center Way	Montecito Rd. to Seal Beach Blvd.	06/02/15	2,945	
Rossmoor Center Way	Montecito Rd. to Seal Beach Blvd.	06/03/15	2,876	
Rossmoor Center Way	Montecito Rd. to Seal Beach Blvd.	07/29/15	2,521	
Rossmoor Center Way	Montecito Rd. to Seal Beach Blvd.	07/30/15	2,473	

<b>Table 1. Traffic Data (Volumes/Speeds) Continued</b>				
<b>Street Name</b>	<b>Location Limits</b>	<b>Date</b>	<b>ADT Volume</b>	<b>85% MPH</b>
Rossmoor Center Way	Montecito Rd. to Seal Beach Blvd.	10/14/15	2,899	
Rossmoor Way	Shakespeare Dr. to Los Alamitos Blvd.	2002	2,070	36
Rossmoor Way	Shakespeare Dr. to Los Alamitos Blvd.	06/02/15	2,144	
Rossmoor Way	Shakespeare Dr. to Los Alamitos Blvd.	06/03/15	2,111	
Rossmoor Way	Shakespeare Dr. to Los Alamitos Blvd.	07/29/15	1,275	
Rossmoor Way	Shakespeare Dr. to Los Alamitos Blvd.	07/30/15	1,378	
Rossmoor Way	Shakespeare Dr. to Los Alamitos Blvd.	10/13/15	2,179	35
Rossmoor Way	Shakespeare Dr. to Los Alamitos Blvd.	10/14/15	2,013	35
Saint Cloud Drive	Montecito Rd. to Seal Beach Blvd.	2002	No Data	
Saint Cloud Drive	Montecito Rd. to Seal Beach Blvd.	12/17/13		36
Saint Cloud Drive	Montecito Rd. to Seal Beach Blvd.	02/24/15	9,033	
Saint Cloud Drive	Montecito Rd. to Seal Beach Blvd.	07/29/15	8,360	
Saint Cloud Drive	Montecito Rd. to Seal Beach Blvd.	07/30/15	8,190	
Saint Cloud Drive	Montecito Rd. to Seal Beach Blvd.	10/13/15	10,734	
Saint Cloud Drive	Montecito Rd. to Seal Beach Blvd.	10/14/15	10,917	
Wallingsford Road	Hedwig Rd. to Katella Ave.	2002	15,204	
Wallingsford Road	Hedwig Rd. to Katella Ave.	07/29/15	10,383	
Wallingsford Road	Hedwig Rd. to Katella Ave.	07/30/15	10,464	
Wallingsford Road	Hedwig Rd. to Katella Ave.	10/13/15	9,068	
Wallingsford Road	Hedwig Rd. to Katella Ave.	10/14/15	9,422	
Yellowtail Drive	Silverfox Rd. to St. Cloud Dr.	2002	961	35
Yellowtail Drive	Silverfox Rd. to St. Cloud Dr.	06/02/15	815	33
Yellowtail Drive	Silverfox Rd. to St. Cloud Dr.	06/03/15	802	32
Yellowtail Drive	Silverfox Rd. to St. Cloud Dr.	07/29/15	759	32
Yellowtail Drive	Silverfox Rd. to St. Cloud Dr.	07/30/15	687	32
Yellowtail Drive	Silverfox Rd. to St. Cloud Dr.	10/13/15	819	37
Yellowtail Drive	Silverfox Rd. to St. Cloud Dr.	10/14/15	794	36

