



AGENDA

CITY OF SEASIDE
PLANNING COMMISSION AND
BOARD OF ARCHITECTURAL
REVIEW

JOINT SPECIAL MEETING
COUNCIL CHAMBER
440 Harcourt Avenue
Wednesday, March 25, 2015
6:00 PM

PLEASE TURN OFF YOUR CELL PHONES UPON ENTERING THE MEETING

PLANNING COMMISSIONERS

John Owens	Chair
Margaret Leighton	Commissioner
Keith Dodson	Commissioner
Michael Lechman	Commissioner
Paul Mugan	Commissioner
Denise Ross	Commissioner

BOARD OF ARCHITECTURAL REVIEW

Toby Keller	Chair
Kathleen Ventimiglia	Vice Chair
Ken Rudissill	Board Member
Wendell Montes	Board Member
Mitsugu Mori	Board Member

1. **CALL TO ORDER**

2. **ROLL CALL - ESTABLISHMENT OF QUORUM**

3. **PUBLIC COMMENT**

4. **NEW BUSINESS**

- A. **Coastal Development Permit Application No. CDP-14-01**, The City of Seaside Successor Agency, Property Owner, and In-N-Out Burger, Applicant, are requesting the approval of a Coastal Development Permit, design review approval, and sign permit approval for the construction of a proposed In-N-Out Burger Drive-Through Restaurant located within the appealable area of the City's Local Coastal Plan at 1350 Del Monte Boulevard in the Coastal Visitor Serving Commercial (CVSC) Zoning District. In accordance with Section 15164 of the State California Environmental Quality Act Guidelines, an Addendum to a Final

Environmental Impact Report that was certified on July 21, 2011 for a similar In-N-Out Drive-Through Restaurant project on the same project site has been prepared to address compliance with the CEQA Guidelines for the proposed project design.

PURPOSE:

In accordance with Title 18 (Coastal Implementation Plan) of the Seaside Municipal Code (SMC), the applicant is requesting the approval of a Coastal Development Permit for the construction of a new one story, 3,750 square foot In-N-Out Burger restaurant with associated site improvements (e.g. Drive Thru Window/Aisle, Landscaping, and Signs) on a 2.19 ac. site at 1350 Del Monte Boulevard.

RECOMMENDATION:

It is recommended that the Planning Commission receive a presentation and public comment on the Addendum to the Certified Final Environmental Impact Report for the Seaside In-N-Out Restaurant (FEIR), formally accepting the Addendum to the FEIR.

It is further recommended that the Planning Commission receive a presentation on the proposed Project and take action to adopt the Coastal Development Permit in accordance with the following Resolutions:

1. Adopt Draft Resolution provided as Attachment 1 approving the Addendum to the certified FEIR; and
2. Adopt Draft Resolution provided as Attachment 2 approving the Coastal Development Permit for the project.

B. Board of Architectural Review Application No. BAR 15-06. City of Seaside Successor Agency, property owner, and In-N-Out Burger Restaurant (Mark Nowak), applicant, are requesting Design Review and Sign Permit approval for the construction of a new 3,750 square-foot In-N-Out Burger Restaurant with a Drive-Through Aisle located at 1350 Del Monte Boulevard in the Coastal Visitor Serving Commercial (CVSC) Zoning District (APN: 011-401-023).

PURPOSE: In accordance with Section 17.62.030.B.1 of the Seaside Municipal Code (SMC), the applicant is requesting Design Review and Sign Permit approval for the construction of a new one story, 3,750 square foot In-N-Out Burger restaurant with associated site improvements (e.g. Drive Thru Window/Aisle, Landscaping, and Signs).

RECOMMENDATION: Staff recommends approval of the architectural plans subject to the conditions of approval provided as Attachment 1 and the project plans provided as Attachment 1 -Exhibit A.

6. **REPORTS FROM COMMISSIONERS**

7. **REPORTS FROM STAFF**

8. **ADJOURNMENT**

The City of Seaside is an ADA accessible facility and is committed to include the disabled in all of its services, programs and activities. Any person who requires accommodation to be able to participate in this meeting is asked to contact the office of the City Clerk at 899-6707, no fewer than two business days prior to the meeting to allow for reasonable arrangements.

The City Council Chambers is equipped with a portable microphone for anyone unable to come to the podium. Assisted listening devices are also available.

Meetings that are held in the City Council Chambers are broadcast live to all Seaside residents on Comcast Channel 25 and U-verse Channel 99. Meetings are also available through live streaming at: <http://cyp.telvue.com/player?id=T01629&video=52314&noplaylists=1&width=400&height=300> Videos of past meetings are available on demand through the City's website: <http://www.ci.seaside.ca.us>

Agenda-related writings or documents provided during public meetings are available for public inspection during the meeting or from the office of the City Clerk. This agenda is posted in compliance with California Government Code Section 54954.2(a) or Section 54956.



**CITY OF SEASIDE
STAFF REPORT**

Item No.: 4.A.

TO: Planning Commission

BY: Lisa Brinton, Community and Economic Development Services Manager
Diana Ingersoll, Deputy City Manager Resource Management Services
Rick Medina, Senior Planner

DATE: March 25, 2015

SUBJECT: **Coastal Development Permit Application No. CDP-14-01**, The City of Seaside Successor Agency, Property Owner, and In-N-Out Burger, Applicant, are requesting the approval of a Coastal Development Permit, design review approval, and sign permit approval for the construction of a proposed In-N-Out Burger Drive-Through Restaurant located within the appealable area of the City's Local Coastal Plan at 1350 Del Monte Boulevard in the Coastal Visitor Serving Commercial (CVSC) Zoning District. In accordance with Section 15164 of the State California Environmental Quality Act Guidelines, an Addendum to a Final Environmental Impact Report that was certified on July 21, 2011 for a similar In-N-Out Drive-Through Restaurant project on the same project site has been prepared to address compliance with the CEQA Guidelines for the proposed project design.

PURPOSE

In accordance with Title 18 (Coastal Implementation Plan) of the Seaside Municipal Code (SMC), the applicant is requesting the approval of a Coastal Development Permit for the construction of a new one story, 3,750 square foot In-N-Out Burger restaurant with associated site improvements (e.g. Drive Thru Window/Aisle, Landscaping, and Signs) on a 2.19 ac. site at 1350 Del Monte Boulevard.

RECOMMENDATION

It is recommended that the Planning Commission receive a presentation and public comment on the Addendum to the Certified Final Environmental Impact Report for the Seaside In-N-Out Restaurant (FEIR), formally accepting the Addendum to the FEIR.

It is further recommended that the Planning Commission receive a presentation on the proposed Project and take action to adopt the Coastal Development Permit in accordance with the following Resolutions:

1. Adopt Draft Resolution provided as Attachment 1 approving the Addendum to the certified FEIR; and
2. Adopt Draft Resolution provided as Attachment 2 approving the Coastal Development Permit for the project.

ENVIRONMENTAL REVIEW

In accordance with the Guidelines for Implementation of the California Environmental Quality Act (CEQA) (Article 11, Section 15164), an Addendum to the FEIR (See Exhibit A to Attachment 1) was prepared to describe minor technical modifications to the In-N-Out Burger Drive Through Restaurant Project for which an FEIR was previously certified on July 21, 2011 by the Seaside City Council. The Addendum includes the following Appendices:

- A. Previously Certified Final Environmental Impact Report Figures
- B. Revised Site Plan Figures
- C. Local Coastal Plan: Land Use Plan, Coastal Implementation Plan Consistency Analysis, and Sea Level Rise Report
- D. Letters from the Central Coast Regional Water Quality Control Board and Monterey County Department of Health
- E. Traffic Impact Analysis

The Certified FEIR can be accessed at the following web link:

<http://www.ci.seaside.ca.us/index.aspx?page=226>.

BACKGROUND

The project under consideration is the development of a drive-through In-N-Out Burger restaurant on land owned by the Successor Agency to the Redevelopment Agency of the City of Seaside. On July 21, 2011, the City of Seaside City Council certified a Final Environmental Impact Report (FEIR) for an In-N-Out Burger Drive-Through Restaurant in accordance with the practices of the CEQA. However, the proposed In-N-Out Burger Drive-Through Restaurant Project was not approved by the City Council due to the expiration and non-renewal of an Exclusive Negotiation Agreement (ENA) for the proposed project. Subsequent to certification of the FEIR, a new ENA was entered into in October 2013 and a Purchase and Sales Agreement was entered into by In-N-Out Burger and the Successor Agency of the former City of Seaside Redevelopment Agency on July 17, 2014. The previous project, as described and analyzed in the certified FEIR, has been modified by the Applicant and a new application has been submitted to the City for consideration. In response to the modified application, an Addendum to the FEIR was prepared to consider the impacts associated with the modifications to the In-N-Out Burger Drive Through Restaurant Project.

Prior to formally accepting the Addendum to the FEIR, a public meeting is being held to provide

the Planning Commission with an opportunity to receive information on the modified project design and to consider approval of the Coastal Development Permit for the project.

The Addendum to the FEIR has been prepared by the City of Seaside pursuant to the CEQA Guidelines Section 15164. The Addendum to the FEIR is intended to augment the certified FEIR and assess whether the new project design or the existing setting has changed such that the new project design would result in impacts not previously assessed by the certified FEIR. The addendum found that the revised project would remain consistent with the size and scope of the previous project design and no additional mitigation measures would be required. It was also determined that there have been no changes to the characteristics and setting of the project site and surrounding setting that would create new impacts not previously identified in the FEIR.

SITE LOCATION AND DESCRIPTION

The project site is located on the southeast side of Del Monte Boulevard facing Roberts Lake to the north-northwest, and bordered by Laguna Grande Regional Park and Lake to the southeast. The channel connecting Roberts Lake with Laguna Grande Lake runs along the east-northeast boundary of the project site. The west-southwest boundary of the project site lies on the Seaside-Monterey city limit line (refer to Figure 3 in the Addendum to the FEIR, Conceptual Site Plan). Location Map is provided as Attachment 3. Site Photographs are provided as Attachment 5.

The project site is approximately 2.28 acres (ac) including an approximately 2.19 ac (95,317 square feet) parcel (Assessor's Parcel Number 011-401-023) and an approximately 0.094 ac City right-of-way easement that will be used for additional landscaping, curb, driveway, and sidewalk features. The project site was formerly the site of an automobile wrecking yard and is currently vacant. The project site was owned by the City until July 2010 at which point it was transferred to the Redevelopment Agency of the City of Seaside (currently the Successor Agency to the Redevelopment Agency of the City of Seaside) for the purpose of developing it with a visitor-serving commercial use. The project would develop an approximately 3,750 sf Drive-Through Restaurant and associated facilities, including indoor and outdoor patio dining totaling 159 seats, and a drive-through window. The proposed restaurant would provide approximately 53 parking spaces including three Americans with Disabilities Act (ADA) accessible spaces, one RV parking space, three bicycle racks, and two motorcycle parking stalls (refer to Figure 3 in the Addendum to the FEIR, Conceptual Site Plan).

The northwest boundary of the project site is located along the border of the City of Seaside and the City of Monterey. Land uses within the vicinity of the project site include hotel, commercial, retail, and recreational facilities. Immediately adjacent to the east-northeast of the project site boundary is a 4-story, 143-room Holiday Inn Express. A 12-story, 225-room Embassy Suites Hotel is located east of the Holiday Inn Express at the southeast corner of Del Monte Boulevard and Canyon Del Rey Boulevard. A 2-story La Quinta Inn motel is located across from the project site on Del Monte Boulevard to the west northwest. Shopping and service facilities are in close proximity to the project site. Biking, hiking, and walking trails are located south of the project site around Laguna Grande Regional Park and Lake and along the Monterey Bay Coastal Bike

Trail located along Del Monte Boulevard. Nearby beaches located across State Route 1 (SR-1) to the west are within walking distance of the project site.

The project site is visible from Cabrillo Highway (SR-1) and is located within 0.5 mi of the on and off ramps at Canyon Del Rey Boulevard (State Route 218). Additional regional access to the project site is provided by the Monterey-Salinas Highway (State Route 68). These highways connect the project site to the cities of the Monterey Peninsula, Salinas, San Jose, and the San Francisco Bay area.

PROJECT DESCRIPTION

Portions of the project site – a 125 foot wide buffer along the edge of Laguna Grande Lake that borders the property and a 100 foot wide buffer along the western boundary of the channel connecting Roberts Lake and Laguna Grande Lake (PRC Section 30160 (c)) are within the California Coastal Zone Boundary (Coastal Zone Boundary Figure is provided as Attachment 4). The majority of the proposed project's restaurant building, outdoor dining, surface parking, landscaping, proposed extension of a pedestrian/bicycle trail, and the entire drive-through service area are proposed for the portion of the project site that is within the Coastal Zone. The City of Seaside's Local Coastal Program – Land Use Plan designates the project site as Coastal Visitor Serving Commercial (CVSC). The City Zoning Code that is applicable to areas within the Coastal Zone – Title 18 Coastal Implementation Plan designates the project site as Coastal Visitor Serving Commercial (CVSC).

Development within the Coastal Zone may not commence until a Coastal Development Permit (CDP) has been issued by either the California Coastal Commission (Coastal Commission) or by local government that has a certified Local Coastal Program (LCP). In June 2013, the City of Seaside's LCP was certified by the Coastal Commission; therefore, the proposed project is applying for a CDP from the City of Seaside Planning Commission.

At the time the FEIR for the previous project application was certified, the City was in the process of updating its LCP for certification; therefore, the previous project application was assessed based on the existing Coastal Zone Standards outlined in Chapter 17.24.070 of the City's Municipal Code. Because the proposed project was reviewed under the existing regulations at that time and the City did not have a certified LCP in place, the proposed project would have required a CDP from the Coastal Commission. However, as noted above, the Coastal Commission certified the City's LCP in June 2013. Therefore, as indicated in the Addendum to the FEIR, the proposed project is currently applying for the approval of a CDP from the City Planning Commission instead of the Coastal Commission. Furthermore, because the City now has a certified LCP, the proposed project was assessed based on the LCP not the existing Coastal Zone Standards outlined in Chapter 17.24.070 of the City's Municipal Code. The proposed project, as stated in the Addendum to the FEIR, is consistent with the certified LCP.

Project Modifications and Revisions Subsequent to the Certification of the FEIR

In addition to the certification of the City's LCP in June 2013, in July 2013, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032). The Post-Construction Requirements became effective on March 6, 2014 and mandate that development projects use Low Impact Development (LID) BMPs, which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. Therefore, the proposed project is required to comply with the Post-Construction Requirements to implement LID BMPs and infiltrate stormwater runoff on-site.

The modifications and revisions to the previously approved project description, as specified in the new application, include the following:

- Removal of one parking space and the addition of one RV parking space. The proposed project now includes 53 parking spaces and 1 RV parking space.
- Addition of five benches with trash receptacles in the following locations:
 - Two benches along the southeastern edge of the project site adjacent to Laguna Grande Lake;
 - One bench on the southwestern edge of the project site at the northern extension of the pathway where it ends in the parking lot;
 - One bench along the east side of the property, south of the wood bridge; and
 - One additional bench at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake.
- Removal of one 14 ft. x 11 ft. red-and-yellow cabinet wall sign on the west side of the easternmost entrance off of Del Monte Boulevard.
- Replacement of the four lampposts with double-head lights along the drive-through service area with single-head lights, and removal of the two lampposts with double-head lights along the building entrance.
- Addition of a series of biofiltration planters for stormwater capture, treatment, retention, and infiltration to replace the previously proposed BMPs (vegetated swale or catch basin filter insert).

The project plans are provided as Exhibit "D" to Attachment 2.

Project Components

The proposed 1-story restaurant would occupy a total of 3,750 sf of the 99,397 sf of the project site as itemized in Table 2.1 in the Addendum to the FEIR. The 1-story 3,750 sf restaurant is equivalent to a Floor Area Ratio (FAR) of 0.04, which is within the maximum permitted FAR of 1.0 for the CVSC zone. Development on the remainder of the project site is proposed to include an outdoor dining area (patio), drive-through service area, 53 parking spaces, landscaping, and a pedestrian/bicycle trail.

Architectural Style and Lighting

The architectural style of the proposed project would be designed to be harmonious with the existing land uses in the area as well as be consistent with the design guidelines of the West Broadway Urban Village Specific Plan to provide a suitable gateway entrance to the City. The Board of Architectural Review (BAR) would be responsible for reviewing and approving the proposed project's final architectural design, lighting, landscaping, and sign plans. It is expected that review and approval of the architectural design plans by the BAR would not result in a change to the proposed project's plans in such a way as to substantially deviate from that which was detailed in the certified FEIR.

The outdoor lighting plan would include the following components: Four Lithonia lampposts with single-head lights flanking the two driveways on Del Monte Boulevard; five Lithonia lampposts with double-head lights within the median of the parking lot and two near the trash and recycling enclosure and outdoor seating area; two Lithonia lampposts with single-head lights on the southern boundary of the parking lot; two Lithonia lampposts with single-head lights along the drive-through service area; two single-head Lithonia lampposts flanking each side of the building entrance; five Lithonia down-lights under the building awnings; three Voigt Lighting recessed fixtures along the building facing the outdoor patio area; and five Gotham Lighting recessed fixtures under the drive-through canopy. A single strand Red LED band is proposed under the alcove of the towers and cornice of the building. The LED lighting is illustrated on the sign plan elevations. A photometric lighting plan is included as part of the project plans. The proposed restaurant would include two internally illuminated signs, which would be mounted on the west and south sides of the building walls, one drive-through menu board, and two directional signs at the entrance and exit locations of the drive-through.

Greenhouse Gas Reduction Strategies

The following greenhouse gas (GHG) reduction strategies, some of which are required under the CALGreen Building Standards that went into effect on January 1, 2011 (required CALGreen

building standards are noted by an asterisk), have been incorporated into the proposed project design to reduce potential GHG emissions associated with construction and operation of the proposed project:

- Use “Green Building Materials,” such as those materials that are resource-efficient, and recycled and manufactured in an environmentally friendly way, including low-volatile organic compound (VOC) materials.
- Design all project buildings to exceed the California Building Code’s (CBC) Title 24 energy standard, including, but not limited to, the following:
 - Increase insulation such that heat transfer and thermal bridging are minimized;
 - Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption; and
 - Incorporate ENERGY STAR or better rated windows, space heating and cooling equipment, light fixtures, appliances, or other applicable electrical equipment.
- Install water-efficient fixtures and appliances, including low-flow faucets, dual-flush toilets, and waterless urinals.
- Install energy-efficient heating and cooling systems, appliances and equipment, and control systems.
- Provide a landscape and development plan for the proposed project which includes*:
 - Native drought-tolerant plants;
 - Water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls;
 - Restricted watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.
- Recycle construction waste (including, but not limited to, concrete, lumber, metal, and cardboard).
- Provide interior and exterior storage areas for recyclables and green waste for restaurant operational uses, as well as adequate recycling containers located in public areas for restaurant patrons.
- Provide employee education about reducing waste and available recycling services.

Access and Circulation

Access to the project site would be from two driveways along Del Monte Boulevard. The westernmost driveway (next to the City of Monterey boundary) would be a right-in/right-out only and the other would be a full-access driveway. The proposed service area is designed to provide a one-way counterclockwise traffic movement around the project site. The drive-through service area, which is located on the east-southeast side of the building, would provide one lane of queuing for ordering and food pick-up. Approximately 250 linear feet would be available for queuing of vehicles in the drive-through lane and additional vehicle storage would be available on site in the adjacent parking lot and drive aisles. Proposed vehicle queuing in the drive-through lane would accommodate 14 vehicles from the entry sign, in the west-southwest corner of the proposed project site to the drive-through pick-up window on the east-southeast side of the

proposed project site.

Utilities and Water

All necessary utility services (e.g., wastewater, water, and stormwater) are located adjacent to the project site; the proposed project would not require the development of new service utility lines. The sanitary sewer line would connect to an existing lift station 30 feet northwest of the northwesterly corner of the site. Water connections (fire and domestic) would be made at the existing main in the on-site public utility easement fronting Del Monte Boulevard.

In compliance with the Monterey Regional Stormwater Management Program, including the Post-Construction Requirements, post construction, stormwater runoff will be retained and infiltrated on-site for storm events up to the 95th percentile rainfall event. The stormwater control plan will rely on a series of biofiltration planters to capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots), remove pollutants from runoff, and retain and infiltrate the runoff. The Project will also ensure that post development runoff not exceed predevelopment runoff.

The Monterey Peninsula Water Management District must issue a water permit for any development or redevelopment activity that would involve the connection or modification of a connection to an existing water distribution system, such as the proposed project. Due to below adequate levels of water on the Monterey Peninsula, the Seaside City Council is restricting the allocation of water it has received from the Monterey Peninsula Water Management District to specific high priority economic development projects, such as redevelopment projects like the proposed project. The City of Seaside has allocated the required water for the proposed project and the landscape areas from its Perlata Well Allocation. Water for the proposed project would be supplied by California American Water Company (CAL-AM).

Pedestrian/Bicycle Extension

An existing decomposed granite and partial asphalt pedestrian/bicycle trail borders Laguna Grande Regional Park and Lake and the southeastern project site boundary. The existing trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The proposed project would extend the pedestrian/bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension would be made of decomposed granite. Portions of the existing pedestrian/bicycle trail within the project boundaries that are asphalt would be replaced with decomposed granite so that the pedestrian/bicycle trail would be cohesive throughout the project site. Seven benches with trash receptacles would be placed along the pedestrian/bicycle trail- one at the northern edge of the project site where the pedestrian/bicycle trail tees and connects to the restaurant approximately half-way between the wooden pedestrian bridge and Del Monte Boulevard, two on the

southeastern edge of the property adjacent to Laguna Grande Lake, three at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake, and one on the east side of the property south of the wood bridge (refer to Figure 3 in the Addendum to the FEIR).

The trail extension would provide pedestrian and bicycle access to the restaurant from Laguna Grande Regional Park and Lake, the adjacent hotel property to the northeast, and Del Monte Boulevard. The trail extension would also provide pedestrian and bicycle access from the restaurant to the trail around Laguna Grande Lake, as well as to the Monterey Bay Coastal Bike Trail, which is located along Del Monte Boulevard and which connects, via Canyon Del Rey Boulevard, to the coastal trail fronting the beach on the north side of SR-1.

LCP Consistency

A portion of the previous (and current) project is within the Coastal Zone. Because a majority of the proposed project's restaurant building, outdoor dining, surface parking, landscaping, proposed extension of a pedestrian and bicycle trail, and the entire drive-through service area are proposed for the portion of the project site that is within the Coastal Zone, for planning purposes, it was assumed that the entire project site was in the Coastal Zone.

The FEIR for the previous project was certified in July of 2011. At that time, the City did not have a certified LCP. The Coastal Commission certified the City's LCP in June 2013. Because the LCP had not yet been approved by the Coastal Commission at the time the previous FEIR was certified, the previous project was assessed based on the goals, policies, and regulations provided in the City of Seaside's General Plan (2004) and Title 17 of the City's Municipal Code and would have required three Zoning Code Amendments to allow drive-through restaurants in the zoning district, to reduce the setbacks from Laguna Grande Lake, and to exceed the City's height limit within 100 ft of Laguna Grande Lake in order to be approved.

As noted above, the Coastal Commission certified the City's LCP in June 2013. An LCP consists of two major parts: the LUP and the CIP. Whereas the LUP designates the kinds, location, and intensity of land and water uses and presents applicable resource protection and development policies, the CIP provides development regulations for specific Coastal Zone activities needed to carry out the LUP. The CIP is referred to as Title 18, Zoning Ordinance for the City of Seaside (Applicable to Areas Within the Coastal Zone), and applies to all development within the Coastal Zone.

According to Title 18:

- Drive-through restaurants would be considered a conditionally permitted use within the zoning designation Coastal Visitor-Serving Commercial (CVSC), as identified in Figure 1a (Coastal Zoning Map) in the City's CIP;

- Allowable building heights within 100 feet of Laguna Grande Lake would be increased to a maximum height of 20 feet, with allowances for architectural features up to a maximum height of 30 feet; and
- Buffers and setbacks would be a minimum of 50 feet from wetland/riparian areas, but smaller setbacks would be allowed for the development of recreational trails and/or nature observation platforms based on site constraints.

The In-N-Out Burger Drive-Through Restaurant Project is consistent with the City's certified LCP (refer to Appendix C of the Addendum for a full analysis of the project's consistency with the LCP's LUP, CIP and a report addressing the proposed project in regard to sea level rise) and would not require any zoning code amendments.

Discretionary Actions

Discretionary actions required to be taken by the City as part of the proposed project include:

- Review and approval of a Coastal Development Permit by the City Planning Commission.
- Review and approval of the proposed project site plans and elevations, lighting, and landscape plans by the City's Board of Architectural Review.

Additional approvals required by other agencies:

- United States Army Corps of Engineers (Corps) Preconstruction Notification pursuant to Section 404 of the Clean Water Act (CWA).
- Regional Water Quality Control Board (RWQCB) Water Quality Certification pursuant to Section 401 of the CWA.
- California Department of Fish and Game (CDFG) Lake and Streambed Alteration Agreement (SAA) pursuant to Section 1602 of the Fish and Game Code.

Previously required discretionary actions that are no longer necessary include:

- City Council approval of a Zoning Code amendment to Chapter 17.24, Commercial Zones, of the City's Zoning Code allowing drive-through retail uses.
- City Council approval of a Zoning Code amendment to Chapter 17.24.070.E of the City's Zoning Code allowing development within 100 ft of Laguna Grande Lake to exceed 15 ft in height.
- City Council approval of a Zoning Code amendment to Chapter 17.24.070 of the City's

Zoning Code allowing development within 0 ft to 20 ft of Laguna Grande Lake.

- Review and approval by the City Planning Commission of a Conditional Use Permit for the development of an approximately 3,750 sf In-N-Out Burger Drive-Through Restaurant, including indoor dining, outdoor patio seating, and a drive-through facility.

LONG RANGE PROPERTY MANAGEMENT PLAN APPROVAL

In October 2013, both the Successor Agency Board and the Oversight Board approved the execution of an Exclusive Negotiation Agreement (ENA) with In-in-Out for the development of a quick service restaurant and related facilities at the project site contingent upon approval by the Department of Finance (DOF). In a letter dated December 19, 2013, the DOF approved the Oversight Board's action approving the ENA. In the letter, provided as Attachment 6, DOF states that the ENA must be included in the Agency's Long Range Property Management Plan (LRPMP) for review and approval before final disposition. The ENA, which includes the In-N-Out Project, is included in the LRPMP approved by the Agency Board on June 19, 2014 and the Oversight Board on August 25, 2014. The LRPMP was submitted to the DOF for its review and consideration on September 2, 2014.

Upon receiving DOF approval, the ENA became effective, and the Agency proceeded to commence negotiations for the purchase and sale of the project site. In July 2014, the Successor Agency and Oversight Board considered and approved a Purchase and Sale Agreement and Escrow Instructions (PSA) with In-N-Out. In November 2014, the DOF approved the PSA contingent upon the approval of the LRPMP.

DOF has completed its review and has requested that modifications to the LRPMP be considered and approved by the Successor Agency and Oversight Board as a First Amendment in order to receive approval. It is anticipated that the DOF will approve the modified LRPMP by the end of March 2015.

STAFF ANALYSIS AND FINDINGS

Primary issues evaluated in the certified FEIR included aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, noise, public services and recreation, traffic and transportation, utilities and service systems, and environmental issue areas determined to be less than significant. The certified FEIR identified a number of significant impacts that would be reduced to a less-than-significant level with implementation of mitigation measures, as well as certain significant and unavoidable impacts associated with traffic and circulation. The minor modifications and revisions to the site plan described in the Addendum to the FEIR, including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights,

and a revised drainage plan would not result in a change to the significance conclusions outlined in the previously certified FEIR. None of the conditions described in Section 15162 of the CEQA Guidelines calling for preparation of a subsequent MND or FEIR have occurred; therefore, an Addendum was deemed the appropriate environmental document to address the minor modifications and revisions to the In-N-Out Burger Drive-Through Restaurant Project.

Significant unavoidable adverse impacts

As stated in the certified FEIR, Section 15126.2(b) of CEQA Guidelines requires that an FEIR discuss significant impacts. When such impacts cannot be reduced to a less than significant level, the FEIR must describe their implications and the reasons why the project is being proposed in spite of the impacts. Chapter 4.0 of the certified FEIR, Existing Environmental Setting, Environmental Analysis Impacts, and Mitigation Measures provided a description of the potential environmental impacts for the proposed project as well as measures to reduce the environmental impacts to the maximum extent feasible. As concluded in the certified FEIR, after implementation of the proposed project and all related mitigation measures, there was one “class” of significant unavoidable impacts associated with the proposed project and that was traffic impacts. The previously certified FEIR noted that the following significant unavoidable impacts would occur with implementation of the proposed project:

- Direct project-related and cumulative impacts to the two-way stop controlled (TWSC) intersection of **Fremont Boulevard/Del Monte Boulevard** by increasing (worsening) the deficient 719.4-second delay by 34.4 seconds and 35.6 seconds, respectively, during the p.m. peak hour.
- Direct project-related and cumulative impacts to the TWSC intersection of **State Route 1 (SR-1) southbound on-ramp/Del Monte Boulevard** by adding traffic to an intersection that is already operating at a deficient level of service (LOS D) in the p.m. peak hour.
- Cumulative impacts to the signalized intersection of Canyon del Rey Boulevard/SR-1 northbound ramps by adding traffic to an intersection that is already operating at a deficient level of service (LOS D) in the cumulative p.m. peak hour.

As part of the Addendum to the FEIR, a new *Traffic Impact Analysis* (TIA) including new traffic counts at 17 intersections within the study area was prepared. The new TIA concluded that the proposed project would have the same significant unavoidable traffic impacts as those identified above (and in the previously certified FEIR), with the exception of the following impact which would be eliminated under the currently proposed project:

- The cumulatively significant and unavoidable impact at the Canyon Del Rey Boulevard/SR-1 northbound ramp intersection would be eliminated. The previously certified FEIR concluded that there was a cumulatively significant and unavoidable impact because the intersection was previously operating at a deficient level of service (LOS) in the existing condition, and the addition of any project traffic to an intersection that is already operating at a deficient LOS is considered significant. Currently, however,

as stated in the new TIA, the intersection is no longer operating at a deficient LOS and the addition of project traffic to this intersection would not result in a deficient LOS. Therefore, there is no longer a cumulatively significant and unavoidable impact at the Canyon Del Rey Boulevard/SR-1 northbound ramp intersection.

Further explanation describing the significant unavoidable traffic impacts is provided below.

Fremont Boulevard/Del Monte Boulevard

At this time, the City has no adopted traffic impact fee program or other mechanism for collecting impact fees as a means of mitigating transportation impacts. A regional traffic impact fee program is in place and is administered by the Transportation Agency for Monterey County (TAMC), however fees paid into this regional program are not used to mitigate impacts to local intersections. As a result, there is no mechanism at this time for a fair-share contribution to the signalization of the intersection of Fremont Boulevard/Del Monte Boulevard. The only mitigation which would avoid the significant unavoidable impacts to the Fremont Boulevard/Del Monte Boulevard intersection would be full signalization of this intersection. The City, as lead agency, has only the constitutional legal authority to require mitigation that is roughly proportional to the impact of the proposed project (CEQA Guidelines 15126.4(a)(4)(B)) and the proposed project's impacts do not merit a mitigation measure that requires full funding for a traffic signal at the Fremont Boulevard/Del Monte Boulevard intersection. Therefore, there is no feasible mitigation to avoid the significant and unavoidable impact identified for the Fremont Boulevard/Del Monte Boulevard intersection.

SR-1 Southbound On-Ramp/Del Monte Boulevard

The California Department of Transportation (Caltrans) has determined that a significant project impact occurs for any signalized and unsignalized intersection where project traffic causes the LOS to deteriorate from satisfactory (LOS C or better) to unsatisfactory (LOS D, E, or F); or the addition of project traffic causes an increase in delay at an intersection already operating at unsatisfactory LOS (D, E, or F). Implementation of the proposed project would result in a 1.8-second increase in the existing 25.6-second delay in the p.m. peak hour at the SR-1 southbound on-ramp/Del Monte Boulevard intersection. Because Caltrans' threshold states that any increase in delay at an intersection already operating at an unsatisfactory LOS constitutes a significant impact, the 1.8-second increase of delay at this intersection constitutes a significant impact. Based on discussions with Caltrans on March 4, 2011, the Caltrans District 5 Traffic Engineer (Boyle, 2011) has concluded that because the increase in delay at this intersection is nominal relative to the total amount of traffic at this intersection, the increase in delay would not result in functional impacts to the operation of this intersection, and mitigation would not be warranted or practicable.

Furthermore, there are currently no scheduled improvements to address the existing deficiencies at the SR-1 Southbound On-Ramp/Del Monte Boulevard intersection. There is no adopted traffic impact fee program or other mechanism for collecting impact fees as a means of mitigating

transportation impacts to the SR-1 Southbound on-ramp/Del Monte Boulevard intersection. As a result, there is no mechanism in place at this time for the proposed project applicant to make a fair-share contribution to fund improvements (e.g., signalization) at the to the SR-1 Southbound on-ramp/Del Monte Boulevard intersection. The City, as lead agency, only has the constitutional legal authority to require mitigation that is roughly proportional to the impact of the proposed project (CEQA Guidelines 15126.4(a)(4)(B)). If one applicant were expected to fund such improvements with little or no help from other benefitting parties, the result would be mitigation that is *not* “roughly proportional” to the impact. As such; the proposed project’s impacts do not merit a mitigation measure that requires full funding for improvements (e.g., signalization) at the to the SR-1 Southbound on-ramp/Del Monte Boulevard intersection. Because there is no feasible mitigation to address the impacts to the SR-1 Southbound on-ramp/Del Monte Boulevard intersection, the impacts are significant and unavoidable.

The City’s Zoning Code requires a minimum of 1 parking space for every 3 restaurant seats, or 53 parking spaces.

The City Council approved the Purchase and Sales Agreement on July 17, 2014. However, the Purchase and Sales Agreement is conditioned on the approval of a Coastal Development Permit by the City Planning Commission.

Because the project is in the coastal zone, the Conditional Use Permit is now part of the Coastal Development Permit.

CONCLUSION

It is recommended that the Planning Commission receive the presentation on the details of the project as it was analyzed in the certified FEIR and on the project specific modifications as considered in the Addendum to the FEIR, formally accept the Addendum to the FEIR, and approve the Coastal Development Permit for the proposed project.

FISCAL IMPACT

There is no fiscal impact associated with this item

ATTACHMENTS

1. Attachment 1 - Draft Resolution approving the Addendum to the FEIR
 2. Attach 1 Exhibit “A”: Addendum to the Seaside In-N-Out Restaurant FEIR
 3. Attachment 2 - CDP Resolution
 4. Attachment 2 - Exhibit A Addendum to the Seaside In-N-Out FEIR
 5. Attachment 2 - Exhibit “B: Local Coastal Plan Land Use Plan consistency checklist
 6. Attachment 2 - Exhibit “C”: Local Costal Plan Coastal Implementation Plan consistency checklist
-

7. Attachment 2 - Exhibit "D": Project plans
 8. Attachment 3 - Location Map
 9. Attachment 4 - Coastal Zone Boundary Figure
 10. Attachment 5 - Site Photographs
 11. Attachment 6 - Department of Finance Letter
-

RESOLUTION NO. 15-XX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SEASIDE APPROVING AN ADDENDUM TO A PREVIOUSLY CERTIFIED FINAL ENVIRONMENTAL IMPACT REPORT TO ALLOW FOR THE CONSTRUCTION OF A 3,750 SQUARE-FOOT IN-N-OUT RESTAURANT WITH A DRIVE-THROUGH AISLE AND WINDOW FOR COASTAL DEVELOPMENT PERMIT, BOARD OF ARCHITECTURAL REVIEW APPLIATION AND SIGN PERMIT APPLICATION LOCATED AT 1350 DEL MONTE BOULEVARD.

WHEREAS, the City Council of the City of Seaside acted to certify a Final Environmental Impact Report (FEIR) for a 3,750 square-foot In-N-Out Restaurant with a drive through aisle and window located at 1350 Del Monte Boulevard on July 21, 2011; and

WHEREAS, due to the expiration of an Exclusive Negotiating Agreement the proposed project did not proceed with the issuance of a Coastal Development Permit in order for the proposed to be implemented; and

WHEREAS, a new Exclusive Negotiating Agreement was executed with In-N-Out Burger Restaurant on October 2013 for a similar 3,750 square-foot restaurant with a drive through aisle and window and a Purchase and Sales Agreement was executed on July 17, 2014 in order for the Seaside In-N-Out Burger Restaurant to proceed with the filing of a Coastal Development Permit for the construction of a revised Seaside In-N-Out restaurant project design; and

WHEREAS, the applicant, In-N-Out Burger Restaurant submitted an application for the proposed Seaside In-N-Out Burger Restaurant on August 29, 2014, and

WHEREAS, the City of Seaside Resource Management Services Department - Planning Division reviewed the Certified Final Environmental Impact Report (Seaside In-N-Out Restaurant FEIR), certified by City Council of the City of Seaside on July 21, 2011 to determine whether there have been any changes to the project design and/or project conditions/setting which would preclude the City from processing an Addendum to the Seaside Restaurant FEIR pursuant to Section 15164 of the California Environmental Quality Act (CEQA) Guidelines; and

WHEREAS, the City of Seaside Resource Management Services Department, based on the preparation of a modified initial study checklist, determined that there have been no changes in the revised project design or environmental setting that would result in any new significant or increased environmental effects, including impacts to water consumption, traffic generation, or emissions of air pollutant or greenhouse gas emissions related to vehicle trips; and

WHEREAS, as previously stated, the project is the In-N-Out Burger Drive-Through Restaurant Project. This project is substantially the same as the previous In-N-Out Burger Drive-Through Restaurant Project that was analyzed in the Seaside In-N-Out Burger

Restaurant FEIR, except for the modifications to the site plan that include parking, benches, signs, and lighting. Specifically, the application that is currently pending would modify the project from what was previously approved in the following ways:

1. Parking: One parking space has been removed and one RV parking space has been added. The proposed project now includes 53 parking spaces and 1 RV parking space.
2. Benches: Five benches with trash receptacles have been added in the following locations:
 - a. Two benches have been added along the southeastern edge of the project site adjacent to Laguna Grande Lake;
 - b. One bench has been added on the southwestern edge of the project site at the northern extension of the pathway where it ends in the parking lot;
 - c. One bench has been added along the east side of the property, south of the wood bridge; and
 - d. One additional bench has been added at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake.
3. Signs: One 14 x 11 ft red-and-yellow cabinet wall sign on the west side of the easternmost entrance off of Del Monte Boulevard has been removed.
4. Lighting: The four lampposts with double-head lights along the drive-through service area have been replaced with single-head lights, and the two lampposts with double-head lights along the building entrance have been removed.
5. Stormwater BMPs: The previously proposed BMPs (vegetated swale or catch basin insert) have been replaced with a series of biofiltration planters to capture, treat, retain, and infiltrate stormwater runoff.

WHEREAS, In accordance with the Guidelines for Implementation of the California Environmental Quality Act (CEQA) (Article 11, Section 15164), an Addendum to the FEIR was prepared to describe minor technical modifications to the In-N-Out Burger Drive Through Restaurant Project for which an FEIR was previously certified on July 21, 2011 by the Seaside City Council. The Addendum is provided as Exhibit “A”. The Certified FEIR can be accessed at the following web link: <http://www.ci.seaside.ca.us/index.aspx?page=226>

The Addendum includes the following Appendices:

- A. Previously Certified Final Environmental Impact Report Figures
- B. Revised Site Plan Figures

- C. Local Coastal Plan: Land Use Plan, Coastal Implementation Plan Consistency Analysis, and Sea Level Rise Report
- D. Letters from the Central Coast Regional Water Quality Control Board and Monterey County Department of Health
- E. Traffic Impact Analysis the City has prepared for an Addendum to the In-N-Out FEIR in accordance with CEQA Guidelines Section 15164; and

WHEREAS, in accordance with the California Environmental Quality Act (CEQA) and implementing CEQA Guidelines, specifically Public Resources Code section 21166 and CEQA Guidelines section 15162, no further environmental review is necessary; and

WHEREAS, the Planning Commission of the City of Seaside has reviewed the Seaside In-N-Out Addendum in conjunction with the Seaside In-N-Out Restaurant FEIR provided at the following web link and attached to the Resolution as Exhibit “B” by reference:

WHEREAS, the Planning Commission of the City of Seaside has reviewed the staff report and exhibits to the staff report and the CEQA Findings; and

WHEREAS, the Planning Commission of the City of Seaside concurs with the findings presented; and

WHEREAS, the development of the project site with a 3,750 square-foot In-N-Out restaurant with a drive-through aisle is consistent with the provisions of the City’s Local Coastal Program and benefits the City of Seaside and the City’s goal of facilitating economic development at a Gateway location to the City of Seaside; and

THEREFORE, BE IT RESOLVED, that the Planning Commission of the City of Seaside does hereby find as follows:

The previously certified Seaside In-N-Out Restaurant FEIR considered the impacts of the proposed project on special-status species and cultural resources. The previously certified Seaside In-N-Out Restaurant FEIR concluded that the proposed project has the potential to temporarily impact special-status species, riparian habitat, federally protected wetlands, and temporarily disturb wildlife movements during construction. Implementation of the proposed project would increase human and vehicular activity at the proposed project site, which would negatively impact wildlife and wildlife habitat. In addition, implementation of the proposed project has the potential to impact previously unidentified historic, archaeological, and paleontological resources or previously unidentified human remains, although it is considered unlikely. As mentioned in the previously certified Seaside In-N-Out Restaurant FEIR, these potential impacts would be reduced to less than significant levels with implementation of standard conditions and mitigation. The revisions contemplated in this modified project do not change the intended outcomes and thus do not change the likely cumulative impacts of the project. The changes made to the Seaside In-N-Out Burger Drive-Through Restaurant Project would not result in a change to the physical environmental conditions of the proposed project site; therefore, there is no anticipated change in the impacts to biological

resources and no anticipated change to the project's contribution to cumulative impacts. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

NOW, THEREFORE, BE IT FURTHER RESOLVED, the applicable Mitigation Measures from the prior certified FEIR for the Seaside In-N-Out Restaurant remain in effect and that no new significant effects on the environment would occur in accordance with the Addendum prepared for the current Seaside In-N-Out Restaurant that is provided as Exhibit "A".

PASSED AND ADOPTED at a regular meeting held on the 25th day of March 2015 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

John Owens, Chairperson

ATTEST:

Planning Commission Secretary

Exhibits

Exhibit "A": Seaside In-N-Out Addendum

**ADDENDUM TO THE
FINAL ENVIRONMENTAL IMPACT REPORT

FOR
THE IN-N-OUT BURGER DRIVE-THROUGH RESTAURANT
PROJECT**

Prepared for

**City of Seaside
440 Harcourt Avenue
Seaside, California 93955**

Prepared by

**LSA Associates, Inc.
1998 Santa Barbara Street, Suite 120
San Luis Obispo, California 93401**

March 2015

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Appendices

A: Previously Certified Final Environmental Impact Report Figures

B: Revised Site Plan Figures

C: Local Coastal Plan: Land Use Plan, Coastal Implementation Plan Consistency Analysis, and Sea Level Rise Report

D: Letters from the Central Coast Regional Water Quality Control Board and Monterey County Department of Health

E: Traffic Impact Analysis

**ADDENDUM TO THE
ENVIRONMENTAL IMPACT REPORT
FOR
THE IN-N-OUT BURGER DRIVE-THROUGH RESTAURANT PROJECT**

1. Purpose

This Addendum is prepared to augment the Final Environmental Impact Report (FEIR) that previously was certified by the City Council of the City of Seaside on July 21, 2011, for the In-N-Out Burger Drive-Through Restaurant Project (<http://www.ci.seaside.ca.us/Modules/ShowDocument.aspx?documentid=9844>) The previously certified FEIR is hereinafter referred to as “the FEIR.” Although the FEIR was certified, the previous project was not approved by the City Council. The previous project design has been modified by the project applicant and a new application has been submitted to the City of Seaside (City) for consideration. The modified project is herein referred to as the “proposed project”. This Addendum, together with the above-mentioned FEIR, serve as the environmental review of the proposed project, known generally as the In-N-Out Burger Drive-Through Restaurant Project and more fully described below, as required pursuant to the provisions of the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Section 21000 et. seq. and the State and local CEQA Guidelines.

Pursuant to the provisions of CEQA and the State and local CEQA Guidelines, the City is the Lead Agency and is charged with the responsibility of deciding whether or not to approve the proposed project (In-N-Out Burger Drive-Through Restaurant). As part of the decision-making process, the City is required to review and consider the potential environmental effects that could result from the modification of the project analyzed in the previously certified FEIR. As part of the decision-making process, the City will determine whether the project’s modifications constitute necessary changes and/or additions to the previously certified FEIR that can be addressed in this Addendum pursuant to Section 15164 of the CEQA Guidelines, as amended, because these modifications do not represent substantial changes to the project description requiring major changes to the FEIR, or new information of substantial importance that could not have been known at the time the FEIR was certified.

2. The Previous Project As Described and Analyzed in The Certified FEIR

A. Project Site Location and Setting

The project is located in the City of Seaside, a coastal community of approximately 35,000 residents overlooking Monterey Bay to the north-northwest. The City is within the County of Monterey (County) and is located approximately 18 miles (mi) southwest of Salinas and 3 mi east-northeast of Monterey city center (refer to Figure 1, Project Vicinity Map, in Appendix A to this Addendum). The project site is located on the southeast side of Del Monte Boulevard facing Roberts Lake to the north-northwest and is bordered by Laguna Grande Regional Park and Lake to the southeast. The channel connecting Roberts Lake with Laguna Grande Lake runs along the east-northeast boundary of the project site. The west-southwest boundary of the project site lies on the Seaside-Monterey city limits line (refer to Figure 3, Conceptual Site Plan, in Appendix A).

The approximately 2.28-acre (ac) project site is comprised of an approximately 2.19 ac (95,317-square-foot [sf]) parcel (Assessor’s Parcel Number [APN] 011-401-023) and an approximately 0.094

In-N-Out Burger Drive-Through Restaurant

ac City right-of-way (ROW) easement that will be used for additional landscaping, curb, driveway, and sidewalk features. The project site was formerly the site of an automobile wrecking yard and is currently vacant. The project site was owned by the City until July 2010, at which point it was transferred to the Redevelopment Agency of the City of Seaside for the purpose of developing it with a visitor-serving commercial use. The project would develop an approximately 3,750 sf In-N-Out Burger Drive-Through Restaurant and associated facilities, including indoor and outdoor patio dining totaling 159 seats and a drive-through window. The proposed restaurant would provide approximately 54 parking spaces, including three Americans with Disabilities Act (ADA) accessible spaces, three bicycle racks, and two motorcycle parking stalls (refer to Figure 3, Conceptual Site Plan, in Appendix A).

The northwest boundary of the project site is located along the border between the City of Seaside and the City of Monterey. Land uses within the vicinity of the project site include hotel, commercial, retail, and recreational facilities. Immediately east-northeast of the project site boundary is a 4-story, 143-room Holiday Inn Express. A 12-story, 225-room Embassy Suites Hotel is located east of the Holiday Inn Express at the southeast corner of Del Monte Boulevard and Canyon Del Rey Boulevard. A 2-story La Quinta Inn motel is located across from the project site on Del Monte Boulevard to the west northwest. Shopping and service facilities are in close proximity to the project site. Biking, hiking, and walking trails are located south of the project site around Laguna Grande Regional Park and Lake and along the Monterey Bay Coastal Bike Trail located along Del Monte Boulevard. Nearby beaches located across State Route 1 (SR-1) to the west are within walking distance of the project site.

The project site is visible from Cabrillo Highway (SR-1) and is located within 0.5 mi of the on- and off-ramps at Canyon Del Rey Boulevard (State Route 218 [SR-218]). Additional regional access to the project site is provided by the Monterey-Salinas Highway (State Route 68 [SR-68]) (refer to the Regional Inset Map on Figure 1). These highways connect the project site to the cities of the Monterey Peninsula, Salinas, San Jose, and San Francisco Bay area.

Local access to the project site is provided by Del Monte Boulevard, which creates the north-northwest boundary of the project site, as well as Canyon Del Rey Boulevard to the north and nearby Fremont Boulevard to the east.

B. Project Objectives

The objectives of the project are to:

- Develop the site in accordance with the City's Strategic Plan for economic development in order to generate tax revenue for the City;
- Develop a fast food drive-through restaurant that is convenient to and meets the demands of the local residents and visitors to the area;
- Implement the goals of the City General Plan; and
- Increase and enhance the visual gateway of the City.

C. Project Technical, Economic, and Environmental Characteristics

The 2004 Seaside General Plan designates the 2.19 ac portion of the project site as Regional Commercial (RCC). The City Zoning Code Title 17 designates the project site as Regional

In-N-Out Burger Drive-Through Restaurant

Commercial (CRG). Drive-through services within the CRG zone are limited to establishments existing in the City prior to December 4, 2006. Approval of the project with the drive-through service would then be contingent upon the approval of an amendment to the existing Zoning Code that would allow a drive-through restaurant at the project site, followed by the issuance of a Use Permit for the same. Further discussion of the proposed code amendment is provided in the Coastal Zone section below.

(1) Coastal Zone

Portions of the project site (i.e., a 125-foot [ft] wide buffer along the edge of Laguna Grande Lake that borders the property and a 100 ft wide buffer along the western boundary of the channel connecting Roberts Lake and Laguna Grande Lake [PRC Section 30160(c)]) are within the California Coastal Zone Boundary (refer to Figure 4, Coastal Zone Boundary, in Appendix A). The majority of the project's restaurant building, outdoor dining, surface parking, landscaping, proposed extension of a pedestrian/bicycle trail, and the entire drive-through service area are proposed for the portion of the project site that is within the Coastal Zone. Development within the Coastal Zone may not commence until a Coastal Development Permit (CDP) has been issued by either the California Coastal Commission (Coastal Commission) or by a local government that has a certified Local Coastal Program (LCP).

An LCP consists of two major parts: the Land Use Plan (LUP) and the Coastal Implementation Plan (CIP). The City has an LUP¹ that was drafted in 1983 and was certified by the Coastal Commission. However, the City never prepared a CIP. Therefore, the City does not have a certified LCP, and all development within the City's Coastal Zone must receive a CDP from the Coastal Commission².

The City is currently updating its LCP for certification and, in doing so, the City's LUP has been individualized rather than prepared as a joint document with the City of Monterey and includes a CIP. A public comment period was open for the Draft Initial Study (IS)/Proposed Negative Declaration (ND) for the LCP from August 5, 2010, through September 7, 2010. Comments received during that time were reviewed for incorporation in the Draft LCP and were presented to the City Council for the first of two required readings on Thursday, November 18, 2010. The City Council approved the Draft LCP at its first reading and approved the Draft LCP at its second reading on February 3, 2011. City staff have submitted an application to the Coastal Commission requesting LCP certification.

Because the LCP has not yet been approved by the Coastal Commission, the project is being assessed based on the existing Coastal Zone Standards outlined in Chapter 17.24.070 of the City's Municipal Code rather than on those that were approved on February 3, 2011, by the City Council. Since the project is being reviewed and approved under the existing regulations and the City does not yet have a certified LCP in place, the project would require a CDP from the Coastal Commission. If the updated LCP is certified prior to approval of the project, the applicant would have the choice to apply for a CDP through the City or the Coastal Commission.

According to the Seaside Zoning Code (Section 17.24.070.D), developments within the CRG zone and Coastal Zone and adjacent to Roberts Lake and Laguna Grande Lake are required to be set back a minimum of 50 ft from the marsh or riparian vegetation. However, this setback may be reduced to 20 ft where recreational trails and/or nature observation platforms or piers are proposed.

¹ The City's 1983 LUP was adopted as a joint LUP with the City of Monterey.

² Please refer to Section 9, Land Use and Planning, for a discussion of the proposed project's consistency with the City's certified LCP.

In-N-Out Burger Drive-Through Restaurant

Portions of the existing and the proposed pedestrian/bicycle trail and proposed landscape areas are within 0–20 ft of the riparian vegetation of Laguna Grande Lake (refer to Figure 5, Coastal Zone Setback, in Appendix A). As currently designed, the project would violate the City's existing setback requirements within the Coastal Zone and would require a Zoning Code amendment in order to allow development within 20 ft of the riparian vegetation of Laguna Grande Lake.

Additionally, Section 17.24.070.E of the Seaside Zoning Code requires that proposed structures within 100 ft of Laguna Grande Lake do not exceed a maximum height of 15 ft. The height of the main building of the proposed restaurant would be 20 ft tall, and the three architectural towers proposed for generally the north, northwest, and southeast sides of the building would be 29 ft each (refer to Figure 6, Floor Plan and Elevations, in Appendix A). As currently designed, the project would exceed the City's existing height limits within the Coastal Zone and would require a Zoning Code amendment to modify the City's height requirements within 100 ft of Laguna Grande Lake.

If the updated LCP is certified by the Coastal Commission prior to approval of the project, the Zoning Code amendments would not be required for approval of the project because the project would be in compliance with the standards set forth in the updated LCP. However, the timing of certification of the updated LCP by the Coastal Commission is uncertain. Therefore, Zoning Code Amendments have been included as components of the project, and the environmental effects of the Zoning Code amendments have been analyzed in this FEIR.

City of Seaside Coastal Implementation Plan (CIP), Title 18, *Draft*. As noted above, the City is currently amending the LCP, which will include a CIP. The Draft CIP, Title 18, after being approved by the City Council and certified by the Coastal Commission, would replace Chapter 17.24 of the Zoning Code, Title 17. Title 18 and Chapter 17.24 are similar in many respects. However, under Title 18:

- Drive-through restaurants would be considered an allowable use within the CRG zone after the approval of a Use Permit by the Planning Commission;
- Allowable building heights within 100 ft of Laguna Grande Lake would be increased to a maximum of 20 ft, with allowances for architectural features up to a maximum height of 30 ft; and
- Buffers and setbacks would be a minimum of 50 ft as measured from the inland extent of wetland/riparian areas, but smaller setbacks would be allowed based on site constraints, the development of recreational trails and or/nature observation platforms or piers, or if a professional biologist concludes that a smaller setback provides sufficient resource protection.

Therefore, although the project is being reviewed under the current Coastal Zone Ordinance (Title 17) and would require Zoning Code amendments in order to remain consistent with the current Coastal Zone Ordinance, the project would be consistent with the Draft CIP, Title 18 (without requiring any Zoning Code Amendments) once the Draft CIP has been certified by the Coastal Commission.

(2) Project Components

The proposed 1-story restaurant would occupy a total of 3,750 sf of the 99,397 sf of the project site as itemized in Table 2.1. The 1-story 3,750 sf restaurant is equivalent to a Floor Area Ratio (FAR) of 0.04, which is within the maximum permitted FAR of 1.0 for the CRG zone (except that hotels are allowed a maximum FAR of 3.0.). Development on the remainder of the project site is

Table 2.1: Proposed Building Uses and Square Footages

Project Building Use	Total Square Footage
Dining and Vestibules	1,735 square feet
Kitchen	1,143 square feet
Offices	278 square feet
Restrooms	392 square feet
Storage Area	142 square feet
Electrical/Fire Closet	60 square feet
Total Building	3,750 square feet
Outdoor Patio Seating/Hardscape	4,650 square feet
Parking and Drive-Through Service Area	31,850 square feet
Driveway, Curb, Sidewalk (City easement)	2,933 square feet
Landscaping (irrigated, main parcel)	21,477 square feet
Landscaping (irrigated, City easement)	1,147 square feet
Natural Vegetation	6,560 square feet
Wetland Areas (undevelopable)	20,540 square feet
Pedestrian/Bicycle Trail Extension	6,490 square feet
Total Project Site	99,397 square feet

proposed to include an outdoor dining area (patio), drive-through service area, 54³ parking spaces, landscaping, and a pedestrian/bicycle trail.

(3) Architectural Style and Lighting

The architectural style of the project would be designed to be harmonious with the existing land uses in the area as well as be consistent with the design guidelines of the West Broadway Urban Village Specific Plan to provide a suitable gateway entrance to the City. The Board of Architectural Review (BAR) would be responsible for reviewing and approving the project's final architectural design and lighting plans before the project is considered and approved by the Planning Commission. Review and approval of the architectural design plans by the BAR would not result in a change to the project's plans in such a way as to substantially deviate from that which is detailed in the FEIR.

Figure 6 (provided in Appendix A) shows the Floor Plan and Elevations. The proposed architectural design includes a stucco building with a textured finish, stone veneer along the base of the proposed restaurant building, brown awnings on two sides of the building (facing north and facing west), and three tower elements with terracotta tile roofs. In-N-Out Restaurants are characterized by their bright red and yellow signature colors, so a 14 ft x 11 ft red and yellow cabinet sign would be constructed on the west side of the easternmost entrance off of Del Monte Boulevard and red and yellow illuminated wall signs would be constructed on all building sides. The project includes clear anodized aluminum storefront doors and windows and a covered drive-through pick-up canopy facing east toward the Holiday Inn Express.

The outdoor lighting plan would include the following components: four lampposts with single-head lights flanking the two driveways along Del Monte Boulevard; three lampposts with double-head lights within the median of the parking lot and one near the trash and recycling enclosure; four lampposts with double-head lights along the drive-through service area; two lampposts with double-head lights and one single-head light along the building entrance; nine square down-lights along the

³ The City's Zoning Code requires a minimum of 1 parking space for every 3 restaurant seats, or 53 parking spaces. The proposed project includes 54 parking spaces, which is 1 more than the minimum required.

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building eaves; and six enclosed industrial lamps along the building facing the outdoor patio area. The proposed restaurant would include eight internally illuminated signs, four of which would be mounted on the building walls.

(4) Landscaping

The project would be landscaped on all four sides of the parcel with a variety of native drought-tolerant trees, shrubs, annuals, and landscape materials, such as local river stone (refer to Figure 7, Landscape Plan, in Appendix A). Native plants proposed for planting on the project site include, but are not limited to, Manzanita (*Arctostaphylos Manzanita*), Island bush snapdragon (*Galvezia speciosa*), toyon (*Heteromeles arbutifolia*), sticky monkey flower (*Mimulus aurantiacus*), fuchsia flowering gooseberry (*Ribes speciosum*), black sage (*Salvia mellifera*), western sword fern (*Polystichum munitum*) emerald carpet manzanita (*Arctostaphylos uva-ursi*), beach daisy (*Erigeron glaucus*), California fescue (*Festuca californica*), island alum root (*Heurchera maxima*), douglas iris (*Iris douglasiana*), blue wild rye (*Leymus condensatus*), deer grass (*Muhlenbergia rigens*), California wild rose (*Rosa californica*), western redbud (*Cercis occidentalis*), and Monterey cypress (*Cupressus macrocarpa*). Two Mexican fan palms (*Washingtonia robusta*) would be planted in the corner of the parking lot adjacent to the building entrance. The two Mexican fan palms, a signature design feature for In-N-Out Restaurants, are the only nonnative plants included in the proposed landscape plan. On the south and east project site boundaries, a landscape buffer would extend from the edge of the drive-through service area to the existing and proposed pedestrian/bicycle trail. On the west project site boundary a landscape buffer would extend from the edge of the parking lot to the property boundary. The irrigation system would comply with the State Water Conservation Ordinance by using native drought-tolerant plants. The BAR would be responsible for reviewing and approving the project's final landscaping plan before the project is considered by the Planning Commission and the City Council and they approve the issuance of a building permit.

(5) Greenhouse Gas Reduction Strategies

The following greenhouse gas (GHG) reduction strategies, some of which are required under the CALGreen building standards that went into effect on January 1, 2011 (required CALGreen building standards are noted by an asterisk), have been incorporated into the project design to reduce potential GHG emissions associated with construction and operation of the project:

Use "Green Building Materials," such as those materials that are resource-efficient, and recycled and manufactured in an environmentally friendly way, including low-volatile organic compound (VOC) materials.

Design all project buildings to exceed the California Building Code's (CBC) Title 24 energy standard, including, but not limited to, the following:

- Increase insulation such that heat transfer and thermal bridging are minimized;
- Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption; and
- Incorporate ENERGY STAR or better rated windows, space heating and cooling equipment, light fixtures, appliances, or other applicable electrical equipment.

Install water-efficient fixtures and appliances, including low-flow faucets, dual-flush toilets, and waterless urinals.

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Install energy-efficient heating and cooling systems, appliances and equipment, and control systems*.

Provide a landscape and development plan for the project which includes*:

- Native drought-tolerant plants;
- Water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls*;
- Restricted watering methods (e.g., prohibit systems that apply water to nonvegetated surfaces) and control runoff*.

Recycle construction waste (including, but not limited to, concrete, lumber, metal, and cardboard)*.

Provide interior and exterior storage areas for recyclables and green waste for restaurant operational uses, as well as adequate recycling containers located in public areas for restaurant patrons*.

Provide employee education about reducing waste and available recycling services.

(6) Access and Circulation

Access to the project site would be from two driveways along Del Monte Boulevard. The westernmost driveway (next to the City of Monterey boundary) would be a right-in/right-out only and the other would be a full-access driveway. The proposed service area is designed to provide a one-way counterclockwise traffic movement around the project site. The drive-through service area, which is located on the east-southeast side of the building, would provide one lane of queuing for ordering and food pick-up. Approximately 250 linear feet would be available for queuing of vehicles in the drive-through lane and additional vehicle storage would be available on site in the adjacent parking lot and drive aisles. Proposed vehicle queuing in the drive-through lane would accommodate 14 vehicles from the entry sign, in the west-southwest corner of the project site to the drive-through pick-up window on the east-southeast side of the project site.

(7) Utilities and Water

All necessary utility services (e.g., wastewater, water, and storm water) are located adjacent to the project site; the project would not require the development of new service utility lines. The sanitary sewer line would connect to an existing lift station 30 ft northwest of the northwesterly corner of the site. Water connections (fire and domestic) would be made at the existing main in the on-site public utility easement fronting Del Monte.

Storm water runoff from new impervious surfaces would be treated by means of vegetated swales and catch basins with filter inserts before being discharged into the municipal storm drain system on Del Monte Boulevard, which discharges into Laguna Grande Lake. The City requires that post development runoff not exceed predevelopment runoff.

The Monterey Peninsula Water Management District must issue a water permit for any development or redevelopment activity that would involve the connection or modification of a connection to an existing water distribution system, such as the project. Due to below adequate levels of water on the Monterey Peninsula, the Seaside City Council is restricting the allocation of water it has received

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from the Monterey Peninsula Water Management District to specific high priority economic development projects, such as redevelopment projects like the project. The Monterey Peninsula Water Management District issued a water permit for the project⁴ with consent from the Seaside City Council. Water for the project would be supplied by California American Water Company (CAL-AM).

(8) Pedestrian/Bicycle Extension

An existing decomposed granite and partial asphalt pedestrian/bicycle trail borders Laguna Grande Regional Park and Lake and the southeastern project site boundary. The existing trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The project would extend the pedestrian/bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension would be made of decomposed granite. Portions of the existing pedestrian/bicycle trail within the project boundaries that are asphalt would be replaced with decomposed granite so that the pedestrian/bicycle trail would be cohesive throughout the project site. Two benches with trash receptacles would be placed along the pedestrian/bicycle trail- one at the northern edge of the project site where the pedestrian/bicycle trail tees and connects to the restaurant approximately half-way between the wooden pedestrian bridge and Del Monte Boulevard, and one at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake (refer to Figure 3, Conceptual Site Plan, in Appendix A).

The trail extension would provide pedestrian and bicycle access to the restaurant from Laguna Grande Regional Park and Lake, the adjacent hotel property to the northeast, and Del Monte Boulevard. The trail extension would also provide pedestrian and bicycle access from the restaurant to the trail around Laguna Grande Lake, as well as to the Monterey Bay Coastal Bike Trail, which is located along Del Monte Boulevard and which connects, via Canyon Del Rey Boulevard, to the coastal trail fronting the beach on the north side of SR-1.

D. Discretionary Actions

The discretionary actions required to be taken by the City as part of the project include:

- City Council approval of a Zoning Code amendment to Chapter 17.24, Commercial Zones, of the City's Zoning Code allowing drive-through retail uses.⁵
- City Council approval of a Zoning Code amendment to Chapter 17.24.070.E of the City's Zoning Code allowing development within 100 ft of Laguna Grande Lake to exceed 15 ft in height.¹
- City Council approval of a Zoning Code amendment to Chapter 17.24.070 of the City's Zoning Code allowing development within 0 ft to 20 ft of Laguna Grande Lake.¹
- City Council approval of a Development and Disposition Agreement (DDA) by the Redevelopment Agency of the City of Seaside conditioned on the subsequent approval of a Conditional Use Permit for a drive-through restaurant by the City Planning Commission.

⁴ This water permit remains valid for the proposed project.

⁵ If the updated LCP is certified by the Coastal Commission prior to approval of the proposed project, the Zoning Code Amendments would not be required for approval of the proposed project as the proposed project would be in compliance with the standards set forth in the updated LCP.

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- Review and approval by the City Planning Commission of a Conditional Use Permit for the development of an approximately 3,750 sf In-N-Out Burger Drive-Through Restaurant, including indoor dining, outdoor patio seating, and a drive-through facility.
- Review and approval of project site plans and elevations, lighting, and landscape plans by the City's BAR.

Additional approvals required by other agencies:

- California Coastal Commission Coastal Development Permit for portions of the project within the Coastal Zone (If the City's proposed LCP is certified by the Coastal Commission prior to certification of this FEIR, the project applicant would have the choice of applying for a CDP from the Coastal Commission or applying for a CDP from the City.)
- United States Army Corps of Engineers (Corps) Preconstruction Notification pursuant to Section 404 of the Clean Water Act (CWA).
- Regional Water Quality Control Board (RWQCB) Water Quality Certification pursuant to Section 401 of the CWA.
- California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (SAA) pursuant to Section 1602 of the Fish and Game Code.

The project was not approved by the City Council; however, the FEIR was certified in July of 2011.

3. The Previous FEIR

The previous FEIR analyzed the potential environmental impacts of the In-N-Out Burger Drive-Through Restaurant Project. The previous FEIR determined that the In-N-Out Burger Drive-Through Restaurant Project would not have the potential for creating a significant environmental effect on any environmental resource except for the following:

- **Aesthetics:** The project's exterior lighting sources have the potential to significantly impact the nighttime views from the adjacent Laguna Grande Lake and surrounding area. Implementation of a Final Lighting Plan ensuring that all exterior lighting would be unobtrusive, down-lit, and harmonious with the local area as determined by the City, and that all off-site glare would be fully controlled, would reduce potential impacts to less than significant levels.
- **Biological Resources:** The project has the potential to temporarily impact special-status species, riparian habitat, federally protected wetlands, or other sensitive natural communities during construction operations. Implementation of biotic habitat protection (including the retention of a qualified biologist to implement avoidance and minimization measures such as pre-construction nesting bird surveys, presence/absences surveys for California red-legged frogs, coast range newts, and burrowing owls, monitoring during construction, installation of barriers around sensitive habitats, and construction personnel training and education program) would reduce potential impacts to less than significant levels. Construction of the project would increase human and vehicular activity at the project site, which would negatively impact wildlife and wildlife habitat. Implementation of weed management and installation of signage instructing pedestrians to remain on the maintained trail would reduce potential impacts to less than significant levels.

- **Cultural Resources:** The project has the potential to impact previously unidentified historical or archaeological resources, paleontological resources, and human remains. In the unlikely event that one of these resources were discovered during construction, implementation of standard conditions (including halting work, professional evaluation of the situation, and appropriate treatment/handling of the discovery) would reduce potential impacts to less than significant levels.
- **Geology and Soils:** Structures and buildings associated with the project have the potential to be significantly impacted by strong seismic-related ground shaking, ground lurching, liquefaction, lateral spreading, subsidence, slope instability, and seismic settlement. Implementation of standard conditions (including designing all structures in accordance with the seismic parameters presented in the project-specific geotechnical engineering report and applicable section of the CBC) would reduce potential impacts to less than significant levels. Construction of the project has the potential to increase soil erosion on the project site. Implementation of standard conditions requiring the inclusion of erosion control measures (e.g., control of surface runoff, protection of exposed soils, and drainage diversion features on all project plans) would reduce potential impacts to less than significant levels.
- **Hazards and Hazardous Materials:** Construction of the project has the potential to create a significant hazard to the public or environment through accidental release of hazardous materials into the environment. A Phase I Environmental Site Assessment and a Supplemental Site Assessment Report were prepared for the project which identified contaminated soils and groundwater on the project site. Implementation of a site-specific Soil and Groundwater Management Plan would reduce potential impacts to less than significant levels. Development of the project (including site grading, excavation, and other land-disturbing activities) could result in the exposure of construction personnel or site occupants to health and safety risks from prior uses of the project site. Implementation of a site-specific Health and Safety Plan and periodic monitoring of grading activity by a qualified environmental professional would reduce potential impacts to less than significant levels.
- **Hydrology and Water Quality:** Construction of the project has the potential to violate water quality standards or waste discharge requirements. Implementation of an Erosion and Sediment Control Plan, a Storm Water Pollution Prevention Plan (SWPPP), and Best Management Practices (BMPs) for project construction and operations (including specific details about the type of garbage receptacles to be used at the project site, the frequency of garbage pickups, litter control, signage prohibiting the feeding of wildlife, and stormwater treatment within the project site) would reduce potential impacts to less than significant levels. The project would result in the placement of fill within the Federal Emergency Management Agency (FEMA) Zone AE boundary, which would reduce flood storage capacity on the project site. Approval of a Letter of Map Revision based on Fill (LOMR-F) from the City and FEMA prior to building occupancy would reduce potential impacts to less than significant.
- **Noise:** Construction and operational activities associated with the project have the potential to expose sensitive receptors to noise levels that exceed normally acceptable standards. Implementation of standard conditions that ensure the construction contractor implements noise reduction measures would reduce potential noise impacts associated with project construction to less than significant. The construction of a 6 ft barrier made out of concrete or other heavy solid material that runs the length of the entire southwest project boundary

would reduce potential noise impacts associated with project operations to less than significant.

- **Traffic and Transportation:** The project would exacerbate an existing deficiency at the Fremont Boulevard/Del Monte Boulevard and SR-1 southbound on-ramp/Del Monte Boulevard intersections. Furthermore, the project would contribute to a cumulative increase in traffic at the following already deficient intersections: Fremont Boulevard/Del Monte Boulevard intersection, SR-1 southbound on-ramp/Del Monte Boulevard, and Canyon del Rey Boulevard/SR-1 northbound ramps. No feasible mitigation measures were identified; therefore, these impacts were identified as significant and unavoidable.
- **Utilities and Service Systems:** The project would require a new or expanded supply of water and associated treatment facilities, the provision of which would potentially cause significant environmental impacts. Providing the City with verification from CAL-AM that CAL-AM has the legal authority and physical capacity to provide water to the project would reduce potential impacts to less than significant levels.

4. Actions Subsequent to the Certification of the FEIR

The previous FEIR was certified in July of 2011; however, the City Council did not approve the In-N-Out Burger Drive-Through Restaurant Project at that time. At the time the previous FEIR was certified, the City did not have an LCP that was certified by the Coastal Commission. A portion of the previous project is within the Coastal Zone. The Coastal Commission certified the City's LCP in June 2013. Additionally, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032) in July 2013. The Post-Construction Requirements became effective on March 6, 2014 and mandate that development projects use Low Impact Development (LID) BMPs, which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. Therefore, the project is required to comply with the Post-Construction Requirements to implement LID BMPs and infiltrate stormwater runoff on-site.

Therefore, In-N-Out Burger has modified the previous project to address policy and regulatory changes contained within the certified LCP as well as post-construction requirements for implementation of LID BMPs and infiltration of stormwater runoff on-site. In-N-Out submitted a new application to the City for consideration. A Phase II Environmental Site Assessment was prepared for the project site in February of 2015, as described in Section 8 under Hydrology and Water Quality. The modifications and revisions to the previous project description, as specified in the new application, include the following:

- Removal of one parking space and the addition of one RV parking space. The proposed project now includes 53 parking spaces and 1 RV parking space.
- Addition of five benches with trash receptacles in the following locations:
 - Two benches along the southeastern edge of the project site adjacent to Laguna Grande Lake;
 - One bench on the southwestern edge of the project site at the northern extension of the pathway where it ends in the parking lot;

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- One bench along the east side of the property, south of the wood bridge; and
- One additional bench at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake.
- Removal of one 14 x 11 ft red-and-yellow cabinet wall sign on the west side of the easternmost entrance off of Del Monte Boulevard.
- Replacement of the four lampposts with double-head lights along the drive-through service area with single-head lights, and removal of the two lampposts with double-head lights along the building entrance.
- Addition of a series of biofiltration planters for stormwater capture, treatment, retention, and infiltration to replace the previously proposed BMPs (vegetated swale or catch basin filter insert).

As a result of the modifications and revisions to the previous project description, the discretionary actions required as part of the proposed project have also changed. Changes to the required discretionary actions include the following:

- Previously required discretionary actions that are no longer necessary include:
 - City Council approval of Zoning Code Amendments to Chapter 17.24
 - City Council approval of a Development and Disposition Agreement (DDA)
- Discretionary actions that are still required as part of the proposed project include:
 - Review and approval by the City Planning Commission of a Conditional Use Permit
 - Coastal Development Permit
 - Review and approval of the proposed project site plans and elevations, lighting, and landscape plans by the City's BAR
 - United States Army Corps of Engineers Preconstruction Notification
 - Regional Water Quality Control Board Water Quality Certification
 - California Department of Fish and Wildlife Lake and Streambed Alteration Agreement

In response to the revised application, this Addendum to the FEIR was prepared to consider the impacts associated with the modifications and changes to the In-N-Out Burger Drive-Through Restaurant Project. This Addendum focuses on the changes between the project as evaluated in the previously certified FEIR and the modifications to the site plan, including parking, benches, signs, lighting, and drainage as discussed above (refer to site plan figures provided in Appendix B).

5. Project Changes Addressed in this Addendum

As previously stated, the project is the In-N-Out Burger Drive-Through Restaurant Project. This project is the same as the previous In-N-Out Burger Drive-Through Restaurant Project, except for the modifications to the site plan that include parking, benches, signs, and lighting. Specifically, the application that is pending now would change the project from what was previously approved in the following ways:

- **Parking:** One parking space has been removed and one RV parking space has been added. The proposed project now includes 53 parking spaces and 1 RV parking space.
- **Benches:** Five benches with trash receptacles have been added in the following locations:
 - Two benches have been added along the southeastern edge of the project site adjacent to Laguna Grande Lake;
 - One bench has been added on the southwestern edge of the project site at the northern extension of the pathway where it ends in the parking lot;
 - One bench has been added along the east side of the property, south of the wood bridge; and
 - One additional bench has been added at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake.
- **Signs:** One 14 x 11 ft red-and-yellow cabinet wall sign on the west side of the easternmost entrance off of Del Monte Boulevard has been removed.
- **Lighting:** The four lampposts with double-head lights along the drive-through service area have been replaced with single-head lights, and the two lampposts with double-head lights along the building entrance have been removed.
- **Stormwater BMPs:** The previously proposed BMPs (vegetated swale or catch basin insert) have been replaced with a series of biofiltration planters to capture, treat, retain, and infiltrate stormwater runoff.

6. Required Findings for Use of an Addendum

Section 15164 of the State CEQA Guidelines states that an Addendum to an earlier adopted Mitigated Negative Declaration (MND) or certified EIR shall be prepared if some changes or additions are necessary to the previously adopted document, but none of the conditions described in Section 15162 calling for preparation of a subsequent MND or EIR have occurred. Section 15162 of the State CEQA Guidelines identifies the conditions that require preparation of a subsequent EIR. A proposed change in a project will require preparation of a subsequent environmental document if:

- A. *The change in the project is substantial.*

Substantial changes in the project are those that would require major revision of the previous environmental document due to the involvement of new significant environmental effects, or if a substantial increase in the severity of previously identified significant effects has occurred.

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- B. The circumstances under which the project is undertaken have substantially changed.*

Substantial changes in circumstances are those defined as those that would require major revisions of the previous environmental document in order to describe and analyze new significant environmental effects, or any changes that would cause a substantial increase in the severity of the previously identified significant effects.

- C. New information of substantial importance, which was not known and could not have been known, with the exercise of reasonable diligence at the time the previous environmental document was approved, shows:*

- (1) The project will have one or more significant effects not discussed in the previous environmental document;
- (2) The significant effects previously examined will be substantially more severe than identified in the previous environmental document;
- (3) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or
- (4) Mitigation measures or alternatives that are considerably different from those analyzed in the previous environmental document would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

If none of the above conditions are met, the City may prepare an Addendum in order to make minor changes to the previously certified EIR and to document the City's analysis as to why no further environmental review is required.

In performing the required analysis and determining that the criteria is met for use of an Addendum, this Addendum relies on use of a Modified Environmental Checklist Form, as suggested in Section 15063(d)(3) of the State CEQA Guidelines. Section 8 of this document contains the Modified Environmental Checklist Form and explains the basis for each response to the questions on that Form. This Addendum has evaluated each of the changes to the In-N-Out Burger Drive-Through Restaurant Project between the version in the 2011 certified FEIR and the version now presented, and measures the impacts of those changes against the checklist of questions presented in Section 8 of this document.

Based on differences between the project description within the previously certified FEIR and the proposed project as described above and the accompanying environmental analysis of these differences in this Addendum, there is no evidence that the proposed project requires major changes to the previously certified FEIR pursuant to Section 15164 of the CEQA Guidelines. Comparison of the previous project with the proposed project, as described in Section 5 of this document, indicates there are no new significant environmental impacts associated with implementation of the In-N-Out Burger Drive-Through Restaurant Project. In addition, there is no substantial evidence that the circumstances under which the project is undertaken have substantially changed, and there is no evidence of new or more severe environmental impacts arising out of the proposed changes to the In-N-Out Burger Drive-Through Restaurant Project.

7. Evaluation of Environmental Impacts

As indicated above, the Modified Environmental Checklist Form included in Section 8 of this Addendum was used to identify the potential environmental effects of the proposed project changes. Each project change was referenced against the standard environmental categories listed in Appendix G of the State CEQA Guidelines. A summary of the proposed project changes, the resulting potential impacts, and the reasons why an Addendum is appropriate in this situation are set forth below.

The following modifications and revisions have been made to the site plan for the proposed project:

- One parking space has been removed and one RV parking space has been added to the proposed project. The proposed project now includes 53 parking spaces and 1 RV parking space.
- Five benches with trash receptacles have been added to the proposed project in the following locations:
 - Two benches have been added along the southeastern edge of the project site adjacent to Laguna Grande Lake;
 - One bench has been added on the southwestern edge of the project site at the northern extension of the pathway where it ends in the parking lot;
 - One bench has been added along the east side of the property, south of the wood bridge; and
 - One additional bench has been added at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake.
- One 14 x 11 ft red-and-yellow cabinet wall sign on the west side of the easternmost entrance off of Del Monte Boulevard has been removed from the proposed project.
- The four lampposts with double-head lights along the drive-through service area have been replaced with single-head lights, and the two lampposts with double-head lights along the building entrance have been removed from the proposed project.
- The previously proposed BMPs (vegetated swale or catch basin insert) have been replaced with a series of biofiltration planters to capture, treat, retain, and infiltrate stormwater runoff.

Per CEQA Guidelines Section 15382, a significant effect on the environment is defined as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” The minor modifications and revisions to the site plan described above would not result in a change to the physical environmental conditions of the proposed project site and therefore would not change the environmental impact conclusions of the previously certified FEIR. None of the conditions described in Section 15162 of the CEQA Guidelines calling for preparation of a subsequent MND or EIR have occurred; therefore, an Addendum is the appropriate environmental document to address the minor modifications and revisions to the In-N-Out Burger Drive-Through Restaurant Project.

8. Modified Environmental Checklist Form

This Checklist Form is used to compare the anticipated environmental effects of the project with those disclosed in the previous FEIR and to review whether any of the conditions set forth in Section 15162 of the State CEQA Guidelines requiring preparation of a subsequent environmental document are met. The Form is used to review the potential environmental effects of the proposed project for each of the following areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems
- Mandatory Findings of Significance

There are six possible responses to each of the questions included on the Form:

A. Substantial Change in Project Requiring Major Revision of Previous EIR

This response is used when the project has changed to such an extent that major revisions of the previous EIR are required due to the involvement of new significant environmental effects or an increase in the severity of the previously identified significant effects.

B. Substantial Change in Circumstances under which Project is Undertaken Requiring Major Revision of Previous EIR

This response is used when the circumstances under which the project is undertaken have changed to such an extent that major revisions of the previous EIR are required because such changes would result in the project having new significant environmental effects or would substantially increase the severity of the previously identified significant effects.

C. New Information of Substantial Importance Showing New or Greater Significant Effects Than Identified in Previous EIR

This response is used when new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted, shows that the project would have a new significant environmental effect or more severe significant effect than identified in the previous EIR.

D. New Information of Substantial Importance Showing Ability to Substantially Reduce Significant Impacts Identified in Previous EIR

This response is used when new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted, shows:

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1. The significant environmental effects of the project could be substantially reduced through imposition of mitigation measures or alternatives that although previously found to be infeasible are in fact now feasible, but the project proponent declines to adopt them; or
2. The significant environmental effects of the project could be substantially reduced through imposition of mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR, but the project proponent declines to adopt them.

E. Less Than Significant Impact/No Changes or Circumstances and No New Information That Would Require the Preparation of a New EIR

This response is used when: (1) the potential impact of the project is determined to be below known or measurable thresholds of significance and would not require mitigation; or (2) there are no changes in the project or circumstances and no new information that would require the preparation of a new EIR and/or EIR pursuant to Public Resources Code Section 21166 and Section 15162 of the State CEQA Guidelines.

F. No Impact

This response is used when the proposed project does not have any measurable environmental impact.

The Form and accompanying evaluation of the responses provide the information and analysis upon which the City of Seaside makes its determination that no subsequent environmental document is required for the In-N-Out Burger Drive-Through Restaurant Project.

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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1. AESTHETICS. Would the project:						
a) Have a substantial adverse effect on a scenic vista?					X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?					X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?					X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?					X	
The previously certified FEIR concluded that the proposed project: • Would not result in a substantial adverse effect on a scenic vista; • Is not located within a State Scenic Highway corridor or route nor would it damage any individual scenic resources; • Would not substantially degrade the existing visual character or quality of the site and its surroundings; and • Would not have a cumulatively considerable impact on aesthetics in the project area. The previously certified FEIR concluded that the proposed project's exterior lighting sources would have the potential to significantly impact the nighttime views from the adjacent Laguna Grande Lake and surrounding area. As described in the previously certified FEIR, mitigation including implementation of a Final Lighting Plan ensuring that all exterior lighting would be unobtrusive, down-lit, and harmonious with the local area as determined by the City and that all off-site glare would be fully controlled would reduce these potential impacts to less than significant levels. The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with aesthetics. The replacement of double-head lights with single-head lights may result in a minor reduction in the off-site glare but not to such an extent that it would eliminate the need for the prescribed mitigation measure to address exterior lighting on the project site. The minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on aesthetics, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds: - Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred; - New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and - None of the proposed project changes would significantly affect this environmental resource.						

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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2. AGRICULTURE RESOURCES. Would the project:

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?						X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?						X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?						X

As concluded in the previously certified FEIR, the proposed project site, zoned Regional Commercial, is currently vacant and was a previously filled and otherwise disturbed lot in an urbanized area of the City. There are no agricultural resources located on or near the proposed project site. The previously certified FEIR concluded that the proposed project would not:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural uses;
- Conflict with any existing zoning for agricultural use or a Williamson Act contract; and
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with agricultural resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on agricultural resources. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

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:

a) Conflict with or obstruct implementation of the applicable air quality plan?					X	
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Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					X	
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)?					X	
d) Expose sensitive receptors to substantial pollutant concentrations?						X
e) Create objectionable odors affecting a substantial number of people?					X	

GREENHOUSE GAS EMISSIONS. Would the project:

f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?					X	
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?					X	

The previously certified FEIR concluded that the proposed project is consistent with the policies outlined in the City's General Plan and the Monterey Bay Unified Air Pollution Control District (MBUAPCD) 2008 Air Quality Management Plan and that emissions generated during construction would be below MBUAPCD thresholds of significance. The proposed project would implement standard dust control measures and standard air pollution reduction measures during construction to ensure that project-related impacts to air quality remain below the level of significance.

The previously certified FEIR concluded that:

- Long-term operation of the proposed project would not exceed MBUAPCD daily emissions thresholds for any criteria pollutant for which the project region is in non-attainment;
- The proposed project is not located in an area of known naturally occurring asbestos and would not expose sensitive receptors to substantial concentrations of naturally occurring asbestos or other pollutants;
- The proposed project would not generate odors that would result in injury, nuisance or annoyance to a considerable number of persons or endanger the comfort, health or safety of the public. Although construction activities could result in some short-term odors, they would not be significant;
- The proposed project would not generate GHG emissions, either directly or indirectly, that might have a significant impact on the environment;
- The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases; and

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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- The proposed project would not contribute significantly to cumulative impacts associated with air quality.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with air quality or greenhouse gas emissions. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on air quality and greenhouse gases, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

4. BIOLOGICAL RESOURCES. Would the project:

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?					X	
b) Have 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?					X	
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?						X
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?					X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?						X

In-N-Out Burger Drive-Through Restaurant

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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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?						X
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The previously certified FEIR concluded that the proposed project has the potential to temporarily impact special-status species, riparian habitat, federally protected wetlands, and temporarily disturb wildlife movements during construction. Implementation of the proposed project would increase human and vehicular activity at the proposed project site, which would negatively impact wildlife and wildlife habitat. As described in the previously certified FEIR, mitigation (including biotic habitat protection, biological monitoring during construction, construction employee education programs, and preconstruction surveys) would reduce these potential impacts to less than significant levels.

Furthermore, the previously certified FEIR concluded that the proposed project would not:

- Have a substantial permanent adverse effect on federally protected wetlands or other jurisdictional waters;
- Conflict with the Conservation/Open Space Element or the City's Tree Ordinance;
- Conflict with adopted Habitat Conservation Plans or Natural Community Conservation Plans for the proposed project site since none currently exist; or
- Contribute significantly to cumulative impacts associated with biological resources.

The previously certified FEIR concluded that the proposed project would conflict with the Zoning Code that requires 20 ft setbacks from riparian vegetation; therefore, the previous project required a zoning code amendment. However, the proposed project is consistent with all required setbacks prescribed in the City's 2013 LCP. Therefore, a zoning code amendment is no longer required as part of the proposed project.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with biological resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on biological resources, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

5. CULTURAL RESOURCES. Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines?					X	
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In-N-Out Burger Drive-Through Restaurant

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines?					X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?					X	
d) Disturb any human remains, including those interred outside of formal cemeteries?					X	

The previously certified FEIR concluded that implementation of the proposed project has the potential to impact previously unidentified historic, archaeological, and paleontological resources or previously unidentified human remains, although considered unlikely. As described in the previously certified FEIR, these potential impacts would be reduced to less than significant levels with implementation of standard conditions that specify procedures to be followed should an unidentified resource be discovered during construction. Furthermore, the previously certified FEIR concluded that the proposed project would not have a considerable contribution to cumulative impacts on known historical, archeological, or paleontological resources or human remains.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with cultural resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on cultural resources, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

6. GEOLOGY AND SOILS. Would the project:

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 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.					X	
ii) Strong seismic ground shaking?					X	

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iii) Seismic-related ground failure, including liquefaction?					X	
iv) Landslides?					X	
b) Result in substantial soil erosion or the loss of topsoil?					X	
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?					X	
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property?					X	
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?					X	

The previously certified FEIR concluded that:

- The proposed project is not located in a currently designated Alquist-Priolo Earthquake zone and therefore would not result in significant impacts resulting from fault rupture on the proposed project site;
- The structures and buildings associated with the proposed project have the potential to be significantly impacted by strong seismic-related ground shaking and ground lurching;
- The structures and buildings associated with the proposed project have the potential to be significantly impacted by liquefaction, lateral spreading, subsidence, slope instability, and seismic settlement;
- The potential for landslides to impact the proposed project is low;
- The construction of the proposed project has the potential to increase soil erosion on the proposed project site;
- The proposed project site consists predominantly of nonplastic and silty sands having a low potential for expansion;
- The proposed project design would be consistent with the City of Seaside General Plan Safety Element pertaining to geologic and seismic hazards; and
- The proposed project would not contribute significantly to cumulative impacts associated with geologic and soil hazards.

As described in the previously certified FEIR, implementation of standard conditions (including compliance with the CBC and seismic standards; review and approval of the proposed project's building plans by a soils engineer to ensure the potentials for liquefaction, cyclic softening, lateral spreading, and soil settlement have been addressed; and implementation of standard erosion control measures) would reduce these potential impacts to less than significant levels.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-

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head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with geology and soils. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on geology and soils, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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7. HAZARDS AND HAZARDOUS MATERIALS. Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					X	
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?					X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school?						X
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?					X	
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?						X
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?						X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?					X	
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?						X

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The previously certified FEIR concluded that:

- The proposed project would not create a significant hazard to the public or environment through routine transport, use, or disposal of hazardous materials;
- Construction of the proposed project has the potential to create a significant hazard to the public or environment through accidental release of hazardous materials into the environment;
- The proposed project would not result in significant impacts related to the emission or handling of hazardous substances near a school;
- Development of the proposed project, including site grading, excavation, and other land-disturbing activities, could result in the exposure of construction personnel or site occupants to health and safety risks from prior uses of the proposed project site;
- The proposed project would not result in impacts to airport operations or create airport-related safety hazards;
- The proposed project is not within the vicinity of a private airstrip and would not result in impacts to airport operations or create airport-related safety hazards;
- No impacts to emergency vehicle access at the proposed project site are anticipated, and impacts associated with Emergency Response and Evacuation Plans would not be significant;
- The proposed project site does not lie within or adjacent to a wildland area, and there is no potential for the proposed project to create a risk of wildland fires or to be affected by a wildland fire; and
- The proposed project would not have a significant contribution to cumulative impacts associated with hazards and hazardous materials.

As described in the previously certified FEIR, implementation of mitigation including preparation of a Soil and Groundwater Management Plan and a Health and Safety Plan, and periodic monitoring of grading activity during construction by an environmental professional, would reduce potential impacts to less than significant levels.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with hazards and hazardous materials. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on hazards and hazardous materials, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would affect this environmental resource.

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8. HYDROLOGY AND WATER QUALITY. Would the project:						
a) Violate any water quality standards or waste discharge requirements?					X	
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 able level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?					X	
c) Substantially alter the existing drainage pattern of the site or areas 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?					X	
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?					X	
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?					X	
f) Otherwise substantially degrade water quality?					X	
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?						X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?					X	
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?						X
j) Inundation by seiche, tsunami, or mudflow?					X	

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The previously certified FEIR concluded that:

- Construction of the proposed project has the potential to violate water quality standards or waste discharge requirements;
- The proposed project would have a significant impact on water quality if pollutants in post-project operation storm water discharges were not controlled to the maximum extent through BMPs;
- Implementation of the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge;
- The proposed project would not substantially alter the existing drainage pattern of the proposed project site with the proposed storm water drainage system;
- The proposed project would not create or contribute runoff water exceeding the capacity of the municipal storm water drainage system;
- Dewatering may be necessary due to shallow groundwater levels. Handling of extracted water must be tested prior to disposal due to the low levels of petroleum hydrocarbons detected in groundwater below the site;
- The proposed project would not place housing within a 100-year flood hazard area;
- The proposed project would result in the placement of fill within the FEMA Zone AE boundary, which would reduce flood storage capacity on the proposed project site;
- There is no risk of levee or dam failure upstream of the proposed project site because these types of flood control facilities have not been constructed along Canyon Del Rey Creek;
- Although, the proposed project would be subject to inundation by a tsunami, the risks are less than significant because of the existing emergency planning mechanisms implemented by the City of Seaside; and
- The proposed project would not contribute to cumulative impacts associated with hydrology and water quality.

As described in the previously certified FEIR, implementation of mitigation (including preparation of an Erosion and Sediment Control Plan and a SWPPP along with implementation of BMPs for project operations) would reduce potential impacts to less than significant levels.

As noted previously, the project FEIR was certified in 2011. On July 12, 2013, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032). The Post-Construction Requirements became effective on March 6, 2014 and mandate that development projects use Low Impact Development (LID) BMPs, which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. These Post Construction Requirements are referenced in Section 2.7.G.5 of the City's CIP. Therefore, the project is required to comply with the Post-Construction Requirements to implement LID BMPs and infiltrate stormwater runoff on-site.

When the project FEIR was certified in 2011, infiltrating stormwater runoff on site was deemed inappropriate to avoid mobilization of contaminated soils and groundwater. However, a Phase II Environmental Site Assessment was prepared for the project site in February of 2015, which determined that the low levels of contamination in the existing soils and groundwater would not present a public or environmental health risk if stormwater was infiltrated on-site. Given this information and the fact that the Central Coast Regional Water Quality Control Board (CCRWQCB) is requiring that all development implement LID Best Management Practices and the Monterey County Department of Health has concurred with the CCRWQCB's direction (refer to Appendix D, Letters from the CCRWQCB and the Monterey County Department of Health), the Project Applicant has prepared a revised stormwater control plan that complies with the Monterey Regional Stormwater Management Program, including the Post-Construction Requirements.

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Post construction, stormwater runoff will be retained and infiltrated on-site for storm events up to the 95th percentile rainfall event. The stormwater control plan will rely on a series of biofiltration planters to capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots), remove pollutants from runoff, and retain and infiltrate the runoff. Consistent with the BMPs identified in the certified FEIR, implementation of the 2013 post construction requirements including LID BMPs and stormwater runoff infiltration would reduce potential impacts to less than significant levels. Compliance with the 2013 post construction requirements would not result in a change to the significance conclusions associated with hydrology and water quality. The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) and compliance with the 2013 post construction requirements would not result in a change to the significance conclusions associated with hydrology and water quality. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on hydrology and water quality, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

9. LAND USE AND PLANNING. Would the project:

a) Physically divide an established community?						X
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?						X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?						X

A portion of the previous (and current) project is within the Coastal Zone. Because a majority of the proposed project's restaurant building, outdoor dining, surface parking, landscaping, proposed extension of a pedestrian and bicycle trail, and the entire drive-through service area are proposed for the portion of the project site that is within the Coastal Zone, for planning purposes, it was assumed that the entire project site was in the Coastal Zone.

The FEIR for the previous project was certified in July of 2011. At that time, the City did not have a certified LCP. The Coastal Commission certified the City's LCP in June 2013.

Because the LCP had not yet been approved by the Coastal Commission at the time the previous FEIR was certified, the previous project was assessed based on the goals, policies, and regulations provided in the City of Seaside's General Plan (2004) and Title 17 of the City's Municipal Code.

Title 17 of the City's Municipal Code contains the City's Zoning Code. Title 17 designated the project site as CRG. The previous

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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project would have required the following Zoning Code Amendments in order to be approved:

- **Title 17, Table 2-4, Allowable Uses and Permit Requirements for Commercial Zones:** Drive-through services within the CRG zone are limited to establishments existing in the City prior to December 2006. Therefore, an amendment to the existing Zoning Code allowing a drive-through restaurant at the project site would have been required.
- **Section 17.24.070D:** According to Section 17.24.070D, developments within the CRG zone and Coastal Zone and adjacent to Roberts Lake and Laguna Grande Lake are required to be set back a minimum of 50 ft from the marsh or riparian vegetation. While this setback may be reduced to 20 ft where recreational trails and/or nature observation platforms or piers are proposed, portions of the pedestrian/bicycle trail and landscape areas are within 0–20 ft of the riparian vegetation of Laguna Grande Lake. Therefore, the previous project would have violated the City's setback requirements and required a Zoning Code amendment in order to allow development within 20 ft of the riparian vegetation of Laguna Grande Lake.
- **Section 17.24.070E:** According to Section 17.24.070DE, structures within 100 ft of Laguna Grande Lake cannot exceed a maximum height of 15 ft. The height of the main building of the previous project was designed to be 20 ft, and the three architectural towers on three sides of the building were designed to be 29 ft tall each. Both the main building and the architectural towers would have exceeded the City's height limit within 100 ft of Laguna Grande Lake. Therefore, the previous project would have violated the City's height requirements and required a zoning amendment in order to allow the main building to be 20 ft tall and the architectural towers to be 29 ft tall within 100 ft of Laguna Grande Lake.