<b>Table 2. School Survey Data</b>		
<b>Distance from home to school</b>	<b>Mode of Transportation</b>	<b>Attending School</b>
Between 1 to 2 miles	Rides the bus, Family Car	Hopkinson Elementary
Between 1 to 2 miles	Bike	Weaver Elementary
Between 1 to 2 miles	Bike	Lee Elementary
Between 1 to 2 miles	Bike	Lee Elementary
Between 1 to 2 miles	Bike	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Bike	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Bike	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Bike	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Bike	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Bike	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Bike	Weaver Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Bike	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Bike	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Bike	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Bike	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Bike	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Bike	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Bike	Rossmoor Elementary
Less than a 1/4 mile (3 blocks)	Bike	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Bike	Rossmoor Elementary
Between 1 to 2 miles	Bike, Family Car	Weaver Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Bike, Family Car	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Bike, Family Car	Lee Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Bike, Family Car	Lee Elementary
Between 1 to 2 miles	Carpool	Hopkinson Elementary
Between 1 to 2 miles	Carpool	Hopkinson Elementary
Between 1 to 2 miles	Carpool	Weaver Elementary
Between 1 to 2 miles	Carpool	Weaver Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Carpool	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Carpool	Hopkinson Elementary
Between 1 to 2 miles	Family Car	Lee Elementary
Between 1 to 2 miles	Family Car	Lee Elementary

<b>Table 2. School Survey Data Continued</b>		
<b>Distance from home to school</b>	<b>Mode of Transportation</b>	<b>Attending School</b>
Between a 1/2 mile to a mile (6-12 blocks)	Carpool	Hopkinson Elementary
Between 1 to 2 miles	Family Car	Lee Elementary
Between 1 to 2 miles	Family Car	Lee Elementary
Between 1 to 2 miles	Family Car	Rossmoor Elementary
Between 1 to 2 miles	Family Car	Lee Elementary
Between 1 to 2 miles	Family Car	Lee Elementary
Between 1 to 2 miles	Family Car	Hopkinson Elementary
Between 1 to 2 miles	Family Car	Rossmoor Elementary
Between 1 to 2 miles	Family Car	Hopkinson Elementary
Between 1 to 2 miles	Family Car	Rossmoor Elementary
Between 1 to 2 miles	Family Car	Weaver Elementary
Between 1 to 2 miles	Family Car	Weaver Elementary
Between 1 to 2 miles	Family Car	Weaver Elementary
Between 1 to 2 miles	Family Car	Rossmoor Elementary
Between 1 to 2 miles	Family Car	Rossmoor Elementary
Between 1 to 2 miles	Family Car	Lee Elementary
Between 1 to 2 miles	Family Car	Lee Elementary
Between 1 to 2 miles	Family Car	Lee Elementary
Between 1 to 2 miles	Family Car	Rossmoor Elementary
Between 1 to 2 miles	Family Car	Hopkinson Elementary
Between 1 to 2 miles	Family Car	Rossmoor Elementary
Between 1 to 2 miles	Family Car	Weaver Elementary
Between 1 to 2 miles, We do not live within walking distance to school (Submit form after completing this question)	Family Car	Weaver Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Weaver Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Hopkinson Elementary

<b>Table 2. School Survey Data Continued</b>		
<b>Distance from home to school</b>	<b>Mode of Transportation</b>	<b>Attending School</b>
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Weaver Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Hopkinson Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Lee Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Weaver Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Weaver Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Lee Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Lee Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Weaver Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Weaver Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Weaver Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Family Car	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks), Between a 1/2 mile to a mile (6-12 blocks)	Family Car	Rossmoor Elementary
Less than a 1/4 mile (3 blocks)	Family Car	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Family Car	Hopkinson Elementary

<b>Table 2. School Survey Data Continued</b>		
<b>Distance from home to school</b>	<b>Mode of Transportation</b>	<b>Attending School</b>
More than 2 miles	Family Car	Weaver Elementary
More than 2 miles	Family Car	Rossmoor Elementary
More than 2 miles	Family Car	Rossmoor Elementary
More than 2 miles	Family Car	Lee Elementary
More than 2 miles	Family Car	Weaver Elementary
More than 2 miles	Family Car	Hopkinson Elementary
More than 2 miles	Family Car	Hopkinson Elementary
More than 2 miles	Family Car	Rossmoor Elementary
More than 2 miles	Family Car	Lee Elementary
More than 2 miles	Family Car	Rossmoor Elementary
More than 2 miles	Family Car	Weaver Elementary
More than 2 miles	Family Car	Lee Elementary
More than 2 miles	Family Car	Lee Elementary
More than 2 miles	Family Car	Lee Elementary
More than 2 miles	Family Car	Hopkinson Elementary
More than 2 miles	Family Car	Lee Elementary
We do not live within walking distance to school	Family Car	Hopkinson Elementary
We do not live within walking distance to school	Family Car	Lee Elementary
We do not live within walking distance to school	Family Car	Hopkinson Elementary
We do not live within walking distance to school	Family Car	Lee Elementary
We do not live within walking distance to school	Family Car	Hopkinson Elementary
We do not live within walking distance to school	Family Car	Weaver Elementary
We do not live within walking distance to school	Family Car	Rossmoor Elementary
We do not live within walking distance to school	Family Car	Hopkinson Elementary
We do not live within walking distance to school	Family Car	Hopkinson Elementary
We do not live within walking distance to school	Family Car	Weaver Elementary
We do not live within walking distance to school	Family Car	Weaver Elementary
We do not live within walking distance to school	Family Car	Weaver Elementary
We do not live within walking distance to school	Family Car	Rossmoor Elementary
We do not live within walking distance to school	Family Car	Lee Elementary
We do not live within walking distance to school	Family Car	Hopkinson Elementary
We do not live within walking distance to school	Family Car	Lee Elementary



<b>Table 2. School Survey Data Continued</b>		
<b>Distance from home to school</b>	<b>Mode of Transportation</b>	<b>Attending School</b>
We do not live within walking distance to school (Submit form after completing this question)	Family Car	Lee Elementary
We do not live within walking distance to school	Family Car	Lee Elementary
We do not live within walking distance to school	Family Car	Rossmoor Elementary
We do not live within walking distance to school (Submit form after completing this question)	Family Car	Weaver Elementary
We do not live within walking distance to school	Family Car	Rossmoor Elementary
We do not live within walking distance to school	Family Car	Weaver Elementary
More than 2 miles	Family Car, Carpool	Weaver Elementary
We do not live within walking distance to school	Family Car, Carpool	Hopkinson Elementary
Between 1 to 2 miles	Rides the bus	Hopkinson Elementary
Between 1 to 2 miles	Rides the bus	Hopkinson Elementary
Between 1 to 2 miles	Rides the bus	Hopkinson Elementary
More than 2 miles	Rides the bus, Family Car	Hopkinson Elementary
We do not live within walking distance to school	Rides the bus, Family Car	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Walk	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Walk	Weaver Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Walk	Weaver Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Walk	Weaver Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Rossmoor Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Rossmoor Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Rossmoor Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Lee Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Lee Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Lee Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Hopkinson Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Rossmoor Elementary

<b>Table 2. School Survey Data Continued</b>		
<b>Distance from home to school</b>	<b>Mode of Transportation</b>	<b>Attending School</b>
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Lee Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk	Lee Elementary
Less than a 1/4 mile (3 blocks)	Walk	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Walk	Lee Elementary
Less than a 1/4 mile (3 blocks)	Walk	Rossmoor Elementary
Less than a 1/4 mile (3 blocks)	Walk	Lee Elementary
Less than a 1/4 mile (3 blocks)	Walk	Rossmoor Elementary
Less than a 1/4 mile (3 blocks)	Walk	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Walk	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Walk	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Walk	Lee Elementary
Less than a 1/4 mile (3 blocks)	Walk	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Walk	Rossmoor Elementary
Less than a 1/4 mile (3 blocks)	Walk	Weaver Elementary
Less than a 1/4 mile (3 blocks)	Walk	Rossmoor Elementary
Less than a 1/4 mile (3 blocks)	Walk	Lee Elementary
Less than a 1/4 mile (3 blocks)	Walk	Lee Elementary
Less than a 1/4 mile (3 blocks)	Walk	Weaver Elementary
Less than a 1/4 mile (3 blocks)	Walk	Rossmoor Elementary
Between a 1/4 mile to a 1/2 mile (3-6 blocks)	Walk, Bike	Weaver Elementary
Less than a 1/4 mile (3 blocks)	Walk, Bike	Rossmoor Elementary
Less than a 1/4 mile (3 blocks)	Walk, Bike	Rossmoor Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Walk, Bike, Family Car	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Walk, Bike, Family Car, Carpool	Lee Elementary
Between a 1/2 mile to a mile (6-12 blocks)	Walk, Family Car	Lee Elementary
Less than a 1/4 mile (3 blocks)	Walk, Family Car	Hopkinson Elementary
Less than a 1/4 mile (3 blocks)	Walk, Family Car	Lee Elementary
Less than a 1/4 mile (3 blocks)	Walk, Family Car	Lee Elementary