As noted above, the Coastal Commission certified the City's LCP in June 2013. An LCP consists of two major parts: the LUP and the CIP. Whereas the LUP designates the kinds, location, and intensity of land and water uses and presents applicable resource protection and development policies, the CIP provides development regulations for specific Coastal Zone activities needed to carry out the LUP. The CIP is referred to as Title 18, Zoning Ordinance for the City of Seaside (Applicable to Areas Within the Coastal Zone), and applies to all development within the Coastal Zone.

According to Title 18:

- Drive-through restaurants would be considered a conditionally permitted use within the zoning designation Coastal Visitor-Serving Commercial (CVSC), as identified in Figure 1a (Coastal Zoning Map) in the City's CIP;
- Allowable building heights within 100 ft of Laguna Grande Lake would be increased to a maximum height of 20 ft, with allowances for architectural features up to a maximum height of 30 ft; and
- Buffers and setbacks would be a minimum of 50 ft from wetland/riparian areas, but smaller setbacks would be allowed for the development of recreational trails and/or nature observation platforms based on site constraints.

The In-N-Out Burger Drive-Through Restaurant Project is consistent with the City's certified LCP (refer to Appendix C for a full analysis of the project's consistency with the LCP's LUP and CIP and a report addressing the proposed project with regard to Sea Level Rise) and would not require any zoning code amendments. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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10. MINERAL RESOURCES. Would the project:

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?						X
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?						X

The previously certified FEIR concluded that:

- No mineral resources have been identified at the proposed project site;
- There are no known mineral resources within the proposed project area;
- Implementation of the proposed project would not result in the loss or availability of a known mineral resource that would be of value to the region and the residents of the State of California; and
- Implementation of the proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated in the local LUP.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with mineral resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on mineral resources. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

11. NOISE. Would the project result in:

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?					X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?						X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?					X	

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
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?						X
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?						X

The previously certified FEIR concluded that:

- Construction and operational activities associated with the proposed project have the potential to expose sensitive receptors to noise levels that exceed normally acceptable standards;
- Operation of the proposed project would not result in excessive ground-borne vibration or ground-borne noise levels;
- Construction activities could temporarily expose noise-sensitive residential uses to perceptible ground-borne vibration or noise levels;
- The proposed project would not result in a substantial permanent increase in ambient traffic noise levels;
- On-site noise from parking lot and delivery activities could reach up to 76 dBA L_{max} (maximum instantaneous noise level measured in A-weighted decibels);
- The proposed project would not result in a substantial temporary or periodic increase in ambient noise levels due to limits of construction hours specified in the City's Municipal Code;
- The proposed project is not within the vicinity of a private airstrip; and
- The proposed project would not have a substantial contribution to cumulative impacts associated with traffic and stationary noise sources.

As described in the previously certified FEIR, implementation of mitigation (including implementation of standard construction noise reduction measures and construction of a 6 ft sound barrier along the length of the entire southwest project boundary) would reduce potential impacts to less than significant levels.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with noise. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on noise, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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the severity of previously identified significant effects have not occurred; B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and C. None of the proposed project changes would significantly affect this environmental resource.
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12. POPULATION AND HOUSING. Would the project:

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)?						X
b) Displace substantial numbers of existing housing, necessitating the construction of the replacement housing elsewhere?						X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?						X

The previously certified FEIR concluded that the proposed project would not:

- Induce substantial population grown in the area, either directly or indirectly;
- Displace substantial numbers of existing housing, thereby necessitating the construction of the replacement housing elsewhere; and
- Displace substantial numbers of people, thereby necessitating the construction of replacement housing elsewhere.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with population and housing. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on population and housing. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

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13. PUBLIC SERVICES

a) 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:?						
i) Fire protection?					X	
ii) Police protection?					X	
iii) Schools?						X
iv) Parks?					X	
v) Other public facilities?						X

The previously certified FEIR concluded that the proposed project would not result in the need for additional government facilities, the construction of which would cause a significant environmental impact, in order to maintain acceptable service ratios and response times or meet other performance objectives for fire protection, police protection, public schools, public parks, or other public facilities. Furthermore, the proposed project would not contribute to cumulative impacts associated with the provision of public services. The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with public services. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on public services. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

14. RECREATION.

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?					X	
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In-N-Out Burger Drive-Through Restaurant

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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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?					X	
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The previously certified FEIR concluded that the proposed project's construction of a pedestrian/bicycle trail connecting the existing pedestrian/bicycle trail that borders Laguna Grande Regional Park and Lake with the sidewalk along Del Monte Boulevard would enhance public access to recreational and riparian coastal resources by linking the Monterey Bay Coastal Bike Trail along Del Monte Boulevard with the pedestrian/bicycle trail around the Laguna Grande Regional Park and Lake. Furthermore, because the proposed trail would be located in primarily ruderal (disturbed) habitat, its construction would not result in a significant physical impact. The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with recreational resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on recreation. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

15. TRANSPORTATION/TRAFFIC. Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?					X	
b) Exceed either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?						X
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?						X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?					X	
e) Result in inadequate emergency access?						X

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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f) Result in inadequate parking capacity?					X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?						X

As part of this Addendum, a new *Traffic Impact Analysis* (TIA) (refer to Appendix E) including new traffic counts at 17 intersections within the study area was prepared. The new TIA concluded that the proposed project would have the same traffic impacts as those identified in the previously certified FEIR, with the exception of the following two impacts which would be eliminated under the proposed project:

- There are currently no impacts at the Canyon Del Rey Boulevard/SR-1 northbound ramp intersection where previously there was a cumulatively significant and unavoidable impact because the intersection was previously operating at a deficient level of service (LOS) in the existing condition, and the addition of any project traffic to an intersection that is already operating at a deficient LOS is considered significant. Currently, however, the intersection is no longer operating at a deficient LOS as stated in the new TIA, and the addition of project traffic to this intersection would not result in a deficient LOS. Therefore, there is no longer a cumulatively significant and unavoidable impact at the Canyon Del Rey Boulevard/SR-1 northbound ramp intersection.
- The full-access driveway at which the previous TIA identified a deficiency (LOS F) for the outbound movements (combined left turns and right turns) has improved to satisfactory LOS E because the new traffic counts show slightly lower volumes along Del Monte Boulevard in 2014 vs. 2010.

Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred.
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified.
- None of the proposed project changes would affect this environmental resource.

16. UTILITIES AND SERVICE SYSTEMS. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					X	
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?					X	
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?					X	

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?					X	
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?					X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?						X

The previously certified FEIR concluded that the proposed project:

- Would not exceed wastewater treatment requirements of the applicable RWQCB;
- Would not require or result in the construction of new wastewater treatment facilities or an expansion of existing facilities;
- Would not require the construction of new municipal storm water drainage facilities or an expansion of existing facilities;
- Would require a new or expanded supply of water and associated treatment facilities, the provision of which would potentially cause significant environmental impacts;
- Is in compliance with all federal, State, and local statutes and regulation related to solid waste;
- Would not contribute to cumulative impacts associated with the provision of wastewater treatment facilities or solid waste disposal facilities; and
- Would require a new or expanded supply of water and associated treatment facilities, the provision of which would potentially be cumulatively considerable.

As stated in the previously certified FEIR, a water permit for the proposed project was issued by the Monterey Peninsula Water Management District with consent from the Seaside City Council. This water permit remains valid for the proposed project. Water for the proposed project would be supplied by CAL-AM.

Furthermore, the previously certified FEIR concluded there is adequate capacity at the wastewater treatment facility to serve the proposed project and that the Marine Sanitary Landfill has adequate capacity to accommodate the proposed project's solid waste disposal needs.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with utilities and service systems. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on utilities and service systems. Therefore, the City finds:

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would affect this environmental resource.

17. MANDATORY FINDINGS OF SIGNIFICANCE:

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?					X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?					X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?					X	

The previously certified FEIR considered the impacts of the proposed project on special-status species and cultural resources. The previously certified FEIR concluded that the proposed project has the potential to temporarily impact special-status species, riparian habitat, federally protected wetlands, and temporarily disturb wildlife movements during construction. Implementation of the proposed project would increase human and vehicular activity at the proposed project site, which would negatively impact wildlife and wildlife habitat. In addition, implementation of the proposed project has the potential to impact previously unidentified historic, archaeological, and paleontological resources or previously unidentified human remains, although it is considered unlikely. As mentioned in the previously certified FEIR, these potential impacts would be reduced to less than significant levels with implementation of standard conditions and mitigation. The revisions contemplated in this modified project do not change the intended outcomes and thus do not change the likely cumulative impacts of the project. The changes made to the In-N-Out Burger Drive-Through Restaurant Project would not result in a change to the physical environmental conditions of the proposed project site; therefore, there is no anticipated change in the impacts to biological resources and no anticipated change to the project's contribution to cumulative impacts. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

APPENDIX A

Previously Certified FEIR Figures

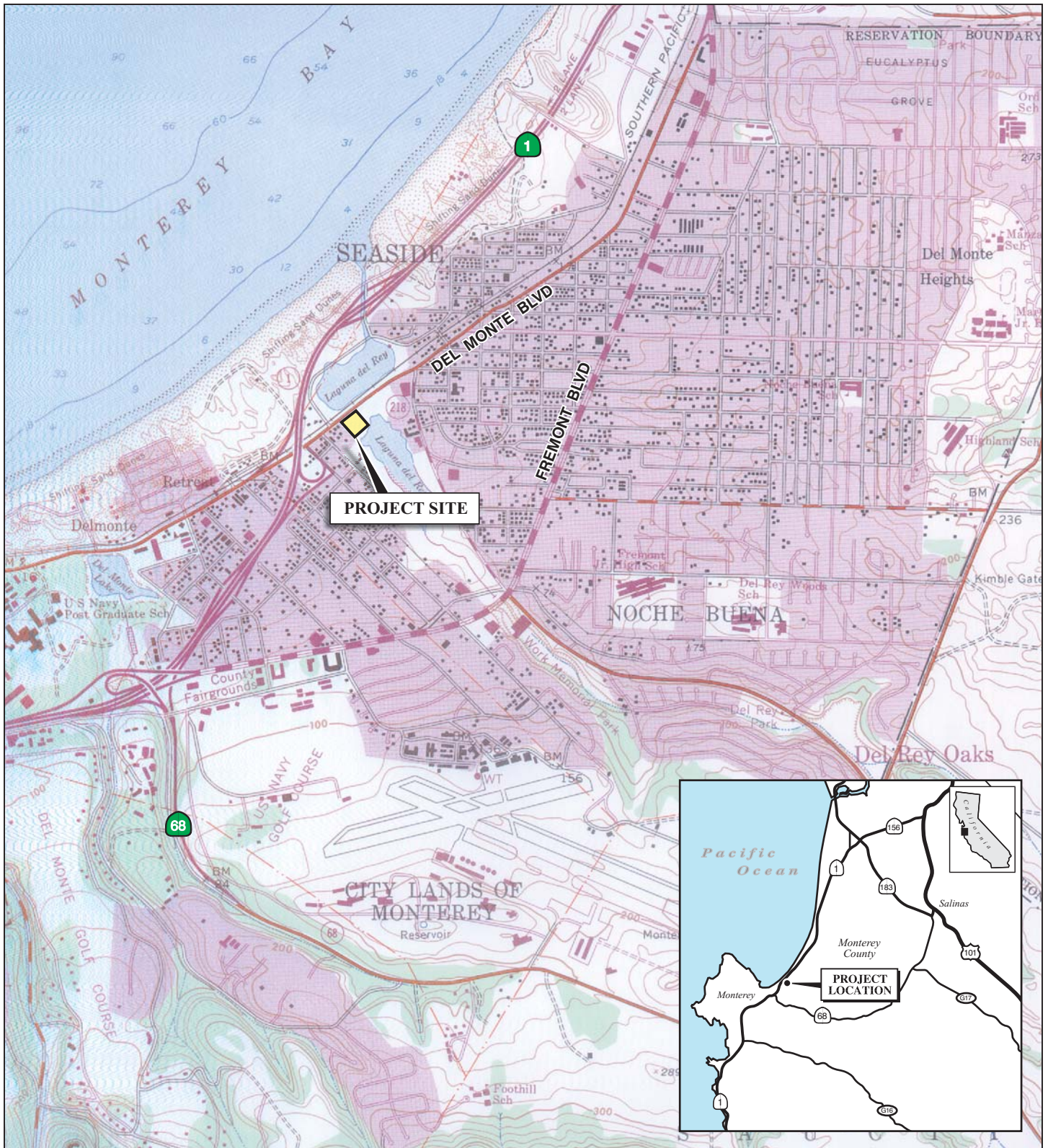


FIGURE 1

LSA



0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Seaside, Ca.

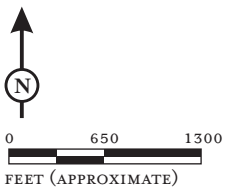
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In-N-Out Burger Drive-Through Restaurant EIR
Project Location

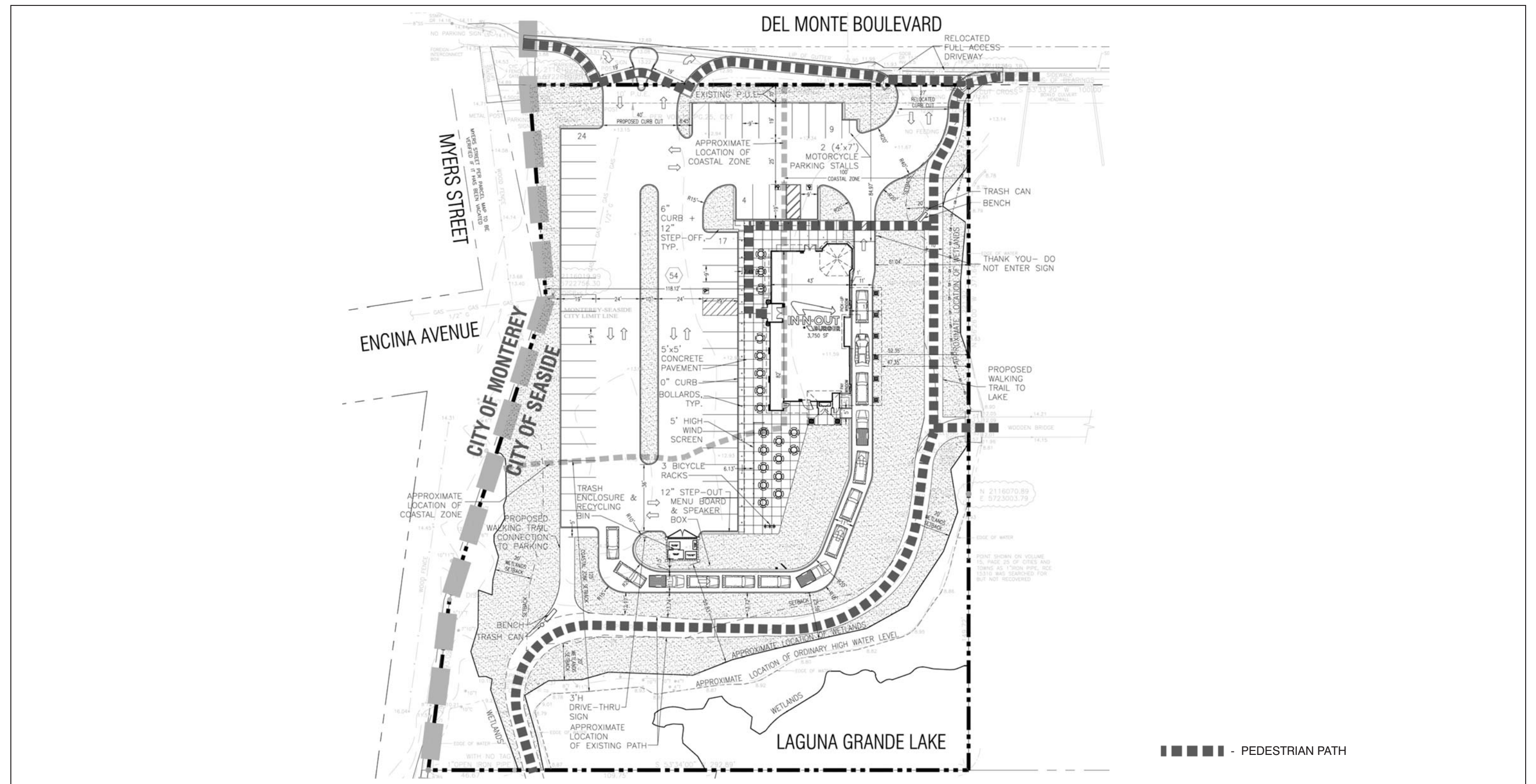


FIGURE 2

LSA



In-N-Out Burger Drive-Through Restaurant EIR
Jurisdictional Boundaries



LSA

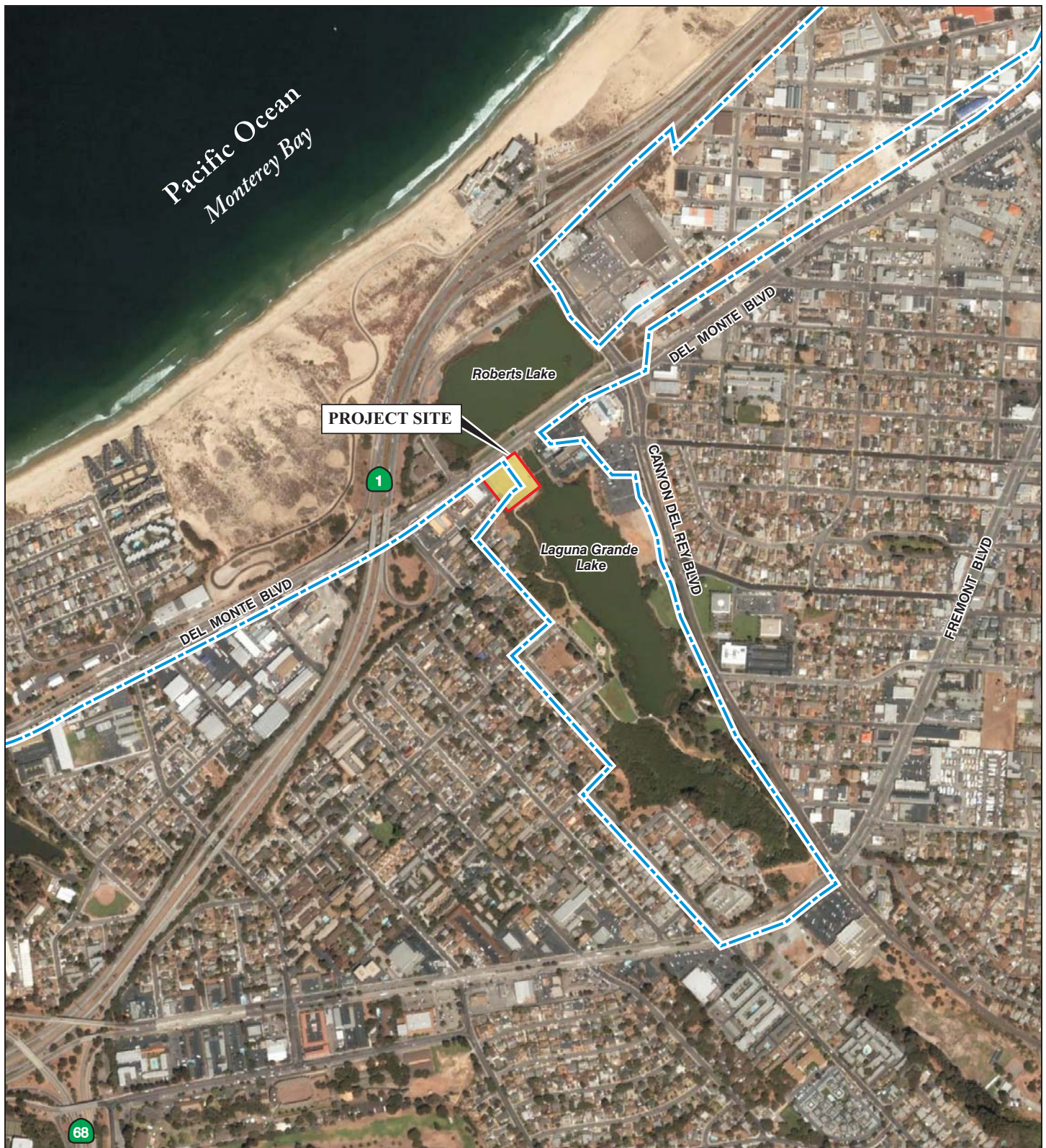


SOURCE: GreenbergFarrow

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FIGURE 3

In-N-Out Burger Drive-Through Restaurant EIR
Conceptual Site Plan

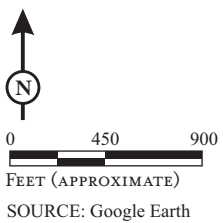


LSA

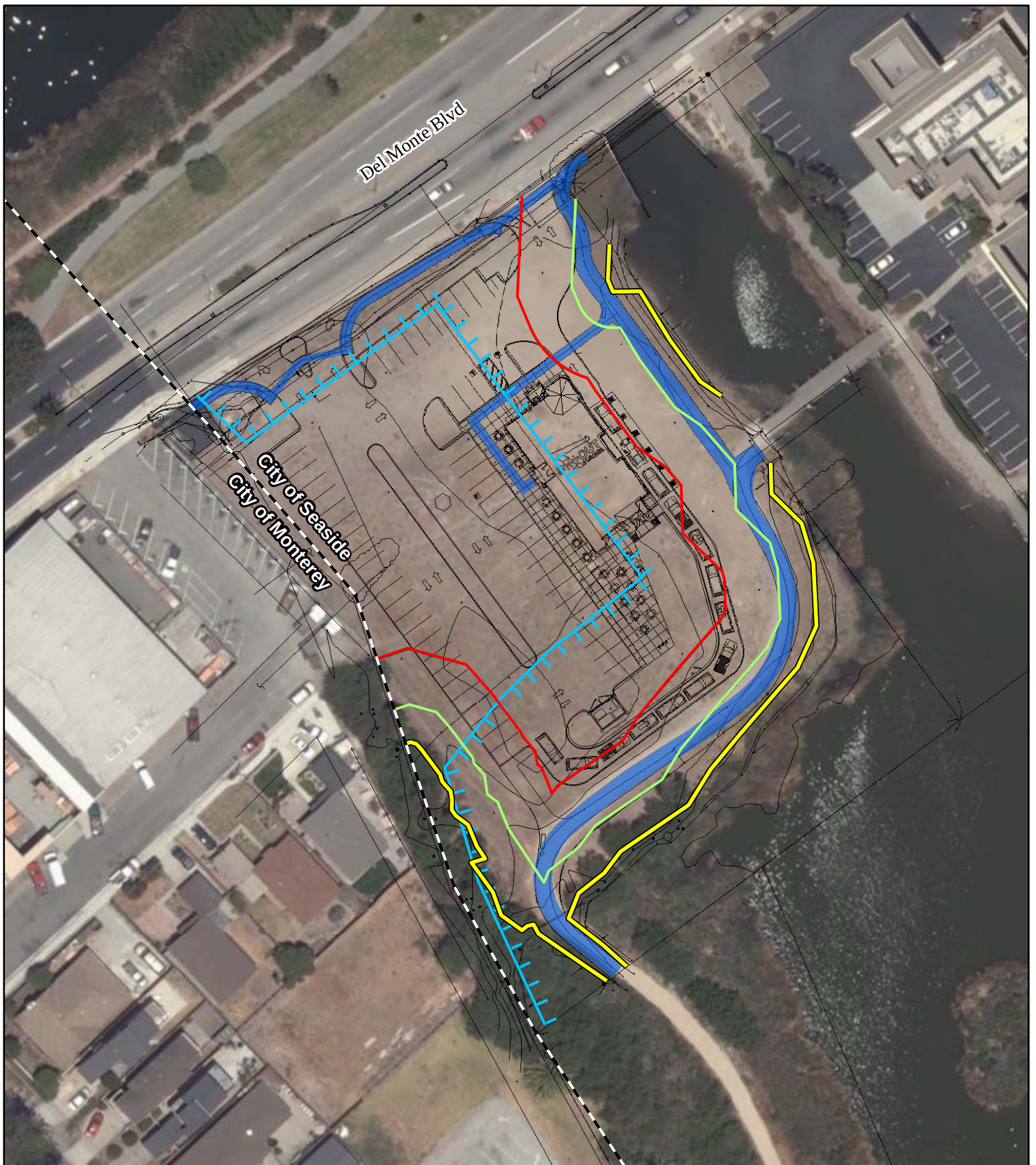
LEGEND

 - Coastal Zone Boundary

FIGURE 4



In-N-Out Burger Drive-Through Restaurant EIR
Coastal Zone Boundary



LSA

LEGEND

- Wetland Boundary
- Coastal Zone Boundary
- 20 Foot Setback
- 50 Foot Setback
- City Boundaries
- Pedestrian/Bicycle Trail



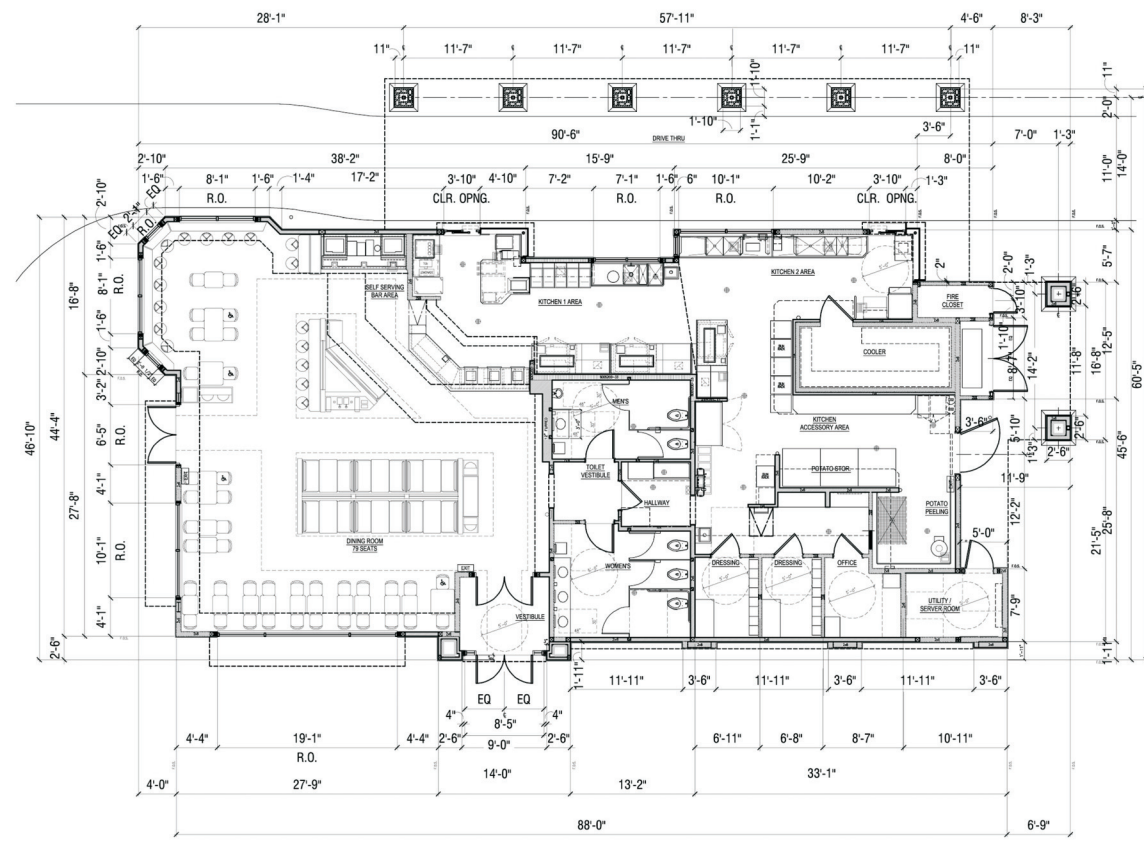
0 37.5 75
FEET

SOURCE: Bing Maps (2009); GreenbergFarrow (2010); City of Seaside (2010)

I:\SEZ1001\GIS\Coastal_Zone_Setback.mxd (12/3/2010)

FIGURE 5

In-N-Out Burger Drive-Through Restaurant EIR
Coastal Zone Setback



FLOOR PLAN



NORTH ELEVATION



EAST ELEVATION



WEST ELEVATION



SOUTH ELEVATION

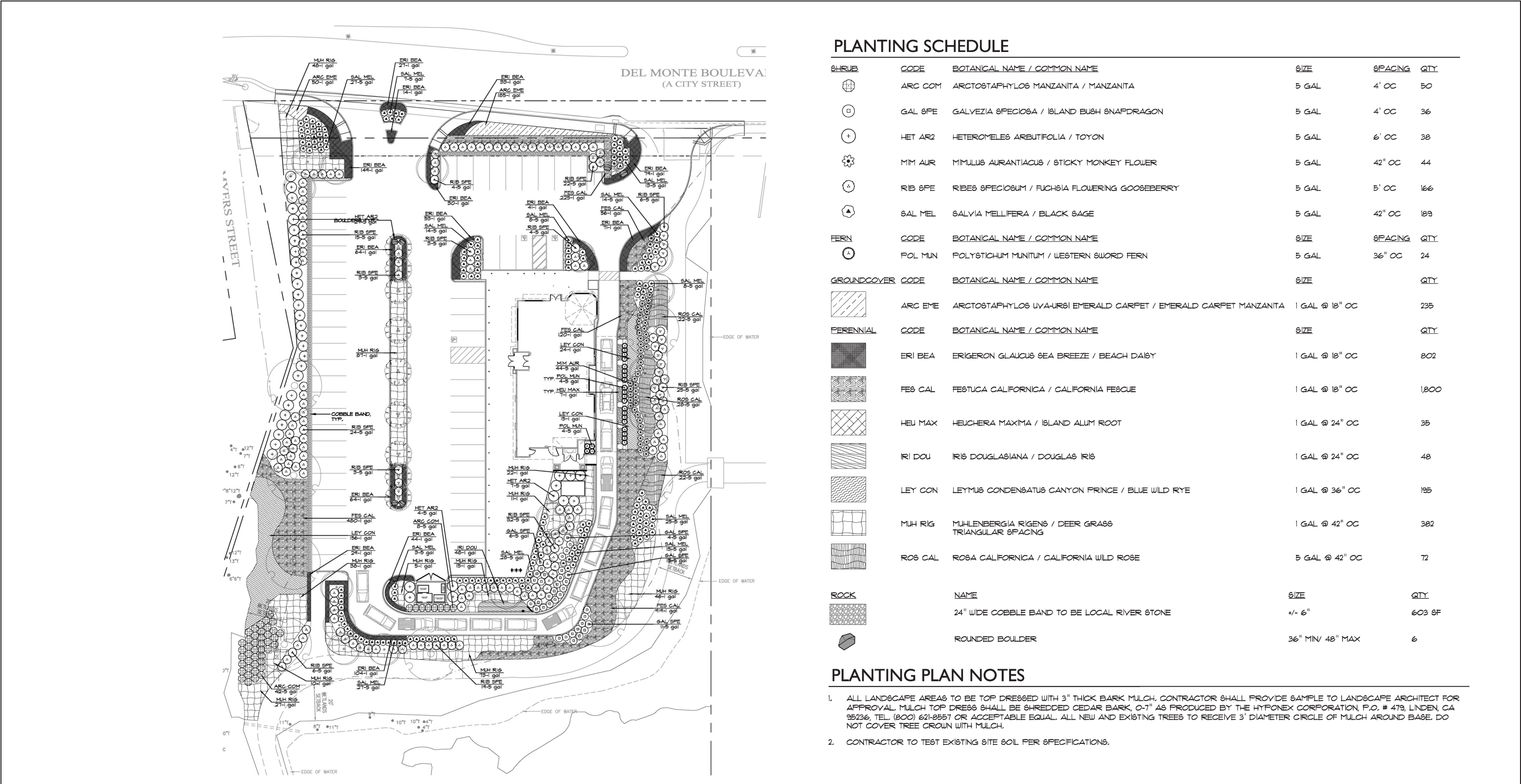
FINISH SCHEDULE

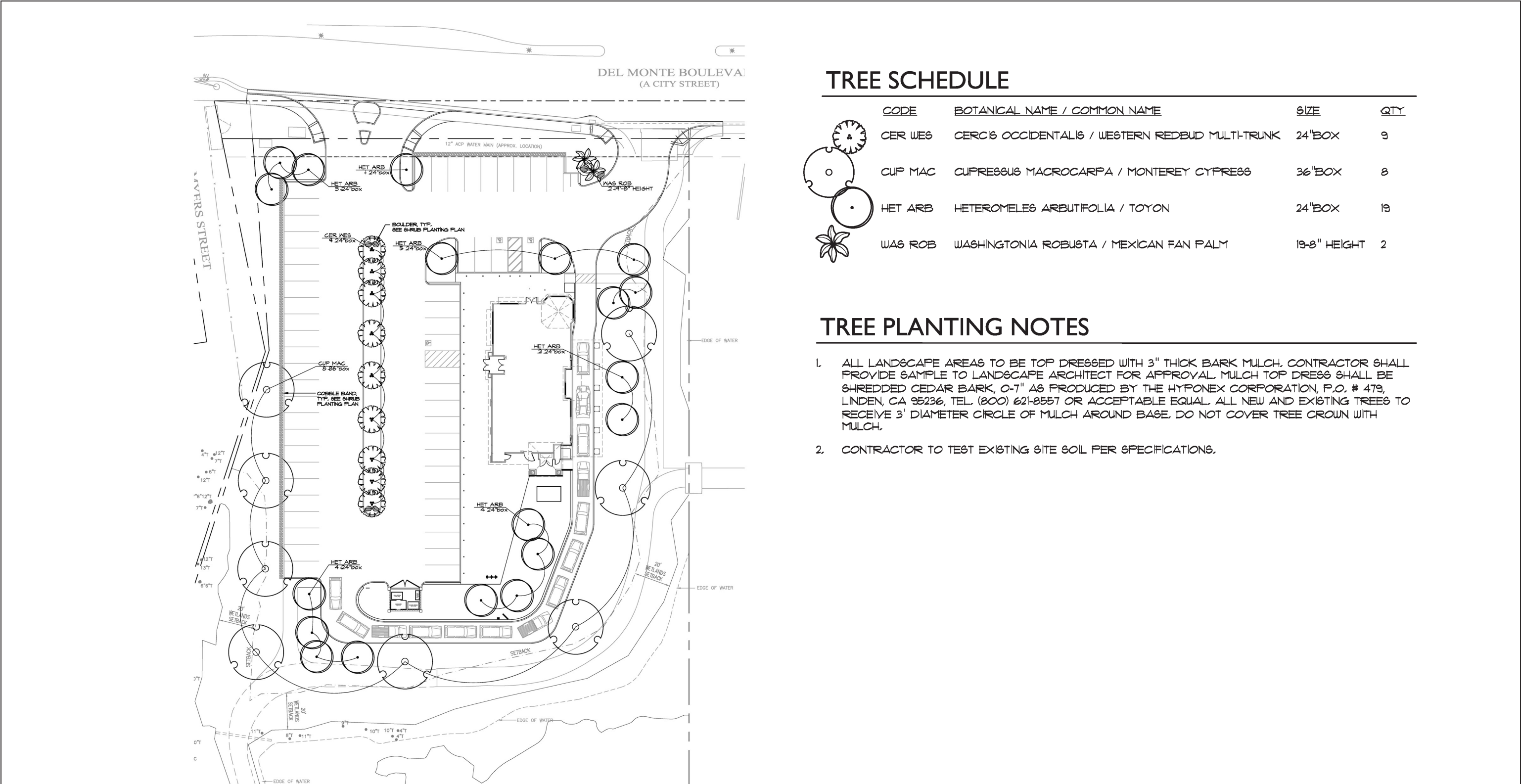
- ▲ FINISH MATERIAL
- 1 TILE ROOF
 - 2 STUCCO WITH SAND FLOAT TEXTURE FINISH
 - 3 CLEAR ANODIZED ALUMINUM STOREFRONT DOORS
 - 4 CLEAR ANODIZED ALUMINUM WINDOWS
 - 5 PVC COATED WICK AWnings
 - 6 STONE VENEER
 - 7 ILLUMINATED LOGO SIGN UNDER SEPARATE PERMIT
 - 8 L.E.D. DOUBLE BAND LIGHTING UNDER SEPARATE PERMIT
 - 9 WOOD BEAM RAFTER TAIL STAINED
- ▼ FINISH COLOR
- | | |
|---|--|
| A | SHERWIN WILLIAMS - SW7036 - ACCESSIBLE BEIGE |
| B | SHERWIN WILLIAMS - SW6109 - HOPSACK |
| C | SHERWIN WILLIAMS - SW7041 - VAN DYKE BROWN |
| R | DUNN EDWARDS STAIN TO MATCH DE6042 BEAR IN MIND |
| S | CORONADO STONE - CARMEL MOUNTAIN
EASTERN LEDGESTONE |
| T | EAGLE ROOFING PRODUCTS CAPISTRANO STYLE
3125 TERRACOTTA |
| W | IN-N-OUT CUSTOM COLORS - SW7041 - VAN DYKE BROWN |

Note:
Colors shown on these elevations are for illustration purposes only. For actual colors, refer to manufacturer's samples.

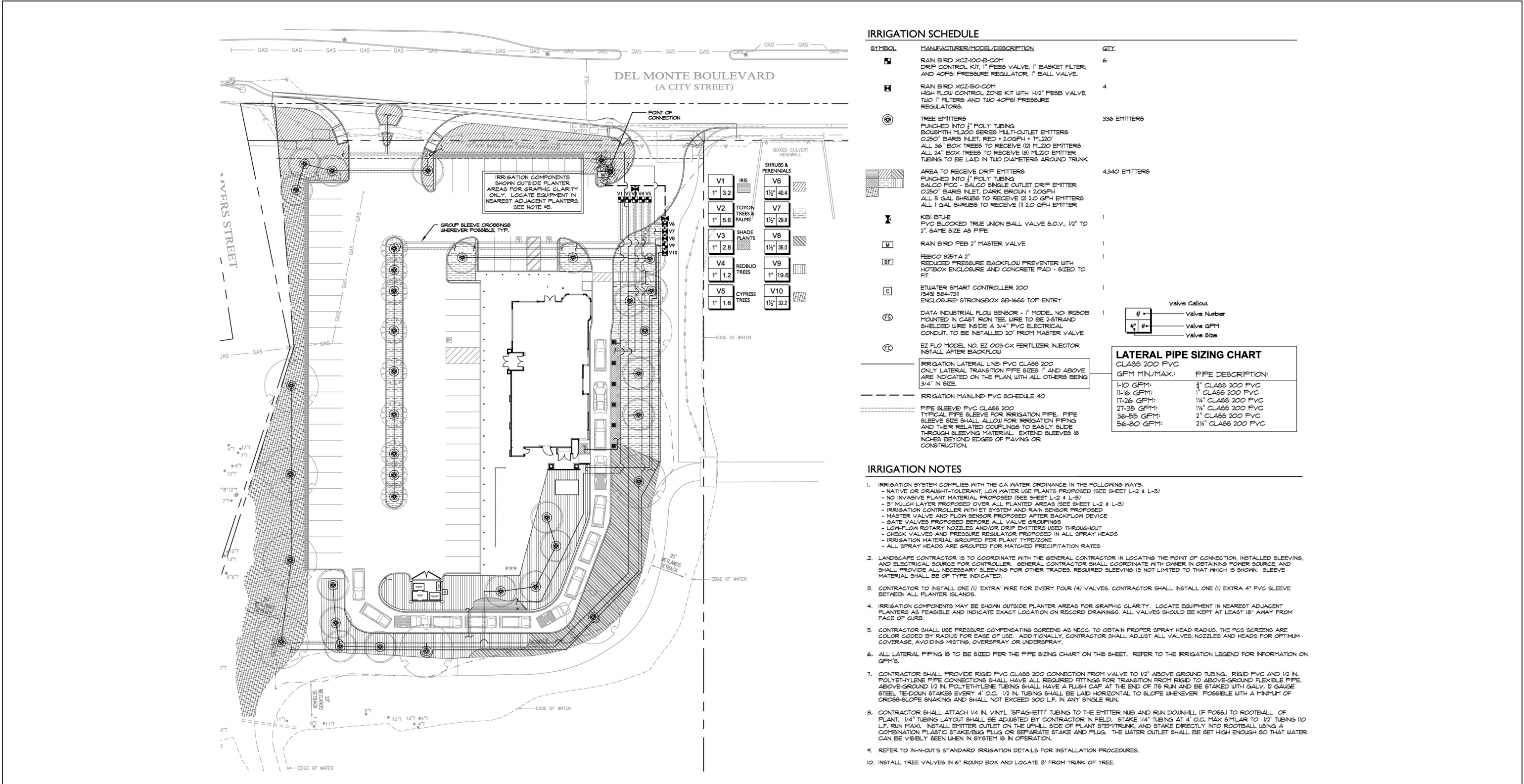
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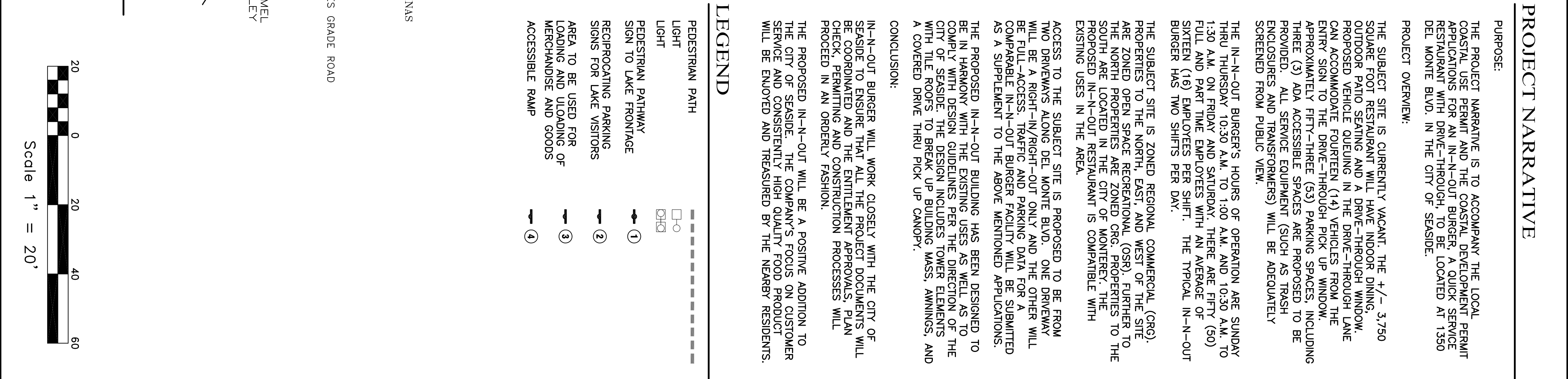
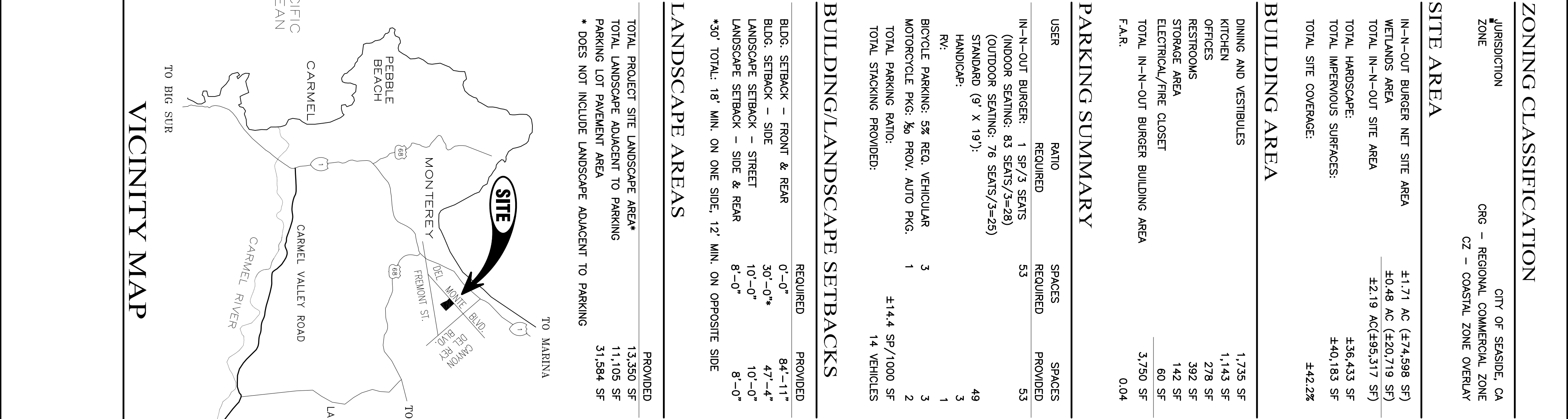


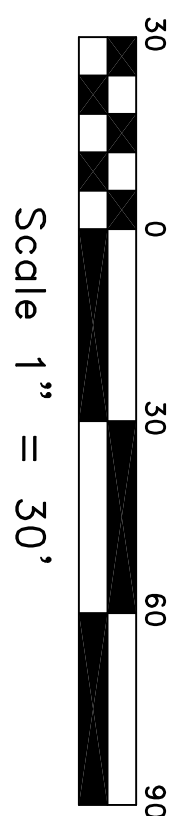
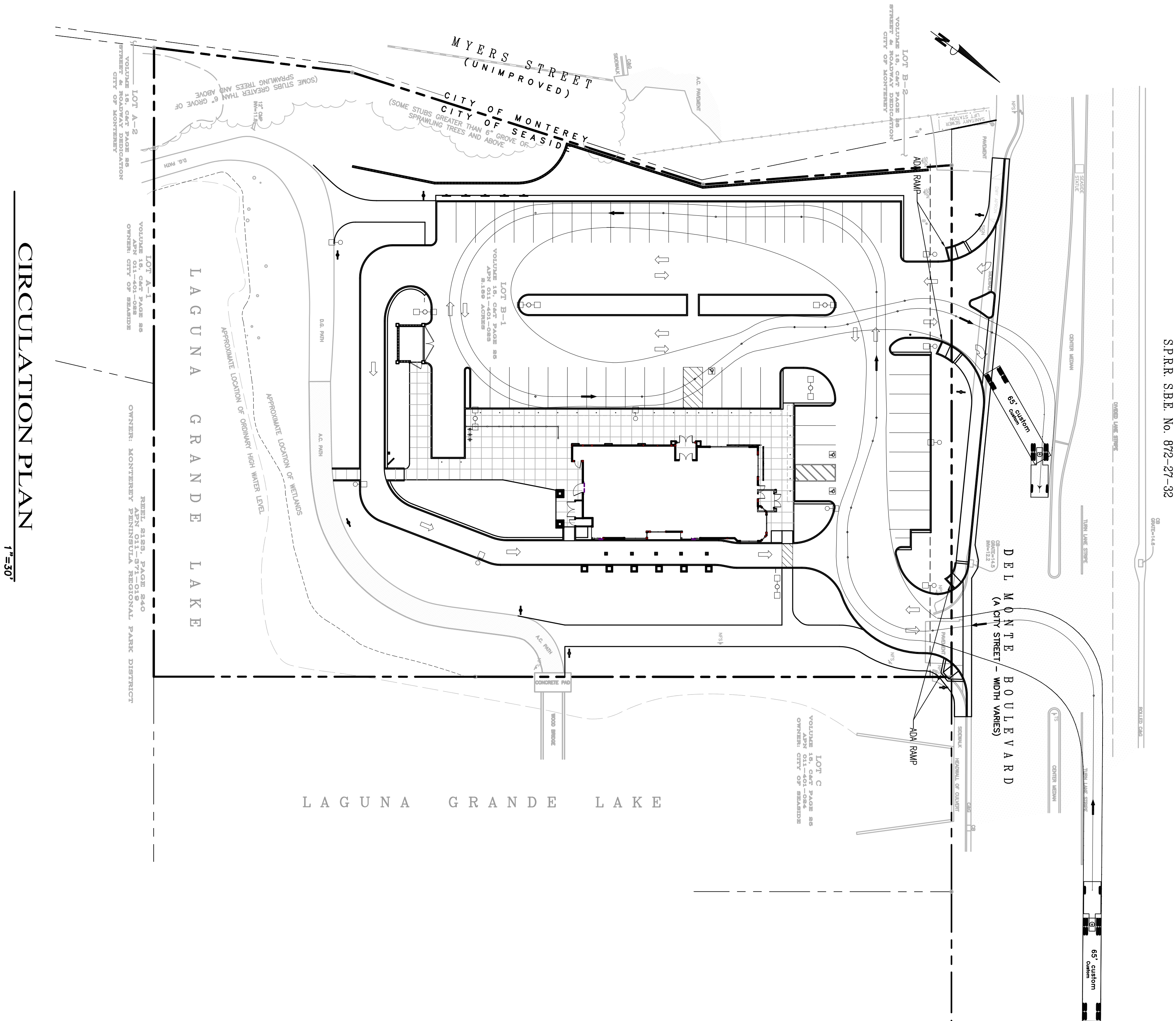
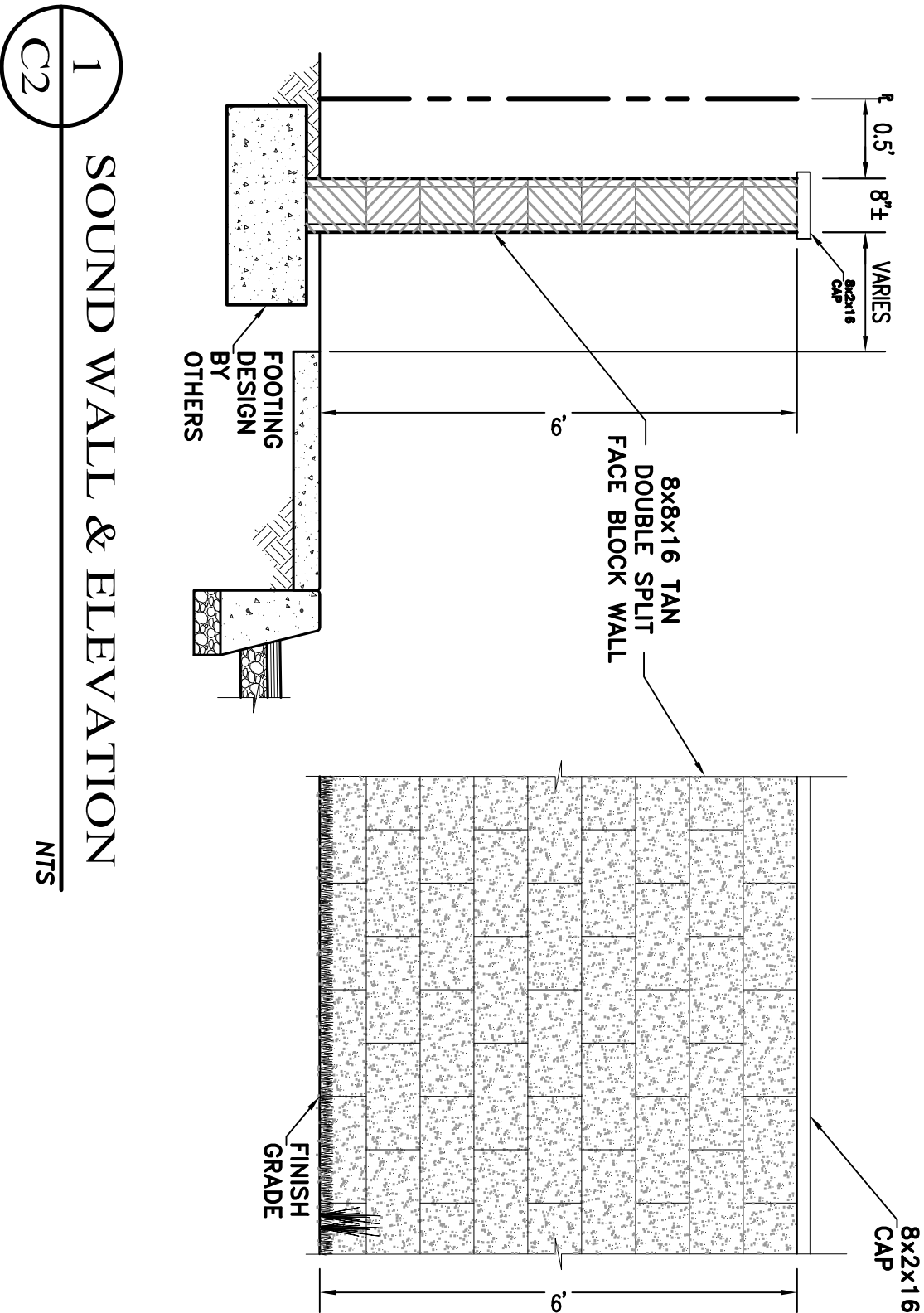
LSA FIGURE 7b



APPENDIX B

Revised Site Plan Figures

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REV.	DATE		DESCRIPTION	BY
MADE IN THE USA				

Packet Page 78

CIRCULATION PLAN

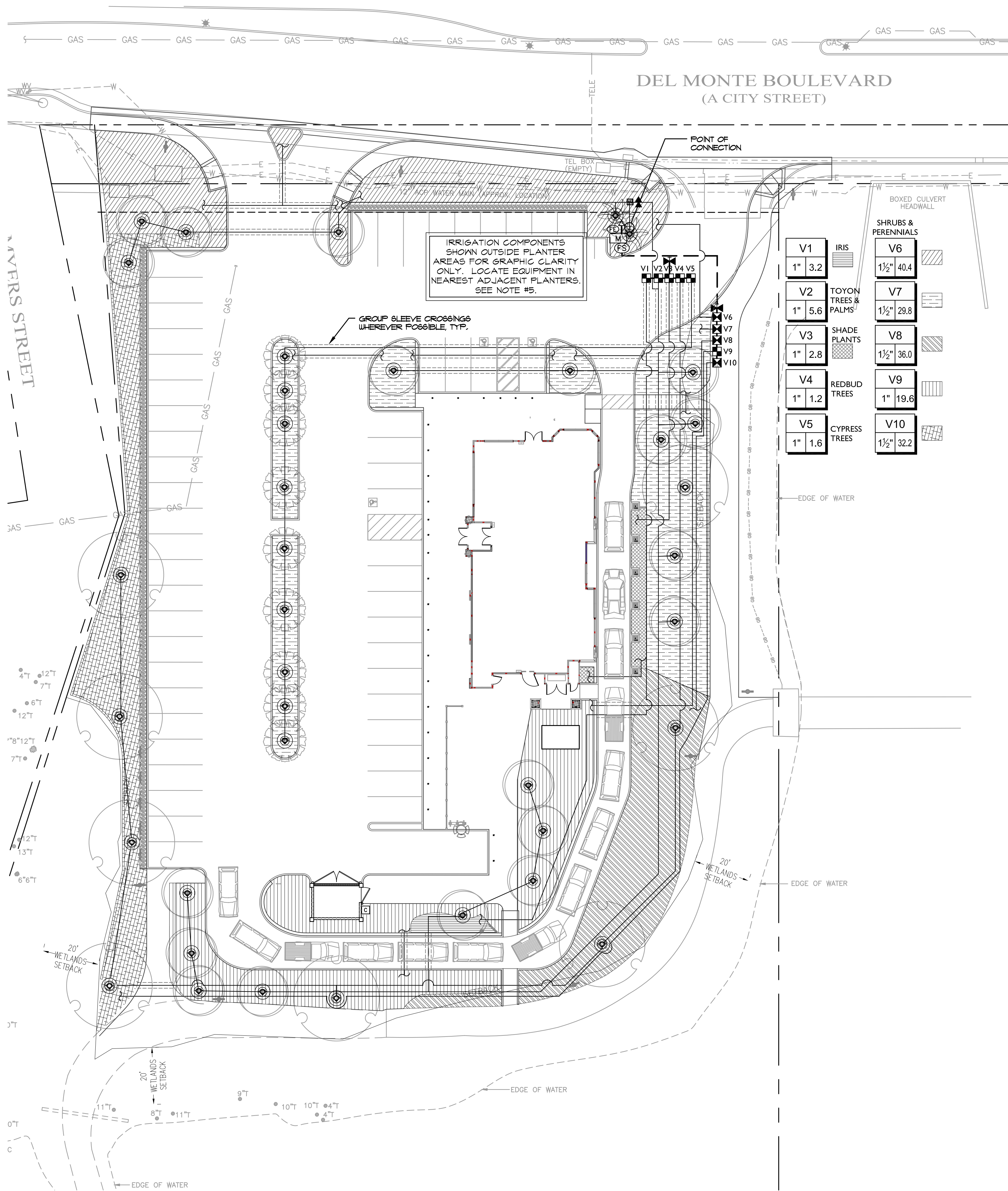
IN-N-OUT BURGER
APN# 011-401-023-000

Project Location: 1350 DEL MONTE BLVD. SEASIDE, CA
PREPARED FOR: GREENBERGFARROW 1920 MAIN ST., SUITE 1150 IRVINE, CA



Civil Engineering Land Development Drafting
126 Bonifacio Place, Suite C, Monterey, CA 93940
Phone: (831) 647-1192 Fax (831) 647-1194
mail@C3Engineering.net

C2
OF 2 SHEETS
PROJECT# 114147



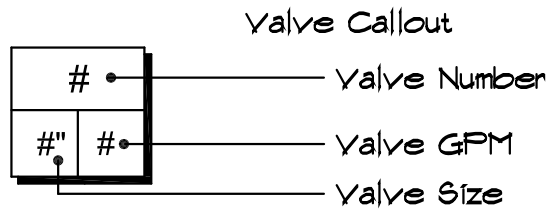
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY.
■	RAIN BIRD XCZ-100-B-COM DRIP CONTROL KIT, 1" FESB VALVE, 1" NETAFIM DISC FILTER AND 40PSI PRESSURE REGULATOR, 1" BALL VALVE.	6
■	RAIN BIRD XCZ-150-COM HIGH FLOW CONTROL ZONE KIT WITH 1-1/2" FESB VALVE, TWO 1" NETAFIM DISC FILTERS AND TWO 40PSI PRESSURE REGULATORS, 1-1/2" BALL VALVE.	4
⊙	TREE EMITTERS RAINBIRD RW8-B-C-1402 DEEP ROOT WATERING SYSTEM W/ 0.5 GPM BUBBLER INSTALL (2) PER SYMBOL	PER PLAN
■	AREA TO RECEIVE DRIP EMITTERS NETAFIM TLCV6-1210 PSI COMP. DRIPLINE W/ CHECK VALVE SET PRS-D AT 45 PSI. TECHLINE SHALL BE SPACED APPROX. 3' OFF PERIMETER AND 18" O.C. AS SHOWN PER PLAN. FOOTERS AND HEADERS SHALL BE 3/4" PVC PIPE U.O.N.	PER PLAN
⌵	KBI BTU-E PVC BLOCKED TRUE UNION BALL VALVE S.O.V., 1/2" TO 2", SAME SIZE AS PIPE	1
M	1/2" HYDROMETER - COMBINATION MASTER VALVE FLOW SENSOR. INSTALL IN PLANTER AREA TYP.	1
BF	FEBCO 8251A 2" REDUCED PRESSURE BACKFLOW PREVENTER WITH HOTBOX ENCLOSURE AND CONCRETE PAD - SIZED TO FIT	1
C	ETWATER SMART CONTROLLER 200 (949) 584-7311 ENCLOSURE: STRONGBOX SB-1666 TOP ENTRY	1
FS	1/2" HYDROMETER - COMBINATION MASTER VALVE FLOW SENSOR. INSTALL IN PLANTER AREA TYP.	1
FE	EZ FLO MODEL NO. EZ 003-CX FERTILIZER INJECTOR INSTALL AFTER BACKFLOW	1

IRRIGATION LATERAL LINE: PVC CLASS 200
ONLY LATERAL TRANSITION PIPE SIZES 1" AND ABOVE
ARE INDICATED ON THE PLAN, WITH ALL OTHERS BEING
3/4" IN SIZE.

IRRIGATION MAINLINE: PVC SCHEDULE 40

PIPE SLEEVE: PVC CLASS 200
TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE
SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING
AND THEIR RELATED COUPLINGS TO EASILY SLIDE
THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18
INCHES BEYOND EDGES OF PAVING OR
CONSTRUCTION.



LATERAL PIPE SIZING CHART

CLASS 200 PVC

GPM MIN./MAX.:	PIPE DESCRIPTION:
1-10 GPM:	3/4" CLASS 200 PVC
11-16 GPM:	1" CLASS 200 PVC
17-26 GPM:	1 1/4" CLASS 200 PVC
27-35 GPM:	1 1/2" CLASS 200 PVC
36-55 GPM:	2" CLASS 200 PVC
56-80 GPM:	2 1/2" CLASS 200 PVC

IRRIGATION NOTES

- IRRIGATION SYSTEM COMPLIES WITH THE CA WATER ORDINANCE IN THE FOLLOWING WAYS:
 - NATIVE OR DRAUGHT-TOLERANT, LOW WATER USE PLANTS PROPOSED (SEE SHEET L-2 & L-3)
 - NO INVASIVE PLANT MATERIAL PROPOSED (SEE SHEET L-2 & L-3)
 - 3" MULCH LAYER PROPOSED OVER ALL PLANTED AREAS (SEE SHEET L-2 & L-3)
 - IRRIGATION CONTROLLER WITH ET SYSTEM AND RAIN SENSOR PROPOSED
 - MASTER VALVE AND FLOW SENSOR PROPOSED AFTER BACKFLOW DEVICE
 - GATE VALVES PROPOSED BEFORE ALL VALVE GROUPINGS
 - LOW-FLOW ROTARY NOZZLES AND/OR DRIP EMITTERS USED THROUGHOUT
 - CHECK VALVES AND PRESSURE REGULATOR PROPOSED IN ALL SPRAY HEADS
 - IRRIGATION MATERIAL GROUPED PER PLANT TYPE/ZONE
 - ALL SPRAY HEADS ARE GROUPED FOR MATCHED PRECIPITATION RATES
- LANDSCAPE CONTRACTOR IS TO COORDINATE WITH THE GENERAL CONTRACTOR IN LOCATING THE POINT OF CONNECTION, INSTALLED SLEEVING, AND ELECTRICAL SOURCE FOR CONTROLLER. GENERAL CONTRACTOR SHALL COORDINATE WITH OWNER IN OBTAINING POWER SOURCE, AND SHALL PROVIDE ALL NECESSARY SLEEVING FOR OTHER TRADES. REQUIRED SLEEVING IS NOT LIMITED TO THAT WHICH IS SHOWN. SLEEVE MATERIAL SHALL BE OF TYPE INDICATED.
- CONTRACTOR TO INSTALL ONE (1) 'EXTRA' WIRE FOR EVERY FOUR (4) VALVES. CONTRACTOR SHALL INSTALL ONE (1) EXTRA 4" PVC SLEEVE BETWEEN ALL PLANTER ISLANDS.
- IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTER AREAS FOR GRAPHIC CLARITY. LOCATE EQUIPMENT IN NEAREST ADJACENT PLANTERS AS FEASIBLE AND INDICATE EXACT LOCATION ON RECORD DRAWINGS. ALL VALVES SHOULD BE KEPT AT LEAST 18" AWAY FROM FACE OF CURB.
- ALL LATERAL PIPING IS TO BE SIZED PER THE PIPE SIZING CHART ON THIS SHEET. REFER TO THE IRRIGATION LEGEND FOR INFORMATION ON GPM'S.
- REFER TO IN-N-OUT'S STANDARD IRRIGATION DETAILS FOR INSTALLATION PROCEDURES.
- INSTALL TREE VALVES IN 6" ROUND BOX AND LOCATE 3' FROM TRUNK OF TREE.

IRRIGATION PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE CA

AGENCY APPROVAL

REVISIONS
NO. DATE PURPOSE

DRAWN BY * MB

CHECKED * RSR

SCALE * 1" = 20' - 0"

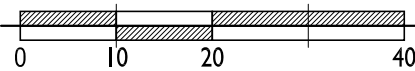
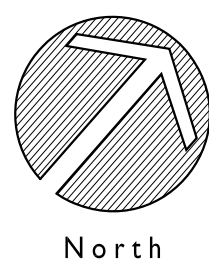
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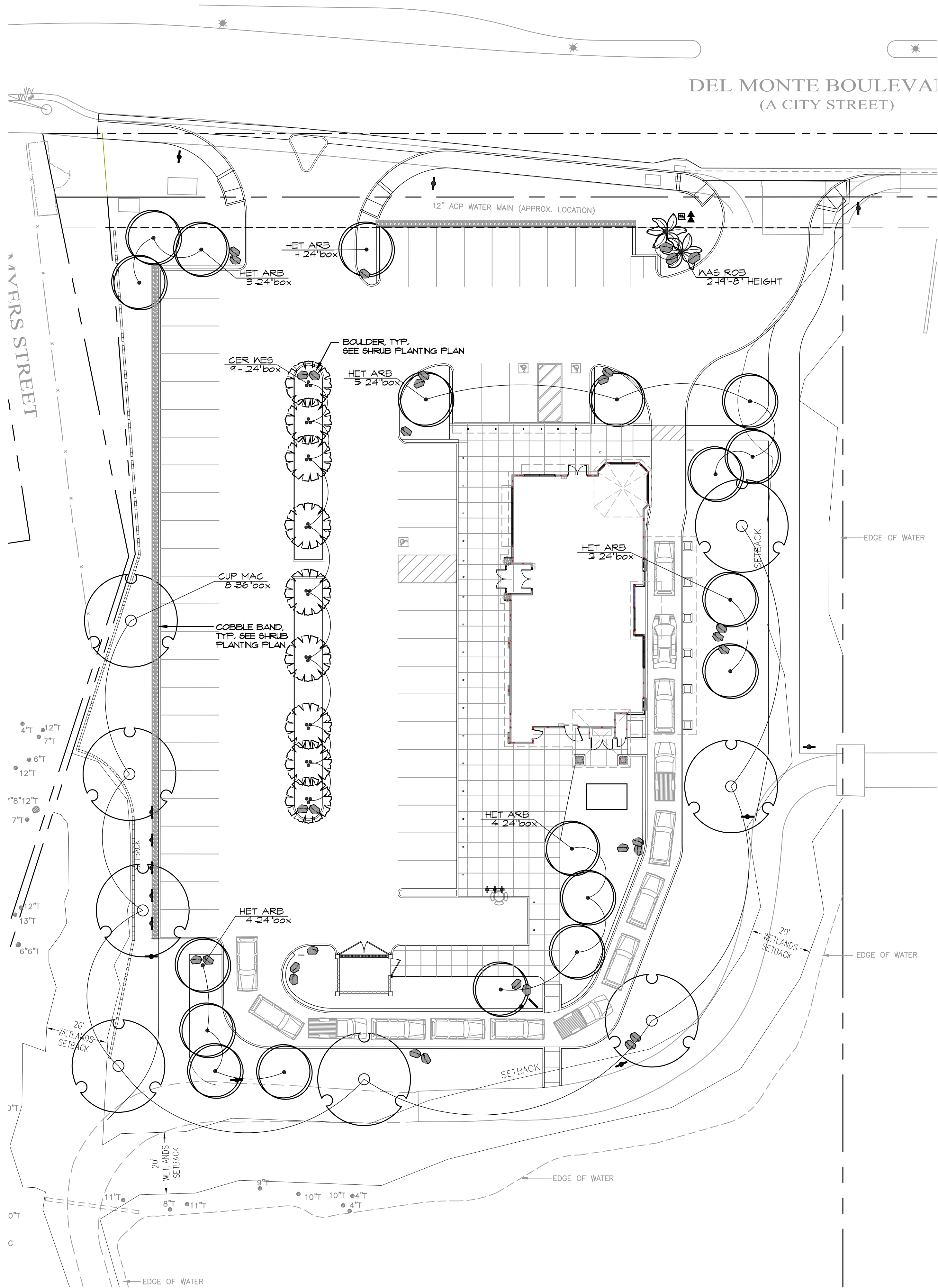
JOB * 090004.00

IRRIGATION PLAN

SHEET

L-1





TREE SCHEDULE

CODE	BOTANICAL NAME / COMMON NAME	SIZE	QTY
CER WES	CERCIS OCCIDENTALIS / WESTERN REDBUD MULTI-TRUNK	24"BOX	9
CUP MAC	CUPRESSUS MACROCARPA / MONTEREY CYPRESS	36"BOX	8
HET ARB	HETEROMELES ARBUTIFOLIA / TOYON	24"BOX	19
WAS ROB	WASHINGTONIA ROBUSTA / MEXICAN FAN PALM	19-8" HEIGHT	2

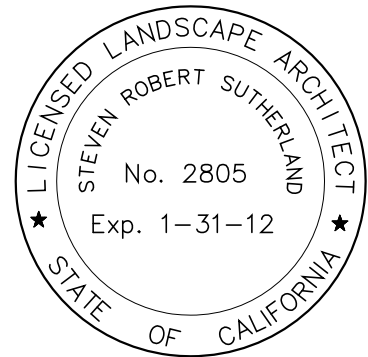
TREE PLANTING NOTES

- ALL LANDSCAPE AREAS TO BE TOP DRESSED WITH 3" THICK BARK MULCH. CONTRACTOR SHALL PROVIDE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL. MULCH TOP DRESS SHALL BE SHREDDED CEDAR BARK, 0-7" AS PRODUCED BY THE HYPONEX CORPORATION, P.O. # 479, LINDEN, CA 95236, TEL. (800) 621-8887 OR ACCEPTABLE EQUAL. ALL NEW AND EXISTING TREES TO RECEIVE 3' DIAMETER CIRCLE OF MULCH AROUND BASE. DO NOT COVER TREE CROWN WITH MULCH.
- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.

SSA

LANDSCAPE ARCHITECTS INCORPORATED

303 Potrero St Ste 40-C
Santa Cruz, CA 95060-2778
PH: (831) 459-0455
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www.ssaia.com
C R L A # 2 8 0 5



TREE PLANTING PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE, CA

AGENCY APPROVAL

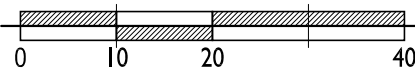
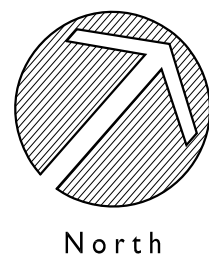
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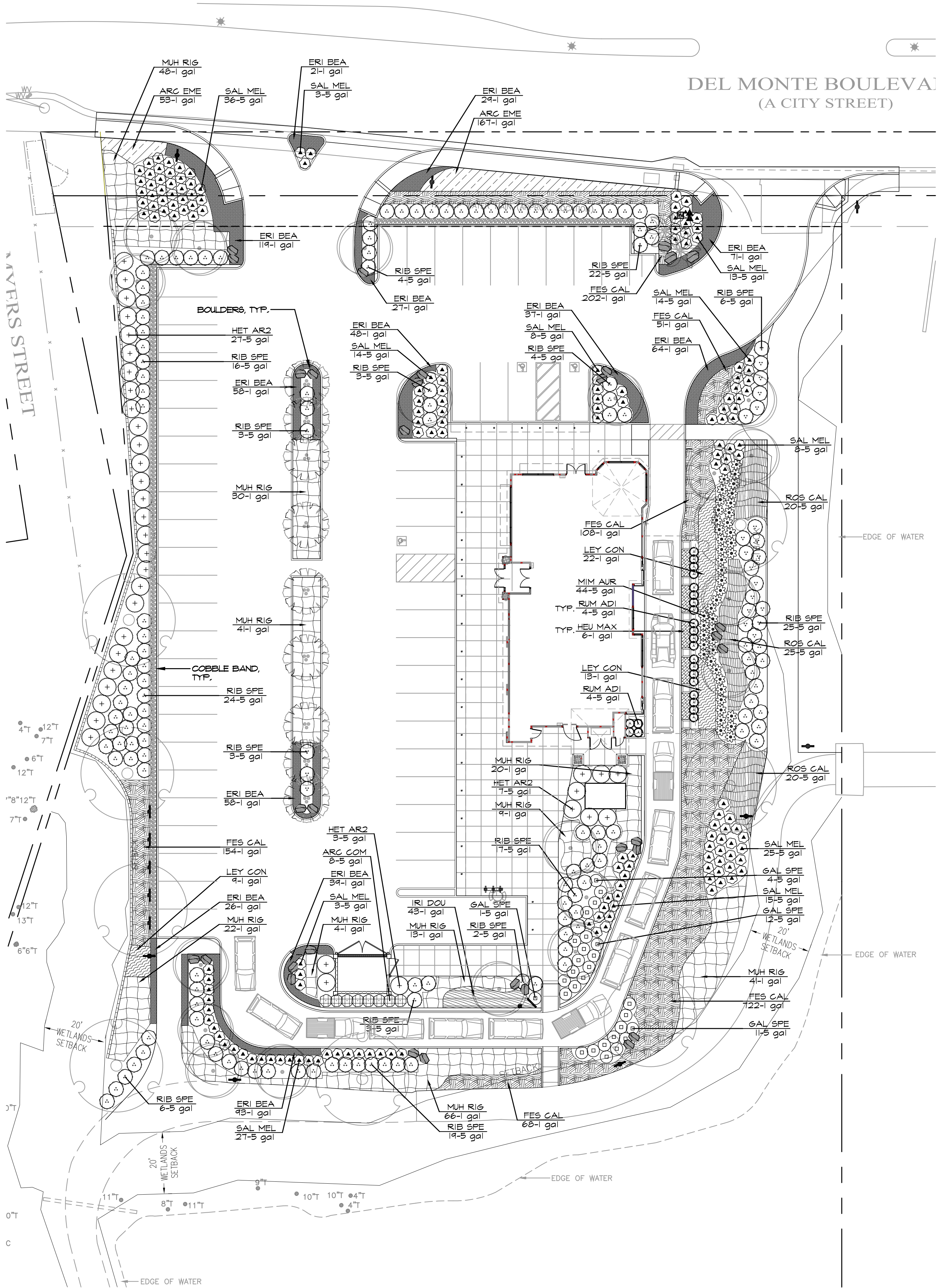
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DATE	•	03.17.15
JOB	•	090004.00

TREE PLANTING PLAN

SHEET

L-2





PLANTING SCHEDULE

SHRUB	CODE	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QTY
ARC COM	ARC COM	ARCTOSTAPHYLOS X. 'SUNSET' / SUNSET MANZANITA	5 GAL	4' OC	8
GAL SPE	GAL SPE	GALVEZIA SPECIOSA / ISLAND BUSH SNAPDRAGON	5 GAL	4' OC	28
HET AR2	HET AR2	HETEROMELES ARBUTIFOLIA / TOYON	5 GAL	6' OC	37
MIM AUR	MIM AUR	MIMULUS AURANTIACUS / STICKY MONKEY FLOWER	5 GAL	42" OC	44
RIB SPE	RIB SPE	RIBES SPECIOSUM / RUCHSIA FLOWERING GOOSEBERRY	5 GAL	5' OC	157
SAL MEL	SAL MEL	SALVIA MELLIFERA / BLACK SAGE	5 GAL	42" OC	166
ERI BEA	ERI BEA	ERIGERON GLAUCUS SEA BREEZE / BEACH DAISY	1 GAL @ 18" OC		220
FES CAL	FES CAL	FESTUCA CALIFORNICA / CALIFORNIA FESCUE	1 GAL @ 18" OC		1305
HEU MAX	HEU MAX	HEUCHERA MAXIMA / ISLAND ALUM ROOT	1 GAL @ 24" OC		30
IRI DOU	IRI DOU	IRIS DOUGLASIANA FCH / DOUGLAS IRIS PACIFIC COAST HYBRID	1 GAL @ 24" OC		43
LEY CON	LEY CON	LEYMUS CONDENSATUS CANYON FRINCE / BLUE WILD RYE	1 GAL @ 36" OC		44
MUH RIG	MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS TRIANGULAR SPACING	1 GAL @ 42" OC		289
ROS CAL	ROS CAL	ROSA CALIFORNICA / CALIFORNIA WILD ROSE	5 GAL @ 42" OC		65
ROCK	NAME	24" WIDE COBBLE BAND TO BE LOCAL RIVER STONE	SIZE		QTY
			+/- 6"		603 SF
		ROUNDED BOULDER	24" MIN/ 48" MAX		34

PLANTING PLAN NOTES

- ALL LANDSCAPE AREAS TO BE TOP DRESSED WITH 3" THICK BARK MULCH. CONTRACTOR SHALL PROVIDE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL. MULCH TOP DRESS SHALL BE SHREDDED CEDAR BARK, 0-7" AS PRODUCED BY THE HYPONEX CORPORATION, P.O. # 479, LINDEN, CA 95236, TEL. (800) 621-8557 OR ACCEPTABLE EQUAL. ALL NEW AND EXISTING TREES TO RECEIVE 3' DIAMETER CIRCLE OF MULCH AROUND BASE. DO NOT COVER TREE CROWN WITH MULCH.
- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.

SHRUB PLANTING PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE CA

AGENCY APPROVAL

REVISIONS
NO. DATE PURPOSE

DRAWN BY * MB

CHECKED * RSR

SCALE * 1" = 20' - 0"

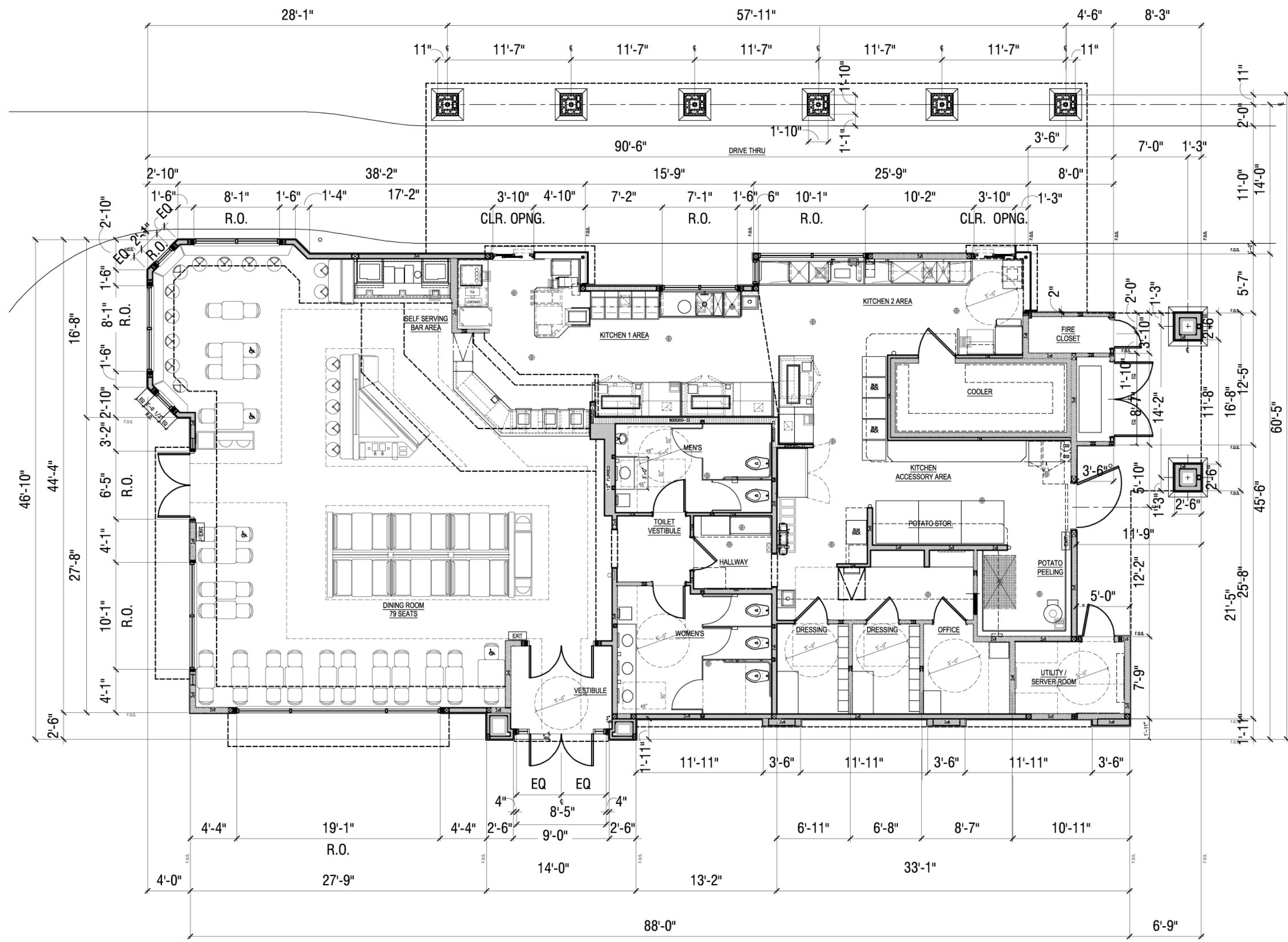
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JOB * 090004.00

SHRUB PLANTING PLAN

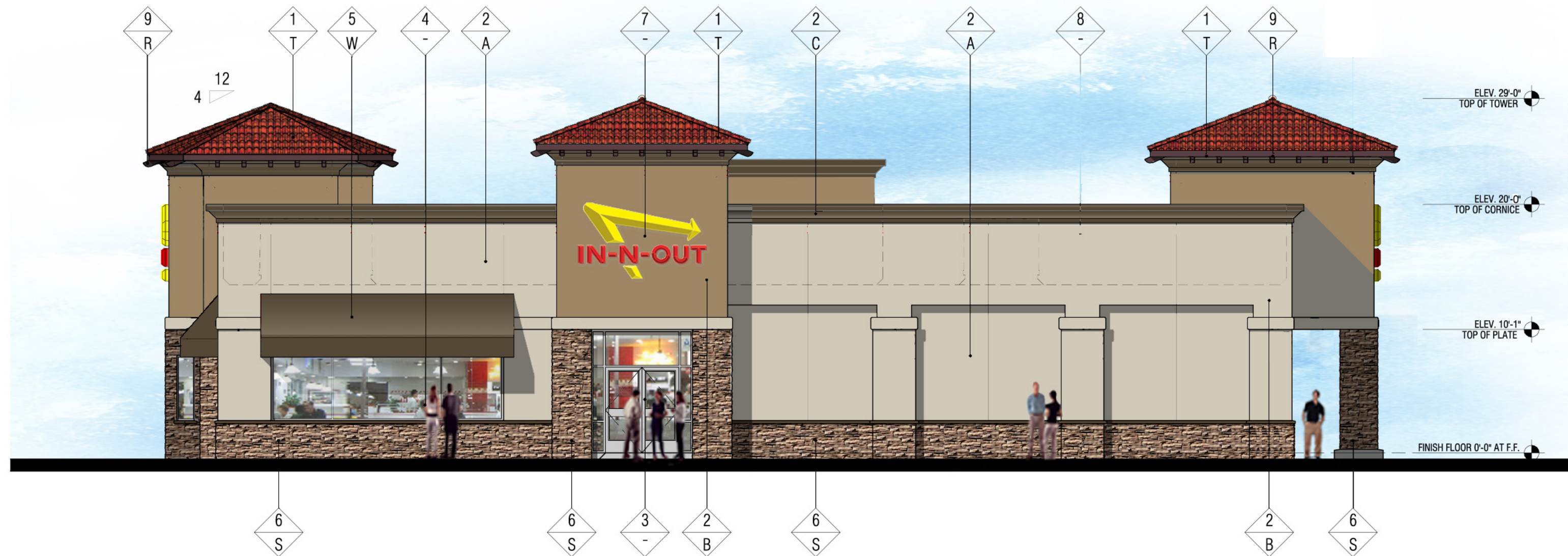
SHEET

L-3



FLOOR PLAN

SCALE: 1/8"=1'-0"



NORTH ELEVATION

SCALE: 1/8"=1'-0"



EAST ELEVATION

SCALE: 1/8"=1'-0"



WEST ELEVATION

SCALE: 1/8"=1'-0"



SOUTH ELEVATION

SCALE: 1/8"=1'-0"

FINISH SCHEDULE

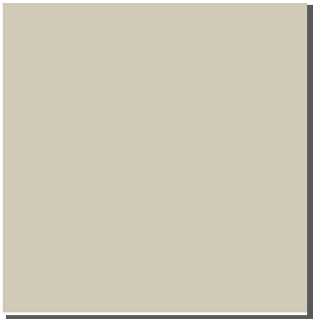
FINISH MATERIAL	FINISH COLOR
1 TILE ROOF	A SHERWIN WILLIAMS - SW7036 - ACCESSIBLE BEIGE
2 STUCCO WITH SAND FLOAT TEXTURE FINISH	B SHERWIN WILLIAMS - SW6109 - HOPSACK
3 CLEAR ANODIZED ALUMINUM STOREFRONT DOORS	C SHERWIN WILLIAMS - SW7041 - VAN DYKE BROWN
4 CLEAR ANODIZED ALUMINUM WINDOWS	
5 PVC COATED WICK AWNINGS	
6 STONE VENEER	
7 ILLUMINATED LOGO SIGN UNDER SEPARATE PERMIT	
8 NOT USED	
9 WOOD BEAM RAFTER TAIL STAINED	
	R DUNN EDWARDS STAIN TO MATCH DE6042 BEAR IN MIND
	S CORONADO STONE - CARMEL MOUNTAIN EASTERN LEDGESTONE
	T EAGLE ROOFING PRODUCTS CAPISTRANO STYLE 3602 CONCORD BLEND
	W IN-N-OUT CUSTOM COLORS - SW7041 - VAN DYKE BROWN

Note:
Colors shown on these elevations are for illustration purposes only. For actual colors, refer to manufacturers samples.

SCALE: 1/8"=1'-0"



COLOR AND MATERIAL BOARD



Color A
Shermin Willams SW7036 - Beige



Color B
Shermin Willams SW6109 - Hopsack



Color/Material C & W
Shermin Williams SW7041 -
Van Dyke Brown - Awnings with
PVC wick resistant erandicable polyester and color Van Dyke Brown



Color R
Dunn Edwards DE6042 -
Bear In Mind



Material S
Coronado Stone -
Carmel Mountain &
Eastern LedgeStone



Material T
Eagle Roofing Products
Capistrano Style -
3602 Concord Blend



1350 hamburger ln.
Baldwin Park, CA 91706

IN-N-OUT BURGER
1350 DEL MONTE
SEASIDE, CA

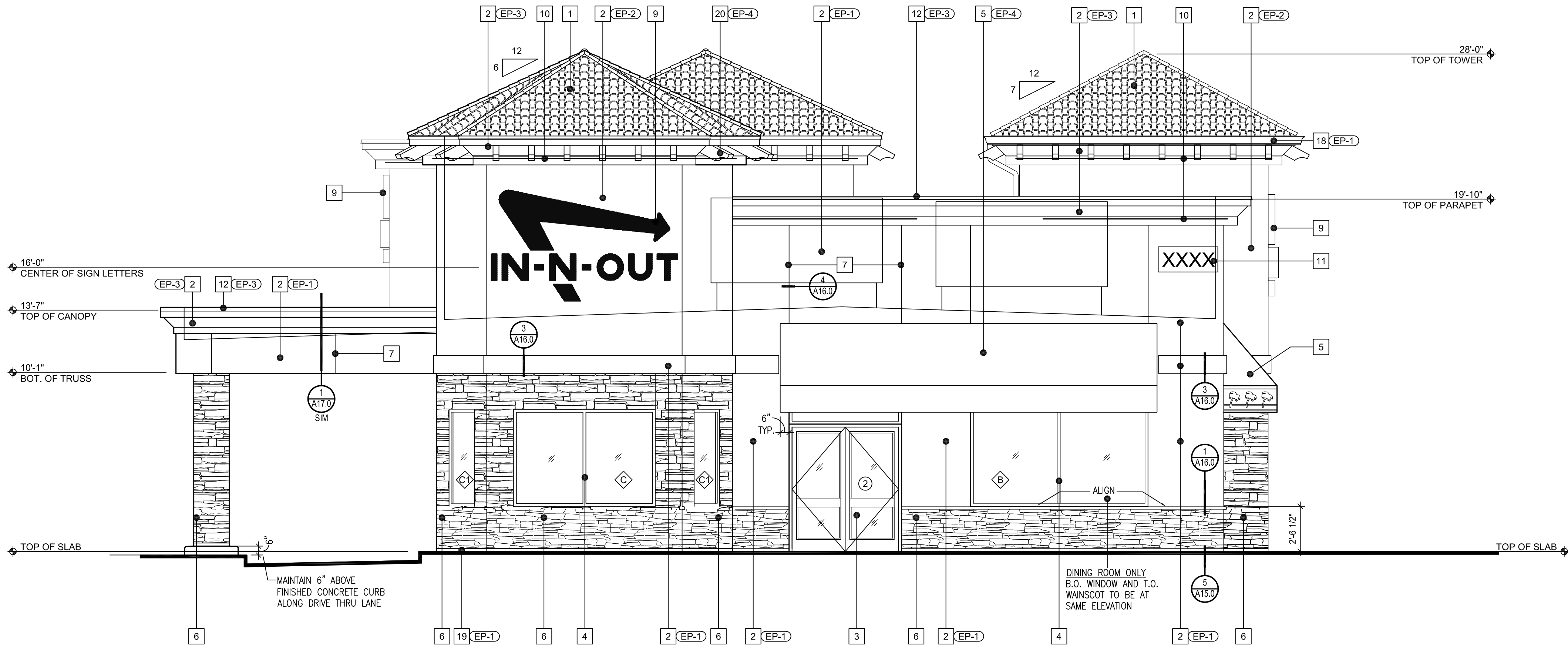
**COLOR AND
MATERIAL BOARD**
05-13-11

KEY NOTES

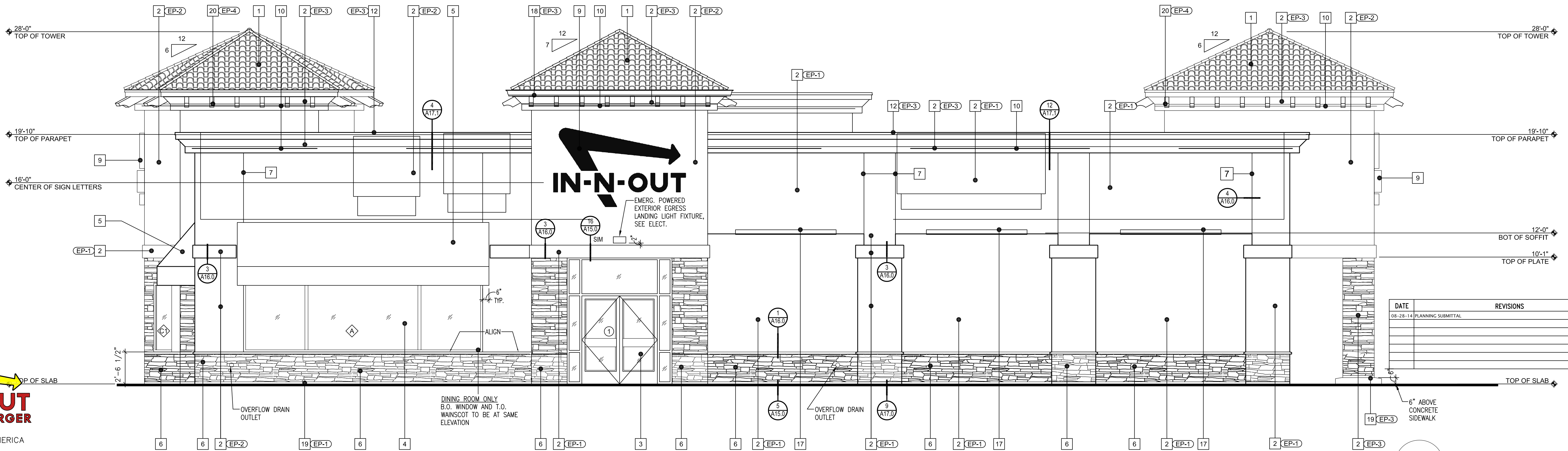
1	TILE ROOF: EAGLE ROOFING PRODUCTS, CAPISTRANO STYLE 3602 CONCORD BLEND. PROVIDE BIRD STOP AND PAINT TO MATCH TILE.
2	STUCCO: MEDIUM SAND FLOAT TEXTURE FINISH.
3	ALUMINUM STOREFRONT DOORS; CLEAR ANODIZED ALUMINUM.
4	ALUMINUM WINDOWS: CLEAR ANODIZED ALUMINUM.
5	AWNINGS: PVC COATED WICK-RESISTANT ERADICABLE POLYESTER AWNINGS. COLOR:SHERWIN WILLIAMS SW7041 9EP-3) PROVIDE FLUORESCENT BACKLIGHTING. SEE: 5/A16.0 & 6/A16.0.
6	STONE VENEER - CARMEL MOUNTAIN EASTERN LEDGE BY CORONADO STONE WITH MATCHING CORONADO STONE WAINSCOT SILL. APPLY PER MFR RECOMMENDATIONS. DRY STACK.
7	1/4" WIDE METAL PENN SCREED: SEE DETAIL 4/A16.0. ALIGN CONTROL JOINTS ON DRIVE-THRU CANOPY FASCIA WITH CONTROL JOINTS ON BOTTOM OF SOFFIT.
8	SLOPED ALUMINUM WINDOWS; U.S. ALUMINUM S-010. GLASS JOINTS TO HAVE POLISHED EDGES WITH SILICONE JOINTS. PAINT WOOD FRAME "EP-4".
9	IN-N-OUT BURGER ILLUMINATED LOGO SIGN; UNDER SEPARATE PERMIT.
10	L.E.D. COVE LIGHTING: UNDER SEPARATE PERMIT.
11	BUILDING ADDRESS NUMBERS TO BE 12" HIGH, 4" MIN. W/ MIN. STROKE WIDTH OF 0.5 INCH PER FIRE DEPARTMENT AND CITY JURISDICTION ADDRESS REQUIREMENTS: 1. ADDRESS SHALL BE DISPLAYED & VISIBLE FROM BOTH STREET DIRECTIONS OF APPROACHING VEHICLES. 2. PERMANENT NUMBERS AND LETTERS SHALL BE MADE OF DURABLE AND CLEARLY VISIBLE MATERIAL SUCH AS WOOD, METAL, CERAMIC, PLASTIC AND VINYL. (PAINTED OR GLUED ON NUMBERS ARE NOT ACCEPTABLE MATERIALS). 3. NUMBERS SHALL BE OF COLORS CONTRASTING WITH BACKGROUND TO WHICH THEY ARE ATTACHED. 4. NUMBERS SHALL BE A MINIMUM PROPORTION RATIO OF 6:1 (HEIGHT TO WIDTH). 5. NUMBERS CANNOT BE SPELLED.
12	METAL CAP: COLOR TO MATCH STUCCO.
13	HOLLOW METAL DOOR: SEE SHEET A11.0 (PAINT WITH SHERWIN WILLIAMS - WATERBASE ACRYLON 100 URETHANE PART A B65-720 / PART-B B65V720 - TINT TO MATCH PAINT COLOR NOTED).
14	5'-0" HIGH STUB OUT FOR Co2 LINE
15	4" MIN. HIGH WHITE LETTERING "RISER ROOM" ON RED BACKGROUND SIGN. MOUNT ON RISER ROOM DOOR
16	RECESSED KNOX BOX AT 5'-0" HIGH TO THE RIGHT OF FIRE RISER ROOM. SEE DETAIL 10/A17.0
17	RECESSED 8" FLUORESCENT LIGHT FIXTURE IN SOFFIT. SEE DETAIL 9/A17.1
18	GUTTER AND DOWNSPOUT. REFER TO DETAIL 8/A17.2
19	TEXTURE EXPOSED FOUNDATION WALL BELOW STUCCO WEEP SCREED AND PAINT TO MATCH WALL.
20	EXPOSED RAFTER TAIL

EXTERIOR PAINT SCHEDULE

NO.	MFR.	MODEL	COLOR #	COLOR NAME	FINISH	REMARKS
EP-1	SHERWIN WILLIAMS	XXX	SW7036	ACCESSIBLE BEIGE	HIGH GLOSS	PRIME W/ D.E. EFF-STOP PREMIUM PRIMER
EP-2	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW6109	HOPSACK	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-3	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW7041	VAN DYKE BROWN	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-4	DUNN EDWARDS	SYN-LUSTRO WATER BASE	DE6042	BEAR IN MIND		AWNING



2 EAST ELEVATION
SCALE: 1/4" = 1'-0"



1 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

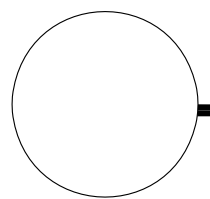
ELEVATION-1

SHEET OF 1

THE INFORMATION, DRAWINGS AND SPECIFICATIONS SHOWN ARE AND SHALL REMAIN THE PROPERTY OF IN-N-OUT BURGER.
THESE DOCUMENTS MAY NOT BE USED WITHOUT THE EXPRESSED WRITTEN CONSENT OF IN-N-OUT BURGERS.

SEASIDE, CA

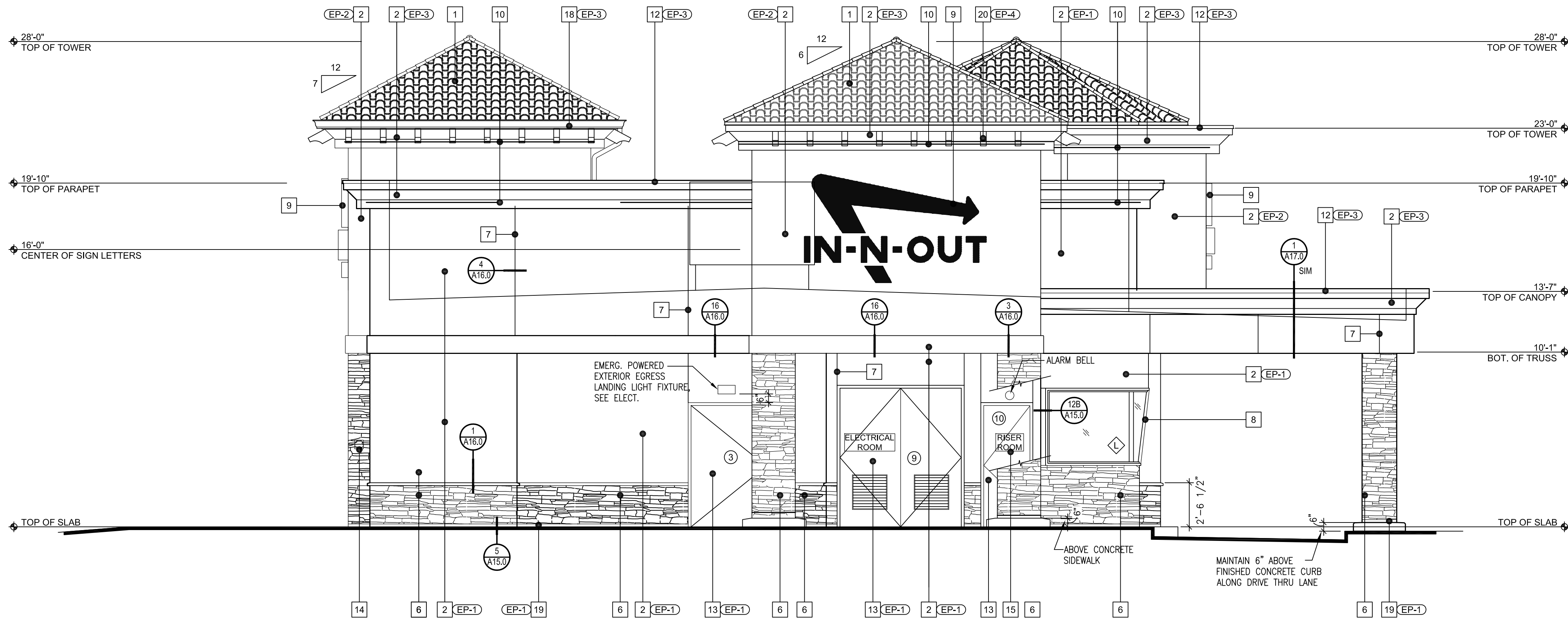
1350 DEL MONTE BOULEVARD



INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





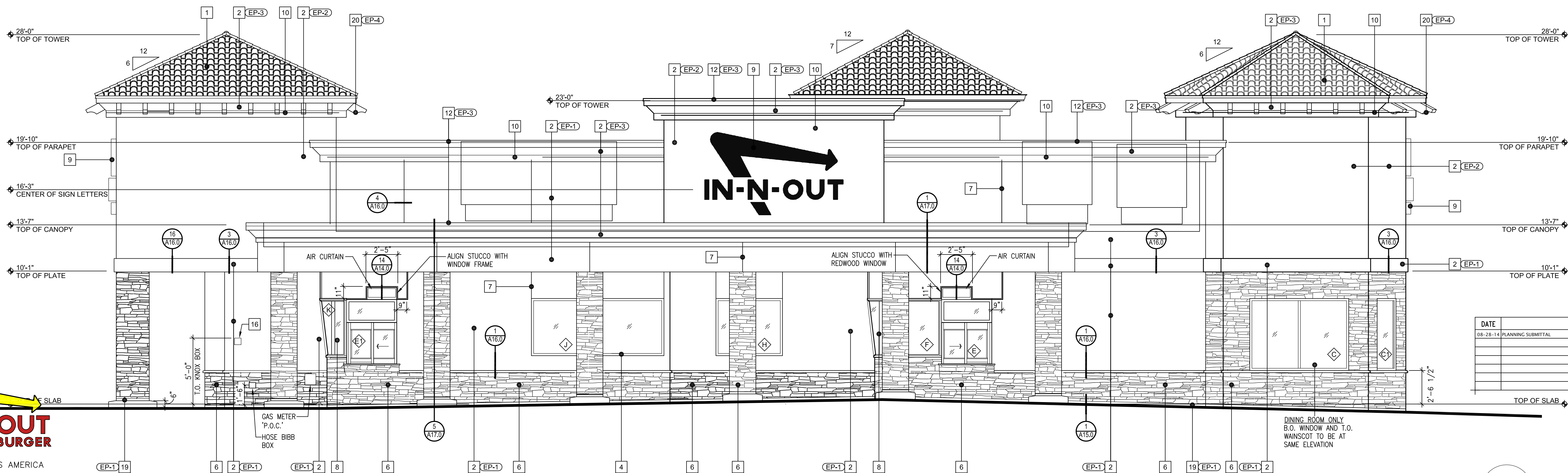
2 WEST ELEVATION
A9.0 SCALE: 1/4" = 1'-0"

KEY NOTES

1	TILE ROOF: EAGLE ROOFING PRODUCTS, CAPISTRANO STYLE 3602 CONCORD BLEND. PROVIDE BIRD STOP AND PAINT TO MATCH TILE.
2	STUCCO: MEDIUM SAND FLOAT TEXTURE FINISH.
3	ALUMINUM STOREFRONT DOORS: CLEAR ANODIZED ALUMINUM.
4	ALUMINUM WINDOWS: CLEAR ANODIZED ALUMINUM.
5	AWNINGS: PVC COATED WICK-RESISTANT ERADICABLE POLYESTER AWNINGS. COLOR:SHERWIN WILLIAMS SW7041 9EP-3) PROVIDE FLUORESCENT BACKLIGHTING. SEE: 5/A16.0 & 6/A16.0.
6	STONE VENEER - CARMEL MOUNTAIN EASTERN LEDGE BY CORONADO STONE WITH MATCHING CORONADO STONE WAINSCOT SILL. APPLY PER MFR RECOMMENDATIONS. DRY STACK.
7	1/4" WIDE METAL PENN SCREED: SEE DETAIL 4/A16.0. ALIGN CONTROL JOINTS ON DRIVE-THRU CANOPY FASCIA WITH CONTROL JOINTS ON BOTTOM OF SOFFIT.
8	SLOPED ALUMINUM WINDOWS: U.S. ALUMINUM S-010. GLASS JOINTS TO HAVE POLISHED EDGES WITH SILICONE JOINTS. PAINT WOOD FRAME "EP-4".
9	IN-N-OUT BURGER ILLUMINATED LOGO SIGN: UNDER SEPARATE PERMIT.
10	L.E.D. COVE LIGHTING: UNDER SEPARATE PERMIT.
11	BUILDING ADDRESS NUMBERS TO BE 12" HIGH, 4" MIN. W/ MIN. STROKE WIDTH OF 0.5 INCH PER FIRE DEPARTMENT AND CITY JURISDICTION ADDRESS DISPLAY REQUIREMENTS: 1. ADDRESS SHALL BE DISPLAYED & VISIBLE FROM BOTH STREET DIRECTIONS OF APPROACHING VEHICLES. 2. PERMANENT NUMBERS AND LETTERS SHALL BE MADE OF DURABLE AND CLEARLY VISIBLE MATERIAL SUCH AS WOOD, METAL, CERAMIC, PLASTIC AND VINYL. (PAINTED OR GLUED ON NUMBERS ARE NOT ACCEPTABLE MATERIALS). 3. NUMBERS SHALL BE OF COLORS CONTRASTING WITH BACKGROUND TO WHICH THEY ARE ATTACHED. 4. NUMBERS SHALL BE A MINIMUM PROPORTION RATIO OF 6:1 (HEIGHT TO WIDTH). 5. NUMBERS CANNOT BE SPELLED.
12	METAL CAP: COLOR TO MATCH STUCCO.
13	HOLLOW METAL DOOR: SEE SHEET A11.0 (PAINT WITH SHERWIN WILLIAMS - WATERBASE ACROLON 100 URETHANE PART A B65-720 / PART -B B65V720 - TINT TO MATCH PAINT COLOR NOTED).
14	5'-0" HIGH STUB OUT FOR Cc2 LINE
15	4" MIN. HIGH WHITE LETTERING "RISER ROOM" ON RED BACKGROUND SIGN. MOUNT ON RISER ROOM DOOR
16	RECESSED KNOX BOX AT 5'-0" HIGH TO THE RIGHT OF FIRE RISER ROOM. SEE DETAIL 10/A17.0
17	RECESSED 8' FLUORESCENT LIGHT FIXTURE IN SOFFIT. SEE DETAIL 9/A17.1
18	GUTTER AND DOWNSPOUT. REFER TO DETAIL 8/A17.2
19	TEXTURE EXPOSED FOUNDATION WALL BELOW STUCCO WEEP SCREED AND PAINT TO MATCH WALL.
20	EXPOSED RAFTER TAIL

EXTERIOR PAINT SCHEDULE

NO.	MFR.	MODEL	COLOR #	COLOR NAME	FINISH	REMARKS
EP-1	SHERWIN WILLIAMS	XXX	SW7036	ACCESSIBLE BEIGE	HIGH GLOSS	PRIME W/ D.E. EFF-STOP PREMIUM PRIMER
EP-2	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW6109	HOPSACK	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-3	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW7041	VAN DYKE BROWN	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-4	DUNN EDWARDS	SYN-LUSTRO WATER BASE	DE6042	BEAR IN MIND		AWNING



1 SOUTH ELEVATION
A9.0 SCALE: 1/4" = 1'-0"

DATE	REVISIONS
08-28-14	PLANNING SUBMITTAL



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ELEVATION-2

SHEET OF 1

THE INFORMATION, DRAWINGS AND SPECIFICATIONS SHOWN ARE AND SHALL REMAIN THE PROPERTY OF IN-N-OUT BURGER.
THESE DOCUMENTS MAY NOT BE USED WITHOUT THE EXPRESSED WRITTEN CONSENT OF IN-N-OUT BURGERS.

SEASIDE, CA

1350 DEL MONTE BOULEVARD

INO_CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

FLOOR PLAN

SHEET OF 1

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SEASIDE, CA

1350 DEL MONTE BOULEVARD

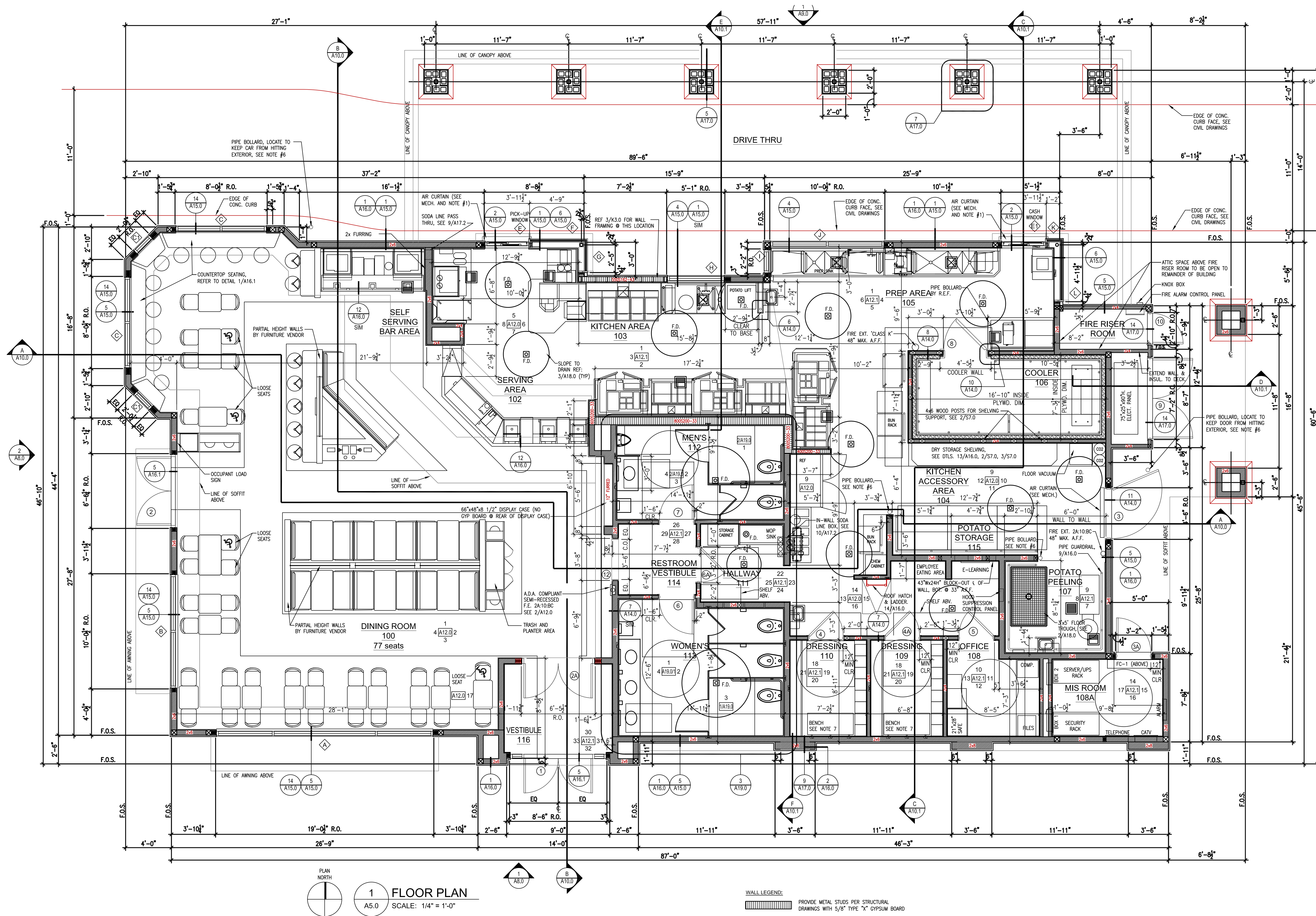
DATE	REVISIONS

0' 5' 10'
SCALE: 1/4"=1'-0"

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

08-26-14

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ROOF PLAN

SHEET OF 1

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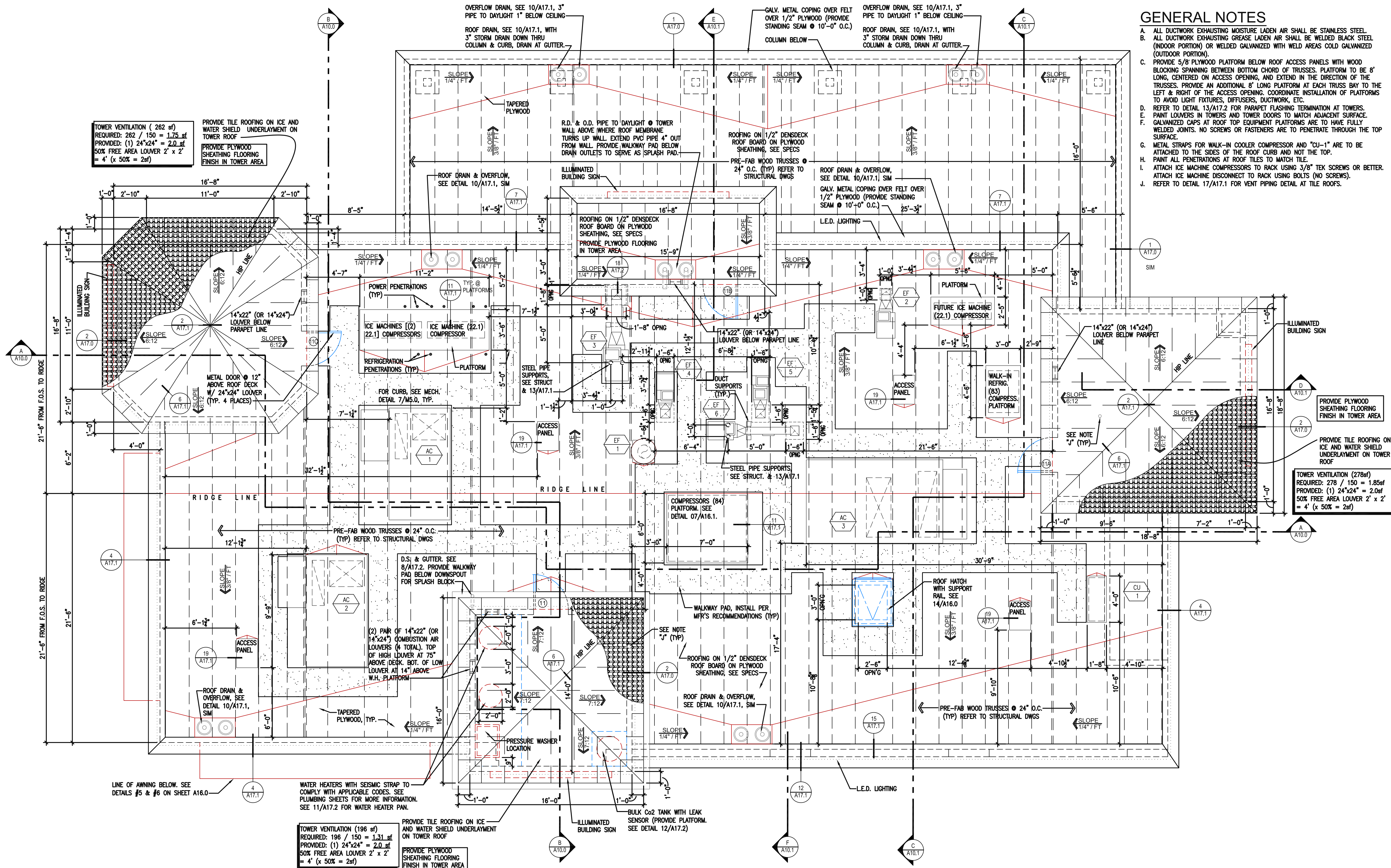
1 ROOF PLAN
A6.0 SCALE: 1/4" = 1'-0"

SEASIDE, CA

1350 DEL MONTE BOULEVARD

GENERAL NOTES

- ALL DUCTWORK EXHAUSTING MOISTURE LADEN AIR SHALL BE STAINLESS STEEL.
- ALL DUCTWORK EXHAUSTING GREASE LADEN AIR SHALL BE WELDED BLACK STEEL (INDOOR PORTION) OR WELDED GALVANIZED WITH WELD AREAS COLD GALVANIZED (OUTDOOR PORTION).
- PROVIDE 5/8" PLYWOOD PLATFORM BELOW ROOF ACCESS PANELS WITH WOOD BLOCKING SPANNING BETWEEN BOTTOM CHORD OF TRUSSES. PLATFORM TO BE 8' LONG, CENTERED ON ACCESS OPENING, AND EXTEND IN THE DIRECTION OF THE TRUSSES. PROVIDE AN ADDITIONAL 8' LONG PLATFORM AT EACH TRUSS BAY TO THE LEFT & RIGHT OF THE ACCESS OPENING. COORDINATE INSTALLATION OF PLATFORMS TO AVOID LIGHT FIXTURES, DIFFUSERS, DUCTWORK, ETC.
- REFER TO DETAIL 13/A17.2 FOR PARAPET FLASHING TERMINATION AT TOWERS.
- PAINT LOUVERS IN TOWERS AND TOWER DOORS TO MATCH ADJACENT SURFACE.
- GALVANIZED CAPS AT ROOF TOP EQUIPMENT PLATFORMS ARE TO HAVE FULLY WELDED JOINTS. NO SCREWS OR FASTENERS ARE TO PENETRATE THROUGH THE TOP SURFACE.
- METAL STRAPS FOR WALK-IN COOLER COMPRESSOR AND "CU-1" ARE TO BE ATTACHED TO THE SIDES OF THE ROOF CURB AND NOT THE TOP.
- PAINT ALL PENETRATIONS AT ROOF TILES TO MATCH TILE.
- ATTACH ICE MACHINE COMPRESSORS TO RACK USING 3/8" TEK SCREWS OR BETTER. ATTACH ICE MACHINE DISCONNECT TO RACK USING BOLTS (NO SCREWS).
- REFER TO DETAIL 17/A17.1 FOR VENT PIPING DETAIL AT TILE ROOFS.



DATE	REVISIONS
08-28-14	PLANNING SUBMITTAL

0' 5' 10'
SCALE: 1/4" = 1'-0"

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

ISSUE RECORD

DATE DESCRIPTION
2014 CLASSIC PROTOTYPE 14C
10.15.14 SITE PHOTOMETRIC ISSUE FOR REVIEW

REVISION RECORD

PROFESSIONAL SEAL

J:\141013
LIPPE AND ASSOCIATES
CONSULTING ENGINEERS
15950 MIDWAY ROAD (972) 367-3500
ADDISON, TEXAS 75001 FAX (972) 367-3849

PROTOTYPE VERSION
14C

PROJECT NAME

IN-N-OUT
BURGER

Seaside
California

1350 Del Monte Blvd.
Seaside, CA. 92XXX

IN-N-OUT
BURGER®

GOD BLESS AMERICA

PROJECT NUMBER

XXXXXX

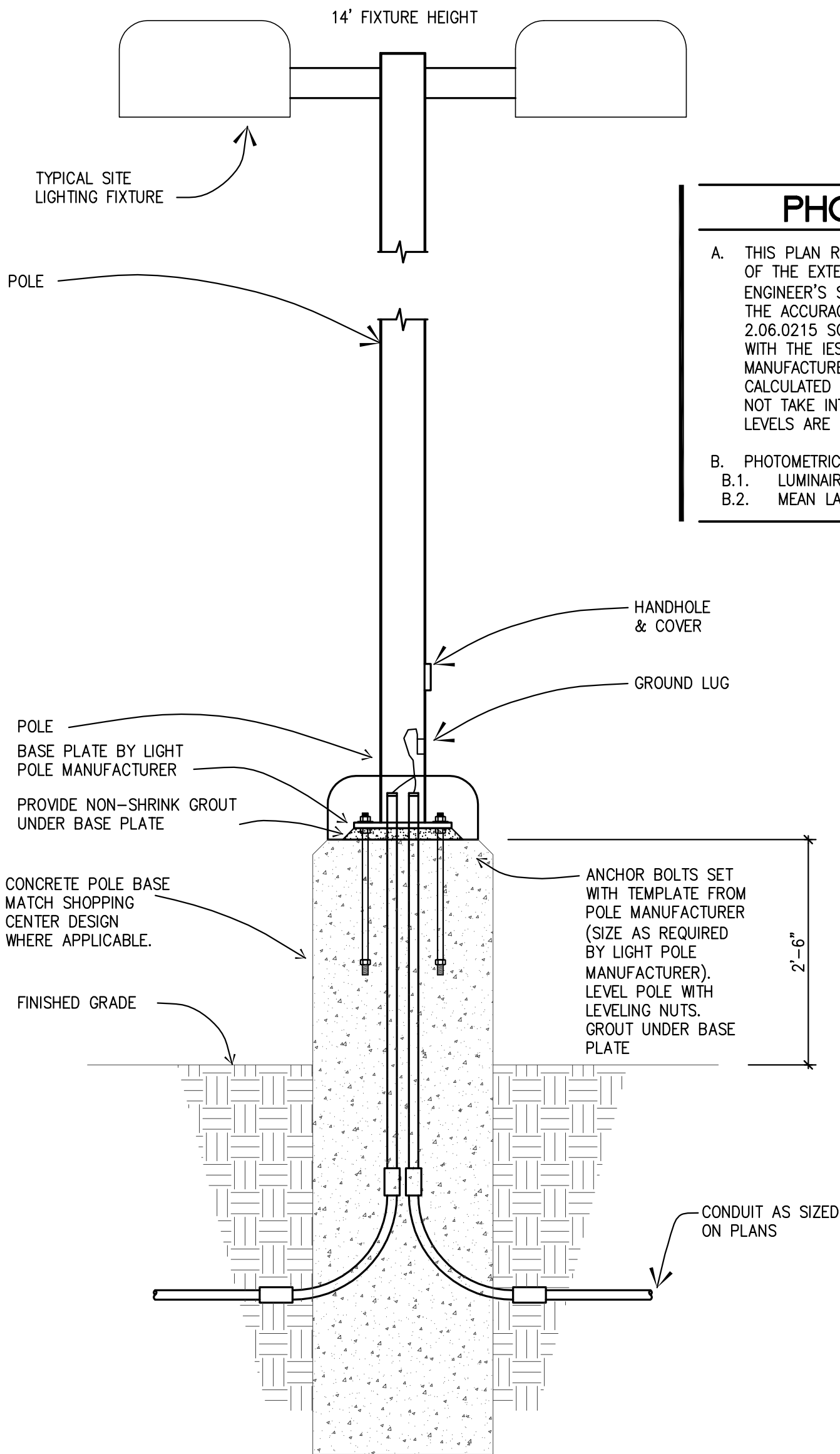
SHEET TITLE

SITE LIGHTING
PHOTOMETRIC PLAN

SHEET NUMBER

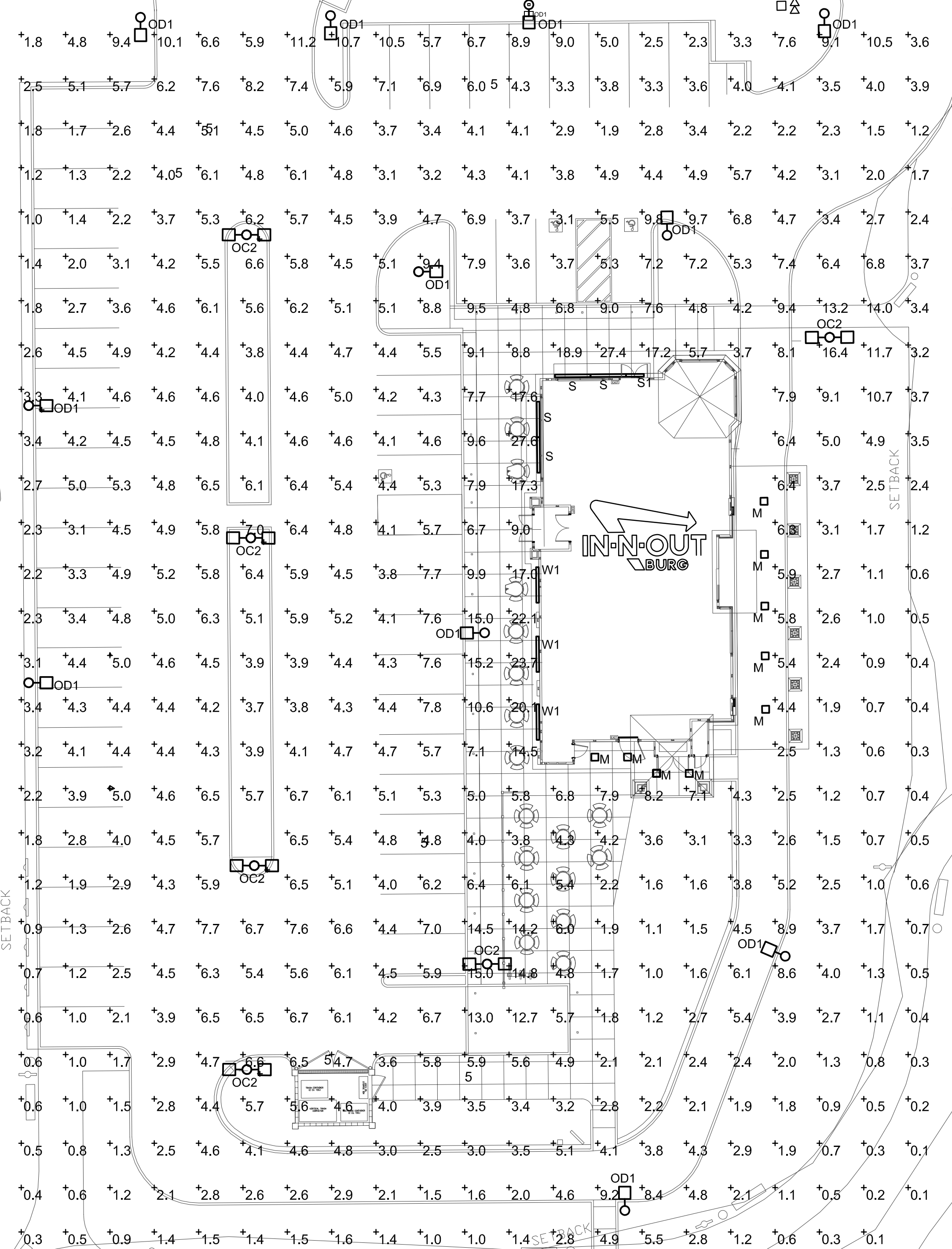
E11.0

SITE LIGHTING FIXTURE SCHEDULE				
TYPE	MANUFACTURER	VOLTAGE	LAMPS	DESCRIPTION
OC2	LITHONIA LIGHTING #KSF2 150M R4W, 208 SP12 SCWA WITH (2) TYPE IV WIDE OPTICS, POLE #SSS 11.5 5G DM28 DDB	208	(2) 150W MH (378 VA TOTAL LOAD)	208V TWIN HEAD, 150W METAL HALIDE, 14' AFG, TOTAL FIXTURE HEIGHT (11'-6" POLE + 2'-6" BASE).
OD1	LITHONIA LIGHTING #KSF2 150M R4W, 208 SP12 SCWA WITH (2) TYPE IV WIDE OPTICS, POLE #SSS 11.5 5G DM28 DDB	208	(1) 150W MH (189 VA TOTAL LOAD)	208V SINGLE HEAD, 150W METAL HALIDE, 14' AFG, TOTAL FIXTURE HEIGHT (11'-6" POLE + 2'-6" BASE).
M	GOHAM LIGHTING #LAH-70MH-12FW-FFL-120	120	(1) 70W MH (90 VA TOTAL LOAD)	120V RECESSED MOUNTED WITH ZERO DEGREE BALLAST, 70W METAL HALIDE, PROVIDE VANDAL RESISTANT COVER.
S	LITHONIA #TDM-232-120-GEBS	120	(4) FO32T8/41K (112 VA TOTAL LOAD)	8' EXTERIOR WALL MOUNTED BACK LIGHTING WITH ZERO DEGREE BALLAST, WALL MOUNTED UNDER AWNING AT 9'-6" AFG.
S1	LITHONIA #DM-232-120-GEB10RS	120	(2) FO32T8/41K (56 VA TOTAL LOAD)	4' EXTERIOR WALL MOUNTED BACK LIGHTING WITH ZERO DEGREE BALLAST, WALL MOUNTED UNDER AWNING AT 9'-6" AFG.
W1	VOIGT LIGHTING #TIMO-400-1T8-32W-120-OP-TRW-8-WH	120	(4) FO32T8/41K (141 VA TOTAL LOAD)	8' EXTERIOR RECESSED FIXTURE. LOCATE IN EXTERIOR NICHE (DAMP LOCATION) WITH ZERO DEGREE BALLAST.



PHOTOMETRIC NOTES

- A. THIS PLAN REPRESENTS A SOFTWARE SIMULATED PHOTOMETRIC STUDY OF THE EXTERIOR SITE LIGHTING. IT WAS CREATED UNDER THE ENGINEER'S SUPERVISION; HOWEVER THE ENGINEER DOES NOT WARRANT THE ACCURACY OF THE SOFTWARE OR LIGHT FIXTURE DATA. VISUAL 2.06.0215 SOFTWARE WAS USED TO GENERATE THIS DOCUMENT ALONG WITH THE IES DATA FILES PROVIDED BY THE LIGHT FIXTURE MANUFACTURER. THIS PLAN INDICATES THE SIMULATED LIGHT INTENSITY CALCULATED IN FOOT CANDLES AT GRAD LEVEL. THE SIMULATION DOES NOT TAKE INTO EFFECT A CHANGE IN GRADE ELEVATION. THE LIGHT LEVELS ARE CALCULATED ON A HORIZONTAL PLANE 0 FT AFG.
- B. PHOTOMETRIC CALCULATION DATA:
B.1. LUMINAIRE LIGHT LOSS FACTOR EQUALS 0.75.
B.2. MEAN LAMP LUMENS WERE USED FOR IES CALCULATIONS

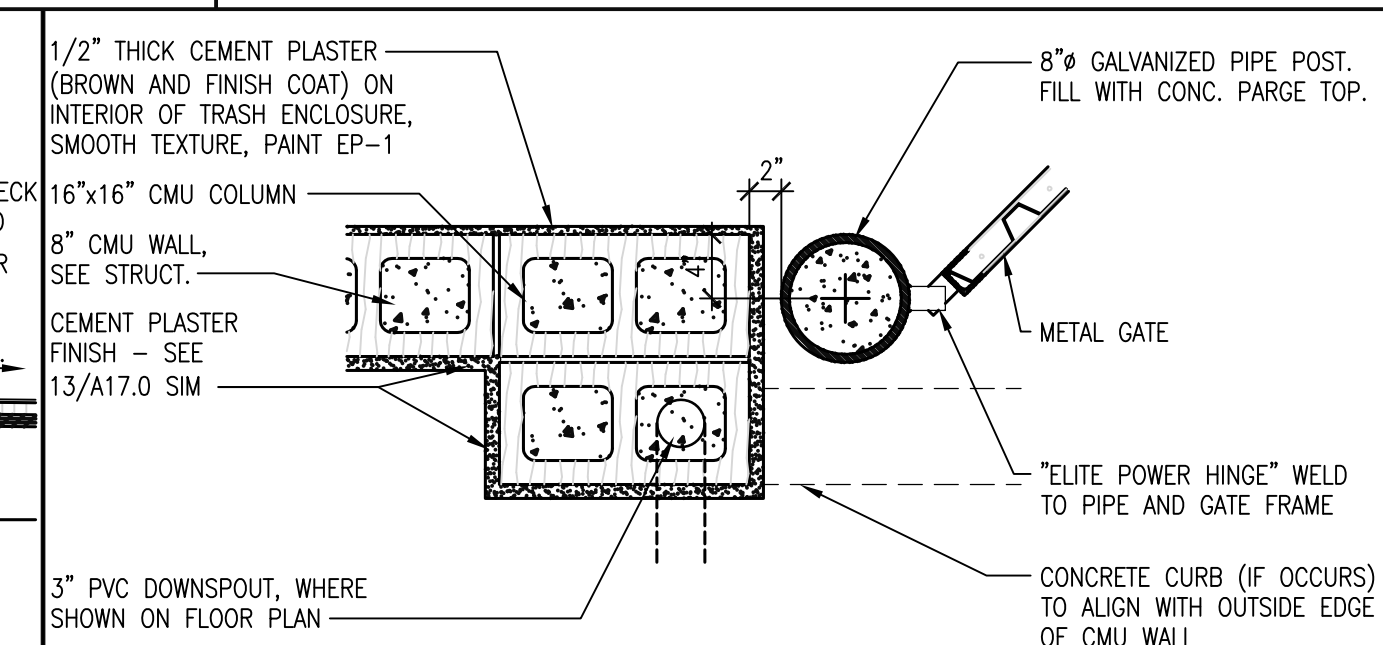
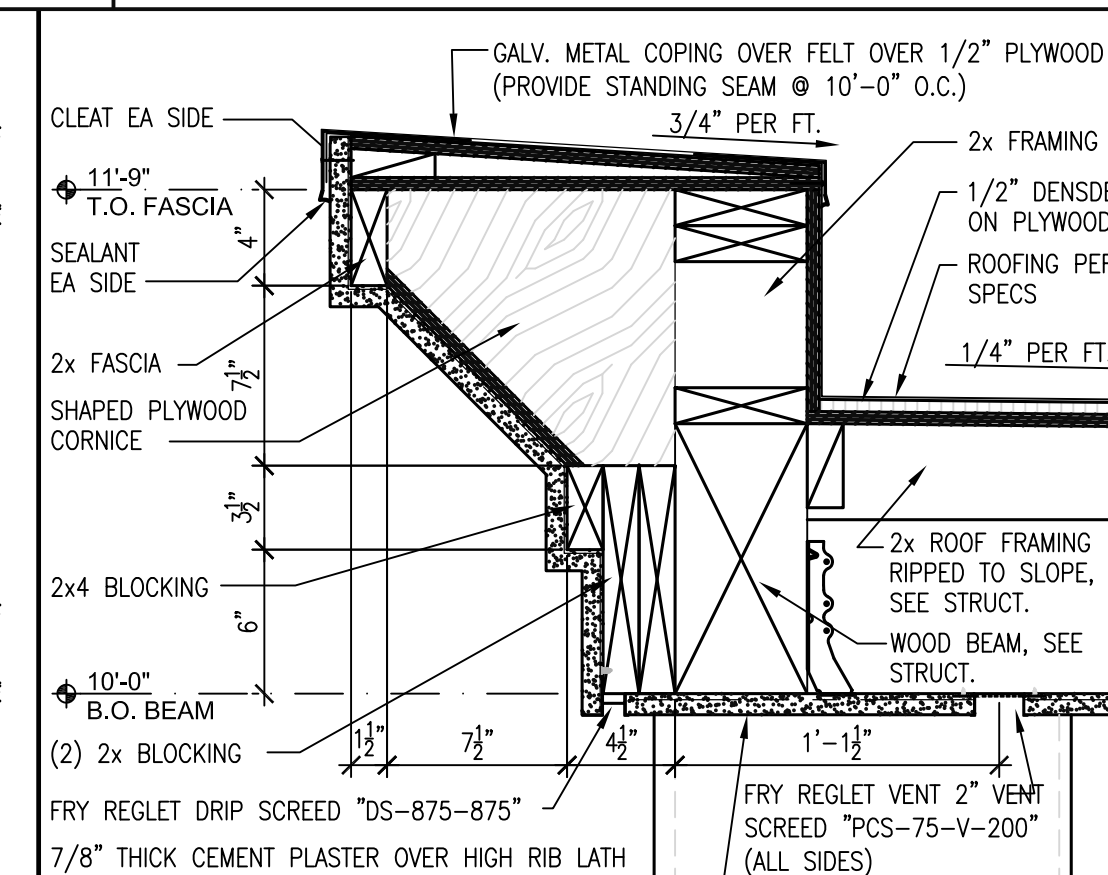
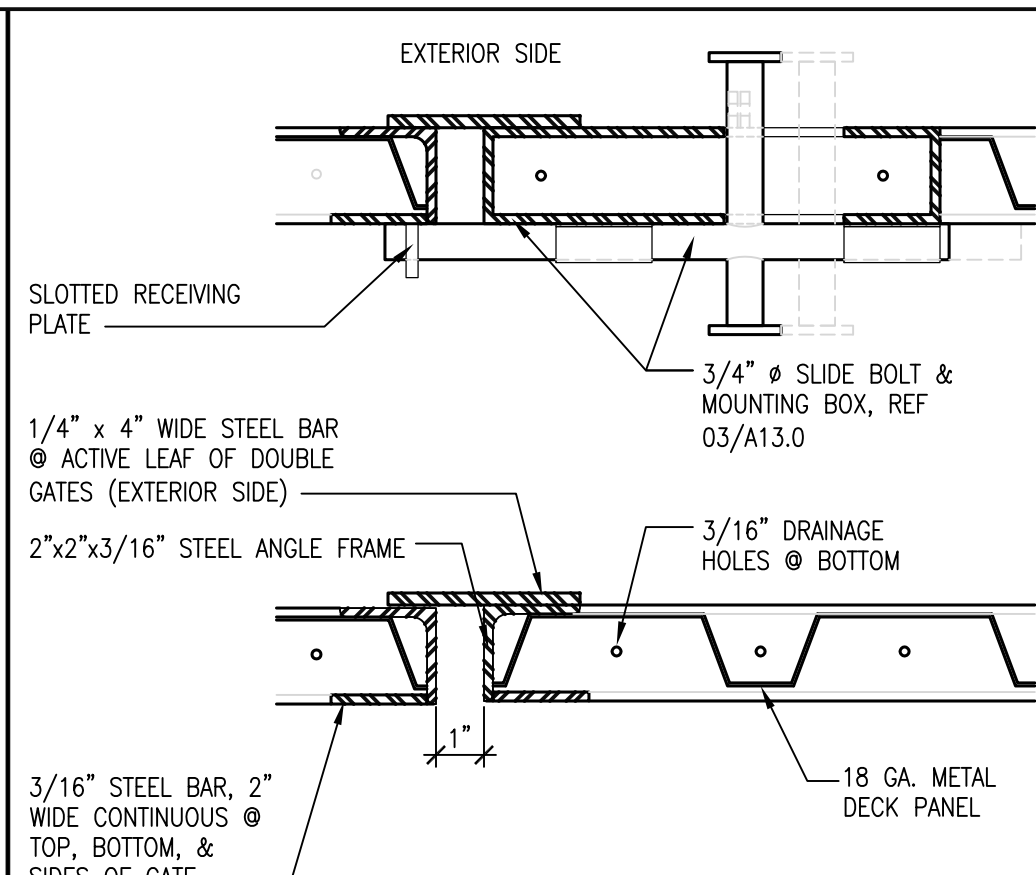
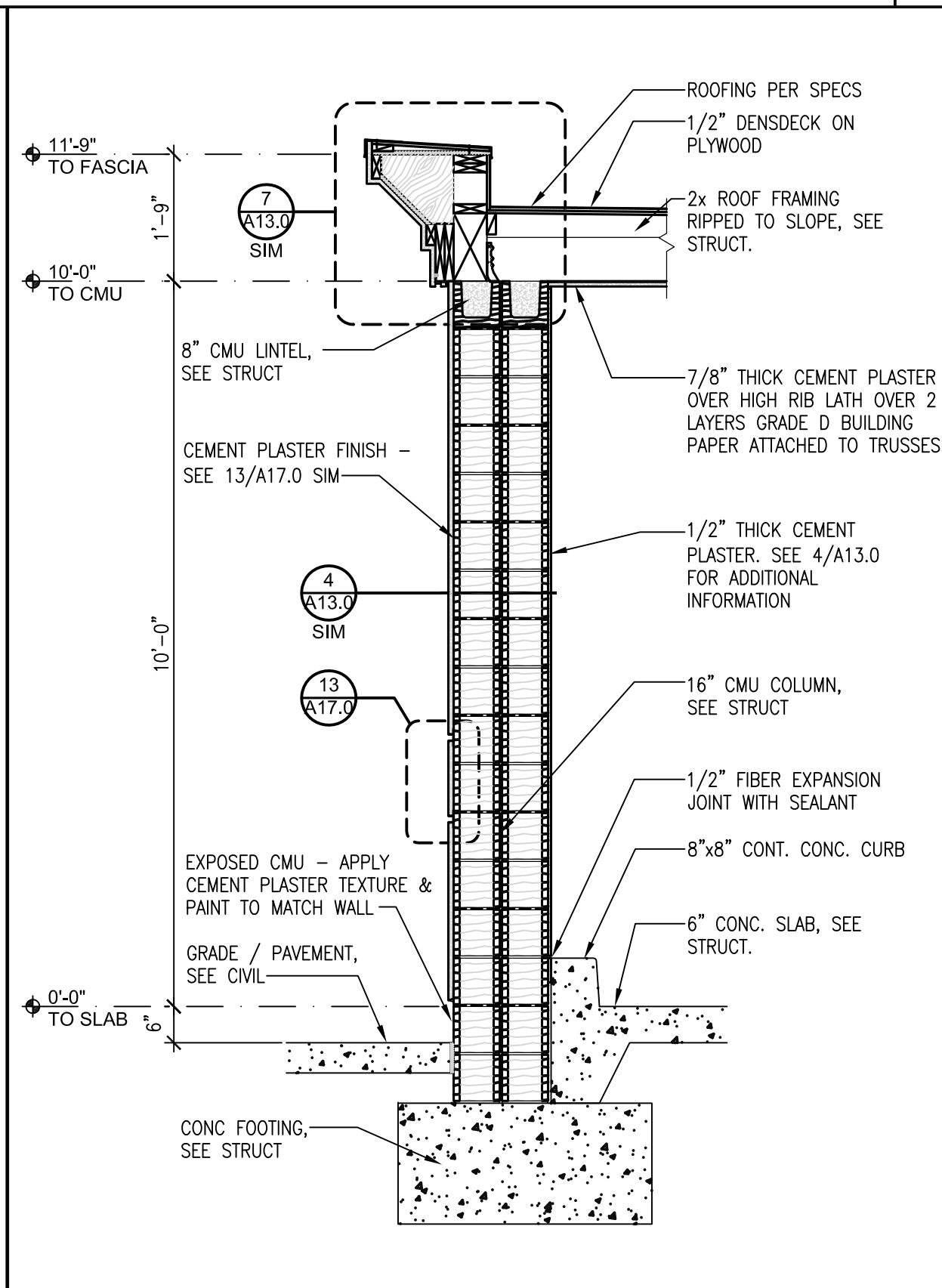
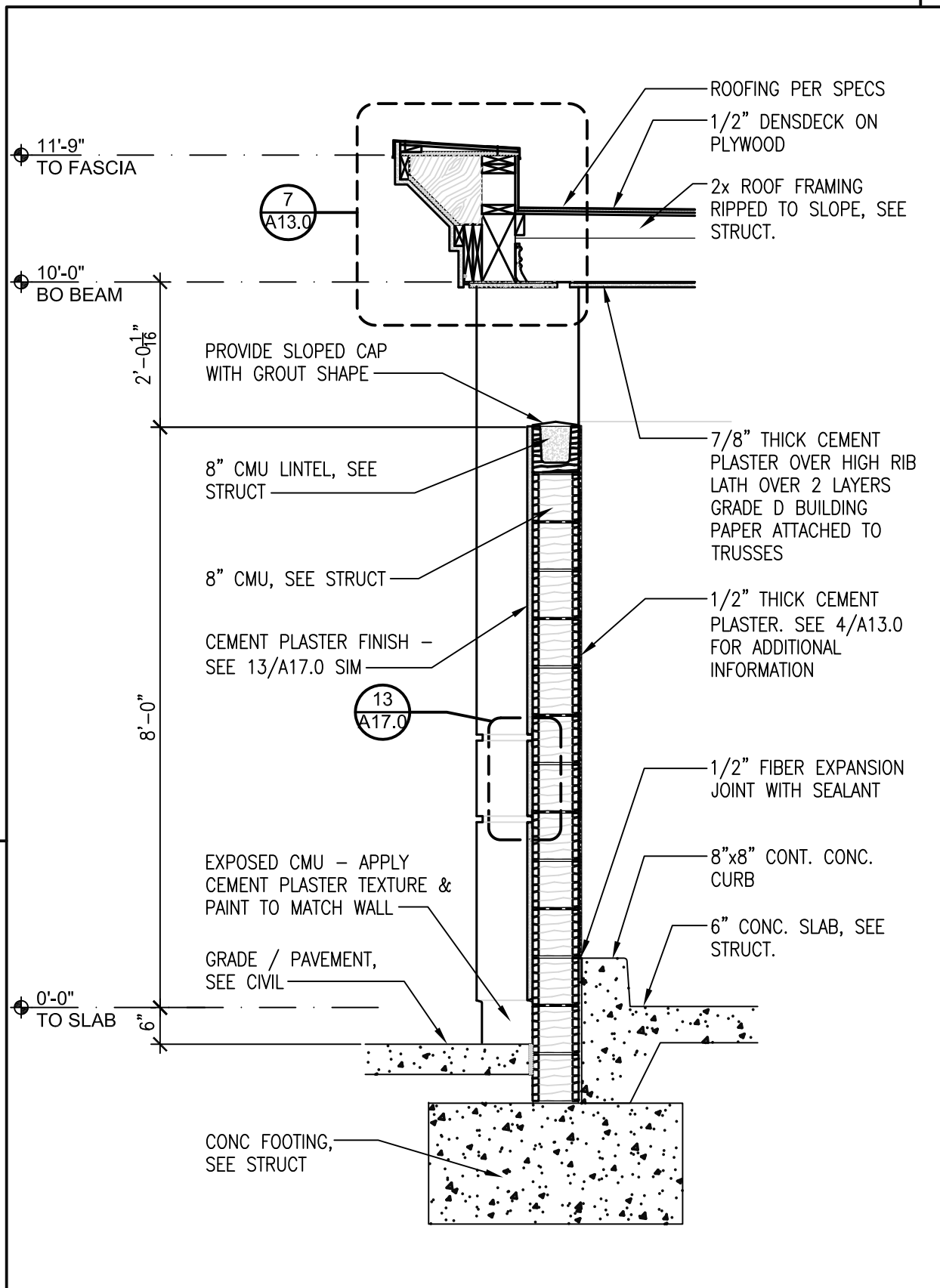


01 SITE PHOTOMETRIC PLAN
SCALE: 1"=20'-0"

02 SITE LIGHTING STANDARD
SCALE: NOT TO SCALE

GENERAL NOTE:
REFER TO STRUCTURAL PLANS FOR POLE BASE STRUCTURAL DETAIL 08/SD01.





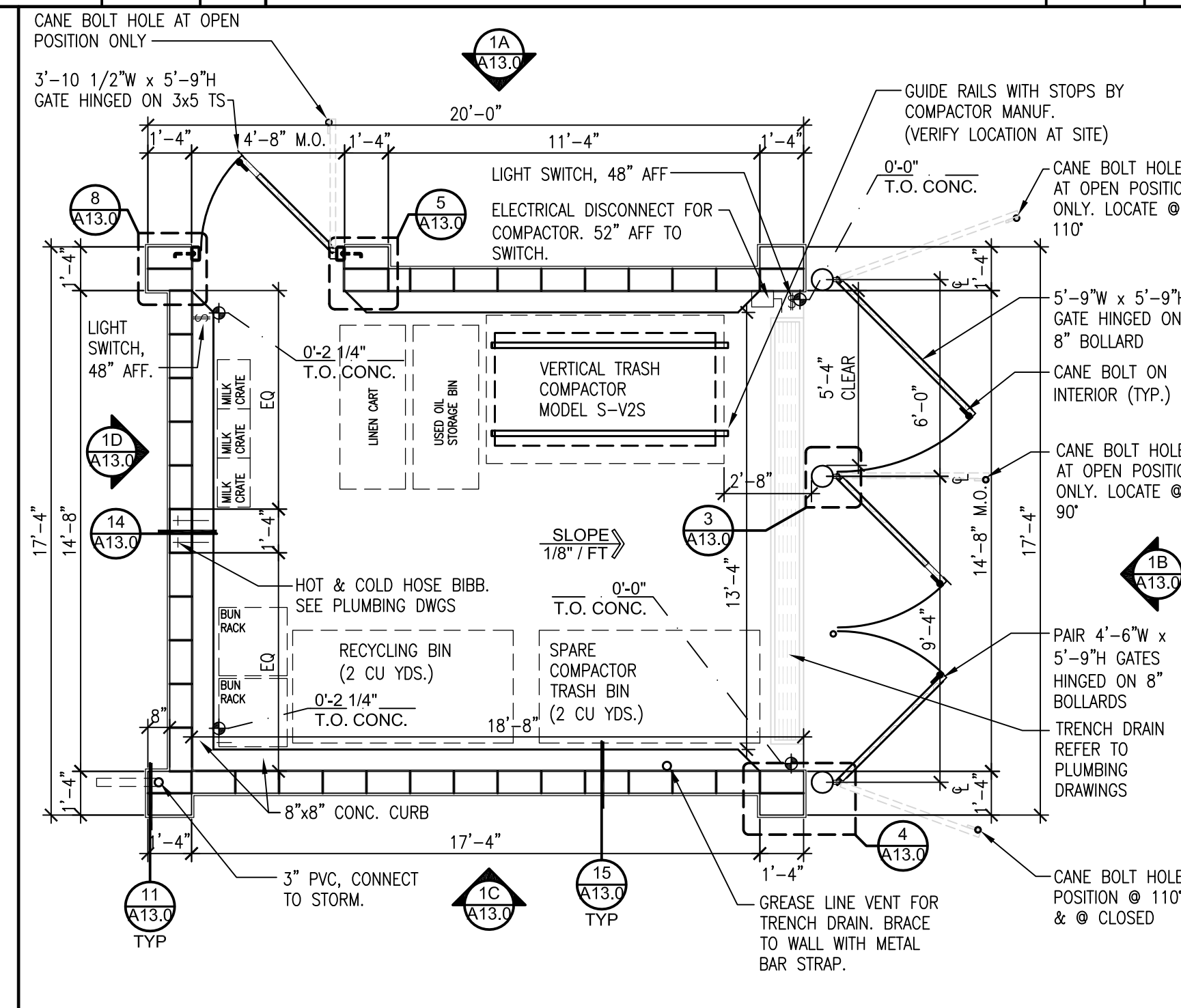
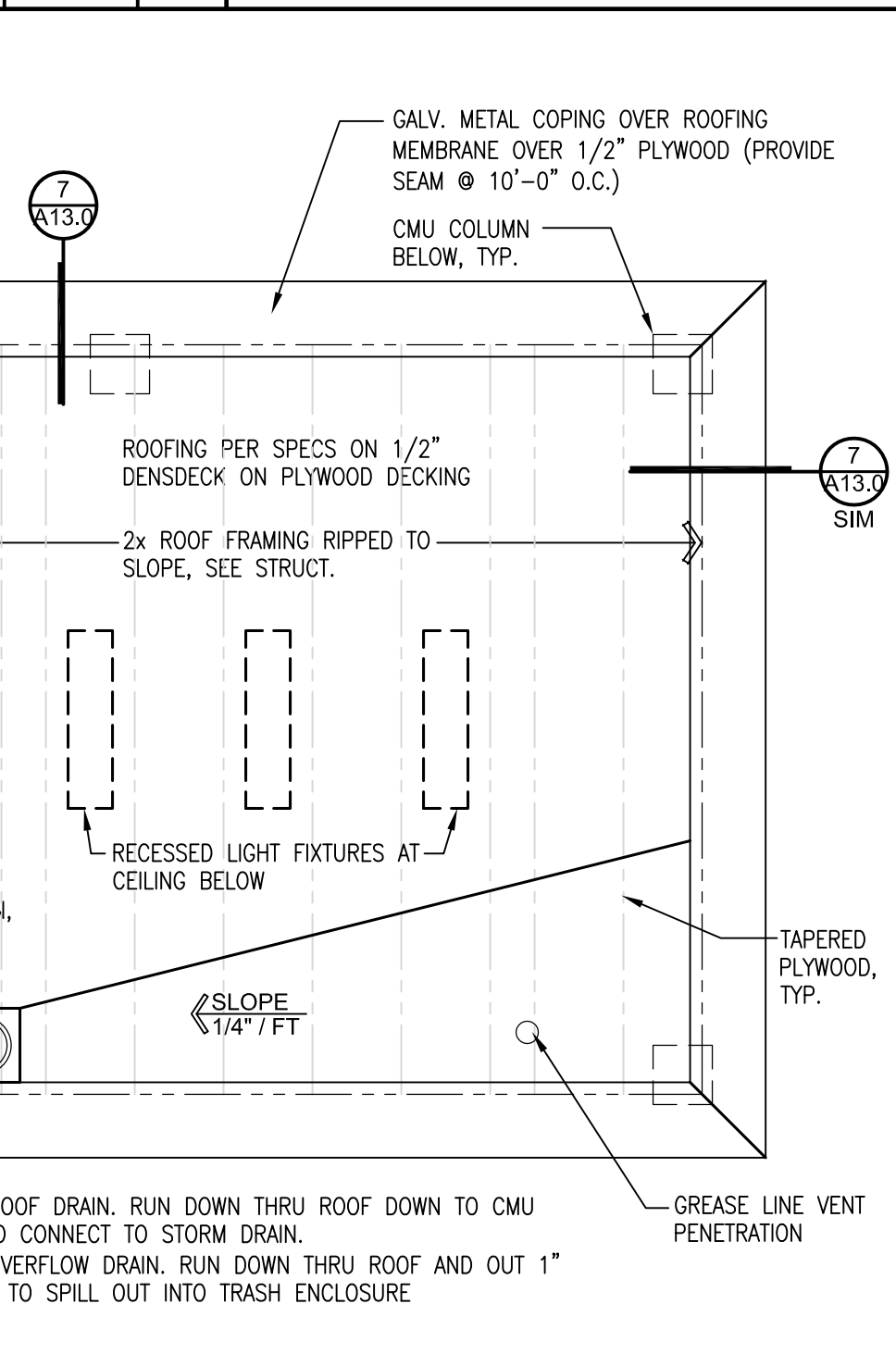
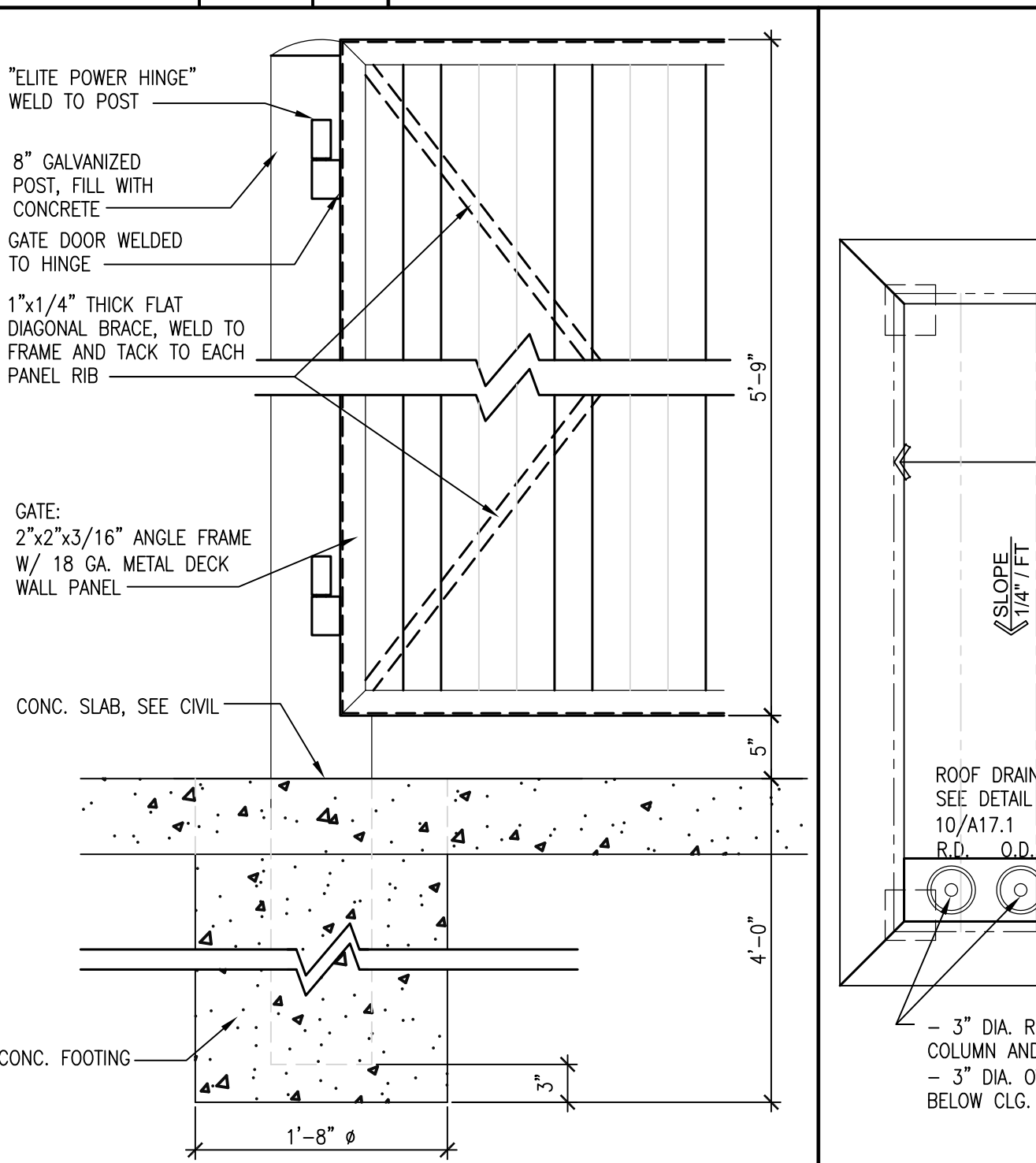
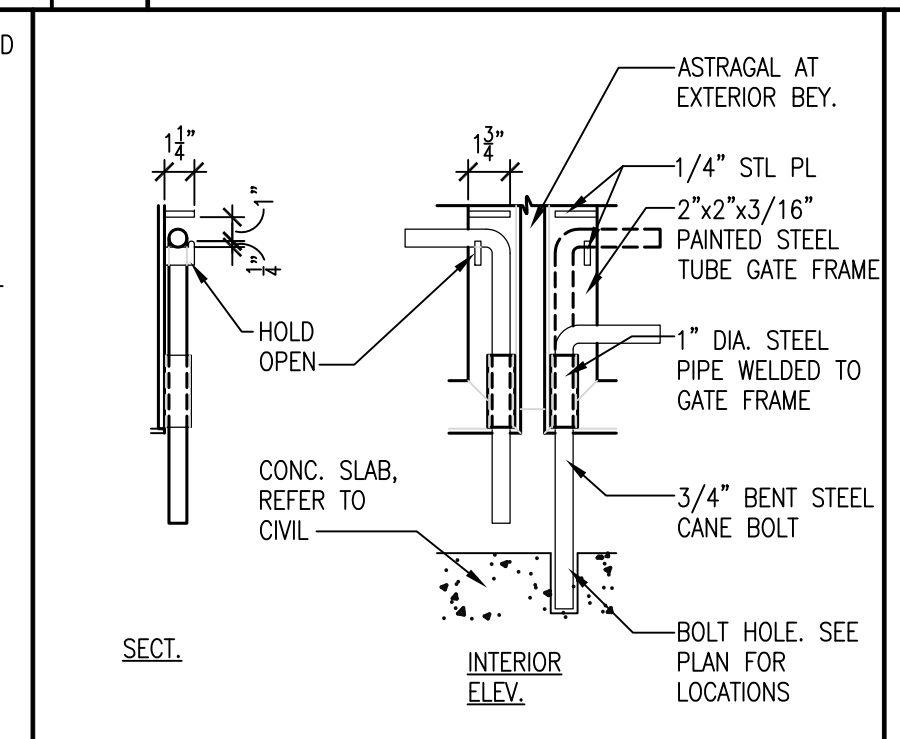
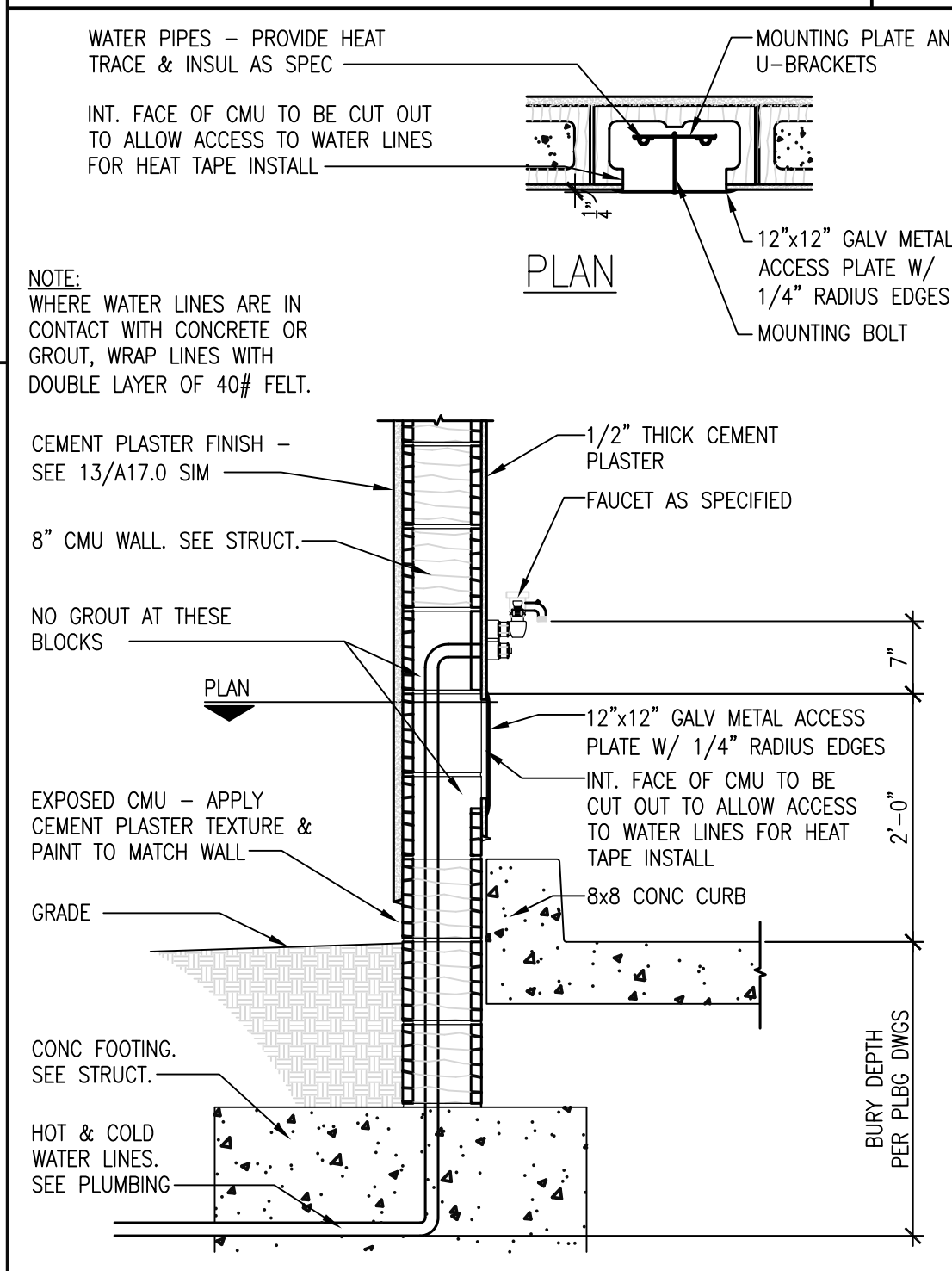
WALL SECTION

15 WALL SECTION

11 MAN GATE DTLS

8 MAN GATE - HINGE JAMB

5 COMPACTOR GATE - LOCK



HOSE BIB DETAIL

14 R.C.P.

12 GATE HINGE DETAIL

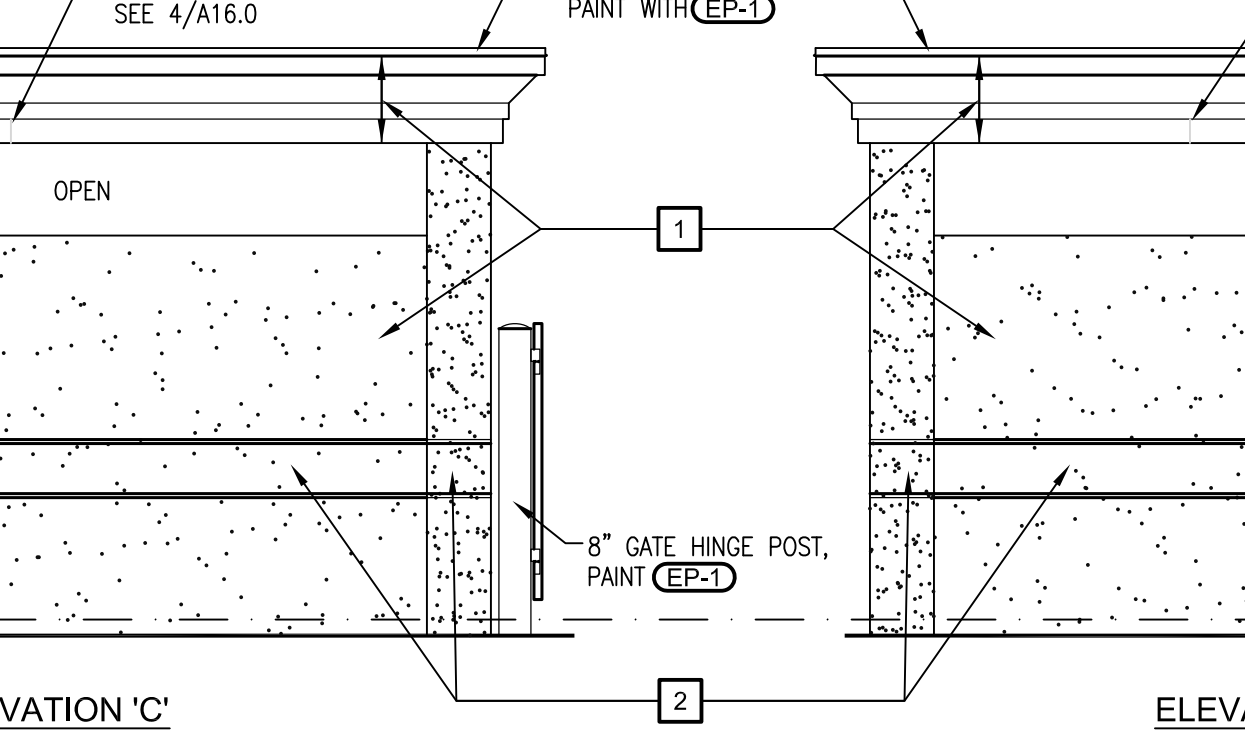
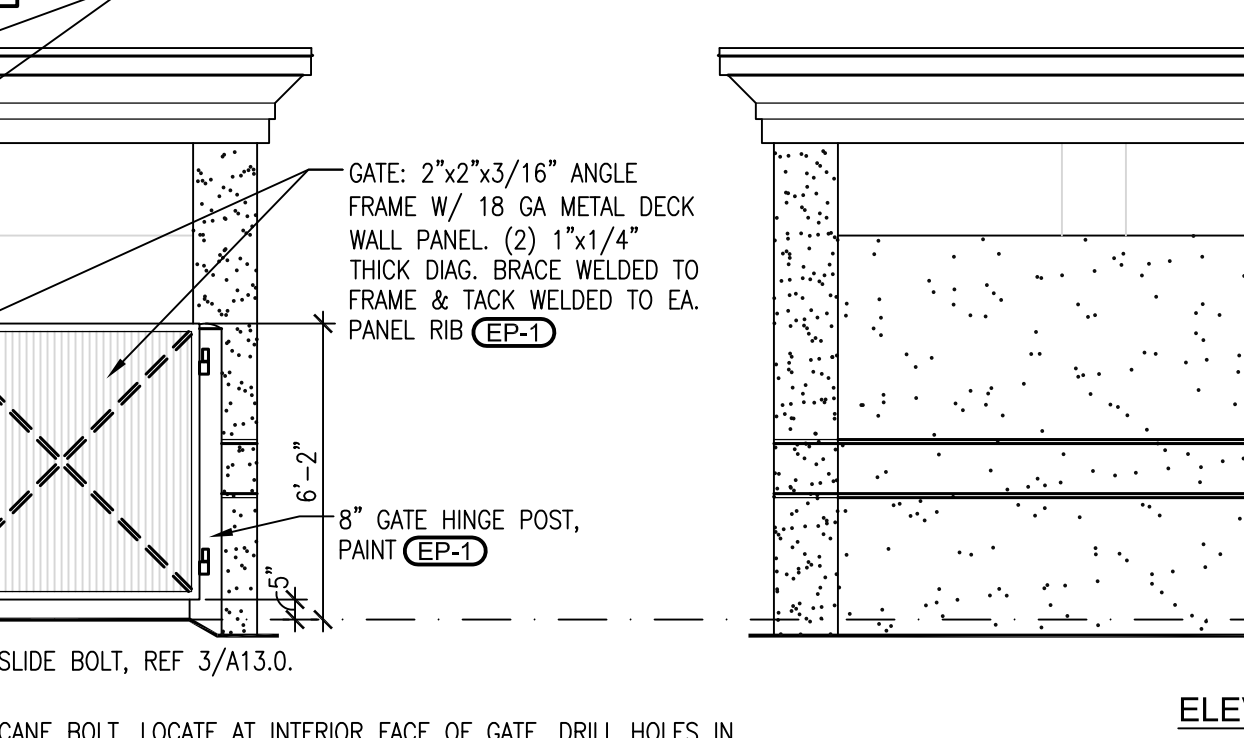
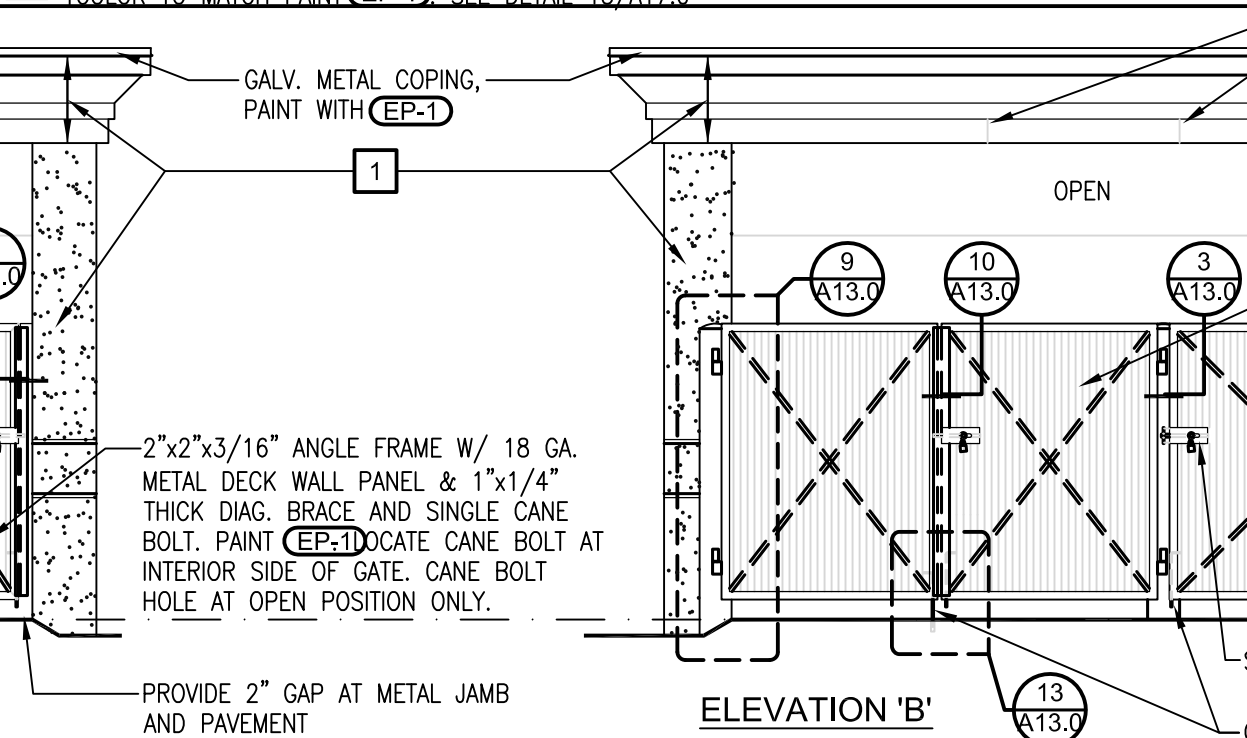
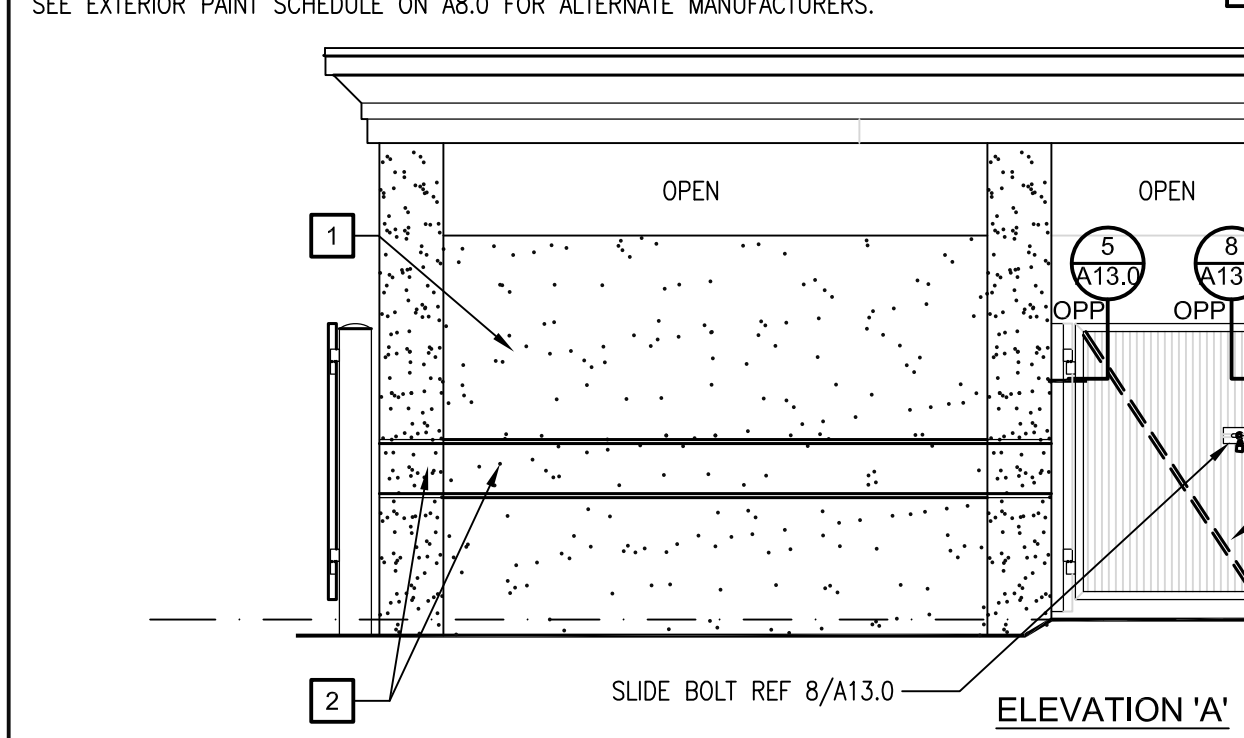
9 ROOF PLAN

6 FLOOR PLAN

EXTERIOR PAINT KEY NOTES		
(EP-1)	DUNN EDWARDS	COLOR #: SW7036 COLOR NAME: ACCESSIBLE BEIGE
(EP-4)	DUNN EDWARDS	COLOR #: SW7041 COLOR NAME: VAN DYKE BROWN

SEE EXTERIOR PAINT SCHEDULE ON A8.0 FOR ALTERNATE MANUFACTURERS.

FINISH KEY NOTES	
1	STUCCO - MEDIUM SAND FLOAT TEXTURE FINISH. PAINT (EP-1)
2	STUCCO BAND - PAINT (EP-4) WITH 1\"



ELEVATIONS

1

1

1

1

REVISION RECORD

PROFESSIONAL SEAL

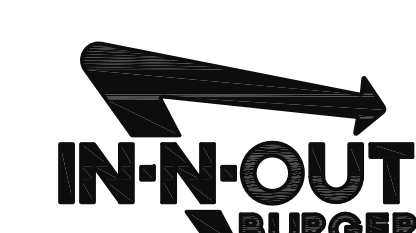
PROTOTYPE VERSION 12C.0

PROJECT NAME

IN-N-OUT BURGER

SEASIDE CA

1350 DEL MONTE BOULEVARI



GOD BLESS AMERICA

PROJECT NUMBER

XXXXX

SHEET TITLE

TRASH ENCLOSURE PLANS, ELEVATIONS, SECTIONS & DETAILS

SHEET NUMBER

A13.0

APPENDIX C

**Local Coastal Plan: Land Use Plan, Coastal Implementation Plan
Consistency Analysis, and Sea Level Rise Report**

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

Natural Coastal Resources	
Natural Habitat Areas	
Policy NCR-CZ 1.1.A – Promote Sustainable Development New development shall promote environmental sustainability which is essential to reducing impacts to natural resources, habitat loss, and air and water resources.	Consistent. The proposed project will include a variety of design features aimed at environmental conservation and sustainability. Specifically, the proposed project will include native drought-tolerant vegetation, water-efficient irrigation systems and devices, Green Building Materials, water-efficient fixtures (i.e., low-flow faucets, dual-flush toilets, and waterless urinals), energy-efficient heating and cooling systems, and interior and exterior storage areas for recyclables and green waste. In addition, the proposed project will also comply with standard conditions and mitigation measures outlined throughout the 2011 Certified Environmental Impact Report (EIR) aimed at reducing impacts to natural resources and habitats and air and water resources.
Policy NCR-CZ 1.1.B – Promote Sustainability of Biological Productivity The City shall identify and pursue appropriate methods of native enhancement and restoration that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at the long-term sustainability of the surrounding coastal habitats and those species that are reliant on such habitats. As required by Measure 4.3.1, Biotic Habitat Protection, the Applicant will be required to retain a qualified biologist who will implement various actions during project construction in order to minimize construction impacts to sensitive biotic habitats adjacent to the project boundaries. Implementation of Measures 4.3.2 through 4.3.4, which outline measures to minimize project-related impacts to special-status species (including northern harriers, other nesting birds, California red-legged frog, and coast range newt) will also be required to ensure the long-term preservation of these species. The proposed project will be required to comply with Measure 4.3.5, Weed Management and Signage, which mandates the placement and ongoing maintenance of signs along the pedestrian trail instructing pedestrians to stay on the trail in order to preserve neighboring biotic habitats. Measure 4.3.5 will also require the eradication of noxious common reed within the project area. An existing pedestrian and bicycle trail that circles Laguna Grande Lake will connect the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The proposed project will extend the pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will increase connectivity between the project

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

	site and the Laguna Grande Park and Lake, the adjacent hotel property, Del Monte Boulevard, the Laguna Grande Regional Park Trail, and the Monterey Bay Coastal Bike Trail, thereby increasing recreational opportunities in the area and promoting appreciation for the biological productivity of the coastal area.
Policy NCR-CZ 1.1.C – Minimize Adverse Effects to Natural Coastal Resources New development shall be located in areas where it will not have a significant adverse effect either individually or cumulatively on natural coastal resources and public access and recreation.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will disturb a very small amount of relatively low-quality habitat; however, the 2011 Certified EIR found and concluded that the proposed project would not have a significant individual or cumulative impact on natural coastal resources. As discussed above under Policy NCR-CZ 1.1B, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will connect the project site with the Laguna Grande Park and Lake, the adjacent hotel property, Del Monte Boulevard, the Laguna Grande Regional Park, and the Monterey Bay Coastal Bike Trail, thereby increasing access to coastal resources and recreational opportunities.
Policy NCR-CZ 1.2.A – Designation of ESHA Areas of particular habitat value and fragility consistent with Policy LUD-CZ 1.3.B are considered Environmentally Sensitive Habitat Areas (ESHA). Figure 2-2 represents a preliminary mapping of lands containing potential ESHA. Actual determination of ESHA boundaries shall be based on facts on the ground at the time development is considered. Policy NCR-CZ 1.2.B – Protection of ESHA i. ESHAs shall be protected against significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. ii. Development in areas adjacent to ESHAs shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat areas. iii. Site-specific surveys to confirm the presence and extent of identifiable plant and animal life or habitats shall be required for all new development in, and adjacent to, ESHA. iv. Site-specific surveys shall be prepared by a qualified biologist and shall include recommended mitigation	Consistent. The project site does not contain any ESHAs; however, potential riparian, emergent wetland, and estuarine ESHAs are present to the south, north, and east of the project site (refer to Figure 2-2, Potentially Environmentally Sensitive Habitat Area (ESHA) within the Coastal Zone, of the City's Local Coastal Program Land Use Plan (LUP). As part of the Biological Resources Report prepared for the 2011 Certified EIR, six site-specific field surveys were conducted to determine existing plant and animal species present on and adjacent to the project site. The Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site that are incorporated into the 2011 Certified EIR as Measures 4.3.1 through 4.3.4. The 2011 Certified EIR found and concluded that the proposed project would not result in significant impacts to neighboring sensitive habitats, including potential ESHAs with implementation of prescribed mitigation measures. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

measures to avoid, and where avoidance is not possible, minimize sensitive habitat impacts.	
Policy NCR-CZ 1.3.A – Designation of Wetlands Areas periodically or permanently covered with water that meet the definition of wetland in Coastal Act Section 30121, are considered to be wetlands. The presence of either hydrology, soils, or vegetation must be evidenced for an area to qualify as a wetland. The wetlands identified on Figure 2-3 shall represent a preliminary mapping of lands containing potential wetlands. Actual determination of wetland boundaries shall be based on facts on the ground at the time development is considered.	Consistent. There are no National Wetlands Inventory (NWI) types located on the project site (refer to Figure 2-3, Potential Wetlands within the Coastal Zone Area, of the City's Local Coastal Program LUP). The Laguna Grande Lake and its associated Freshwater Pond Wetland are located directly east of the eastern boundary of the project site. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, approximately 0.5 acre of jurisdictional waters has been identified on the project site, of which approximately 0.32 acre is seasonal wetlands dominated by red willow and 0.16 acre consists of perennial waters in the form of aquatic palustrine habitat.
Policy NCR-CZ 1.3.B – Protection of Wetlands i. The biological health and productivity of wetland areas shall be maintained, and where feasible, restored. ii. Development that may have an adverse effect on a wetland shall not be allowed. iii. The biological productivity of coastal waters, streams, wetlands, estuaries, and lakes, shall be maintained and restored, where feasible, to maintain optimum populations of marine organisms and to protect human health where applicable. Maintenance and restoration efforts shall support biological productivity by minimizing adverse effects of wastewater discharges and entrainment; controlling runoff, preventing substantial interference with surface water flow, and minimizing alteration of natural streams; preventing depletion of groundwater supplies; encouraging wastewater reclamation; and maintaining natural vegetation buffer areas that protect riparian habitats.	Consistent. There are no NWI types located on the project site (refer to Figure 2-3, Potential Wetlands within the Coastal Zone Area, of the City's Local Coastal Program LUP). The Laguna Grande Lake and its associated Freshwater Pond Wetland are located directly east of the eastern boundary of the project site. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, approximately 0.5 acre of jurisdictional waters has been identified on the project site, of which approximately 0.32 are is seasonal wetlands dominated by red willow and 0.16 acre consists of perennial waters in the form of aquatic palustrine habitat. Temporary impacts to these jurisdictional waters could result during construction activities. As such, the proposed project will be required to comply with Measure 4.3.1 to minimize temporary impacts to on-site jurisdictional waters. No permanent impacts to on-site jurisdictional waters will occur as a result of project implementation and operation. Stormwater runoff for storm events up to the 95th percentile rainfall event will be treated, and retained and infiltrated on-site with a series of biofiltration planters which will capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots). No impacts to Laguna Grande Lake will occur. In addition, implementation of Measure 4.7.1 will require the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and an Erosion and Sediment Control Plan to minimize impacts related to runoff from the project site during construction. The 2011 Certified EIR found and concluded that the proposed project would not substantially deplete groundwater supplies. None of the proposed project changes would change the conclusions on this issue as discussed in

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

	the certified 2011 EIR.
Policy NCR-CZ 1.4.A – Designation of Marine Resources All significant bodies of water including the Monterey Bay, Laguna Grande Lake, and Roberts Lake are recognized as marine resources.	Consistent. As discussed in the consistency analysis for Policy NRC-CZ 1.3.B, Protection of Wetlands, the proposed project will not include any improvements to, or result in any significant impacts to, the adjacent Laguna Grande Lake. Furthermore, the proposed project will not result in any significant impacts to Roberts Lake.
Policy NCR-CZ 1.4.B – Protection of Marine Resources i. Marine resources shall be maintained, enhanced, and, to the extent feasible, restored. Uses of the marine environment shall be carried out in a manner that will improve habitat quality and will sustain the biological productivity of coastal waters. ii. In addition to Policies NCR-CZ 1.3.B and 1.5.C, methods for maintenance and enhancement of marine resources include, but are not limited to, trash removal, sediment removal, nonnative vegetation removal and native revegetation, and any other feasible methods to improve water quality (refer to Policies NCR-CZ 1.3.B, 1.5.C, 1.5.D, and 4.1.A). iii. The City shall seek opportunities to consolidate and/or eliminate reliance on storm water outfalls that daylight onto the beach and convey storm water into Monterey Bay. Such storm water shall be filtered and treated prior to discharge. iv. All development shall adequately collect, filter, and treat its associated runoff. Low impact development concepts (e.g., limiting impervious surfaces, use of vegetated areas for runoff treatment, etc.) shall be encouraged.	Consistent. Refer to the consistency analyses under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, and Policy NCR-CZ 1.2.B, Protection of ESHA. The proposed project will neither result in any significant impacts to marine resources, including sensitive species and habitat, nor will the proposed project interfere with the biological productivity of nearby coastal waters. The proposed project will be landscaped on all four sides of the parcel with a variety of native drought-tolerant trees, shrubs, annuals, and landscape materials. Additionally, the proposed project will include trash receptacles inside and outside the restaurant facility to minimize littering near the project site and its associated potential impacts on coastal wildlife and habitats. In-N-Out employees will be responsible for emptying the trash receptacles and for daily grounds maintenance. In addition, as discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will implement Measure 4.3.5, which will require the removal of the small patch of common reed, which is a noxious weed that is prevalent along the shores of Laguna Grande Lake. The proposed project will include Best Management Practices (BMPs) during project construction and operation to minimize project-related impacts to water quality. The proposed project will increase impervious surface area by approximately 1.0 acre. A series of biofiltration planters will capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots), remove pollutants from runoff, and retain and infiltrate the runoff. The 2011 Certified EIR found and concluded that the proposed project would not result in significant impacts related to water quality. None of the proposed project changes would change the conclusions on this issue as discussed in the Certified 2011 EIR.

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Policy NCR-CZ 1.4.C – Diking, Filling, Dredging of Marine Resources Diking, filling, or dredging activities shall be permitted in accordance with the other applicable provisions of the LCP, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: • Placement of structural pilings for public recreational piers that provide public access and recreation; • Incidental public services (i.e., maintenance of existing outfalls); • Mineral extraction, including for restoring beaches, except in environmentally sensitive habitat areas; • Restoration purposes; • Nature study, aquaculture, or similar resource dependent activities Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems. In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary.	Not Applicable.
Policy NCR-CZ 1.5.A – Designation of the Canyon Del Rey Creek Watershed The Canyon Del Rey Watershed includes lands from multiple jurisdictions. Lands contained within these jurisdictions have been designated as follows: • 2010 General Plan of Monterey County: Rural Density/Permanent Grazing • 2004 General Plan of City of Seaside: Parks and Open Space • 2004 General Plan of the City of Monterey: Industrial/Park	Not Applicable.

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and Open Space • 1997 Zoning Ordinance of Del Rey Oaks: Residential/Commercial/Park and Open Space	
Policy NCR-CZ 1.5.B – Evaluation of the Canyon Del Rey Creek Watershed Support ongoing efforts to prepare the <i>Canyon del Rey Watershed Master Drainage Plan Update</i> as part of the update to the Monterey Peninsula, Carmel Bay, and South Monterey Bay Integrated Regional Water Management Plan. Once adopted, the City shall incorporate the <i>Master Drainage Plan</i> results, goals, policies, and objectives into the codes and programs of the City's Municipal Code, and general Plan, where applicable.	Not Applicable.
Policy NCR-CZ 1.5.C – Protection of the Canyon Del Rey Creek Watershed i. The City shall continue to implement the following erosion control and sedimentation mitigation measures: • Continue enforcement of the Urban Storm Water Quality Management and Discharge Control ordinance, as amended (Chapter 18.46 of the Seaside Municipal Code), for all future construction in the watershed. • Design of street drainage to maximize retention and minimize impervious surface area and street flooding. • Regulate construction activities on unstable slopes that are susceptible to erosion. • Prevent additional gullyng of alluvial terraces by maintaining riparian vegetation. ii. The City shall continue to implement, monitor, comply with and update (as needed) the Monterey Regional Storm Water Management Plan (SWMP) as a participating entity in order to be in compliance with Final Phase II National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 adopted by the State Water Resources Control Board on April 30, 2003.	Consistent. The proposed project will be consistent with and will further the City's goal of protecting the Canyon Del Rey Creek Watershed by implementing and complying with relevant storm water permits and requirements. The proposed project will be required to obtain coverage under the NPDES Construction General Permit and prepare a SWPPP and comply with the City's Phase II NPDES permit requirements to include Low Impact Development Standards (LID) and retain storm water runoff on the project site. In addition, the proposed project will be required to comply with the City's Municipal Code and prepare a project Erosion and Sediment Control Plan (ESCP) outlining components for erosion control, such as phasing of grading, diversion of runoff or run-on away from disturbed areas, and the provision for revegetation or mulching as required by Measure 4.7.1 in the 2011 Certified EIR.