APPENDIX G  
ORANGE COUNTY TRAFFIC ENGINEERING  
COLLISION REPORT SUMMARY



**Orange County**  
**Traffic Engineering Department**

**Collision Report Summary**

4/19/2017

**Date Range Reported:** 3/1/12 - 3/1/17

**Total Number of Collisions:** 11

**Total Number of Persons Injured:** 2

**Total Number of Persons Killed:** 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
12-312	3/28/12	19:33	Montecito Rd & Walker Lee Dr	20'	South	Sideswipe	Parked Motor Vehicle	North	Other Unsafe Turning	North	Parked	Improper Turning	0	0
12-199	6/24/12		Montecito Rd & Brimhall Dr	40'	North	Sideswipe	Parked Motor Vehicle	North	Making Right Turn	North	Parked	Improper Turning	0	0
12-233	7/25/12	21:05	Montecito Rd & Walker Lee Dr	50'	South	Rear-End	Parked Motor Vehicle	South	Other Unsafe Turning	South	Parked	Improper Turning	0	0
158	2/9/13	12:51	Montecito Rd & Woodstock Rd	0'	In Int.	Head-On	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	0	0
180	4/18/13	12:05	Montecito Rd & Loring Dr	300'	North	Sideswipe	Parked Motor Vehicle	North	Making Right Turn	North	Parked	Improper Turning	0	0
110	8/10/14	2:00	Montecito Rd & Loring Dr	171'	South	Rear-End	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Driving Under Influence	0	0
113	9/11/14	14:45	Montecito Rd & Woodstock Rd	100'	North	Other	Bicycle	North	Stopped In Road	North	Proceeding Straight	Other Hazardous Movement	1	0
065	8/5/15	17:45	Montecito Rd & Bostonian Dr	200'	North	Sideswipe	Parked Motor Vehicle	North	Other Unsafe Turning	North	Parked	Improper Turning	0	0
172	3/16/16	7:45	Bradbury Rd & Montecito Rd	0'	In Int.	Other	Bicycle	East	Making Left Turn	West	Proceeding Straight	Auto R/W Violation	1	0
6885	4/28/16	1:25	Montecito Rd & Oak Grove Rd	30'	South	Sideswipe	Other Motor Vehicle	North	Other Unsafe Turning	South	Parked	Improper Turning	0	0
8153	6/15/16	11:40	Montecito Rd & Rossmoor Center Way	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	0	0

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## Settings Used For Query

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<u>Parameter</u>	<u>Setting</u>
Street Name	MONTECITO RD
Starting Date	3/1/2012
Ending Date	3/1/2017
Distance from Intersection	>= 0' for non rear-end collisions >= 0' for rear-end collisions

When only a Primary Road is specified (MONTECITO RD), the query results include all collisions with the specified Primary Road of MONTECITO RD and all collisions with a Secondary Road of MONTECITO RD with a distance of 0 feet.