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Policy NCR-CZ 1.5.D – Management of the Canyon Del Rey Creek Watershed – Update of the Seaside Wetland Management /Enhancement and Restoration Program i. The functioning of the Canyon Del Rey Creek Watershed has potential implications for the entire Seaside coastal zone (potential flooding, erosion, water quality etc.). As such, the City of Seaside shall update the <i>Wetlands Management/ Enhancement and Restoration Program for the Laguna Grande/Roberts Lake LCP</i> (1983) (Appendix B) to incorporate the findings of the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i> upon completion (identified in Policy NCR-CZ 1.5.B). The updated <i>Wetlands Management/Enhancement and Restoration Program for the Laguna Grande/Roberts Lake LCP</i> shall be incorporated into the LCP through an LCP amendment and certification by the Coastal Commission. In addition to incorporating the findings of the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i>, the <i>Wetlands Management/Enhancement and Restoration Program</i> update shall include the following elements (at minimum): • A clear statement of the goals of the native restoration and enhancement of habitat types and water quality within the Canyon Del Rey Creek Watershed that will sustain biological productivity, including a description of the existing habitat types and quality to provide a benchmark for developing performance criteria. • Guidelines, programs, and funding sources for water quality improvements that are consistent with maintenance, reestablishment, and enhancement of existing wetland habitats and water quality improvement objectives. • Guidelines, in consultation with the appropriate state and federal resource agencies, for the preservation and/or reestablishment of equivalent (size and biological value) areas of riparian and marsh vegetation. • Guidelines which identify the appropriate method(s) of resource restoration and enhancement that will sustain the biological productivity of coastal waters (which may include dredging and filling if identified to be for the	Not Applicable.
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exclusive purpose of resource restoration or habitat enhancement only). • Guidelines for the maintenance and management of all resource areas in the watershed after restoration or enhancement. • Guidelines for design of recreational improvements and maintenance of all shoreline improvements in both Laguna Grande and Roberts Lake. • A timeline of near-, mid-, and long-term restoration opportunities. • An identification of technical, planning, and design assistance needed to foster plan development. • A Vegetation Management Plan that includes the following: • Identification of vegetation and habitat types within the Seaside coastal zone. • Guidelines for improvement, maintenance, and management of all identified resource areas including a Weed Eradication Plan, Planting Plan, Maintenance Plan, and Monitoring Plan, as appropriate. • Guidelines for stabilization of the dune areas including the area adjacent to Roberts Lake utilizing best available methods such as planting and maintaining native vegetation. • Identification of vegetative shoreline improvements that will encourage use by native, non-invasive, and non-nuisance wildlife. • Identification of areas appropriate for use as a community garden. • Identification of appropriate responsible parties for improvement, maintenance, and management of all resources. • A summary of relative cost and funding responsibilities. ii. Until the update to the <i>Wetlands Management/Enhancement and Restoration Program</i> for the Local Coastal Program Land Use Plan, including the Laguna Grande and Roberts subareas, is completed, the City shall continue to implement and promote management/enhancement and restoration measures that meet the following objectives:	
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• Stabilize the water surface area and depth of Laguna Grande and Roberts Lake by removing accumulated sediment and controlling the influx of new sediment. • Improve water quality to a degree sufficient to support a recreational fishery, provide enhanced aesthetic qualities and permit recreational boating; • Provide shoreline improvements that enhance public opportunities for observation and enjoyment of the natural habitat areas, that complement the natural character of the wetlands and riparian areas and are consistent with the protection of these areas, and that are compatible with existing recreational facilities and with the use of the adjoining private properties.	
Policy NCR-CZ 1.6.A – Control of Canada Goose Population The City, in coordination with the Monterey Peninsula Regional Park District, shall explore and implement humane methods of controlling goose populations.	Not Applicable.
Visual Resources	
Policy NCR-CZ 2.1.A – Designation of Visual Resources The scenic and visual qualities of lakes and coastal areas, including Roberts Lake, Laguna Grande, the coastal sand dunes, and Monterey Bay/Pacific Ocean, including from State Highway 1, shall be considered visual resources of public importance. Scenic resources identified on Figure 2-4 shall represent a preliminary mapping of visually sensitive areas. Other scenic resources may be identified to be present based on existing conditions at the time proposed development is considered.	Consistent. As discussed in Section 4.1, Aesthetics, of the 2011 Certified EIR, the proposed project's visual impacts were assessed from three key vantage points surrounding the project site (i.e., from southbound State Route 1 [SR-1] north of Roberts Lake, from Laguna Grande Regional Park on the south shore of Laguna Grande Lake, and from the residential area 1.5 miles east of the project site). These vantage points are consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in significant effects to visual resources.
Policy NCR-CZ 2.1.B – Protection of Visual Resources - Coastal visual resources shall be protected as a resource of public importance. - Visual resources and important view corridors shall be preserved. Figure 2-4 shall be used to assist the City in identifying significant public views of visual resources, view corridors, viewshed enhancement areas, and visually sensitive areas where height and bulk limits shall be required to preserve visibility. - Development determined to have a significant adverse effect on a visual resource or substantially limit visibility of visual	Consistent. As discussed above under Policy NCR-CZ 2.1A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key vantage points surrounding the project site. These vantage points are consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not limit the visibility of visual resources because the proposed project is barely visible from public views. In addition, the proposed project will be consistent with Section 2.6, Site Development Standards, of the City's Coastal Implementation Plan (CIP). Furthermore, building and landscaping design included as part of the proposed project

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resource shall not be allowed. iv. Public trails, recreation areas, and public viewing areas shall be developed adjacent and/or accessible to scenic view corridors, where feasible. v. New development shall be sited and designed to protect visual resources, minimize the alteration of natural land forms, preserve view corridors, be visually compatible with the character of surrounding areas, and, where feasible, restore and enhance visual quality in visually degraded areas. vi. Views of the Seaside coastal zone from State Highway 1 shall be protected and enhanced through regulation of siting, design, and landscaping of all new development. vii. New structures shall be sited and designed to harmonize with the natural setting and to not be visually intrusive. Structures, including fences, shall be subordinate to and blended into the environment, which may be accomplished through use of appropriate materials that will achieve that effect. Where necessary, modification shall be required for siting, structural design, shape, lighting, color, texture, building materials, access, and screening to protect public views. When structures cannot be sited outside of common public viewing areas, structures in scenic areas shall provide screening, which may be accomplished through the use of non-invasive native vegetation and topography to help provide visual compatibility.	will be approved by the Board of Architectural Resources (BAR), ensuring that the architectural design of the project will not degrade the existing visual character and quality of the project site and its surroundings. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will also include extending the existing pedestrian and bicycle trail to connect to the Laguna Grande Regional Park and Monterey Bay Coastal Bike Trail. Therefore, the proposed project will be consistent with the City's goal of developing public trails adjacent to scenic view corridors.
Water Resources Policy NCR-CZ 3.1.A – Provision for Potable Water Supply i. The City shall participate in local and regional efforts to secure a safe and adequate/sustainable supply of water. ii. New development shall be sited in areas with adequate public utility services (i.e., water treatment and delivery) and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. Where existing public utility services, including water, can accommodate only a limited amount of new development, priority uses including essential public services, public recreation, and visitor-serving commercial land uses shall have priority over other	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project would have an adequate and sustainable supply of water.

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development/uses.	
Policy NCR-CZ 3.1.B – Protection of Potable Water Supply – Water Conservation The City shall require that all new development, changes of ownership, and changes or expansions of use within the Coastal Zone meet or exceed Monterey Peninsula Water District's Water Efficiency Standards.	Consistent. The Monterey Peninsula Water District Water Efficiency Standards include nonresidential water efficiency standards for new structures. As discussed above under Policy NCR-CZ 1.1A, Promote Sustainable Development, the proposed project will minimize water usage and meet efficiency standards by installing water-efficient fixtures and appliances, native drought-tolerant plants, and water-efficient irrigation systems and devices, including restricted watering methods (i.e., prohibiting systems that apply water). Systems that use excessive and/or inefficient water systems will be prohibited. Therefore, the proposed project will meet the Monterey Peninsula Water District's Water Efficiency Standards.
Policy NCR-CZ 3.1.C – Management of Potable Water Supply Monitor water use in the City to ensure the availability of water to fulfill the goals of the LUP.	Not Applicable.
Policy NCR-CZ 3.1.D – Adequate Water Development may only be approved if it is demonstrated to have a safe, adequate, and sustainable water supply.	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project will have a safe, adequate, and sustainable supply of water.
Policy NCR-CZ 3.2.A – Water Reserves The City shall continue to support regional efforts to develop an alternative water supply for the City of Seaside.	Not Applicable.
Water Quality	
Policy NCR-CZ 4.1.A – Water Quality i. The City shall actively pursue methods of improving water quality of lakes, streams, and other waterways throughout the LCP area by improving the quality of dry-weather and stormwater runoff flows through the adoption of adequate stormwater pollution prevention and Low Impact Development strategies. ii. The biological productivity and quality of coastal waters, streams, wetlands, and lakes shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural	Consistent. As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the proposed project will include source control and treatment BMPs during project construction and operation. With the implementation of BMPs, the proposed project will result in improved water quality runoff when compared to the project site's existing conditions. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at sustaining biological productivity in the areas surrounding the project site and protecting water quality in bodies of water surrounding the project site. For example, as required by Measure 4.3.1, Biotic Habitat Protection, the Applicant will be required to retain a qualified biologist who will implement various actions during project construction in order to minimize construction impacts to sensitive biotic habitats adjacent

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streams.	to the project boundaries. In addition, Measures 4.3.2 through 4.3.4, which outline avoidance and minimization measures to minimize project-related impacts to special-status species (including northern harriers, other nesting birds, California red-legged frog, and Coast range newt) will be required to minimize impacts to sensitive species in the area. The proposed project will also be required to comply with Measure 4.3.5, Weed Management and Signage, mandating the placement and ongoing maintenance of signs along the pedestrian trail instructing pedestrians to stay on the trail in order to preserve neighboring biotic habitats and eradicate noxious common reed within the project area.
Natural Hazards	
Policy NCR-CZ 5.1.A – Designation of Natural Hazard Areas The hazard areas identified on Figures 2-5, 2-6, and 2-7 shall represent a preliminary mapping of potential hazards within the LCP area. Actual determination of hazard areas shall be based on facts on the ground at the time development is considered.	Consistent. The project site is located within an existing 100-year floodplain, is within 2,400 meters of a moderate fire threat and directly west of the Chupines Fault, and is within 0–5 meters of a tsunami evacuation zone (as respectively referred to on Figure 2-5 [Flood Hazard Areas], Figure 2-6 [Faults and Wildland Fire Threat Categories], and Figure 2-7 [Tsunami Evacuation Areas] in the City's Local Coastal Program LUP). As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, a majority of the project site is within the boundary of Federal Emergency Management Agency (FEMA) Zone AE, which is defined as areas inundated by the calculated 100-year flood event. Southwest portions of the project site lie within the boundary of a FEMA Zone X, which is potentially subject to flooding from the 500-year flood occurrence storm event. A small area in the southeast corner, adjacent to the channel and Roberts Lake, lies within a FEMA-designated floodway and must be kept free from encroachment; however, no project improvements are proposed at this location. The Base Flood Elevation at the project site is between 16 feet and 17 feet for the 100-year flood event. The proposed project will include the import of approximately 1,000 cubic yards of fill, which will raise elevations of the restaurant's first floor to 18 feet (i.e., 1 foot above the Base Flood Elevation). Therefore, the 2011 Certified EIR found and concluded that the proposed project would not be subject to on-site flooding. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR. As discussed in Section 4.6, Hazards and Hazardous Materials, of the 2011 Certified EIR, the project site is not located within a wildland area at risk of damage due to a wildfire. Therefore, the 2011 Certified EIR found and

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	concluded that the proposed project would not be at risk of a wildland fire. As discussed in Section 2.5, Geology and Soils, of the 2011 Certified EIR, the project site is located in a region characterized by moderate to high seismic activity, as is most of California. Due to this distance, the project site has the potential of experiencing strong ground shaking from earthquakes on regional and/or local causative faults. The closest active fault to the project site is the Chupines Fault, which lies 900 feet to the northeast of the project site (refer to Figure 2-6 of the Local Coastal Program LUP). Therefore, the project site is not subject to hazards associated with surface rupture; however, seismically induced ground shaking will be expected to occur as a result of seismic activity along the Chupines Fault. The proposed project will be required to comply with the California Building Code Compliance and Seismic Standards as required by Standard Condition 4.5.1 in the 2011 Certified EIR to reduce potential impacts associated with seismic ground shaking to less than significant levels. In addition, Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR found and concluded that the project site is located at an elevation of approximately 10 to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the proposed project in the event of a tsunami.
Policy NCR-CZ 5.1.B - Protection from Natural Hazards i. All new development in areas subject to natural hazards, including geologic, flood, tsunami, sea level rise, ocean storm and surge, and fire hazard, shall be sited, designed, and sized to minimize risk to life, property, and the environment from natural disaster as warranted based on assessed risk and conditions on the ground. ii. Applications for new development and redevelopment in natural hazard areas shall include an Adaptive Management Plan that identifies the expected lifetime of the proposed development and strategies to decommission the development once it has been determined that the development's lifetime has been reached due to hazards. Strategies identified in the Adaptive Management Plan may include, but are not limited to, removing the development and restoring the site to pre-development conditions;	Consistent. The project site is located within an existing 100-year flood zone, is within 2,400 meters of a Moderate Fire Threat and directly west of the Chupines Fault, and is within 5 meters of a tsunami evacuation zone (as respectively referred to on Figure 2-5 [Flood Hazard Areas], Figure 2-6 [Faults and Wildland Fire Threat Categories], and Figure 2-7 [Tsunami Evacuation Areas] of the City's Local Coastal Program LUP). The proposed project will be designed to minimize risk to life, property, and the environment from natural disaster as discussed below. In addition, as part of the proposed project, a quantitative analysis of sea level rise has been prepared that concluded the proposed project is above the sea level rise projections for the next 100 years. As discussed above under Policy NCR-CZ 5.1.A, Designation of Natural Hazard Areas, a majority of the project site is within the boundary of FEMA Zone AE, which is defined as areas inundated by the calculated 100-year flood event. The proposed project will raise elevations of the restaurant's

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managed retreat; and/or other hazard abatement strategies. New development shall only be approved if the approval includes an Adaptive Management Plan with enforceable provisions for both determining when a development's lifetime has been reached due to hazards, and for implementing the required abatement strategy at that time. iii. New development shall assure structural stability over the lifetime of the project as determined by the Adaptive Management Plan. iv. Proposed development shall be consistent with the following applicable goals and actions of the <i>City of Seaside Local Hazard Mitigation Plan</i> (LHMP), as modified to protect coastal resources: • Goal 1: Minimize loss of life and property from hazard events. • Goal 2: Improve safety for residents, business owners, and property in the City of Seaside. • Goal 3: Mitigate for disasters. • Action 3.09: Continue to actively implement existing state law that requires the City to maintain lists of addresses of unreinforced masonry buildings and inform property owners that they own this type of hazardous structure. • Action 3.10: Ensure that all new construction is completed using the latest earthquake-resistant design techniques that will limit damage caused by earthquakes. • Action 3.11: Identify mitigation measures for areas that flood annually. • Action 3.12: Ensure that all new construction that is now, or as modified by rising sea level will be, within the 100-year flood zone is sited to avoid flood hazards to the maximum extent possible and otherwise constructed using design techniques that will limit damage caused by floods consistent with policies NCR-CZ 5.2.A, and NCR-CZ 5.2.C and by using the latest edition of the California Building Code. • Action 3.15: Ensure that new development pays its fair share of improvements to the storm drainage system	first floor by approximately 1 foot above the Base Flood Elevation. Therefore there will be no significant impacts associated with on-site flooding to buildings proposed as part of the project. Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR also found and concluded that the project site is located at an elevation about 10 to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the proposed project in the event of a tsunami. Mitigation is also outlined in this section of the 2011 Certified EIR in order to further ensure that impacts related to flooding and other events causing inundation on the project site will be less than significant. As discussed in Section 4.6, Hazards and Hazardous Materials, of the 2011 Certified EIR, the project site is not located within a wildland area at risk of damage due to a wildfire (refer to Figure 2-7 of the City's Local Coastal Program LUP). Therefore, the 2011 Certified EIR found and concluded that the proposed project would not be at risk of a wildland fire. As discussed in Section 2.5, Geology and Soils, of the 2011 Certified EIR, the project site is located in a region characterized by moderate to high seismic activity, as is most of California. Therefore, the project site has the potential of experiencing strong ground shaking from earthquakes on regional and/or local causative faults. The closest active fault to the project site is the Chupines Fault, which lies 900 feet to the northeast (refer to Figure 2-6 of the City's Local Coastal Program LUP). Due to this distance, the project site is not subject to hazards associated with surface rupture; however, seismically induced ground shaking will be expected to occur as a result of seismic activity along the Chupines Fault. The proposed project will be required to comply with the California Building Code Compliance and Seismic Standards as required by Standard Condition 4.5.1 in the 2011 Certified EIR to reduce potential impacts associated with seismic ground shaking to less than significant levels. In addition, the proposed project will implement Standard Condition 4.5.2, which will require the review and approval of plans in order to ensure consistency with recommendations outlined in a geotechnical report prepared for the proposed project, to minimize impacts associated with seismic events. Therefore, due to the reasons discussed above, the proposed project will be consistent with the applicable goals and actions of the City of Seaside Local Hazard Mitigation Plan (LHMP).
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necessary to accommodate increased flows from the development. • Action 3.16: Ensure that new developments are designed to reduce or eliminate flood damage by requiring lots and rights-of-way are laid out for the provision of approved sewer and drainage facilities, providing on-site detention facilities whenever practical. • Action 3.17: Encourage homeowners in flood-prone areas to participate in home elevation programs and other methods to adapt to sea level rise. • Action 3.22: Ensure that all new construction in areas susceptible to fires is completed using fire-resistant design techniques that will limit damage caused by wildfires. For example, require Class A roofing materials for all homes in areas susceptible to fires. • Action 3.27: Adopt a City ordinance that requires the following measures to reduce fire ignition due to earthquakes: bracing of gas-fired appliances and equipment; flexible couplings on gas appliances and equipment; and the bolting of homes to their foundations and strengthening of cripple walls. • Action 3.33: Provide technical assistance to homeowners whose homes were damaged by natural hazards in order to site and design the residences to better avoid future hazards. Allow a streamlined permitting process for the rebuilding after a disaster. • Action 3.34: Encourage the retrofitting of unreinforced masonry structures that have not been retrofitted. • Action 3.37: Pass a City ordinance that will limit building in high-risk areas. • Goal 4: Increase public education and awareness of hazards so that City residents can better anticipate and prepare for them. • Action 4.15: Educate property owners on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event through appropriate City public education outlets. • Goal 6: Assure that continuity of local government operations will not be significantly disrupted by disasters.	As noted above, The proposed project will raise elevations of the restaurant's first floor by approximately 1 foot above the Base Flood Elevation. Additionally, the area is 10-15 feet above the mean tide level and is protected by City streets and a 40-foot dune. Finally, a quantitative analysis of sea level rise has been prepared that concluded the proposed project is above the sea level rise projections for the next 100 years. Therefore, based on known environmental hazards, the expected lifetime of the project is more than 100 years. In the event that specific geologic hazards and/or changes in Sea Level create conditions which warrant the demolition of the structure and on-site improvements, the property owner and applicant shall be responsible for obtaining the required Coastal Development Permits and City of Seaside demolition permits for the removal and disposal of the structure and on-site improvements. The demolition process shall adhere to all state requirements for the recycling of materials and disposal of hazardous wastes.
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• Action 6.10: Participate in the Office of Emergency Services Safety Assessment Program (SAP) which formalizes arrangements with engineers, building officials, and other qualified people to report to the City, assess damage, and determine if buildings can be reoccupied after a disaster. • Goal 7: Ensure the continuous function of utilities and critical transportation facilities. • Action 7.10: Encourage replacing aboveground utility lines with underground facilities. • Action 7.11: Assure that utility lines are installed underground for new development. • Action 7.22: Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage. • Goal 8: Assure that the economic vitality of the community will not be threatened by future hazards. • Action 8.01: Encourage business owners to participate in a program similar to San Francisco's Building Occupancy Resumption Program (BORP). This program permits owners of buildings to hire qualified structural engineers (California licensed structural engineers with relevant experience) to create facility-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City inspectors for these buildings in the event of a disaster. This program allows rapid reoccupancy of the buildings. • Action 8.02: Provide technical assistance to businesses damaged by natural hazards in order to site and design development to better avoid future hazards. Allow a streamlined permitting process for the rebuilding of businesses after a disaster.	
Policy NCR-CZ 5.2.A – Designation of Sea Level Rise Hazards The City shall collaborate with local jurisdictions and identify properties and stakeholders most likely affected by rising sea levels. Collaboration between these agencies would be beneficial to the citizens of the Monterey Bay area. Adaptation to the effects of sea level rise by the local jurisdictions and	Not Applicable.

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agencies is necessary to reduce the potential negative impacts sea level rise may have upon the economy and infrastructure of the Monterey Bay area.	
Policy NCR-CZ 5.2.B – Protection from Sea Level Rise Hazards i. Collaboration between jurisdictions and agencies could lead to the development and successful implementation of adaptation measures to the threat of sea level rise. Other jurisdictions that may be affected by sea level rise within the Monterey Bay area include: • California State Parks, • California Department of Transportation, • Cities of Monterey, Marina, Del Rey Oaks, Sand City, Pacific Grove, and Carmel-by-the-Sea, • Monterey County, • Monterey Regional Water Pollution Control District, • Association of Monterey Bay Area Governments, • Transportation Agency for Monterey County, • Monterey Peninsula Regional Park District, • Monterey Peninsula Waste Management District, and • California Coastal Commission. ii. Organize educational workshops for local citizens to inform them of the concerns and potential impacts of sea level rise in the Monterey Bay area. • Seek partnerships with educational and institutional organizations to assist with the facilitation of educational workshops. • Support ongoing efforts to develop and implement practical, science-based, long-term solutions and adaptation strategies for minimizing potential adverse impacts of sea level rise.	Not Applicable.
Policy NCR-CZ 5.2.C – Management of Sea Level Rise Hazards i. The City shall prepare periodic updates to the Local Hazard Mitigation Plan (2005) to address the potential impacts sea level rise will have on the City of Seaside. The plan update process shall include input of local citizens, businesses, educational institutions, and neighboring jurisdictions and the following components:	Not Applicable.

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a. A Vulnerability Assessment that identifies and analyzes areas within the city that are most at risk to the impacts of sea level rise. The Vulnerability Assessment will establish how far and how high coastal storms and ocean levels would inundate the city, including consideration of erosion and sedimentation factors. b. A Beachfront Area Plan that addresses the impacts sea level rise will have on the Beach Subarea. The Area Plan shall propose methods to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over a minimum of 100 years. The Area Plan shall also include a wave uprush and impact report and contain an analysis prepared by a licensed engineer with expertise in coastal engineering that addresses and demonstrates the effects of sea level rise in relation to the following: • Beach profile • Impacts to beach public access and recreation opportunities • Areas most affected by wave uprush • Evaluation of shoreline protection alternatives • Protection alternatives for freshwater table • Future projections of regional sea level rise • Location changes of potential mean high tide lines c. An identification of resources (including, but not limited to, visual resources, lakes, wetlands, parks, wildlife, and habitat), infrastructure improvements, public beach access and public trails (i.e., California Coastal Trail and Monterey Bay Recreation Trail), and properties that are potentially at risk to inundation or damage, and guidance for their protection. d. Evaluation of potential salinity changes and water level rise impacts to wetlands, Laguna Grande, and Roberts Lake. e. An identification of City policies that must change and recommendations for necessary policy changes that will make future development and area conservation projects more responsive and adaptive to sea level rise, including LCP policies through a LCP amendment.	
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f. An assessment of impacts to the city's local economy and recommendations for maintaining the economic viability of vulnerable areas. g. Mitigation and adaptation measures that can be implemented, as well as an analysis of the potential impacts of the measures. h. A framework for future revisions to the plan and a proposed method for disseminating information to the public.	
Policy NCR-CZ 5.3.A – Protection from Tsunami Hazards All development located within the tsunami inundation zone shown on Figure 2-7 (and as updated by the most recent state or local California Emergency Management Agency maps), shall be designed and sited to minimize and mitigate flood hazards to the maximum extent possible including by designing all habitable space above the maximum flood elevation as defined by a qualified coastal geologist with experience in tsunami.	Consistent. As discussed in Section 4.5, Geology and Soils, of the 2011 Certified EIR, the project site is located approximately 2,000 feet from Monterey Bay at an elevation of approximately 10 to 15 feet above mean sea level. Historically, there is no record of any tsunamis more than 9 feet high occurring along the County coast. Furthermore, the project site is protected by 20- to 40-foot sand dunes between the project site and the ocean that will minimize impacts to the project site in the event of a tsunami. Therefore, the 2011 Certified EIR found and concluded that the potential for a tsunami to affect the project site would be low.
Policy NCR-CZ 5.3.B – Management of Tsunami Hazards The City of Seaside shall prepare a Tsunami Preparedness Plan for mitigating the hazards associated with tsunamis, which shall include the following elements: • Review local and distant tsunami inundation maps for Seaside and the southern Monterey Bay as they are developed to identify susceptible areas and plan evacuation routes. • Periodically review and update tsunami preparation and response policies/practices to reflect current inundation maps and design standards. • Participate in any regional effort to develop and implement workable response plans that the City's emergency services can adopt immediately for evacuation in the case of a tsunami warning. • Prepare and deploy a system of tsunami detection and early warning systems as warranted based on assessed risk. • Include tsunami evacuation route information as part of any overall evacuation route sign program implemented in the City. Evacuation routes that lead away from low-lying areas	Not Applicable.

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around Roberts Lake, Laguna Grande, and the beach should be clearly posted. An evacuation route traffic monitoring system that provides real-time information on the traffic flow at critical roadways should be considered. • Develop and implement a tsunami educational program for residents, visitors, and people who work in the susceptible areas. • Require overnight visitor-serving facilities in susceptible areas to provide tsunami information and evacuation plans. • Encourage the Monterey County Office of Education to include in their earthquake-preparedness curriculum information specifically related to the natural hazards that Seaside and Monterey citizens could face and what to do about them. • Support tsunami research in the Southern Monterey Bay areas.	
Public Access & Recreation	
Policy PAR-CZ 1.1.A – Designation of Public Access and Recreational Opportunities The public access areas identified on Figure 2-8 shall represent a preliminary generalized mapping of access points and passages to significant coastal features and recreational opportunities. Actual determination of public access areas shall be based on facts on the ground at the time development is considered.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will maintain all access points from the project site to the pedestrian and bicycle trail around Laguna Grande Lake. In addition, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail (refer to Figure 2-8, Public Access Points and Passages, of the City's Local Coastal Program LUP).
Policy PAR-CZ 1.1.B – Protection of Public Access and Recreational Opportunities Maximize and protect public access including pedestrian and bicycle connectivity and recreational opportunities in the coastal zone consistent with resource conservation principles, public safety, public rights, and the rights of private property owners.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail consistent with resource conservation principles, public safety, public rights, and the rights of private property owners.

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Policy PAR-CZ 1.1.C – Management of Public Access and Recreational Opportunities i. As development occurs, the City shall develop and implement a coastal access/directional sign program for all public access points, including those shown on Figure 2-8. The sign program shall include informational signs identifying the location of the Monterey Bay and California Coastal Trail alignments within Seaside. ii. The City shall maximize opportunities for environmental education opportunities within the coastal zone through methods such as interpretive signage, outreach programs, on-site programs, guided walks along access and park trails, nature walks, publications, newsletters, brochures, exhibits/displays, and websites. iii. The City shall explore development of a Peninsula Visitors Center at a location within, or at a compatible location adjacent to, the coastal zone, provided the site has ample access to the lakes, parks, and beach to serve visitors to Seaside and the Monterey Bay area. iv. Ensure the ability of the California Coastal Trail and Monterey Bay Recreation trail to adapt to changes in sea level rise.	Not Applicable.
Policy PAR-CZ 1.1.D – Provision of Recreational Facilities Lower cost visitor serving and public recreational facilities shall be protected, encouraged, and where feasible, provided.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail, encouraging the use of recreational facilities in the Coastal Zone.
Policy PAR-CZ 1.2.A – Designation of Parking for Public Access and Recreational Opportunities i. The City shall provide free and unrestricted parking at all public access and public parking areas within the coastal zone during daylight hours (i.e., from one hour before sunrise to one hour after sunset) including those identified in Figures 2-8 and 2-9. ii. Explore expanding public access parking opportunities at the Embassy Suites Hotel parking lot.	Consistent. The project site is designated as a shared off-street parking area (refer to Figure 2-9, Public Parking Area, of the City's Local Coastal Program LUP). Although the proposed project will develop this property with a restaurant use, thereby eliminating this property as an off-street public parking area, the proposed project will provide sufficient parking to serve visitors to the project site and surrounding areas. Specifically, the proposed project will provide approximately 53 parking spaces, including three Americans with Disabilities Act (ADA) accessible spaces, three bicycle racks, two motorcycle parking stalls, and one recreational vehicle (RV)

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	parking space. In addition, there are two public parking lots located on the north side of Laguna Grande Park that can be accessed from Canyon Del Rey Boulevard that would remain available for public use. The project site is accessible from these public parking lots by an existing pedestrian pathway that circles around Laguna Grande Park.
Policy PAR-CZ 1.3.A – Designation of Trails The City shall establish, designate, and maintain a system of trails and an inter-connected trail / park network as components of the California Coastal Trail and Monterey Bay recreational trail alignments to the extent feasible.	Not Applicable.
Policy PAR-CZ 1.4.A – Public Access Improvements Improve water quality and the recreational experience of southern Monterey Bay area beaches, including by pursuing opportunities to consolidate and/or eliminate reliance on storm water outfalls that convey storm water directly to the beach (Policy NCR-CZ 1.4.B.iii). Such storm water shall be filtered and treated prior to discharge.	Not Applicable.
Land Use & Development	
Land Use Designations & Definitions	
Policy LUD-CZ 1.1.A – Land Use Designations Within the Coastal Zone The following land use designations establish the type, density, and intensity of land use within the coastal zone. The maximum densities allowed for each land use are defined in the Development Standards provided in the Coastal Implementation Plan portion of the LCP. The permitted development intensities shall be limited to those that adequately provide for public access and recreation needs and that address site constraints. Consistency with applicable policies of the LCP will ensure that site constraints are adequately addressed by requiring protection from natural hazards and the preservation and enhancement of natural coastal and scenic visual resources (including provisions for appropriate buffers). The types of land uses allowed within the Coastal Zone are described below: • Coastal Parks and Open Space (CPOS): This designation is appropriate in areas where the City wants to protect and preserve natural resources and habitat, views, and other visual amenities and protect people and property from	Consistent. The northeastern, eastern, and southern portions of the project site are designated Coastal Visitor-Serving Commercial (CVSC) (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). CVSC permitted uses include food service and recreation-related commercial uses; therefore, the development of a restaurant facility and extension of the existing pedestrian and bicycle trail as part of the proposed project will be consistent with permitted uses in the CVSC land use designation as outlined in the City's Local Coastal Program LUP. Furthermore, the proposed project will develop the property at a floor area ratio (FAR) of 0.04, which is well below the maximum FAR of 1.0:1 that is permitted by the land use designation.

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natural and man-made hazards. This designation also identifies existing or planned parkland. Public use areas include the sandy beach, access ways, parks, trails, walkways, and other recreational amenities that are publicly owned or over which easements or similar instruments are required as a condition of development. The maximum floor area ratio (FAR) within this designation is 0.01:1. • Coastal Visitor-Serving Commercial (CVSC): Principal permitted visitor-serving commercial uses include hotels/motels, food service, retail establishments, visitor/traveler support services (such as visitor information centers), and recreational-related commercial uses. The maximum FAR is 1.0:1, except that hotels are allowed a maximum FAR of 1.5:1. • Coastal Visitor-Serving Recreation (CVSR): Principal permitted visitor-serving recreation uses include recreational equipment rental centers (such as bicycle, boat, and other recreational equipment) and visitor-serving support services (such as visitor information centers). Commercial uses such as hotels/motels, restaurants, and retail establishments are not allowed. However, counter food service (such as a snack bar), which is ancillary to a primary permitted use, is permissible. The maximum FAR is 0.5:1. • Coastal Regional Commercial (CCRG): Regional commercial uses are defined as large scale commercial development with retail, entertainment, and/or service uses of a scale and function to serve a regional market. These uses are allowed where existing regional commercial uses are developed within the coastal zone. Permitted regional commercial uses include general, grocery, and outdoor retail; shopping center; health and fitness facilities; and restaurants with table service. The maximum FAR is 1.0:1. • Coastal Heavy Commercial (CCH): Heavy Commercial uses are intended for subregional commercial activities such as auto and truck repair, contractor yards, warehousing, and light manufacturing. These uses are permitted where existing heavy commercial uses are developed within the coastal zone (i.e. near railroad right-of-way adjacent to Sand City boundary). The maximum FAR is 0.5:1.	
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• Coastal Mixed Use/West Broadway Urban Village Specific Plan (CMX/WBUVSP): Seaside has developed a Mixed Use designation as a way to promote pedestrian- and transit-oriented activity centers that have a mixture of residential, commercial, office, and civic uses. This designation is appropriate in the Del Monte Subarea to be consistent and compatible with the West Broadway Urban Village Specific Plan. The applicable Development Standards and Design Guidelines have been included in Appendix C of the CIP. • Coastal Transportation Corridor (CTC): The City of Seaside shall maintain the State Highway One right-of-way and the former Southern Pacific Railroad right-of-way as essential public transportation corridors. Principal permitted uses of the corridors are for motorized and non-motorized forms of transportation. The former Southern Pacific Railroad right-of-way shall be reserved for possible light rail, bus rapid transit route, or other non-motorized forms of transportation including pedestrian and/or bicycle paths.	
Policy LUD-CZ 1.2.A – Definitions within the Coastal Zone The following definitions shall be specific to the LCP. These definitions are intended to provide clarification and guidance for use of terminology used throughout the LCP. i. An “adverse effect on a visual resource” shall be defined as development that impacts common public viewing areas to and along the ocean and scenic coastal areas, alters natural land forms, conflicts with the character of surrounding areas, and/or, does little to restore and enhance the visual quality within visually degraded areas. ii. “Canyon Del Rey Watershed” is the area beginning near the intersection of Quail Ridge Lane and State Route 68, continuing along State Route 68 toward the City of Monterey until the intersection of Canyon Del Rey Boulevard and State Route 68, and extending along Canyon Del Rey Boulevard until the terminus of Canyon Del Rey Creek at the southeastern end of Laguna Grande, has been determined to have exceptional value and public importance.	Not Applicable.

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iii. "Common public viewing area" is a public area such as a public street, road, designated vista point, or public park from which the general public ordinarily views the surrounding viewshed. iv. "Cumulatively" or "cumulative effect" means the incremental effects of an individual project shall be reviewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. v. "Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511). vi. "Environmentally Sensitive habitat area" (ESHA) means any area in which plant or animal life or their habitats are either rare, or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. vii. "Floor area ratio" (FAR) expresses the intensity of use on a lot. The FAR represents the ratio between the total gross floor area of all buildings on a lot and the total land area of	
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that lot. viii. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. ix. The "Fremont Corridor" is an area encompassing 19 acres of land located on the east side of Fremont Boulevard between La Salle Avenue and Olympia Avenue within the Laguna Grande Subarea. x. "Marine Resource" is a broad, encompassing term that incorporates all marine life and marine habitats, including the flora and fauna of the Monterey Bay Marine Sanctuary and all water bodies within the coastal zone that, due to their aesthetics, function, or contribution to the social and environmental ecosystem, are considered to have exceptional value and public importance. xi. A "Mitigation/Restoration and Monitoring Program," prepared pursuant to Section 15097 of the CEQA Guidelines, describes the processes for implementing identified mitigation measures and/or restoration measures and the persons responsible for implementing and/or overseeing those mitigations xii. "Natural Hazard" is defined as threat of an atmospheric, earth, or water-related occurrence that will have a negative effect on life, property, or the environment. Natural hazards within Seaside's coastal zone include the following: Seismic; Fire; Flood; Sea level rise; High wave event storms; surges; and tsunamis. xiii. "Public Access" is defined as the ability of residents and visitors to use and enjoy areas within the coastal zone for recreational uses such as hiking, bicycling, and picnicking. Public access includes the provision of open access way to coastal features and connectivity to other existing coastal features and inland trail networks such as walkways and bicycle paths. xiv. "Sea level rise" is defined as the anticipated sea level changes due to the greenhouse effect and associated global warming and climate changes. xv. "Sustainable development" is development that meets the	
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needs of the present without compromising the ability of future generations to meet their own needs. xvi. “Viewshed enhancement areas” are those areas that can be restored or enhanced to improve visual quality of degraded conditions. xvii. “Visually sensitive areas” are those areas that require height and bulk development restrictions to preserve the public’s ability to view visual resources. xviii. “Wetland” is any area which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.	
Development & Land Use Requirements	
Policy LUD-CZ 2.1.A – Designation of Land Uses Within the Coastal Zone Land use designations for the Local Coastal Plan area are shown on Figures 2-10a and 2-10b.	Consistent. The northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City’s Local Coastal Program LUP).
Policy LUD-CZ 2.1.B – Compliance with Land Use Plan Policies New development shall be required to demonstrate compliance with the Land Use Plan policies applicable to the particular project under consideration.	Consistent. This LCP-LUP Consistency Analysis provides the required information that demonstrates the proposed project is consistent with all applicable LUP policies.
Policy LUD-CZ 2.1.C – Land Use Densities Within the Coastal Zone The densities described in LUD-CZ 1.1.A represent a maximum. As required by the applicable policies of the LUP, permitted development intensities shall be limited to those which adequately address constraints including, but not limited to, public access and recreation needs, coastal hazards, natural habitats (i.e. sand dunes, wetlands, riparian, ESHA, and marine resources, etc.) and their appropriate buffers, natural landforms and scenic views.	Consistent. The northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City’s Local Coastal Program LUP). The proposed project will include the development of a restaurant facility, consistent with conditionally permitted uses in the CVSC land use designation (refer to the CIP Consistency Analysis). The proposed project adequately addresses all constraints as discussed in the LCP.
Policy LUD-CZ 2.1.D - Coastal Development Permit Required A Coastal Development Permit shall be required for all development within the Coastal Zone.	Consistent. The proposed project is located within the Coastal Zone and is seeking approval of a Coastal Development Permit (CDP).
Policy LUD-CZ 2.1.E – Minimize Adverse Effects New development shall be located in areas where it will not have significant adverse effect either individually or cumulatively on natural coastal resources and public access and recreation	Consistent. The 2011 Certified EIR found and concluded that the proposed project would result in neither project-specific nor cumulatively significant impacts to natural coastal resources or public access and recreation. None of the proposed project changes would change the conclusions on this

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(Policy NCR-CZ 1.1.C).	issue as discussed in the certified 2011 EIR.
General Permit Considerations	
Policy LUD-CZ 3.1.A – Considerations for Natural Habitat Areas - ESHA i. Proposed development in areas adjacent to an ESHA (as identified earlier by Policies NCR-CZ 1.2.A and 1.3.A), shall be required to demonstrate that it is sited and designed to be compatible with the protection of these resources. ii. Proposed development in areas adjacent to an ESHA (including wetlands) shall be required to provide a site-specific resource report prepared by a qualified biologist. The report shall include, at a minimum, the following: a. A site-specific survey evaluating existing known resources at the time of proposed development. b. A map identifying existing known resources within the project's identified area of potential impact at the time of proposed development. c. An evaluation of necessary buffers and/or setbacks required around any identified ESHA, wetland or riparian vegetation to ensure the long-term biological integrity of the resource. All identified necessary buffers and/or setbacks required to ensure the biological integrity of the resource shall be mapped. • Buffers or setbacks are required around Natural Habitat Areas including ESHA, riparian vegetation, and wetlands of a sufficient size to ensure the biological integrity of the resource, including under changing sea level conditions. • A minimum buffer of 50 feet as measured from the extent of identified habitat type shall be required, unless a biological assessment results in information indicating that expanded or reduced setback/buffer would ensure the biological integrity of the resource. Smaller setbacks or buffers may be allowed only if it can be demonstrated that: (1) the required minimum 50-foot buffer would render the site unusable for its designated use; and (2) the buffer has been adjusted downward only to a point where the designated use can be accommodated. Under no	Consistent. The project site does not contain any ESHAs; however, potential riparian, emergent wetland, and estuarine ESHAs are present to the north, south, and east of the project site (refer to Figure 2-2, Potentially Environmentally Sensitive Habitat Area [ESHA] within the Coastal Zone, of the City's Local Coastal Program LUP). As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, it was determined that with implementation of Measures 4.3.1, 4.3.2, 4.3.3, and 4.3.4, the proposed project will result in less than significant impacts on neighboring sensitive habitats, including potential ESHAs. In addition, six site-specific field surveys were conducted as part of the Biological Resources Report prepared for the 2011 Certified EIR to determine existing plant and animal species present on and adjacent to the project site. The Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site that are incorporated into the 2011 Certified EIR as Measures 4.3.1 through 4.3.4. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR. Furthermore, according to the City's CIP, developments are required to be set back a minimum of 50 feet from Laguna Grande Lake (a designated marine resource area). However, smaller setbacks may be allowed if public recreational trails are provided within the buffer zone. The proposed project will construct the trail extension within the 50-foot buffer zone; however, the restaurant facility will be set back a minimum of 50 feet from Laguna Grande Lake.

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circumstances shall the buffer be reduced to less than 25-feet. If the buffer/setback is adjusted downward, additional mitigation measures developed in consultation with the Department of Fish & Game shall be implemented. • No permanent structures shall be permitted within the required buffer/setback area except for structures of a minor nature that do not lead to significant degradation of the resource such as fences or at grade improvements for public access and/or recreation purposes (i.e. paths, trails, platforms, parking). d. Identification of all biological impacts of proposed development. e. Alternatives and/or mitigation for avoiding and/or reducing any identified impacts to a less than a significant level. f. Mitigation/Restoration and Monitoring Program for any mitigation required, including identification of appropriate acre replacement/ restoration ratios for any unavoidable impacts.	
Policy LUD-CZ 3.1.B – Considerations for Natural Habitat Areas – Wetland Vegetation Management i. For proposed development within the coastal zone, a <i>Vegetation Management Report</i> prepared by a qualified biologist shall be required. The report shall consist, at a minimum, of the following: a. A site-specific survey of the vegetation and habitat types at the time of proposed development. b. A map identifying existing vegetation and habitat types relative to the identified project area, and identification of all potential impacts associated with the proposed development. c. Identification of appropriate native plant species for use in restoration activities. d. Identification of appropriate buffers, or setbacks, necessary to protect identified vegetation. e. Alternatives and/or mitigation for avoiding and/or minimizing identified impacts. Mitigation shall include	Consistent. As part of the 2011 Certified EIR, a Biological Resources Report was prepared for the proposed project. The Biological Resources Report included six site-specific field surveys to determine existing plant species and vegetation types present on and adjacent to the project site. All existing vegetation and habitat species were identified in this report, as were impacts and prescribed mitigation measures.

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procedures and planting/maintenance plans that will encourage, enhance, or reestablish desirable plant communities. ii. The <i>Vegetation Management Report</i> shall be consistent with the most current version of the Wetland Management/Enhancement and Restoration Program (refer to Policy NCR-CZ 1.5.D).	
Policy LUD-CZ 3.1.C – Considerations for Natural Habitat Areas – Wetlands and Marine Resources i. Applicants for new development within the coastal zone located within, adjacent to, or that has watershed connection to a marine resource shall be required to submit a site-specific Wetland Management / Enhancement and Restoration Program (refer to Policy NCR-CZ 1.5.D) including, at a minimum, the following elements: a. A wetland delineation prepared by a qualified biologist with expertise in identifying wetlands and wetland indicators (i.e. soils, hydrology or vegetation). b. Identification of the current conditions of the site including flooding potential, water quality, and natural systems. c. Identification of all habitat types and known water quality concerns within the project area. d. Guidelines for water quality management and/or improvement that is consistent with maintenance, reestablishment, and enhancement of existing wetland habitats and water quality. e. An identification of appropriate methods of native enhancement and restoration that will sustain the biological productivity of existing wetland habitats. f. An identification of structural and nonstructural best management practices that will: • Maintain, and as feasible enhance, habitat and support natural systems of Laguna Grande, Roberts Lake and Monterey Bay, • Maintain, and as feasible improve, water quality, • Control erosion and sedimentation deposit, and • Provide flood protection. g. Guidelines, after consultation with the appropriate state	Consistent. A Jurisdictional Delineation (JD) was prepared to identify jurisdictional waters, including wetlands on and adjacent to the project site. Section 4.3, Biological Resources, of the 2011 Certified EIR describes existing natural systems and habitat types on the project site that are consistent with the findings in the Biological Resources Report and the JD prepared for the proposed project. Section 4.3, Biological Resources, of the 2011 Certified EIR includes mitigation measures aimed at minimizing, and if at all possible avoiding, impacts to existing native habitats and species on the project site. Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR describes existing conditions related to the flooding potential on the project site. As discussed above under Policy NCR-CZ 5.1.A, Designation of Natural Hazard Areas, the majority of the project site lies within the boundary of FEMA Zone AE, where the 100-year flood event will result in inundation to elevations between 16 feet and 17 feet. The current project grading plan proposes to import slightly more than 1,000 cubic yards (net) of fill. This volume of fill will raise the elevations of developed portions of the project site above 15 feet, and will raise the elevation of the first floor of the restaurant building to 18 feet, which is more than 1 foot above the Base Flood Elevation. In addition, as discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, implementation of Measures 4.7.1 and 4.7.2 will incorporate BMPs to reduce pollutants of concern in storm water runoff during project construction and operation.

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and federal resource agencies, for the preservation and/or reestablishment of equivalent (size and biological value) areas of riparian and marsh vegetation (if appropriate) including implementation and maintenance. h. Identification of technical, planning, and design mechanisms for plan implementation and maintenance.	
Policy LUD-CZ 3.1.D – Considerations for Natural Habitat Areas - Watershed/Water Quality Design and manage proposed development (new development or redevelopment) to eliminate or minimize dry-weather flows to Roberts Lake, Laguna Grande, and Monterey Bay in order to protect and enhance the biological productivity and diversity of fresh, intertidal, and marine organisms. i. All proposed development shall prepare Storm Water Pollution Prevention Plan (SWPPP) that includes, construction, and maintenance of erosion control, and water quality BMPs to be implemented during construction to prevent any construction related runoff and/or sediment from discharging to coastal waters including Roberts Lake, Laguna Grande, and the Beach Subareas as applicable. ii. All proposed development shall include a post-construction drainage plan that identifies the appropriate types of BMPs to be used at the site, implementation and maintenance scheduling, monitoring requirements, and responsibilities. iii. All proposed development shall include, to the extent feasible and as applicable to the type of development proposed, Site Design and Planning, Pollution Prevention, Source Control, and Treatment Control strategies that: • Minimize impervious surface, reduce the volume of runoff, and maximize infiltration of runoff. • Incorporate Pollution Prevention and Source Control BMPs / techniques that eliminate or minimize sources of pollution generated on the site. • Incorporate Low Impact Development (LID) design techniques (also known as Integrated Management Practices (IMPs)) that minimize and disconnect impervious surfaces and are integrated into the landscape design and distributed throughout the site.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at ensuring the sustainability of biological productivity in the areas surrounding the project site. In addition, as required by Measure 4.7.1 outlined in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the proposed project will be required to prepare an ESCP as well as a SWPPP to minimize potentially significant impacts to water quality during construction. In addition, as required by Measure 4.7.2, the proposed project will be required to implement appropriate Source Control and Treatment BMPs to minimize impacts to water quality during project operation. Furthermore, on July 12, 2013, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032). The Post-Construction Requirements mandate that development projects use Low Impact Development (LID), which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. These Post Construction Requirements are referenced in Section 2.7.G.5 of the City's CIP. Therefore, the project is required to comply with the Post-Construction Requirements to implement LIDs and infiltrate storm water runoff on-site.

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• Incorporate Source Control and Treatment Control BMPs that capture and treat polluted runoff prior to entering the municipal storm drainage system or receiving waters. Treatment Control BMPs shall be consistent with Seaside Municipal Code Chapter 18.46, Urban Storm Water Quality Management and Discharge Control, the Monterey Regional Storm Water Management Plan (SWMP), the Central Coast Regional Water Quality Control Board post-construction requirements and the regional NPDES Permit requirements. • All development shall include in construction documents operational and maintenance provisions to ensure ongoing effectiveness of BMPs. • All development shall be conditioned to require ongoing maintenance that is necessary for effective operation of all required water quality structural and non-structural BMPs for the life of the project. • Consolidate and/or eliminate storm drain outfall where feasible. Emphasis shall be placed on eliminating / redirecting dry weather and storm water flows away from the Bay Street and former Fort Ord storm water outfalls.	
Policy LUD-CZ 3.2.A – Considerations for Visual Resources - Proposals for new development shall include a map and visual analysis prepared by a qualified professional identifying the development's visual impacts, including potential impacts on scenic views and viewsheds including, but not limited to, those identified on Figure 2-4. - Development shall be sited and designed to protect, and where feasible enhance, public views to Roberts Lake, Laguna Grande, Monterey Bay, and the Pacific Ocean, including from Highway 1, which may be accomplished by minimizing the alteration of the natural land forms and by designing development to be visually compatible with the character of the surrounding areas. • Where feasible, development shall restore and enhance visual quality in visually degraded areas. - Landscaping shall be sited and installed to screen parking and utility areas from public view (including views from the	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, as part of the visual analysis prepared for the proposed project, three key views consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP were identified and analyzed to see if the project would have an impact on key views. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect on a scenic vista. In addition, the proposed project will be consistent with Section 2.6, Site Development Standards, of the City's CIP. Additionally, the proposed project must be reviewed and approved by the BAR to ensure that the character of the project site is compatible with the surrounding area. The proposed project will include landscaping along all boundaries of the project site. Furthermore, on-site lighting will be designed to be directed downward, will

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water and other recreation areas), provided such landscaping itself also protects and does not degrade views. iv. Outdoor lighting and signs shall be designed to protect sensitive habitats, public recreation areas, public views, and night sky from intrusion, including by prohibiting signs with moving parts or flashing lights, minimizing glare, and shielding and directing lighting within the development areas.	include directional lumens, and will be located in those areas requiring nighttime lighting, thereby reducing impacts on nighttime views as required by Measure 4.1.1, Lighting Plan, in Section 4.1, Aesthetics, of the 2011 Certified EIR. No lighting as part of the proposed project will include moving or flashing parts.
Policy LUD-CZ 3.3.A – Considerations for Water Resources/Utilities i. Installation of new water utility infrastructure shall be provided in a manner which allows development at densities and locations consistent with the land use designations defined in Policy LUD-CZ 1.1.A and taking into account the natural resource protection policies of this plan. ii. Prior to the approval of any development within the coastal zone, adequate water capacity shall be demonstrated consistent with the provisions and requirements of the Monterey Peninsula Water Management District. iii. Capacity for additional water service shall be reserved according to the following ranking of priorities: (a) essential public services; (b) new and existing recreational or open space uses within the coastal zone; and (c) visitor-serving commercial uses. iv. Applications for development shall demonstrate an adequate, sustainable, public (i.e., publicly owned and/or managed) water supply to support the proposed development. Private water supplies are prohibited to serve existing and new development.	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project would have an adequate and sustainable supply of water.
Policy LUD-CZ 3.3.B – Considerations for Water Resources-Water Supply/Conservation i. All new development, changes of ownership, and changes or expansions of use within the Coastal Zone receiving a water permit on or after January 1, 2010 shall meet or exceed the following Water Efficiency Standards (Policy NCR-CZ 3.1.B): • Ultra-Low Flush Toilets shall be installed; • Urinals installed in residential uses shall be designed to flush with one (1) gallon of water. Urinals installed in non-residential uses shall be pint urinals or zero water	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include a variety of design features aimed at reducing water and energy usage. The water efficiency standards outlined under Policy LUD-CZ 3.3.B shall be included in the General Contractor's construction specifications. Therefore, the proposed project would meet or exceed the Water Efficiency Standards.

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consumption urinals and shall be clearly specified on the final construction drawings. Zero water consumption urinals shall be encouraged in settings where there is a regular maintenance staff; • Showerheads, Rain Bars, or Body Spray Nozzles shall be installed that were designed to emit a maximum of 2.0 gallons per minute of water. All shower fixtures should be equipped with scald protection valves rated for 2.0 gallons per minute showerheads. Installation of multiple Showerheads in one stall shall require timers for each Showerhead, Rain Bar, or Body Spray Nozzle. No timer shall operate with greater than a three (3) minute operating increment; • Residential lavatory sink faucets shall emit a maximum of 2.2 gallons of water per minute at 60 psi and residential kitchen sink faucets shall emit a maximum of 2.2 gallons of water per minute at 60 psi; 8. Public lavatory faucets shall emit a maximum of 0.5 gallon of water per minute at 60 psi and public lavatory sinks equipped with automatic shut off devices or sensor faucets shall operate with a maximum flow of 0.25 gallons per cycle; • High efficiency clothes washers shall be installed when a clothes washer is installed in a new structure; • High efficiency dishwashers or high efficiency commercial dishwashers shall be installed and maintained on the site when a dishwasher is installed in a new structure permitted by a Water Permit; • Instant-access hot water system(s) shall be installed for hot water access points to ensure that hot water is available within ten (10) seconds • All hot water pipes shall be insulated; • Sodium chloride (salt) water softeners shall be discouraged in New Construction. Alternate technologies such as potassium chloride shall be recommended. When a sodium chloride water softener is to be installed, the unit shall use demand-initiated regeneration which senses when the resin must be recharged, either electronically or with a meter that measures and	
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calculates usage. This requirement shall be specified on the Construction Drawings; • Water Efficient Pre-Rinse Spray Valves shall be utilized when a pre-rinse spray valve is installed; • There shall be no single-pass water use systems in ice machines, hydraulic equipment, refrigeration condensers, X-ray processing equipment, air compressors, vacuum pumps, etc. Air-cooled or better technology shall be installed; • Water cooled refrigeration equipment shall be prohibited when there is alternative cooling technology available; • Cooling Towers shall be equipped with conductivity controllers that are used to increase the number of cycles that can be achieved; • Boilerless steamers or connectionless steamers shall be installed in place of boiler-based steamers when a steamer is installed in new construction; • All landscape shall comply and identify on the landscape plan the following requirements: - o Group planting by hydrozones (water requirements). - o Irrigation systems shall include the installation, use and maintenance of Weather-Based Irrigation System Controllers (e.g. Smart Controllers). Weather-Based Irrigation System Controllers shall include functioning Soil Moisture Sensors and a Rain Sensor as components of the system. - o Drip Irrigation shall be utilized for watering all non-turf irrigated plantings. - o Rotating Sprinkler Nozzles shall be utilized for turf irrigation. - o Overhead spray irrigation shall not be used to water non-turf landscaping, including trees and shrubs. - o Irrigation systems shall operate with at least 70 percent efficiency. ii. Rainwater and graywater collection/irrigation systems are encouraged to supplement irrigation for new landscaping. New structures shall be encouraged to include one or more rainwater cisterns and a system to provide at least 75 percent of exterior irrigation during normal rainfall years.	
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Systems must be compliant with local catchment system standards, including Monterey County Department of Environmental Health. All sites utilizing a graywater reuse system shall install and maintain a backflow prevention device as required by the water distribution system operator that supplies water to the site.	
Policy LUD-CZ 3.4.A – Considerations for Water Quality/Wastewater i. Prior to the approval of any new development within the coastal zone, adequate sewage treatment facility capacity shall be demonstrated consistent with the provisions and requirements of the California Regional Water Quality Control Board. ii. Capacity for additional wastewater collection, conveyance and treatment shall be verified. iii. Alternatives for demonstrating additional wastewater treatment capacity for permitted development may be considered, including but not limited to, (a) construction of a package treatment plant at the Seaside treatment facility to handle all projected sewage for the City's LUP land use designations; or (b) the construction of a new sewer line to the Monterey treatment facility to handle the same sewage capacities.	Consistent. As discussed in Section 4.12, Utilities and Service Systems, of the 2011 Certified EIR, on November 10, 1992, an Agreement to Allow Connection to Sanitary Sewer Systems (Agreement) was entered into by the City of Monterey and the Seaside County Sanitation District (SCSD). Through this agreement, the City of Monterey will allow the SCSD to utilize the City of Monterey's sanitary sewer collection system for sewer services for the parcel of land (1350 Del Monte Boulevard) on which the proposed project will be developed. The proposed project is projected to experience average daily wastewater flows of approximately 3,850 gallons per day (gpd) and peak flows of approximately 5,775 gpd. The wastewater treatment needs of the proposed project, therefore, will not exceed the average and peak flow limits of 4,000 gpd and 8,000 gpd, respectively, set forth in the Agreement between the SCSD and the City of Monterey. Furthermore, the Monterey Regional Water Pollution Control Agency (MRWPCA) estimates that sufficient flow capacity will be available at the facility to meet all needs through the service area for the next 20 years. Therefore, the wastewater treatment needs of the proposed project will not exceed the permitted capacity of the MRWPCA facility.
Policy LUD-CZ 3.5.A – Considerations for Natural Hazards i. Applications for new development shall include an analysis of all potential hazards, site constraints, alternatives, and appropriate mitigation. The analysis shall also include a determination that the site is suitable for the proposed development and that it will be safe from hazards over the lifetime of the development without reliance on seawalls, deep piers, or similar engineering measures. ii. Proposed development shall be consistent with applicable goals and policies of the LCP. iii. All required geologic engineering reports shall be prepared by a qualified geotechnical engineer. Reports shall address site stability under static and pseudo-static conditions. iv. Geologic reports submitted to the City shall be in conformance with guidelines established for such reports by	Consistent. An analysis of all potential hazards, site constraints, alternatives, potential impacts, and corresponding mitigation measures were outlined in applicable topical sections of the 2011 Certified EIR for the proposed project. As discussed throughout this LCP-LUP Consistency Analysis, the proposed project will be consistent with applicable policies included in the City's LUP. As required by Standard Condition 4.5.2, a site-specific geotechnical report for the proposed project will be prepared by a qualified engineer. The project site is located within 5 meters of a tsunami evacuation zone (refer to Figure 2-7, Tsunami Evacuation Areas, in the City's Local Coastal Program LUP). As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the project site is located at an elevation about 10

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the California Division of Mines and Geology and the Uniform Building Code, including the following: • Geologic reports shall include information on the regional and local geologic setting, topography, significant landforms, soil types and thickness of soil or depth to bedrock, geologic hazards, soil/rock types, geologic structures, groundwater conditions, and other relevant properties, such as erosion potential and mineral economic resources. • The geologic report shall contain the following ten major sections: - o Summary - o Description of Project Alternatives - o Impacts - o Geology of the Project Area - o Geologic and Seismic Impacts - o Mitigation of Impacts - o Coordination with Other Agencies, Groups, or Consultants - o Conclusions and Recommendations - o Report Preparer's Qualifications - o References v. All development proposed within an area that is subject to ocean wave, tsunami, or flooding shall prepare an analysis of wave up-rush / shoreline erosion, and be adequately set back from the area of hazard to be safe for the life of the development or a 100-year period, whichever is greater, without reliance on seawalls, deep piers, or similar engineering measures. vi. Require all coastal development permit applications for all development on a beach or sand dune property subject to wave action to assess the potential for flooding or damage from waves, storm surge, or seiches, through a wave uprush and impact report prepared by a licensed civil engineer with expertise in coastal processes. The conditions that shall be considered in a wave uprush study are: a seasonally eroded beach combined with long-term (75 years) erosion; high tide conditions, combined with long-term (75 years) projects for sea level rise; storm waves from a 100-year storm event or a	to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the project site in the event of a tsunami. Mitigation measures are also outlined in this section of the 2011 Certified EIR in order to further ensure that impacts related to flooding and other events causing inundation on the project site will be less than significant. A sea level rise quantitative analysis was prepared to examine site development relative to projected 75-year and 100-year sea level rise scenarios. The sea level rise quantitative analysis incorporated wave up-rush and beach/shoreline erosion as part of the analysis.
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storm that compares to the 1982/83 El Niño event.	
Policy LUD-CZ 3.5.B – Considerations for Sea Level Rise i. Geotechnical reports prepared for proposed development shall include a comprehensive evaluation of potential sea level rise impacts. This evaluation shall include the following: • A Vulnerability Assessment that identifies and analyzes areas within the city that are most at risk to the impacts of sea level rise. The Vulnerability Assessment shall establish how far and how high coastal storms and ocean levels would inundate the city, including consideration of erosion, inland flooding, and sedimentation factors. • Identification of any site-dependent infrastructure that is at risk from sea level rise. • Identify and prioritize mitigation and adaptation measures that can be implemented as well as an analysis of the potential impacts of the adaptation measures. Mitigation and adaptation measures shall be scaled to the local and regional hydrologic events projected. These measures may include, but are not limited to, riparian habitat restoration, living shoreline projects, management of invasive species, regional sediment management, and innovative designs. • If the City's Local Hazard Mitigation Plan update (required by Policy NCR-CZ 5.2.C) has been prepared at the time the site-specific comprehensive evaluation of sea level rise impacts are being evaluated, then the evaluations shall be consistent with the intent of that plan update.	Consistent. As required by Standard Condition 4.5.2, a site-specific geotechnical report for the proposed project will be prepared by a qualified engineer. This report will be prepared in compliance with all State and City requirements.
Policy LUD-CZ 3.6.A – Considerations for Public Access and Recreation i. Development shall not interfere with the public's right of access to the shore and significant coastal recreation features. ii. New development shall plan for and provide public access to coastal features.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will provide increased connectivity to the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. Therefore, the proposed project will increase public access to coastal features.

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Policy LUD-CZ 3.7.A –Considerations for Cultural Resources i. Identify and protect archaeological resources within Seaside. ii. Require a Phase I Archaeological Study performed by a Registered Professional Archaeologist to determine whether significant archeological resources may be present when excavation activities are proposed. iii. Mitigations are to be required as a condition of development where it would adversely impact any archaeological or paleontological resources, including, but not limited to, those qualified individuals as identified by the State Historic Preservation Officer.	Consistent. As part of the 2011 Certified EIR, a Cultural Resources Report was prepared outlining the proposed project's impacts to cultural resources. As discussed in Section 4.4, Cultural and Paleontological Resources, of the 2011 Certified EIR, no significant archaeological resources were identified. Nevertheless, Mitigation Measure 4.4.1, Historic and Archaeological Resources, has been included to address unknown archaeological resources that may be encountered during construction activities.
Policy LUD-CZ 3.8.A – Considerations for Transportation and Circulation i. Development shall be approved only where adequate circulation and parking have been provided. ii. Retain the former Southern Pacific Railroad right-of-way as a transportation corridor. Prohibit development that would interfere with future uses of the corridor identified in Policy LUD-CZ 1.1.A. iii. Encourage non-motorized and other alternative forms of transportation in all new development. iv. Maintenance of the existing highway, landscaping, and drainage facilities within the Highway 1 corridor may be permitted with a coastal development permit. Activities that involve an expansion of capacity or widening or realigning of the highway pavement or route shall require an amendment to the LCP.	Consistent. Parking has been provided consistent with all the LCP requirements. A Traffic Impact Analysis was prepared (November 2014) and concluded that both on-site and off-site circulation was sufficient. In addition, non-motorized and other alternative forms of transportation will be encouraged through the maintenance of the existing pedestrian and bicycle trail around Laguna Grande Lake and the provision of the extension of the existing pedestrian and bicycle trail over the foot bridge to the north to connect to the existing sidewalk along Del Monte Boulevard.
Proposed Implementation Actions	
Support efforts to prepare the <i>Canyon del Rey Watershed Master Drainage Plan Update</i> (Policy NCR-CZ 1.5.B)	Not Applicable.
Implement erosion control and sedimentation mitigation measures (Policy NCR-CZ 1.5.C.i)	Consistent. The proposed project will be required to prepare an ESCP and a SWPPP as required by Measure 4.7.1 in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR. Both plans will include components for erosion control and prescribe treatment measures to trap sediment once it has been mobilized at a scale and density appropriate to the size and slope of the catchment basin. For the project site, these measures might include inlet protection, straw bale barriers, straw mulching, straw wattles, and silt fencing. Therefore, mitigation measures have been identified in the

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	2011 Certified EIR to reduce the potential for erosion, thereby reducing sediment levels in storm water runoff.
Implement, monitor, comply and update (as needed) the <i>Monterey Regional Storm Water Management Plan</i> (SWMP) as a participating entity (Policy NCR-CZ 1.5.C.ii).	Not Applicable.
Implement, monitor, and comply with the Regional Water Quality Control Board's Post-Construction stormwater requirements for new and redevelopment for the Central Coast Region; and update appropriate policies, programs and documents, including Municipal Code Chapter 18.46, as needed.	Consistent. As discussed in Section 4.7, Hydrology and Water Quality, the proposed project would have a significant water quality impact if direct releases of pollutants or storm water discharges to Laguna Grande Lake during construction exceeded narrative or numerical water quality standards established by the Central Coast Regional Board, or violated the conditions set forth in the City Municipal Code. Implementation of Measures 4.7.1 and 4.7.2 will reduce potential short-term, construction-phase impacts and long-term operational impacts to water quality to below the level of significance. Additionally, as required by the Resolution No. R3-2013-0032, the proposed project will be required to comply with the Low Impact Development Standards (LID) and infiltrate storm water on-site.
Update the <i>Wetland Management/Enhancement and Restoration Program</i> (1983) based on the Canyon del Rey Watershed Master Drainage Plan Update (Policy NCR-CZ 1.5.D.i).	Not Applicable.
Implement and promote management/enhancement and restoration measures that meet the objectives of the current of <i>Wetland Management/Enhancement and Restoration Program</i> (Policy NCR-CZ 1.5.D.ii).	Not Applicable.
Explore and implement humane methods of controlling goose population (Policy NCR-CZ 1.6.A)	Not Applicable.
Participate in local and regional efforts to secure a safe and adequate/sustainable supply of water (Policy NCR-CZ 3.1.A.i).	Not Applicable.
Require new development, changes of ownership, and changes or expansions of use to meet or exceed Monterey Peninsula Water Management District's water efficiency standards (Policy NCR-CZ 3.1.B.i).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will install water-efficient fixtures and appliances, native drought-tolerant plants, and water-efficient irrigation systems and devices, and will include restricted watering methods (i.e., prohibiting systems that apply water). These water efficiency standards will be included in the General Contractor's construction specifications. Therefore, the proposed project will meet the Monterey Peninsula Water Management District's water efficiency standards.
Monitor water use within the City (Policy NCR-CZ 3.1.C).	Not Applicable.
Support regional efforts to develop an alternative water supply (Policy NCR-CZ 3.2.A).	Not Applicable.

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Actively pursue methods of improving water quality of lakes, streams, and other waterways throughout the coastal zone (Policy NCR-CZ 4.1.A.i).	Not Applicable.
Collaborate with local jurisdictions and identify properties and stakeholders most likely affected by rising sea levels (Policy NCR-CZ 5.2.A).	Not Applicable.
Organize educational workshops to inform public of the concerns and potential impacts of sea level rise (Policy NCR-CZ 5.2.B.ii).	Not Applicable.
Update Local Hazard Mitigation Plan to address potential impacts of sea level rise (Policy NCR-CZ 5.2.C).	Not Applicable.
Develop and implement a coastal access/directional sign program (Policy PAR-CZ 1.1.C.i).	Not Applicable.
Maximize opportunities for environmental education within the coastal zone (Policy PAR-CZ 1.1.C.ii).	Not Applicable.
Explore development of a Visitors Center (Policy PAR-CZ 1.1.C.iii).	Not Applicable.
Provide free unrestricted parking at all public access and public parking areas (Policy PAR-CZ 1.2.A.i).	Consistent. As discussed above under Policy PAR-CZ 2.1.A, Designation of Parking for Public Access and Recreational Opportunities, the project site is designated as a shared off-street parking area (refer to Figure 2-9, Public Parking Area, of the City's Local Coastal Program LUP). Although the proposed project will develop this property with a restaurant use, thereby eliminating this property as an off-street public parking area, the proposed project will provide sufficient parking to serve visitors to the project site and surrounding areas. In addition, there are two public parking lots located on the north side of Laguna Grande Park that be accessed from Canyon Del Rey Boulevard that would remain available for public use. The project site is accessible from these public parking lots by an existing pedestrian pathway that circles around Laguna Grande Park.
Explore expanding public access parking at the existing Embassy Suites Hotel parking lot (Policy PAR-CZ 1.2.A.ii).	Not Applicable.
Establish and maintain a system of trails that provides future connectivity to various California Coastal Trail and recreational alignments (Policy PAR-CZ 1.3.A).	Not Applicable.
Participate in the regional planning efforts to restore light rail service along the Monterey Peninsula and through Seaside.	Not Applicable.

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Laguna Grande Subarea	
Natural Coastal Resources	
Natural Habitat Areas	
Policy NCR-LG 1.1.A – Vegetation Management The City of Seaside shall work cooperatively with the City of Monterey, State Parks, and Regional Parks to stabilize area adjacent to Laguna Grande utilizing methods identified in the Vegetation Management Plan for the Seaside Coastal Zone (identified in Policy NCR-CZ 1.5.D.i), or if the plan is not complete, utilizing best available methods such as exotic and invasive plant removal, and planting and maintaining native vegetation.	Not Applicable.
Visual Resources	
Policy NCR-LG 2.1.A – Protection of Visual Resources Development within the Laguna Grande Subarea shall limit building height and bulk in order to minimize adverse impact on public views of the lake and park. Maintain a 50 foot buffer around Laguna Grande Lake and the channel connecting Laguna Grande Lake and Roberts Lake as shown in Figure 2-4 .	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key views (i.e., from southbound SR-1 north of Roberts Lake, from Laguna Grande Regional Park on the south shore of Laguna Grande Lake, and from the residential area 1.5 miles east of the project site), consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect on public views in the area. According to the City's CIP, developments are required to be set back a minimum of 50 feet from Laguna Grande Lake (a designated marine resource area). However, smaller setbacks may be allowed if public recreational trails are provided within the buffer zone. The proposed project will construct the trail extension within the 50-foot buffer zone; however, the restaurant facility will be set back a minimum of 50 feet from Laguna Grande Lake.
Policy NCR-LG 2.1.B – Management of Visual Resources i. Coordinate with the Regional Park District to provide viewshed improvements to areas identified on Figure 2-4 as a component of Coastal Visitor-Serving Commercial land use development and park improvements proposed for Laguna Grande. ii. The City shall develop Gateway Guidelines for the Fremont Corridor adjacent to Laguna Grande Park.	Not Applicable.

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Water Resources	
Policy NCR-LG 3.1.A – Protection of Potable Water Supply The City shall protect potable water supply within the Laguna Grande Subarea by utilizing methods identified in Policy NCR-CZ 3.1.B , as well as by using non-potable water supplies (e.g., from Laguna Grande) for non-potable uses such as park landscaping or as recharge if such use would not have a significant adverse effect on the lake or associated habitat.	Not Applicable.
Water Quality	
Policy NCR-LG 4.1.A – Management of Water Quality Improve the water quality of Laguna Grande, thus improving the recreational opportunities and preserving and enhancing the habitat value of Laguna Grande by carrying out the recommendations of the updated <i>Wetland Management/Enhancement and Restoration Program</i> (identified as Policy NCR-CZ 1.5.D.i), enforcing the Urban Storm Water Quality Management and Discharge Ordinance (Policy NCR-CA 1.5.C.i; Chapter 18.46), continued implementation of the <i>Monterey Regional Storm Water Management Plan</i> (Policy NCR-CZ 1.5.C.ii), and following the recommendations from the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i> (Policy NCR-CZ 1.5.B).	Not Applicable.
Policy NCR-LG 4.2.A – Water Quality Enhancement Investigate opportunities for habitat enhancement, impervious site coverage reduction, and restoration of previously disturbed areas.	Not Applicable.
Natural Hazards	
Policy NCR-LG 5.1.A – Management of Sea Level Rise Hazards The City shall protect and maintain the functionality of Laguna Grande and the adjacent park lands from impacts associated with sea level rise.	Not Applicable.
Policy NCR-LG 5.2.A – Management of Flooding Hazards i. In order to maintain stormwater flows and prevent flooding that could otherwise result in hazardous conditions and property damage, the City shall maintain the outfall at Laguna Grande under Fremont Street. A coastal development permit shall be required for maintenance activities including periodic cleaning and removal of sand	Not Applicable.

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and debris to facilitate stormwater flows. ii. The City shall accommodate for flooding impacts by increasing buffer areas around Laguna Grande and investigating opportunities for increasing lake capacity via sediment and fill removal.	
Public Access & Recreation	
Policy PAR-LG 1.1.A – Protection of Public Access and Recreational Opportunities The City shall maintain, and enhance, pedestrian and bicycle connectivity within the Laguna Grande Subarea, and to Roberts Lake, and the beach to maximize public access and recreation opportunities to these coastal resources.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will connect to the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will increase public access to coastal features.
Policy PAR-LG 1.1.B – Management of Public Access and Recreational Opportunities i. The City shall develop interpretive signage along access trails around Laguna Grande as part of ongoing park improvements and maintenance efforts. ii. The City shall maintain the portion of Laguna Grande Park and facilities that are within the city, including restrooms, for the recreation purposes of its citizens and visitors. iii. The City shall maintain and seek to enhance the developed pedestrian walkway/bikeway, including potential additions to it. The walkway/bikeway shall be maintained at a minimum width of 10 feet and so as to have a minimum impact on the wetland.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect the proposed project to the greater Laguna Grande Regional Park Trail. The trail width will be maintained at a minimum width of 10 feet. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean.
Policy PAR-LG 1.1.C – Provisions for Public Access and Recreational Opportunities i. Develop pedestrian access along lands adjoining Laguna Grande. Where passing through or near the wildlife habitat area in Laguna Grande, this access is to be designed so as to protect wetland areas (e.g., a required setback from the inland extent of emergent wetland vegetation, overpass, etc.). ii. New development shall be required to provide public access easements and access improvements, consistent with habitat protection, from public rights-of-way to the access	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect the proposed project to the greater Laguna Grande Regional Park Trail. The trail will be designed to protect the wetland areas by adhering to the required setback from Laguna Grande Lake.

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trail. iii. Upon the significant improvement in water quality of Laguna Grande (consistent with objectives presented in Policy NCR-LG 4.1.A), the City shall coordinate with the Monterey Peninsula Regional Park District to explore additional recreational water uses within Laguna Grande such as a fishing/fly-casting pier or paddle boat concession. iv. The City shall coordinate with the Monterey Peninsula Regional Park District to provide additional active and passive recreational opportunities in and around Laguna Grande (such as a fishing pier, par course, disk golf or similar). v. The City shall coordinate with the Monterey Peninsula Regional Park District for provision of additional programs and/or facilities for use by senior citizens and community groups (such as community garden, outdoor class area, horseshoe pit, bocce ball area, wildlife viewing station).	
Land Use & Development	
Land Use Designations & Definitions	
Policy LUD-LG 1.1.A – Land Use Designations Within the Laguna Grande Subarea The land use designation establishes the type, density, and intensity of land uses allowed. The Development Standards and Design Guidelines provided in the Coastal Implementation Plan portion of the LCP provide further guidance regarding the density and intensity of development allowed within each land use designation. Land within the Laguna Grande Subarea is designated as Coastal Parks and Open Space (CPOS) and Coastal Visitor-Serving Commercial (CVSC), which are defined as follows: • Coastal Parks and Open Space (CPOS): This designation is appropriate in areas where the City wants to protect and preserve natural resources and habitat, views, and other visual amenities and protect people and property from natural and man-made hazards. This designation also identifies existing or planned parkland. Public use areas include the sandy beach, access ways, parks, trails, walkways, and other recreational amenities that are publicly	Consistent. As discussed above under Policy LUD-CZ 1.1.A, Land Use Designations within the Coastal Zone, the northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). The proposed project will include the development of a restaurant facility, consistent with conditionally permitted uses in the CVSC land use designation as outlined in the City's Local Coastal Program LUP and CIP. Furthermore, the proposed project will develop the property at a FAR of 0.04, which will be well below the maximum FAR of 1.0:1 permitted by the City's CIP.

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owned or over which easements are required as a condition of development (IV.A.3.e). The maximum floor area ratio (FAR) within this designation is 0.01:1. • Coastal Visitor-Serving Commercial (CVSC): Principal permitted visitor-serving commercial uses include hotels/motels, food service, retail establishments, visitor/traveler support services (such as visitor information centers), and recreational-related commercial uses. The maximum floor area ratio (FAR) is 1.0:1, except that hotels are allowed a maximum FAR of 1.5:1.	
Development & Land Use Requirements	
Policy LUD-LG 2.1.A – Designation of Land Uses Within the Laguna Grande Subarea Land use designations in the Laguna Grande Subarea are shown earlier in Figure 2-10a of this plan. Gen	Consistent. As discussed above under Policy LUD-CZ 1.1.A, Land Use Designations within the Coastal Zone, the northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). The proposed project will include the development of a restaurant facility consistent with conditionally permitted uses in the CVSC land use designation as outlined in the City's CIP.
Policy LUD-LG 3.1.A – Considerations for Visual Resources • Permitted development shall be sited and designed to protect public views to Laguna Grande and be compatible with the regional park. Consideration of public views of the lake and park must be carefully considered as a component of the visual analysis required by Policy LUD-CZ 3.2.A. • To protect views of Laguna Grande, proposed development should avoid placing structures in close proximity to the channel. Preferred development within 50-feet of the channel would consist of low-profile, and non-structural development including parking lots and recreational amenities (such as formalized viewing areas, off-street parking, and improved bike paths and trailways).	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key views consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect to public views of Laguna Grande Lake. Furthermore, the proposed project will not be developed within such close proximity to the Channel that it will subsequently result in obstruction of public views of the Laguna Grande Lake.
Policy LUD-LG 3.2.A – Considerations for Public Access • All relevant access improvements outlined in the Public Access section of this chapter are to be carried out as a condition of development. • Proposed development in the Laguna Grande Subarea shall be required to provide public access easements and access improvements, consistent with habitat protection, to the access trail from the public right-of-way to the access trail.	Consistent. The proposed project will be consistent with all relevant public access and recreation policies outlined in the City's Local Coastal Program LUP. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect to the greater Laguna Grande Regional Park Trail. The trail is 10 feet wide, will be designed to protect the wetland areas by adhering to the required setback from Laguna Grande Lake, and will include signage to require people to

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- Proposed development will maintain and seek to enhance the developed pedestrian walkway/bikeway, including potential additions to it, as applicable. The walkway/bikeway shall be maintained at a minimum width of 10 feet and so as to have a minimum impact on the wetland. - Proposed development within the Laguna Grande Subarea will be required to provide additional/enhanced public access through means such as directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard.	stay on the designated trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will add to the City's and region's existing pedestrian and bicycle trail system.
Proposed Implementation Actions	
Stabilize the areas adjacent to Laguna Grande utilizing methods identified in the Vegetation Management Plan for the Seaside Coastal Zone or, if the plan is not complete, utilizing best available methods (Policy NCR-LG 1.1.A).	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to adhere to a variety of mitigation measures that will minimize project-related impacts to on-site and surrounding sensitive species and habitats. Implementation of these mitigation measures will further ensure the long-term stabilization of those habitats surrounding the Laguna Grande Lake area.
Coordinate with the Regional Park District to provide viewshed improvements as a component of park improvements proposed for Laguna Grande (Policy NCR-LG 3.1.A).	Not Applicable.
Develop Gateway Guidelines for the Fremont Corridor (Policy NCR-LG 2.1.B.ii). Improve water quality of Laguna Grande through implementation of the current water quality policies and programs, and the current Wetland Management / Enhancement and Restoration Program (Policy NCR-LG 4.1.A).	Not Applicable.
Improve water quality and the recreational experience of southern Monterey Bay area beaches, including by properly maintaining the outfall at Laguna Grande under Fremont Street and by pursuing opportunities to consolidate and/or eliminate reliance on storm water outfalls which convey storm water directly to the beach. Such storm water shall be filtered and treated prior to discharge (Policy NCR-LG 5.2.A).	Not Applicable.
Maintain, and where necessary improve, pedestrian and bicycle connectivity within the Laguna Grande Subarea (Policy PAR-LG 1.1.A).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian/ and bicycle trail to connect with the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides

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	direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will increase connectivity within the Laguna Grande Subarea.
Develop interpretive signage along access trails around Laguna Grande (Policy PAR-LG 1.1.B.i).	Not Applicable.
Maintain the portion of Laguna Grande Park and facilities that are within the city (Policy PAR-LG 1.1.B.ii).	Not Applicable.
Maintain the developed pedestrian walkway/bikeway (Policy PAR-LG 1.1.B.iii). Expand recreational water uses within Laguna Grande (Policy PAR-LG 1.1.C.iii).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail to connect with the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will enhance recreational access to the coastal area. The Applicant will be responsible for ensuring the trail extension is maintained.
Coordinate with the Monterey Peninsula Regional Park District to provide additional active recreational opportunities around Laguna Grande (Policy PAR-LG 1.1.C.iv).	Not Applicable.
The City shall coordinate with the Monterey Peninsula Regional Park District for provision of additional programs and/or facilities for the use by senior citizens and community groups (Policy PAR-LG 1.1.C.v).	Not Applicable.

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Coastal Implementation Plan	
Chapter 2 Coastal Zone Districts, Uses, Regulations and Requirements	
2.3 Establishment and Designation of Coastal Zoning Districts	The portion of the project area that is within the Coastal Zone is designated Coastal Visitor-Serving Commercial (CVSC), as identified in Figure 1a (Coastal Zoning Map) in the City of Seaside's (City) Coastal Implementation Plan (CIP). As stated in Table 1 (Coastal Zoning Districts) in the City's CIP, the purpose of the CVSC land designation is to establish areas to service the needs of visitors to the City and the surrounding area.
2.4 Development Requiring Coastal Development Permit	All development in the Coastal Zone requires either a Coastal Development Permit (CDP) or a Coastal Administrative Permit (CAP). Development, as defined by the City's General Plan, includes "...the construction... of any structure ...or land disturbance." Therefore, the proposed project is considered a development per the City's General Plan. Projects with certain characteristics may not be approved via a CAP and would require a CDP. The proposed project will require a CDP because it is: (1) a development that is deemed to have the potential to cause a significant environmental impact pursuant to the California Environmental Quality Act (CEQA); (2) a development within a visual resource area as identified on Figure 2-4 (Views and Viewsheds to Visual Resources); and (3) a development within 100 feet of mapped or field-identified wetlands or Environmentally Sensitive Habitat Areas (ESHA).
2.5 Allowed Land Uses and Permit Requirements for Coastal Zoning Districts	Consistent. The land use "restaurant, café-fast food" is conditionally permitted in areas zoned CVSC (refer to Table 2 of the City's CIP). Therefore, the proposed project is consistent with the allowable uses in the Coastal Zone subject to the issuance of a CDP.
2.6 Site Development Standards	Consistent. Table 3 (Site Development Standards) in the City's CIP establishes the development standards for property in the Coastal Zone. In specific subareas, additional standards apply. The project area is within the Laguna Grande Subarea (Section 2.7[I.2]), which has specific standards for visual resources, public access and recreation, and dune management in addition to the Site Development Standards provided in Table 3. The following Special Site Development Standards for the Laguna Grande Subarea apply to the proposed project: a. Consistent. Height: Development within 100 feet of Laguna Grande Lake will be limited to one-story and not exceed a maximum height of 20 feet, except for design/architectural features, which can be up to 30 feet in height. The maximum height of the proposed project will be 19 feet 10 inches to the top of the parapet and 28 feet to the top of the corner tower (which is considered a design/architectural feature). b. Consistent. Views: Development will not be placed within close proximity to the channel between Roberts Lake and Laguna Grande Lake (Channel) except for such improvements as parking lots and recreational amenities. The buildings that are part of the proposed project will be set back approximately 63 feet from the Channel.

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	c. Consistent. <i>Public Access:</i> All public paths will be designed at a minimum width of 10 feet. The public path included as part of the proposed project has a minimum width of 10 feet. d. Consistent. <i>Public Access:</i> All walkways/bikeways will be maintained at a minimum width of 10 feet. The extension of the pedestrian and bicycle trail included as part of the proposed project will have a minimum width of 10 feet. e. Consistent. <i>Public Access:</i> Public access will be expanded and/or enhanced through directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard. The existing pedestrian and bicycle trail that ends at the wood bridge across the canal will be extended to Del Monte Boulevard as part of the proposed project. f. Consistent. <i>Views:</i> Development between 100 feet and 500 feet of Laguna Grande, including the Channel area, will be limited to a maximum of five stories and 60 feet in height, and will be oriented parallel to the Channel. In addition, upper floors will be set back from lower floors, and building facades will include articulation. The maximum height of the proposed project will be 19 feet 10 inches at the top of the parapet and 28 feet at the top of the corner tower. Additionally, the building facades will include articulation that would blend into the surroundings. The following Site Development Standards (Table 3) apply to the proposed project: • Consistent. <i>Maximum Building Site Coverage:</i> The maximum building site coverage is 90%. The total site area covered by the proposed building will be approximately 42%. • Consistent. <i>Minimum Lot Area:</i> The minimum lot area is 1 acre. The project site will be approximately 2.28 acres. • Not Applicable. <i>Minimum Lot Width:</i> The project site is a legal lot of record and these standards do not apply. • Not Applicable. <i>Minimum Lot Depth:</i> The project site is a legal lot of record and these standards do not apply. • Consistent. <i>Floor Area Ratio (FAR):</i> The FAR standard is 1.0:1. The proposed project's FAR is 0.04.
2.6A. Parking Requirements	Consistent. As indicated in Table 4 (Parking Requirements by Land Use), the restaurant land use type is required to have 1 space for every 3 seats. The proposed project will include development of indoor and outdoor patio dining totaling 159 seats. The proposed project will include 53 parking spaces, which equals 1 space for every 3 seats.
2.6A(2)(e) Recreational Vehicle (RV) Parking Spaces	Consistent. RV parking spaces are to be provided at a minimum ratio of 1 RV space for each 40 off-street vehicle parking spaces. The proposed project will include 53 parking spaces and 1 RV parking space.

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2.6A(3)(a) Disabled Parking Requirements	Consistent. In accordance with the Americans with Disabilities Act (ADA) standards, 1 disabled parking space is required to be provided for every 25 parking spaces and any fraction thereof for non-residential developments. The parking spaces required for the disabled would count toward the minimum number of off-street parking spaces as discussed in Section 2.6A, Parking Requirements. The disabled parking spaces will have a minimum width of 14 feet. In addition, the disabled parking spaces will be located so that: (1) there is easy access from the closest parking area to the major entrances; (2) the disabled individual would not have to wheel or walk behind parked cars other than his or her own; and (3) a pedestrian way accessible to physically disabled persons will be provided from each parking space to the related facilities, including curb cuts and/or ramps. The proposed project will include 53 parking spaces, and 3 of these spaces will be designated as disabled parking spaces. The disabled parking spaces will have a minimum width of 14 feet, will be located adjacent to the northern and western entrances of the restaurant facility, and will comply with all of the above requirements.
2.6A(3)(b) Bicycle Parking Requirements	Consistent. Nonresidential developments are required to provide bicycle parking that equals a minimum of 5% of the required vehicle parking spaces. The proposed project will include 53 parking spaces requiring the project to include at least 3 bicycle parking spaces. The proposed project will also include 3 bicycle parking facilities which can typically accommodate two bicycles. The provision of 3 bicycle parking facilities, (parking for 6 bicycles) is more than 5% of the total required bicycle parking spaces.
2.6A(3)(c) Motorcycle Parking Requirements	Consistent. A parking lot with 50 or more vehicle parking spaces is required to provide motorcycle parking spaces near the main entrance of the structures. A minimum of 1 motorcycle parking space is required for each 50 vehicle spaces or fraction thereof. The proposed project will include 2 motorcycle parking stalls near the northern entrance of the restaurant.
2.6A(3)(d) Public Access Parking	Consistent. The project will include five parking stalls at the southeast corner of the project site that will serve as public parking for lake visitors, in addition to parking for the restaurant.
2.6A(4)(h) Water Quality Requirement	Consistent. The project will incorporate post-construction Best Management Practices (BMPs) and water quality measures, including Low Impact Development (LID) techniques established by the RWQCB to minimize impacts from storm water runoff and dry weather flows.
2.6B Landscaping Requirements	
2.6B(1) General Landscaping Requirements	Consistent. The project site will be landscaped on all four sides of the parcel with a variety of drought-tolerant plant species. In addition, where feasible and practical, landscaping will be designed to address post-construction water quality site design and Low Impact Design (LID) requirements.

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2.6B(2) Landscaping of Parking Lots	Consistent. Landscaping is required within each outdoor parking area at a minimum ratio of ten percent of the gross area of the parking lot for commercial uses. The project will include 35% of landscaping around the immediate area of the parking lot and will provide at least one shade tree for every five parking spaces. Landscaping will be a combination of groundcover, shrubs, and trees and will be concentrated along the perimeter of the project site, including at the primary entrances to help screen the restaurant from the street and adjoining properties. Shade trees will be provided at the minimum required rate of one for every twenty-five linear feet of landscaped areas and the proposed landscaping will also be properly oriented to provide pedestrian access to the restaurant without requiring them to cross unpaved landscaped areas.
2.6C Lighting Requirements	
2.6C(1)(a) Lighting General Requirements- Maximum Height	Consistent. The lights installed as part of the proposed project will not exceed the height of 14 feet or the height of the nearest structure.
2.6C(1)(b) Energy-Efficiency	Consistent. The outdoor lighting included as part of the proposed project will be consistent with Title 24, Building Energy Efficiency Standards. In addition, the outdoor lighting plan will be reviewed and approved by the City's Board of Architectural Review (BAR), which will ensure that energy-efficient lighting technology is used.
2.6C(1)(c) Position of Light Fixtures	Consistent. All lighting fixtures included as part of the proposed project will be consistent with Section 2.6C, Lighting Requirements of the City's CIP. In addition, all lighting fixtures will be reviewed and approved by the City's BAR. The City will ensure that the light fixtures are directed downward to prevent light spill and glare onto adjacent properties, will ensure that the light source is not visible off site, and will confine glare and reflections within the boundaries of the project site to the maximum extent feasible.
2.6C(1)(d) Maximum Illumination	Consistent. The lighting plan included as part of the proposed project will be consistent with Section 2.6C, Lighting Requirements, of the City's CIP. In addition, the lighting plan will be reviewed and approved by the City's BAR in order to ensure that the maximum illumination is not exceeded.
2.6D Sign Requirements	Consistent. The signs included as part of the proposed project will be consistent with Section 2.6D, Sign Requirements, of the City's CIP. In addition, the City's BAR will review and approve the signage plans as part of the application for the proposed project. The proposed project will include the construction of red and yellow external illuminated wall signs on the west and south side of the building. In addition, the proposed restaurant will include six internally illuminated signs, four of which would be mounted on the building walls.
2.7 Special Development Standards	
2.7B Environmentally Sensitive Habitat Area (ESHA)	
2.7B(1) Biological Report Requirements	Consistent. A Biological Resources Report was prepared for the 2011 Certified Environmental Impact Report (EIR). As part of the Biological Resources Report, six site-specific field surveys were conducted in an effort to determine existing plant and animal

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	species present on and adjacent to the project site. In addition, the Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7B(2) Development Within or Adjacent to an ESHA	Consistent. A small portion of the southern boundary of the project area is adjacent to a riparian ESHA (refer to Figure 2-2 in the City's Land Use Plan [LUP]). The proposed project has been designed to avoid impacts to the riparian area. Furthermore, the structures associated with the proposed project will be set back greater than 50 feet from the riparian area.
2.7C Marine Resource Area	
2.7C(1) Designation of Marine Resource Area	The project area is adjacent to Laguna Grande Lake, which is identified in the City's LUP as a marine resource area.
2.7C(2) Biological Study	Consistent. A qualified biologist prepared a Biological Resources Report for the 2011 Certified EIR. The Biological Resources Report included the criteria set forth above in 2.7B(1). None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7C(3) Buffer	Consistent. The proposed project is adjacent to Laguna Grande Lake. Development of the proposed project will be set back at a minimum of 50 feet from Laguna Grande Lake in order to ensure the biological integrity of the wetland and estuarine habitat. The 50-foot buffer can be reduced to 25-feet if public recreational facilities are provided. Consistent with Section 2.7C(3), the bicycle and pedestrian trail will be provided within that minimum 50-foot buffer zone between the edge of Laguna Grande Lake and the project site.
2.7C(4) Wetland Management and Enhancement Study for Development Within or Adjacent to a Marine Resource	Consistent. A Jurisdictional Delineation (JD) and Water Quality Assessment Report (WQAR) were prepared as part of the 2011 Certified EIR. These reports identified the current flooding potential and water quality in the project area, best management practices (BMPs), and jurisdictional features. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7C(4) Diking, Filling, Dredging of Marine Resource Areas	Not Applicable.
2.7D Visually Sensitive Areas	
2.7D(1) Identification of Visual Resources	Consistent. The project area is located within a visually sensitive area (refer to Figure 2-4 in the City's LUP). The proposed project will be one-story in height and will provide view corridors on the north and south sides of the project site providing views of the dunes surrounding Roberts Lake.
2.7D(2) Consideration of Visual Resources	Consistent. The project area is located within a visually sensitive area. The 2011 Certified EIR found and concluded that the proposed project did not result in any significant impacts to visual resources.
2.7E Natural Hazard Areas	

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2.7E(1) Designation of Natural Hazard Areas	The project site is located within an existing 100-year floodplain, is within 2,400 meters (m) of a moderate fire threat and directly west of the Chupines Fault, and is within 0 to 5 m of a tsunami evacuation zone (refer to Figure 2-5, Flood Hazard Areas; Figure 2-6, Faults and Wildland Fire Threat Categories; and Figure 2-7, Tsunami Evacuation Areas in the City's LUP, respectively).
2.7E(2) Protection from Natural Hazards	Consistent. The 2011 Certified EIR found and concluded that the proposed project would not result in any significant impacts from natural hazards with implementation of prescribed Mitigation Measures. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7F Vegetation Management Report	Consistent. A Biological Resources Report was prepared as part of the 2011 Certified EIR. The Biological Resource Report included six site-specific field surveys to determine existing plant species and habitat types present on and adjacent to the project site. In addition, the Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7G Water Quality	Consistent. The proposed project will comply with the City's Phase II National Pollutant Discharge Elimination System (NPDES) permit requirements and with the Post-Construction Requirements of Resolution No. R3-2013-0032 of the California Regional Water Quality Control Board (RWQCB), Central Coast Region. As required by the Resolution No. R3-2013-0032, the proposed project will comply with the Low Impact Development Standards (LID) to infiltrate stormwater on-site. Additionally, as discussed in Section 4.7 (Hydrology and Water Quality) of the 2011 Certified EIR, implementation of Mitigation Measure 4.7.1 will require the preparation of an Erosion and Sediment Control Plan (ESCP) and a Storm Water Pollution Prevention Plan (SWPPP) to reduce pollutants of concern during construction. Implementation of Mitigation Measure 4.7.2 will require the implementation of post-construction BMPs to reduce pollutants of concern during operation.
2.7H Public Access & Recreation	Consistent. An existing bicycle and pedestrian trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge that extends over the canal connecting Roberts Lake with Laguna Grande Lake. The proposed project will extend the pedestrian and bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension will increase connectivity between the project site and the Laguna Grande Park and Laguna Grande Lake, the adjacent hotel property, Del Monte Boulevard, and the Laguna Grande Regional Park Trail and Monterey Bay Coastal Bike Trail, thereby maximizing public recreational access opportunities. Seven benches with trash receptacles will be placed along the segment of the bicycle and pedestrian trail that is on the project site. In addition, five parking stalls will be provided at the southeast corner that will serve as public parking for lake visitors.
2.7I Additional Standards for Laguna Grande	Consistent. Refer to response 2.6, Site Development Standards.

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Subarea	
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November 20, 2014

LSA Associates, Inc.
1998 Santa Barbara Street, Suite 120
San Luis Obispo, CA 93401

Attention: Pam Reading – Senior Environmental Planner (Pam.Reading@lsa-assoc.com)

Re: Quantitative Analysis of Sea Level Rise

Dear Ms. Reading,

Sea Engineering, Inc. (SEI) is pleased to present the following quantitative analysis to LSA Associates, Inc. (LSA) of projected Sea Level Rise (SLR) for a proposed site development in Seaside, CA.

The following steps contain a quantitative analysis for Sea Level Rise (SLR) based on the October 14, 2013 California Coastal Commission (CCC) Draft Sea-Level Rise Policy Guidance document as well as other SLR sources.

1. Determine appropriate planning horizon or expected project life.

Design life proposed for analysis is 75 and 100 years as recommended by the CCC.

2. Determine regional sea level projections for planning horizon or expected project life.

Appendix B of the Draft Sea-Level Rise Policy Guidance allows use of quadratic fit for SLR from NRC Report (NRC 2012). Assuming a completion date of 2015, years used for 75 year design life and 100 year design life are 2090 and 2115, respectively.

Note: Due to increased uncertainty in sea level rise projections, and the related escalation in the range between high and low projections over the longer time spans, the project team will use median values for 75 year and 100 year projections.

75 years - 2090

Upper Range - $SLR(2090) = 0.0093t^2 + 0.7457t$ (cm) -> 142.44 cm = 4.67'
Lower Range - $SLR(2090) = 0.0038t^2 + 0.039t$ (cm) -> 34.29 cm = 1.13'
 $SLR(2090) = \text{Median}(\text{Upper}, \text{Lower}) = 2.9'$

100 years - 2115

Upper Range - $SLR(2115) = 0.0093t^2 + 0.7457t$ (cm) -> 208.75 cm = 6.85'
Lower Range - $SLR(2115) = 0.0038t^2 + 0.039t$ (cm) -> 54.74 cm = 1.795'
 $SLR(2115) = \text{Median}(\text{Upper}, \text{Lower}) = 4.32'$

3. Modify regional sea-level rise projects for local vertical land motion.

The project location does not lie in the area between Humboldt Bay, CA and Crescent City, CA (where local modification is recommended in CCC SLR Appendix B), therefore the project team will use sea-level rise values calculated in Step 2, above.

4. Project tidal elevations and future inundation.

Future Water Elevation = Current Water Elevation + Projected Sea-level Rise

Current MHHW Elev. (Mean Higher High Water, Relative to NAVD88, NOAA Tide Station 9413450, Monterey, CA) = 5.48'

Future Higher High Tide Elevation (75 year) = 5.48' + 2.9' = 8.38'

Future Higher High Tide Elevation (100 year) = 5.48' + 4.32' = 9.8'

5. Determine water level changes from surge, El Niños, PDOs, etc.

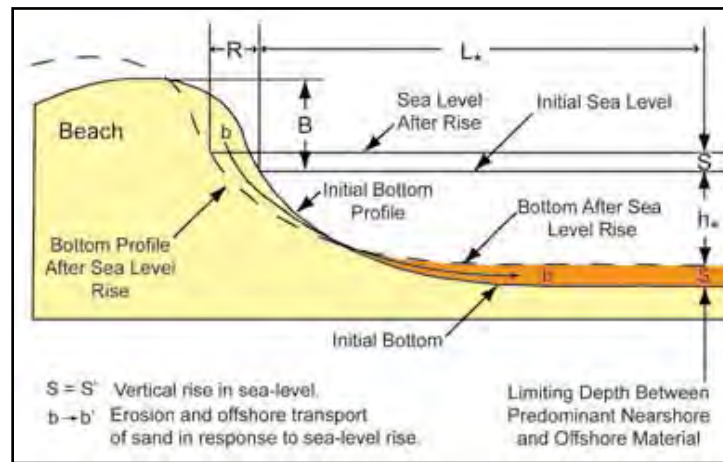
There is insufficient information to predict temporary changes in local water level caused by oceanographic phenomena such as El Niños and PDOs (Pacific Decadal Oscillation). However, the 2012 NRC document states that "Short-period fluctuations of sea level may sometimes exceed 20 cm (7.9 in.), and storm-driven wave heights of 1 m (3.28 ft) or even higher amplitudes than are seen in the historical record could easily occur." The project team uses storm estimation for extreme events which would encompass any extra surge due to phenomena such as El Niños and PDOs.

6. Estimate beach, bluff, and dune change from erosion

Erosion of beaches and dunes can be a very complex process with many factors that vary year to year. For this reason estimations and assumptions made for calculations are conservative in nature to account for possible unknown error.

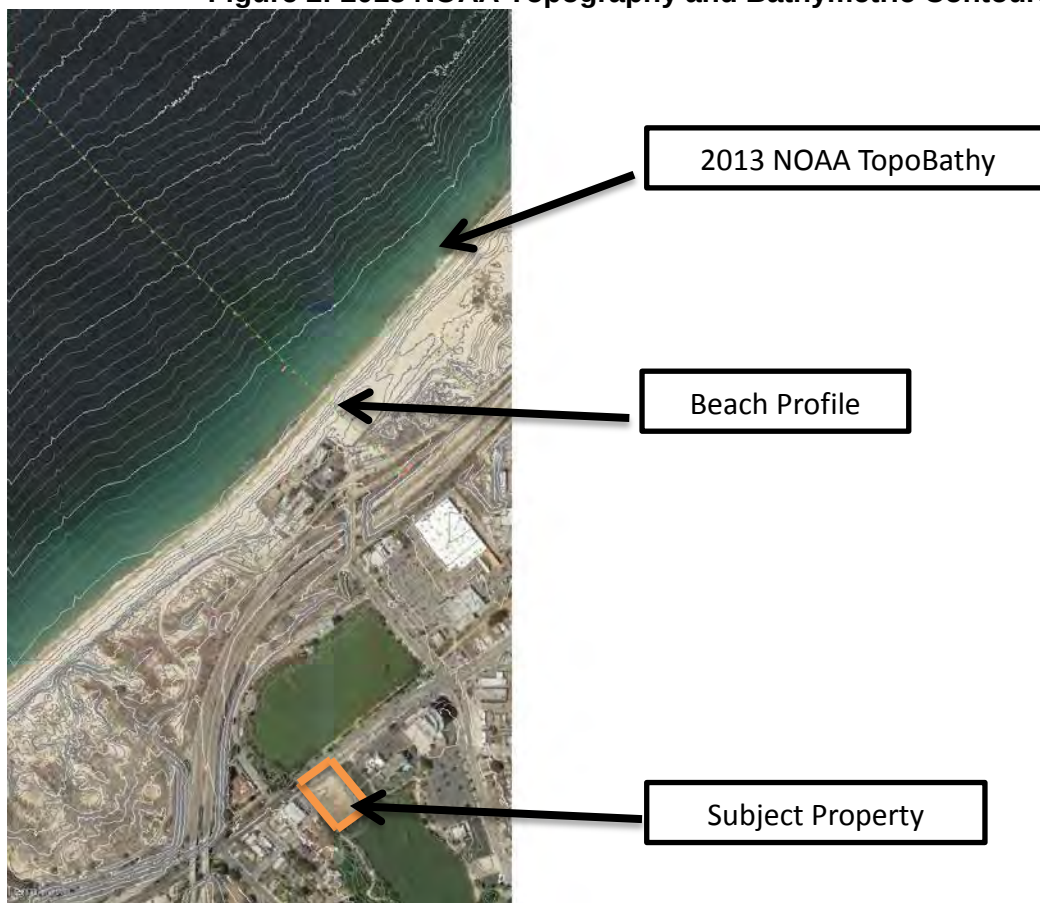
The major factor that plays into the process is manmade activity of structures and beach nourishment processes. Without beach nourishment processes, SLR will most likely result in shoreline changes for beaches and dunes. This has been proven with the Bruun Model as well as the Davidson – Arnott (RD-A) Model, in which the beach profile shift is likely higher and landward.

Figure 1: Illustrations showing Bruun Model concept and inputs (USGS, 2009)



In order to create a SLR adjusted beach profile, a 2013 NOAA Digital Elevation model was used for existing contours. This data set includes merged Light Detecting and Ranging (Lidar) Topography and Bathymetric data (See Figure 2).

Figure 2: 2013 NOAA Topography and Bathymetric Contours



The proposed location sits in a low lying basin between two land locked lagoons. These Topography and Bathymetric Contours show the locations sitting at 14-17 feet elevation NAVD88 which corresponds to the FEMA Flood Maps and presented drawings for the site (Appendix C).

Following the assumption that the basin surrounding the proposed development site will flood due to run up at the lowest section of shoreline, the inundation analyses are conducted for this location. A beach profile transect through this low point is selected as representative of elevations that control the physical processes related to runup and inundation well seaward of the project site. The profile extends from the backbeach out to the sloping beach bottom, several hundred feet offshore of the beach toe. The location of the profile also has the highest flood risk in this region's coastal dunes, as identified by the Pacific Institute's California Flood Risk: Sea Level Rise map of Seaside, CA (Appendix C).

Using the previously mentioned Bruun Model and an approximate profile adjustment process, the dune profile was shifted relative to the 100 and 75 year estimates for SLR (Step 2). This shift is upward with SLR and landward along the beach slope. Along with this, the road and parking lot are set impermeable and dune build up will form around and not on top. These calculations assume that no beach replenishment efforts take place seaward of Del Monte Blvd, Cabrillo Highway, Sand Dunes Drive, or the Best Western Beach Resort during this time period, allowing erosion and accretion processes to go unimpeded. Profiles for the shifted dune and beach slopes are included in Appendix A.

The seaward side of Cabrillo Highway, a significant transportation artery, is located no nearer than 750 feet seaward of the project site. There is a very low probability of coastal erosion resulting in shoreline regression beyond this existing infrastructure. Numerous infrastructure and resort improvements create a wide buffer between the proposed project site and the dynamic coastline in Monterey Bay, reducing the potential for either storm related or erosion related impacts to the property.

7. Determine potential flooding, wave impacts and run-up

$$\text{Future Flooding} = \text{Future Higher High Tide} + \text{Surge} + \text{Forcing} + \text{Wave Run-up}$$

Based on design conditions for Monterey Bay as laid out in a 2011 SEI assessment of Monterey Bay (See Appendix D), a significant wave height of 3 feet and 16 second period are assumed. Using the U.S. Army Corps of Engineers design program ACES: Surge, forcing and wave run-up can be calculated. The values are then added to the already calculated still water level for a Future Flooding elevation of 15.69 feet and 17.11 feet for the 75 and 100 year design conditions, respectively. This calculation also assumes no beach replenishment processes take place. It is important to remember that these elevations are projected for the coastal frontal dune and not necessarily the project site as seen in Figure A-4 of Appendix A.

Table 1: Design Condition Runup Elevations

75-yr Design Conditions					
Slope	Design Height (ft)	Average Wave Runup (ft)	Surge + Forcing (ft)	75-yr Stillwater Level (ft)	Total Elevation (ft)
1V:6.63H	3	5.83	1.48	8.38	15.69
100-yr Design Conditions					
Slope	Design Height (ft)	Average Wave Runup (ft)	Surge + Forcing (ft)	75-yr Stillwater Level (ft)	Total Elevation (ft)
1V:6.63H	3	5.83	1.48	9.8	17.11

The beach slope of 1V:6.63H is measured from Topography and Bathymetric contours and taken landward from the toe of the beach as seen in Figure A-2 of Appendix A. Likely during storm events beach profile slopes increase with the increased activity and more resemble dune slope (Coastal Engineering Manual V-4-1).

8. Examine potential flooding from extreme events

Storm:

Wave Conditions = 100(and 75)-year Design Storm + High Water + Eroded Beach

Using Coastal Data Information Program's (CDIP) Cabrillo Point Buoy 158, data was compiled for offshore Monterey Bay. This resulted in the following values for 75 and 100 year return period Significant Wave Heights:

Table 2: Return Period Significant Wave Heights

Return Period (years)	Offshore Significant Wave Height (Hs)
75	16.17
100	16.53

The 75 and 100 year return Offshore Significant wave heights are assigned to the 75 and 100 year design calculations, respectively, along with a statistically averaged wave period; these conditions are then used to calculate extreme event maximum runup with ACES. Using the same process as the design conditions, outlined in Appendix B, this gives an extreme total elevation for the 75 and 100 year storm of 23.04 and 24.57 feet, respectively. Relative to the top 10 recorded significant wave heights from 2007-2014, this approximation is a worst case scenario but large wave heights and elevations could occur within this range.

Table 3: Top 10 Recorded Significant Wave Heights (CDIP 158 Cabrillo Point)

YYYY-MM-DD HH	Hs (ft)	Tp (s)	Direction (deg.)
2013-04-08 13	12.40	10.53	345
2010-04-22 00	12.33	11.11	344
2009-04-15 01	12.27	11.11	349
2012-03-18 15	11.35	12.50	349
2008-12-26 05	10.56	11.76	347
2011-03-25 13	8.89	12.50	352
2014-01-12 18	8.27	14.29	2

It is important to note that this potential for extreme flooding is not due solely to SLR. Chance of abnormal weather of this magnitude can occur at any point in time and could cause flooding without sea level rise.

Tsunami:

The proposed location lies within the USGS Tsunami inundation area as well as California Emergency Management Agency's (CalEMA) Tsunami Inundation zone (Appendix C). The location lies in a low lying basin directly behind dunes. While it's hard to predict damage from initial bore of a Tsunami, it is clear the location will be flooded.

Since there is typically a period of warning prior to extreme events, like Tsunamis, there may be time to prepare preventative measures for building damage, such as the temporary installation of sand bags or other readily available barriers.

9. Repeat as necessary

N/A

Sea Level Rise Elevation

For the proposed location, there is significant protection from flooding because of the wide dune field and considerable improvement seaward of the project site. In addition, there is a considerable setback between the subject property and the shoreline, which also mitigates coastal flood potential. The existing flood map (Appendix C:FEMA Flood Map) shows the inland edge of the VE zone aligned with the current dune field, abutting an inland, shaded X zone, or the 0.2% annual chance of flooding. Both of these flood zones are located seaward of Cabrillo Highway, which is well seaward of the subject property. The subject property is located in an AE zone; however, this zone is related to inland, not coastal, flooding.

Portions of the undeveloped site, where existing elevations are between 14 and 17 feet (NAVD88) may be subject to flooding associated with the 75 and 100-year design conditions of 15.69 and 17.11 feet (NAVD88) of runup. For the proposed development, the main restaurant structure and most of the drive through facilities are elevated to a minimum of 17.87 feet (NAVD88) and would be above the 17.11 feet (NAVD88) runup elevation of 100 year return period wave. This would put the parking lot and beginning of the drive through under water as their elevations are closer to that of the undeveloped site, 14-17 feet (NAVD88). As would be expected, less flooding of the developed property would occur under the 75-year design condition. It should be noted that for a low lying basin, as exists in the area surrounding the project site, both the 75 and 100-year flood risk would require a breach in the coastal dunes and significant funneling of water through Roberts Lake and into Canyon Del Rey (Appendix C: FEMA Flood Map), which would make flooding from coastal events highly unlikely.

Along with this, beach nourishment has been utilized historically to augment the natural beach conditions and offset the impacts of chronic erosion along the Seaside and Sand City shoreline. It is likely that nourishment would again be utilized to protect the significant infrastructure and improvements seaward of the subject property. If nourishment maintains the dunes in their current location (Figure A-2, Appendix A), runup values and total elevation of 15.69 and 17.11 for the 75 and 100-year design, respectively, will be the same but distance of inland inundation will diminish considerably. This entails about a 100 ft horizontal difference, seaward, from the backbeach and a significantly lowered chance of dune breach. For more accurate inland inundation values, a 3-D model would need to be run. This is outside the current project scope.

The dune system acts as a barrier between ocean and inland coastal areas, dispersing wave energy and minimizing inland flooding. One advantage of beach nourishment is the preservation of the coastal frontal dune system. In the absence of nourishment, dunes will slowly retreat upward and landward with rising sea levels. Maintaining stable coastal frontal dunes, and inland dune fields is important for the region, as they protect the natural coastal ecosystem, the vital transportation arteries, and the substantial development, all of which are located seaward of the subject property.

Please don't hesitate to contact me if you have any questions.

Very truly yours,

SEA ENGINEERING, INC.



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References

Coastal Engineering Manual. V-4-1 – “Engineering Aspects of Beach Fill Design.” United States Army Corp of Engineers.

Davidson-Arnott, R.G.D. 2005. “Conceptual Model of the Effects of Sea Level Rise on Sandy Coasts.” *Journal of Coastal Research*, Vol. 21, No. 6, p. 1166-1172.

National Research Council. 2012. Sea Level Rise for the Coasts of California, Oregon, and Washington. The National Academies Press. Washington, D.C.

NOAA Coastal California TopoBathy Merge Project Digital Elevation Model (DEM) 2013 . Charleston, SC NOAA's Ocean Service (NOS), Coastal Services Center (CSC)

Sea Engineering, Inc. December 2010. “Kailua Bay Dune and Beach management plan” – Appendix A.

Sea Engineering, Inc. March 2011. “BASIS OF DESIGN FOR SHORE PROTECTION AT MOSS LANDING HARBOR, MOSS LANDING, CA Monterey Bay Sanctuary Scenic Trail Project.” – Appendix D

Appendix A: Beach Profiles

Figure A- 1: 2013 NOAA Profile Elevation NAVD88 (ft)

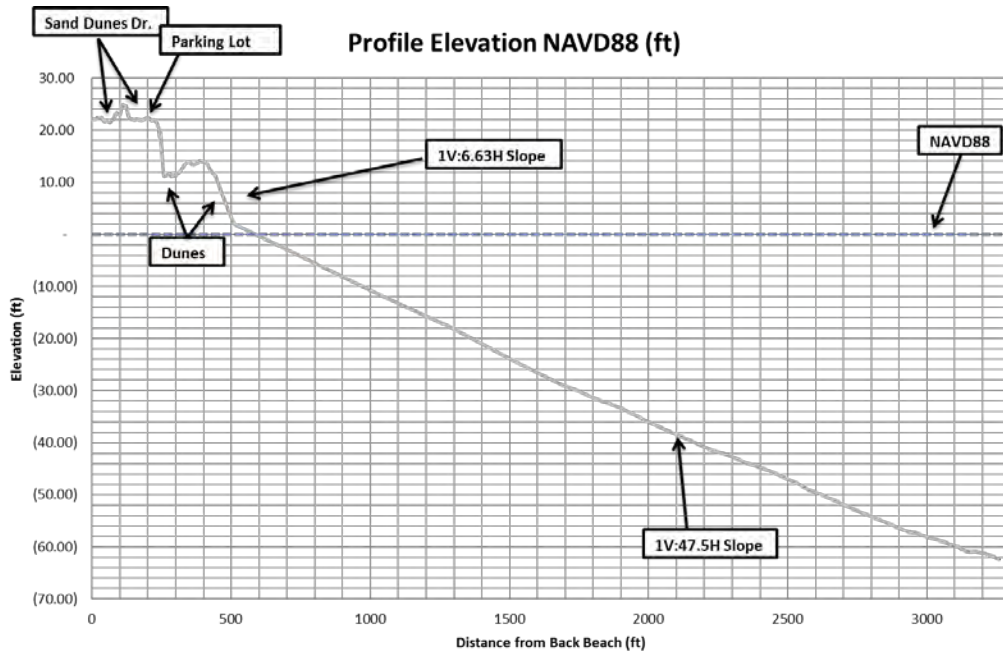


Figure A- 2: Projected Profiles – Bruun Model - NAVD88 (ft)

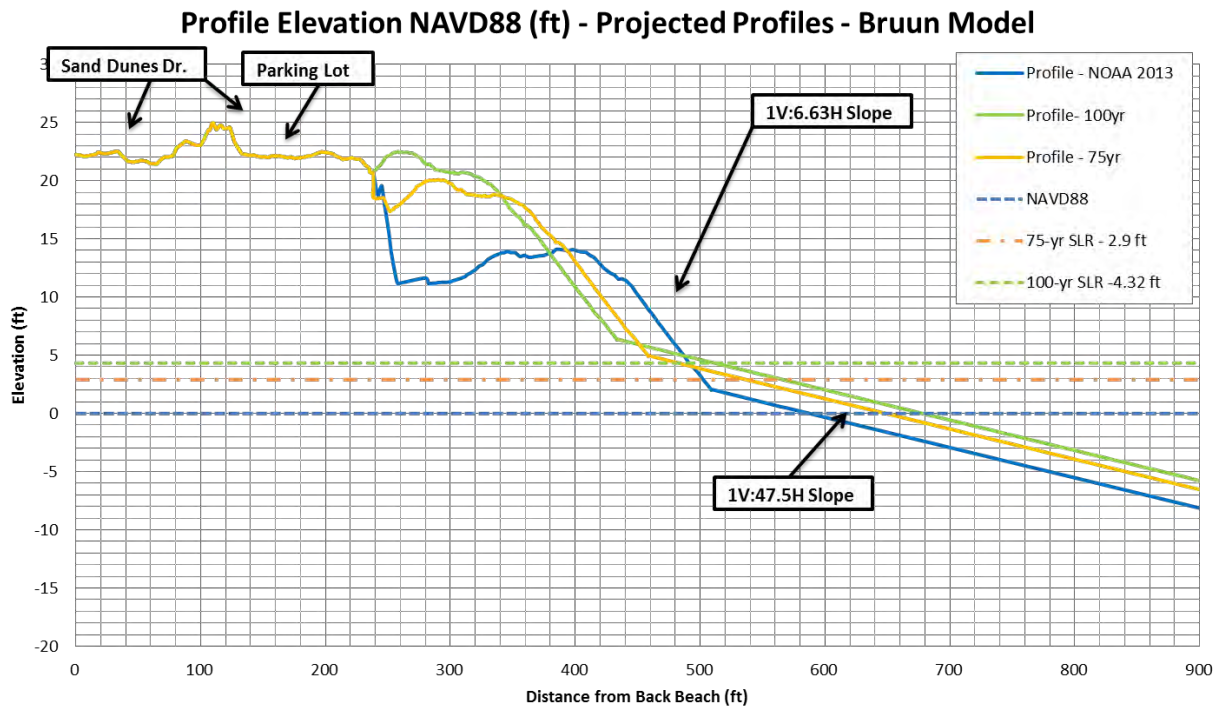


Figure A- 3: Projected Profiles – Beach Nourishment – NAVD88 (ft)

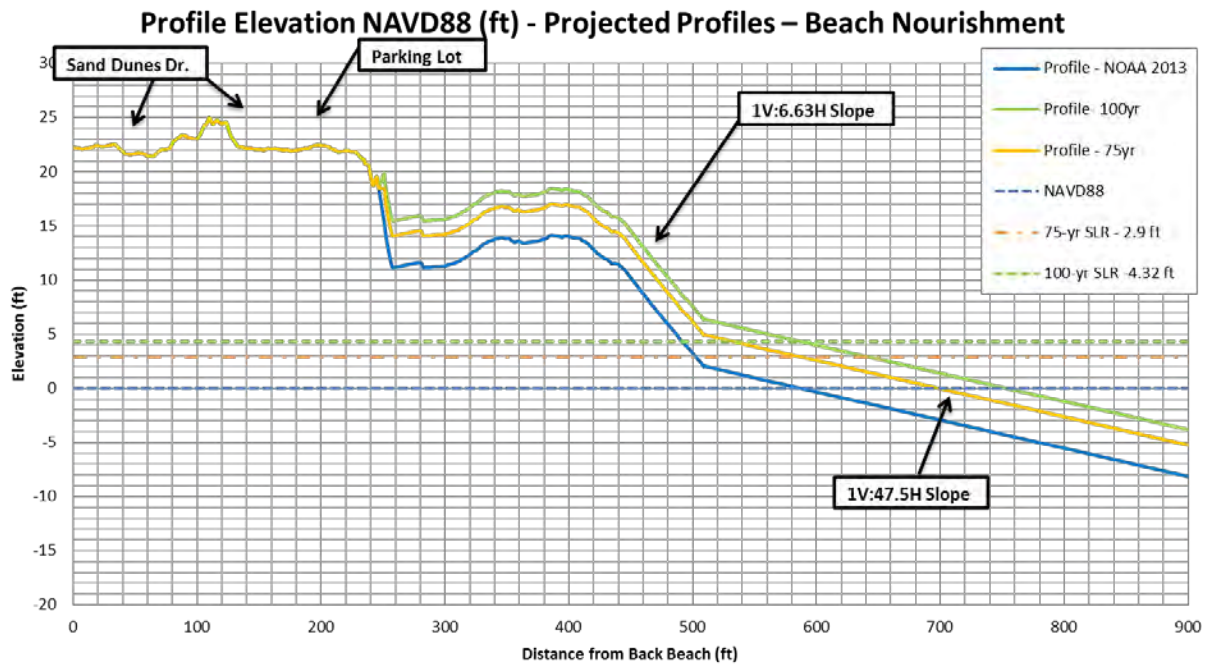
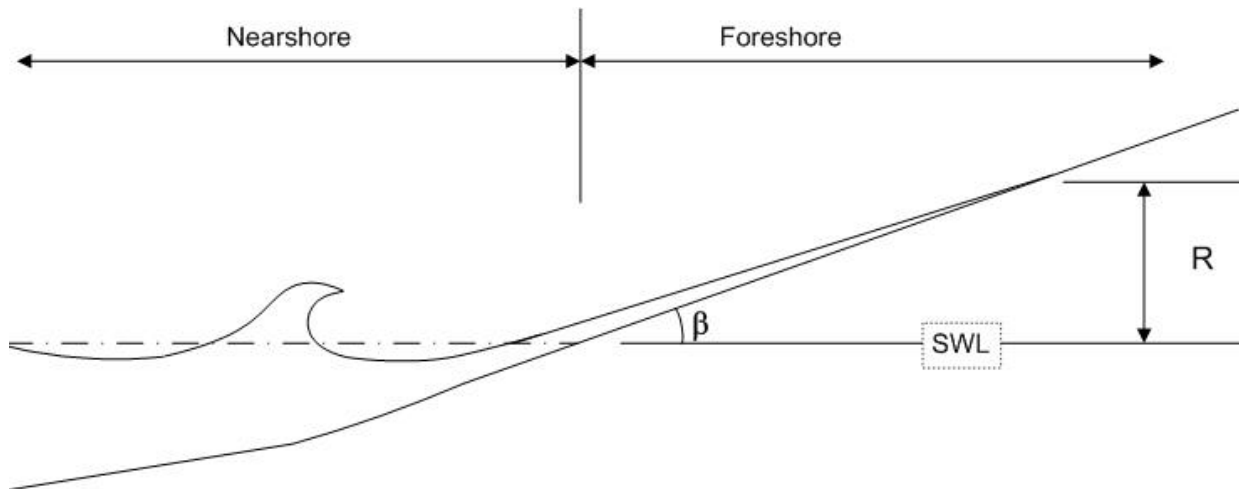


Figure A- 4: Wave Runup, R, on Beach above Still Water Level, SWL



Appendix B: Wave Runup Calculations

No Beach Nourishment

For the case of no beach nourishment, dune elevations are shifted upward and landward following the beach slope while sand volume is maintained. The beach transect holds the parking lot and Sand Dunes Dr. fixed while erosion and accretion processes take place without impedance on the seaward dune. The Approximated Bruun models are used for profile changes due to SLR (Figure A-2 in Appendix A).

Design:

Assuming the conditions given in the Moss Landing Revetment Basis of Design, a significant deepwater wave height of 3 feet at 16 seconds is used:

Table B-1: Wave Runup - Design Conditions

Case: Wave Runup-Design Conditions		
Irregular Wave Runup on Smooth Slope Linear Beaches		
Deepwater significant wave height:	3	ft
Peak energy wave period:	16	ft
Cotangent of beach slope:	6.63	ft
Average of highest 1/3 of runups	9.25	ft
Average wave runup:	5.83	ft

For design conditions the average wave runup of 5.83 feet is used for both 100 and 75 year design conditions.

Storm:

Data from the CDIP's Cabrillo Point Buoy is used due to its proximity to study location. This will give better approximation for location because of shadowing that occurs at certain swell angles. This can be seen in the SWAN model of Monterey Bay, Figure 2-1 in Moss Landing Revetment Basis of Design (Appendix D). The 100 and 75 year return period significant wave heights are calculated from the recorded data and are applied to the 100 and 75 year design lifetimes, respectively, in order to account for extreme conditions.

Along with this, location is assumed to be in deep water and a Goda Transformation at a direct heading is used to calculate wave height as it approaches dune. This transformation approximates wave propagation from deep to shallow water. Because of offshore slope steepness, wave will shoal and break, losing energy and reducing wave height upon reaching dune. The following transformation is used for the 100 and 75 year return period:

Table B-2: Goda Transformation - 75 year Return Period

Case: 75 year return period Hs=16.17 ft							
Irregular Wave Transformation (Goda's Method)							
Item	Subject Wave	Deepwater Wave	Units	Item	Subject	Wave	Deepwater Wave
Wave height (H _o)		16.17	ft		H _s	6.674	16.214
Sig wave period (T _s)	11.2	11.2	sec		H _{mean}	4.702	10.12
Water depth (d)	10	642.007	ft		H _{rms}	5.038	11.419
Nearshore slope (cot phi)	47.5	47.5			H _{10%}	7.636	20.571
Principal dir (theta)	0	0	deg		H _{02%}	8.423	25.27
					H _{max}	9.014	29.207
Shoaling Coeff. (K _s)	2.661	1					
Surf Beat RMS (zeta)	0.801	0.16	ft	Effec refract coe	ff (K _r)	0.956	
Wave setup (S _w)	0.576	-0.009	ft	Depth/height	(d/H _o)	0.584	39.704
Wave steepness (H _o /L _o)	0.025	0.025		Rel water depth	(d/L _o)	0.015	1

Table B-3: Goda Transformation - 100 year Return Period

Case: 100 year return period Hs=16.53 ft							
Irregular Wave Transformation (Goda's Method)							
Item	Subject Wave	Deepwater Wave	Units	Item	Subject	Wave	Deepwater Wave
Wave height (H _o)		16.53	ft		H _s	6.709	16.575
Sig wave period (T _s)	11.2	11.2	sec		H _{mean}	4.729	10.345
Water depth (d)	10	642.006	ft		H _{rms}	5.067	11.673
Nearshore slope (cot phi)	47.5	47.5			H _{10%}	7.664	21.029
Principal dir (theta)	0	0	deg		H _{02%}	8.5	25.832
					H _{max}	9.088	29.857
Shoaling Coeff. (K _s)	2.66	1					
Surf Beat RMS (zeta)	0.812	0.163	ft	Effec refract coe	ff (K _r)	0.956	
Wave setup (S _w)	0.59	-0.009	ft	Depth/height	(d/H _o)	0.574	38.839
Wave steepness (H _o /L _o)	0.026	0.026		Rel water depth	(d/L _o)	0.015	1

With an Incident wave height calculated for both conditions, dune runup can be modeled as smooth impermeable structure allowing for two slopes to be input, dune and offshore beach.

Table B-4: Wave Runup on Dune - 100yr Storm

Case: Wave Runup - 100yr Storm		
Wave Runup and Overtopping on Impermeable Structures		
Slope Type:	Smooth	
Wave type:	Monochromatic	
Rate estimate:	Runup	
Breaking criteria:	1	
Incident wave ht (H _i):	6.7	ft
Peak wave period (T):	11.2	
COTAN of nearshore slope (cot phi):	47.5	
Water depth at structure toe (d _s):	8.29	ft
COTAN of structure slope (cot theta):	6.63	
Structure height above toe (h _s):	12.95	ft
Wave Runup (R):	9.914	ft

Table B-5: Wave Runup on Dune - 75 yr Storm

Case: Wave Runup - 75yr Storm		
Wave Runup and Overtopping on Impermeable Structures		
Slope Type:	Smooth	
Wave type:	Monochromatic	
Rate estimate:	Runup	
Breaking criteria:	1	
Incident wave ht (H _i):	6.67	ft
Peak wave period (T):	11.2	
COTAN of nearshore slope (cot phi):	47.5	
Water depth at structure toe (d _s):	8.2	ft
COTAN of structure slope (cot theta):	6.63	
Structure height above toe (h _s):	12.423	ft
Wave Runup (R):	9.892	ft

This results in a wave runup of 9.914 and 9.892 feet for the 100 and 75 year storm conditions, respectively. Relative to the top 10 recorded significant wave heights for the buoy location, the 75 and 100 year return period waves are much larger. This is expected as the 100 and 75 year return period waves are the height of a wave which, on average, is met or exceeded once within the time period (100 and 75 years) for the given location.

Table B-6: Storm Condition Runup Elevations

75-yr Design Conditions					
Dune Slope	Design Height (ft)	Max Wave Runup (ft)	Surge + Forcing (ft)	Stillwater Level (ft)	Total Elevation (ft)
1V:6.63H	16.17	9.89	4.77	8.38	23.04
100-yr Design Conditions					
Slope	Design Height (ft)	Max Wave Runup (ft)	Surge + Forcing (ft)	Stillwater Level (ft)	Total Elevation (ft)
1V:6.63H	16.53	9.91	4.86	9.8	24.57

Beach Nourishment

Assuming that beach nourishment does take place and dune locations are kept in the same location, dune heights would continue to rise with rising sea levels. Profile elevations of dune would be kept in place with littoral cell sand volume supplemented through dredging and other processes. This additional volume is needed to maintain the existing vertical relationship between the beach, dunes, and ocean at higher sea levels (Figure A-3 of Appendix A).

Design:

Assuming the conditions given in the Moss Landing Revetment Basis of Design, average runup values for both design periods would be 5.83 feet, the same as the case without beach nourishment. This is because the same beach and offshore slope is maintained.

Storm:

With the same data set and conditions as the case without beach nourishment, the runup calculations will also be the same due to the slope being maintained.

Table B-7: Wave Runup on Dune - 75 yr Storm - Nourished Beach

Case: Wave Runup - 75yr Storm		
Wave Runup and Overtopping on Impermeable Structures		
Slope Type:	Smooth	
Wave type:	Monochromatic	
Rate estimate:	Runup	
Breaking criteria:	1	
Incident wave ht (Hi):	6.67	ft
Peak wave period (T):	11.2	
COTAN of nearshore slope (cot phi):	47.5	
Water depth at structure toe (ds):	8.2	ft
COTAN of structure slope (cot theta):	6.63	
Structure height above toe (hs):	11.74	ft
Wave Runup (R):	9.892	ft

Table B-8: Wave Runup on Dune - 100yr Storm – Nourished Beach

Case: Wave Runup - 100yr Storm		
Wave Runup and Overtopping on Impermeable Structures		
Slope Type:	Smooth	
Wave type:	Monochromatic	
Rate estimate:	Runup	
Breaking criteria:	1	
Incident wave ht (Hi):	6.7	ft
Peak wave period (T):	11.2	
COTAN of nearshore slope (cot phi):	47.5	
Water depth at structure toe (ds):	8.29	ft
COTAN of structure slope (cot theta):	6.63	
Structure height above toe (hs):	11.93	ft
Wave Runup (R):	9.914	ft

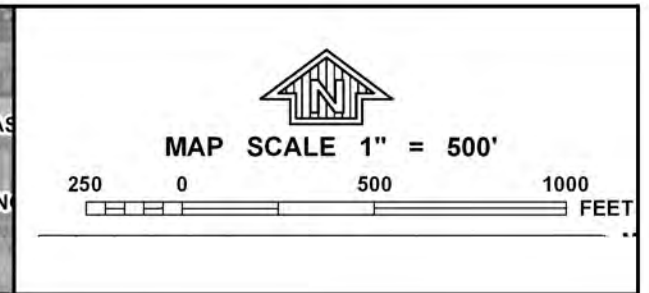
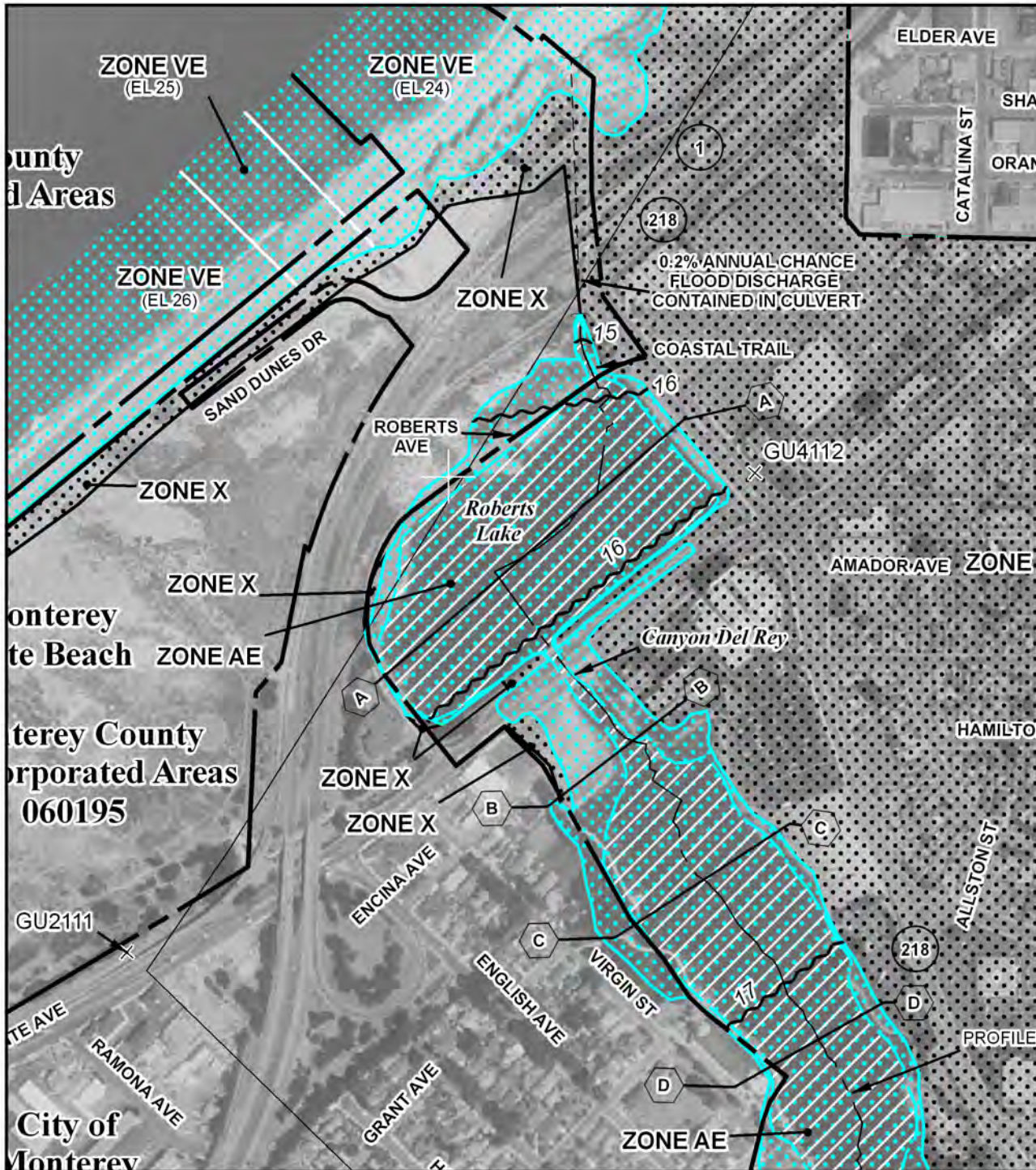
Table B-6: Storm Condition Runup Elevations - Nourished

75-yr Deisgn Conditions					
Dune Slope	Deisgn Height (ft)	Max Wave Runup (ft)	Surge + Forcing (ft)	Stillwater Level (ft)	Runup Elevation (ft)
1V:6.63H	16.17	9.89	4.77	8.38	23.04
100-yr Deisgn Conditions					
Slope	Deisgn Height (ft)	Max Wave Runup (ft)	Surge + Forcing (ft)	Stillwater Level (ft)	Runup Elevation (ft)
1V:6.63H	16.53	9.91	4.86	9.8	24.57

This will result in the same runup elevations. Higher frontal dunes will minimize the inland extent of inundation. Coastal frontal dunes and inland dune fields mitigate coastal inundation impacts before they reach crucial inland structures. This minimizes the inland extent of the coastal high hazard flood zones.

Indundation calculations for this scenario generate a more realistic model of flooding, given the current infrastructure located along the coastline. Calculations would need to be done for each beach transcet. For this reason a 3-D model of this senario would be needed to produce accurate values. This is outside the current project's scope.

Appendix C: Flood and Inundation Maps



NFIP

PANEL 0326G

FIRM

FLOOD INSURANCE RATE MAP

MONTEREY COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 326 OF 2050
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEL REY OAKS, CITY OF	060197	0326	G
MONTEREY COUNTY	060195	0326	G
MONTEREY, CITY OF	060200	0326	G
SAND CITY, CITY OF	060435	0326	G
SEASIDE, CITY OF	060203	0326	G

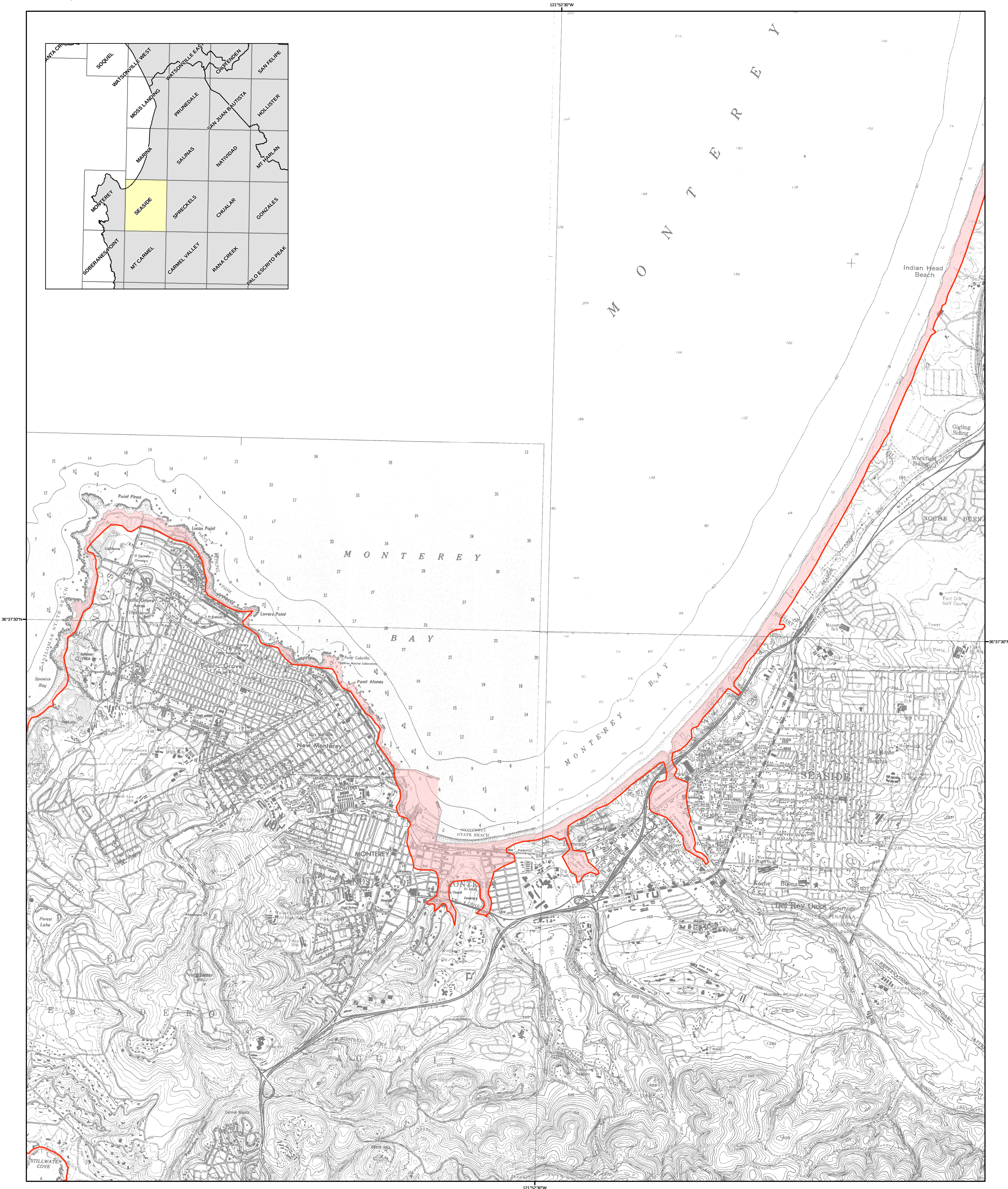
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06053C0326G

EFFECTIVE DATE
APRIL 2, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



METHOD OF PREPARATION

Initial tsunami modeling was performed by the University of Southern California (USC) Tsunami Research Center funded through the California Emergency Management Agency (CalEMA) by the National Tsunami Hazard Mitigation Program. The tsunami modeling process utilized the MOST (Method of Splitting Tsunamis) computational program (Version 0), which allows for wave evolution over a variable bathymetry and topography used for the inundation mapping (Titov and Gonzalez, 1997; Titov and Synolakis, 1998).

The bathymetric/topographic data that were used in the tsunami models consist of a series of nested grids. Near-shore grids with a 3 arc-second (75- to 90-meters) resolution or higher, were adjusted to "Mean High Water" sea-level conditions, representing a conservative sea level for the intended use of the tsunami modeling and mapping.

A suite of tsunami source events was selected for modeling, representing realistic local and distant earthquakes and hypothetical extreme undersea, near-shore landslides (Table 1). Local tsunami sources that were considered include offshore reverse-thrust faults, restraining bends on strike-slip fault zones and large submarine landslides capable of significant seafloor displacement and tsunami generation. Distant tsunami sources that were considered include great subduction zone events that are known to have occurred historically (1960 Chile and 1964 Alaska earthquakes) and others which can occur around the Pacific Ocean "Ring of Fire."

In order to enhance the result from the 75- to 90-meter inundation grid data, a method was developed utilizing higher-resolution digital topographic data (3- to 10-meters resolution) that better defines the location of the maximum inundation line (U.S. Geological Survey, 1993; Intermap, 2003; NOAA, 2004). The location of the enhanced inundation line was determined by using digital imagery and terrain data on a GIS platform with consideration given to historic inundation information (Lander, et al., 1993). This information was verified, where possible, by field work coordinated with local county personnel.

The accuracy of the inundation line shown on these maps is subject to limitations in the accuracy and completeness of available terrain and tsunami source information, and the current understanding of tsunami generation and propagation phenomena as expressed in the models. Thus, although an attempt has been made to identify a credible upper bound to inundation at any location along the coastline, it remains possible that actual inundation could be greater in a major tsunami event.

This map does not represent inundation from a single scenario event. It was created by combining inundation results for an ensemble of source events affecting a given region (Table 1). For this reason, all of the inundation region in a particular area will not likely be inundated during a single tsunami event.

References:

Intermap Technologies, Inc., 2003, Intermap product handbook and quick start guide: Intermap NEXTmap document on 5-meter resolution data, 112 p.

Lander, J.F., Lockridge, P.A., and Kozuch, M.J., 1993, Tsunamis Affecting the West Coast of the United States 1806-1992: National Geophysical Data Center Key to Geophysical Record Documentation No. 29, NOAA, NESDIS, NGDC, 242 p.

National Atmospheric and Oceanic Administration (NOAA), 2004, Interferometric Synthetic Aperture Radar (IFSAR) Digital Elevation Models from GeoSAR platform (EarthData): 3-meter resolution data.

Titov, V.V., and Gonzalez, F.I., 1997, Implementation and Testing of the Method of Tsunami Splitting (MOST): NOAA Technical Memorandum ERL PMEL – 112, 11 p.

Titov, V.V., and Synolakis, C.E., 1998, Numerical modeling of tidal wave runup: Journal of Waterways, Port, Coastal and Ocean Engineering, ASCE, 124 (4), pp 157-171.

U.S. Geological Survey, 1993, Digital Elevation Models: National Mapping Program, Technical Instructions, Data Users Guide 5, 49 p.

TSUNAMI INUNDATION MAP
FOR EMERGENCY PLANNING

State of California ~ County of Monterey
SEASIDE QUADRANGLE

July 1, 2009

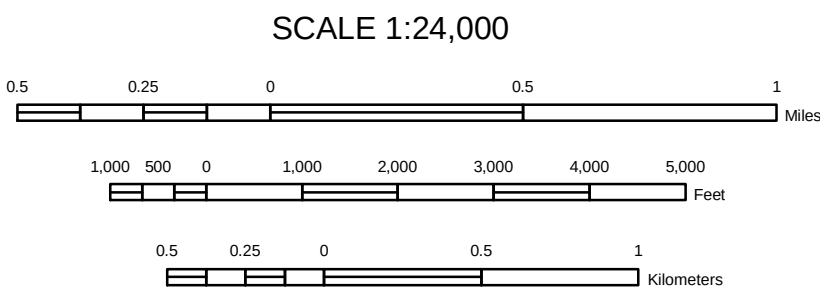


Table 1: Tsunami sources modeled for the Monterey County coastline.

Sources (M = moment magnitude used in modeled event)		Areas of Inundation Map Coverage and Sources Used		
		Santa Cruz	Monterey Bay Blg	Monterey
Local Source	Monterey Canyon Landslide		X	
Distant Sources	Cascadia Subduction Zone-full rupture (M9.0)	X		X
	Central Aleutians Subduction Zone #1 (M8.9)	X	X	X
	Central Aleutians Subduction Zone #2 (M8.9)	X		X
	Central Aleutians Subduction Zone #3 (M9.2)		X	
	Chile North Subduction Zone (M9.4)	X		X
	1960 Chile Earthquake (M9.3)	X		X
	1964 Alaska Earthquake (M9.2)	X	X	X
	Japan Subduction Zone #2 (M8.8)	X		X
	Kuril Islands Subduction Zone #2 (M8.8)	X		X
	Kuril Islands Subduction Zone #3 (M8.8)	X		X
	Kuril Islands Subduction Zone #4 (M8.8)	X		X
	Marianas Subduction Zone (M8.6)		X	X

MAP EXPLANATION

- Tsunami Inundation Line
- Tsunami Inundation Area

PURPOSE OF THIS MAP

This tsunami inundation map was prepared to assist cities and counties in identifying their tsunami hazard. It is intended for local jurisdictional, coastal evacuation planning uses only. This map, and the information presented herein, is not a legal document and does not meet disclosure requirements for real estate transactions nor for any other regulatory purpose.

The inundation map has been compiled with best currently available scientific information. The inundation line represents the maximum considered tsunami runup from a number of extreme, yet realistic, tsunami sources. Tsunamis are rare events; due to a lack of known occurrences in the historical record, this map includes no information about the probability of any tsunami affecting any area within a specific period of time.

Please refer to the following websites for additional information on the construction and/or intended use of the tsunami inundation map:

State of California Emergency Management Agency, Earthquake and Tsunami Program: <http://www.oes.ca.gov/WebPage/oeswebsite.nsf/Content/B1EC51BA215931768825741F005E8D80?OpenDocument>

University of Southern California – Tsunami Research Center: <http://www.usc.edu/dept/tsunamis/2005/index.php>

State of California Geological Survey Tsunami Information: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/index.htm

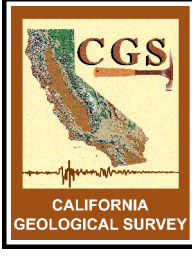
National Oceanic and Atmospheric Agency Center for Tsunami Research (MOST model): <http://nctr.pmel.noaa.gov/time/background/models.html>

MAP BASE

Topographic base maps prepared by U.S. Geological Survey as part of the 7.5-minute Quadrangle Map Series (originally 1:24,000 scale). Tsunami inundation line boundaries may reflect updated digital orthophotographic and topographic data that can differ significantly from contours shown on the base map.

DISCLAIMER

The California Emergency Management Agency (CalEMA), the University of Southern California (USC), and the California Geological Survey (CGS) make no representation or warranties regarding the accuracy of this inundation map nor the data from which the map was derived. Neither the State of California nor USC shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.



California Flood Risk: Sea Level Rise Seaside Quadrangle



Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles
0 0.5 1 2 3
Kilometers

Created by the Pacific Institute, Oakland, California, 2009.
Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Monterey OE N
2: Marina
3: Salinas
4: Monterey
5: *not printed*
6: Soberanes Point
7: *not printed*
8: *not printed*

Map extents match USGS 7.5 minute topographic maps



Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal Services Center (CSC), Scripps Institution of Oceanography, Phillip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.



Appendix D: Moss Landing Revetment basis of design

BASIS OF DESIGN FOR SHORE PROTECTION
AT MOSS LANDING HARBOR,
MOSS LANDING, CA

Monterey Bay Sanctuary Scenic Trail Project
March, 2011



Prepared for:

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Santa Cruz, CA 95060



SEI Job No. 25245

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1. INTRODUCTION

1.1 Introduction and Project Location

The Monterey County Department of Public Works is designing a pedestrian and bicycle trail between the cities of Santa Cruz and Monterey to be known as the Monterey Bay Sanctuary Scenic Trail (MBSST). The Moss Landing segment runs from the north shore of Elkhorn Slough, across a proposed new bridge along the west side of California State Highway 1 (Hwy-1), through the Moss Landing Power Plant and south to Moss Landing Road. A 350-ft reach of shoreline immediately south of the new bridge is subject to erosion by ocean waves entering the slough from the Moss Landing entrance channel, and is in need of new shore protection. The proposed bridge and section of shoreline to be protected are within the California State Highway Right of Way.

The project site is located at the center of the Monterey Bay shoreline, in Central California (Figure 1-1). Moss Landing is small boat harbor used by both fishing and recreational vessels. Access to open waters of the Pacific Ocean is through a 400 ft-wide entrance channel protected by jetties on both sides. The jetties trend southwest, and offer some protection from large ocean waves and locally generated seas from the west and northwest. Monterey Bay is bisected by a large submarine canyon (Monterey Canyon) that is a dominant morphological feature in the region's bathymetry. The head of the canyon is located just offshore of the Moss Landing jetties (See Figure 1-1).

Figure 1-2 shows the project location inside the Moss Landing entrance channel in Elkhorn Slough.

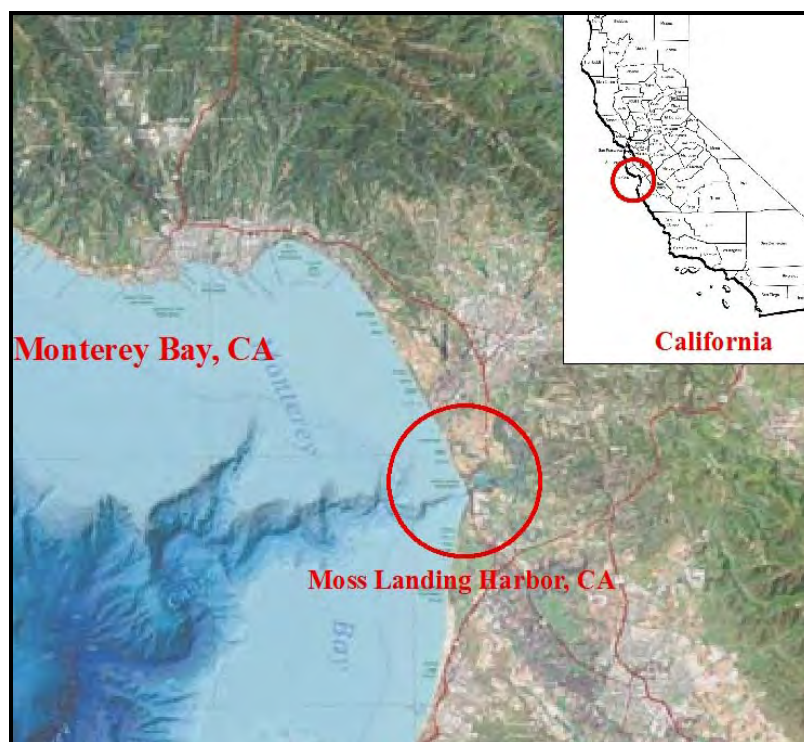


Figure 1-1. Project location in Central California



Figure 1-2. Project vicinity

1.2 Existing Site Condition and Characteristics

The project area is a small peninsula adjacent to the new Hwy-1 bridge (see Figure 1-2) and bounded on the channel side by the remnants of the the bridge abutment for the old (demolished) Hwy-1 bridge. Figure 1-3 is a photograph of the end of the peninsula showing the steel sheetpile abutment of the abandoned bridge. The curved steel sheetpile wingwalls of the abutment are concrete capped. The concrete piles and pile-supported beam in front of steel sheetpile were probably a support for the old bridge. Cement Rubble Masonry (CRM) facing between the piles has deteriorated to expose the steel sheepile behind.

There are two concrete bollard structures along the project reach, and one of these is shown in Figure 1-3. The purpose of these bollards is not clear.

The project shoreline south of the abutment is characterized by deteriorated non-engineered riprap shore protection constructed of concrete debris. Wave overtopping has eroded an approximate 3-ft scarp in the bluff landward of the riprap, and has contributed to the deposition of a sand, gravel, and cobble beach perched above the concrete riprap. These features are shown in Figure 1-4, a photograph illustrating typical conditions along the project reach.

There are no known buried utilities along the project reach. Abandoned 10-inch and 5-inch pipes have been exposed by erosion - the 5-inch pipe is visible in Figure 1-4. A 12-inch corrugated steel drain pipe (Figure 1-5) extends from a catchment basin adjacent to the Hwy-1 embankment and into the project area.

The project reach terminates to the South at a steel sheet pile retaining wall that protects a 20-inch steel oil delivery pipeline. (Figure 1-6). Although no longer in use, the pipeline is in a state of preservation in case of future need. The pipeline alignment appears to angle down to the seabed on the channel side, and bends to be sub-parallel to the shoreline on the landward side of the retaining wall. The alignment is such that construction of a sloping revetment in the vicinity of the pipe would be difficult, and might put the pipeline at risk.

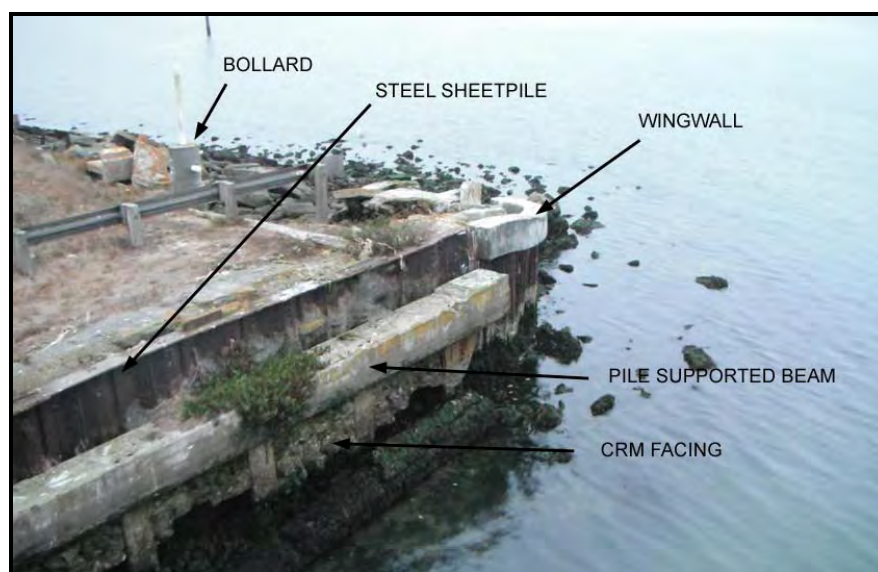


Figure 1-3. Abandoned abutment at the north end of the project reach



Figure 1-4. Typical site conditions



Figure 1-5. 12-inch corrugated steel drainage pipe



Figure 1-6. 20-inch oil delivery pipeline at the south end of project reach (view looking north).

2. OCEANOGRAPHIC CONDITIONS

2.1 Introduction

Monterey Bay experiences a Mediterranean type climate with cool summers and moderate winters. Rainfall averages 19 inches per year and falls almost exclusively between October and May. The seasonal shift between the dry spring/summer period and the wet fall/winter period is governed by the position of the northern hemisphere storm track and of the North Pacific High high pressure system.

This seasonal shift also governs the prevailing winds. In the winter, frequent storms pass through the area resulting in strong winds with variable direction. The spring transition, in March or April, marks the beginning of several months of predominantly strong winds from the northwest associated with the Pacific High. These are intermittently interrupted by periods of several days duration when the wind slackens and may come out of the west or south. In particular, a phenomenon known as a southerly surge will suddenly reverse the wind direction from blowing out of the northwest to coming out of the south, as it propagates northward along the coast.

The fall transition typically occurs in September and is a time of calm winds and sunny weather before the onset of the winter storms, usually in November. There can be significant year-to-year differences in the "typical" annual cycle.

2.2 Tide

The tides at Moss Landing are mixed semi-diurnal with two high tides and two low tides daily. The nearest NOAA tide gauge is located in Monterey, CA, approximately 15 miles to the south (Sta. 9413450). The mean tide range is 3.54 feet and the diurnal range is 5.34 feet. Tidal data are listed in Table 2-1.

Table 2-1. Tide elevations at Monterey, CA

Tide Datum	Height (ft) MLLW	Height (ft) NAVD 88
Mean higher high water	5.33	5.20
Mean high water	4.63	4.50
Mean sea level	2.83	2.70
Mean low water	1.09	0.96
Mean lower low water	0.00	-0.13
Highest water level (1/27/1983)	7.88	7.75

The project elevation datum is NAVD 88. Although the mean diurnal range is 5.34 ft, the range during spring tide conditions can be greater, and predicted high tide levels over 6 ft are not uncommon.

2.3 Wave Conditions

2.3.1 Deepwater Wave Data

The project site is sheltered within a harbor at the eastern edge of Central Monterey Bay. Because of the location within Monterey Bay, waves will only approach the harbor from a westerly direction. The National Oceanographic and Atmospheric Association (NOAA) National Data Buoy Center (NDBC) operates and maintains several offshore buoys in the vicinity of Monterey Bay which are exposed to deepwater waves generated south, west and north of Monterey Bay. Two of these, Sta. 46042 and Sta. 46236 are considered representative of the Monterey Bay region, due to their proximity, and are used in this analysis.

Sta. 46042 is located 27 nautical miles west of Monterey Bay. It is an NDBC moored 3-meter discus buoy located in greater than 1500 meters (5000 feet) water depth. Meteorological and oceanographic data have been collected with this buoy since 1987. Its water depth and long period of record makes it a suitable data source for deepwater wave conditions.

Sta. 46236 is located within Monterey Bay, over outer Monterey Canyon. It is a Coastal Data Information Program (CDIP) Waverider buoy (CDIP buoy #156) located in 168 meters (550 feet) of water depth. Data have been collected with this buoy since 2007. Both buoys record significant wave height (Hs), peak period (Tp) and mean wave direction (MWD).

Table 2-2, Table 2-3, and Table 2-4 show, respectively, wave height versus wave direction, wave period versus wave direction and wave height versus wave period joint frequency distributions that were generated data from NOAA NDBC buoy 46042. Only records from 1992-2009 were used in the analysis because the mean wave direction parameter was not measured prior to 1992. A few of the noteworthy observations from the datasets are:

- On a yearly average, less than 2% of the wave heights measured at buoy 46042 are larger than 4.5 meters (15.0 feet).
- The most frequent wave directions are from the directional sector of 270-330 degrees; eighty-three percent (83%) of the recorded waves approached from these directions.

Table 2-2. Percent Frequency of Deepwater Wave Heights vs. Wave Directions

(Period: 1992-2009; Source: NOAA NDBC)

Wave Height (ft)	Mean Wave Direction (deg from True North)												TOTAL
	0-30	30-60	60-90	90-120	120-150	150-180	180-210	210-240	240-270	270-300	300-330	330-360	
0	0.00	0.00	0.00	0.00	0.00	0.09	0.63	0.31	0.19	0.35	0.27	0.00	1.85
3	0.00	0.00	0.00	0.01	0.02	1.21	5.09	1.91	2.27	11.08	16.55	0.26	38.39
6	0.00	0.00	0.00	0.00	0.01	0.37	0.63	0.25	1.34	13.22	20.10	0.19	36.11
9	0.00	0.00	0.00	0.00	0.00	0.26	0.15	0.09	0.58	6.48	8.24	0.02	15.82
12	0.00	0.00	0.00	0.00	0.00	0.15	0.06	0.03	0.26	2.43	2.80	0.01	5.74
15	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.01	0.08	0.64	0.73	0.00	1.54
18	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.03	0.17	0.16	0.00	0.38
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.03	0.00	0.13
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.03
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
30	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
TOTAL	0.00	0.00	0.00	0.01	0.03	2.15	6.57	2.61	4.79	34.47	48.88	0.49	100.00

Table 2-3. Percent Frequency of Deepwater Wave Periods vs. Wave Directions
(Period: 1992-2009; Source: NOAA NDBC)

Wave Period (s)	Mean Wave Direction (deg from True North)												TOTAL
	0-30	30-60	60-90	90-120	120-150	150-180	180-210	210-240	240-270	270-300	300-330	330-360	
0-2	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
2-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.03
4-6	0.00	0.00	0.00	0.01	0.01	0.23	0.08	0.01	0.01	0.12	1.29	0.08	1.84
6-8	0.00	0.00	0.00	0.00	0.01	0.34	0.17	0.05	0.11	0.70	7.64	0.11	9.12
8-10	0.00	0.00	0.00	0.00	0.00	0.19	0.12	0.15	0.36	2.07	13.62	0.18	16.68
10-12	0.00	0.00	0.00	0.00	0.00	0.13	0.14	0.17	0.94	7.59	13.43	0.09	22.49
12-14	0.00	0.00	0.00	0.00	0.00	0.22	0.87	0.45	1.49	10.15	6.87	0.01	20.06
14-16	0.00	0.00	0.00	0.00	0.01	0.53	2.62	0.92	1.41	8.03	3.39	0.00	16.89
16-18	0.00	0.00	0.00	0.00	0.00	0.47	2.33	0.77	0.45	4.73	2.08	0.01	10.83
18-20	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.03	0.01	0.25	0.15	0.00	0.56
20-22	0.00	0.00	0.00	0.00	0.00	0.02	0.14	0.08	0.03	0.80	0.38	0.00	1.45
22-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.02
>24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.03
TOTAL	0.00	0.00	0.00	0.01	0.03	2.15	6.57	2.61	4.79	34.47	48.88	0.49	100.00

Table 2-4. Percent Frequency of Deepwater Wave Heights vs. Wave Periods
(Period: 1992-2009; Source: NOAA NDBC)

Wave Height (ft)	Wave Period (seconds)													Total
	0-2	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	>24	
0	0.00	0.01	0.04	0.08	0.19	0.29	0.51	0.51	0.20	0.01	0.01	0.00	0.00	1.85
3	0.00	0.03	1.44	5.03	7.04	8.07	5.80	6.20	4.22	0.19	0.36	0.00	0.00	38.39
6	0.00	0.00	0.35	3.40	7.17	9.29	7.68	4.41	3.04	0.21	0.54	0.01	0.01	36.11
9	0.00	0.00	0.01	0.50	1.84	3.47	4.41	3.38	1.73	0.09	0.37	0.01	0.01	15.82
12	0.00	0.00	0.00	0.09	0.37	1.07	1.29	1.75	1.02	0.05	0.11	0.00	0.00	5.74
15	0.00	0.00	0.00	0.01	0.05	0.24	0.30	0.48	0.39	0.01	0.04	0.00	0.00	1.54
18	0.00	0.00	0.00	0.00	0.01	0.06	0.05	0.11	0.13	0.01	0.01	0.00	0.00	0.38
21	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.07	0.00	0.00	0.00	0.00	0.13
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.03
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
30	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
Total	0.00	0.03	1.84	9.12	16.68	22.49	20.06	16.89	10.83	0.56	1.45	0.02	0.03	100.00

2.3.2 Extreme Wave Heights

Data from NOAA NDBC Sta. 46042 were used to generate a return period distributions of extreme wave height events at the buoy location. Results are listed in Table 2-5. The analysis indicates a yearly return period significant wave height (Hs) of 21.6 ft, and a 50-year return period wave height of 32.4 ft.

Table 2-5. Return Period Wave Heights for Buoy 46042

Return Period (years)	Offshore Significant Wave Height (Hs) (ft)
1	21.6
5	25.6
10	27.5
25	30.2
50	32.4

2.3.3 Nearshore Wave Heights

Wave Transformations in Shallow Water

As deepwater waves propagate toward shore, they begin to encounter and be transformed by the ocean bottom. In shallow water, the wave speed becomes related to the water depth. As waves slow down with decreasing depth, the process of *wave shoaling* steepens the wave and increases the wave height. *Wave breaking* occurs when the wave profile shape becomes too steep to be maintained. This typically occurs when the ratio of wave height to water depth is about 0.78, and is a mechanism for dissipating the wave energy. Wave energy is also dissipated due to bottom friction. The phenomenon of *wave refraction* is caused by differential wave speed along a wave crest as the wave passes over varying bottom contours, and will cause wave crests to converge or diverge and may locally increase or decrease wave heights. Not strictly a shallow water phenomenon, *wave diffraction* is the lateral transmission of wave energy along the wave crest, and will cause the spreading of waves in a shadow zone, such as occurs behind a breakwater or other barrier.

The seafloor bathymetry of Monterey Bay is dominated by a system of submarine canyons known as the Monterey Canyon System. Monterey Canyon itself begins directly offshore of Moss Landing Harbor. The varied offshore bathymetry causes wide differences in nearshore wave heights along the Monterey Bay shoreline as the process of wave refraction causes waves to converge or diverge at various locations.

Two numerical wave models were used to analyze the transition of waves from deepwater to the project site. The SWAN (Simulating Waves Nearshore) model was used to calculate the propagation of waves from the Buoy 46042 to nearshore sites offshore of Moss Landing Harbor. The numerical wave model CGWave was then used to model the refraction, diffraction, and shoaling characteristics of waves as they enter and pass through the harbor jetties and move to the project site.

Figure 2-1 is an example of the SWAN modeling, and shows the effects of deepwater waves approaching the Monterey Bay shoreline from the West. The color contours show the variation in nearshore wave height. The model indicates that a divergent zone – a zone of relatively smaller wave heights - exists at the mouth of Moss Landing Harbor, with wave energy essentially diverted to the north and south.

Figure 2-2 shows results from the CGWave analysis super-imposed on an aerial image from *Google-Earth*. The model boundary is a semi-circle offshore of the harbor. The crest lines diverge near the harbor mouth, and waves that enter the jetties are locally high adjacent to both the north and south jetties. Significant diffraction occurs inside the harbor. The flare geometry at the end of each jetty helps to spread and diffuse the wave energy into the harbor and away from the project site. Wave heights at the project site are approximately 10-percent of the wave height at the model boundary.

Design Wave Conditions

Based on the buoy statistics and wave modeling, a significant wave height of 3 ft and wave period of 16 seconds is used for the project site 50-year design condition, and a 2-ft wave height is used for an annual design condition.

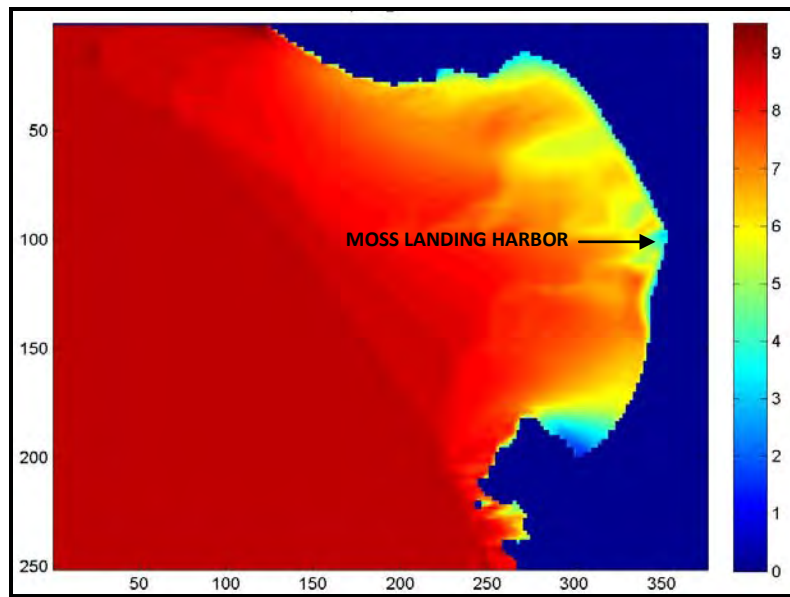


Figure 2-1. SWAN model showing the variation of wave heights in Monterey Bay



Figure 2-2. CGWave model for Moss Landing Harbor

2.4 Water Level Rise: Storm Surge and Wave Setup

During extreme storm events the water level at the shoreline will generally rise due to the combination of storm surge and wave setup.

Storm surge is an elevation of the coastal water level caused by the combined effects of strong wind stresses on the water surface and the reduction in atmospheric pressure within a storm that causes a rise in the water surface beneath the low pressure area.

Large waves breaking nearshore cause a significant water elevation rise known as wave setup. Wave setup is typically 10% to 15% of the average breaking wave height.

A water level rise analysis was conducted using the data from NOAA NDBC buoy Sta. 46042 and the tide gauge station in Monterey, CA. The months in which the 5 largest storms on record occurred were determined from the NOAA buoy records. Water level data records from the corresponding months were extracted from the tide gauge records. The water level data included both predicted tide levels and measured tide levels. The measured tide offsets are empirical data for the combined effect of storm surge and wave setup.

The differences between the measured and predicted tide levels were found to vary between 1.0 ft and 1.5 ft in during the largest storms on record. An example plot showing the difference between verified and predicted tides for the month of January, 2008 is shown in Figure 2-3. Data were smoothed using a 12-point (approximately 1 hour) running average filter. A combined storm surge and wave setup value of 1.5 ft is used for a 50-year design condition, and a 1-ft rise is used for an annual design condition.

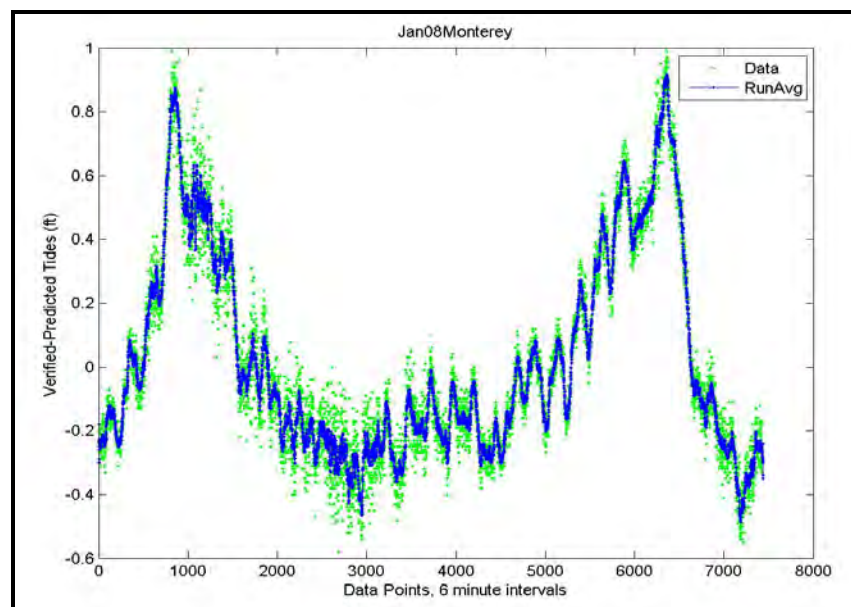


Figure 2-3. Differences between real and predicted water levels, January 2008

2.5 Global Sea Level Rise

It is widely recognized that global warming has caused a world-wide acceleration in sea level rise. Sea level rise predictions are not clear, and the state-of-the-science is in early stages.

Estimates vary, but a 3-foot rise by the end of the present century is in use as a reasonable figure (Fletcher, 2009). Given the uncertainties in stillwater elevation due to long-term phenomena, and the need for a long term coastal engineering design, an extra 1 ft of stillwater level rise has been added for the project design.

2.6 Design Still Water Level

Table 2-6 shows a 50-year design stillwater level of 8.5 ft to be a combination of astronomical tide (6.0 ft), combined storm surge and wave setup (1.5 ft), and an extra 1.0 ft to account for miscellaneous oceanographic phenomena including global warming induced sea level rise. A stillwater level of 7.0 ft is used for an annual design condition.

Table 2-6. Combined Stillwater Level for Design Conditions

Parameter	Stillwater Rise (ft – NAVD 88)
Tide	6.0
Storm Surge and Wave Setup	1.5
Other Phenomena	1.0
Design Stillwater Level	8.5

2.7 Wave Runup

In the design of shore protection structures, wave runup is the level to which the wash from breaking waves will rise on a structure, usually considered a rough planar slope (as in this case). Wave overtopping occurs when the structure is not sufficiently elevated and the wave will spill over the crest. Wave runup was calculated using the U.S. Army Corps of Engineers design program ACES based on methods by Ahrens and McCartney (1975).

The calculated runup value is 5.8 ft, and is added to the design stillwater elevation (8.5 ft) to give the non-overtopping elevation of 14.45 feet in Table 2-7.

Table 2-7. Wave runup for 50-year design conditions

Structure Slope	Design Wave Height (ft)	Wave Runup (ft)	Stillwater Level (ft)	Runup Elevation (ft)
1V :1.75H	3.0	5.95	8.5	14.45

The design wave and design stillwater level reflect relatively extreme conditions. Table 2-8 lists wave runup values using somewhat milder conditions based on a yearly return period wave height at the site of 2 ft, and a combined stillwater level of 7 ft:

Table 2-8. Wave runup for yearly design conditions

Structure Slope	Design Wave Height (ft)	Wave Runup (ft)	Stillwater Level (ft)	Runup Elevation (ft)
1V :1.75H	2.0	4.1	7.0	11.1

3. RIPRAP REVETMENT DESIGN

3.1 Stone Gradation – USACE SPM Method

The following riprap stone gradation calculations are slightly modified from methods found in the *USACE Shore Protection Manual*.

A 50-year design wave height of 3.0 ft is used for stone sizing and gradation. As the design wave height is less than 5 ft, a riprap, or graded stone size revetment is used.

The median weight (W_{50}) of armor stone required is determined by the Hudson formulation:

$$W_{50} = w_r H^3 / K (S_r - 1)^3 \cot \theta$$

Where,

- w_r = unit weight of stone (use 160 lbs/cu ft for basalt quarrystone)
- H = design wave height ($H = 3.0$ ft)
- K = stability coefficient (use 2.2 rip rap)
- S_r = specific gravity of the stone relative to sea water (2.5)
- θ = side slope (use 1V to 1.75H)

$$W_{50} = 330 \text{ lbs}$$

$$W_{50} (\text{min}) = 0.75 W_{50} = 250 \text{ lbs}$$

$$W_{50} (\text{max}) = 1.25 W_{50} = 412 \text{ lbs}$$

A riprap revetment consists of a gradation of stone sizes based on the following 15th and 100th percentile mix of sizes:

$$W_{15} (\text{min}) = 0.4 W_{50} (\text{min}) = 100 \text{ lbs}, \quad W_{15} (\text{max}) = W_{50} (\text{min}) = 250 \text{ lbs}$$

$$W_{100} (\text{min}) = 2 W_{50} (\text{min}) = 500 \text{ lbs}, \quad W_{100} (\text{max}) = 4 W_{50} (\text{min}) = 1,000 \text{ lbs}$$

In summary, the armor stone gradation is as follows:

Table 3-1. SPM Riprap Stone Gradation ($H = 3$ ft)

Percentile	Minimum Weight	Maximum Weight
15	100 lbs	250 lbs
50	250 lbs	412 lbs
100	450 lbs	1,000 lbs

The graded riprap thickness (T) is twice the nominal diameter of a W50 stone (D_{50}):

$$D_{50} = (W_{50} / w_r)^{1/3} = 1.273 \text{ ft}$$

$$T = 2 \times D_{50} = 2.55 \text{ ft (use 2.5 ft)}$$

The riprap should be underlain by a bedding layer that is nominally 10% of the riprap W_{50} stone size, say 10 lb to 50 lb stone with a layer thickness of 1.25 ft.

3.2 Stone Gradation – CABS (Caltrans) Method

The following stone gradation method uses guidelines presented in *California Bank and Shore Rock Slope Protection Design*, (Caltrans Study No. F90TL03, October 2000) and known as the California Bank and Shore (CABS) layered Rock Slope Protection (RSP) design method. The method uses standard classes between 1 lb and 16 tons. Figure 3-1, a table of rock classes from the study, is derived from Section 72-2.02 of the State of California, Department of Transportation, Standard Specifications.

STANDARD Rock SIZE or Rock MASS or Rock WEIGHT		GRADING OF ROCK SLOPE PROTECTION PERCENTAGE LARGER THAN											
		RSP-Classes [A]											
		Method A Placement						Method B Placement					
		RSP-Classes other than Backing									Backing No.		
		8 ton	4 ton	2 ton	1 ton	1/2 ton	1 ton	1/2 ton	1/4 ton	Light	1 [B]	2	3
US unit	SI unit	8 T	4 T	2 T	1 T	1/2 T	1 T	1/2 T	1/4 T	Light	1 [B]	2	3
16 ton	14.5 tonne	0-5											
8 ton	7.25 tonne	50-100	0-5										
4 ton	3.6 tonne	95-100	50-100	0-5									
2 ton	1.8 tonne		95-100	50-100	0-5		0-5						
1 ton	900 kg			95-100	50-100	0-5	50-100	0-5					
1/2 ton	450 kg				95-100	50-100	-----	50-100	0-5				
1/4 ton	220 kg					95-100	95-100	-----	50-100	0-5			
200 lb	90 kg						95-100	-----	50-100	0-5			
75 lb	34 kg								95-100	-----	50-100	0-5	
25 lb	11 kg									95-100	90-100	25-75	0-5
5 lb	2.2 kg											90-100	25-75
1 lb	0.4 kg												90-100

[A] US customary names (units) of RSP-Classes listed above SI names, example US is "2 ton" metric is "2 T".
[B] "Facing" has same gradation as "Backing No. 1". To conserve space "Facing" is not shown .

Example for determining RSP-Class of outside layer. By using Equation 1, if the calculated $W=135$ kg (minimum stable rock size):
1. Enter table at left and select closest value of STANDARD Rock SIZE which is greater than calculated W , in this case 220 kg
2. Trace to right and locate "50-100" entry 3. Trace upward and read column heading "1/4 T", then 1/4 T is first trial RSP-Class.

Figure 3-1. RSP classes for CABS method

The standard RSP class is the next heavier standard rock weight from the W_{50} stone size as calculated in Section 3.1. For a W_{50} of 330 lbs, the standard RSP class is 1/4 Ton using Method B placement. Method A placement is individually placed stone and is used for the heavier RSP classes. In Method B placement multiple stones are "dumped" and final placement is spread by machinery.

The 1/4 Ton RSP class gradation is summarized in Table 3-2. The graded riprap thickness (T) is twice the nominal diameter of a W_{50} stone (D_{50}):

$$D_{50} = (W_{50} / w_r)^{1/3} = 1.46 \text{ ft (note: } W_{50} \text{ is 500 lbs)}$$

$$T = 2 \times D_{50} = 2.9 \text{ ft (use 3.0 ft)}$$

Table 3-2. CABS Riprap Stone Gradation for ¼ Ton RSP Class

Percent Larger Than	Weight
95-100	75 lbs
50-100	500 lbs
0-5	1,000 lbs

According to the Caltrans study, both Backing No. 1 and Backing No. 2 (Figure 3-1) are appropriate underlayer material for the 1/4 ton RSP class. Backing No. 2 is closer to the SPM criteria, with most of the material in the 25 lb to 75 lb stone range, and is preferable for this shore protection design.

3.3 Revetment Crest

The overtopping elevation for 50-year design conditions is 14.45 ft (see Section 2.4). Pursuant to discussions with the design team concerning the desired level of protection, the revetment crest is set at 15 ft, and the revetment is designed as a non-overtopping structure.

3.4 Revetment Toe

The top of the revetment toe is set at -2 ft (NAVD 88). The elevation is approximately one annual design wave height below the MLLW tidal datum. This is considered a reasonable scour depth in the event of erosion of the nearshore substrate at the project reach. The toe has an apron that is 4 x D_{50} in width and designed for the soft sediment bottom conditions at the site.

3.5 Revetment Cross-Sections and Stone Size Discussion

Figure 3-2 is a section view of the revetment design using the SPM method (Section 3.1), with stone sizing and gradation from Table 3-1. Figure 3-3 is a section using the CABS method, with stone sizing and gradation for RSP Class 1/4 T from Table 3-2.

Although both stone sizing methods are similar, the CABS method is inherently more conservative as the “next size up” stone class is used, i.e. 500-lb stone is essentially substituted for 330-lb stone specified by the Hudson formulation, with a consequent increase in revetment dimensions. The CABS method stone size and gradation is recommended for a robust and conservatively designed structure. However the SPM structure is also conservatively designed, and can be substituted without reservation if the difference in cost becomes a significant issue.

3.6 Revetment Alignment

The revetment layout is shown on Figure 3-4 (north end) and Figure 3-5 (south end). The revetment is aligned so that the top of the revetment slope approximately follows the project

hinge line. Some departures from the hinge line were used to straighten the revetment crest and to provide a 5-ft minimum clearance to the edge of the bike path.

The north end of the revetment stops short of the old bridge abutment. An alternative alignment was considered that would have wrapped the revetment around the abutment into the channel. However, this alternative was abandoned as armor protection for the channel is essentially a very different project scope:

- High flow velocities can scour the channel walls and substrate. These are independent of the site wave conditions and require a different set of design parameters
- Proper channel protection might require a different design cross-section, and may result in extending the rock protection to the bottom of the channel

Care must be taken not to excavate near the abutment in order not to de-stabilize the existing sheetpile.

The south end of the alignment stops short of the 20-inch oil delivery pipeline. As the geometry of the site does not allow a significant return to be constructed, the revetment will grade into the existing armor rock on the shoreline.

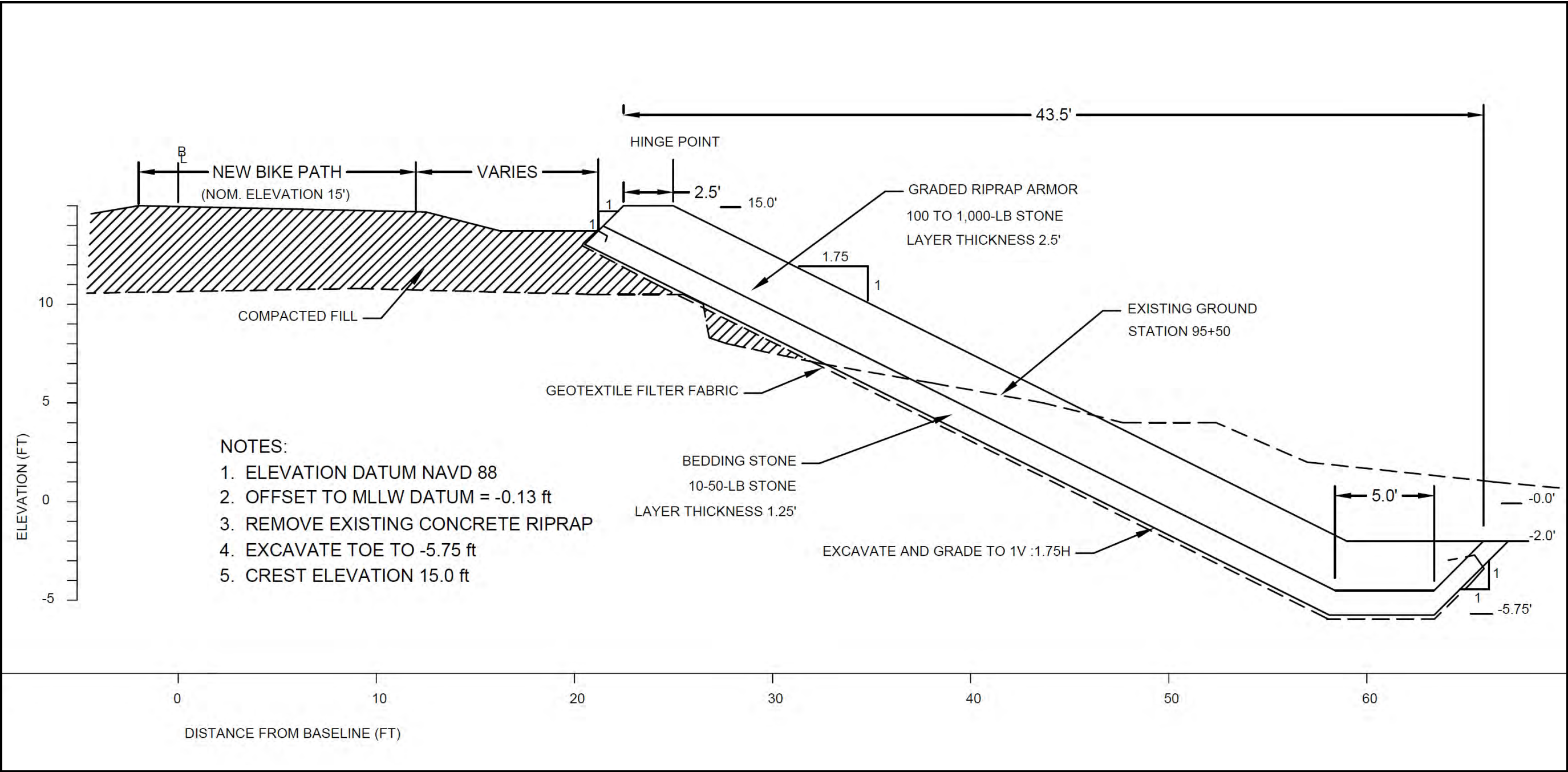


Figure 3-2. Design section for SPM method stone size and grading (see Section 3.1)

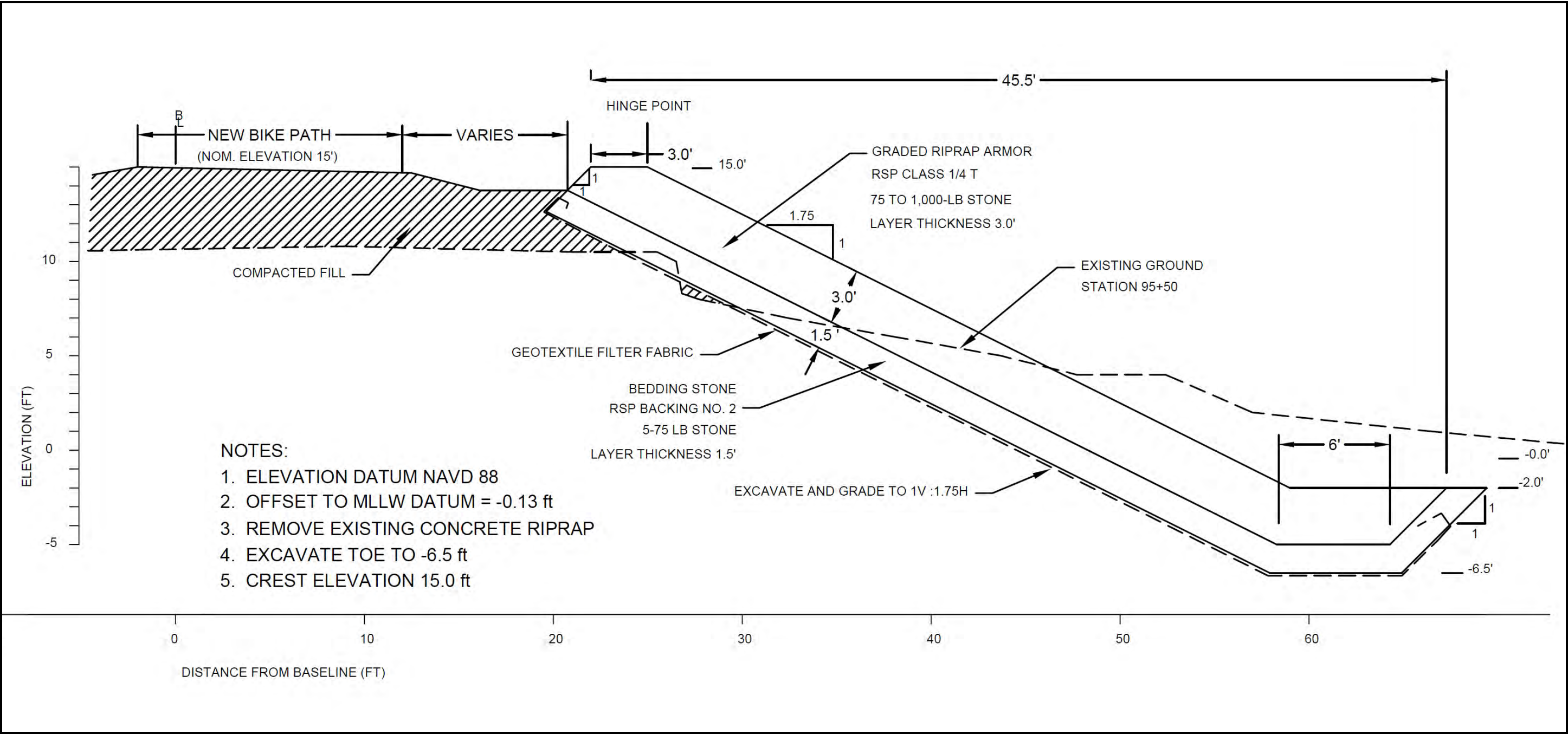


Figure 3-3. Design section for CABS method stone size and grading (see Section 3.2)

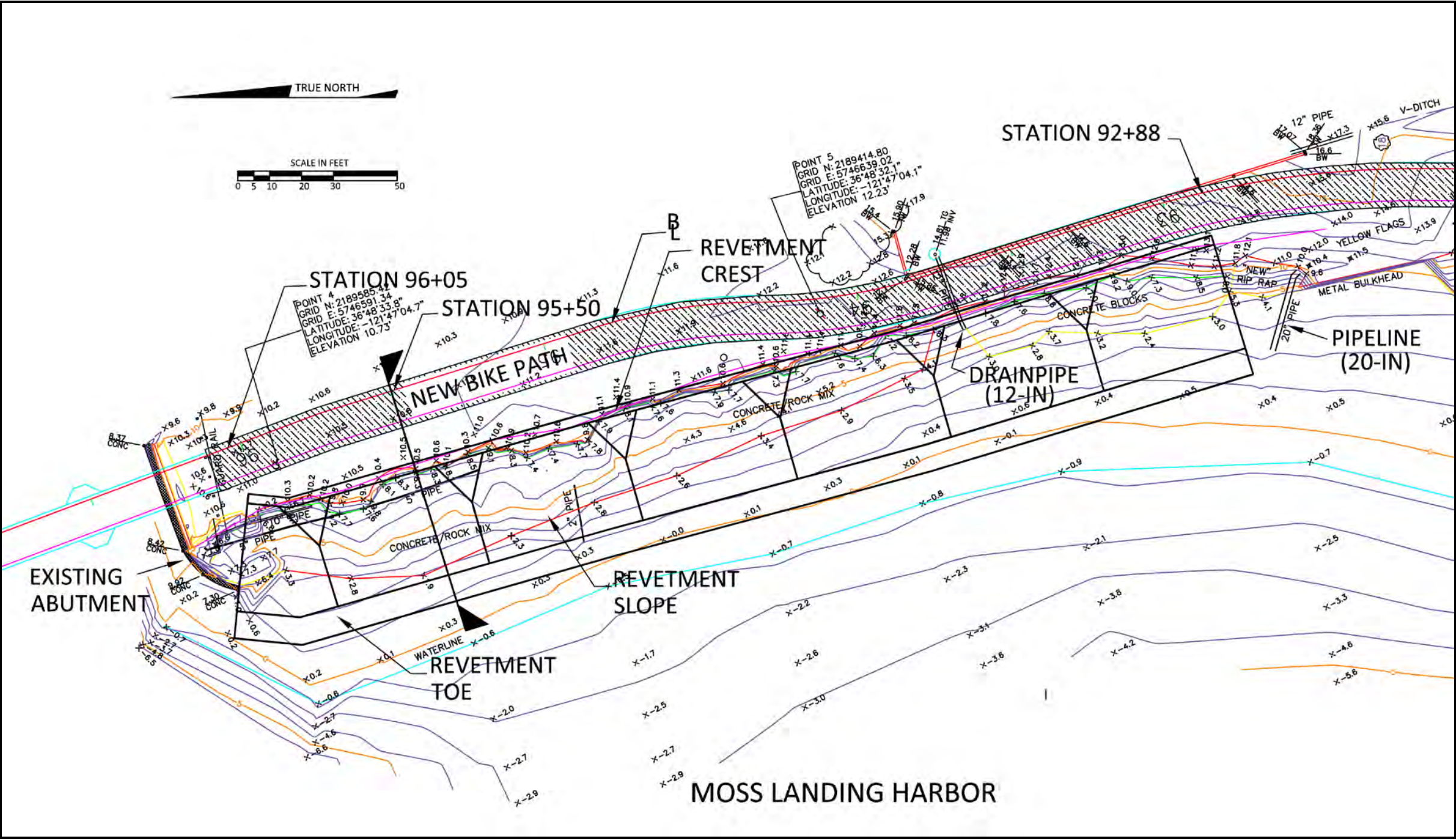


Figure 3-4. Revetment layout (CABS method stone size)

4. REFERENCES

Ahrens, J., and B.L. McCartney, 1975. "Wave Period Effect on the Stability of Riprap," *Proceedings of Civil Engineering in the Oceans, III*, ASCE pp. 1019-1034

Fletcher, C.H., 2009; Sea Level by the End of the 21st Century: A Review; *Shore and Beach* Vol. 77, No. 4, Fall 2009

USACOE, CERC, 1984, *Shore Protection Manual*.

State of California, Department of Transportation, 2000; *California Bank and Shore Rock Slope Protection Design*; Final Report No. FHWA-CA-TL-95-10 Caltrans Study No. F90TL03

APPENDIX D

**Letters from the Central Coast Regional Water Quality Control Board and
Monterey County Department of Health**

Central Coast Regional Water Quality Control Board

March 12, 2015

Tim O'Halloran, PE
City of Seaside Resource Management Services
440 Harcourt Avenue
Seaside, CA 93955
Email: tohallor@ci.seaside.ca.us

Sent via Electronic Mail

Dear Mr. O'Halloran:

**IMPLEMENTATION OF LOW IMPACT DEVELOPMENT REQUIREMENTS FOR THE
IN-AND-OUT BURGER CONSTRUCTION, 1350 DEL MONTE BOULEVARD, SEASIDE, CA -
ADDENDUM FOR THE PROJECT ENVIRONMENTAL IMPACT REPORT**

This letter confirms that Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff supports the City of Seaside making changes to the project to permit on-site stormwater management consistent with Central Coast Post-Construction Stormwater Management Requirements (Resolution No. R3-2013-0032) and the City's approach to reviewing and approving the project. Our evaluation of background and current site conditions indicates that current stormwater management techniques and requirements apply to this site.

Central Coast Water Board staff received your letter on February 27, 2015, for the above referenced project. That letter summarizes the history of work for the parcel development and the City's proposed approach to move forward on project review and approval.

One factor affecting parcel development is management of the onsite contamination from its former use as an auto wrecking yard. The Central Coast Water Board stated in a 1994 letter that capping the site is a recommended remediation method. If the site is capped, the residual contamination onsite is not considered a threat to water quality and no further investigation or cleanup of the groundwater is required.