APPENDIX H  
MEMO ON ADDITIONAL LONG-TERM  
NOISE MONITORING





May 8, 2017

MIG  
537 South Raymond Avenue  
Pasadena, California 91105

Attention: Laura Stetson, AICP  
  
Subject: LA Fitness Center Noise Study for EIR  
Seal Beach, California  
Memo on Additional Long-Term Noise Monitoring  
VA Project No. 6691-001

Dear Laura:

Veneklasen Associates (VA) performed additional long-term monitoring at the subject project site from April 14 to 21, 2017. The long-term monitoring equipment was located in the same location as the previous monitoring survey performed for the VA acoustical report dated January 26, 2017.

Based on VA's more recent measurements, the calculated Community Noise Equivalent Level (CNEL) values ranged from CNEL 54 to 59. These results are similar to the original findings discussed in the referenced acoustical report. As such, the proposed subject project will not result in any new uses or traffic generation that would increase noise levels in the vicinity or expose the residential neighbors to levels above those that are deemed normally acceptable in the noise ordinance, or less than 61 CNEL.

VA's sound measurements are included in Appendix I of this memo.

This concludes our comments at this time. Please do not hesitate to contact us with any questions.

Sincerely,

Veneklasen Associates, Inc.



Richard H. Silva  
Senior Associate

# Appendix I

## Long-Term Measurement Results

Start time	LAeq [dB]
4/14/2017 7:36	61.1
4/14/2017 8:36	58.5
4/14/2017 9:36	56.3
4/14/2017 10:36	55.2
4/14/2017 11:36	53.7
4/14/2017 12:36	53.6
4/14/2017 13:36	53.2
4/14/2017 14:36	51.2
4/14/2017 15:36	52.4
4/14/2017 16:36	53.8
4/14/2017 17:36	51.8
4/14/2017 18:36	49.2
4/14/2017 19:36	53.7
4/14/2017 20:36	48.8
4/14/2017 21:36	49.4
4/14/2017 22:36	47.3
4/15/2017 0:01	46.9
4/15/2017 1:01	47.9
4/15/2017 2:01	46.4
4/15/2017 3:01	46.5
4/15/2017 4:01	49.7
4/15/2017 5:01	50.8
4/15/2017 6:01	52.5
4/15/2017 7:01	52.4
4/15/2017 8:01	50.4
4/15/2017 9:01	50.4
4/15/2017 10:01	53.1
4/15/2017 11:01	50.7
4/15/2017 12:01	49.9
4/15/2017 13:01	52.3
4/15/2017 14:01	50.3
4/15/2017 15:01	50.7
4/15/2017 16:01	50.0
4/15/2017 17:01	52.9
4/15/2017 18:01	48.9
4/15/2017 19:01	48.9
4/15/2017 20:01	49.4
4/15/2017 21:01	50.1
4/15/2017 22:01	49.4
4/15/2017 23:01	47.6
4/16/2017 0:01	46.1
4/16/2017 1:01	44.7
4/16/2017 2:01	43.9
4/16/2017 3:01	42.7
4/16/2017 4:01	43.1
4/16/2017 5:01	46.2
4/16/2017 6:01	49.1
4/16/2017 7:01	48.7
4/16/2017 8:01	50.8
4/16/2017 9:01	48.5
4/16/2017 10:01	52.6