Site investigations were conducted in December 2014 to characterize site contamination. Central Coast Water Board staff reviewed the report of the December 2014 investigation, which includes historical and new soil and groundwater contaminant data from 1992 to 2014. The data indicate petroleum related contamination has decreased over time to concentrations that are below detection limits (1 – 5 mg/kg soil; 0.5 – 1 µg/L groundwater). The conclusions in the report suggest the decrease in site contaminant concentrations is likely due to natural attenuation and that petroleum contamination is no longer a pollution threat¹.

¹ Stechmann Geoscience, Inc. Phase II Environmental Site Assessment 2.2-Acre Property, 1350 Del Monte Avenue Seaside, California. February 2015.

Based on this new information, and on the more contemporary imperative to manage stormwater on-site where feasible, Central Coast Water Board staff finds the recommended remediation method cited in the 1994 letter is no longer appropriate. As such, Central Coast Water Board staff supports changes to the project that permit on-site stormwater management consistent with Central Coast Post-Construction Stormwater Management Requirements (Resolution No. R3-2013-0032).

Your February 27, 2015 letter also recommended the following approach to complete the project. The developer must revise the project Draft Environmental Impact Report (DEIR) with an addendum addressing management of contaminants, if encountered, during construction, and proposing a redesign of the post-construction stormwater control measures in accordance with Resolution No. R3-2013-0032. The project DEIR addendum will include the following six items:

1. A Soils and Groundwater Management Plan shall be prepared and submitted for approval to the Monterey County Environmental Health Department prior to final project approval;
2. A Site Health and Safety Plan shall be prepared and submitted for approval to the Monterey County Environmental Health Department prior to final project approval;
3. Infiltration from precipitation or irrigation would be permitted onsite without further remediation or study;
4. Infiltration of stormwater runoff from new impervious surfaces through stormwater control measures designed in accordance with Resolution No. R3-2013-0032 would be permitted onsite without further remediation or study;
5. The landscaping and undeveloped areas of the project will be classified as "undisturbed or planted areas" for the purpose of determining the Retention Tributary Area; and
6. A Stormwater Quality Control Plan, as required by the Central Coast Water Board Resolution No. R3-2013-0032 shall be prepared and submitted for approval by the City prior to obtaining final project approval.

The Central Coast Water Board concurs with the approach to complete the project as described in the City's February 27, 2015 letter.

If you have any questions regarding this letter, please contact Julia Dyer at (805) 542-4624 (Julia.Dyer@waterboards.ca.gov) or Dominic Roques at (805) 542-4780.

Sincerely,

Kenneth A. Harris, Jr.
Executive Officer

cc: Scott Ottmar, City of Seaside

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MONTEREY COUNTY

DEPARTMENT OF HEALTH Ray Bullick, Director

ANIMAL SERVICES
BEHAVIORAL HEALTH
CLINIC SERVICES

EMERGENCY MEDICAL SERVICES
ENVIRONMENTAL HEALTH

PUBLIC HEALTH
PUBLIC ADMINISTRATOR/PUBLIC GUARDIAN



March 17, 2015

Tim O'Halloran, P.E.
City Engineer/Public Works Services Manager
City of Seaside
440 Harcourt Ave.
Seaside, CA 93955

Dear Mr. O'Halloran

Thank you for sending me copies of your correspondence with the Central Coast Regional Water Quality Control Board (CCRWQCB), regarding Stormwater issues with the proposed In and Out Burger facility at 1350 Del Monte Blvd., Seaside. We concur with the recommendation of the CCRWQCB regarding infiltration of the site Stormwater. Based on the most recent soil sampling information, concentrations of contaminants have been reduced to levels that should not impact water quality.

Please ensure that the project DEIR addendum does require a soil and groundwater management plan, and a site health and safety plan, to be submitted to my Bureau prior to final project approval. If you have any questions, or require additional information, please contact Mr. Bruce Welden, Supervisor, Hazardous Materials Management Services, at 831-755-4680 or weldenb@co.monterey.ca.us

Sincerely,

John Ramirez, REHS, MPA
Director, Environmental Health Bureau

Cc: Ric Encarnacion, Assistant Director, Environmental Health Bureau
Bruce Welden, Supervisor, Hazardous Materials Management Services
Sandra Tauriac, Supervisor, Hazardous Materials Management Services

APPENDIX E

Traffic Impact Analysis

TRAFFIC IMPACT ANALYSIS

IN-N-OUT BURGER DRIVE-THROUGH RESTAURANT

CITY OF SEASIDE, CALIFORNIA

LSA

November 2014

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TRAFFIC IMPACT ANALYSIS

IN-N-OUT BURGER DRIVE-THROUGH RESTAURANT

CITY OF SEASIDE, CALIFORNIA

Submitted to:

City of Seaside
Community Development Department
440 Harcourt Avenue
Seaside, California 93955

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

LSA Project No. SEZ1401

LSA

November 2014

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INTRODUCTION

The purpose of this Traffic Impact Analysis (TIA) is to identify the potential circulation impacts associated with the proposed construction of an In-N-Out Burger drive-through restaurant in the City of Seaside (City). The proposed project site is located on the south side of Del Monte Boulevard, north and west of Laguna Grande Lake. Figure 1 shows the location of the proposed project.

Issues addressed in this analysis include the operation of the intersections in the vicinity of the proposed project and site access. The traffic analysis for the proposed project will examine four scenarios:

1. Existing condition
2. Existing plus project condition
3. Cumulative condition (future short-term year, corresponding to project opening)
4. Cumulative plus project condition

The traffic analysis provides an assessment of traffic impacts and determination of traffic mitigation as required by the City and for California Environmental Quality Act (CEQA) compliance.

PROJECT DESCRIPTION

The proposed project considers the construction of a 3,750 square foot (sf) In-N-Out Burger drive-through restaurant northwest of Laguna Grande Lake and southeast of Del Monte Boulevard. According to the Project Applicant, the proposed drive-through restaurant is scheduled to be constructed by 2016. Figure 2 shows the site plan for the proposed project. Access to the proposed project site will be provided via two driveways on Del Monte Boulevard (an easterly full-access driveway and a westerly right-in/right-out [RIRO] driveway).

The proposed project site is located adjacent to existing lodging, manufacturing, and residential uses. It is bounded by Del Monte Boulevard to the northwest, Laguna Grande Lake to the southeast, and manufacturing and residential uses to the southwest. The proposed project site is located near commercial and office business corridors along Del Monte Boulevard and Canyon del Rey Boulevard.

METHODOLOGY

This TIA is prepared consistent with the objectives and requirements of the City and applicable provisions of CEQA.

The following study area intersections, as illustrated in Figure 3, are analyzed in this report:

Study Area Intersections

1. Fremont Boulevard/Monterey Road
2. Fremont Boulevard/Del Monte Boulevard

3. Playa Avenue/Del Monte Boulevard
4. Tioga Avenue/Del Monte Boulevard
5. Contra Costa Street/Del Monte Boulevard
6. Broadway Avenue/Del Monte Boulevard
7. Canyon del Rey Boulevard/Del Monte Boulevard
8. Roberts Avenue/Del Monte Boulevard
9. English Avenue/Del Monte Boulevard
10. Casa Verde Way/Del Monte Boulevard
11. Sloat Avenue/Del Monte Boulevard
12. Canyon del Rey Boulevard (State Route 218 [SR-218])/State Route 1 (SR-1) southbound ramps
13. Canyon del Rey Boulevard/SR-1 northbound ramps
14. Canyon del Rey Boulevard/Fremont Boulevard
15. Canyon del Rey Boulevard/State Route 68 (SR-68)
16. SR-1 southbound on-ramp/Del Monte Boulevard
17. SR-1 northbound ramps/English Avenue

Intersection Level of Service Methodology

The Synchro 8 software was used to determine the levels of service (LOS) at the study area intersections. The 2010 *Highway Capacity Manual* (HCM 2010) signalized intersection methodology presents levels of service (LOS) in terms of control delay (in seconds per vehicle). The HCM 2010 unsignalized methodology presents LOS in terms of total intersection control delay and approach delay of the major and minor streets (in seconds per vehicle). The resulting delay is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations. The table below describes the conditions that would be experienced with LOS A through F.



FIGURE 1

LSA



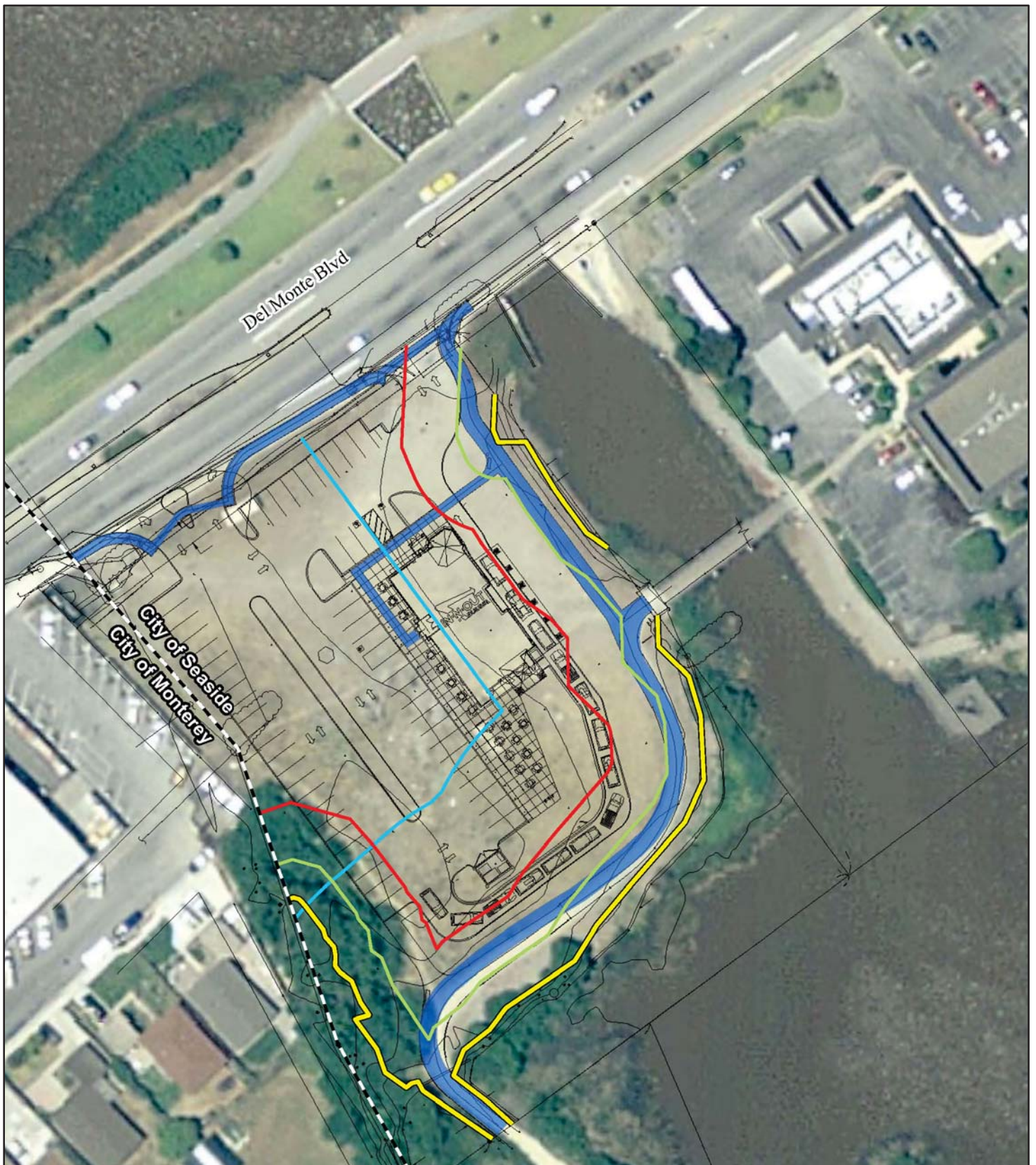
0 650 1300
FEET

SOURCE: USGS 7.5' Quad - Seaside, Ca.

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In-N-Out Burger Drive-Through Restaurant
Project Vicinity

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LSA

LEGEND

- Wetland Boundary
- Coastal Zone Boundary
- 20 Foot Setback
- 50 Foot Setback
- City Boundaries
- Pedestrian/Bicycle Trail



0 37.5 75
FEET

SOURCE: Bing Maps (2009); GreenbergFarrow (2010); City of Seaside (2010)

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FIGURE 2

In-N-Out Burger Drive-Through Restaurant
Site Plan

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LSA

LEGEND

- ① - Study Area Intersections



0 650 1300
FEET

SOURCE: USGS 7.5' Quad - Seaside, Ca.

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FIGURE 3

In-N-Out Burger Drive-Through Restaurant
Study Area Intersections

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LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.
F	This level describes forced-flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.

The relationship between LOS and delay at signalized and unsignalized intersections is as follows:

Level of Service (LOS)	Signalized Intersection Delay per Vehicle (sec)	Unsignalized Intersection Delay per Vehicle (sec)
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

sec = second(s)

The City considers LOS C to be the upper limit of satisfactory operations for signalized intersections. Mitigation is required for any signalized intersection where project traffic causes the LOS to deteriorate from satisfactory (LOS C or better) to unsatisfactory (LOS D, E, or F); or the addition of project traffic increases the average delay more than 2.0 seconds at LOS D; or the addition of project traffic increases the average delay by more than 1.0 second at intersections operating at LOS E or F.

Within the study area, three facilities are State Routes under the jurisdiction of the California Department of Transportation (Caltrans). These facilities are SR-1, SR-68, and Canyon del Rey Boulevard (SR-218). According to the Caltrans *Guide for the Preparation of Traffic Impact Studies*, "Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D." As such, satisfactory operation for Caltrans intersections is the same as at City intersections. Caltrans has determined that a significant project impact occurs for any signalized intersection where project traffic causes the LOS to deteriorate from satisfactory (LOS C or better) to unsatisfactory (LOS D, E,

or F); or the addition of project traffic causes an increase in delay at an intersection already operating at unsatisfactory LOS (D, E, or F).

For unsignalized intersections, mitigation is required where the addition of project traffic causes the LOS to deteriorate from satisfactory (LOS E or better for two-way stop-controlled [TWSC] intersections, LOS C or better for all-way stop-controlled [AWSC] intersections) to unsatisfactory (LOS F for TWSC intersections; LOS D for AWSC intersections), or the addition of project traffic exacerbates unacceptable operations (LOS F for TWSC intersections; LOS D for AWSC intersections).

EXISTING CONDITIONS

Existing Circulation System

Key roadways in the vicinity of the proposed project are as follows:

- **SR-1:** SR-1 is a four-lane divided highway in the vicinity of the proposed project site. It connects the Monterey Peninsula with Santa Cruz County and the San Francisco Bay Area to the north and San Luis Obispo County to the south. The posted speed limit along this highway is 55 miles per hour (mph).
- **SR-68:** SR-68 is a four-lane undivided highway located southeast of the proposed project site. It connects the Cities of Pacific Grove and Salinas in Monterey County. The posted speed limit along this highway is 55 mph.
- **Canyon del Rey Boulevard (SR-218):** Canyon del Rey Boulevard is an undivided north-south arterial located east of the proposed project site that connects SR-1 with SR-68 through the City of Del Rey Oaks. It is a four-lane arterial between SR-1 and Fremont Boulevard and a two-lane roadway between Fremont Boulevard and SR-68. The posted speed limit along this roadway is 30 mph in Seaside and 45 mph in Del Rey Oaks.
- **Del Monte Boulevard:** Del Monte Boulevard is a four-lane divided north-south arterial that begins south of the City limits and ends at the SR-1 interchange at Fremont Boulevard. It extends along the northwest border of the proposed project site. Direct access to this site is provided via two driveways on Del Monte Boulevard. The posted speed limit along this roadway is 35 mph.
- **Fremont Boulevard:** Fremont Boulevard is a four-lane divided north-south arterial located south and east of the proposed project site. It begins south of the City limits and ends at the SR-1 interchange. The posted speed limit along Fremont Boulevard is 30 mph.

All other roadways in the study area are local serving roads.

Existing Traffic Volumes and Level of Service Analysis

The a.m. peak-hour (7:00 a.m.–9:00 a.m.) and p.m. peak-hour (4:00 p.m.–6:00 p.m.) intersection turn volumes at the study area intersections were collected by Quality Traffic Data LLC in September 2014. Traffic counts were collected when schools were in session. Figure 4 presents the existing a.m. and p.m. peak-hour turn movement volumes at the study area intersections. Appendix A provides the existing peak-hour count data.

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Table A summarizes the results of the existing a.m. and p.m. peak-hour LOS analysis for the 17 study area intersections. As discussed previously, the LOS were determined using the HCM 2010 methodology and the Synchro 8 software. The existing LOS calculation worksheets are contained in Appendix B.

Table A: Existing Level of Service Summary

Intersection		Traffic Control	Baseline			
			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Fremont Blvd/Monterey Rd	Signal	37.6 ¹	D ¹	38.4 ¹	D ¹
2	Fremont Blvd/Del Monte Blvd	TWSC	102.5 ¹	F ¹	1,092.6 ¹	F ¹
3	Playa Ave/Del Monte Blvd	Signal	32.1	C	35.4 ¹	D ¹
4	Tioga Ave/Del Monte Blvd	Signal	25.4	C	31.2	C
5	Contra Costa St/Del Monte Blvd	Signal	17.2	B	14.1	B
6	Broadway Ave/Del Monte Blvd	Signal	19.2	B	20.2	C
7	Canyon del Rey Blvd/Del Monte Blvd	Signal	13.1	B	12.1	B
8	Roberts Ave/Del Monte Blvd	Signal	15.7	C	10.9	B
9	English Ave/Del Monte Blvd	Signal	9.3	A	15.5	B
10	Casa Verde Way/Del Monte Blvd	Signal	27.9	C	21.6	C
11	Sloat Ave/Del Monte Blvd ²	Signal	10.1	B	21.3	C
12	Canyon del Rey Blvd/SR-1 SB ramps	Signal	25.5	C	34.2	C
13	Canyon del Rey Blvd/SR-1 NB ramps	TWSC	14.2	B	14.7	B
14	Canyon del Rey Blvd/Fremont Blvd	Signal	31.6	C	36.1 ¹	D ¹
15	Canyon del Rey Blvd/SR-68	Signal	27.4	C	32.6	C
16	SR-1 SB on-ramp/Del Monte Blvd	TWSC	23.9	C	34.2 ³	D ³
17	SR-1 NB ramps/English Ave	TWSC	10.4	B	13.2	B

Notes: Delay is reported in seconds.

For signalized intersections, delay is the average control delay for the whole intersection.

For TWSC intersections, delay is the worst-case minor street approach delay.

The City and Caltrans consider signalized intersections operating at LOS C or better to be satisfactory LOS.

The City considers TWSC intersections operating at LOS E or better to be satisfactory LOS.

¹ Exceeds the City's LOS criteria

² The City of Monterey considers LOS D as the standard at this intersection.

³ Caltrans considers intersections operating at LOS D to be deficient.

City = City of Seaside

LOS = level of service

NB = northbound

SB = southbound

SR = State Route

TWSC = two-way stop-controlled

As Table A indicates, all study area intersections operate at an acceptable LOS during both peak hours, with the exception of the following:

- Fremont Boulevard/Monterey Road (LOS D during both peak hours)
- Fremont Boulevard/Del Monte Boulevard (LOS F during both peak hours)
- Playa Avenue/Del Monte Boulevard (LOS D during the p.m. peak hour)
- Canyon Del Rey Boulevard/Fremont Boulevard (LOS D during the p.m. peak hour)
- SR-1 southbound on-ramp/Del Monte Boulevard (LOS D during the p.m. peak hour)

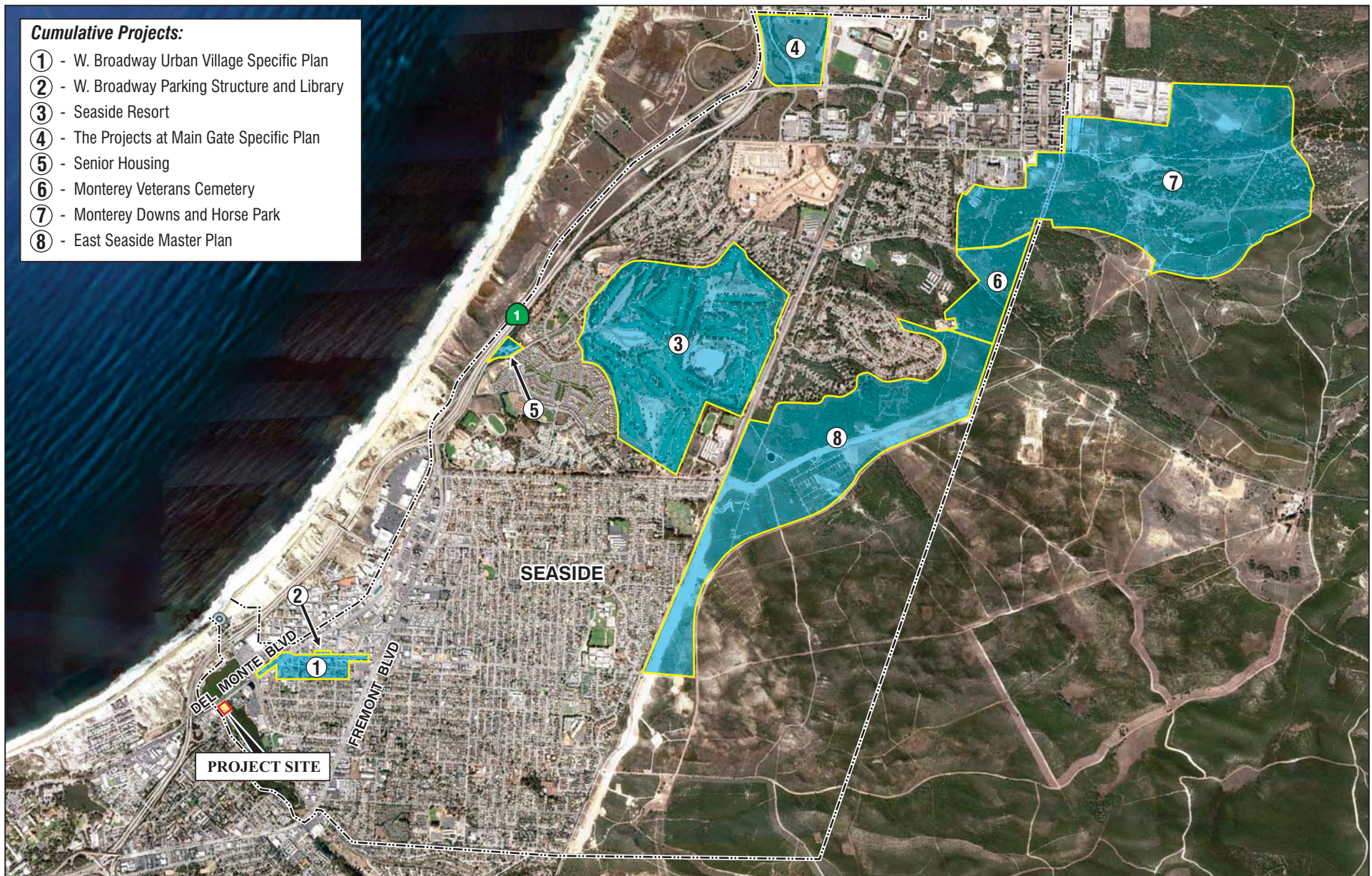
CUMULATIVE BASELINE CONDITIONS

According to the Project Applicant, the proposed project will be completed and operational by 2016. In order to determine a cumulative (2016) condition, traffic volumes for other committed and/or approved (cumulative) developments were added to the existing baseline traffic volumes. Prior to the preparation of this analysis, LSA Associates, Inc. (LSA) obtained a list of approved/pending projects from the City Planning Department. A description of the cumulative projects, the respective trip generation, and the trip assignment through the study area intersections are provided in Appendix C. Eight cumulative projects were included as part of this analysis. The locations of these projects are provided in Figure 5. The eight cumulative projects are as follows:

1. West Broadway Urban Village Specific Plan
2. West Broadway Parking Structure and Library
3. Seaside Resort (Seaside Resort, LLC)
4. The Projects at Main Gate Specific Plan (adopted August 2010)
5. Senior Housing
6. Monterey Veterans Cemetery
7. Monterey Downs and Horse Park
8. East Seaside Master Plan

The trip generation, distribution, and assignment for cumulative projects 1 through 4 were based on traffic studies previously prepared. For cumulative projects 5 and 6, the trip generation, distribution, and assignment were based on the Institute of Transportation Engineers *Trip Generation* manual (9th Edition, 2012), as well as each project's location in relation to local/regional transportation facilities and origins/destinations. While the proposed Monterey Downs and Horse Park and the East Seaside Master Plan were considered in the cumulative projects list (projects 7 and 8), they are not included in the cumulative trip generation. These projects are not anticipated to be completed prior to the In-N-Out Burger drive-through restaurant project opening year (2016). Furthermore, based on review of these cumulative project locations, trips from these projects would affect intersections outside of the project study area.

Cumulative a.m. and p.m. peak-hour traffic volumes are shown in Figure 6.



- Cumulative Projects:**
- ① - W. Broadway Urban Village Specific Plan
 - ② - W. Broadway Parking Structure and Library
 - ③ - Seaside Resort
 - ④ - The Projects at Main Gate Specific Plan
 - ⑤ - Senior Housing
 - ⑥ - Monterey Veterans Cemetery
 - ⑦ - Monterey Downs and Horse Park
 - ⑧ - East Seaside Master Plan

LSA

FEET

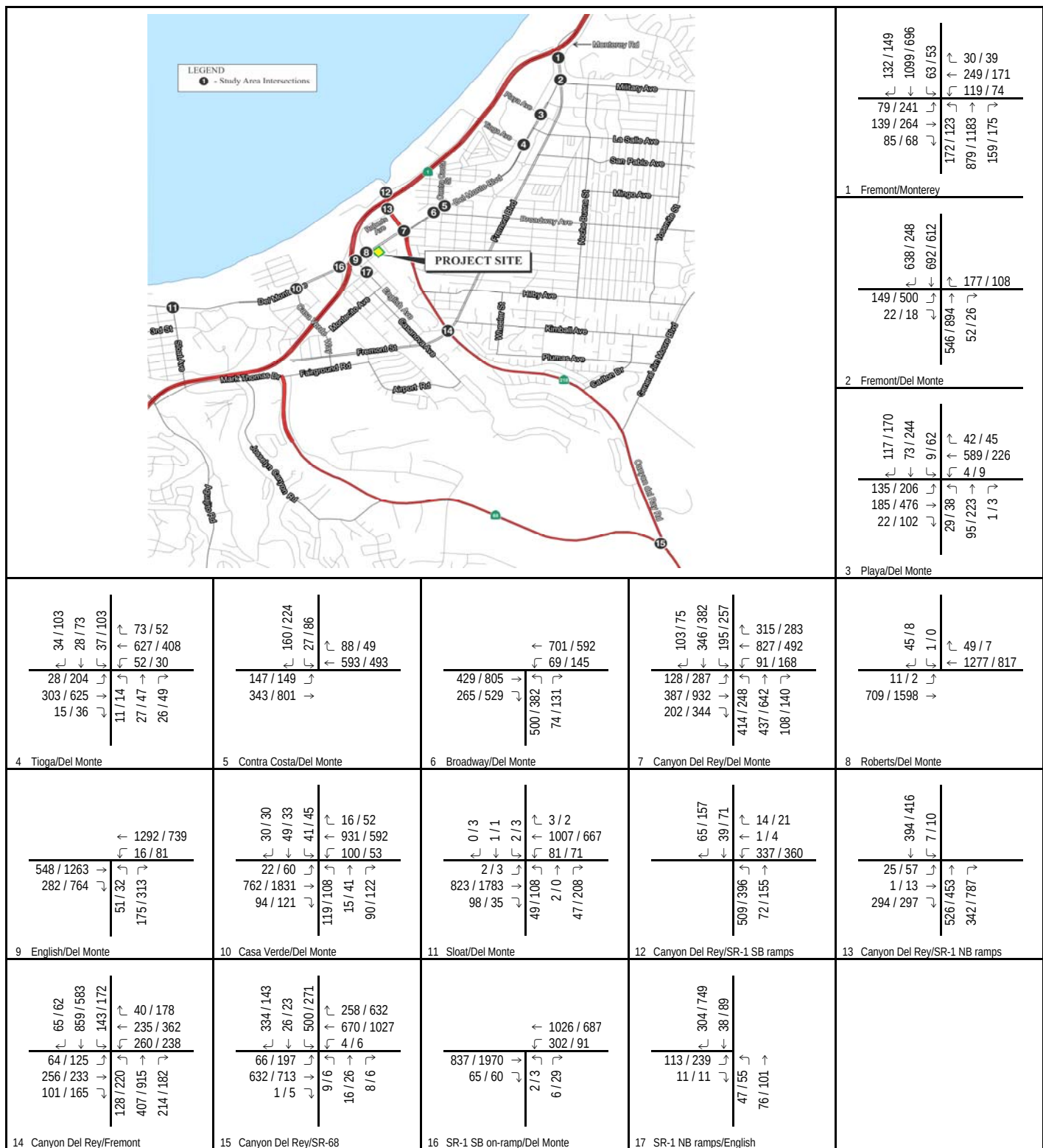
SOURCE: Google Earth

LEGEND

----- - Seaside City Boundary

FIGURE 5

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LSA

FIGURE 6

123 / 456 AM / PM Volume

In-N-Out Burger Drive-Through Restaurant
Cumulative Peak-Hour Traffic Volumes

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Table B summarizes the results of the cumulative a.m. and p.m. peak-hour LOS analyses for all study area intersections. The LOS worksheets are provided in Appendix D.

Table B: Cumulative Level of Service Summary

Intersection		Traffic Control	Baseline			
			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Fremont Blvd/Monterey Rd	Signal	37.8¹	D¹	38.7¹	D¹
2	Fremont Blvd/Del Monte Blvd	TWSC	114.1¹	F¹	1,176.6¹	F¹
3	Playa Ave/Del Monte Blvd	Signal	32.0	C	35.4¹	D¹
4	Tioga Ave/Del Monte Blvd	Signal	26.1	C	31.4	C
5	Contra Costa St/Del Monte Blvd	Signal	17.1	B	14.4	B
6	Broadway Ave/Del Monte Blvd	Signal	19.9	B	23.3	C
7	Canyon del Rey Blvd/Del Monte Blvd	Signal	13.1	B	11.7	B
8	Roberts Ave/Del Monte Blvd	Signal	16.0	C	11.2	B
9	English Ave/Del Monte Blvd	Signal	9.2	A	16.0	B
10	Casa Verde Way/Del Monte Blvd	Signal	27.9	C	21.6	C
11	Sloat Ave/Del Monte Blvd ²	Signal	10.2	B	21.4	C
12	Canyon del Rey Blvd/SR-1 SB ramps	Signal	26.5	C	34.5	C
13	Canyon del Rey Blvd/SR-1 NB ramps	TWSC	14.8	B	15.4	C
14	Canyon del Rey Blvd/Fremont Blvd	Signal	32.6	C	37.7¹	D¹
15	Canyon del Rey Blvd/SR-68	Signal	27.3	C	34.1	C
16	SR-1 SB on-ramp/Del Monte Blvd	TWSC	25.5³	D³	36.2³	E³
17	SR-1 NB ramps/English Ave	TWSC	10.4	B	13.2	B

Notes: Delay is reported in seconds.

For signalized intersections, delay is the average control delay for the whole intersection.

For TWSC intersections, delay is the worst-case minor street approach delay.

The City and Caltrans consider signalized intersections operating at LOS C or better to be satisfactory LOS.

The City considers TWSC intersections operating at LOS E or better to be satisfactory LOS.

¹ Exceeds the City's LOS criteria

² The City of Monterey considers LOS D as the standard at this intersection.

³ Caltrans considers intersections operating at LOS D to be deficient.

City = City of Seaside

LOS = level of service

NB = northbound

SB = southbound

SR = State Route

TWSC = two-way stop-controlled

As Table B indicates, all study area intersections are forecast to operate at acceptable LOS during both peak hours in the cumulative baseline condition, with the exception of the following:

- Fremont Boulevard/Monterey Road (LOS D during both peak hours)
- Fremont Boulevard/Del Monte Boulevard (LOS F during both peak hours)
- Playa Avenue/Del Monte Boulevard (LOS D during the p.m. peak hour)
- Canyon Del Rey Boulevard/Fremont Boulevard (LOS D during the p.m. peak hour)
- SR-1 southbound on-ramp/Del Monte Boulevard (LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)

PROJECT CONDITIONS

Trip Generation

The proposed project considers the construction of a 3,750 sf, 159-seat, In-N-Out Burger drive-through restaurant. In order to determine the trip rates for the proposed project, National Data & Surveying Services (NDS) conducted trip generation surveys at an existing In-N-Out Burger in the City of Salinas, which is similar to the proposed project in size and layout (2,912 sf and 151 seats). The trip generation surveys were collected on two typical weekdays (Tuesday, August 17, 2010, and Wednesday, August 18, 2010) during normal hours of operation (10:30 a.m. to 1:00 a.m.).

Fast-food restaurants generally generate more trips on a weekend day than on weekdays. However, the traffic analysis provides an evaluation of the adjacent streets during weekday peak hours, when ambient traffic is highest. Although the peak hour of trip generation for the In-N-Out Burger may occur on a Saturday or Sunday, traffic on the adjacent streets is usually lower on weekend days when compared to the weekday peak commute hours. Evaluation of weekend conditions is likely to result in better LOS; therefore, the worst-case weekday peak-hour conditions are evaluated to provide a more conservative analysis of the operation of adjacent streets. It should be noted that some In-N-Out Burger restaurant patrons will be making an intermediate stop (i.e., pass-by trip) between an origin and a destination. Although pass-by trips are not new trips on the circulation system, no adjustments/reductions have been made to the project trip generation to present a conservative analysis.

The 2-day survey data were averaged to determine the Salinas In-N-Out Burger trip generation. The In-N-Out Burger trip generation surveys are provided in Appendix A. The daily and peak-hour trips for the proposed project were calculated using the surveyed trip rates, as presented in Table C.

As Table C indicates, the proposed In-N-Out Burger is forecast to generate approximately 2,251 average daily traffic (ADT) trips, 22 a.m. peak-hour trips (19 inbound and 3 outbound), and 172 p.m. peak-hour trips (83 inbound and 89 outbound).

Table C: In-N-Out Burger Trip Generation Summary

Land Use	Size	Unit	ADT Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Observed Trip Generation ¹									
In-N-Out Burger	151	seats	2,138	19	3	22	79	84	163
Observed Trip Rates ²									
In-N-Out Burger		seats	14.16	0.12	0.02	0.14	0.52	0.56	1.08
Project Trip Generation									
In-N-Out Burger	159	seats	2,251	19	3	22	83	89	172

¹ The observed trip generation is based on trip generation surveys of an existing In-N-Out Burger drive-through restaurant in the City of Salinas. NDS conducted these surveys on Tuesday and Wednesday, August 17 and 18, 2010. There are two shifts per day and approximately 16 employees per shift. Employees on the first shift arrive in the a.m. peak hour (inbound trips only) and leave at the end of the shift (outbound trips occur outside of the a.m. and p.m. peak hours). Employees on the second shift arrive and leave outside of the a.m. and p.m. peak hours. It is anticipated that a maximum of three deliveries would occur in the a.m. peak hour.

² The a.m. peak-hour trip rates are based on estimated employees and deliveries. ADT and p.m. peak-hour trip rates are based on the NDS trip generation surveys.

ADT = average daily traffic

NDS = National Data & Surveying Services

Trip Distribution and Assignment

Trip distribution for the proposed project was based on proximity to major arterials (i.e., SR-1, SR-68, Del Monte Boulevard, and Canyon del Rey Boulevard). Project traffic volumes for vehicles both entering and exiting the proposed project site were distributed to the adjacent street system accordingly. Figure 7 shows the regional project trip distribution for the proposed project as well as the resulting project trip assignment for the study area intersections. As shown in the figure, approximately 25 percent of the project trips are destined west via Del Monte Boulevard, 15 percent are destined southwest via SR-1, 15 percent are destined southeast via Canyon del Rey Boulevard and SR-68, 25 percent are destined east via Broadway Avenue, and 20 percent are destined north via SR-1.

EXISTING PLUS PROJECT CONDITIONS

In order to determine the existing plus project conditions, the traffic generated by the proposed project was added to the existing baseline traffic volumes at the study area intersections. Figure 8 shows the resulting existing plus project a.m. and p.m. peak-hour traffic volumes. The existing plus project peak-hour LOS analysis is presented in Table D. The LOS worksheets are provided in Appendix E.

Table D: Existing Plus Project Level of Service Summary

Intersection		Traffic Control	Baseline				Plus Project				Peak-Hour	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Δ in Delay	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1	Fremont Blvd/Monterey Rd	Signal	37.6 ¹	D ¹	38.4 ¹	D ¹	37.6 ¹	D ¹	38.5 ¹	D ¹	0.0	0.1
2	Fremont Blvd/Del Monte Blvd	TWSC	102.5 ¹	F ¹	1,092.6 ¹	F ¹	102.5 ¹	F ¹	1,125.6 ²	F ²	0.0	33.0 ²
	<i>With Mitigation</i>	<i>Signal</i>	-	-	-	-	7.0	A	4.5	A	(95.5)	(1,121.1)
3	Playa Ave/Del Monte Blvd	Signal	32.1	C	35.4 ¹	D ¹	32.1	C	35.4 ¹	D ¹	0.0	0.0
4	Tioga Ave/Del Monte Blvd	Signal	25.4	C	31.2	C	25.4	C	31.5	C	0.0	0.3
5	Contra Costa St/Del Monte Blvd	Signal	17.2	B	14.1	B	17.2	B	14.1	B	0.0	0.0
6	Broadway Ave/Del Monte Blvd	Signal	19.2	B	20.2	C	19.2	B	20.5	C	0.0	0.3
7	Canyon del Rey Blvd/Del Monte Blvd	Signal	13.1	B	12.1	B	13.1	B	12.9	B	0.0	0.8
8	Roberts Ave/Del Monte Blvd	Signal	15.7	C	10.9	B	15.7	C	11.1	B	0.0	0.2
9	English St/Del Monte Blvd	Signal	9.3	A	15.5	B	14.1	B	15.9	B	4.8	0.4
10	Casa Verde Way/Del Monte Blvd	Signal	27.9	C	21.6	C	27.9	C	21.6	C	0.0	0.0
11	Sloat Ave/Del Monte Blvd ³	Signal	10.1	B	21.3	C	10.1	B	21.4	C	0.0	0.1
12	Canyon del Rey Blvd/SR-1 SB ramps	Signal	25.5	C	34.2	C	25.6	C	34.6	C	0.1	0.4
13	Canyon del Rey Blvd/SR-1 NB ramps	TWSC	14.2	B	14.7	B	14.3	B	14.8	B	0.1	0.1
14	Canyon del Rey Blvd/Fremont Blvd	Signal	31.6	C	36.1 ¹	D ¹	31.6	C	36.1 ¹	D ¹	0.0	0.0
15	Canyon del Rey Blvd/SR-68	Signal	27.4	C	32.6	C	27.4	C	32.5	C	0.0	(0.1)
16	SR-1 SB on-ramp/Del Monte Blvd	TWSC	23.9	C	34.2 ⁴	D ⁴	24.3	C	37.3 ⁵	E ⁵	0.4	3.1 ⁵
17	SR-1 NB ramps/English Ave	TWSC	10.4	B	13.2	B	10.4	B	13.5	B	0.0	0.3

Notes: Delay is reported in seconds.

For signalized intersections, delay is the average control delay for the whole intersection.

For TWSC intersections, delay is the worst-case minor street approach delay.

The City and Caltrans consider signalized intersections operating at LOS C or better to be satisfactory LOS. For deficient signalized intersections, the project causes an impact when it adds more than 2.0 seconds to an LOS D condition or more than 1.0 second to an LOS E or F condition.

The City considers TWSC intersections operating at LOS E or better to be satisfactory LOS. A project impact occurs at a TWSC intersection when the addition of project traffic causes the LOS to deteriorate from satisfactory to unsatisfactory, or when the addition of project traffic exacerbates unsatisfactory operations.

¹ Exceeds the City's LOS criteria

² Significant impact

³ The City of Monterey considers LOS D as the standard at this intersection.

⁴ Caltrans considers intersections operating at LOS D to be deficient.

⁵ Caltrans considers the addition of project traffic which causes an increase in delay at an intersection already operating at an unsatisfactory LOS (LOS D, E, or F) to be a significant impact.

Δ= change

SB = southbound

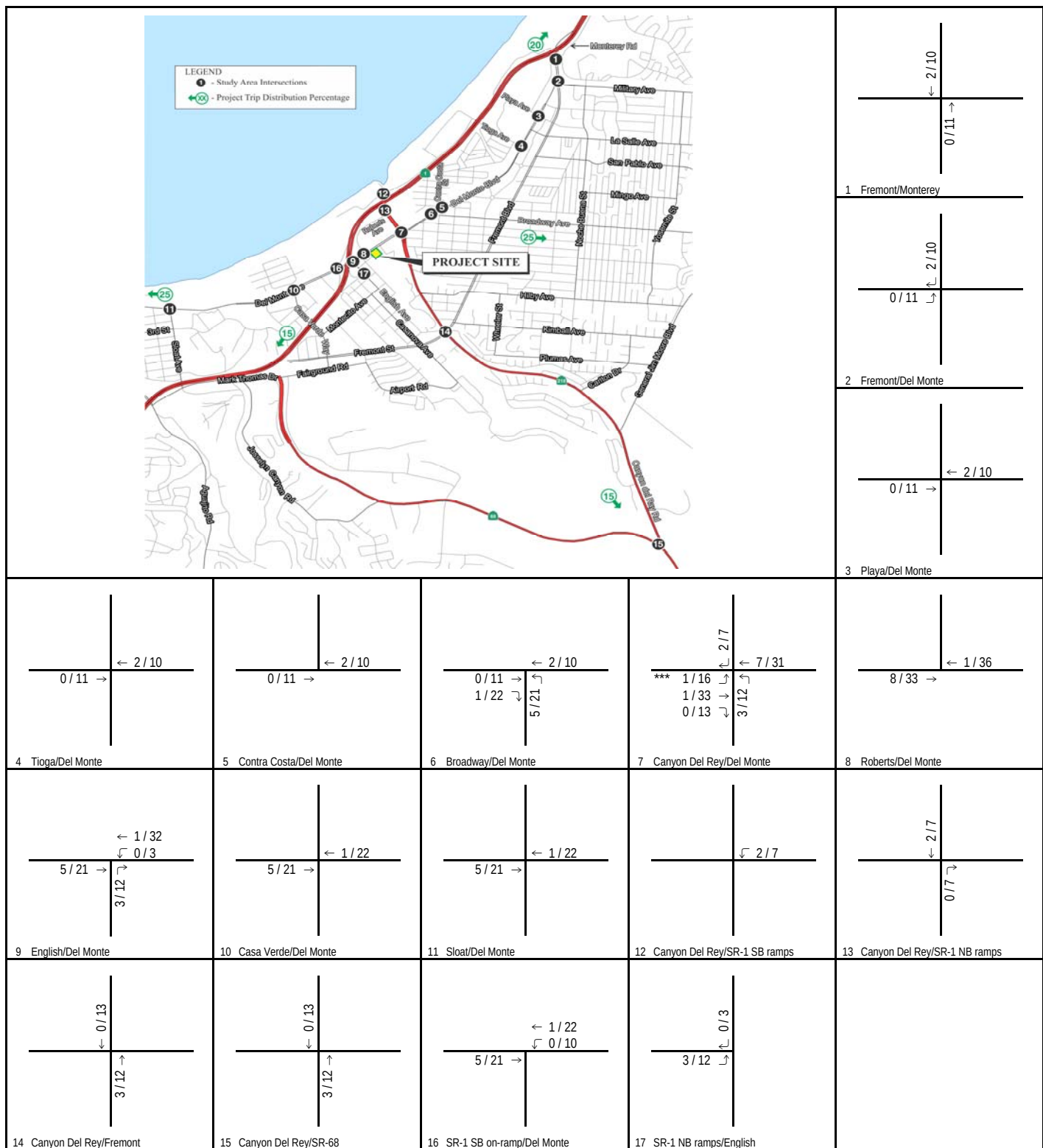
City = City of Seaside

SR = State Route

LOS = level of service

TWSC = two-way stop-controlled

NB = northbound



LSA

FIGURE 7

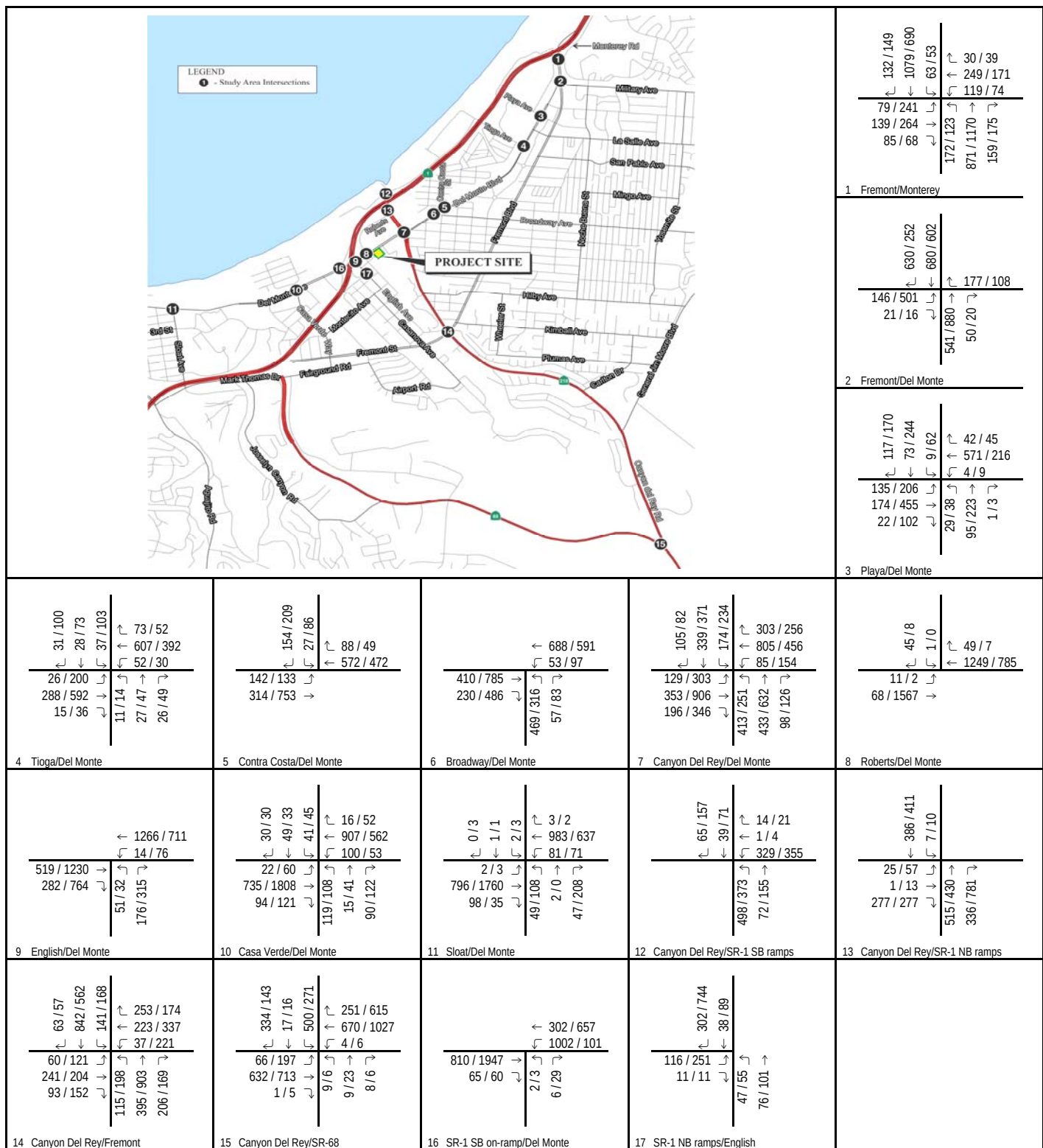
123 / 456

AM / PM Volume

*** Includes 9 U-Turns in the PM Peak Hour

In-N-Out Burger Drive-Through Restaurant
 Project Trip Distribution and Assignment

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LSA

FIGURE 8

123 / 456 AM / PM Volume

In-N-Out Burger Drive-Through Restaurant
Existing Plus Project Peak-Hour Traffic Volumes

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As Table D indicates, the proposed project would cause a significant impact at two study area intersections. The project increases the deficient 1,092.6-second delay by 33.0 seconds during the p.m. peak hour at the TWSC intersection of Fremont Boulevard/Del Monte Boulevard.¹ The proposed project also increases the deficient 34.2-second delay by 3.1 seconds during the p.m. peak hour at the TWSC intersection of the SR-1 southbound on-ramp/Del Monte Boulevard. Mitigation measures are discussed in a subsequent section.

CUMULATIVE PLUS PROJECT CONDITIONS

Traffic generated by the proposed project was added to the cumulative baseline traffic volumes at each study area intersection. Figure 9 illustrates the resulting cumulative plus project a.m. and p.m. peak-hour traffic volumes. Table E summarizes the results of the cumulative plus project a.m. and p.m. peak-hour LOS analysis for all study area intersections. The LOS worksheets are provided in Appendix F.

As Table E indicates, the proposed project would cause a significant impact at two study area intersections (similar to the existing condition). The project increases the deficient 1,176.6-second delay by 34.1 seconds during the p.m. peak hour at the TWSC intersection of Fremont Boulevard/Del Monte Boulevard. The project also increases the deficient 36.2-second delay by 4.6 seconds during the p.m. peak hour at the TWSC intersection of the SR-1 southbound on-ramp/Del Monte Boulevard. Mitigation measures are discussed in a subsequent section.

SITE ACCESS ANALYSIS

As illustrated in the site plan (Figure 2), access to the proposed project will be provided via two driveways on Del Monte Boulevard. The two project driveways are separated by approximately 150 feet (ft). The westerly driveway is located approximately 200 ft east of the unsignalized intersection at Roberts Avenue, and the easterly driveway is approximately 300 ft west of an adjacent driveway providing access to the Holiday Inn Express. The inbound and outbound peak-hour traffic volumes at the project driveways are shown in Figure 10.

A median exists along Del Monte Boulevard at the westerly project driveway, which is restricted to RIRO access only. There are no sight distance obstructions, such as on-street parking or landscaping, adjacent to the roadway along Del Monte Boulevard. Unimpeded vehicle egress/ingress is provided at the easterly full-access driveway, as a left-turn lane currently exists on Del Monte Boulevard fronting this access.

¹ LOS analyses were conducted at the Fremont Boulevard/Del Monte Boulevard intersection to see how many vehicular trips could be added to the eastbound left-turn lane before the delay increased by any amount over its current level, which is the threshold for impacts associated with an unsignalized intersection already operating at a deficient level. The LOS analysis showed that the addition of one vehicular trip in the existing plus project p.m. peak-hour scenario would add 3.0 seconds of delay. In other words, the addition of one vehicular trip would increase the existing delay of 1,092.6 seconds to 1,095.6 seconds. Therefore, adding even a single trip to the eastbound left turn would result in a significant impact to the Fremont Boulevard/Del Monte Boulevard intersection.

Table E: Cumulative Plus Project Level of Service Summary

Intersection		Traffic Control	Baseline				Plus Project				Peak-Hour	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Δ in Delay	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1	Fremont Blvd/Monterey Rd	Signal	37.8 ¹	D ¹	38.7 ¹	D ¹	37.8 ¹	D ¹	38.8 ¹	D ¹	0.0	0.1
2	Fremont Blvd/Del Monte Blvd	TWSC	114.1 ¹	F ¹	1,176.6 ¹	F ¹	114.1 ¹	F ¹	1,210.7 ²	F ²	0.0	34.1 ²
	<i>With Mitigation</i>	<i>Signal</i>	-	-	-	-	9.7	A	5.8	A	(104.4)	(1,204.9)
3	Playa Ave/Del Monte Blvd	Signal	32.0	C	35.4 ¹	D ¹	31.5	C	35.0 ¹	D ¹	(0.5)	(0.4)
4	Tioga Ave/Del Monte Blvd	Signal	26.1	C	31.4	C	26.3	C	31.0	C	0.2	(0.4)
5	Contra Costa St/Del Monte Blvd	Signal	17.1	B	14.4	B	17.0	B	14.4	B	(0.1)	0.0
6	Broadway Ave/Del Monte Blvd	Signal	19.9	B	23.3	C	20.0	B	23.4	C	0.1	0.1
7	Canyon del Rey Blvd/Del Monte Blvd	Signal	13.1	B	11.7	B	13.1	B	12.6	B	0.0	0.9
8	Roberts Ave/Del Monte Blvd	Signal	16.0	C	11.2	B	16.0	C	11.4	B	0.0	0.2
9	English St/Del Monte Blvd	Signal	9.2	A	16.0	B	14.1	B	16.3	B	4.9	0.3
10	Casa Verde Way/Del Monte Blvd	Signal	27.9	C	21.6	C	27.9	C	21.7	C	0.0	0.1
11	Sloat Ave/Del Monte Blvd ³	Signal	10.2	B	21.4	C	10.2	B	21.5	C	0.0	0.1
12	Canyon del Rey Blvd/SR-1 SB ramps	Signal	26.5	C	34.5	C	26.7	C	34.9	C	0.2	0.4
13	Canyon del Rey Blvd/SR-1 NB ramps	TWSC	14.8	B	15.4	C	14.8	B	15.6	C	0.0	0.2
14	Canyon del Rey Blvd/Fremont Blvd	Signal	32.6	C	37.7 ¹	D ¹	32.6	C	38.0 ¹	D ¹	0.0	0.3
15	Canyon del Rey Blvd/SR-68	Signal	27.3	C	34.1	C	27.3	C	34.0	C	0.0	(0.1)
16	SR-1 SB on-ramp/Del Monte Blvd	TWSC	25.5 ⁴	D ⁴	36.2 ⁴	E ⁴	25.5 ⁴	D ⁴	40.8 ⁵	E ⁵	0.0	4.6 ⁵
17	SR-1 NB ramps/English Ave	TWSC	10.4	B	13.2	B	10.4	B	13.5	B	0.0	0.3

Notes: Delay is reported in seconds.

For signalized intersections, delay is the average control delay for the whole intersection.

For TWSC intersections, delay is the worst-case minor street approach delay.

The City and Caltrans consider signalized intersections operating at LOS C or better to be satisfactory LOS. For deficient signalized intersections, the project causes an impact when it adds more than 2.0 seconds to an LOS D condition or more than 1.0 second to an LOS E or F condition.

The City considers TWSC intersections operating at LOS E or better to be satisfactory LOS. A project impact occurs at a TWSC intersection when the addition of project traffic causes the LOS to deteriorate from satisfactory to unsatisfactory, or when the addition of project traffic exacerbates unsatisfactory operations.

¹ Exceeds the City's LOS criteria

² Significant impact

³ The City of Monterey considers LOS D as the standard at this intersection.

⁴ Caltrans considers intersections operating at LOS D to be deficient.

⁵ Caltrans considers the addition of project traffic which causes an increase in delay at an intersection already operating at an unsatisfactory LOS (LOS D, E, or F) to be a significant impact.

Δ= change

City = City of Seaside

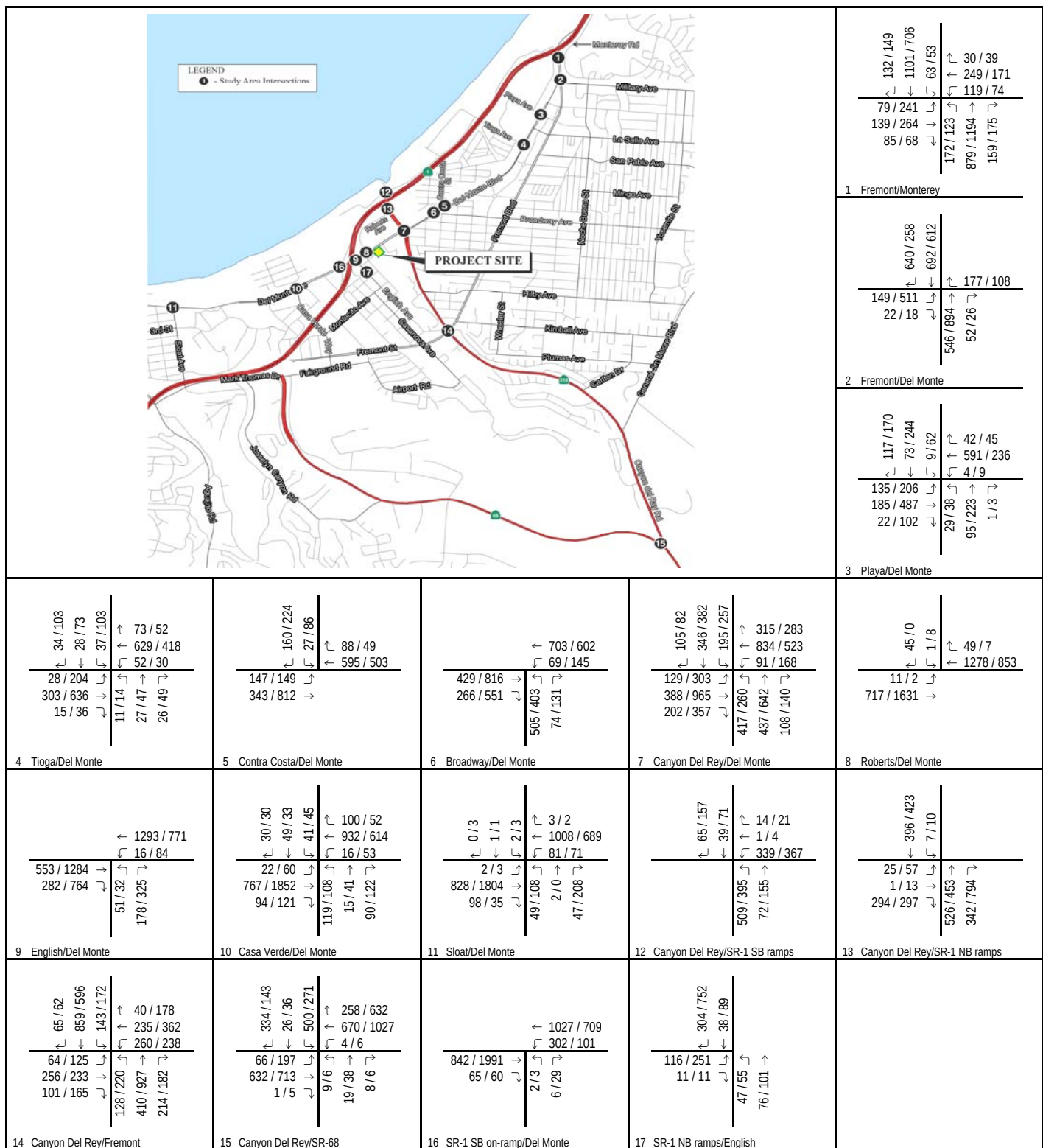
LOS = level of service

NB = northbound

SB = southbound

SR = State Route

TWSC = two-way stop-controlled



LSA

FIGURE 9

123 / 456 AM / PM Volume

In-N-Out Burger Drive-Through Restaurant
Cumulative Plus Project Peak-Hour Traffic Volumes

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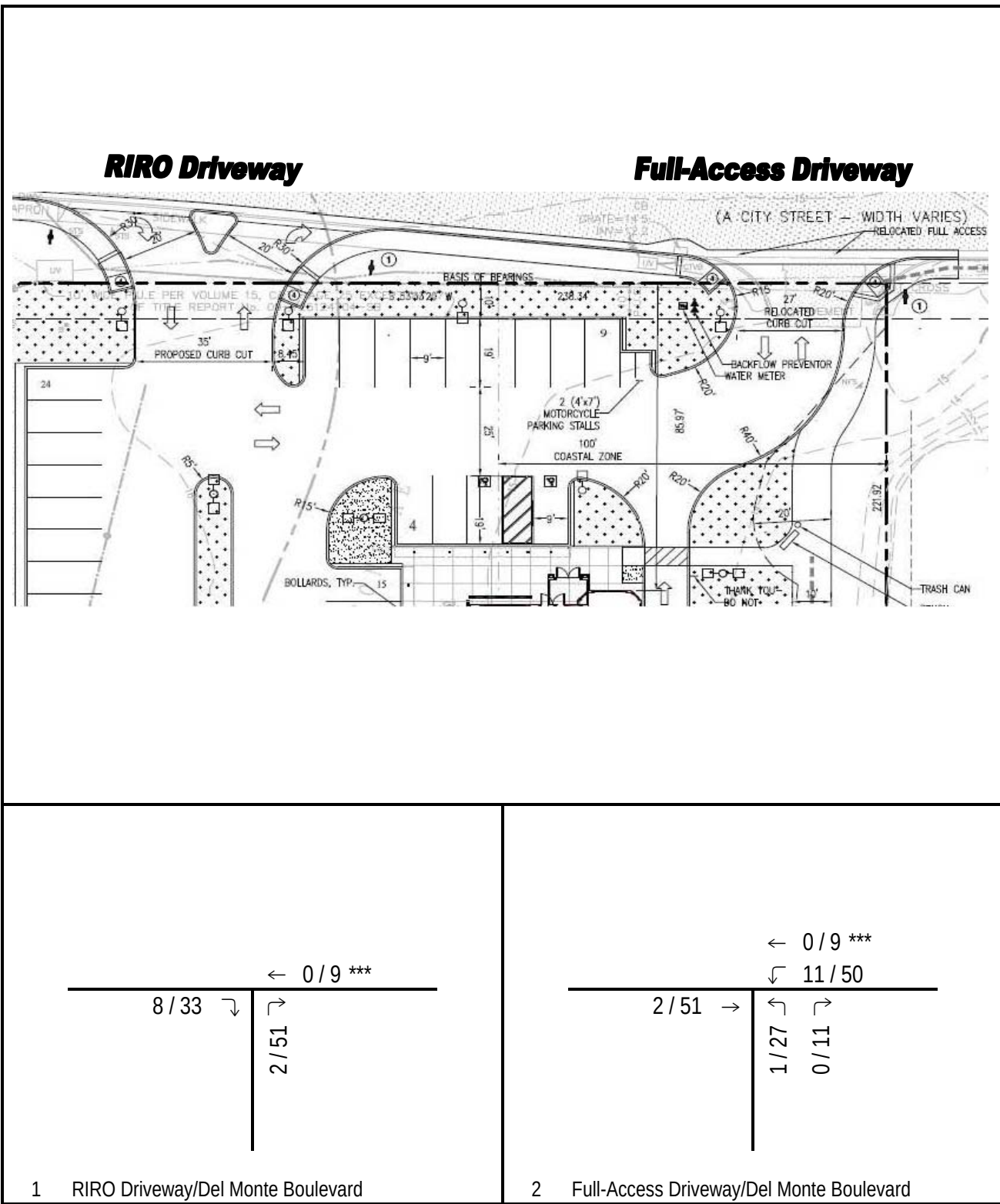


FIGURE 10

L S A
 123 / 456 AM / PM Volume
 *** U-Turn Vehicles from Canyon Del Rey Blvd/Del Monte Blvd
 In-N-Out Burger Drive-Through Restaurant
 Project Driveways Peak-Hour Traffic Volumes

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It is recommended that left-turn storage lengths for unsignalized intersections be designed to provide 1 ft per vehicle, based on the total hourly left-turning volume. This standard is based on the Oregon State University Transportation Research Institute *Discussion Paper No. 10 Left-Turn Bays* (1996). The existing left-turn lane is 100 ft long on Del Monte Boulevard. Therefore, adequate storage length is provided to accommodate a peak hour left-turn volume of 100 vehicles, which is adequate for the 50 left-turning p.m. peak-hour vehicles at the full-access driveway. This left-turn lane would remove left-turning inbound/outbound vehicles from the through lanes and store those vehicles in the median area until an acceptable gap is available.

The throat length at both project driveways is approximately 50 ft (measured from Del Monte Boulevard to the first parking space on site). The parking lot drive aisle along the RIRO driveway is approximately 200 ft from Del Monte Boulevard to the back of the drive-through lane. The parking lot drive aisle between the two project driveways is approximately 115 ft. Based on the recommended throat length in Figure 10-15 of the Transportation Research Board (TRB) *Access Management Manual* (2003), the driveways should provide approximately 50 ft of vehicle storage. The throat lengths of 50 ft at the RIRO and full-access driveways, as well as the two parking lot drive aisles (i.e., an additional 200 and 115 ft of storage at the RIRO and full-access driveways, respectively), are of sufficient length so that vehicles may enter, exit, or circulate on site without interfering with traffic on Del Monte Boulevard. Based on a vehicle length of 25 ft, approximately 16 vehicles could be stacked in the parking area and driveways in addition to the 14 vehicles that could be accommodated in the drive-through lane.

A peak-hour queuing and LOS summary of the TWSC project driveways is provided in Table F. The existing plus project and cumulative plus project queuing and LOS analysis worksheets are provided in Appendix G. As shown in Table F, both project driveways are forecast to operate at satisfactory LOS E or better. A maximum outbound queue of 23 ft (LOS E) occurs at the full-access driveway during the p.m. peak hour under cumulative plus project conditions. Based on 165 ft of total storage length at the full-access driveway (50 ft driveway throat and 115 ft parking lot drive aisle), the outbound queue could be accommodated on site. Vehicles on Del Monte Boulevard would not experience additional delay due to inbound/outbound In-N-Out Burger traffic.

Although some drivers may utilize local-serving streets to access the proposed project site, the additional traffic at these locations will be minimal. Deliveries (i.e., loading/unloading of lumber and supplies) at the M & S Building Supply and Home Center often occur along Myers Street, Encina Avenue, and Virgin Street; therefore, providing inefficient access to the proposed In-N-Out Burger restaurant.

The adjacent residential streets are relatively low-speed (i.e., 25 mph) and narrow, connecting TWSC, AWSC, and roundabout intersections. These streets would primarily serve the local neighborhood, and due to the circuitous routes and traffic control, minimal cut-through In-N-Out Burger traffic is anticipated.

In the event that drivers miss the driveway entrances to the proposed In-N-Out Burger restaurant, U-turns can be accommodated at the upstream and downstream intersections of Canyon del Rey Boulevard/Del Monte Boulevard and Casa Verde Way/Del Monte Boulevard, respectively.

Table F: Project Driveways Queuing and Level of Service Summary

Intersection	Traffic Control	AM Peak Hour					PM Peak Hour				
		Inbound (Left Turn)		Outbound		LOS	Inbound (Left Turn)		Outbound		LOS
		Queue	Delay	Queue	Delay		Queue	Delay	Queue	Delay	
Full-Access Driveway/Del Monte Blvd	TWSC										
Existing plus Project		0	0.1	0	18.3	C	10	0.9	20	36.1	E
Cumulative plus Project		0	0.1	0	18.9	C	13	0.9	23	40.0	E
RIRO Driveway/Del Monte Blvd	TWSC										
Existing plus Project		-	-	0	10.5	B	-	-	13	17.8	C
Cumulative plus Project		-	-	0	10.7	B	-	-	15	18.8	C

Notes:

Queue is reported in feet. A queue of 25 feet represents 1 vehicle.

Delay is reported in seconds. For TWSC intersections, LOS is based on the worst-case minor street approach delay, in this case the outbound delay.

City = City of Seaside

RIRO = right-in/right-out

TWSC = two-way stop-controlled

DRIVE-THROUGH QUEUING ANALYSIS

In order to determine the potential vehicle queues in the drive-through lane, queuing observations were conducted at an existing In-N-Out Burger location similar to the proposed project. NDS conducted queuing surveys at the Salinas In-N-Out Burger on two typical weekdays (Tuesday, August 17, 2010, and Wednesday, August 18, 2010) during the lunch (11:00 a.m. to 1:00 p.m.), dinner (5:00 p.m. to 7:00 p.m.), and late-night (9:00 p.m. to 11:00 p.m.) hours. The 2-day survey data were averaged. The In-N-Out Burger drive-through queuing surveys are provided in Appendix A.

The maximum number of vehicles queued from the pick-up window to the end of the queue was 17 vehicles at the existing 151-seat Salinas In-N-Out Burger location. Application of the observed queue to the proposed 159-seat In-N-Out Burger restaurant results in a maximum potential drive-through queue of 18 vehicles. The proposed drive-through lane would provide enough distance for 14 vehicles (10 vehicles from the pick-up window to the menu order board, and 4 vehicles from the menu order board to the back of the drive-through lane). The RIRO driveway and parking lot drive aisle are approximately 250 ft between Del Monte Boulevard and the back of the drive-through lane, which provides room for up to 10 vehicles to queue in the parking area. Therefore, the maximum drive-through queue of 18 vehicles could be accommodated within the 14-vehicle drive-through lane and the adjacent parking lot drive aisle without backing out onto Del Monte Boulevard.

During the peak hours, it is possible that the drive-through queue could interfere with parking maneuvers in the lot. However, the queuing data collected at the Salinas In-N-Out Burger location, provided in Appendix A, show that peak queues are usually reduced to a number of vehicles that could be accommodated in the drive-through lane within a 5-minute period. Therefore, minor delays associated with drive-through queuing would be localized and temporary. In addition, the proposed In-N-Out location may provide a service person to take customer orders rather than depend upon the menu board to improve traffic flow and service times during peak periods.

PARKING DEMAND ANALYSIS

The proposed In-N-Out Burger restaurant will have a parking supply of 53 spaces. In order to determine whether adequate parking will be provided for the proposed project, parking demand surveys were conducted at the existing Salinas In-N-Out Burger on two typical weekdays (Tuesday, August 17, 2010, and Wednesday, August 18, 2010) during normal hours of operation (10:30 a.m. to 1:00 a.m.). The In-N-Out Burger drive-through parking demand surveys are provided in Appendix A. Based on the average of the 2-day survey data, the maximum number of parked vehicles was 43 vehicles for the 151-seat Salinas In-N-Out Burger location. Applying the observed parking demand to the proposed 159-seat Seaside In-N-Out Burger restaurant would result in a parking demand of 46 parking spaces. Therefore, the 53-space parking supply is adequate for the proposed project. Seaside In-N-Out Burger restaurant patrons would not have to park along residential streets or in the M & S Building Supply and Home Center lot.

LSA also generated the parking requirement for the proposed project, consistent with the City Code parking rate of 1 space per 3 seats for restaurant use. Based on the City Code, the proposed 159-seat In-N-Out Burger restaurant would require a total of 53 parking spaces. Therefore, the proposed project could accommodate the forecasted 46-space parking demand and is consistent with the City's parking requirement of 53 spaces.

PEDESTRIAN AND BICYCLE PATHS

Sidewalks and pedestrian/bicycle paths currently exist along Del Monte Boulevard (i.e., the Monterey Bay Coastal Bike Path) and around Laguna Grande Regional Park and Lake and Roberts Lake (located north and east of the project site) that provide linkages to the proposed project. Grant Avenue, a local area-serving street south of the proposed project site, links with the existing Class I pedestrian/bicycle trail on the west side of Laguna Grande Regional Park and Lake. The proposed project will provide a pedestrian/bicycle trail along the northeast boundary of the site connecting the sidewalks along Del Monte Boulevard with an existing pedestrian/bicycle trail along the southern boundary of the site, which loops around Laguna Grande Regional Park and Lake. Therefore, the proposed project site is accessible via walking/biking from all neighborhood and regional locations.

The proposed project will also provide bicycle racks on site to promote alternative, nonautomotive means of transportation. All pedestrian/bicycle amenities will be designed to comply with applicable design criteria and increase connectivity to the existing circulation network. Where modes intersect (i.e., streets, sidewalks, and paths), accessible ramps will be incorporated. Safe access from the proposed project to the public street system (via Del Monte Boulevard) is currently provided. This is an important feature, as transit stops are located within close proximity to the project site (i.e., English Avenue/Del Monte Boulevard). Adjacent land uses include retail/commercial uses and employment centers. All these land use types are accessible by nonautomotive means.

MITIGATION MEASURES

The traffic analysis identifies a deficiency at the TWSC intersection of Fremont Boulevard/Del Monte Boulevard. This intersection is deficient in both the existing and cumulative baseline (no project) conditions. The addition of project traffic results in an increase of 33.0 seconds and 34.1 seconds to the average control delay at the intersection during the p.m. peak hour in the existing plus project and cumulative plus project conditions, respectively. However, Caltrans approved the *SR-1 Project Study Report* (PSR) in 2002, which identified several improvements to SR-1, Fremont Boulevard, and Del Monte Boulevard, including signalization of Fremont Boulevard/Del Monte Boulevard. As shown in Tables D and E, installation of a traffic signal would improve the p.m. peak-hour delay at Fremont Boulevard/Del Monte Boulevard to 4.5 seconds (LOS A) in the existing plus project condition and 5.8 seconds (LOS A) in the cumulative plus project condition, respectively. The mitigated LOS worksheets are provided in Appendix H.

At present, there is no plan to fund this signalization. Until and unless the signalization is programmed in a Capital Improvement Plan or similar City plan, the implementation of this signalization cannot be guaranteed or assumed. At this time, the City has not adopted a traffic impact fee program or other mechanism for collecting impact fees as a means of mitigating transportation impacts. A regional traffic impact fee program is in place and is administered by the Transportation Agency for Monterey County (TAMC); however, fees paid into this regional program are not used to mitigate impacts to local intersections. As a result, there is no mechanism at this time for a fair-share contribution to the signalization of Fremont Boulevard/Del Monte Boulevard. The only mitigation that would avoid the significant unavoidable impacts to the Fremont Boulevard/Del Monte Boulevard intersection would be full signalization of this intersection. The City, as Lead Agency, only has the constitutional legal authority to require mitigation that is roughly proportional to the impact of the proposed project (CEQA Guidelines 15126.4(a)(4)(B)) and the proposed project's impacts do not

merit a mitigation measure that requires full funding for a traffic signal at the Fremont Boulevard/Del Monte Boulevard intersection. Therefore, there is no feasible mitigation to avoid the significant and unavoidable impact identified for the Fremont Boulevard/Del Monte Boulevard intersection.

With respect to the SR-1 southbound on-ramp/Del Monte Boulevard intersection, an increase of 3.1 seconds and 4.6 seconds to the deficient delay at this intersection during the p.m. peak hour in the existing plus project and cumulative plus project conditions, respectively, would constitute a significant impact. The Caltrans threshold states that any increase in delay at an intersection already operating at an unsatisfactory LOS constitutes a significant impact.

The proposed project would add approximately 53 p.m. peak-hour project vehicles at the SR-1 southbound on-ramp/Del Monte Boulevard intersection. The additional project vehicles represent only 1.89 percent of the total existing plus project volume of 2,797 p.m. peak hour vehicles. Based on previous discussions with Caltrans, the Caltrans District 5 Traffic Engineer concluded that because the increase in delay is nominal relative to the total amount of traffic at this intersection, this increase in delay would not result in impacts to the operation or function of this intersection. In addition, mitigation would be neither warranted nor feasible. Because there is no feasible mitigation to address the project-related impact to the SR-1 southbound on-ramp/Del Monte Boulevard intersection, the impact is significant and unavoidable.

CONCLUSIONS

Based on the results of this TIA, the proposed construction of a 3,750 sf In-N-Out Burger drive-through restaurant on the proposed project site would result in significant and unavoidable impacts at the intersections of Fremont Boulevard/Del Monte Boulevard and the SR-1 southbound on-ramp/Del Monte Boulevard. The project is not expected to cause queuing onto the public street, and would provide adequate on-site circulation and parking capacity.

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APPENDIX A

EXISTING COUNTS AND SURVEYS

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PEAK HOUR ITM SUMMARY

#001 Fremont Blvd & Monterey Blvd

LOCATION#:	001	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Fremont Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Monterey Blvd	VICINITY:	Seaside	PM PEAK:	445 PM

Fremont Blvd

SOUTHBOUND LANES			
LN	1	2	1
AM	132	1077	63
MD	0	0	0
PM	149	680	53
TOTAL	281	1757	116



Monterey Blvd

LN	1.5	0.5	1	AM	MD	PM	TOTAL
EASTBOUND LANES	79	139	85	0	0	0	241
WESTBOUND LANES	241	403	153	0	0	0	320

SIGNALIZED

LN	1	0.5	1.5	AM	MD	PM	TOTAL
EASTBOUND LANES	30	0	0	0	0	0	30
WESTBOUND LANES	249	171	69	0	0	0	420

Monterey Blvd

NORTHBOUND LANES			
LN	1	2	0
AM	172	871	159
MD	0	0	0
PM	123	1159	175
TOTAL	295	2030	334

Fremont Blvd

 **QUALITY TRAFFIC DATA, LLC**
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Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#002 Fremont Blvd & Del Monte Blvd–Military Ave

LOCATION#:	002	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Fremont Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Del Monte Blvd–Military Ave	VICINITY:	Seaside	PM PEAK:	445 PM

Fremont Blvd

SOUTHBOUND LANES			
LN	0	2	0
AM	628	680	0
MD	0	0	0
PM	242	602	0
TOTAL	870	1282	0



Del Monte Blvd–Military Ave

LN	1	0	0	AM	MD	PM	TOTAL
EASTBOUND LANES	146	0	0	0	0	0	490
WESTBOUND LANES	0	0	0	0	0	0	0

2-WAY STOP (E/W)

LN	1	0	0	AM	MD	PM	TOTAL
EASTBOUND LANES	177	0	0	0	0	0	177
WESTBOUND LANES	0	0	0	0	0	0	0

Del Monte Blvd–Military Ave

NORTHBOUND LANES			
LN	0	2	0
AM	0	541	50
MD	0	0	0
PM	0	880	20
TOTAL	0	1421	70

Fremont Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#003 Del Monte Blvd & Playa Ave

LOCATION#:	003	QTD PROJ#:	2014222	AM PEAK:	800 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Playa Ave	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	42	569	4	
MD	0	0	0	
PM	45	206	0	
TOTAL	87	775	13	



Playa Ave

EAST BOUND LANES	LN	AM	MD	PM	TOTAL
	1	9	0	62	71
	1	73	0	244	317
	1	117	0	170	287

SIGNALIZED

WESTBOUND LANES				
TOTAL	PM	MD	AM	LN
4	2	0	1	0.5
318	223	0	95	1.5
67	38	0	29	1

Playa Ave

NORTHBOUND LANES				
TOTAL	PM	MD	AM	LN
341	618	124		
206	444	102		
0	0	0		
135	174	22		
2	1.5	0.5		

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#004 Del Monte Blvd & Tioga Ave

LOCATION#:	004	QTD PROJ#:	2014222	AM PEAK:	800 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Tioga Ave	VICINITY:	Seaside	PM PEAK:	415 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	73	605	52	
MD	0	0	0	
PM	52	382	30	
TOTAL	125	987	82	



Tioga Ave

EAST BOUND LANES	LN	AM	MD	PM	TOTAL
	1	37	0	109	140
	1	28	0	73	101
	1	31	0	100	131

SIGNALIZED

WESTBOUND LANES				
TOTAL	PM	MD	AM	LN
75	49	0	26	0.5
74	47	0	27	0.5
25	14	0	11	1

Tioga Ave

NORTHBOUND LANES				
TOTAL	PM	MD	AM	LN
226	869	51		
200	581	36		
0	0	0		
26	288	15		
1	2	0		

Del Monte Blvd

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Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#005 Del Monte Blvd & Contra Costa St

LOCATION#:	005	QTD PROJ#:	2014222	AM PEAK:	745 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Contra Costa St	VICINITY:	Seaside	PM PEAK:	415 PM

Del Monte Blvd

SOUTHBOUND LANES			
LN	0	2	0
AM	88	570	0
MD	0	0	0
PM	49	462	0
TOTAL	137	1032	0



Contra Costa St

EASTBOUND LANES				
LN	1	27	0	86
AM	0	0	0	0
MD	1	154	0	209
PM				
TOTAL				

SIGNALIZED				
------------	--	--	--	--

WESTBOUND LANES				
LN	0	0	0	0
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0
TOTAL				

Contra Costa St

NORTHBOUND LANES			
LN	1	1	0
AM	142	314	0
MD	0	0	0
PM	133	742	0
TOTAL	275	1056	0

Del Monte Blvd

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#006 Del Monte Blvd & Broadway Ave

LOCATION#:	006	QTD PROJ#:	2014222	AM PEAK:	745 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Broadway Ave	VICINITY:	Seaside	PM PEAK:	415 PM

Del Monte Blvd

SOUTHBOUND LANES			
LN	0	2	1
AM	0	686	53
MD	0	0	0
PM	0	581	97
TOTAL	0	1267	150



Broadway Ave

EASTBOUND LANES				
LN	0	0	0	0
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0
TOTAL				

SIGNALIZED				
------------	--	--	--	--

WESTBOUND LANES				
LN	1	140	83	0
AM	0	0	0	0
MD	2	759	295	0
PM				
TOTAL				

Broadway Ave

NORTHBOUND LANES			
LN	0	2	0
AM	0	410	229
MD	0	0	0
PM	0	774	464
TOTAL	0	1184	693

Del Monte Blvd

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#007 Del Monte Blvd & Canyon Del Rey Blvd

LOCATION#:	007	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Canyon Del Rey Blvd	VICINITY:	Seaside	PM PEAK:	430 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	1	2	1	
AM	303	798	85	
MD	0	0	0	
PM	256	425	154	
TOTAL	559	1223	239	



Canyon Del Rey Blvd

EASTBOUND LANES				
LN	1	2	1	
AM	174	0	234	408
MD	339	0	371	710
PM	103	0	75	178

SIGNALIZED

WESTBOUND LANES				
LN	1	2	1	
AM	224	126	0	98
MD	1065	632	0	433
PM	649	239	0	430

Canyon Del Rey Blvd

NORTHBOUND LANES				
LN	1	2	1	
AM	415	1225	529	
MD	287	873	333	
PM	0	0	0	
TOTAL	128	352	196	

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#008 Del Monte Blvd & Roberts Ave

LOCATION#:	008	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	Roberts Ave	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	0	
AM	49	1248	0	
MD	0	0	0	
PM	7	749	0	
TOTAL	56	1997	0	



Roberts Ave

EASTBOUND LANES				
LN	1	2	1	
AM	0.5	1	0	1
MD	0	0	0	0
PM	0.5	45	0	53

1-WAY STOP (WB)

WESTBOUND LANES				
LN	1	2	1	
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0

Roberts Ave

NORTHBOUND LANES				
LN	1	1	0	
AM	13	2287	0	
MD	2	1534	0	
PM	0	0	0	
TOTAL	11	673	0	

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#009 Del Monte Blvd & English Ave

LOCATION#:	009	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	English Ave	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	0	1265	14	
MD	0	0	0	
PM	0	679	73	
TOTAL	0	1944	87	



English Ave

EASTBOUND LANES				
LN	0	0	0	0
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0
TOTAL	0	0	0	0

SIGNALIZED

WESTBOUND LANES				
TOTAL	476	303	0	173
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0
LN	0	0	0	0

English Ave

NORTHBOUND LANES				
LN	0	2	1	
AM	0	1209	764	
MD	0	0	0	
PM	0	514	282	
TOTAL	0	1723	1046	

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#010 Del Monte Blvd & Casa Verde Way

LOCATION#:	010	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	Casa Verde Way	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	16	906	100	
MD	0	0	0	
PM	52	540	53	
TOTAL	68	1446	153	



Casa Verde Way

EASTBOUND LANES				
LN	1	41	0	45
AM	1	49	0	33
MD	1	30	0	30
PM	1	30	0	30
TOTAL	1	41	0	45

SIGNALIZED

WESTBOUND LANES				
TOTAL	212	122	0	90
AM	56	41	0	15
MD	227	108	0	119
PM	227	108	0	119
LN	1	3	0	0

Casa Verde Way

NORTHBOUND LANES				
LN	1	3	0	
AM	22	730	94	
MD	0	0	0	
PM	60	1787	121	
TOTAL	82	2517	215	

Del Monte Blvd

 **QUALITY TRAFFIC DATA, LLC**
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#011 Sloat Ave & Del Monte Blvd

LOCATION#:	011	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Sloat Ave	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	Del Monte Blvd	VICINITY:	Seaside	PM PEAK:	445 PM

Sloat Ave

SOUTHBOUND LANES			
LN	0	0	0
AM	0	1	2
MD	0	0	0
PM	2	1	2
TOTAL	3	2	5



Del Monte Blvd

EASTBOUND LANES			
LN	0	2	0
AM	2	0	3
MD	791	0	1739
PM	98	0	35
TOTAL	5	2530	133

SIGNALIZED

WESTBOUND LANES			
LN	0	0	0
AM	5	2	0
MD	1597	615	982
PM	152	71	81
TOTAL	2	982	0

Del Monte Blvd

NORTHBOUND LANES			
LN	1	0	1
AM	49	2	47
MD	0	0	0
PM	108	0	208
TOTAL	157	2	255

Sloat Ave

 **QUALITY TRAFFIC DATA, LLC**
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#012 SR-1 SB Ramps & Canyon Del Rey Blvd

LOCATION#:	012	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	SR-1 SB Ramps	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Canyon Del Rey Blvd	VICINITY:	Seaside	PM PEAK:	400 PM

SR-1 SB Ramps

SOUTHBOUND LANES			
LN	1	0.5	0.5
AM	14	1	327
MD	0	0	0
PM	21	4	348
TOTAL	35	5	675



Canyon Del Rey Blvd

EASTBOUND LANES			
LN	0	0	0
AM	0	0	0
MD	1	39	0
PM	0	65	0
TOTAL	0	71	110

SIGNALIZED

WESTBOUND LANES			
LN	0	0	0
AM	0	0	0
MD	227	155	0
PM	871	373	0
TOTAL	0	72	1

Canyon Del Rey Blvd

NORTHBOUND LANES			
LN	0	0	0
AM	0	0	0
MD	0	0	0
PM	0	0	0
TOTAL	0	0	0

SR-1 SB Ramps

 **QUALITY TRAFFIC DATA, LLC**
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#013 SR-1 NB Ramps & Canyon Del Rey Blvd

LOCATION#:	013	QTD PROJ#:	2014222	AM PEAK:	800 AM
NORTH / SOUTH:	SR-1 NB Ramps	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Canyon Del Rey Blvd	VICINITY:	Seaside	PM PEAK:	430 PM

SR-1 NB Ramps

SOUTHBOUND LANES			
LN	0	0	0
AM	0	0	0
MD	0	0	0
PM	0	0	0
TOTAL	0	0	0



Canyon Del Rey Blvd

EASTBOUND LANES			
LN	0	7	0
AM	0	10	17
MD	384	0	404
PM	0	0	0
TOTAL	0	0	0

1-WAY STOP (NB)

WESTBOUND LANES			
TOTAL	1110	774	0
PM	945	430	0
MD	0	0	0
AM	0	0	0
LN	1	1	0

Canyon Del Rey Blvd

NORTHBOUND LANES			
TOTAL	82	14	554
PM	57	13	277
MD	0	0	0
AM	25	1	277
LN	0.5	0.5	1

SR-1 NB Ramps

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#014 Fremont Blvd & Canyon Del Rey Blvd

LOCATION#:	014	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Fremont Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	Canyon Del Rey Blvd	VICINITY:	Seaside	PM PEAK:	430 PM

Fremont Blvd

SOUTHBOUND LANES			
LN	1	2	1
AM	63	842	141
MD	0	0	0
PM	57	549	168
TOTAL	120	1391	309



Canyon Del Rey Blvd

EASTBOUND LANES			
LN	1	60	0
AM	0	121	181
MD	241	0	204
PM	93	0	152
TOTAL	1.5	241	0

SIGNALIZED

WESTBOUND LANES			
TOTAL	211	174	0
PM	560	337	0
MD	474	221	0
AM	37	223	1.5
LN	1	1	0.5

Canyon Del Rey Blvd

NORTHBOUND LANES			
TOTAL	313	1283	375
PM	198	891	169
MD	0	0	0
AM	115	392	206
LN	1	2	1

Fremont Blvd

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#015 Canyon Del Rey Blvd & SR-68

LOCATION#:	015	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Canyon Del Rey Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	SR-68	VICINITY:	Seaside	PM PEAK:	415 PM

Canyon Del Rey Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	334	17	500	
MD	0	0	0	
PM	143	2	271	
TOTAL	477	20	771	



SR-68

EASTBOUND LANES				
LN	1	0.5	0.5	TOTAL
AM	66	0	197	263
MD	632	0	713	1345
PM	1	0	5	6

SIGNALIZED				
------------	--	--	--	--

WESTBOUND LANES				
LN	1	0.5	0.5	TOTAL
AM	866	615	0	251
MD	1697	1027	0	670
PM	10	6	0	4

SR-68

NORTHBOUND LANES				
LN	1	2	1	
AM	15	17	14	
MD	6	11	6	
PM	0	0	0	
TOTAL	9	6	8	

Canyon Del Rey Blvd

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#016 Del Monte Blvd & SR-1 SB On-Ramp

LOCATION#:	016	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	SR-1 SB On-Ramp	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	0	1001	302	
MD	0	0	0	
PM	0	635	91	
TOTAL	0	1636	393	



SR-1 SB On-Ramp

EASTBOUND LANES				
LN	0	0	0	0
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0

1-WAY STOP (NB)				
-----------------	--	--	--	--

WESTBOUND LANES				
LN	0.5	0.5	0.5	TOTAL
AM	35	29	0	6
MD	0	0	0	0
PM	5	3	0	2

SR-1 SB On-Ramp

NORTHBOUND LANES				
LN	0	2	0	
AM	0	2731	125	
MD	0	1926	60	
PM	0	805	65	
TOTAL	0	2	0	

Del Monte Blvd

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#017 English Ave & SR-1 NB Ramps

LOCATION#:	017	QTD PROJ#:	2014222	AM PEAK:	715 AM
NORTH / SOUTH:	English Ave	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	SR-1 NB Ramps	VICINITY:	Seaside	PM PEAK:	445 PM

English Ave

SOUTHBOUND LANES			
LN	1	1	0
AM	302	38	0
MD	0	0	0
PM	741	89	0
TOTAL	1043	127	0



SR-1 NB Ramps

EASTBOUND LANES	LN	AM	MD	PM	TOTAL
	0.5	113	0	239	352
	0	0	0	0	0
	0.5	11	0	11	22

1-WAY STOP (WB)

WESTBOUND LANES	TOTAL	PM	MD	AM	LN
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

SR-1 NB Ramps

NORTHBOUND LANES			
TOTAL	182	177	0
PM	55	101	0
MD	0	0	0
AM	47	76	0
LN	0	1	0

English Ave

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

Salinas In-N-Out Trip Generation Surveys

Time	Tuesday 8/17/10			Wednesday 8/18/10			Average		
	In	Out	Total	In	Out	Total	In	Out	Total
10:30 AM	11	4	15	11	5	16	11	5	16
10:45 AM	10	14	24	11	17	28	11	16	26
11:00 AM	17	4	21	12	10	22	15	7	22
11:15 AM	25	14	39	18	11	29	22	13	34
11:30 AM	23	18	41	22	16	38	23	17	40
11:45 AM	20	17	37	23	19	42	22	18	40
12:00 PM	38	27	65	33	31	64	36	29	65
12:15 PM	45	52	97	45	49	94	45	51	96
12:30 PM	44	49	93	44	41	85	44	45	89
12:45 PM	35	37	72	33	39	72	34	38	72
1:00 PM	23	24	47	32	27	59	28	26	53
1:15 PM	25	29	54	30	29	59	28	29	57
1:30 PM	25	29	54	26	25	51	26	27	53
1:45 PM	23	24	47	26	29	55	25	27	51
2:00 PM	19	25	44	22	25	47	21	25	46
2:15 PM	22	19	41	22	19	41	22	19	41
2:30 PM	21	28	49	29	20	49	25	24	49
2:45 PM	23	16	39	11	20	31	17	18	35
3:00 PM	19	19	38	23	23	46	21	21	42
3:15 PM	22	18	40	26	22	48	24	20	44
3:30 PM	25	22	47	20	16	36	23	19	42
3:45 PM	24	27	51	17	24	41	21	26	46
4:00 PM	20	22	42	13	22	35	17	22	39
4:15 PM	24	17	41	16	14	30	20	16	36
4:30 PM	25	21	46	19	17	36	22	19	41
4:45 PM	20	21	41	23	11	34	22	16	38
5:00 PM	19	13	32	22	23	45	21	18	39
5:15 PM	12	27	39	23	23	46	18	25	43
5:30 PM	20	21	41	23	24	47	22	23	44
5:45 PM	19	16	35	20	20	40	20	18	38
6:00 PM	22	16	38	21	19	40	22	18	39
6:15 PM	12	18	30	22	23	45	17	21	38
6:30 PM	23	12	35	18	11	29	21	12	32
6:45 PM	14	17	31	15	15	30	15	16	31
7:00 PM	20	16	36	15	19	34	18	18	35
7:15 PM	25	18	43	27	21	48	26	20	46
7:30 PM	25	17	42	24	20	44	25	19	43
7:45 PM	17	24	41	21	16	37	19	20	39
8:00 PM	19	24	43	28	16	44	24	20	44
8:15 PM	15	18	33	18	20	38	17	19	36
8:30 PM	15	15	30	11	21	32	13	18	31
8:45 PM	20	15	35	17	14	31	19	15	33
9:00 PM	21	10	31	17	15	32	19	13	32
9:15 PM	19	21	40	9	12	21	14	17	31
9:30 PM	13	15	28	15	13	28	14	14	28
9:45 PM	10	25	35	12	12	24	11	19	30
10:00 PM	16	14	30	14	21	35	15	18	33
10:15 PM	12	9	21	9	11	20	11	10	21
10:30 PM	7	12	19	12	14	26	10	13	23
10:45 PM	5	12	17	13	16	29	9	14	23
11:00 PM	12	9	21	11	11	22	12	10	22
11:15 PM	4	8	12	8	14	22	6	9	15
11:30 PM	8	0	8	7	10	17	8	5	13
11:45 PM	7	5	12	7	11	18	7	8	15
12:00 AM	7	14	21	6	8	14	7	11	18
12:15 AM	1	8	9	5	5	10	3	7	10
12:30 AM	3	2	5	4	7	11	4	5	8
12:45 AM	4	5	9	2	3	5	3	4	7
Total	1,074	1,049	2,123	1,083	1,069	2,152	1,079	1,059	2,138

In-N-Out: Size (sf) Size (seats)
 2,912 151

Salinas In-N-Out Drive-Through Queuing Surveys

Time	Tuesday 8/17/10		Wednesday 8/18/10		Average	
	Total	Beyond Board	Total	Beyond Board	Total	Beyond Board
11:00 AM	0	0	0	0	0	0
11:05 AM	1	0	0	0	1	0
11:10 AM	3	2	4	0	4	1
11:15 AM	5	0	8	2	7	1
11:20 AM	6	2	6	3	6	3
11:25 AM	6	2	4	1	5	2
11:30 AM	9	2	5	1	7	2
11:35 AM	8	2	4	1	6	2
11:40 AM	4	0	8	4	6	2
11:45 AM	4	0	3	0	4	0
11:50 AM	2	0	2	0	2	0
11:55 AM	1	0	5	1	3	1
12:00 PM	3	0	4	2	4	1
12:05 PM	3	1	2	0	3	1
12:10 PM	14	6	12	5	13	6
12:15 PM	13	5	15	10	14	8
12:20 PM	12	6	13	7	13	7
12:25 PM	18	11	15	10	17	11
12:30 PM	10	3	9	3	10	3
12:35 PM	14	7	15	9	15	8
12:40 PM	16	8	18	11	17	10
12:45 PM	7	5	8	3	8	4
12:50 PM	8	3	7	3	8	3
12:55 PM	4	0	3	0	4	0
1:00 PM	13	7	6	0	10	4
1:05 PM	14	7	10	4	12	6
1:10 PM	8	2	3	1	6	2
1:15 PM	11	5	12	8	12	7
1:20 PM	5	0	10	3	8	2
1:25 PM	6	0	5	1	6	1
1:30 PM	5	0	7	3	6	2
1:35 PM	3	0	3	0	3	0
1:40 PM	4	1	5	2	5	2
1:45 PM	1	0	2	0	2	0
1:50 PM	1	0	3	2	2	1
1:55 PM	4	1	5	1	5	1
2:00 PM	6	0	8	2	7	1
2:05 PM	7	2	6	3	7	3
2:10 PM	7	3	9	3	8	3
2:15 PM	9	4	10	6	10	5
2:20 PM	6	1	4	0	5	1
2:25 PM	6	2	7	2	7	2
2:30 PM	7	1	8	4	8	3
2:35 PM	11	5	10	4	11	5
2:40 PM	13	8	12	6	13	7
2:45 PM	12	6	10	3	11	5
2:50 PM	15	10	13	8	14	9
2:55 PM	10	5	8	3	9	4
3:00 PM	10	7	6	1	8	4
3:05 PM	10	5	6	0	8	3
3:10 PM	14	8	4	0	9	4
3:15 PM	9	3	6	2	8	3
3:20 PM	13	8	7	1	10	5
3:25 PM	10	4	7	2	9	3
3:30 PM	8	1	9	4	9	3
3:35 PM	9	3	5	1	7	2
3:40 PM	10	3	6	0	8	2
3:45 PM	11	5	7	2	9	4
3:50 PM	7	2	9	4	8	3
3:55 PM	8	2	6	2	7	2
4:00 PM	7	2	4	1	6	2
4:05 PM	6	1	3	0	5	1
4:10 PM	4	0	2	0	3	0
4:15 PM	6	1	4	0	5	1
4:20 PM	5	0	3	0	4	0
4:25 PM	8	2	4	1	6	2
4:30 PM	5	1	7	3	6	2
4:35 PM	2	0	7	3	5	2
4:40 PM	3	0	6	2	5	1
4:45 PM	3	0	5	0	4	0
4:50 PM	3	0	4	1	4	1
4:55 PM	2	0	2	0	2	0

In-N-Out: Size (sf) Size (Seats)
 2,912 151

Salinas In-N-Out Parking Demand Surveys

Time	Parked Vehicles		
	Tues 8/17/10	Wed 8/18/10	Average
10:30 AM	11	13	12
11:00 AM	16	14	15
11:30 AM	32	28	30
12:00 PM	36	36	36
12:30 PM	35	44	40
1:00 PM	44	42	43
1:30 PM	40	38	39
2:00 PM	41	43	42
2:30 PM	32	38	35
3:00 PM	28	40	34
3:30 PM	35	36	36
4:00 PM	36	39	38
4:30 PM	37	31	34
5:00 PM	33	33	33
5:30 PM	31	29	30
6:00 PM	27	34	31
6:30 PM	28	39	34
7:00 PM	26	33	30
7:30 PM	29	28	29
8:00 PM	32	23	28
8:30 PM	28	27	28
9:00 PM	25	28	27
9:30 PM	34	24	29
10:00 PM	20	25	23
10:30 PM	20	21	21
11:00 PM	10	18	14
11:30 PM	13	15	14
12:00 AM	12	11	12
12:30 AM	10	12	11
1:00 AM	11	11	11

In-N-Out: Size (sf) Size (Seats)
 2,912 151

APPENDIX B

EXISTING LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Volume (veh/h)	79	139	85	119	249	30	172	871	159	63	1077	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	139	85	119	249	30	172	871	159	63	1077	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	177	185	158	125	261	31	195	1390	254	81	1417	634
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	542	1133	137	1774	2990	546	1774	3539	1583
Grp Volume(v), veh/h	79	139	85	398	0	0	172	515	515	63	1077	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1812	0	0	1774	1770	1766	1774	1770	1583
Q Serve(g_s), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.0	22.0	3.5	26.2	5.5
Cycle Q Clear(g_c), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.0	22.0	3.5	26.2	5.5
Prop In Lane	1.00		1.00	0.30		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	177	185	158	417	0	0	195	823	821	81	1417	634
V/C Ratio(X)	0.45	0.75	0.54	0.96	0.00	0.00	0.88	0.63	0.63	0.78	0.76	0.21
Avail Cap(c_a), veh/h	284	298	253	417	0	0	195	823	821	106	1417	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	43.8	42.8	38.0	0.0	0.0	43.9	20.2	20.2	47.2	25.8	19.6
Incr Delay (d2), s/veh	1.8	6.0	2.9	32.7	0.0	0.0	34.1	3.6	3.6	22.9	3.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	4.1	2.4	14.6	0.0	0.0	6.5	11.6	11.5	2.2	13.5	2.5
LnGrp Delay(d),s/veh	44.2	49.8	45.7	70.7	0.0	0.0	77.9	23.8	23.8	70.2	29.7	20.3
LnGrp LOS	D	D	D	E			E	C	C	E	C	C
Approach Vol, veh/h	303			398			1202			1272		
Approach Delay, s/veh	47.2			70.7			31.5			30.7		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	50.5		13.9	15.0	44.1		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	39.0		16.0	11.0	34.0		23.0				
Max Q Clear Time (g_c+I1), s	5.5	24.0		9.3	11.6	28.2		23.7				
Green Ext Time (p_c), s	0.0	11.7		0.7	0.0	5.1		0.0				

Intersection Summary												
HCM 2010 Ctrl Delay	37.6											
HCM 2010 LOS	D											

Notes
User approved volume balancing among the lanes for turning movement.