4/16/2017 11:01	48.3
4/16/2017 12:01	50.7
4/16/2017 13:01	49.3
4/16/2017 14:01	49.9
4/16/2017 15:01	50.3
4/16/2017 16:01	50.0
4/16/2017 17:01	48.9
4/16/2017 18:01	54.2
4/16/2017 19:01	49.5
4/16/2017 20:01	48.1
4/16/2017 21:01	49.7
4/16/2017 22:01	46.5
4/16/2017 23:01	46.8
4/17/2017 0:01	46.4
4/17/2017 1:01	48.0
4/17/2017 2:01	44.5
4/17/2017 3:01	46.4
4/17/2017 4:01	49.8
4/17/2017 5:01	51.1
4/17/2017 6:01	52.6
4/17/2017 7:01	51.0
4/17/2017 8:01	55.7
4/17/2017 9:01	53.9
4/17/2017 10:01	51.6
4/17/2017 11:01	58.1
4/17/2017 12:01	58.1
4/17/2017 13:01	61.8
4/17/2017 14:01	51.9
4/17/2017 15:01	51.8
4/17/2017 16:01	52.3
4/17/2017 17:01	51.2
4/17/2017 18:01	50.1
4/17/2017 19:01	49.8
4/17/2017 20:01	50.9
4/17/2017 21:01	53.9
4/17/2017 22:01	48.6
4/17/2017 23:01	47.1
4/18/2017 0:01	44.3
4/18/2017 1:01	45.0
4/18/2017 2:01	43.9
4/18/2017 3:01	41.8
4/18/2017 4:01	45.1
4/18/2017 5:01	48.3
4/18/2017 6:01	49.6
4/18/2017 7:01	52.1
4/18/2017 8:01	55.2
4/18/2017 9:01	52.8
4/18/2017 10:01	52.2
4/18/2017 11:01	51.4
4/18/2017 12:01	53.4
4/18/2017 13:01	51.2
4/18/2017 14:01	53.3

4/18/2017 15:01	51.3
4/18/2017 16:01	52.0
4/18/2017 17:01	50.1
4/18/2017 18:01	52.3
4/18/2017 19:01	50.8
4/18/2017 20:01	51.8
4/18/2017 21:01	49.6
4/18/2017 22:01	47.9
4/18/2017 23:01	46.1
4/19/2017 0:01	43.8
4/19/2017 1:01	42.7
4/19/2017 2:01	44.8
4/19/2017 3:01	43.9
4/19/2017 4:01	45.9
4/19/2017 5:01	48.5
4/19/2017 6:01	47.8
4/19/2017 7:01	51.1
4/19/2017 8:01	51.7
4/19/2017 9:01	51.5
4/19/2017 10:01	53.2
4/19/2017 11:01	51.1
4/19/2017 12:01	51.9
4/19/2017 13:01	53.6
4/19/2017 14:01	51.5
4/19/2017 15:01	51.2
4/19/2017 16:01	51.4
4/19/2017 17:01	52.1
4/19/2017 18:01	52.5
4/19/2017 19:01	51.7
4/19/2017 20:01	52.5
4/19/2017 21:01	53.5
4/19/2017 22:01	51.6
4/19/2017 23:01	48.7
4/20/2017 0:01	49.6
4/20/2017 1:01	49.4
4/20/2017 2:01	48.9
4/20/2017 3:01	48.5
4/20/2017 4:01	51.4
4/20/2017 5:01	54.3
4/20/2017 6:01	54.8
4/20/2017 7:01	54.6
4/20/2017 8:01	53.2
4/20/2017 9:01	52.7
4/20/2017 10:01	54.0
4/20/2017 11:01	53.5
4/20/2017 12:01	52.3
4/20/2017 13:01	53.8
4/20/2017 14:01	52.5
4/20/2017 15:01	50.8
4/20/2017 16:01	51.5
4/20/2017 17:01	49.8
4/20/2017 18:01	51.9

4/20/2017 19:01	53.3
4/20/2017 20:01	54.2
4/20/2017 21:01	54.5
4/20/2017 22:01	52.5
4/20/2017 23:01	51.6
4/21/2017 0:01	47.8
4/21/2017 1:01	48.9
4/21/2017 2:01	50.3
4/21/2017 3:01	48.5
4/21/2017 4:01	50.0
4/21/2017 5:01	50.2
4/21/2017 6:01	51.1
4/21/2017 7:01	55.4
4/21/2017 8:01	53.0
4/21/2017 9:01	53.3
4/21/2017 10:01	54.5
4/21/2017 11:01	53.0
4/21/2017 12:01	54.9





MIG, Inc. 537 S. Raymond Avenue, Pasadena, CA 91105

[www.migcom.com](http://www.migcom.com)