AM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh		11.9									
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	177	0	541	50	0	680	628	146	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	177	0	541	50	0	680	628	146	21	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	892	271	680	0	0	541	0	0	951	340	
Stage 1	541	-	-	-	-	-	-	-	680	-	
Stage 2	351	-	-	-	-	-	-	-	271	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	237	727	908	-	-	1024	-	0	214	656	
Stage 1	493	-	-	-	-	-	-	0	407	-	
Stage 2	639	-	-	-	-	-	-	0	712	-	
Platoon blocked, %				-	-		-				
Mov Cap-1 Maneuver	216	727	908	-	-	1024	-	-	162	656	
Mov Cap-2 Maneuver	216	-	-	-	-	-	-	-	162	-	
Stage 1	493	-	-	-	-	-	-	-	407	-	
Stage 2	609	-	-	-	-	-	-	-	539	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	11.5	0			0			102.5			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBRWBLn1	SBL	SBT				
Capacity (veh/h)	162	-	908	-	-	727	1024	-			
HCM Lane V/C Ratio	0.901	-	-	-	-	0.243	-	-			
HCM Control Delay (s)	102.5	0	0	-	-	11.5	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	6.5	-	0	-	-	1	0	-			

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	9	73	117	29	95	1	135	174	22	4	569	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	73	117	29	95	1	135	174	22	4	569	42
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	533	190	161	557	413	4	203	1330	166	7	1221	90
Arrive On Green	0.30	0.10	0.10	0.31	0.12	0.12	0.06	0.42	0.42	0.00	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	1774	3588	38	3442	3167	395	1774	3343	246
Grp Volume(v), veh/h	9	73	117	29	47	49	135	96	100	4	301	310
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1856	1721	1770	1793	1774	1770	1819
Q Serve(g_s), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.3	3.4	0.2	13.0	13.0
Cycle Q Clear(g_c), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.3	3.4	0.2	13.0	13.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.22	1.00		0.14
Lane Grp Cap(c), veh/h	533	190	161	557	204	214	203	743	753	7	647	665
V/C Ratio(X)	0.02	0.38	0.73	0.05	0.23	0.23	0.67	0.13	0.13	0.54	0.47	0.47
Avail Cap(c_a), veh/h	533	410	348	557	460	483	413	743	753	106	647	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	42.0	43.6	23.9	40.2	40.2	46.1	17.8	17.8	49.7	24.3	24.3
Incr Delay (d2), s/veh	0.0	1.3	6.1	0.0	0.6	0.5	3.6	0.3	0.3	48.8	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.2	2.0	3.4	0.6	1.2	1.3	1.9	1.7	1.8	0.2	6.8	7.0
LnGrp Delay(d),s/veh	24.6	43.3	49.6	24.0	40.8	40.8	49.7	18.1	18.2	98.5	26.7	26.6
LnGrp LOS	C	D	D	C	D	D	D	B	B	F	C	C
Approach Vol, veh/h	199			125			331			615		
Approach Delay, s/veh	46.2			36.9			31.0			27.1		
Approach LOS	D			D			C			C		
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	4.4	46.0	35.4	14.2	9.9	40.5	34.1	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	42.0	14.0	22.0	12.0	36.0	10.0	26.0				
Max Q Clear Time (g_c+I1), s	2.2	5.4	3.1	9.2	5.8	15.0	2.4	4.4				
Green Ext Time (p_c), s	0.0	5.6	0.0	1.0	0.2	5.0	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	32.1											
HCM 2010 LOS	C											

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	37	28	31	11	27	26	26	288	15	52	605	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	37	28	31	11	27	26	26	288	15	52	605	73
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	47	290	321	19	626	527	36	806	685	67	1432	172
Arrive On Green	0.03	0.36	0.36	0.01	0.34	0.34	0.02	0.43	0.43	0.04	0.45	0.45
Sat Flow, veh/h	1774	809	896	1774	1825	1536	1774	1863	1583	1774	3182	383
Grp Volume(v), veh/h	37	0	59	11	26	27	26	288	15	52	336	342
Grp Sat Flow(s),veh/h/ln	1774	0	1705	1774	1770	1592	1774	1863	1583	1774	1770	1795
Q Serve(g_s), s	2.1	0.0	2.3	0.6	1.0	1.1	1.5	10.4	0.5	2.9	12.9	12.9
Cycle Q Clear(g_c), s	2.1	0.0	2.3	0.6	1.0	1.1	1.5	10.4	0.5	2.9	12.9	12.9
Prop In Lane	1.00		0.53	1.00		0.97	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	47	0	612	19	607	546	36	806	685	67	796	808
V/C Ratio(X)	0.79	0.00	0.10	0.59	0.04	0.05	0.71	0.36	0.02	0.77	0.42	0.42
Avail Cap(c_a), veh/h	195	0	612	124	607	546	160	806	685	231	796	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	48.4	0.0	21.3	49.3	21.9	21.9	48.7	19.0	16.2	47.7	18.7	18.7
Incr Delay (d2), s/veh	25.1	0.0	0.3	26.1	0.1	0.2	22.5	1.2	0.1	16.3	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	1.1	0.4	0.5	0.5	0.9	5.6	0.2	1.7	6.6	6.7	
LnGrp Delay(d),s/veh	73.5	0.0	21.6	75.4	22.0	22.1	71.2	20.3	16.3	64.0	20.2	20.2
LnGrp LOS	E	C	E	C	C	C	E	C	B	E	C	C
Approach Vol, veh/h	96			64			329			730		
Approach Delay, s/veh	41.6			31.2			24.1			23.3		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s7.8	47.3	5.1	39.9	6.1	49.0	6.6	38.3					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	41.0	7.0	23.0	9.0	45.0	11.0	19.0					
Max Q Clear Time (g_c+I1), s	12.4	2.6	4.3	3.5	14.9	4.1	3.1					
Green Ext Time (p_c), s	0.0	6.9	0.0	0.5	0.0	6.9	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	25.4											
HCM 2010 LOS	C											

AM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	142	314	570	88	27	154		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	142	314	570	88	27	154		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	173	2407	1668	257	426	380		
Arrive On Green	0.20	1.00	0.54	0.54	0.24	0.24		
Sat Flow, veh/h	1774	3632	3168	473	1774	1583		
Grp Volume(v), veh/h	142	314	327	331	27	154		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1779	1774	1583		
Q Serve(g_s), s	7.7	0.0	10.4	10.4	1.2	8.2		
Cycle Q Clear(g_c), s	7.7	0.0	10.4	10.4	1.2	8.2		
Prop In Lane	1.00			0.27	1.00	1.00		
Lane Grp Cap(c), veh/h	173	2407	960	965	426	380		
V/C Ratio(X)	0.82	0.13	0.34	0.34	0.06	0.41		
Avail Cap(c_a), veh/h	408	2407	960	965	426	380		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.4	0.0	12.8	12.9	29.3	32.0		
Incr Delay (d2), s/veh	9.0	0.1	1.0	1.0	0.3	3.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	5.3	5.4	0.6	7.8		
LnGrp Delay(d),s/veh	48.4	0.1	13.8	13.8	29.6	35.2		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h		456	658		181			
Approach Delay, s/veh		15.2	13.8		34.4			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				72.0		28.0	13.8	58.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				68.0		24.0	23.0	41.0
Max Q Clear Time (g_c+I1), s				2.0		10.2	9.7	12.4
Green Ext Time (p_c), s				7.8		0.4	0.3	7.0
Intersection Summary								
HCM 2010 Ctrl Delay			17.2					
HCM 2010 LOS			B					

AM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations								
Volume (veh/h)	410	229	53	686	464	57		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	410	0	53	686	464	57		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2384	1066	68	2661	578	266		
Arrive On Green	0.22	0.00	0.08	1.00	0.17	0.17		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	410	0	53	686	464	57		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	9.4	0.0	2.9	0.0	13.0	3.1		
Cycle Q Clear(g_c), s	9.4	0.0	2.9	0.0	13.0	3.1		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2384	1066	68	2661	578	266		
V/C Ratio(X)	0.17	0.00	0.78	0.26	0.80	0.21		
Avail Cap(c_a), veh/h	2384	1066	231	2661	1239	570		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.98	0.00	0.94	0.94	1.00	1.00		
Uniform Delay (d), s/veh	16.3	0.0	45.7	0.0	40.0	35.9		
Incr Delay (d2), s/veh	0.2	0.0	16.2	0.2	2.6	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	1.7	0.1	6.4	1.4		
LnGrp Delay(d),s/veh	16.5	0.0	62.0	0.2	42.6	36.3		
LnGrp LOS	B		E	A	D	D		
Approach Vol, veh/h	410			739	521			
Approach Delay, s/veh	16.5			4.7	41.9			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.8	7.8	71.4				79.2
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		36.0	13.0	39.0				56.0
Max Q Clear Time (g_c+I1), s		15.0	4.9	11.4				2.0
Green Ext Time (p_c), s		1.8	0.0	8.7				9.9
Intersection Summary								
HCM 2010 Ctrl Delay			19.2					
HCM 2010 LOS			B					

AM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	128	352	196	85	798	303	410	433	98	174	339	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	128	352	196	85	798	303	410	433	98	174	339	103
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	227	1632	730	458	1632	730	838	1624	727	791	1233	369
Arrive On Green	0.92	0.92	0.92	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	510	3539	1583	856	3539	1583	1830	3539	1583	1686	2686	804
Grp Volume(v), veh/h	128	352	196	85	798	303	410	433	98	174	222	220
Grp Sat Flow(s), veh/h/ln	510	1770	1583	856	1770	1583	915	1770	1583	843	1770	1721
Q Serve(g_s), s	19.7	1.0	1.3	6.1	15.7	12.8	17.9	7.5	3.6	7.1	7.7	8.0
Cycle Q Clear(g_c, s)	35.4	1.0	1.3	7.0	15.7	12.8	25.9	7.5	3.6	14.6	7.7	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	227	1632	730	458	1632	730	838	1624	727	791	812	790
V/C Ratio(X)	0.56	0.22	0.27	0.19	0.49	0.42	0.49	0.27	0.13	0.22	0.27	0.28
Avail Cap(c_a), veh/h	247	1770	792	492	1770	792	838	1624	727	791	812	790
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.6	2.1	2.1	16.7	18.7	18.0	24.8	16.7	15.6	21.2	16.7	16.8
Incr Delay (d2), s/veh	2.5	0.1	0.2	0.2	0.2	0.4	2.0	0.4	0.4	0.6	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.5	1.4	7.7	5.6	4.7	3.8	1.6	1.7	3.9	4.0	
LnGrp Delay(d),s/veh	12.1	2.2	2.3	16.9	19.0	18.3	26.9	17.1	16.0	21.8	17.6	17.7
LnGrp LOS	B	A	A	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	676			1186			941			616		
Approach Delay, s/veh	4.1			18.6			21.2			18.8		
Approach LOS	A			B			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	49.9		50.1		49.9		50.1					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	42.0		50.0		42.0		50.0					
Max Q Clear Time (g_c+I1), s	27.9		37.4		16.6		17.7					
Green Ext Time (p_c), s	8.2		8.7		11.4		15.8					
Intersection Summary												
HCM 2010 Ctrl Delay	16.5											
HCM 2010 LOS	B											

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LSA Associates, Inc.

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	673	0	0	1248	49	0	0	0	1	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	11	673	0	0	1248	49	0	0	0	1	0	45
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	1297	0	0	673	0	0	1632	1968	649			
Stage 1	-	-	-	-	-	-	1273	1273	-			
Stage 2	-	-	-	-	-	-	359	695	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	530	-	-	914	-	-	92	62	412			
Stage 1	-	-	-	-	-	-	227	237	-			
Stage 2	-	-	-	-	-	-	677	442	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	530	-	-	914	-	-	90	0	412			
Mov Cap-2 Maneuver	-	-	-	-	-	-	90	0	-			
Stage 1	-	-	-	-	-	-	227	0	-			
Stage 2	-	-	-	-	-	-	663	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0.2			0			15.7					
HCM LOS	C											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	530	-	-	914	-	-	382					
HCM Lane V/C Ratio	0.021	-	-	-	-	-	0.12					
HCM Control Delay (s)	11.9	-	-	0	-	-	15.7					
HCM Lane LOS	B	-	-	A	-	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	514	282	14	1265	51	173		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	514	0	14	1265	51	173		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh. %	2	2	2	2	2	2		
Cap, veh/h	2442	1092	681	2442	408	364		
Arrive On Green	1.00	0.00	0.69	0.69	0.23	0.23		
Sat Flow, veh/h	3632	1583	883	3632	1774	1583		
Grp Volume(v), veh/h	514	0	14	1265	51	173		
Grp Sat Flow(s),veh/h/ln	1770	1583	883	1770	1774	1583		
Q Serve(g_s), s	0.0	0.0	0.5	17.2	2.3	9.4		
Cycle Q Clear(g_c), s	0.0	0.0	0.5	17.2	2.3	9.4		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2442	1093	681	2442	408	364		
V/C Ratio(X)	0.21	0.00	0.02	0.52	0.12	0.48		
Avail Cap(c_a), veh/h	2442	1093	681	2442	408	364		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.0	4.9	7.5	30.5	33.3		
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.8	0.6	4.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	0.0	0.1	8.5	1.2	4.6		
LnGrp Delay(d),s/veh	0.2	0.0	4.9	8.3	31.2	37.7		
LnGrp LOS	A		A	A	C	D		
Approach Vol, veh/h	514			1279	224			
Approach Delay, s/veh	0.2			8.2	36.2			
Approach LOS	A			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		73.0				73.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		69.0				69.0
Max Q Clear Time (g_c+I1), s		11.4		2.0				19.2
Green Ext Time (p_c), s		0.5		23.4				21.3
Intersection Summary								
HCM 2010 Ctrl Delay			9.3					
HCM 2010 LOS			A					

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HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑	↑	↓	↑↑	↑	↓	↑	↓	↓	↑	↑
Volume (veh/h)	22	730	94	100	906	16	119	15	90	41	49	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	22	730	94	100	906	16	119	15	90	41	49	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	32	2322	297	128	2001	35	149	53	319	52	327	278
Arrive On Green	0.02	0.51	0.51	0.02	0.19	0.19	0.08	0.23	0.23	0.03	0.18	0.18
Sat Flow, veh/h	1774	4567	583	1774	3558	63	1774	231	1387	1774	1863	1583
Grp Volume(v), veh/h	22	540	284	100	451	471	119	0	105	41	49	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1760	1774	1770	1852	1774	0	1618	1774	1863	1583
Q Serve(g_s), s	1.2	9.3	9.4	5.6	22.6	22.6	6.6	0.0	5.3	2.3	2.2	1.6
Cycle Q Clear(g_c), s	1.2	9.3	9.4	5.6	22.6	22.6	6.6	0.0	5.3	2.3	2.2	1.6
Prop In Lane		1.00		0.33	1.00		0.03	1.00		0.86	1.00	1.00
Lane Grp Cap(c), veh/h	32	1724	895	128	995	1041	149	0	372	52	327	278
V/C Ratio(X)	0.68	0.31	0.32	0.78	0.45	0.45	0.80	0.00	0.28	0.79	0.15	0.11
Avail Cap(c_a), veh/h	124	1724	895	248	995	1041	266	0	372	142	327	278
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	14.4	14.4	48.0	27.0	27.0	45.0	0.0	31.7	48.2	34.9	34.7
Incr Delay (d2), s/veh	0.5	0.9	0.9	9.8	1.5	1.4	9.4	0.0	1.9	22.5	1.0	0.8
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(-26165%),veh/ln	4.5	4.8	3.1	11.5	12.0	3.6	0.0	0.0	2.6	1.5	1.2	0.8
LnGrp Delay(d),s/veh	70.7	14.9	15.3	57.8	28.5	28.5	54.3	0.0	33.6	70.8	35.9	35.4
LnGrp LOS	E	B	B	E	C	C	D		C	E	D	D
Approach Vol, veh/h		846			1022			224			120	
Approach Delay, s/veh		16.5			31.4			44.6			47.7	
Approach LOS		B			C			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	27.0	11.2	54.8	12.4	21.5	5.8	60.2					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	23.0	14.0	39.0	15.0	16.0	7.0	46.0					
Max Q Clear Time (g_c+I1), s	7.3	7.6	11.4	8.6	4.2	3.2	24.6					
Green Ext Time (p_c), s	0.0	0.8	0.1	14.1	0.1	0.7	0.0	12.2				
Intersection Summary												
HCM 2010 Ctrl Delay					27.9							
HCM 2010 LOS					C							

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HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

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
Volume (veh/h)	2	791	98	81	982	3	49	2	47	2	1	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	791	98	81	982	3	49	2	47	2	1	0
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2171	269	0	2478	8	63	0	372	0	298	0
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.04	0.24	0.24	0.00	0.16	0.00
Sat Flow, veh/h	0	3170	393	0	3619	11	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	441	448	0	480	505	49	0	47	0	1	0
Grp Sat Flow(s),veh/h/ln	0	1770	1793	0	1770	1861	1774	0	1583	0	1863	0
Q Serve(g_s), s	0.0	10.5	10.5	0.0	11.7	11.7	2.7	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.5	10.5	0.0	11.7	11.7	2.7	0.0	2.3	0.0	0.0	0.0
Prop In Lane	0.00		0.22	0.00		0.01	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1212	1228	0	1212	1274	63	0	372	0	298	0
V/C Ratio(X)	0.00	0.36	0.36	0.00	0.40	0.40	0.78	0.00	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1212	1228	0	1212	1274	71	0	372	0	298	0
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)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.6	6.6	0.0	6.8	6.8	47.9	0.0	30.1	0.0	35.3	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	1.0	0.9	38.5	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.3	5.4	0.0	5.9	6.2	2.0	0.0	1.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.5	7.5	0.0	7.8	7.7	86.3	0.0	30.3	0.0	35.3	0.0
LnGrp LOS	A	A		A	A	F		C		D		
Approach Vol, veh/h	889			985			96			1		
Approach Delay, s/veh	7.5			7.8			58.9			35.3		
Approach LOS	A			A			E			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/0.0	27.5	0.0	72.5	7.5	20.0	0.0	72.5					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	16.0	4.0	60.0	4.0	16.0	4.0	60.0					
Max Q Clear Time (g_c+10), s	4.3	0.0	12.5	4.7	2.0	0.0	13.7					
Green Ext Time (p_c), s	0.0	0.1	0.0	19.4	0.0	0.1	0.0	19.2				
Intersection Summary												
HCM 2010 Ctrl Delay	10.1											
HCM 2010 LOS	B											

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HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

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
Volume (veh/h)	0	0	0	327	1	14	498	72	0	0	39	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				327	1	14	498	72	0	0	39	65
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				374	1	335	793	115	0	0	101	168
Arrive On Green				0.21	0.21	0.21	0.85	0.85	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1769	5	1583	1559	225	0	0	629	1049
Grp Volume(v), veh/h				328	0	14	570	0	0	0	0	104
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1785	0	0	0	0	1678
Q Serve(g_s), s				17.9	0.0	0.7	10.3	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s				17.9	0.0	0.7	10.3	0.0	0.0	0.0	0.0	5.6
Prop In Lane				1.00		1.00	0.87		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				375	0	335	908	0	0	0	0	268
V/C Ratio(X)				0.87	0.00	0.04	0.63	0.00	0.00	0.00	0.00	0.39
Avail Cap(c_a), veh/h				497	0	443	908	0	0	0	0	268
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				38.2	0.0	31.4	4.5	0.0	0.0	0.0	0.0	37.6
Incr Delay (d2), s/veh				12.8	0.0	0.1	3.3	0.0	0.0	0.0	0.0	4.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				10.1	0.0	0.3	5.5	0.0	0.0	0.0	0.0	2.9
LnGrp Delay(d),s/veh				50.9	0.0	31.4	7.8	0.0	0.0	0.0	0.0	41.8
LnGrp LOS				D		C	A					D
Approach Vol, veh/h				342			570			104		
Approach Delay, s/veh				50.1			7.8			41.8		
Approach LOS				D			A			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		54.9				20.0		25.1				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		44.0				16.0		28.0				
Max Q Clear Time (g_c+10), s		12.3				7.6		19.9				
Green Ext Time (p_c), s		4.4				0.3		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay	25.5											
HCM 2010 LOS	C											

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HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	1	277	0	0	0	0	515	336	7	384	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	25	1	277	0	0	0	0	515	336	7	384	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	913	913	384	384	0	0	515	0	0			
Stage 1	398	398	-	-	-	-	-	-	-	-	-	-
Stage 2	515	515	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	304	273	664	1174	-	-	1051	-	-	-	-	-
Stage 1	678	603	-	-	-	-	-	-	-	-	-	-
Stage 2	600	535	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	302	0	664	1174	-	-	1051	-	-	-	-	-
Mov Cap-2 Maneuver	425	0	-	-	-	-	-	-	-	-	-	-
Stage 1	673	0	-	-	-	-	-	-	-	-	-	-
Stage 2	600	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.2			0			0.2					
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1174	-	-	425	664	1051	-	-				
HCM Lane V/C Ratio	-	-	-	0.061	0.417	0.007	-	-				
HCM Control Delay (s)	0	-	-	14	14.2	8.4	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	2.1	0	-	-				

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HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	241	93	253	223	37	115	392	206	141	842	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	60	241	93	253	223	37	115	392	206	141	842	63
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	77	375	168	289	797	356	144	1069	554	173	1637	122
Arrive On Green	0.04	0.11	0.11	0.16	0.23	0.23	0.08	0.47	0.47	0.10	0.49	0.49
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2256	1170	1774	3338	250
Grp Volume(v), veh/h	60	241	93	253	223	37	115	306	292	141	446	459
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1656	1774	1770	1819
Q Serve(g_s), s	3.3	6.5	5.6	13.9	5.2	1.9	6.4	11.0	11.2	7.8	17.2	17.2
Cycle Q Clear(g_c), s	3.3	6.5	5.6	13.9	5.2	1.9	6.4	11.0	11.2	7.8	17.2	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.14
Lane Grp Cap(c), veh/h	77	375	168	289	797	356	144	838	785	173	867	892
V/C Ratio(X)	0.78	0.64	0.55	0.88	0.28	0.10	0.80	0.37	0.37	0.82	0.51	0.51
Avail Cap(c_a), veh/h	160	566	253	390	1026	459	213	838	785	266	867	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	42.9	42.5	40.9	32.0	30.7	45.2	16.7	16.8	44.2	17.4	17.4
Incr Delay (d2), s/veh	15.1	1.8	2.9	15.4	0.2	0.1	12.3	1.2	1.3	10.7	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.0	3.3	2.6	8.1	2.6	0.8	3.6	5.6	5.4	4.4	8.8	9.1
LnGrp Delay(d),s/veh	62.4	44.7	45.3	56.3	32.2	30.9	57.4	18.0	18.2	55.0	19.6	19.5
LnGrp LOS	E	D	D	E	C	C	E	B	B	D	B	B
Approach Vol, veh/h	394			513			713			1046		
Approach Delay, s/veh	47.6			44.0			24.4			24.3		
Approach LOS	D			D			C			C		
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	13.7	51.4	20.3	14.6	12.1	53.0	8.4	26.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	15.0	31.0	22.0	16.0	12.0	34.0	9.0	29.0				
Max Q Clear Time (g_c+I1), s	9.8	13.2	15.9	8.5	8.4	19.2	5.3	7.2				
Green Ext Time (p_c), s	0.1	9.3	0.4	2.1	0.1	8.3	0.0	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay	31.6											
HCM 2010 LOS	C											

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HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	632	1	4	670	251	9	6	8	500	17	334
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	632	1	4	670	251	9	6	8	500	17	334
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	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	85	1135	2	7	953	426	16	408	544	1534	957	814
Arrive On Green	0.05	0.31	0.31	0.00	0.27	0.27	0.01	0.56	0.56	0.51	0.51	0.51
Sat Flow, veh/h	1774	3626	6	1774	3539	1583	1774	725	967	2704	1863	1583
Grp Volume(v), veh/h	66	308	325	4	670	251	9	0	14	500	17	334
Grp Sat Flow(s), veh/h/ln	1770	1770	1862	1774	1770	1583	1774	0	1692	1352	1863	1583
Q Serve(g_s), s	3.7	14.5	14.5	0.2	17.1	13.8	0.5	0.0	0.4	11.0	0.4	13.0
Cycle Q Clear(g_c), s	3.7	14.5	14.5	0.2	17.1	13.8	0.5	0.0	0.4	11.0	0.4	13.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	85	554	583	7	953	426	16	0	952	1534	957	814
V/C Ratio(X)	0.77	0.56	0.56	0.54	0.70	0.59	0.57	0.00	0.01	0.33	0.02	0.41
Avail Cap(c_a), veh/h	195	708	745	71	1168	523	71	0	952	1534	957	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	28.6	28.6	49.7	32.9	31.7	49.4	0.0	9.6	14.5	11.9	15.0
Incr Delay (d2), s/veh	13.7	0.9	0.8	48.8	1.5	1.3	28.9	0.0	0.0	0.6	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	7.2	7.5	0.2	8.5	6.1	0.4	0.0	0.0	0.2	4.2	0.2	6.0
LnGrp Delay(d), s/veh	60.8	29.5	29.4	98.5	34.4	33.0	78.3	0.0	9.7	15.1	12.0	16.5
LnGrp LOS	E	C	C	F	C	C	E		A	B	B	B
Approach Vol, veh/h	699			925			23			851		
Approach Delay, s/veh	32.4			34.3			36.5			15.6		
Approach LOS	C			C			D			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	60.3	4.4	35.3	4.9	55.4	8.8	30.9					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	44.0	4.0	40.0	4.0	36.0	11.0	33.0					
Max Q Clear Time (g_c+I1), s	2.4	2.2	16.5	2.5	15.0	5.7	19.1					
Green Ext Time (p_c), s	3.6	0.0	10.6	0.0	3.3	0.0	7.8					
Intersection Summary												
HCM 2010 Ctrl Delay	27.4											
HCM 2010 LOS	C											

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HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	3.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	805	65	302	1001	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	805	65	302	1001	2	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	870	0	1943	435
Stage 1	-	-	-	-	838	-
Stage 2	-	-	-	-	1105	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	452	-	76	487
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	452	-	25	487
Mov Cap-2 Maneuver	-	-	-	-	71	-
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	90	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.4		23.9	
HCM LOS	C				C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	198	-	-	452	-	
HCM Lane V/C Ratio	0.04	-	-	0.668	-	
HCM Control Delay (s)	23.9	-	-	27.6	-	
HCM Lane LOS	C	-	-	D	-	
HCM 95th %tile Q(veh)	0.1	-	-	4.8	-	

AM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	5.7					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	47	76	38	302	113	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	47	76	38	302	113	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	208	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	170	-
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	1572	-	-	0	780	1034
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	-	756	1034
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	833	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.8		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	756	1034	1572	-	-	
HCM Lane V/C Ratio	0.149	0.011	0.03	-	-	
HCM Control Delay (s)	10.6	8.5	7.4	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	0.5	0	0.1	-	-	

HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	264	68	74	171	39	123	1159	175	53	680	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	241	264	68	74	171	39	123	1159	175	53	680	149
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	295	310	263	80	184	42	153	1437	216	68	1478	661
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.47	0.47	0.04	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	468	1081	247	1774	3086	464	1774	3539	1583
Grp Volume(v), veh/h	241	264	68	284	0	0	123	663	671	53	680	149
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1796	0	0	1774	1770	1781	1774	1770	1583
Q Serve(g_s), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.0	32.3	3.0	13.9	6.0
Cycle Q Clear(g_c), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.0	32.3	3.0	13.9	6.0
Prop In Lane	1.00		1.00	0.26		0.14	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	295	310	263	305	0	0	153	824	829	68	1478	661
V/C Ratio(X)	0.82	0.85	0.26	0.93	0.00	0.00	0.80	0.80	0.81	0.78	0.46	0.23
Avail Cap(c_a), veh/h	337	354	301	305	0	0	231	824	829	71	1478	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	40.5	36.3	40.9	0.0	0.0	44.9	22.8	22.9	47.7	21.0	18.7
Incr Delay (d2), s/veh	13.0	16.2	0.5	33.8	0.0	0.0	11.5	8.2	8.4	40.5	1.0	0.8
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(-26165%),veh/ln	7.5	8.5	1.7	10.6	0.0	0.0	3.8	17.4	17.8	2.2	6.9	2.8
LnGrp Delay(d),s/veh	53.3	56.7	36.8	74.7	0.0	0.0	56.4	31.1	31.3	88.2	22.0	19.5
LnGrp LOS	D	E	D	E			E	C	C	F	C	B
Approach Vol, veh/h	573			284			1457			882		
Approach Delay, s/veh	52.9			74.7			33.3			25.6		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	50.6		20.6	12.6	45.8		21.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	44.0		19.0	13.0	35.0		17.0				
Max Q Clear Time (g_c+I1), s	5.0	34.3		15.8	8.8	15.9		17.6				
Green Ext Time (p_c), s	0.0	7.9		0.9	0.1	13.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	38.4											
HCM 2010 LOS	D											

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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh		261.9									
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	108	0	880	20	0	602	242	490	16	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	108	0	880	20	0	602	242	490	16	
Major/Minor	Minor1		Major1			Major2			Minor2		
Conflicting Flow All	1189	440	602	0	0	880	0	0	1042	301	
Stage 1	880	-	-	-	-	-	-	-	602	-	
Stage 2	309	-	-	-	-	-	-	-	440	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	143	565	971	-	-	764	-	0	~ 184	695	
Stage 1	308	-	-	-	-	-	-	0	~ 453	-	
Stage 2	676	-	-	-	-	-	-	0	566	-	
Platoon blocked, %				-	-						
Mov Cap-1 Maneuver	129	565	971	-	-	764	-	-	~ 149	695	
Mov Cap-2 Maneuver	129	-	-	-	-	-	-	-	~ 149	-	
Stage 1	308	-	-	-	-	-	-	-	~ 453	-	
Stage 2	654	-	-	-	-	-	-	-	~ 458	-	
Approach	WB		NB			SB			NE		
HCM Control Delay, s	12.9		0			0			\$ 1092.6		
HCM LOS	B								F		
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	149	-	971	-	-	565	764	-			
HCM Lane V/C Ratio	3.289	-	-	-	-	0.191	-	-			
HCM Control Delay (s)	\$ 1092.6	0	0	-	-	12.9	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	46.6	-	0	-	-	0.7	0	-			
Notes											
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon			

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	62	244	170	38	223	3	206	444	102	9	206	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	244	170	38	223	3	206	444	102	9	206	45
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	597	327	278	578	589	8	284	945	216	16	744	159
Arrive On Green	0.34	0.18	0.18	0.33	0.16	0.16	0.08	0.33	0.33	0.01	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	3576	48	3442	2864	653	1774	2901	621
Grp Volume(v), veh/h	62	244	170	38	110	116	206	273	273	9	124	127
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1854	1721	1770	1747	1774	1770	1753
Q Serve(g_s), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	12.2	12.4	0.5	5.6	5.8
Cycle Q Clear(g_c), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	12.2	12.4	0.5	5.6	5.8
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.37	1.00		0.35
Lane Grp Cap(c), veh/h	597	327	278	578	292	306	284	584	577	16	454	449
V/C Ratio(X)	0.10	0.75	0.61	0.07	0.38	0.38	0.73	0.47	0.47	0.57	0.27	0.28
Avail Cap(c_a), veh/h	597	596	507	578	495	519	585	584	577	106	454	449
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	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	39.1	38.1	23.2	37.2	37.2	44.8	26.5	26.6	49.4	29.7	29.8
Incr Delay (d2), s/veh	0.1	3.4	2.2	0.0	0.8	0.8	2.7	2.0	2.1	28.9	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.2	6.7	4.5	0.7	2.8	2.9	2.9	6.3	6.3	0.4	2.9	3.0
LnGrp Delay(d),s/veh	22.9	42.5	40.2	23.3	38.0	38.0	47.5	28.6	28.7	78.3	31.2	31.4
LnGrp LOS	C	D	D	C	D	D	D	C	C	E	C	C
Approach Vol, veh/h	476				264		752				260	
Approach Delay, s/veh	39.1				35.9		33.8				32.9	
Approach LOS	D				D		C				C	
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	4.9	37.0	36.6	21.6	12.3	29.6	37.6	20.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	33.0	13.0	32.0	17.0	22.0	17.0	28.0				
Max Q Clear Time (g_c+I1), s	2.5	14.4	3.5	14.4	7.8	7.8	4.4	7.6				
Green Ext Time (p_c), s	0.0	4.7	0.0	3.1	0.4	4.2	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay	35.4											
HCM 2010 LOS	D											

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HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	103	73	100	14	47	49	200	581	36	30	382	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	103	73	100	14	47	49	200	581	36	30	382	52
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	239	327	23	485	434	236	875	744	40	1127	152
Arrive On Green	0.07	0.33	0.33	0.01	0.27	0.27	0.13	0.47	0.47	0.02	0.36	0.36
Sat Flow, veh/h	1774	713	977	1774	1770	1583	1774	1863	1583	1774	3134	424
Grp Volume(v), veh/h	103	0	173	14	47	49	200	581	36	30	215	219
Grp Sat Flow(s),veh/h/ln	1774	0	1690	1774	1770	1583	1774	1863	1583	1774	1770	1788
Q Serve(g_s), s	5.7	0.0	7.6	0.8	2.0	2.3	11.0	24.0	1.2	1.7	8.8	9.0
Cycle Q Clear(g_c), s	5.7	0.0	7.6	0.8	2.0	2.3	11.0	24.0	1.2	1.7	8.8	9.0
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	130	0	565	23	485	434	236	875	744	40	636	643
V/C Ratio(X)	0.79	0.00	0.31	0.61	0.10	0.11	0.85	0.66	0.05	0.75	0.34	0.34
Avail Cap(c_a), veh/h	213	0	565	71	485	434	373	875	744	106	636	643
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	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	45.6	0.0	24.7	49.1	27.1	27.2	42.4	20.4	14.4	48.6	23.3	23.4
Incr Delay (d2), s/veh	10.2	0.0	1.4	23.7	0.4	0.5	10.1	4.0	0.1	23.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	3.8	0.5	1.0	1.1	6.1	13.2	0.6	1.1	4.5	4.6
LnGrp Delay(d),s/veh	55.7	0.0	26.1	72.8	27.5	27.7	52.5	24.4	14.5	71.9	24.7	24.8
LnGrp LOS	E		C	E	C	C	D	C	B	E	C	C
Approach Vol, veh/h	276				110		817				464	
Approach Delay, s/veh	37.1				33.4		30.8				27.8	
Approach LOS	D				C		C				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s6.3	51.0	5.3	37.4	17.3	40.0	11.3	31.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	47.0	4.0	27.0	21.0	32.0	12.0	19.0					
Max Q Clear Time (g_c+I1), s	26.0	2.8	9.6	13.0	11.0	7.7	4.3					
Green Ext Time (p_c), s	0.0	6.9	0.0	1.4	0.3	6.9	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	31.2											
HCM 2010 LOS	C											

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

								
Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	133	742	462	49	86	209		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	133	742	462	49	86	209		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	164	2265	1640	173	497	443		
Arrive On Green	0.18	1.00	0.51	0.51	0.28	0.28		
Sat Flow, veh/h	1774	3632	3324	341	1774	1583		
Grp Volume(v), veh/h	133	742	252	259	86	209		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1803	1774	1583		
Q Serve(g_s), s	7.2	0.0	8.2	8.3	3.7	10.9		
Cycle Q Clear(g_c), s	7.2	0.0	8.2	8.3	3.7	10.9		
Prop In Lane	1.00			0.19	1.00	1.00		
Lane Grp Cap(c), veh/h	164	2265	898	915	497	443		
V/C Ratio(X)	0.81	0.33	0.28	0.28	0.17	0.47		
Avail Cap(c_a), veh/h	426	2265	898	915	497	443		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.9	0.0	14.1	14.1	27.2	29.9		
Incr Delay (d2), s/veh	8.8	0.4	0.8	0.8	0.8	3.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	4.2	4.3	1.9	10.4			
LnGrp Delay(d),s/veh	48.7	0.4	14.9	14.9	28.0	33.4		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	875	511	295					
Approach Delay, s/veh	7.7	14.9		31.8				
Approach LOS	A	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				68.0		32.0	13.2	54.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				64.0		28.0	24.0	36.0
Max Q Clear Time (g_c+I1), s				2.0		12.9	9.2	10.3
Green Ext Time (p_c), s				11.5		0.8	0.3	9.5
Intersection Summary								
HCM 2010 Ctrl Delay			14.1					
HCM 2010 LOS			B					

PM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

	→	↖	↖	↖	↖	↖		
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↗↗	↖		↗↗	↖	↖		
Volume (veh/h)	774	464	97	581	295	83		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	774	0	97	581	295	83		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2469	1104	123	2856	389	179		
Arrive On Green	0.23	0.00	0.14	1.00	0.11	0.11		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	774	0	97	581	295	83		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	18.1	0.0	5.3	0.0	8.3	4.9		
Cycle Q Clear(g_c), s	18.1	0.0	5.3	0.0	8.3	4.9		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2469	1104	123	2856	389	179		
V/C Ratio(X)	0.31	0.00	0.79	0.20	0.76	0.46		
Avail Cap(c_a), veh/h	2469	1104	319	2856	723	332		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.87	0.00	0.96	0.96	1.00	1.00		
Uniform Delay (d), s/veh	18.6	0.0	42.4	0.0	43.0	41.5		
Incr Delay (d2), s/veh	0.3	0.0	10.2	0.2	3.0	1.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	2.9	0.1	4.1	2.2		
LnGrp Delay(d),s/veh	18.9	0.0	52.6	0.2	46.1	43.4		
LnGrp LOS	B		D	A	D	D		
Approach Vol, veh/h	774			678	378			
Approach Delay, s/veh	18.9			7.7	45.5			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		15.3	10.9	73.8				84.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		21.0	18.0	49.0				71.0
Max Q Clear Time (g_c+I1), s		10.3	7.3	20.1				2.0
Green Ext Time (p_c), s		1.0	0.1	11.4				13.9
Intersection Summary								
HCM 2010 Ctrl Delay			20.2					
HCM 2010 LOS			C					

PM Peak Hour Existing
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HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	287	873	333	154	425	256	239	632	126	234	371	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	287	873	333	154	425	256	239	632	126	234	371	75
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	392	1802	806	307	1802	806	736	1454	651	530	1208	242
Arrive On Green	1.00	1.00	1.00	0.34	0.34	0.34	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	756	3539	1583	462	3539	1583	1824	3539	1583	1366	2940	588
Grp Volume(v), veh/h	287	873	333	154	425	256	239	632	126	234	222	224
Grp Sat Flow(s),veh/h/ln	756	1770	1583	462	1770	1583	912	1770	1583	683	1770	1759
Q Serve(g_s), s	25.2	0.0	0.0	28.3	8.6	11.9	10.2	12.8	5.1	14.8	8.4	8.6
Cycle Q Clear(g_c), s	33.8	0.0	0.0	28.3	8.6	11.9	18.8	12.8	5.1	27.6	8.4	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	392	1802	806	307	1802	806	736	1454	651	530	727	723
V/C Ratio(X)	0.73	0.48	0.41	0.50	0.24	0.32	0.32	0.43	0.19	0.44	0.31	0.31
Avail Cap(c_a), veh/h	430	1982	887	331	1982	887	736	1454	651	530	727	723
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.9	0.0	0.0	25.5	19.0	20.1	26.2	21.1	18.9	31.0	19.8	19.9
Incr Delay (d2), s/veh	5.7	0.2	0.3	1.2	0.1	0.2	1.2	0.9	0.7	2.7	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.1	0.1	0.1	3.7	4.2	5.3	2.7	6.4	2.4	3.0	4.3	4.4
LnGrp Delay(d),s/veh	8.6	0.2	0.3	26.7	19.1	20.3	27.4	22.1	19.5	33.7	20.9	21.0
LnGrp LOS	A	A	A	C	B	C	C	C	B	C	C	C
Approach Vol, veh/h	1493			835			997			680		
Approach Delay, s/veh	1.8			20.9			23.0			25.3		
Approach LOS	A			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	45.1		54.9		45.1		54.9					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	36.0		56.0		36.0		56.0					
Max Q Clear Time (g_c+I1), s	20.8		35.8		29.6		30.3					
Green Ext Time (p_c), s	9.5		15.1		4.8		18.1					
Intersection Summary												
HCM 2010 Ctrl Delay	15.1											
HCM 2010 LOS	B											

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	1534	0	0	749	7	0	0	0	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	2	1534	0	0	749	7	0	0	0	0	0	8
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	756	0	0	1534	0	0	1524 2291 378					
Stage 1	-	-	-	-	-	-	753 753 -					
Stage 2	-	-	-	-	-	-	771 1538 -					
Critical Hdwy	4.14	-	-	4.14	-	-	6.84 6.54 6.94					
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84 5.54 -					
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84 5.54 -					
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52 4.02 3.32					
Pot Cap-1 Maneuver	851	-	-	430	-	-	109 39 620					
Stage 1	-	-	-	-	-	-	426 416 -					
Stage 2	-	-	-	-	-	-	417 176 -					
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	851	-	-	430	-	-	109 0 620					
Mov Cap-2 Maneuver	-	-	-	-	-	-	109 0 -					
Stage 1	-	-	-	-	-	-	426 0 -					
Stage 2	-	-	-	-	-	-	416 0 -					
Approach	EB			WB			SB					
HCM Control Delay, s	0			0			10.9					
HCM LOS							B					
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	851	-	-	430	-	-	620					
HCM Lane V/C Ratio	0.002	-	-	-	-	-	0.013					
HCM Control Delay (s)	9.2	-	-	0	-	-	10.9					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	1209	764	73	679	32	303		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1209	0	73	679	32	303		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2194	982	307	2194	532	475		
Arrive On Green	0.82	0.00	0.20	0.20	0.30	0.30		
Sat Flow, veh/h	3632	1583	460	3632	1774	1583		
Grp Volume(v), veh/h	1209	0	73	679	32	303		
Grp Sat Flow(s),veh/h/ln	1770	1583	460	1770	1774	1583		
Q Serve(g_s), s	11.0	0.0	13.9	16.3	1.3	16.6		
Cycle Q Clear(g_c), s	11.0	0.0	24.9	16.3	1.3	16.6		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2194	982	307	2194	532	475		
V/C Ratio(X)	0.55	0.00	0.24	0.31	0.06	0.64		
Avail Cap(c_a), veh/h	2194	982	307	2194	532	475		
HCM Platoon Ratio	1.33	1.33	0.33	0.33	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.3	0.0	29.8	21.6	25.0	30.3		
Incr Delay (d2), s/veh	1.0	0.0	1.8	0.4	0.2	6.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	5.5	0.0	1.9	8.1	0.7	8.1		
LnGrp Delay(d),s/veh	5.3	0.0	31.7	22.0	25.2	36.7		
LnGrp LOS	A		C	C	C	D		
Approach Vol, veh/h	1209			752	335			
Approach Delay, s/veh	5.3			22.9	35.6			
Approach LOS	A			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.0		66.0				66.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		30.0		62.0				62.0
Max Q Clear Time (g_c+I1), s		18.6		13.0				26.9
Green Ext Time (p_c), s		0.9		24.9				20.8
Intersection Summary								
HCM 2010 Ctrl Delay				15.5				
HCM 2010 LOS				B				

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HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	1787	121	53	540	52	108	41	122	45	33	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	1787	121	53	540	52	108	41	122	45	33	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	77	2674	181	68	1776	171	136	91	271	57	327	278
Arrive On Green	0.04	0.55	0.55	0.05	0.72	0.72	0.08	0.22	0.22	0.03	0.18	0.18
Sat Flow, veh/h	1774	4866	329	1774	3264	313	1774	414	1232	1774	1863	1583
Grp Volume(v), veh/h	60	1244	664	53	292	300	108	0	163	45	33	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1805	1774	1770	1807	1774	0	1645	1774	1863	1583
Q Serve(g_s), s	3.3	26.1	26.2	3.0	5.8	5.9	6.0	0.0	8.6	2.5	1.5	1.6
Cycle Q Clear(g_c), s	3.3	26.1	26.2	3.0	5.8	5.9	6.0	0.0	8.6	2.5	1.5	1.6
Prop In Lane	1.00		0.18	1.00		0.17	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	77	1863	992	68	963	983	136	0	362	57	327	278
V/C Ratio(X)	0.78	0.67	0.67	0.78	0.30	0.30	0.79	0.00	0.45	0.79	0.10	0.11
Avail Cap(c_a), veh/h	160	1863	992	124	963	983	213	0	362	106	327	278
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	16.0	16.1	47.0	7.1	7.1	45.4	0.0	33.8	48.0	34.6	34.6
Incr Delay (d2), s/veh	15.1	1.9	3.6	17.3	0.8	0.8	10.5	0.0	4.0	20.5	0.6	0.8
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(-26165%),veh/ln	12.6	13.9	1.8	3.0	3.1	3.3	0.0	0.0	4.3	1.6	0.8	0.8
LnGrp Delay(d),s/veh	62.4	18.0	19.7	64.4	7.9	7.9	55.9	0.0	37.8	68.5	35.2	35.4
LnGrp LOS	E	B	B	E	A	A	E		D	E	D	D
Approach Vol, veh/h		1968			645			271			108	
Approach Delay, s/veh		19.9			12.6			45.0			49.2	
Approach LOS		B			B			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), s7.2	26.0	7.8	58.9	11.7	21.6	8.4	58.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	22.0	7.0	49.0	12.0	16.0	9.0	47.0					
Max Q Clear Time (g_c+I1), s	10.6	5.0	28.2	8.0	3.6	5.3	7.9					
Green Ext Time (p_c), s	0.0	0.9	0.0	16.8	0.1	0.9	0.0	27.3				
Intersection Summary												
HCM 2010 Ctrl Delay					21.6							
HCM 2010 LOS					C							

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HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↔	↔	↔	↔	↔
Volume (veh/h)	3	1739	35	71	615	2	108	0	208	3	1	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	0	1863	1900	1863	1900
Adj Flow Rate, veh/h	3	1739	35	71	615	2	108	0	208	3	1	3
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2	2	2	2
Cap, veh/h	0	2378	48	0	2424	8	89	0	0	0	66	197
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.05	0.00	0.00	0.25	0.16	0.16
Sat Flow, veh/h	0	3549	71	0	3619	12	1774	108	0	411	1234	
Grp Volume(v), veh/h	0	865	909	0	301	316	108	212.7	0	0	4	
Grp Sat Flow(s),veh/h/ln	0	1770	1850	0	1770	1861	1774	F	0	0	1645	
Q Serve(g_s), s	0.0	31.6	31.9	0.0	6.8	6.8	5.0		0.0	0.0	0.2	
Cycle Q Clear(g_c), s	0.0	31.6	31.9	0.0	6.8	6.8	5.0		0.0	0.0	0.2	
Prop In Lane	0.00		0.04	0.00		0.01	1.00		0.00		0.75	
Lane Grp Cap(c), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
V/C Ratio(X)	0.00	0.73	0.73	0.00	0.25	0.25	1.22		0.00	0.00	0.02	
Avail Cap(c_a), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00		0.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	10.7	10.7	0.0	6.6	6.6	47.5		0.0	0.0	35.4	
Incr Delay (d2), s/veh	0.0	4.0	3.9	0.0	0.5	0.5	165.2		0.0	0.0	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(-26165%),veh/ln	16.4	17.2	0.0	3.4	3.6	6.5			0.0	0.0	0.1	
LnGrp Delay(d),s/veh	0.0	14.6	14.6	0.0	7.1	7.1	212.7		0.0	0.0	35.5	
LnGrp LOS	B	B		A	A	F					D	
Approach Vol, veh/h	1774			617						4		
Approach Delay, s/veh	14.6			7.1						35.5		
Approach LOS	B			A						D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.0		0.0	71.0	9.0	20.0	0.0	71.0				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	4.0		59.0	5.0	16.0	4.0	59.0					
Max Q Clear Time (g_c+10), s	0.0		33.9	7.0	2.2	0.0	8.8					
Green Ext Time (p_c), s	0.0		0.0	19.4	0.0	0.0	31.8					
Intersection Summary												
HCM 2010 Ctrl Delay	21.3											
HCM 2010 LOS	C											

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↔	↔	↔				↔	↔	↔
Volume (veh/h)	0	0	0	348	4	21	373	155	0	0	71	157
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				348	4	21	373	155	0	0	71	157
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				395	5	356	629	261	0	0	83	183
Arrive On Green				0.23	0.23	0.23	0.83	0.83	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1755	20	1583	1271	528	0	0	517	1144
Grp Volume(v), veh/h				352	0	21	528	0	0	0	0	228
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1799	0	0	0	0	1661
Q Serve(g_s), s				19.2	0.0	1.0	10.0	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				19.2	0.0	1.0	10.0	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.99		1.00	0.71		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				400	0	356	890	0	0	0	0	266
V/C Ratio(X)				0.88	0.00	0.06	0.59	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				515	0	459	890	0	0	0	0	266
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				37.4	0.0	30.4	5.3	0.0	0.0	0.0	0.0	40.9
Incr Delay (d2), s/veh				13.4	0.0	0.1	2.9	0.0	0.0	0.0	0.0	28.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				10.9	0.0	0.5	5.3	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh				50.9	0.0	30.5	8.2	0.0	0.0	0.0	0.0	69.2
LnGrp LOS				D		C	A					E
Approach Vol, veh/h				373			528			228		
Approach Delay, s/veh				49.7			8.2			69.2		
Approach LOS				D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.5				20.0		26.5				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				16.0		29.0				
Max Q Clear Time (g_c+10), s		12.0				15.4		21.2				
Green Ext Time (p_c), s		3.9				0.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	34.2											
HCM 2010 LOS	C											

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HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	13	277	0	0	0	0	430	774	10	404	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	57	13	277	0	0	0	0	430	774	10	404	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	854	854	404	404	0	0	430	0	0	-	-	-
Stage 1	424	424	-	-	-	-	-	-	-	-	-	-
Stage 2	430	430	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	329	296	647	1155	-	-	1129	-	-	-	-	-
Stage 1	660	587	-	-	-	-	-	-	-	-	-	-
Stage 2	656	583	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	325	0	647	1155	-	-	1129	-	-	-	-	-
Mov Cap-2 Maneuver	445	0	-	-	-	-	-	-	-	-	-	-
Stage 1	653	0	-	-	-	-	-	-	-	-	-	-
Stage 2	656	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.7	-	-	0	-	-	0.2	-	-	-	-	-
HCM LOS	B	-	-	-	-	-	-	-	-	-	-	-
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1155	-	-	445	647	1129	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	0.157	0.428	0.009	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	14.6	14.7	8.2	0	-	-	-	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.1	0	-	-	-	-	-	-

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HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	204	152	221	337	174	198	891	169	168	549	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	121	204	152	221	337	174	198	891	169	168	549	57
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	151	469	210	254	676	302	233	1341	254	200	1401	145
Arrive On Green	0.08	0.13	0.13	0.14	0.19	0.19	0.13	0.45	0.45	0.11	0.43	0.43
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2970	563	1774	3238	335
Grp Volume(v), veh/h	121	204	152	221	337	174	198	531	529	168	299	307
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1763	1774	1770	1804
Q Serve(g_s), s	6.7	5.3	9.2	12.2	8.5	10.0	10.9	23.5	23.5	9.3	11.6	11.6
Cycle Q Clear(g_c), s	6.7	5.3	9.2	12.2	8.5	10.0	10.9	23.5	23.5	9.3	11.6	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		0.19
Lane Grp Cap(c), veh/h	151	469	210	254	676	302	233	799	797	200	766	780
V/C Ratio(X)	0.80	0.44	0.72	0.87	0.50	0.58	0.85	0.66	0.66	0.84	0.39	0.39
Avail Cap(c_a), veh/h	231	566	253	302	708	317	355	799	797	231	766	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	39.9	41.6	41.9	36.2	36.8	42.4	21.5	21.5	43.5	19.4	19.4
Incr Delay (d2), s/veh	11.0	0.6	7.9	20.3	0.6	2.3	11.3	4.3	4.3	21.2	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.8	2.6	4.5	7.4	4.2	4.5	6.1	12.3	12.4	5.7	6.0	6.1
LnGrp Delay(d),s/veh	56.0	40.6	49.5	62.3	36.8	39.1	53.8	25.8	25.8	64.7	20.9	20.9
LnGrp LOS	E	D	D	E	D	D	D	C	C	E	C	C
Approach Vol, veh/h	477			732			1258			774		
Approach Delay, s/veh	47.3			45.0			30.2			30.4		
Approach LOS	D			D			C			C		
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	15.2	49.2	18.3	17.2	17.2	47.3	12.5	23.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	38.0	17.0	16.0	20.0	31.0	13.0	20.0				
Max Q Clear Time (g_c+1), s	11.3	25.5	14.2	11.2	12.9	13.6	8.7	12.0				
Green Ext Time (p_c), s	0.1	8.1	0.2	2.0	0.3	10.2	0.1	3.0				
Intersection Summary												
HCM 2010 Ctrl Delay	36.1											
HCM 2010 LOS	D											

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HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	197	713		5	6	1027	615	6	11	6	271	3 143
Number	7	4		14	3	8	18	5	2	12	1	6 16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	197	713		5	6	1027	615	6	11	6	271	3 143
Adj No. of Lanes	1	2		0	1	2	1	1	1	0	2	1 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
Percent Heavy Veh, %	2	2		2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1890		13	11	1416	633	11	396	216	962	565 480
Arrive On Green	0.13	0.52		0.52	0.01	0.40	0.40	0.01	0.35	0.35	0.30	0.30 0.30
Sat Flow, veh/h	1774	3603		25	1774	3539	1583	1774	1135	619	2697	1863 1583
Grp Volume(v), veh/h	197	350		368	6	1027	615	6	0	17	271	3 143
Grp Sat Flow(s), veh/h/ln	1774	1770		1858	1774	1770	1583	1774	0	1754	1349	1863 1583
Q Serve(g, s)	10.9	11.7		11.7	0.3	24.5	38.1	0.3	0.0	0.6	7.8	0.1 6.9
Cycle Q Clear(g, c), s	10.9	11.7		11.7	0.3	24.5	38.1	0.3	0.0	0.6	7.8	0.1 6.9
Prop In Lane	1.00			0.01	1.00		1.00	1.00		0.35	1.00	1.00
Lane Grp Cap(c), veh/h	232	928		975	11	1416	633	11	0	612	962	565 480
V/C Ratio(X)	0.85	0.38		0.38	0.55	0.73	0.97	0.55	0.00	0.03	0.28	0.01 0.30
Avail Cap(c_a), veh/h	337	973		1022	71	1416	633	71	0	612	962	565 480
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00 1.00
Uniform Delay (d), s/veh	42.5	14.1		14.1	49.6	25.4	29.4	49.6	0.0	21.4	27.0	24.3 26.7
Incr Delay (d2), s/veh	12.8	0.3		0.2	37.0	1.9	28.5	37.0	0.0	0.1	0.7	0.0 1.6
Initial Q Delay(d3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0
%ile BackOfQ(-26165%), veh/ln	5.8			6.1	0.3	12.4	21.6	0.3	0.0	0.3	3.0	0.1 3.2
LnGrp Delay(d), s/veh	55.3	14.3		14.3	86.6	27.2	58.0	86.6	0.0	21.5	27.7	24.3 28.3
LnGrp LOS	E	B		B	F	C	E	F		C	C	C C
Approach Vol, veh/h	915			1648			23			417		
Approach Delay, s/veh	23.2			38.9			38.4			27.9		
Approach LOS	C			D			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	38.9	4.6	56.5	4.6	34.3	17.1	44.0					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	29.0	4.0	55.0	4.0	21.0	19.0	40.0					
Max Q Clear Time (g_c+I1), s	2.6	2.3	13.7	2.3	9.8	12.9	40.1					
Green Ext Time (p_c), s	1.6	0.0	23.0	0.0	1.2	0.3	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	32.6											
HCM 2010 LOS	C											

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HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1926	60	91	635	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1926	60	91	635	3	29
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1986	0	2456	993
Stage 1	-	-	-	-	1956	-
Stage 2	-	-	-	-	500	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	127	-	37	210
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	556	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	127	-	10	210
Mov Cap-2 Maneuver	-	-	-	-	44	-
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	158	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		10.6		34.2	
HCM LOS	C		D		D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	155	-	-	127	-	
HCM Lane V/C Ratio	0.206	-	-	0.717	-	
HCM Control Delay (s)	34.2	-	-	84.5	-	
HCM Lane LOS	D	-	-	F	-	
HCM 95th %tile Q(veh)	0.7	-	-	4	-	

PM Peak Hour Existing
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HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	7.5					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	55	101	89	741	239	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	55	101	89	741	239	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	300	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	211	-
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	1506	-	-	0	691	969
Stage 1	-	-	-	0	934	-
Stage 2	-	-	-	0	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	664	969
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	792	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.6		0		13.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	664	969	1506	-	-	
HCM Lane V/C Ratio	0.36	0.011	0.037	-	-	
HCM Control Delay (s)	13.4	8.8	7.5	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	1.6	0	0.1	-	-	

APPENDIX C

CUMULATIVE PROJECTS LIST AND PEAK-HOUR VOLUMES

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In-N-Out Drive-Thru Restaurant Cumulative Projects List (October 2014)

No.	Project Name	Description	Location
1	West Broadway Urban Village Specific Plan (Adopted January 2010)	~ 40 acre Study Area ~ The goal of the West Broadway Urban Village (WBUV) Specific Plan is to revitalize Seaside's central business district. The Plan includes a mix of residential, ground floor retail and commercial uses, and public amenities along Broadway Avenue with supporting future transit-oriented development located along the west side of Del Monte Boulevard. Adopted Design Guidelines promote smart growth, pedestrian-oriented streets and green building practices. Two planned catalyst projects include a public library, parking structure and mixed-use development on Broadway Avenue and a gateway hotel and conference project at the southwest end of the plan area.	Area is bounded by Del Monte Blvd, Olympia, Fremont Blvd, Imperial St., Canyon Del Rey and Harcourt Ave.
2	West Broadway Parking Structure & Library (Pending)	A public library, parking structure and mixed-use development has been identified as an opportunity site. The proposed project includes the following components. Library: 20,000 sq ft Retail: 20,000 sq ft Residential: 80 units (senior/affordable) Parking: up to 500 spaces Public Plaza: 5,000 sq ft	2.1 acrea site bounded by W. Broadway and Olympia and includes the City corporation yard
3	Seaside Resort (Seaside Resort, LLC) (Pending)	330 room Fairmont Hotel; 175 timeshares; 125 residential lots	At the Bayonet and Black Horse Golf Course in the northwest area of the City on the former Fort Ord military base.
4	The Projects at Main Gate Specific Plan/EIR (Adopted August 2010)	Proposed 552,000 sq ft of regional retail/entertainment, including a department store and restaurants in a life style center that will include a 250 room hotel and spa	~ 60 acres at the former Fort Ord Main Gate bordered by Hwy 1, Light Fighter Drive, 2 nd Avenue, and 1 st Street
5	Senior Housing Living	Proposed assisted living and memory care facility that includes 111,237 square feet of floor area. The assisted living facility will consist of 83 units comprised of 41 studio units, 36 1-bedroom units, 6 2-bedroom units. The memory care facility will consist of 49 total units comprised of 37 private units and 12 companion units. The facility will include a commercial kitchen with full service dining for the residents and related support services.	5.4 acres at the terminus of Monterey Road and Coe Avenue (former Fort Ord)
6	Monterey Veterans Cemetery (Pending)	The Central Coast Veteran's Cemetery will honor the service of regional Veterans. The site will serve the surrounding four-county area with 11,500 traditional burial and crypt sites. A Final Development Master Plan includes 80 acres for the cemetery and two adjacent development opportunity parcels. Sale proceeds from the development parcels will generate an operational endowment for the cemetery.	~175 acres of the former Fort Ord Military Base within the City of Seaside and Monterey County
7	Monterey Downs Horse Park	Proposal includes a mix of residential housing units as part of a combination equestrian training facility, mixed us commercial office, retail hotel, residential, light industrial and non-profit equestrian and recreational facility located in Monterey County.	Approximately 40 acres to the northwest of the Veteran's Cemetery in the City of Seaside. Includes the Endowment Parcel
8	East Seaside	The City has established an advisory committee to formulate a high-level conceptual master plan for East Seaside. Proposed land uses include a trade and expo center, green technology park, sports complex with fields, a new school and residential neighborhoods. The conceptual master plan will be available Fall 2010.	The project site comprises approximately 700 acres and is bounded to the west by General Jim Moore Boulevard, Seaside proper, and a Habitat Management area under the Bureau of Land Management (BLM). The northern boundary is a military residential enclave and the Department of Defense Building. The City's southern boundary marks the southern boundary of the planned development area while Eucalyptus Road runs through the property generally west to east

Cumulative Projects Trip Generation

Land Use		Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Trip Rates ¹										
254	Assisted Living		Bed	2.74	0.12	0.06	0.18	0.15	0.15	0.29
566	Cemetery		Acre	4.73	0.12	0.05	0.17	0.28	0.56	0.84
Cumulative Projects Trip Generation										
1	West Broadway Urban Village Specific Plan ²									
	Total (excluding Library)			2,703	176	153	341	66	154	220
2	West Broadway Urban Village Library ²									
	Library (20,000 Square Feet)			1,080	15	6	21	68	74	142
3	Seaside Resort ³									
	210 Single-Family Homes and 330 Resort Hotel Rooms			5,672	145	122	267	180	182	362
4	Seaside Main Gate Retail Development ⁴									
	559,500 Square Feet of Retail Use and 250 Hotel Rooms			26,067	437	239	716	934	997	1,931
5	Senior Housing									
	132 Assisted Living Units	150	Beds	411	18	9	27	22	22	43
6	Monterey Veterans Cemetery									
	Total	80	Acres	378	10	4	14	22	45	67
Total				36,311	801	533	1,386	1,292	1,474	2,765

¹ Trip rates referenced from the Institute of Transportation Engineers *Trip Generation*, 9th Edition (2012).² Trip generation referenced from West Broadway Urban Village Specific Plan Transportation Impact Study (Fehr & Peers, December 2008).

Includes 234,667 square feet (sf) of retail use, 96,533 sf of office use, a 20,000 sf library, 250 hotel rooms, 351 townhomes/condominiums, 66 apartments, and 82 senior housing units.

³ Trip generation referenced from the Seaside Resort Traffic Analysis Study (Higgins Associates, July 2001).⁴ Trip generation referenced from the Seaside Main Gate Retail Development Transportation Analysis Study (Hexagon Transportation Consultants, Inc., March 2008).

Cumulative Project Trips

Intersection			Total Cumulative		1. West Broadway Urban Village		2. West Broadway Parking Structure		3. Seaside Resort		4. Main Gate Specific Plan		5. Senior Housing		6. Monterey Veterans	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1 Fremont Blvd/Monterey Rd																
	NL		0	0												
	NT		8	24	5	11							3	13		
	NR		0	0												
	SL		0	0												
	ST		22	16	8	9							14	7		
	SR		0	0												
	EL		0	0												
	ET		0	0												
	ER		0	0												
	WL		0	0												
	WT		0	0												
	WR		0	0												
2 Fremont Blvd/Del Monte Blvd																
	NL		0	0												
	NT		5	14	3	7							2	7		
	NR		2	6					2	6						
	SL		0	0												
	ST		12	10	5	6							7	4		
	SR		10	6	3	3							7	3		
	EL		3	10	2	4							1	6		
	ET		0	0												
	ER		1	2	1	2										
	WL		0	0												
	WT		0	0												
	WR		0	0												
3 Playa Ave/Del Monte Blvd																
	NL		0	0												
	NT		0	0												
	NR		0	0												
	SL		0	0												
	ST		0	0												
	SR		0	0												
	EL		0	0												
	ET		11	32	6	14	4	12					1	6		
	ER		0	0												
	WL		0	0												
	WT		20	20	10	11	3	6					7	3		
	WR		0	0												
4 Tioga Ave/Del Monte Blvd																
	NL		0	0												
	NT		0	0												
	NR		0	0												
	SL		0	0												
	ST		0	0												
	SR		3	3	3	3										
	EL		2	4	2	4										
	ET		15	44	6	14	8	24					1	6		
	ER		0	0												
	WL		0	0												
	WT		22	26	10	11	5	12					7	3		
	WR		0	0												
5 Contra Costa St/Del Monte Blvd																
	NL		0	0												
	NT		0	0												
	NR		0	0												
	SL		0	0												
	ST		0	0												
	SR		6	15	3	3	3	12								
	EL		5	16	2	4	3	12								
	ET		29	59	18	25	10	26			0	2	1	6		
	ER		0	0												
	WL		0	0												
	WT		23	31	8	9	7	17			1	2	7	3		
	WR		0	0												
6 Broadway Ave/Del Monte Blvd																
	NL		36	87	28	53	6	19			1	4			1	11
	NT		0	0												
	NR		17	48	3	6	13	38			1	4				
	SL		0	0												
	ST		0	0												
	SR		0	0												
	EL		0	0												
	ET		19	31	17	24			1	1			1	6		
	ER		36	65	26	35	5	20			2	4			3	6
	WL		16	48	4	5	10	39			2	4				
	WT		15	11	7	7			1	1			7	3		
	WR		0	0												

Cumulative Project Trips (continued)

Intersection	Total Cumulative		1. West Broadway Urban Village		2. West Broadway Parking Structure		3. Seaside Resort		4. Main Gate Specific Plan		5. Senior Housing		6. Monterey Veterans	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
7 Canyon Del Rey Blvd/Del Monte Blvd														
NL	4	9	2	4			2	3	0	2				
NT	4	10	2	5			2	3	0	2				
NR	10	14	8	9			2	3	0	2				
SL	21	23	21	23										
ST	7	11	2	3			2	3	3	5				
SR	0	0												
EL	0	0												
ET	35	59	28	32	3	15					1	6	3	6
ER	6	11	2	3			1	3	3	5				
WL	6	14	5	11			1	3						
WT	29	67	17	38	4	15					7	3	1	11
WR	12	27	12	27										
8 Roberts Ave/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	36	64	28	32	2	14	0	2	2	4	1	6	3	6
ER	0	0												
WL	0	0												
WT	29	68	17	38	4	14			0	2	7	3	1	11
WR	0	0												
9 English Ave/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	2	10			1	7	0	1	1	2				
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	34	54	28	32	1	7	0	1	1	2	1	6	3	6
ER	0	0												
WL	2	8			2	7			0	1				
WT	27	60	17	38	2	7			0	1	7	3	1	11
WR	0	0												
10 Casa Verde Way/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	32	44	28	32							1	6	3	6
ER	0	0												
WL	0	0												
WT	25	52	17	38							7	3	1	11
WR	0	0												
11 Sloat Ave/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	32	44	28	32							1	6	3	6
ER	0	0												
WL	0	0												
WT	25	52	17	38							7	3	1	11
WR	0	0												
12 Canyon Del Rey Blvd/Cabrillo Hwy SB Ramps														
NL	11	23	10	21			1	1	0	1				
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	0	0												
ER	0	0												
WL	10	12	8	9			1	1	1	2				
WT	0	0												
WR	0	0												

Cumulative Project Trips (continued)

Intersection	Total Cumulative		1. West Broadway Urban Village		2. West Broadway Parking Structure		3. Seaside Resort		4. Main Gate Specific Plan		5. Senior Housing		6. Monterey Veterans	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
13 Canyon Del Rey Blvd/Cabrillo Hwy NB Ramps														
NL	0	0												
NT	11	23	10	21			1	1	0	1				
NR	6	13	5	11			1	1	0	1				
SL	0	0												
ST	10	12	8	9			1	1	1	2				
SR	0	0												
EL	0	0												
ET	0	0												
ER	17	20	15	17			1	1	1	2				
WL	0	0												
WT	0	0												
WR	0	0												
14 Canyon Del Rey Blvd/Fremont Blvd														
NL	13	22					11	12	2	10				
NT	15	24	2	2			11	12	2	10				
NR	8	13	6	7							1	3	1	3
SL	2	4	2	4										
ST	17	34	1	3			8	13	8	18				
SR	2	5	2	5										
EL	4	4	4	4										
ET	15	20	12	13							1	4	2	3
ER	8	13					8	13						
WL	7	17	4	8							3	2	0	7
WT	12	25	7	16							4	2	1	7
WR	3	4	3	4										
15 Canyon Del Ray Rd/Salinas Hwy														
NL	0	0												
NT	10	15	8	9							1	3	1	3
NR	0	0												
SL	0	0												
ST	9	20	5	11							3	2	1	7
SR	0	0												
EL	0	0												
ET	0	0												
ER	0	0												
WL	0	0												
WT	0	0												
WR	7	17							7	17				
16 Cabrillo Hwy SB On-Ramp/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	32	44	28	32							1	6	3	6
ER	0	0												
WL	0	0												
WT	25	52	17	38							7	3	1	11
WR	0	0												
17 English Ave/Cabrillo Hwy NB Ramps														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	2	8			2	7			0	1				
EL	2	10			1	7	0	1	1	2				
ET	0	0												
ER	0	0												
WL	0	0												
WT	0	0												
WR	0	0												

APPENDIX D

CUMULATIVE LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Volume (veh/h)	79	139	85	119	249	30	172	879	159	63	1099	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	139	85	119	249	30	172	879	159	63	1099	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	177	185	158	125	261	31	195	1392	252	81	1417	634
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	542	1133	137	1774	2995	542	1774	3539	1583
Grp Volume(v), veh/h	79	139	85	398	0	0	172	519	519	63	1099	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1812	0	0	1774	1770	1767	1774	1770	1583
Q Serve(g_s), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.2	22.2	3.5	27.0	5.5
Cycle Q Clear(g_c), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.2	22.2	3.5	27.0	5.5
Prop In Lane	1.00		1.00	0.30		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	177	185	158	417	0	0	195	823	822	81	1417	634
V/C Ratio(X)	0.45	0.75	0.54	0.96	0.00	0.00	0.88	0.63	0.63	0.78	0.78	0.21
Avail Cap(c_a), veh/h	284	298	253	417	0	0	195	823	822	106	1417	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	43.8	42.8	38.0	0.0	0.0	43.9	20.3	20.3	47.2	26.1	19.6
Incr Delay (d2), s/veh	1.8	6.0	2.9	32.7	0.0	0.0	34.1	3.7	3.7	22.9	4.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	4.1	2.4	14.6	0.0	0.0	6.5	11.7	11.6	2.2	14.0	2.5
LnGrp Delay(d),s/veh	44.2	49.8	45.7	70.7	0.0	0.0	77.9	23.9	23.9	70.2	30.3	20.3
LnGrp LOS	D	D	D	E			E	C	C	E	C	C
Approach Vol, veh/h	303			398			1210			1294		
Approach Delay, s/veh	47.2			70.7			31.6			31.2		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	50.5		13.9	15.0	44.1		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	39.0		16.0	11.0	34.0		23.0				
Max Q Clear Time (g_c+I1), s	5.5	24.2		9.3	11.6	29.0		23.7				
Green Ext Time (p_c), s	0.0	11.7		0.7	0.0	4.4		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

AM Peak Hour Cumulative Trips
LSA Associates, Inc.

Synchro 8 Report
Page 1

HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh	13.2										
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	177	0	546	52	0	692	638	149	22	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	177	0	546	52	0	692	638	149	22	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	903	273	692	0	0	546	0	0	965	346	
Stage 1	546	-	-	-	-	-	-	-	692	-	
Stage 2	357	-	-	-	-	-	-	-	273	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	232	725	899	-	-	1019	-	0	209	650	
Stage 1	490	-	-	-	-	-	-	0	400	-	
Stage 2	633	-	-	-	-	-	-	0	710	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	210	725	899	-	-	1019	-	-	158	650	
Mov Cap-2 Maneuver	210	-	-	-	-	-	-	-	158	-	
Stage 1	490	-	-	-	-	-	-	-	400	-	
Stage 2	602	-	-	-	-	-	-	-	537	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	11.6	0			0			114.1			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	158	-	899	-	-	725	1019	-			
HCM Lane V/C Ratio	0.943	-	-	-	-	0.244	-	-			
HCM Control Delay (s)	114.1	0	0	-	-	11.6	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	6.9	-	0	-	-	1	0	-			

AM Peak Hour Cumulative Trips
LSA Associates, Inc.

Synchro 8 Report
Page 3

HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	9	73	117	29	95	1	135	185	22	4	589	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	73	117	29	95	1	135	185	22	4	589	42
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	533	190	161	557	413	4	203	1340	157	7	1225	87
Arrive On Green	0.30	0.10	0.10	0.31	0.12	0.12	0.06	0.42	0.42	0.00	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	1774	3588	38	3442	3191	375	1774	3352	239
Grp Volume(v), veh/h	9	73	117	29	47	49	135	102	105	4	311	320
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1856	1721	1770	1797	1774	1770	1821
Q Serve(g_s), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.5	3.6	0.2	13.5	13.6
Cycle Q Clear(g_c), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.5	3.6	0.2	13.5	13.6
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	533	190	161	557	204	214	203	743	755	7	647	665
V/C Ratio(X)	0.02	0.38	0.73	0.05	0.23	0.23	0.67	0.14	0.14	0.54	0.48	0.48
Avail Cap(c_a), veh/h	533	410	348	557	460	483	413	743	755	106	647	665
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	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	42.0	43.6	23.9	40.2	40.2	46.1	17.8	17.9	49.7	24.4	24.4
Incr Delay (d2), s/veh	0.0	1.3	6.1	0.0	0.6	0.5	3.6	0.4	0.4	48.8	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.2	2.0	3.4	0.6	1.2	1.3	1.9	1.8	1.9	0.2	7.0	7.2
LnGrp Delay(d),s/veh	24.6	43.3	49.6	24.0	40.8	40.8	49.7	18.2	18.2	98.5	27.0	26.9
LnGrp LOS	C	D	D	C	D	D	D	B	B	F	C	C
Approach Vol, veh/h	199			125			342			635		
Approach Delay, s/veh	46.2			36.9			30.6			27.4		
Approach LOS	D			D			C			C		
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	4.4	46.0	35.4	14.2	9.9	40.5	34.1	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	42.0	14.0	22.0	12.0	36.0	10.0	26.0				
Max Q Clear Time (g_c+I1), s	2.2	5.6	3.1	9.2	5.8	15.6	2.4	4.4				
Green Ext Time (p_c), s	0.0	5.9	0.0	1.0	0.2	5.2	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	32.0											
HCM 2010 LOS	C											

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	37	28	34	11	27	26	28	303	15	52	627	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	37	28	34	11	27	26	28	303	15	52	627	73
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	47	282	343	19	643	541	38	789	671	67	1406	163
Arrive On Green	0.03	0.37	0.37	0.01	0.35	0.35	0.02	0.42	0.42	0.04	0.44	0.44
Sat Flow, veh/h	1774	767	931	1774	1825	1536	1774	1863	1583	1774	3195	371
Grp Volume(v), veh/h	37	0	62	11	26	27	28	303	15	52	347	353
Grp Sat Flow(s),veh/h/ln	1774	0	1698	1774	1770	1592	1774	1863	1583	1774	1770	1797
Q Serve(g_s), s	2.1	0.0	2.4	0.6	1.0	1.1	1.6	11.2	0.6	2.9	13.7	13.7
Cycle Q Clear(g_c), s	2.1	0.0	2.4	0.6	1.0	1.1	1.6	11.2	0.6	2.9	13.7	13.7
Prop In Lane	1.00		0.55	1.00		0.97	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	47	0	625	19	623	560	38	789	671	67	779	791
V/C Ratio(X)	0.79	0.00	0.10	0.59	0.04	0.05	0.73	0.38	0.02	0.77	0.45	0.45
Avail Cap(c_a), veh/h	195	0	625	142	623	560	177	789	671	231	779	791
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	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	48.4	0.0	20.7	49.3	21.3	21.4	48.6	19.8	16.8	47.7	19.5	19.5
Incr Delay (d2), s/veh	25.1	0.0	0.3	26.1	0.1	0.2	23.0	1.4	0.1	16.2	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	1.2	0.4	0.5	0.5	1.0	6.0	0.3	1.7	7.0	7.1	7.1
LnGrp Delay(d),s/veh	73.5	0.0	21.1	75.4	21.4	21.5	71.7	21.2	16.8	63.9	21.2	21.2
LnGrp LOS	E	C	E	C	C	E	C	B	E	C	C	C
Approach Vol, veh/h	99			64			346			752		
Approach Delay, s/veh	40.7			30.7			25.1			24.2		
Approach LOS	D			C			C			C		
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	46.4	5.1	40.8	6.2	48.0	6.6	39.2					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	41.0	8.0	22.0	10.0	44.0	11.0	19.0					
Max Q Clear Time (g_c+I1), s	13.2	2.6	4.4	3.6	15.7	4.1	3.1					
Green Ext Time (p_c), s	0.0	7.1	0.0	0.5	0.0	7.2	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	26.1											
HCM 2010 LOS	C											

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	147	343	593	88	27	160		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	147	343	593	88	27	160		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	178	2407	1669	247	426	380		
Arrive On Green	0.20	1.00	0.54	0.54	0.24	0.24		
Sat Flow, veh/h	1774	3632	3187	458	1774	1583		
Grp Volume(v), veh/h	147	343	339	342	27	160		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1782	1774	1583		
Q Serve(g_s), s	7.9	0.0	10.9	11.0	1.2	8.5		
Cycle Q Clear(g_c), s	7.9	0.0	10.9	11.0	1.2	8.5		
Prop In Lane	1.00			0.26	1.00	1.00		
Lane Grp Cap(c), veh/h	178	2407	955	961	426	380		
V/C Ratio(X)	0.82	0.14	0.35	0.36	0.06	0.42		
Avail Cap(c_a), veh/h	408	2407	955	961	426	380		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.1	0.0	13.1	13.1	29.3	32.1		
Incr Delay (d2), s/veh	9.0	0.1	1.0	1.0	0.3	3.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	5.5	5.6	0.6	8.1		
LnGrp Delay(d),s/veh	48.1	0.1	14.1	14.2	29.6	35.5		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h	490	681		187				
Approach Delay, s/veh	14.5	14.2		34.7				
Approach LOS	B	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				72.0		28.0	14.1	57.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				68.0		24.0	23.0	41.0
Max Q Clear Time (g_c+I1), s				2.0		10.5	9.9	13.0
Green Ext Time (p_c), s				8.4		0.5	0.3	7.5
Intersection Summary								
HCM 2010 Ctrl Delay			17.1					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↶↶	↶	↶	↶↶	↶↶	↶		
Volume (veh/h)	429	265	69	701	500	74		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	429	0	69	701	500	74		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2301	1030	89	2620	619	285		
Arrive On Green	0.21	0.00	0.10	1.00	0.18	0.18		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	429	0	69	701	500	74		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	9.9	0.0	3.8	0.0	13.9	4.0		
Cycle Q Clear(g_c), s	9.9	0.0	3.8	0.0	13.9	4.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2301	1030	89	2620	619	285		
V/C Ratio(X)	0.19	0.00	0.78	0.27	0.81	0.26		
Avail Cap(c_a), veh/h	2301	1030	231	2620	1239	570		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.98	0.00	0.93	0.93	1.00	1.00		
Uniform Delay (d), s/veh	17.6	0.0	44.5	0.0	39.4	35.3		
Incr Delay (d2), s/veh	0.2	0.0	12.7	0.2	2.6	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	2.2	0.1	6.8	1.8		
LnGrp Delay(d),s/veh	17.8	0.0	57.2	0.2	41.9	35.8		
LnGrp LOS	B		E	A	D	D		
Approach Vol, veh/h	429			770	574			
Approach Delay, s/veh	17.8			5.3	41.1			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		22.0	9.0	69.0				78.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		36.0	13.0	39.0				56.0
Max Q Clear Time (g_c+I1), s		15.9	5.8	11.9				2.0
Green Ext Time (p_c), s		2.0	0.1	8.9				10.3
Intersection Summary								
HCM 2010 Ctrl Delay			19.9					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	128	387	202	91	827	315	414	437	108	195	346	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	128	387	202	91	827	315	414	437	108	195	346	103
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	224	1666	746	453	1666	746	811	1590	711	762	1213	356
Arrive On Green	0.94	0.94	0.94	0.47	0.47	0.47	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	491	3539	1583	824	3539	1583	1819	3539	1583	1665	2700	792
Grp Volume(v), veh/h	128	387	202	91	827	315	414	437	108	195	225	224
Grp Sat Flow(s), veh/h/ln	491	1770	1583	824	1770	1583	909	1770	1583	832	1770	1723
Q Serve(g_s), s	20.8	0.8	1.0	6.7	16.1	13.1	18.7	7.8	4.0	8.3	8.0	8.2
Cycle Q Clear(g_c), s	36.9	0.8	1.0	7.5	16.1	13.1	26.9	7.8	4.0	16.1	8.0	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	224	1666	746	453	1666	746	811	1590	711	762	795	774
V/C Ratio(X)	0.57	0.23	0.27	0.20	0.50	0.42	0.51	0.27	0.15	0.26	0.28	0.29
Avail Cap(c_a), veh/h	238	1770	792	477	1770	792	811	1590	711	762	795	774
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	1.6	1.6	16.2	18.3	17.5	26.0	17.3	16.3	22.4	17.4	17.4
Incr Delay (d2), s/veh	2.9	0.1	0.2	0.2	0.2	0.4	2.3	0.4	0.5	0.8	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.3	0.4	1.5	7.9	5.8	4.9	3.9	1.9	2.0	4.1	4.1	
LnGrp Delay(d),s/veh	12.0	1.6	1.8	16.4	18.5	17.8	28.2	17.7	16.7	23.2	18.3	18.4
LnGrp LOS	B	A	A	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	717			1233			959			644		
Approach Delay, s/veh	3.5			18.2			22.2			19.8		
Approach LOS	A			B			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	48.9		51.1		48.9		51.1					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	42.0		50.0		42.0		50.0					
Max Q Clear Time (g_c+I1), s	28.9		38.9		18.1		18.1					
Green Ext Time (p_c), s	8.0		8.2		11.5		16.7					
Intersection Summary												
HCM 2010 Ctrl Delay	16.6											
HCM 2010 LOS	B											

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

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Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	709	0	0	1277	49	0	0	0	1	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	11	709	0	0	1277	49	0	0	0	1	0	45
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	1326	0	0	709	0	0	1679 2033 663					
Stage 1	-	-	-	-	-	-	1302 1302 -					
Stage 2	-	-	-	-	-	-	377 731 -					
Critical Hdwy	4.14	-	-	4.14	-	-	6.84 6.54 6.94					
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84 5.54 -					
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84 5.54 -					
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52 4.02 3.32					
Pot Cap-1 Maneuver	517	-	-	886	-	-	86 56 404					
Stage 1	-	-	-	-	-	-	219 229 -					
Stage 2	-	-	-	-	-	-	663 425 -					
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	517	-	-	886	-	-	84 0 404					
Mov Cap-2 Maneuver	-	-	-	-	-	-	84 0 -					
Stage 1	-	-	-	-	-	-	219 0 -					
Stage 2	-	-	-	-	-	-	649 0 -					
Approach	EB			WB			SB					
HCM Control Delay, s	0.2			0			16					
HCM LOS							C					
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	517	-	-	886	-	-	373					
HCM Lane V/C Ratio	0.021	-	-	-	-	-	0.123					
HCM Control Delay (s)	12.1	-	-	0	-	-	16					
HCM Lane LOS	B	-	-	A	-	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↘	↙	↑↑	↘	↙		
Volume (veh/h)	548	282	16	1292	51	175		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	548	0	16	1292	51	175		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2442	1092	662	2442	408	364		
Arrive On Green	1.00	0.00	0.69	0.69	0.23	0.23		
Sat Flow, veh/h	3632	1583	856	3632	1774	1583		
Grp Volume(v), veh/h	548	0	16	1292	51	175		
Grp Sat Flow(s),veh/h/ln	1770	1583	856	1770	1774	1583		
Q Serve(g_s), s	0.0	0.0	0.6	17.8	2.3	9.6		
Cycle Q Clear(g_c), s	0.0	0.0	0.6	17.8	2.3	9.6		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2442	1093	662	2442	408	364		
V/C Ratio(X)	0.22	0.00	0.02	0.53	0.12	0.48		
Avail Cap(c_a), veh/h	2442	1093	662	2442	408	364		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.0	4.9	7.6	30.5	33.3		
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.8	0.6	4.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	0.0	0.2	8.9	1.2	4.6		
LnGrp Delay(d),s/veh	0.2	0.0	5.0	8.4	31.2	37.8		
LnGrp LOS	A		A	A	C	D		
Approach Vol, veh/h	548			1308	226			
Approach Delay, s/veh	0.2			8.4	36.3			
Approach LOS	A			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		73.0				73.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		69.0				69.0
Max Q Clear Time (g_c+I1), s		11.6		2.0				19.8
Green Ext Time (p_c), s		0.5		24.8				22.3
Intersection Summary								
HCM 2010 Ctrl Delay			9.2					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	  			 			 			 		 
Volume (veh/h)	22	762	94	100	931	16	119	15	90	41	49	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	22	762	94	100	931	16	119	15	90	41	49	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	32	2334	286	128	2002	34	149	53	319	52	327	278
Arrive On Green	0.02	0.51	0.51	0.02	0.19	0.19	0.08	0.23	0.23	0.03	0.18	0.18
Sat Flow, veh/h	1774	4591	563	1774	3560	61	1774	231	1387	1774	1863	1583
Grp Volume(v), veh/h	22	561	295	100	463	484	119	0	105	41	49	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1763	1774	1770	1852	1774	0	1618	1774	1863	1583
Q Serve(g_s), s	1.2	9.8	9.9	5.6	23.3	23.3	6.6	0.0	5.3	2.3	2.2	1.6
Cycle Q Clear(g_c), s	1.2	9.8	9.9	5.6	23.3	23.3	6.6	0.0	5.3	2.3	2.2	1.6
Prop In Lane	1.00		0.32	1.00		0.03	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	32	1724	897	128	995	1042	149	0	372	52	327	278
V/C Ratio(X)	0.68	0.33	0.33	0.78	0.46	0.46	0.80	0.00	0.28	0.79	0.15	0.11
Avail Cap(c_a), veh/h	124	1724	897	248	995	1042	266	0	372	142	327	278
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	14.5	14.5	48.0	27.3	27.3	45.0	0.0	31.7	48.2	34.9	34.7
Incr Delay (d2), s/veh	21.9	0.5	1.0	9.8	1.6	1.5	9.4	0.0	1.9	22.5	1.0	0.8
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(-26165%),veh/ln	4.6	5.0	3.1	11.9	12.4	3.6	0.0	2.6	1.5	1.2	0.8	0.8
LnGrp Delay(d),s/veh	70.7	15.0	15.5	57.8	28.9	28.8	54.3	0.0	33.6	70.8	35.9	35.4
LnGrp LOS	E	B	B	E	C	C	D		C	E	D	D
Approach Vol, veh/h		878			1047			224			120	
Approach Delay, s/veh		16.6			31.6			44.6			47.7	
Approach LOS		B			C			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	27.0	11.2	54.8	12.4	21.5	5.8	60.2					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	23.0	14.0	39.0	15.0	16.0	7.0	46.0					
Max Q Clear Time (g_c+I1), s	7.3	7.6	11.9	8.6	4.2	3.2	25.3					
Green Ext Time (p_c), s	0.0	0.8	0.1	14.5	0.1	0.7	12.3					
Intersection Summary												
HCM 2010 Ctrl Delay				27.9								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

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
Volume (veh/h)	2	823	98	81	1007	3	49	2	47	2	1	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	823	98	81	1007	3	49	2	47	2	1	0
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2182	260	0	2479	7	63	0	372	0	298	0
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.04	0.24	0.24	0.00	0.16	0.00
Sat Flow, veh/h	0	3186	379	0	3620	11	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	457	464	0	492	518	49	0	47	0	1	0
Grp Sat Flow(s),veh/h/ln	0	1770	1796	0	1770	1861	1774	0	1583	0	1863	0
Q Serve(g, s), s	0.0	11.0	11.0	0.0	12.2	12.2	2.7	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g, c), s	0.0	11.0	11.0	0.0	12.2	12.2	2.7	0.0	2.3	0.0	0.0	0.0
Prop In Lane	0.00		0.21	0.00		0.01	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1212	1230	0	1212	1274	63	0	372	0	298	0
V/C Ratio(X)	0.00	0.38	0.38	0.00	0.41	0.41	0.78	0.00	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1212	1230	0	1212	1274	71	0	372	0	298	0
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)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.7	6.7	0.0	6.9	6.9	47.9	0.0	30.1	0.0	35.3	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.0	1.0	1.0	38.5	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.6	5.7	0.0	6.2	6.5	2.0	0.0	1.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.6	7.6	0.0	7.9	7.8	86.3	0.0	30.3	0.0	35.3	0.0
LnGrp LOS	A	A		A	A	F		C		D		
Approach Vol, veh/h	921			1010			96			1		
Approach Delay, s/veh	7.6			7.9			58.9			35.3		
Approach LOS	A			A			E			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/0.0	27.5	0.0	72.5	7.5	20.0	0.0	72.5					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	16.0	4.0	60.0	4.0	16.0	4.0	60.0					
Max Q Clear Time (g_c+10), s	4.3	0.0	13.0	4.7	2.0	0.0	14.2					
Green Ext Time (p_c), s	0.0	0.1	0.0	20.3	0.0	0.1	20.1					
Intersection Summary												
HCM 2010 Ctrl Delay	10.2											
HCM 2010 LOS	B											

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HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

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
Volume (veh/h)	0	0	0	337	1	14	509	72	0	0	39	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	0	0	1863	1900			
Adj Flow Rate, veh/h	337	1	14	509	72	0	0	39	65			
Adj No. of Lanes	0	1	1	0	1	0	1	0	0	1	0	0
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	0	0	2	2			
Cap, veh/h	382	1	342	788	112	0	0	101	168			
Arrive On Green	0.22	0.22	0.22	0.84	0.84	0.00	0.00	0.16	0.16			
Sat Flow, veh/h	1769	5	1583	1563	221	0	0	629	1049			
Grp Volume(v), veh/h	338	0	14	581	0	0	0	0	104			
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1785	0	0	0	0	1678			
Q Serve(g, s), s	18.5	0.0	0.7	11.3	0.0	0.0	0.0	0.0	5.6			
Cycle Q Clear(g, c), s	18.5	0.0	0.7	11.3	0.0	0.0	0.0	0.0	5.6			
Prop In Lane	1.00		1.00	0.88		0.00	0.00		0.62			
Lane Grp Cap(c), veh/h	383	0	342	900	0	0	0	0	268			
V/C Ratio(X)	0.88	0.00	0.04	0.65	0.00	0.00	0.00	0.00	0.39			
Avail Cap(c_a), veh/h	479	0	427	900	0	0	0	0	268			
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	38.0	0.0	31.0	4.8	0.0	0.0	0.0	0.0	37.6			
Incr Delay (d2), s/veh	14.9	0.0	0.0	3.6	0.0	0.0	0.0	0.0	4.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	10.6	0.0	0.3	6.0	0.0	0.0	0.0	0.0	2.9			
LnGrp Delay(d),s/veh	52.9	0.0	31.1	8.4	0.0	0.0	0.0	0.0	41.8			
LnGrp LOS	D		C	A					D			
Approach Vol, veh/h			352			581			104			
Approach Delay, s/veh			52.0			8.4			41.8			
Approach LOS			D			A			D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s	54.4					20.0		25.6				
Change Period (Y+Rc), s	4.0					4.0		4.0				
Max Green Setting (Gmax), s	45.0					16.0		27.0				
Max Q Clear Time (g_c+10), s	13.3					7.6		20.5				
Green Ext Time (p_c), s	4.5					0.3		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay	26.5											
HCM 2010 LOS	C											

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HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	1	294	0	0	0	0	526	342	7	394	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	25	1	294	0	0	0	0	526	342	7	394	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	934	934	394	394	0	0	526	0	0			
Stage 1	408	408	-	-	-	-	-	-	-	-	-	-
Stage 2	526	526	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	295	266	655	1165	-	-	1041	-	-	-	-	-
Stage 1	671	597	-	-	-	-	-	-	-	-	-	-
Stage 2	593	529	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	292	0	655	1165	-	-	1041	-	-	-	-	-
Mov Cap-2 Maneuver	417	0	-	-	-	-	-	-	-	-	-	-
Stage 1	665	0	-	-	-	-	-	-	-	-	-	-
Stage 2	593	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.8			0			0.1					
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1165	-	-	417	655	1041	-	-				
HCM Lane V/C Ratio	-	-	-	0.062	0.449	0.007	-	-				
HCM Control Delay (s)	0	-	-	14.2	14.9	8.5	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	2.3	0	-	-				

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	256	101	260	235	40	128	407	214	143	859	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	256	101	260	235	40	128	407	214	143	859	65
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	83	391	175	296	816	365	158	1046	544	175	1580	120
Arrive On Green	0.05	0.11	0.11	0.17	0.23	0.23	0.09	0.46	0.46	0.10	0.47	0.47
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2254	1172	1774	3335	252
Grp Volume(v), veh/h	64	256	101	260	235	40	128	319	302	143	456	468
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1656	1774	1770	1818
Q Serve(g_s), s	3.6	6.9	6.1	14.3	5.5	2.0	7.1	11.8	12.0	7.9	18.3	18.3
Cycle Q Clear(g_c), s	3.6	6.9	6.1	14.3	5.5	2.0	7.1	11.8	12.0	7.9	18.3	18.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.14
Lane Grp Cap(c), veh/h	83	391	175	296	816	365	158	821	769	175	838	861
V/C Ratio(X)	0.78	0.65	0.58	0.88	0.29	0.11	0.81	0.39	0.39	0.82	0.54	0.54
Avail Cap(c_a), veh/h	160	566	253	390	1026	459	213	821	769	266	838	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	42.7	42.3	40.7	31.7	30.4	44.7	17.5	17.6	44.2	18.6	18.6
Incr Delay (d2), s/veh	14.3	1.9	3.0	16.2	0.2	0.1	15.5	1.4	1.5	11.1	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	3.5	2.8	8.3	2.7	0.9	4.2	6.1	5.8	4.4	9.4	9.7
LnGrp Delay(d),s/veh	61.4	44.5	45.3	56.9	31.9	30.5	60.2	18.9	19.1	55.3	21.2	21.1
LnGrp LOS	E	D	D	E	C	C	E	B	B	E	C	C
Approach Vol, veh/h	421			535			749			1067		
Approach Delay, s/veh	47.3			43.9			26.0			25.7		
Approach LOS	D			D			C			C		
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	13.9	50.4	20.7	15.0	12.9	51.4	8.7	27.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	15.0	31.0	22.0	16.0	12.0	34.0	9.0	29.0				
Max Q Clear Time (g_c+1), s	9.9	14.0	16.3	8.9	9.1	20.3	5.6	7.5				
Green Ext Time (p_c), s	0.1	9.3	0.4	2.1	0.1	8.1	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay	32.6											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	632	1	4	670	258	9	16	8	500	26	334
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	632	1	4	670	258	9	16	8	500	26	334
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	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	85	1136	2	7	953	426	16	660	330	1521	957	813
Arrive On Green	0.05	0.31	0.31	0.00	0.27	0.27	0.01	0.56	0.56	0.51	0.51	0.51
Sat Flow, veh/h	1774	3626	6	1774	3539	1583	1774	1173	586	2680	1863	1583
Grp Volume(v), veh/h	66	308	325	4	670	258	9	0	24	500	26	334
Grp Sat Flow(s), veh/h/ln	1770	1770	1862	1774	1770	1583	1774	0	1759	1340	1863	1583
Q Serve(g, s), s	3.7	14.5	14.5	0.2	17.1	14.2	0.5	0.0	0.6	11.2	0.7	13.0
Cycle Q Clear(g, c), s	3.7	14.5	14.5	0.2	17.1	14.2	0.5	0.0	0.6	11.2	0.7	13.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	85	554	583	7	953	426	16	0	990	1521	957	813
V/C Ratio(X)	0.77	0.56	0.56	0.54	0.70	0.61	0.57	0.00	0.02	0.33	0.03	0.41
Avail Cap(c_a), veh/h	195	708	745	71	1168	523	71	0	990	1521	957	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	28.6	28.6	49.7	32.9	31.9	49.4	0.0	9.7	14.5	12.0	15.0
Incr Delay (d2), s/veh	13.7	0.9	0.8	48.8	1.5	1.4	28.9	0.0	0.0	0.6	0.1	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	7.2	7.5	0.2	8.5	6.4	0.4	0.4	0.0	0.3	4.2	0.4	6.0
LnGrp Delay(d), s/veh	60.8	29.4	29.4	98.5	34.4	33.3	78.3	0.0	9.7	15.1	12.0	16.5
LnGrp LOS	E	C	C	F	C	C	E		A	B	B	B
Approach Vol, veh/h	699			932			33			860		
Approach Delay, s/veh	32.4			34.4			28.4			15.6		
Approach LOS	C			C			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	60.3	4.4	35.3	4.9	55.4	8.8	30.9					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	44.0	4.0	40.0	4.0	36.0	11.0	33.0					
Max Q Clear Time (g_c+I1), s	2.6	2.2	16.5	2.5	15.0	5.7	19.1					
Green Ext Time (p_c), s	3.7	0.0	10.6	0.0	3.5	0.0	7.9					
Intersection Summary												
HCM 2010 Ctrl Delay	27.3											
HCM 2010 LOS	C											

AM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	837	65	302	1026	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	837	65	302	1026	2	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	902	0	1987	451
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	1117	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	436	-	71	475
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	268	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	436	-	22	475
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	82	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.8		25.5	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	184	-	-	436	-	
HCM Lane V/C Ratio	0.043	-	-	0.693	-	
HCM Control Delay (s)	25.5	-	-	29.9	-	
HCM Lane LOS	D	-	-	D	-	
HCM 95th %tile Q(veh)	0.1	-	-	5.2	-	

AM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	5.7					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	47	76	38	304	113	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	47	76	38	304	113	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	208	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	170	-
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	1572	-	-	0	780	1034
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	-	756	1034
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	833	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.8		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	756	1034	1572	-	-	
HCM Lane V/C Ratio	0.149	0.011	0.03	-	-	
HCM Control Delay (s)	10.6	8.5	7.4	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	0.5	0	0.1	-	-	

HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	264	68	74	171	39	123	1183	175	53	696	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	241	264	68	74	171	39	123	1183	175	53	696	149
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	295	310	263	80	184	42	153	1441	212	68	1478	661
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.47	0.47	0.04	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	468	1081	247	1774	3096	456	1774	3539	1583
Grp Volume(v), veh/h	241	264	68	284	0	0	123	674	684	53	696	149
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1796	0	0	1774	1770	1782	1774	1770	1583
Q Serve(g_s), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.9	33.3	3.0	14.3	6.0
Cycle Q Clear(g_c), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.9	33.3	3.0	14.3	6.0
Prop In Lane	1.00		1.00	0.26		0.14	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	295	310	263	305	0	0	153	824	830	68	1478	661
V/C Ratio(X)	0.82	0.85	0.26	0.93	0.00	0.00	0.80	0.82	0.82	0.78	0.47	0.23
Avail Cap(c_a), veh/h	337	354	301	305	0	0	231	824	830	71	1478	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	40.5	36.3	40.9	0.0	0.0	44.9	23.1	23.2	47.7	21.1	18.7
Incr Delay (d2), s/veh	13.0	16.2	0.5	33.8	0.0	0.0	11.5	8.9	9.1	40.5	1.1	0.8
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(-26165%),veh/ln	7.5	8.5	1.7	10.6	0.0	0.0	3.8	18.0	18.4	2.2	7.2	2.8
LnGrp Delay(d),s/veh	53.3	56.7	36.8	74.7	0.0	0.0	56.4	32.0	32.3	88.2	22.2	19.5
LnGrp LOS	D	E	D	E			E	C	C	F	C	B
Approach Vol, veh/h	573			284			1481			898		
Approach Delay, s/veh	52.9			74.7			34.1			25.6		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	50.6		20.6	12.6	45.8		21.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	44.0		19.0	13.0	35.0		17.0				
Max Q Clear Time (g_c+I1), s	5.0	35.3		15.8	8.8	16.3		17.6				
Green Ext Time (p_c), s	0.0	7.3		0.9	0.1	13.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	38.7											
HCM 2010 LOS	D											

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection										
Int Delay, s/veh	283.1									
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER
Vol, veh/h	0	108	0	894	26	0	612	248	500	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	Free	-	-
Storage Length	-	0	-	-	0	-	-	0	0	0
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	108	0	894	26	0	612	248	500	18
Major/Minor	Minor1	Major1			Major2			Minor2		
Conflicting Flow All	1209	447	612	0	0	894	0	0	1059	306
Stage 1	894	-	-	-	-	-	-	-	612	-
Stage 2	315	-	-	-	-	-	-	-	447	-
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32
Pot Cap-1 Maneuver	139	559	963	-	-	755	-	0	~ 179	690
Stage 1	302	-	-	-	-	-	-	0	~ 447	-
Stage 2	671	-	-	-	-	-	-	0	560	-
Platoon blocked, %			-	-	-		-			
Mov Cap-1 Maneuver	123	559	963	-	-	755	-	-	~ 144	690
Mov Cap-2 Maneuver	123	-	-	-	-	-	-	-	~ 144	-
Stage 1	302	-	-	-	-	-	-	-	~ 447	-
Stage 2	646	-	-	-	-	-	-	-	~ 452	-
Approach	WB	NB			SB			NE		
HCM Control Delay, s	13	0			0			\$ 1176.6		
HCM LOS	B							F		
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT		
Capacity (veh/h)	144	-	963	-	-	559	755	-		
HCM Lane V/C Ratio	3.472	-	-	-	-	0.193	-	-		
HCM Control Delay (s)	\$ 1176.6	0	0	-	-	13	0	-		
HCM Lane LOS	F	A	A	-	-	B	A	-		
HCM 95th %tile Q(veh)	48.4	-	0	-	-	0.7	0	-		
Notes										
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon										

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	62	244	170	38	223	3	206	476	102	9	226	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	244	170	38	223	3	206	476	102	9	226	45
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	597	327	278	578	589	8	284	958	204	16	757	148
Arrive On Green	0.34	0.18	0.18	0.33	0.16	0.16	0.08	0.33	0.33	0.01	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	3576	48	3442	2904	619	1774	2953	578
Grp Volume(v), veh/h	62	244	170	38	110	116	206	289	289	9	134	137
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1854	1721	1770	1754	1774	1770	1761
Q Serve(g_s), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	13.1	13.2	0.5	6.1	6.3
Cycle Q Clear(g_c), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	13.1	13.2	0.5	6.1	6.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.35	1.00		0.33
Lane Grp Cap(c), veh/h	597	327	278	578	292	306	284	584	579	16	454	451
V/C Ratio(X)	0.10	0.75	0.61	0.07	0.38	0.38	0.73	0.49	0.50	0.57	0.30	0.30
Avail Cap(c_a), veh/h	597	596	507	578	495	519	585	584	579	106	454	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	39.1	38.1	23.2	37.2	37.2	44.8	26.8	26.9	49.4	29.9	30.0
Incr Delay (d2), s/veh	0.1	3.4	2.2	0.0	0.8	0.8	2.6	2.2	2.2	28.9	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.2	6.7	4.5	0.7	2.8	2.9	2.9	6.7	6.8	0.4	3.2	3.3
LnGrp Delay(d),s/veh	22.9	42.5	40.2	23.3	38.0	38.0	47.4	29.0	29.1	78.3	31.6	31.7
LnGrp LOS	C	D	D	C	D	D	D	C	C	E	C	C
Approach Vol, veh/h		476			264			784			280	
Approach Delay, s/veh		39.1			35.9			33.9			33.1	
Approach LOS		D			D			C			C	
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	4.9	37.0	36.6	21.6	12.3	29.6	37.6	20.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	33.0	13.0	32.0	17.0	22.0	17.0	28.0				
Max Q Clear Time (g_c+I1), s	2.5	15.2	3.5	14.4	7.8	8.3	4.4	7.6				
Green Ext Time (p_c), s	0.0	5.0	0.0	3.1	0.4	4.4	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay					35.4							
HCM 2010 LOS					D							

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HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	103	73	103	14	47	49	204	625	36	30	408	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	103	73	103	14	47	49	204	625	36	30	408	52
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	227	321	23	467	418	239	894	760	40	1162	147
Arrive On Green	0.07	0.32	0.32	0.01	0.26	0.26	0.13	0.48	0.48	0.02	0.37	0.37
Sat Flow, veh/h	1774	700	988	1774	1770	1583	1774	1863	1583	1774	3161	401
Grp Volume(v), veh/h	103	0	176	14	47	49	204	625	36	30	227	233
Grp Sat Flow(s),veh/h/ln	1774	0	1688	1774	1770	1583	1774	1863	1583	1774	1770	1792
Q Serve(g_s), s	5.7	0.0	7.9	0.8	2.0	2.4	11.2	26.3	1.2	1.7	9.3	9.4
Cycle Q Clear(g_c), s	5.7	0.0	7.9	0.8	2.0	2.4	11.2	26.3	1.2	1.7	9.3	9.4
Prop In Lane	1.00		0.59	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	130	0	548	23	467	418	239	894	760	40	651	659
V/C Ratio(X)	0.79	0.00	0.32	0.61	0.10	0.12	0.85	0.70	0.05	0.75	0.35	0.35
Avail Cap(c_a), veh/h	213	0	548	71	467	418	355	894	760	106	651	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	45.6	0.0	25.5	49.1	27.8	28.0	42.3	20.3	13.8	48.6	22.9	23.0
Incr Delay (d2), s/veh	10.2	0.0	1.5	23.7	0.4	0.6	12.2	4.5	0.1	23.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	3.9	0.5	1.0	1.1	6.3	14.5	0.6	1.1	4.8	4.9
LnGrp Delay(d),s/veh	55.7	0.0	27.0	72.8	28.3	28.5	54.5	24.9	14.0	71.8	24.4	24.4
LnGrp LOS	E	C	C	E	C	C	D	C	B	E	C	C
Approach Vol, veh/h		279			110			865			490	
Approach Delay, s/veh		37.6			34.0			31.4			27.3	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s6.3	52.0	5.3	36.4	17.5	40.8	11.3	30.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	48.0	4.0	26.0	20.0	34.0	12.0	18.0					
Max Q Clear Time (g_c+I1), s	28.3	2.8	9.9	13.2	11.4	7.7	4.4					
Green Ext Time (p_c), s	0.0	7.3	0.0	1.4	0.3	7.7	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay					31.4							
HCM 2010 LOS					C							

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	149	801	493	49	86	224		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	149	801	493	49	86	224		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	181	2230	1588	157	514	459		
Arrive On Green	0.20	1.00	0.49	0.49	0.29	0.29		
Sat Flow, veh/h	1774	3632	3346	322	1774	1583		
Grp Volume(v), veh/h	149	801	267	275	86	224		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1806	1774	1583		
Q Serve(g_s), s	8.0	0.0	9.1	9.2	3.6	11.7		
Cycle Q Clear(g_c), s	8.0	0.0	9.1	9.2	3.6	11.7		
Prop In Lane	1.00			0.18	1.00	1.00		
Lane Grp Cap(c), veh/h	181	2230	864	882	514	459		
V/C Ratio(X)	0.82	0.36	0.31	0.31	0.17	0.49		
Avail Cap(c_a), veh/h	426	2230	864	882	514	459		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.92	0.92	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.0	0.0	15.4	15.4	26.5	29.4		
Incr Delay (d2), s/veh	8.4	0.4	0.9	0.9	0.7	3.7		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	4.7	4.8	1.9	11.0			
LnGrp Delay(d),s/veh	47.4	0.4	16.4	16.4	27.2	33.0		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	950	542		310				
Approach Delay, s/veh	7.8	16.4		31.4				
Approach LOS	A	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		33.0	14.2	52.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		29.0	24.0	35.0
Max Q Clear Time (g_c+I1), s				2.0		13.7	10.0	11.2
Green Ext Time (p_c), s				12.8		0.9	0.3	10.0
Intersection Summary								
HCM 2010 Ctrl Delay	14.4							
HCM 2010 LOS	B							

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↗↗	↖	↖	↗↗	↖	↖		
Volume (veh/h)	805	529	145	592	382	131		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	805	0	145	592	382	131		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2269	1015	175	2761	481	222		
Arrive On Green	0.21	0.00	0.20	1.00	0.14	0.14		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	805	0	145	592	382	131		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	19.4	0.0	7.8	0.0	10.7	7.8		
Cycle Q Clear(g_c), s	19.4	0.0	7.8	0.0	10.7	7.8		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	2269	1015	175	2761	481	222		
V/C Ratio(X)	0.35	0.00	0.83	0.21	0.79	0.59		
Avail Cap(c_a), veh/h	2269	1015	337	2761	723	332		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.85	0.00	0.95	0.95	1.00	1.00		
Uniform Delay (d), s/veh	21.8	0.0	39.3	0.0	41.6	40.3		
Incr Delay (d2), s/veh	0.4	0.0	9.0	0.2	3.6	2.5		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	4.2	0.1	5.3	3.5		
LnGrp Delay(d),s/veh	22.2	0.0	48.2	0.2	45.2	42.8		
LnGrp LOS	C		D	A	D	D		
Approach Vol, veh/h	805			737	513			
Approach Delay, s/veh	22.2			9.6	44.6			
Approach LOS	C			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.0	13.9	68.1				82.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		21.0	19.0	48.0				71.0
Max Q Clear Time (g_c+I1), s		12.7	9.8	21.4				2.0
Green Ext Time (p_c), s		1.3	0.2	11.4				14.7
Intersection Summary								
HCM 2010 Ctrl Delay			23.3					
HCM 2010 LOS			C					

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HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	287	932	344	168	492	283	248	642	140	257	382	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	287	932	344	168	492	283	248	642	140	257	382	75
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	384	1863	834	299	1863	834	690	1393	623	490	1163	226
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	693	3539	1583	432	3539	1583	1805	3539	1583	1335	2956	575
Grp Volume(v), veh/h	287	932	344	168	492	283	248	642	140	257	227	230
Grp Sat Flow(s), veh/h/ln	693	1770	1583	432	1770	1583	903	1770	1583	668	1770	1761
Q Serve(g, s), s	28.2	0.0	0.0	30.1	7.6	10.3	11.1	13.4	5.9	17.7	8.9	9.1
Cycle Q Clear(g, c), s	35.8	0.0	0.0	30.1	7.6	10.3	20.2	13.4	5.9	31.1	8.9	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	384	1863	834	299	1863	834	690	1393	623	490	696	693
V/C Ratio(X)	0.75	0.50	0.41	0.56	0.26	0.34	0.36	0.46	0.22	0.52	0.33	0.33
Avail Cap(c_a), veh/h	407	1982	887	314	1982	887	690	1393	623	490	696	693
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.6	0.0	0.0	18.3	13.0	13.7	28.2	22.5	20.2	34.0	21.1	21.1
Incr Delay (d2), s/veh	7.0	0.2	0.3	2.0	0.1	0.2	1.5	1.1	0.8	4.0	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.1	0.1	0.1	3.7	3.7	4.5	2.9	6.7	2.7	3.5	4.6	4.6
LnGrp Delay(d),s/veh	9.6	0.2	0.3	20.3	13.1	13.9	29.7	23.6	21.0	38.0	22.3	22.4
LnGrp LOS	A	A	A	C	B	B	C	C	C	D	C	C
Approach Vol, veh/h	1563			943			1030			714		
Approach Delay, s/veh	2.0			14.6			24.7			28.0		
Approach LOS	A			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	43.4		56.6		43.4		56.6					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	36.0		56.0		36.0		56.0					
Max Q Clear Time (g_c+I1), s	22.2		37.8		33.1		32.1					
Green Ext Time (p_c), s	9.2		14.8		2.4		18.5					
Intersection Summary												
HCM 2010 Ctrl Delay	14.7											
HCM 2010 LOS	B											

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	1598	0	0	817	7	0	0	0	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	2	1598	0	0	817	7	0	0	0	0	0	8
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	824	0	0	1598	0	0	1624	2423	412			
Stage 1	-	-	-	-	-	-	821	821	-			
Stage 2	-	-	-	-	-	-	803	1602	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	802	-	-	406	-	-	93	32	589			
Stage 1	-	-	-	-	-	-	393	387	-			
Stage 2	-	-	-	-	-	-	401	163	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	802	-	-	406	-	-	93	0	589			
Mov Cap-2 Maneuver	-	-	-	-	-	-	93	0	-			
Stage 1	-	-	-	-	-	-	393	0	-			
Stage 2	-	-	-	-	-	-	400	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0			0			11.2					
HCM LOS	B											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	802	-	-	406	-	-	589					
HCM Lane V/C Ratio	0.002	-	-	-	-	-	0.014					
HCM Control Delay (s)	9.5	-	-	0	-	-	11.2					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑		
Volume (veh/h)	1263	764	81	739	32	313		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1263	0	81	739	32	313		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2194	982	291	2194	532	475		
Arrive On Green	0.82	0.00	0.20	0.20	0.30	0.30		
Sat Flow, veh/h	3632	1583	437	3632	1774	1583		
Grp Volume(v), veh/h	1263	0	81	739	32	313		
Grp Sat Flow(s),veh/h/ln	1770	1583	437	1770	1774	1583		
Q Serve(g_s), s	11.9	0.0	16.5	17.8	1.3	17.2		
Cycle Q Clear(g_c), s	11.9	0.0	28.4	17.8	1.3	17.2		
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	2194	982	291	2194	532	475		
V/C Ratio(X)	0.58	0.00	0.28	0.34	0.06	0.66		
Avail Cap(c_a), veh/h	2194	982	291	2194	532	475		
HCM Platoon Ratio	1.33	1.33	0.33	0.33	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.4	0.0	31.7	22.2	25.0	30.5		
Incr Delay (d2), s/veh	1.1	0.0	2.4	0.4	0.2	7.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	6.0	0.0	2.2	8.9	0.7	8.5		
LnGrp Delay(d),s/veh	5.5	0.0	34.1	22.6	25.2	37.5		
LnGrp LOS	A		C	C	C	D		
Approach Vol, veh/h	1263			820	345			
Approach Delay, s/veh	5.5			23.8	36.4			
Approach LOS	A			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.0		66.0				66.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		30.0		62.0				62.0
Max Q Clear Time (g_c+I1), s		19.2		13.9				30.4
Green Ext Time (p_c), s		0.9		27.0				20.9
Intersection Summary								
HCM 2010 Ctrl Delay			16.0					
HCM 2010 LOS			B					

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑↑	↑	↓	↑↑	↑	↓	↑	↓	↓	↑	↑
Volume (veh/h)	60	1831	121	53	592	52	108	41	122	45	33	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	1831	121	53	592	52	108	41	122	45	33	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	77	2678	177	68	1792	157	136	91	271	57	327	278
Arrive On Green	0.04	0.55	0.55	0.05	0.72	0.72	0.08	0.22	0.22	0.03	0.18	0.18
Sat Flow, veh/h	1774	4875	321	1774	3293	289	1774	414	1232	1774	1863	1583
Grp Volume(v), veh/h	60	1272	680	53	318	326	108	0	163	45	33	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1806	1774	1770	1812	1774	0	1645	1774	1863	1583
Q Serve(g_s), s	3.3	27.1	27.2	3.0	6.5	6.5	6.0	0.0	8.6	2.5	1.5	1.6
Cycle Q Clear(g_c), s	3.3	27.1	27.2	3.0	6.5	6.5	6.0	0.0	8.6	2.5	1.5	1.6
Prop In Lane	1.00	0.18	1.00	0.16	1.00	0.75	1.00	1.00	0.75	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	77	1863	992	68	963	986	136	0	362	57	327	278
V/C Ratio(X)	0.78	0.68	0.69	0.78	0.33	0.33	0.79	0.00	0.45	0.79	0.10	0.11
Avail Cap(c_a), veh/h	160	1863	992	124	963	986	213	0	362	106	327	278
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	16.2	16.3	47.0	7.2	7.2	45.4	0.0	33.8	48.0	34.6	34.6
Incr Delay (d2), s/veh	15.1	2.1	3.8	17.3	0.9	0.9	10.5	0.0	4.0	20.5	0.6	0.8
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(-26165%),veh/ln	13.1	14.5	1.8	3.3	3.4	3.3	0.0	0.0	4.3	1.6	0.8	0.8
LnGrp Delay(d),s/veh	62.4	18.3	20.1	64.4	8.1	8.1	55.9	0.0	37.8	68.5	35.2	35.4
LnGrp LOS	E	B	C	E	A	A	E		D	E	D	D
Approach Vol, veh/h		2012			697			271			108	
Approach Delay, s/veh		20.2			12.4			45.0			49.2	
Approach LOS		C			B			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), s7.2	26.0	7.8	58.9	11.7	21.6	8.4	58.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	22.0	7.0	49.0	12.0	16.0	9.0	47.0					
Max Q Clear Time (g_c+I1), s	10.6	5.0	29.2	8.0	3.6	5.3	8.5					
Green Ext Time (p_c), s	0.0	0.9	0.0	16.5	0.1	0.9	0.0	28.0				
Intersection Summary												
HCM 2010 Ctrl Delay					21.6							
HCM 2010 LOS					C							

PM Peak Hour Cumulative Trips
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HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

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
Volume (veh/h)	3	1783	35	71	667	2	108	0	208	3	1	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	0	1863	1900	1863	1900
Adj Flow Rate, veh/h	3	1783	35	71	667	2	108	0	208	3	1	3
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2	2	2	2
Cap, veh/h	0	2379	47	0	2425	7	89	0	0	0	66	197
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.05	0.00	0.00	0.25	0.16	0.16
Sat Flow, veh/h	0	3551	70	0	3620	11	1774	108	0	411	1234	
Grp Volume(v), veh/h	0	886	932	0	326	343	108	212.7	0	0	4	
Grp Sat Flow(s), veh/h/ln	0	1770	1850	0	1770	1861	1774	F	0	0	1645	
Q Serve(g_s), s	0.0	33.1	33.5	0.0	7.5	7.5	5.0		0.0	0.0	0.2	
Cycle Q Clear(g_c), s	0.0	33.1	33.5	0.0	7.5	7.5	5.0		0.0	0.0	0.2	
Prop In Lane	0.00		0.04	0.00		0.01	1.00		0.00		0.75	
Lane Grp Cap(c), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
V/C Ratio(X)	0.00	0.75	0.75	0.00	0.28	0.28	1.22		0.00	0.00	0.02	
Avail Cap(c_a), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(l)	0.00	1.00	1.00	0.00	1.00	1.00	1.00		0.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	10.9	11.0	0.0	6.7	6.7	47.5		0.0	0.0	35.4	
Incr Delay (d2), s/veh	0.0	4.3	4.2	0.0	0.6	0.6	165.2		0.0	0.0	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(-26165%),veh/ln	17.4	18.3	0.0	3.8	4.0	6.5			0.0	0.0	0.1	
LnGrp Delay(d),s/veh	0.0	15.2	15.2	0.0	7.2	7.2	212.7		0.0	0.0	35.5	
LnGrp LOS	B	B		A	A	F					D	
Approach Vol, veh/h	1818			669						4		
Approach Delay, s/veh	15.2			7.2						35.5		
Approach LOS	B			A						D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.0		0.0	71.0	9.0	20.0	0.0	71.0				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	4.0		4.0	59.0	5.0	16.0	4.0	59.0				
Max Q Clear Time (g_c+10), s	0.0		0.0	35.5	7.0	2.2	0.0	9.5				
Green Ext Time (p_c), s	0.0		0.0	19.0	0.0	0.0	0.0	33.2				
Intersection Summary												
HCM 2010 Ctrl Delay	21.4											
HCM 2010 LOS	C											

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HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

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
Volume (veh/h)	0	0	0	360	4	21	396	155	0	0	71	157
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				360	4	21	396	155	0	0	71	157
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				406	5	367	631	247	0	0	83	183
Arrive On Green				0.23	0.23	0.23	0.82	0.82	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1755	20	1583	1292	506	0	0	517	1144
Grp Volume(v), veh/h				364	0	21	551	0	0	0	0	228
Grp Sat Flow(s), veh/h/ln				1775	0	1583	1798	0	0	0	0	1661
Q Serve(g_s), s				19.8	0.0	1.0	11.6	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				19.8	0.0	1.0	11.6	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.99		1.00	0.72		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				411	0	367	878	0	0	0	0	266
V/C Ratio(X)				0.89	0.00	0.06	0.63	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				515	0	459	878	0	0	0	0	266
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				37.1	0.0	29.9	5.8	0.0	0.0	0.0	0.0	40.9
Incr Delay (d2), s/veh				14.4	0.0	0.1	3.4	0.0	0.0	0.0	0.0	28.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				11.3	0.0	0.5	6.2	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh				51.5	0.0	30.0	9.2	0.0	0.0	0.0	0.0	69.2
LnGrp LOS				D		C	A					E
Approach Vol, veh/h				385			551			228		
Approach Delay, s/veh				50.3			9.2			69.2		
Approach LOS				D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		52.9				20.0		27.1				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				16.0		29.0				
Max Q Clear Time (g_c+10), s		13.6				15.4		21.8				
Green Ext Time (p_c), s		4.1				0.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	34.5											
HCM 2010 LOS	C											

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	13	297	0	0	0	0	453	787	10	416	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	57	13	297	0	0	0	0	453	787	10	416	0
Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	889	889	416				416	0	0	453	0	0
Stage 1	436	436	-				-	-	-	-	-	-
Stage 2	453	453	-				-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22				4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-				-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318				2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	314	282	637				1143	-	-	1108	-	-
Stage 1	652	580	-				-	-	-	-	-	-
Stage 2	640	570	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	310	0	637				1143	-	-	1108	-	-
Mov Cap-2 Maneuver	432	0	-				-	-	-	-	-	-
Stage 1	644	0	-				-	-	-	-	-	-
Stage 2	640	0	-				-	-	-	-	-	-
Approach	EB						NB			SB		
HCM Control Delay, s	15.4						0			0.2		
HCM LOS	C											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1143	-	-	432	637	1108	-	-				
HCM Lane V/C Ratio	-	-	-	0.162	0.466	0.009	-	-				
HCM Control Delay (s)	0	-	-	14.9	15.5	8.3	0	-				
HCM Lane LOS	A	-	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	2.5	0	-	-				

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	125	233	165	238	362	178	220	915	182	172	583	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	125	233	165	238	362	178	220	915	182	172	583	62
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	155	492	220	271	725	324	256	1274	253	204	1303	138
Arrive On Green	0.09	0.14	0.14	0.15	0.20	0.20	0.14	0.43	0.43	0.12	0.40	0.40
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2944	585	1774	3229	343
Grp Volume(v), veh/h	125	233	165	238	362	178	220	550	547	172	319	326
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1759	1774	1770	1802
Q Serve(g_s), s	6.9	6.1	10.0	13.1	9.1	10.1	12.1	25.6	25.6	9.5	13.1	13.2
Cycle Q Clear(g_c), s	6.9	6.1	10.0	13.1	9.1	10.1	12.1	25.6	25.6	9.5	13.1	13.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.19
Lane Grp Cap(c), veh/h	155	492	220	271	725	324	256	766	762	204	714	727
V/C Ratio(X)	0.81	0.47	0.75	0.88	0.50	0.55	0.86	0.72	0.72	0.84	0.45	0.45
Avail Cap(c_a), veh/h	231	566	253	319	743	332	373	766	762	248	714	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	39.7	41.4	41.4	35.2	35.6	41.8	23.3	23.3	43.4	21.7	21.7
Incr Delay (d2), s/veh	12.0	0.7	10.1	20.7	0.5	1.8	12.8	5.7	5.8	19.2	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.9	3.0	5.0	8.0	4.5	4.5	6.8	13.6	13.5	5.7	6.8	6.9
LnGrp Delay(d),s/veh	56.8	40.4	51.5	62.1	35.8	37.4	54.6	29.1	29.1	62.6	23.7	23.7
LnGrp LOS	E	D	D	E	D	D	D	C	C	E	C	C
Approach Vol, veh/h	523			778			1317			817		
Approach Delay, s/veh	47.8			44.2			33.4			31.9		
Approach LOS	D			D			C			C		
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	15.5	47.3	19.3	17.9	18.4	44.4	12.7	24.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	14.0	36.0	18.0	16.0	21.0	29.0	13.0	21.0				
Max Q Clear Time (g_c+1), s	11.5	27.6	15.1	12.0	14.1	15.2	8.9	12.1				
Green Ext Time (p_c), s	0.1	6.2	0.2	1.9	0.3	9.1	0.1	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay	37.7											
HCM 2010 LOS	D											

PM Peak Hour Cumulative Trips
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HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	197	713		5	6	1027	632	6	26	6	271	23 143
Number	7	4		14	3	8	18	5	2	12	1	6 16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	197	713		5	6	1027	632	6	26	6	271	23 143
Adj No. of Lanes	1	2		0	1	2	1	1	1	0	2	1 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
Percent Heavy Veh, %	2	2		2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1890		13	11	1416	633	11	512	118	951	565 480
Arrive On Green	0.13	0.52		0.52	0.01	0.40	0.40	0.01	0.35	0.35	0.30	0.30 0.30
Sat Flow, veh/h	1774	3603		25	1774	3539	1583	1774	1465	338	2661	1863 1583
Grp Volume(v), veh/h	197	350		368	6	1027	632	6	0	32	271	23 143
Grp Sat Flow(s), veh/h/ln	1774	1770		1858	1774	1770	1583	1774	0	1803	1330	1863 1583
Q Serve(g_s), s	10.9	11.7		11.7	0.3	24.5	39.9	0.3	0.0	1.2	7.9	0.9 6.9
Cycle Q Clear(g_c), s	10.9	11.7		11.7	0.3	24.5	39.9	0.3	0.0	1.2	7.9	0.9 6.9
Prop In Lane	1.00			0.01	1.00		1.00	1.00		0.19	1.00	1.00
Lane Grp Cap(c), veh/h	232	928		975	11	1416	633	11	0	630	951	565 480
V/C Ratio(X)	0.85	0.38		0.38	0.55	0.73	1.00	0.55	0.00	0.05	0.29	0.04 0.30
Avail Cap(c_a), veh/h	337	973		1022	71	1416	633	71	0	630	951	565 480
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00 1.00
Uniform Delay (d), s/veh	42.5	14.1		14.1	49.6	25.4	30.0	49.6	0.0	21.6	27.0	24.6 26.7
Incr Delay (d2), s/veh	12.8	0.3		0.2	37.0	1.9	35.2	37.0	0.0	0.2	0.8	0.1 1.6
Initial Q Delay(d3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0
%ile BackOfQ(-26165%), veh/ln	5.8			6.1	0.3	12.4	23.6	0.3	0.0	0.6	3.0	0.5 3.2
LnGrp Delay(d), s/veh	55.3	14.3		14.3	86.6	27.2	65.2	86.6	0.0	21.7	27.8	24.7 28.3
LnGrp LOS	E	B		B	F	C	E	F		C	C	C C
Approach Vol, veh/h	915			1665				38		437		
Approach Delay, s/veh	23.2			41.8				31.9		27.8		
Approach LOS	C			D				C		C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	38.9	4.6	56.5	4.6	34.3	17.1	44.0					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	29.0	4.0	55.0	4.0	21.0	19.0	40.0					
Max Q Clear Time (g_c+I1), s	3.2	2.3	13.7	2.3	9.9	12.9	41.9					
Green Ext Time (p_c), s	1.8	0.0	23.2	0.0	1.4	0.3	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	34.1											
HCM 2010 LOS	C											

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1970	60	91	687	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1970	60	91	687	3	29
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2030	0	2526	1015
Stage 1	-	-	-	-	2000	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	121	-	33	203
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	540	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	121	-	8	203
Mov Cap-2 Maneuver	-	-	-	-	40	-
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	134	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		11		36.2	
HCM LOS	C		E		E	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	147	-	-	121	-	
HCM Lane V/C Ratio	0.218	-	-	0.752	-	
HCM Control Delay (s)	36.2	-	-	93.8	-	
HCM Lane LOS	E	-	-	F	-	
HCM 95th %tile Q(veh)	0.8	-	-	4.3	-	

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	7.5					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	55	101	89	749	239	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	55	101	89	749	239	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	300	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	211	-
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	1506	-	-	0	691	969
Stage 1	-	-	-	0	934	-
Stage 2	-	-	-	0	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	664	969
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	792	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.6		0		13.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	664	969	1506	-	-	
HCM Lane V/C Ratio	0.36	0.011	0.037	-	-	
HCM Control Delay (s)	13.4	8.8	7.5	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	1.6	0	0.1	-	-	

APPENDIX E

EXISTING PLUS PROJECT LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Volume (veh/h)	79	139	85	119	249	30	172	871	159	63	1079	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	139	85	119	249	30	172	871	159	63	1079	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	177	185	158	125	261	31	195	1390	254	81	1417	634
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	542	1133	137	1774	2990	546	1774	3539	1583
Grp Volume(v), veh/h	79	139	85	398	0	0	172	515	515	63	1079	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1812	0	0	1774	1770	1766	1774	1770	1583
Q Serve(g_s), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.0	22.0	3.5	26.3	5.5
Cycle Q Clear(g_c), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.0	22.0	3.5	26.3	5.5
Prop In Lane	1.00		1.00	0.30		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	177	185	158	417	0	0	195	823	821	81	1417	634
V/C Ratio(X)	0.45	0.75	0.54	0.96	0.00	0.00	0.88	0.63	0.63	0.78	0.76	0.21
Avail Cap(c_a), veh/h	284	298	253	417	0	0	195	823	821	106	1417	634
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	43.8	42.8	38.0	0.0	0.0	43.9	20.2	20.2	47.2	25.9	19.6
Incr Delay (d2), s/veh	1.8	6.0	2.9	32.7	0.0	0.0	34.1	3.6	3.6	22.9	3.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	4.1	2.4	14.6	0.0	0.0	6.5	11.6	11.5	2.2	13.5	2.5
LnGrp Delay(d),s/veh	44.2	49.8	45.7	70.7	0.0	0.0	77.9	23.8	23.8	70.2	29.8	20.3
LnGrp LOS	D	D	D	E			E	C	C	E	C	C
Approach Vol, veh/h	303			398			1202			1274		
Approach Delay, s/veh	47.2			70.7			31.5			30.8		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	50.5		13.9	15.0	44.1		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	39.0		16.0	11.0	34.0		23.0				
Max Q Clear Time (g_c+I1), s	5.5	24.0		9.3	11.6	28.3		23.7				
Green Ext Time (p_c), s	0.0	11.8		0.7	0.0	5.0		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

AM Peak Hour Plus Project
LSA Associates, Inc.

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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh	11.9										
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	177	0	541	50	0	680	630	146	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	177	0	541	50	0	680	630	146	21	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	892	271	680	0	0	541	0	0	951	340	
Stage 1	541	-	-	-	-	-	-	-	680	-	
Stage 2	351	-	-	-	-	-	-	-	271	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	237	727	908	-	-	1024	-	0	214	656	
Stage 1	493	-	-	-	-	-	-	0	407	-	
Stage 2	639	-	-	-	-	-	-	0	712	-	
Platoon blocked, %				-	-			-			
Mov Cap-1 Maneuver	216	727	908	-	-	1024	-	-	162	656	
Mov Cap-2 Maneuver	216	-	-	-	-	-	-	-	162	-	
Stage 1	493	-	-	-	-	-	-	-	407	-	
Stage 2	609	-	-	-	-	-	-	-	539	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	11.5	0			0			102.5			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	162	-	908	-	-	727	1024	-			
HCM Lane V/C Ratio	0.901	-	-	-	-	0.243	-	-			
HCM Control Delay (s)	102.5	0	0	-	-	11.5	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	6.5	-	0	-	-	1	0	-			

AM Peak Hour Plus Project
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	9	73	117	29	95	1	135	174	22	4	571	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	73	117	29	95	1	135	174	22	4	571	42
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	533	190	161	557	413	4	203	1330	166	7	1222	90
Arrive On Green	0.30	0.10	0.10	0.31	0.12	0.12	0.06	0.42	0.42	0.00	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	1774	3588	38	3442	3167	395	1774	3344	246
Grp Volume(v), veh/h	9	73	117	29	47	49	135	96	100	4	302	311
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1856	1721	1770	1793	1774	1770	1819
Q Serve(g_s), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.3	3.4	0.2	13.0	13.1
Cycle Q Clear(g_c), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.3	3.4	0.2	13.0	13.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.22	1.00		0.13
Lane Grp Cap(c), veh/h	533	190	161	557	204	214	203	743	753	7	647	665
V/C Ratio(X)	0.02	0.38	0.73	0.05	0.23	0.23	0.67	0.13	0.13	0.54	0.47	0.47
Avail Cap(c_a), veh/h	533	410	348	557	460	483	413	743	753	106	647	665
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	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	42.0	43.6	23.9	40.2	40.2	46.1	17.8	17.8	49.7	24.3	24.3
Incr Delay (d2), s/veh	0.0	1.3	6.1	0.0	0.6	0.5	3.6	0.3	0.3	48.8	2.4	2.4
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(-26165%),veh/ln	0.2	2.0	3.4	0.6	1.2	1.3	1.9	1.7	1.8	0.2	6.8	7.0
LnGrp Delay(d),s/veh	24.6	43.3	49.6	24.0	40.8	40.8	49.7	18.1	18.2	98.5	26.7	26.7
LnGrp LOS	C	D	D	C	D	D	D	B	B	F	C	C
Approach Vol, veh/h	199			125			331			617		
Approach Delay, s/veh	46.2			36.9			31.0			27.1		
Approach LOS	D			D			C			C		
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	4.4	46.0	35.4	14.2	9.9	40.5	34.1	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	42.0	14.0	22.0	12.0	36.0	10.0	26.0				
Max Q Clear Time (g_c+I1), s	2.2	5.4	3.1	9.2	5.8	15.1	2.4	4.4				
Green Ext Time (p_c), s	0.0	5.7	0.0	1.0	0.2	5.0	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	32.1											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	37	28	31	11	27	26	26	288	15	52	607	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	37	28	31	11	27	26	26	288	15	52	607	73
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	47	290	321	19	626	527	36	806	685	67	1432	172
Arrive On Green	0.03	0.36	0.36	0.01	0.34	0.34	0.02	0.43	0.43	0.04	0.45	0.45
Sat Flow, veh/h	1774	809	896	1774	1825	1536	1774	1863	1583	1774	3183	382
Grp Volume(v), veh/h	37	0	59	11	26	27	26	288	15	52	337	343
Grp Sat Flow(s),veh/h/ln	1774	0	1705	1774	1770	1592	1774	1863	1583	1774	1770	1795
Q Serve(g_s), s	2.1	0.0	2.3	0.6	1.0	1.1	1.5	10.4	0.5	2.9	12.9	13.0
Cycle Q Clear(g_c), s	2.1	0.0	2.3	0.6	1.0	1.1	1.5	10.4	0.5	2.9	12.9	13.0
Prop In Lane	1.00		0.53	1.00		0.97	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	47	0	612	19	607	546	36	806	685	67	796	808
V/C Ratio(X)	0.79	0.00	0.10	0.59	0.04	0.05	0.71	0.36	0.02	0.77	0.42	0.42
Avail Cap(c_a), veh/h	195	0	612	124	607	546	160	806	685	231	796	808
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	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	48.4	0.0	21.3	49.3	21.9	21.9	48.7	19.0	16.2	47.7	18.7	18.7
Incr Delay (d2), s/veh	25.1	0.0	0.3	26.1	0.1	0.2	22.5	1.2	0.1	16.3	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	1.1	0.4	0.5	0.5	0.9	5.6	0.2	0.7	6.6	6.7	6.7
LnGrp Delay(d),s/veh	73.5	0.0	21.6	75.4	22.0	22.1	71.2	20.3	16.3	64.0	20.2	20.2
LnGrp LOS	E	C	E	C	C	C	E	C	B	E	C	C
Approach Vol, veh/h	96			64			329			732		
Approach Delay, s/veh	41.6			31.2			24.1			23.4		
Approach LOS	D			C			C			C		
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	47.3	5.1	39.9	6.1	49.0	6.6	38.3					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	41.0	7.0	23.0	9.0	45.0	11.0	19.0					
Max Q Clear Time (g_c+I1), s	12.4	2.6	4.3	3.5	15.0	4.1	3.1					
Green Ext Time (p_c), s	0.0	6.9	0.0	0.5	0.0	6.9	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	25.4											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	142	314	572	88	27	154		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	142	314	572	88	27	154		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	173	2407	1669	256	426	380		
Arrive On Green	0.20	1.00	0.54	0.54	0.24	0.24		
Sat Flow, veh/h	1774	3632	3170	472	1774	1583		
Grp Volume(v), veh/h	142	314	328	332	27	154		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1779	1774	1583		
Q Serve(g_s), s	7.7	0.0	10.4	10.5	1.2	8.2		
Cycle Q Clear(g_c), s	7.7	0.0	10.4	10.5	1.2	8.2		
Prop In Lane	1.00			0.27	1.00	1.00		
Lane Grp Cap(c), veh/h	173	2407	960	965	426	380		
V/C Ratio(X)	0.82	0.13	0.34	0.34	0.06	0.41		
Avail Cap(c_a), veh/h	408	2407	960	965	426	380		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.4	0.0	12.9	12.9	29.3	32.0		
Incr Delay (d2), s/veh	9.0	0.1	1.0	1.0	0.3	3.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	5.4	5.4	0.6	7.8		
LnGrp Delay(d),s/veh	48.4	0.1	13.8	13.8	29.6	35.2		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h		456	660		181			
Approach Delay, s/veh		15.2	13.8		34.4			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				72.0		28.0	13.8	58.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				68.0		24.0	23.0	41.0
Max Q Clear Time (g_c+I1), s				2.0		10.2	9.7	12.5
Green Ext Time (p_c), s				7.8		0.4	0.3	7.1
Intersection Summary								
HCM 2010 Ctrl Delay			17.2					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↑↑	↗		↑↑	↖	↗		
Volume (veh/h)	410	230	53	688	469	57		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	410	0	53	688	469	57		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2378	1064	68	2656	584	269		
Arrive On Green	0.22	0.00	0.08	1.00	0.17	0.17		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	410	0	53	688	469	57		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	9.4	0.0	2.9	0.0	13.1	3.1		
Cycle Q Clear(g_c), s	9.4	0.0	2.9	0.0	13.1	3.1		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2378	1064	68	2656	584	269		
V/C Ratio(X)	0.17	0.00	0.78	0.26	0.80	0.21		
Avail Cap(c_a), veh/h	2378	1064	231	2656	1239	570		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.98	0.00	0.94	0.94	1.00	1.00		
Uniform Delay (d), s/veh	16.4	0.0	45.7	0.0	39.9	35.8		
Incr Delay (d2), s/veh	0.2	0.0	16.2	0.2	2.6	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	1.7	0.1	6.5	1.4		
LnGrp Delay(d),s/veh	16.6	0.0	62.0	0.2	42.6	36.2		
LnGrp LOS	B		E	A	D	D		
Approach Vol, veh/h	410			741	526			
Approach Delay, s/veh	16.6			4.6	41.9			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		21.0	7.8	71.2				79.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		36.0	13.0	39.0				56.0
Max Q Clear Time (g_c+I1), s		15.1	4.9	11.4				2.0
Green Ext Time (p_c), s		1.9	0.0	8.7				9.9
Intersection Summary								
HCM 2010 Ctrl Delay			19.2					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	353	196	85	805	303	413	433	98	174	339	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	129	353	196	85	805	303	413	433	98	174	339	105
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	229	1652	739	464	1652	739	824	1604	718	780	1211	370
Arrive On Green	0.93	0.93	0.93	0.47	0.47	0.47	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	507	3539	1583	855	3539	1583	1827	3539	1583	1686	2673	815
Grp Volume(v), veh/h	129	353	196	85	805	303	413	433	98	174	223	221
Grp Sat Flow(s), veh/h/ln	507	1770	1583	855	1770	1583	914	1770	1583	843	1770	1719
Q Serve(g_s), s	19.7	0.8	1.1	6.0	15.7	12.6	18.3	7.6	3.6	7.2	7.9	8.1
Cycle Q Clear(g_c), s	35.4	0.8	1.1	6.8	15.7	12.6	26.4	7.6	3.6	14.8	7.9	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	229	1652	739	464	1652	739	824	1604	718	780	802	779
V/C Ratio(X)	0.56	0.21	0.27	0.18	0.49	0.41	0.50	0.27	0.14	0.22	0.28	0.28
Avail Cap(c_a), veh/h	251	1805	807	501	1805	807	824	1604	718	780	802	779
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	1.8	1.8	16.3	18.4	17.6	25.4	17.0	15.9	21.6	17.1	17.2
Incr Delay (d2), s/veh	2.4	0.1	0.2	0.2	0.2	0.3	2.2	0.4	0.4	0.7	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(26165%), veh/ln	0.4	0.5	1.4	7.7	5.5	4.8	3.8	1.7	1.7	4.0	4.0	4.0
LnGrp Delay(d), s/veh	11.4	1.9	2.0	16.5	18.6	17.9	27.6	17.4	16.3	22.3	18.0	18.1
LnGrp LOS	B	A	A	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	678			1193			944			618		
Approach Delay, s/veh	3.7			18.3			21.8			19.2		
Approach LOS	A			B			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	49.3		50.7		49.3		50.7					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	41.0		51.0		41.0		51.0					
Max Q Clear Time (g_c+I1), s	28.4		37.4		16.8		17.7					
Green Ext Time (p_c), s	7.6		9.2		11.2		16.1					
Intersection Summary												
HCM 2010 Ctrl Delay	16.5											
HCM 2010 LOS	B											

HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	681	0	0	1249	49	0	0	0	1	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	11	681	0	0	1249	49	0	0	0	1	0	45
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	1298	0	0	681	0	0				1637	1977	649
Stage 1	-	-	-	-	-	-				1274	1274	-
Stage 2	-	-	-	-	-	-				363	703	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	4.02	3.32
Pot Cap-1 Maneuver	530	-	-	907	-	-				91	61	412
Stage 1	-	-	-	-	-	-				226	236	-
Stage 2	-	-	-	-	-	-				674	438	-
Platoon blocked, %	-	-	-	-	-	-						-
Mov Cap-1 Maneuver	530	-	-	907	-	-				89	0	412
Mov Cap-2 Maneuver	-	-	-	-	-	-				89	0	-
Stage 1	-	-	-	-	-	-				226	0	-
Stage 2	-	-	-	-	-	-				660	0	-
Approach	EB			WB			SB					
HCM Control Delay, s	0.2			0			15.7					
HCM LOS	C											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	530	-	-	907	-	-	382					
HCM Lane V/C Ratio	0.021	-	-	-	-	-	0.12					
HCM Control Delay (s)	11.9	-	-	0	-	-	15.7					
HCM Lane LOS	B	-	-	A	-	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑		
Volume (veh/h)	519	282	14	1266	51	176		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	519	0	14	1266	51	176		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2442	1092	678	2442	408	364		
Arrive On Green	1.00	0.00	0.46	0.46	0.23	0.23		
Sat Flow, veh/h	3632	1583	879	3632	1774	1583		
Grp Volume(v), veh/h	519	0	14	1266	51	176		
Grp Sat Flow(s),veh/h/ln	1770	1583	879	1770	1774	1583		
Q Serve(g_s), s	0.0	0.0	0.9	25.3	2.3	9.6		
Cycle Q Clear(g_c), s	0.0	0.0	0.9	25.3	2.3	9.6		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2442	1093	678	2442	408	364		
V/C Ratio(X)	0.21	0.00	0.02	0.52	0.12	0.48		
Avail Cap(c_a), veh/h	2442	1093	678	2442	408	364		
HCM Platoon Ratio	2.00	2.00	0.67	0.67	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.0	8.6	15.1	30.5	33.4		
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.8	0.6	4.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	0.0	0.2	12.6	1.2	4.7		
LnGrp Delay(d),s/veh	0.2	0.0	8.6	15.9	31.2	37.9		
LnGrp LOS	A		A	B	C	D		
Approach Vol, veh/h	519			1280	227			
Approach Delay, s/veh	0.2			15.8	36.4			
Approach LOS	A			B	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		73.0				73.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		69.0				69.0
Max Q Clear Time (g_c+I1), s		11.6		2.0				27.3
Green Ext Time (p_c), s		0.5		23.5				19.9
Intersection Summary								
HCM 2010 Ctrl Delay				14.1				
HCM 2010 LOS				B				

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑↑		↓	↑↑		↓	↑		↓	↑	↑
Volume (veh/h)	22	735	94	100	907	16	119	15	90	41	49	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	22	735	94	100	907	16	119	15	90	41	49	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	32	2324	295	128	2001	35	149	53	319	52	327	278
Arrive On Green	0.02	0.51	0.51	0.02	0.19	0.19	0.08	0.23	0.23	0.03	0.18	0.18
Sat Flow, veh/h	1774	4570	580	1774	3559	63	1774	231	1387	1774	1863	1583
Grp Volume(v), veh/h	22	544	285	100	451	472	119	0	105	41	49	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1760	1774	1770	1852	1774	0	1618	1774	1863	1583
Q Serve(g_s), s	1.2	9.4	9.5	5.6	22.7	22.7	6.6	0.0	5.3	2.3	2.2	1.6
Cycle Q Clear(g_c), s	1.2	9.4	9.5	5.6	22.7	22.7	6.6	0.0	5.3	2.3	2.2	1.6
Prop In Lane		1.00	0.33	1.00		0.03	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	32	1724	895	128	995	1041	149	0	372	52	327	278
V/C Ratio(X)	0.68	0.32	0.32	0.78	0.45	0.45	0.80	0.00	0.28	0.79	0.15	0.11
Avail Cap(c_a), veh/h	124	1724	895	248	995	1041	266	0	372	142	327	278
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	14.4	14.4	48.0	27.0	27.0	45.0	0.0	31.7	48.2	34.9	34.7
Incr Delay (d2), s/veh	21.9	0.5	0.9	9.8	1.5	1.4	9.4	0.0	1.9	22.5	1.0	0.8
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(-26165%),veh/ln	4.5	4.8	3.1	11.5	12.1	3.6	0.0	0.0	2.6	1.5	1.2	0.8
LnGrp Delay(d),s/veh	70.7	14.9	15.4	57.8	28.5	28.5	54.3	0.0	33.6	70.8	35.9	35.4
LnGrp LOS	E	B	B	E	C	C	D		C	E	D	D
Approach Vol, veh/h		851			1023			224			120	
Approach Delay, s/veh		16.5			31.4			44.6			47.7	
Approach LOS		B			C			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		27.0	11.2	54.8	12.4	21.5	5.8	60.2				
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		23.0	14.0	39.0	15.0	16.0	7.0	46.0				
Max Q Clear Time (g_c+I1), s		7.3	7.6	11.5	8.6	4.2	3.2	24.7				
Green Ext Time (p_c), s		0.0	0.8	0.1	14.1	0.1	0.7	12.2				
Intersection Summary												
HCM 2010 Ctrl Delay					27.9							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↖		↗	↔		
Volume (veh/h)	2	796	98	81	983	3	49	2	47	2	1	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	796	98	81	983	3	49	2	47	2	1	0
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2173	267	0	2478	8	63	0	372	0	298	0
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.04	0.24	0.24	0.00	0.16	0.00
Sat Flow, veh/h	0	3173	391	0	3619	11	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	444	450	0	481	505	49	0	47	0	1	0
Grp Sat Flow(s),veh/h/ln	0	1770	1794	0	1770	1861	1774	0	1583	0	1863	0
Q Serve(g_s), s	0.0	10.6	10.6	0.0	11.8	11.8	2.7	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.6	10.6	0.0	11.8	11.8	2.7	0.0	2.3	0.0	0.0	0.0
Prop In Lane	0.00		0.22	0.00		0.01	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1212	1228	0	1212	1274	63	0	372	0	298	0
V/C Ratio(X)	0.00	0.37	0.37	0.00	0.40	0.40	0.78	0.00	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1212	1228	0	1212	1274	71	0	372	0	298	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.6	6.6	0.0	6.8	6.8	47.9	0.0	30.1	0.0	35.3	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.8	0.0	1.0	0.9	38.5	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.3	5.4	0.0	6.1	6.4	2.0	0.0	1.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.5	7.5	0.0	7.8	7.7	86.3	0.0	30.3	0.0	35.3	0.0
LnGrp LOS	A	A		A	A	F		C		D		
Approach Vol, veh/h	894			986			96			1		
Approach Delay, s/veh	7.5			7.8			58.9			35.3		
Approach LOS	A			A			E			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/0.0	27.5	0.0	72.5	7.5	20.0	0.0	72.5					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	16.0	4.0	60.0	4.0	16.0	4.0	60.0					
Max Q Clear Time (g_c+10), s	4.3	0.0	12.6	4.7	2.0	0.0	13.8					
Green Ext Time (p_c), s	0.0	0.1	0.0	19.5	0.0	0.1	0.0	19.3				
Intersection Summary												
HCM 2010 Ctrl Delay	10.1											
HCM 2010 LOS	B											

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↗			↖	↗		↖	↗
Volume (veh/h)	0	0	0	329	1	14	498	72	0	0	39	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				329	1	14	498	72	0	0	39	65
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				376	1	336	791	114	0	0	101	168
Arrive On Green				0.21	0.21	0.21	0.85	0.85	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1769	5	1583	1559	225	0	0	629	1049
Grp Volume(v), veh/h				330	0	14	570	0	0	0	0	104
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1785	0	0	0	0	1678
Q Serve(g_s), s				18.0	0.0	0.7	10.4	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s				18.0	0.0	0.7	10.4	0.0	0.0	0.0	0.0	5.6
Prop In Lane				1.00		1.00	0.87		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				377	0	336	906	0	0	0	0	268
V/C Ratio(X)				0.88	0.00	0.04	0.63	0.00	0.00	0.00	0.00	0.39
Avail Cap(c_a), veh/h				497	0	443	906	0	0	0	0	268
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				38.1	0.0	31.3	4.5	0.0	0.0	0.0	0.0	37.6
Incr Delay (d2), s/veh				12.9	0.0	0.1	3.3	0.0	0.0	0.0	0.0	4.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				10.2	0.0	0.3	5.5	0.0	0.0	0.0	0.0	2.9
LnGrp Delay(d),s/veh				51.0	0.0	31.3	7.9	0.0	0.0	0.0	0.0	41.8
LnGrp LOS				D		C	A					D
Approach Vol, veh/h				344			570			104		
Approach Delay, s/veh				50.2			7.9			41.8		
Approach LOS				D			A			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			2			6		8				
Phs Duration (G+Y+Rc), s			54.8			20.0		25.2				
Change Period (Y+Rc), s			4.0			4.0		4.0				
Max Green Setting (Gmax), s			44.0			16.0		28.0				
Max Q Clear Time (g_c+10), s			12.4			7.6		20.0				
Green Ext Time (p_c), s			4.4			0.3		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay	25.6											
HCM 2010 LOS	C											

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	1	277	0	0	0	0	515	336	7	386	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	25	1	277	0	0	0	0	515	336	7	386	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	915	915	386	386	0	0	515	0	0			
Stage 1	400	400	-	-	-	-	-	-	-	-	-	-
Stage 2	515	515	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	303	273	662	1172	-	-	1051	-	-	-	-	-
Stage 1	677	602	-	-	-	-	-	-	-	-	-	-
Stage 2	600	535	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	301	0	662	1172	-	-	1051	-	-	-	-	-
Mov Cap-2 Maneuver	424	0	-	-	-	-	-	-	-	-	-	-
Stage 1	672	0	-	-	-	-	-	-	-	-	-	-
Stage 2	600	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.3			0			0.2					
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1172	-	-	424	662	1051	-	-				
HCM Lane V/C Ratio	-	-	-	0.061	0.418	0.007	-	-				
HCM Control Delay (s)	0	-	-	14	14.3	8.4	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	2.1	0	-	-				

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	241	93	253	223	37	115	395	206	141	842	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	60	241	93	253	223	37	115	395	206	141	842	63
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	77	375	168	289	797	356	144	1072	552	173	1637	122
Arrive On Green	0.04	0.11	0.11	0.16	0.23	0.23	0.08	0.47	0.47	0.10	0.49	0.49
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2262	1165	1774	3338	250
Grp Volume(v), veh/h	60	241	93	253	223	37	115	308	293	141	446	459
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1657	1774	1770	1819
Q Serve(g_s), s	3.3	6.5	5.6	13.9	5.2	1.9	6.4	11.1	11.3	7.8	17.2	17.2
Cycle Q Clear(g_c), s	3.3	6.5	5.6	13.9	5.2	1.9	6.4	11.1	11.3	7.8	17.2	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.70	1.00		0.14
Lane Grp Cap(c), veh/h	77	375	168	289	797	356	144	838	785	173	867	892
V/C Ratio(X)	0.78	0.64	0.55	0.88	0.28	0.10	0.80	0.37	0.37	0.82	0.51	0.51
Avail Cap(c_a), veh/h	160	566	253	390	1026	459	213	838	785	266	867	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	42.9	42.5	40.9	32.0	30.7	45.2	16.8	16.8	44.2	17.4	17.4
Incr Delay (d2), s/veh	15.1	1.8	2.9	15.4	0.2	0.1	12.3	1.2	1.4	10.7	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.0	3.3	2.6	8.1	2.6	0.8	3.6	5.7	5.4	4.4	8.8	9.1
LnGrp Delay(d),s/veh	62.4	44.7	45.3	56.3	32.2	30.9	57.4	18.0	18.2	55.0	19.6	19.5
LnGrp LOS	E	D	D	E	C	C	E	B	B	D	B	B
Approach Vol, veh/h	394			513			716			1046		
Approach Delay, s/veh	47.6			44.0			24.4			24.3		
Approach LOS	D			D			C			C		
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	13.7	51.4	20.3	14.6	12.1	53.0	8.4	26.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	15.0	31.0	22.0	16.0	12.0	34.0	9.0	29.0				
Max Q Clear Time (g_c+1), s	9.8	13.3	15.9	8.5	8.4	19.2	5.3	7.2				
Green Ext Time (p_c), s	0.1	9.3	0.4	2.1	0.1	8.3	0.0	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay	31.6											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	632	1	4	670	251	9	9	8	500	17	334
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	632	1	4	670	251	9	9	8	500	17	334
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	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	85	1135	2	7	953	426	16	512	455	1530	957	814
Arrive On Green	0.05	0.31	0.31	0.00	0.27	0.27	0.01	0.56	0.56	0.51	0.51	0.51
Sat Flow, veh/h	1774	3626	6	1774	3539	1583	1774	911	809	2697	1863	1583
Grp Volume(v), veh/h	66	308	325	4	670	251	9	0	17	500	17	334
Grp Sat Flow(s), veh/h/ln	1770	1770	1862	1774	1770	1583	1774	0	1720	1349	1863	1583
Q Serve(g_s), s	3.7	14.5	14.5	0.2	17.1	13.8	0.5	0.0	0.4	11.1	0.4	13.0
Cycle Q Clear(g_c), s	3.7	14.5	14.5	0.2	17.1	13.8	0.5	0.0	0.4	11.1	0.4	13.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	85	554	583	7	953	426	16	0	968	1530	957	814
V/C Ratio(X)	0.77	0.56	0.56	0.54	0.70	0.59	0.57	0.00	0.02	0.33	0.02	0.41
Avail Cap(c_a), veh/h	195	708	745	71	1168	523	71	0	968	1530	957	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	28.6	28.6	49.7	32.9	31.7	49.4	0.0	9.7	14.5	11.9	15.0
Incr Delay (d2), s/veh	13.7	0.9	0.8	48.8	1.5	1.3	28.9	0.0	0.0	0.6	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	7.2	7.5	0.2	8.5	6.1	0.4	0.0	0.0	0.2	4.2	0.2	6.0
LnGrp Delay(d), s/veh	60.8	29.5	29.4	98.5	34.4	33.0	78.3	0.0	9.7	15.1	12.0	16.5
LnGrp LOS	E	C	C	F	C	C	E		A	B	B	B
Approach Vol, veh/h	699			925			26			851		
Approach Delay, s/veh	32.4			34.3			33.4			15.6		
Approach LOS	C			C			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	60.3	4.4	35.3	4.9	55.4	8.8	30.9					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	44.0	4.0	40.0	4.0	36.0	11.0	33.0					
Max Q Clear Time (g_c+I1), s	2.4	2.2	16.5	2.5	15.0	5.7	19.1					
Green Ext Time (p_c), s	3.6	0.0	10.6	0.0	3.4	0.0	7.8					
Intersection Summary												
HCM 2010 Ctrl Delay	27.4											
HCM 2010 LOS	C											

HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	3.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	810	65	302	1002	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	810	65	302	1002	2	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	875	0	1948	438
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	1105	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	450	-	75	484
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	450	-	25	484
Mov Cap-2 Maneuver	-	-	-	-	70	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	89	-
Approach						
	EB		WB		NB	
HCM Control Delay, s	0		6.4		24.3	
HCM LOS	C				C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	195	-	-	450	-	
HCM Lane V/C Ratio	0.041	-	-	0.671	-	
HCM Control Delay (s)	24.3	-	-	27.8	-	
HCM Lane LOS	C	-	-	D	-	
HCM 95th %tile Q(veh)	0.1	-	-	4.9	-	

HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	5.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	47	76	38	302	116	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	47	76	38	302	116	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	208	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	170	-
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	1572	-	-	0	780	1034
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	-	756	1034
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	833	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.8		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	756	1034	1572	-	-	
HCM Lane V/C Ratio	0.153	0.011	0.03	-	-	
HCM Control Delay (s)	10.6	8.5	7.4	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	0.5	0	0.1	-	-	

HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	264	68	74	171	39	123	1170	175	53	690	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	241	264	68	74	171	39	123	1170	175	53	690	149
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	295	310	263	80	184	42	153	1439	214	68	1478	661
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.47	0.47	0.04	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	468	1081	247	1774	3091	461	1774	3539	1583
Grp Volume(v), veh/h	241	264	68	284	0	0	123	668	677	53	690	149
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1796	0	0	1774	1770	1781	1774	1770	1583
Q Serve(g_s), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.4	32.8	3.0	14.1	6.0
Cycle Q Clear(g_c), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.4	32.8	3.0	14.1	6.0
Prop In Lane	1.00		1.00	0.26		0.14	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	295	310	263	305	0	0	153	824	829	68	1478	661
V/C Ratio(X)	0.82	0.85	0.26	0.93	0.00	0.00	0.80	0.81	0.82	0.78	0.47	0.23
Avail Cap(c_a), veh/h	337	354	301	305	0	0	231	824	829	71	1478	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	40.5	36.3	40.9	0.0	0.0	44.9	22.9	23.0	47.7	21.1	18.7
Incr Delay (d2), s/veh	13.0	16.2	0.5	33.8	0.0	0.0	11.5	8.5	8.7	40.5	1.1	0.8
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(-26165%),veh/ln	7.5	8.5	1.7	10.6	0.0	0.0	3.8	17.7	18.0	2.2	7.1	2.8
LnGrp Delay(d),s/veh	53.3	56.7	36.8	74.7	0.0	0.0	56.4	31.5	31.8	88.2	22.1	19.5
LnGrp LOS	D	E	D	E			E	C	C	F	C	B
Approach Vol, veh/h	573			284			1468			892		
Approach Delay, s/veh	52.9			74.7			33.7			25.6		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	50.6		20.6	12.6	45.8		21.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	44.0		19.0	13.0	35.0		17.0				
Max Q Clear Time (g_c+I1), s	5.0	34.8		15.8	8.8	16.1		17.6				
Green Ext Time (p_c), s	0.0	7.7		0.9	0.1	13.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	38.5											
HCM 2010 LOS	D											

HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh		274.2									
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	108	0	880	20	0	602	252	501	16	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	108	0	880	20	0	602	252	501	16	
Major/Minor	Minor1		Major1			Major2			Minor2		
Conflicting Flow All	1189	440	602	0	0	880	0	0	1042	301	
Stage 1	880	-	-	-	-	-	-	-	602	-	
Stage 2	309	-	-	-	-	-	-	-	440	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	143	565	971	-	-	764	-	0	~ 184	695	
Stage 1	308	-	-	-	-	-	-	0	~ 453	-	
Stage 2	676	-	-	-	-	-	-	0	566	-	
Platoon blocked, %				-	-			-			
Mov Cap-1 Maneuver	129	565	971	-	-	764	-	-	~ 149	695	
Mov Cap-2 Maneuver	129	-	-	-	-	-	-	-	~ 149	-	
Stage 1	308	-	-	-	-	-	-	-	~ 453	-	
Stage 2	654	-	-	-	-	-	-	-	~ 458	-	
Approach	WB		NB			SB			NE		
HCM Control Delay, s	12.9		0			0			\$ 1125.6		
HCM LOS	B								F		
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	149	-	971	-	-	565	764	-			
HCM Lane V/C Ratio	3.362	-	-	-	-	0.191	-	-			
HCM Control Delay (s)	\$ 1125.6	0	0	-	-	12.9	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	47.9	-	0	-	-	0.7	0	-			
Notes											
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon											

HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	62	244	170	38	223	3	206	455	102	9	216	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	244	170	38	223	3	206	455	102	9	216	45
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	597	327	278	578	589	8	284	950	211	16	751	153
Arrive On Green	0.34	0.18	0.18	0.33	0.16	0.16	0.08	0.33	0.33	0.01	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	3576	48	3442	2878	641	1774	2928	599
Grp Volume(v), veh/h	62	244	170	38	110	116	206	279	278	9	129	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1854	1721	1770	1750	1774	1770	1757
Q Serve(g_s), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	12.5	12.7	0.5	5.8	6.0
Cycle Q Clear(g_c), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	12.5	12.7	0.5	5.8	6.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.37	1.00		0.34
Lane Grp Cap(c), veh/h	597	327	278	578	292	306	284	584	577	16	454	450
V/C Ratio(X)	0.10	0.75	0.61	0.07	0.38	0.38	0.73	0.48	0.48	0.57	0.28	0.29
Avail Cap(c_a), veh/h	597	596	507	578	495	519	585	584	577	106	454	450
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	0.75	0.75	0.75	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	39.1	38.1	23.2	37.2	37.2	44.8	26.6	26.7	49.4	29.8	29.9
Incr Delay (d2), s/veh	0.1	3.4	2.2	0.0	0.8	0.8	2.7	2.1	2.2	28.9	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.2	6.7	4.5	0.7	2.8	2.9	2.9	6.5	6.5	0.4	3.1	3.1
LnGrp Delay(d),s/veh	22.9	42.5	40.2	23.3	38.0	38.0	47.4	28.7	28.9	78.3	31.4	31.5
LnGrp LOS	C	D	D	C	D	D	D	C	C	E	C	C
Approach Vol, veh/h	476			264			763			270		
Approach Delay, s/veh	39.1			35.9			33.8			33.0		
Approach LOS	D			D			C			C		
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	4.9	37.0	36.6	21.6	12.3	29.6	37.6	20.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	33.0	13.0	32.0	17.0	22.0	17.0	28.0				
Max Q Clear Time (g_c+I1), s	2.5	14.7	3.5	14.4	7.8	8.0	4.4	7.6				
Green Ext Time (p_c), s	0.0	4.8	0.0	3.1	0.4	4.3	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay	35.4											
HCM 2010 LOS	D											

HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	103	73	100	14	47	49	200	592	36	30	392	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	103	73	100	14	47	49	200	592	36	30	392	52
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	239	327	23	485	434	235	875	744	40	1132	149
Arrive On Green	0.07	0.33	0.33	0.01	0.27	0.27	0.13	0.47	0.47	0.02	0.36	0.36
Sat Flow, veh/h	1774	713	977	1774	1770	1583	1774	1863	1583	1774	3145	414
Grp Volume(v), veh/h	103	0	173	14	47	49	200	592	36	30	219	225
Grp Sat Flow(s),veh/h/ln	1774	0	1690	1774	1770	1583	1774	1863	1583	1774	1770	1790
Q Serve(g_s), s	5.7	0.0	7.6	0.8	2.0	2.3	11.0	24.7	1.2	1.7	9.1	9.2
Cycle Q Clear(g_c), s	5.7	0.0	7.6	0.8	2.0	2.3	11.0	24.7	1.2	1.7	9.1	9.2
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	130	0	565	23	485	434	235	875	744	40	637	644
V/C Ratio(X)	0.79	0.00	0.31	0.61	0.10	0.11	0.85	0.68	0.05	0.75	0.34	0.35
Avail Cap(c_a), veh/h	213	0	565	71	485	434	355	875	744	106	637	644
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	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	45.6	0.0	24.7	49.1	27.1	27.2	42.4	20.6	14.4	48.6	23.4	23.4
Incr Delay (d2), s/veh	10.2	0.0	1.4	23.7	0.4	0.5	11.6	4.2	0.1	23.3	1.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	3.8	0.5	1.0	1.1	6.1	13.7	0.6	1.1	4.7	4.8
LnGrp Delay(d),s/veh	55.7	0.0	26.1	72.8	27.5	27.7	54.0	24.8	14.5	71.9	24.8	24.9
LnGrp LOS	E		C	E	C	C	D	C	B	E	C	C
Approach Vol, veh/h	276			110			828			474		
Approach Delay, s/veh	37.1			33.4			31.4			27.8		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s6.3	51.0	5.3	37.4	17.3	40.0	11.3	31.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Q Clear Time (g_c+I1), s	2.5	14.7	3.5	14.4	7.8	8.0	4.4	7.6				
Green Ext Time (p_c), s	0.0	4.8	0.0	3.1	0.4	4.3	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay	31.5											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	133	753	472	49	86	209		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	133	753	472	49	86	209		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	164	2265	1644	170	497	443		
Arrive On Green	0.18	1.00	0.51	0.51	0.28	0.28		
Sat Flow, veh/h	1774	3632	3331	335	1774	1583		
Grp Volume(v), veh/h	133	753	257	264	86	209		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1804	1774	1583		
Q Serve(g_s), s	7.2	0.0	8.4	8.4	3.7	10.9		
Cycle Q Clear(g_c), s	7.2	0.0	8.4	8.4	3.7	10.9		
Prop In Lane	1.00			0.19	1.00	1.00		
Lane Grp Cap(c), veh/h	164	2265	899	916	497	443		
V/C Ratio(X)	0.81	0.33	0.29	0.29	0.17	0.47		
Avail Cap(c_a), veh/h	408	2265	899	916	497	443		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	40.0	0.0	14.2	14.2	27.2	29.9		
Incr Delay (d2), s/veh	8.8	0.4	0.8	0.8	0.8	3.6		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	4.3	4.4	1.9	10.4			
LnGrp Delay(d),s/veh	48.7	0.4	15.0	15.0	28.0	33.4		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	886	521	295					
Approach Delay, s/veh	7.6	15.0	31.8					
Approach LOS	A	B	C					
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				68.0		32.0	13.2	54.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				64.0		28.0	23.0	37.0
Max Q Clear Time (g_c+I1), s				2.0		12.9	9.2	10.4
Green Ext Time (p_c), s				11.8		0.8	0.3	9.8
Intersection Summary								
HCM 2010 Ctrl Delay			14.1					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations								
Volume (veh/h)	785	486	97	591	316	83		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	785	0	97	591	316	83		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2445	1094	123	2832	412	190		
Arrive On Green	0.23	0.00	0.14	1.00	0.12	0.12		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	785	0	97	591	316	83		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	18.5	0.0	5.3	0.0	8.9	4.9		
Cycle Q Clear(g_c), s	18.5	0.0	5.3	0.0	8.9	4.9		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2445	1094	123	2832	412	190		
V/C Ratio(X)	0.32	0.00	0.79	0.21	0.77	0.44		
Avail Cap(c_a), veh/h	2445	1094	302	2832	757	348		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.87	0.00	0.95	0.95	1.00	1.00		
Uniform Delay (d), s/veh	19.1	0.0	42.4	0.0	42.6	40.9		
Incr Delay (d2), s/veh	0.3	0.0	10.3	0.2	3.0	1.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	2.9	0.1	4.4	2.2		
LnGrp Delay(d),s/veh	19.4	0.0	52.6	0.2	45.7	42.5		
LnGrp LOS	B		D	A	D	D		
Approach Vol, veh/h	785			688	399			
Approach Delay, s/veh	19.4			7.6	45.0			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		16.0	10.9	73.1				84.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		22.0	17.0	49.0				70.0
Max Q Clear Time (g_c+I1), s		10.9	7.3	20.5				2.0
Green Ext Time (p_c), s		1.1	0.1	11.6				14.3
Intersection Summary								
HCM 2010 Ctrl Delay			20.5					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	303	906	346	154	456	256	251	632	126	234	371	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	303	906	346	154	456	256	251	632	126	234	371	82
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	398	1891	846	308	1891	846	677	1365	610	488	1114	244
Arrive On Green	1.00	1.00	1.00	0.36	0.36	0.36	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	735	3539	1583	442	3539	1583	1812	3539	1583	1366	2889	632
Grp Volume(v), veh/h	303	906	346	154	456	256	251	632	126	234	226	227
Grp Sat Flow(s), veh/h/ln	735	1770	1583	442	1770	1583	906	1770	1583	683	1770	1751
Q Serve(g, s), s	30.6	0.0	0.0	29.2	9.1	11.6	11.4	13.4	5.3	15.5	9.0	9.2
Cycle Q Clear(g, c), s	39.6	0.0	0.0	29.2	9.1	11.6	20.5	13.4	5.3	28.8	9.0	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	398	1891	846	308	1891	846	677	1365	610	488	682	675
V/C Ratio(X)	0.76	0.48	0.41	0.50	0.24	0.30	0.37	0.46	0.21	0.48	0.33	0.34
Avail Cap(c_a), veh/h	417	1982	887	319	1982	887	677	1365	610	488	682	675
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.4	0.0	0.0	24.3	17.8	18.7	28.9	23.0	20.5	33.8	21.6	21.7
Incr Delay (d2), s/veh	7.7	0.2	0.3	1.2	0.1	0.2	1.6	1.1	0.8	3.3	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(26165%), veh/ln	0.0	0.0	0.1	3.7	4.4	5.2	3.0	6.7	2.4	3.2	4.6	4.7
LnGrp Delay(d), s/veh	11.0	0.2	0.3	25.5	17.9	18.9	30.5	24.1	21.3	37.1	22.9	23.0
LnGrp LOS	B	A	A	C	B	B	C	C	C	D	C	C
Approach Vol, veh/h	1555			866			1009			687		
Approach Delay, s/veh	2.3			19.5			25.3			27.8		
Approach LOS	A			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	42.6		57.4		42.6		57.4					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	36.0		56.0		36.0		56.0					
Max Q Clear Time (g_c+I1), s	22.5		41.6		30.8		31.2					
Green Ext Time (p_c), s	8.8		11.8		4.0		18.4					
Intersection Summary												
HCM 2010 Ctrl Delay	15.8											
HCM 2010 LOS	B											

HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh		0										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	1567	0	0	785	7	0	0	0	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	2	1567	0	0	785	7	0	0	0	0	0	8
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	792	0	0	1567	0	0	1577	2360	396			
Stage 1	-	-	-	-	-	-	789	789	-			
Stage 2	-	-	-	-	-	-	788	1571	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	824	-	-	417	-	-	100	35	603			
Stage 1	-	-	-	-	-	-	408	400	-			
Stage 2	-	-	-	-	-	-	409	169	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	824	-	-	417	-	-	100	0	603			
Mov Cap-2 Maneuver	-	-	-	-	-	-	100	0	-			
Stage 1	-	-	-	-	-	-	408	0	-			
Stage 2	-	-	-	-	-	-	408	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0			0			11.1					
HCM LOS							B					
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	824	-	-	417	-	-	603					
HCM Lane V/C Ratio	0.002	-	-	-	-	-	0.013					
HCM Control Delay (s)	9.4	-	-	0	-	-	11.1					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	1230	764	76	711	32	315		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1230	0	76	711	32	315		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2194	982	301	2194	532	475		
Arrive On Green	0.82	0.00	0.20	0.20	0.30	0.30		
Sat Flow, veh/h	3632	1583	451	3632	1774	1583		
Grp Volume(v), veh/h	1230	0	76	711	32	315		
Grp Sat Flow(s),veh/h/ln	1770	1583	451	1770	1774	1583		
Q Serve(g_s), s	11.3	0.0	14.9	17.1	1.3	17.4		
Cycle Q Clear(g_c), s	11.3	0.0	26.2	17.1	1.3	17.4		
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	2194	982	301	2194	532	475		
V/C Ratio(X)	0.56	0.00	0.25	0.32	0.06	0.66		
Avail Cap(c_a), veh/h	2194	982	301	2194	532	475		
HCM Platoon Ratio	1.33	1.33	0.33	0.33	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.3	0.0	30.5	21.9	25.0	30.6		
Incr Delay (d2), s/veh	1.0	0.0	2.0	0.4	0.2	7.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	5.6	0.0	2.0	8.5	0.7	8.6		
LnGrp Delay(d),s/veh	5.4	0.0	32.5	22.3	25.2	37.7		
LnGrp LOS	A		C	C	C	D		
Approach Vol, veh/h	1230			787	347			
Approach Delay, s/veh	5.4			23.3	36.6			
Approach LOS	A			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.0		66.0				66.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		30.0		62.0				62.0
Max Q Clear Time (g_c+I1), s		19.4		13.3				28.2
Green Ext Time (p_c), s		0.9		25.9				21.0
Intersection Summary								
HCM 2010 Ctrl Delay			15.9					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	1808	121	53	562	52	108	41	122	45	33	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	1808	121	53	562	52	108	41	122	45	33	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	77	2676	179	68	1783	165	136	91	271	57	327	278
Arrive On Green	0.04	0.55	0.55	0.05	0.72	0.72	0.08	0.22	0.22	0.03	0.18	0.18
Sat Flow, veh/h	1774	4870	325	1774	3276	303	1774	414	1232	1774	1863	1583
Grp Volume(v), veh/h	60	1257	672	53	303	311	108	0	163	45	33	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1805	1774	1770	1809	1774	0	1645	1774	1863	1583
Q Serve(g_s), s	3.3	26.6	26.7	3.0	6.1	6.2	6.0	0.0	8.6	2.5	1.5	1.6
Cycle Q Clear(g_c), s	3.3	26.6	26.7	3.0	6.1	6.2	6.0	0.0	8.6	2.5	1.5	1.6
Prop In Lane	1.00		0.18	1.00		0.17	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	77	1863	992	68	963	984	136	0	362	57	327	278
V/C Ratio(X)	0.78	0.67	0.68	0.78	0.31	0.32	0.79	0.00	0.45	0.79	0.10	0.11
Avail Cap(c_a), veh/h	160	1863	992	124	963	984	213	0	362	106	327	278
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	16.1	16.2	47.0	7.1	7.2	45.4	0.0	33.8	48.0	34.6	34.6
Incr Delay (d2), s/veh	15.1	2.0	3.7	17.3	0.9	0.8	10.5	0.0	4.0	20.5	0.6	0.8
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(-26165%),veh/ln	12.9	14.3	1.8	3.2	3.2	3.3	0.0	0.0	4.3	1.6	0.8	0.8
LnGrp Delay(d),s/veh	62.4	18.1	19.9	64.4	8.0	8.0	55.9	0.0	37.8	68.5	35.2	35.4
LnGrp LOS	E	B	B	E	A	A	E		D	E	D	D
Approach Vol, veh/h		1989			667			271			108	
Approach Delay, s/veh		20.0			12.5			45.0			49.2	
Approach LOS		C			B			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), s7.2	26.0	7.8	58.9	11.7	21.6	8.4	58.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	22.0	7.0	49.0	12.0	16.0	9.0	47.0					
Max Q Clear Time (g_c+I1), s	10.6	5.0	28.7	8.0	3.6	5.3	8.2					
Green Ext Time (p_c), s	0.0	0.9	0.0	16.6	0.1	0.9	0.0	27.6				
Intersection Summary												
HCM 2010 Ctrl Delay					21.6							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↖		↗	↔		
Volume (veh/h)	3	1760	35	71	637	2	108	0	208	3	1	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	0	1863	1900	1863	1900
Adj Flow Rate, veh/h	3	1760	35	71	637	2	108	0	208	3	1	3
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2	2	2	2
Cap, veh/h	0	2378	47	0	2425	8	89	0	0	0	66	197
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.05	0.00	0.00	0.25	0.16	0.16
Sat Flow, veh/h	0	3550	70	0	3619	11	1774	108	0	411	1234	
Grp Volume(v), veh/h	0	875	920	0	311	328	108	212.7	0	0	4	
Grp Sat Flow(s), veh/h/ln	0	1770	1850	0	1770	1861	1774	F	0	0	1645	
Q Serve(g_s), s	0.0	32.3	32.6	0.0	7.0	7.0	5.0		0.0	0.0	0.2	
Cycle Q Clear(g_c), s	0.0	32.3	32.6	0.0	7.0	7.0	5.0		0.0	0.0	0.2	
Prop In Lane	0.00		0.04	0.00		0.01	1.00		0.00		0.75	
Lane Grp Cap(c), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
V/C Ratio(X)	0.00	0.74	0.74	0.00	0.26	0.26	1.22		0.00	0.00	0.02	
Avail Cap(c_a), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(l)	0.00	1.00	1.00	0.00	1.00	1.00	1.00		0.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	10.8	10.8	0.0	6.6	6.6	47.5		0.0	0.0	35.4	
Incr Delay (d2), s/veh	0.0	4.1	4.0	0.0	0.5	0.5	165.2		0.0	0.0	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(-26165%),veh/ln	16.9	17.7	0.0	3.6	3.7	6.5			0.0	0.0	0.1	
LnGrp Delay(d),s/veh	0.0	14.9	14.9	0.0	7.1	7.1	212.7		0.0	0.0	35.5	
LnGrp LOS	B	B		A	A	F					D	
Approach Vol, veh/h	1795			639			4			228		
Approach Delay, s/veh	14.9			7.1			35.5			69.2		
Approach LOS	B			A			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0		0.0	71.0	9.0	20.0	0.0	71.0				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	4.0		4.0	59.0	5.0	16.0	4.0	59.0				
Max Q Clear Time (g_c+10), s	0.0		0.0	34.6	7.0	2.2	0.0	9.0				
Green Ext Time (p_c), s	0.0		0.0	19.3	0.0	0.0	0.0	32.5				
Intersection Summary												
HCM 2010 Ctrl Delay	21.4											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↖	↗		↖	↗		↖	↗
Volume (veh/h)	0	0	0	355	4	21	373	155	0	0	71	157
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				355	4	21	373	155	0	0	71	157
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				402	5	362	624	259	0	0	83	183
Arrive On Green				0.23	0.23	0.23	0.82	0.82	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1755	20	1583	1271	528	0	0	517	1144
Grp Volume(v), veh/h				359	0	21	528	0	0	0	0	228
Grp Sat Flow(s), veh/h/ln				1775	0	1583	1799	0	0	0	0	1661
Q Serve(g_s), s				19.6	0.0	1.0	10.3	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				19.6	0.0	1.0	10.3	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.99		1.00	0.71		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				406	0	362	884	0	0	0	0	266
V/C Ratio(X)				0.88	0.00	0.06	0.60	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				515	0	459	884	0	0	0	0	266
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				37.3	0.0	30.1	5.5	0.0	0.0	0.0	0.0	40.9
Incr Delay (d2), s/veh				14.0	0.0	0.1	3.0	0.0	0.0	0.0	0.0	28.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				11.2	0.0	0.5	5.6	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh				51.2	0.0	30.2	8.5	0.0	0.0	0.0	0.0	69.2
LnGrp LOS				D		C	A					E
Approach Vol, veh/h				380			528			228		
Approach Delay, s/veh				50.1			8.5			69.2		
Approach LOS				D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.1				20.0		26.9				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				16.0		29.0				
Max Q Clear Time (g_c+10), s		12.3				15.4		21.6				
Green Ext Time (p_c), s		3.9				0.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	34.6											
HCM 2010 LOS	C											

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

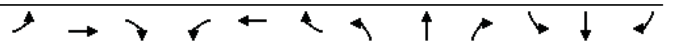
10/30/2014

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	13	277	0	0	0	0	430	781	10	411	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	57	13	277	0	0	0	0	430	781	10	411	0
Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	861	861	411				411	0	0	430	0	0
Stage 1	431	431	-				-	-	-	-	-	-
Stage 2	430	430	-				-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22				4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-				-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318				2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	326	293	641				1148	-	-	1129	-	-
Stage 1	655	583	-				-	-	-	-	-	-
Stage 2	656	583	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	322	0	641				1148	-	-	1129	-	-
Mov Cap-2 Maneuver	442	0	-				-	-	-	-	-	-
Stage 1	648	0	-				-	-	-	-	-	-
Stage 2	656	0	-				-	-	-	-	-	-
Approach	EB						NB			SB		
HCM Control Delay, s	14.8						0			0.2		
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1148	-	-	442	641	1129	-	-				
HCM Lane V/C Ratio	-	-	-	0.158	0.432	0.009	-	-				
HCM Control Delay (s)	0	-	-	14.7	14.8	8.2	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	2.2	0	-	-				

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR			
Lane Configurations															
Volume (veh/h)	121	204	152	221	337	174	198	903	169	168	562	57			
Number	7	4	14	3	8	18	5	2	12	1	6	16			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900			
Adj Flow Rate, veh/h	121	204	152	221	337	174	198	903	169	168	562	57			
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0			
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	151	469	210	254	676	302	233	1345	252	200	1404	142			
Arrive On Green	0.08	0.13	0.13	0.14	0.19	0.19	0.13	0.45	0.45	0.11	0.43	0.43			
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2977	557	1774	3246	328			
Grp Volume(v), veh/h	121	204	152	221	337	174	198	537	535	168	306	313			
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1764	1774	1770	1805			
Q Serve(g_s), s	6.7	5.3	9.2	12.2	8.5	10.0	10.9	23.9	23.9	9.3	11.9	11.9			
Cycle Q Clear(g_c), s	6.7	5.3	9.2	12.2	8.5	10.0	10.9	23.9	23.9	9.3	11.9	11.9			
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		0.18			
Lane Grp Cap(c), veh/h	151	469	210	254	676	302	233	799	797	200	766	781			
V/C Ratio(X)	0.80	0.44	0.72	0.87	0.50	0.58	0.85	0.67	0.67	0.84	0.40	0.40			
Avail Cap(c_a), veh/h	231	566	253	302	708	317	355	799	797	231	766	781			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	44.9	39.9	41.6	41.9	36.2	36.8	42.4	21.6	21.6	43.5	19.5	19.5			
Incr Delay (d2), s/veh	11.0	0.6	7.9	20.3	0.6	2.3	11.3	4.5	4.5	21.2	1.6	1.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	3.8	2.6	4.5	7.4	4.2	4.5	6.1	12.6	12.6	5.7	6.1	6.2			
LnGrp Delay(d),s/veh	56.0	40.6	49.5	62.3	36.8	39.1	53.8	26.0	26.1	64.7	21.0	21.0			
LnGrp LOS	E	D	D	E	D	D	D	C	C	E	C	C			
Approach Vol, veh/h	477			732			1270			787					
Approach Delay, s/veh	47.3			45.0			30.4			30.3					
Approach LOS	D			D			C			C					
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	15.2	49.2	18.3	17.2	17.2	47.3	12.5	23.1							
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0							
Max Green Setting (Gmax), s	13.0	38.0	17.0	16.0	20.0	31.0	13.0	20.0							
Max Q Clear Time (g_c+I1), s	11.3	25.9	14.2	11.2	12.9	13.9	8.7	12.0							
Green Ext Time (p_c), s	0.1	8.1	0.2	2.0	0.3	10.3	0.1	3.0							
Intersection Summary															
HCM 2010 Ctrl Delay	36.1														
HCM 2010 LOS	D														

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	197	713		5	6	1027	615	6	23	6	271	16	143
Number	7	4		14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863	
Adj Flow Rate, veh/h	197	713		5	6	1027	615	6	23	6	271	16	143
Adj No. of Lanes	1	2		0	1	2	1	1	1	0	2	1	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	232	1890		13	11	1416	633	11	498	130	953	565	480
Arrive On Green	0.13	0.52		0.52	0.01	0.40	0.40	0.01	0.35	0.35	0.30	0.30	0.30
Sat Flow, veh/h	1774	3603		25	1774	3539	1583	1774	1425	372	2668	1863	1583
Grp Volume(v), veh/h	197	350		368	6	1027	615	6	0	29	271	16	143
Grp Sat Flow(s),veh/h/ln	1774	1770		1858	1774	1770	1583	1774	0	1797	1334	1863	1583
Q Serve(g,s), s	10.9	11.7		11.7	0.3	24.5	38.1	0.3	0.0	1.1	7.9	0.6	6.9
Cycle Q Clear(g,c), s	10.9	11.7		11.7	0.3	24.5	38.1	0.3	0.0	1.1	7.9	0.6	6.9
Prop In Lane	1.00			0.01	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	232	928		975	11	1416	633	11	0	628	953	565	480
V/C Ratio(X)	0.85	0.38		0.38	0.55	0.73	0.97	0.55	0.00	0.05	0.28	0.03	0.30
Avail Cap(c_a), veh/h	337	973		1022	71	1416	633	71	0	628	953	565	480
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	14.1		14.1	49.6	25.4	29.4	49.6	0.0	21.5	27.0	24.5	26.7
Incr Delay (d2), s/veh	12.8	0.3		0.2	37.0	1.9	28.5	37.0	0.0	0.1	0.7	0.1	1.6
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.8			6.1	0.3	12.4	21.6	0.3	0.0	0.6	3.0	0.3	3.2
LnGrp Delay(d),s/veh	55.3	14.3		14.3	86.6	27.2	58.0	86.6	0.0	21.7	27.8	24.6	28.3
LnGrp LOS	E	B		B	F	C	E	F		C	C	C	C
Approach Vol, veh/h	915			1648			35			430			
Approach Delay, s/veh	23.2			38.9			32.8			27.8			
Approach LOS	C			D			C			C			
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	38.9	4.6	56.5	4.6	34.3	17.1	44.0						
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0						
Max Green Setting (Gmax), s	29.0	4.0	55.0	4.0	21.0	19.0	40.0						
Max Q Clear Time (g_c+I1), s	3.1	2.3	13.7	2.3	9.9	12.9	40.1						
Green Ext Time (p_c), s	1.8	0.0	23.0	0.0	1.4	0.3	0.0						
Intersection Summary													
HCM 2010 Ctrl Delay	32.5												
HCM 2010 LOS	C												

HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	4.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1947	60	101	657	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1947	60	101	657	3	29
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2007	0	2508	1004
Stage 1	-	-	-	-	1977	-
Stage 2	-	-	-	-	531	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	124	-	34	206
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	537	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	124	-	6	206
Mov Cap-2 Maneuver	-	-	-	-	36	-
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	100	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		13.8		37.3	
HCM LOS	C		E		E	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	143	-	-	124	-	
HCM Lane V/C Ratio	0.224	-	-	0.815	-	
HCM Control Delay (s)	37.3	-	-	103.6	-	
HCM Lane LOS	E	-	-	F	-	
HCM 95th %tile Q(veh)	0.8	-	-	4.9	-	

HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	7.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	55	101	89	744	251	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	55	101	89	744	251	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	300	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	211	-
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	1506	-	-	0	691	969
Stage 1	-	-	-	0	934	-
Stage 2	-	-	-	0	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	664	969
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	792	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.6		0		13.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	664	969	1506	-	-	
HCM Lane V/C Ratio	0.378	0.011	0.037	-	-	
HCM Control Delay (s)	13.7	8.8	7.5	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	1.8	0	0.1	-	-	

APPENDIX F

CUMULATIVE PLUS PROJECT LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Volume (veh/h)	79	139	85	119	249	30	172	879	159	63	1101	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	139	85	119	249	30	172	879	159	63	1101	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	177	185	158	125	261	31	195	1392	252	81	1417	634
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	542	1133	137	1774	2995	542	1774	3539	1583
Grp Volume(v), veh/h	79	139	85	398	0	0	172	519	519	63	1101	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1812	0	0	1774	1770	1767	1774	1770	1583
Q Serve(g_s), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.2	22.2	3.5	27.1	5.5
Cycle Q Clear(g_c), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.2	22.2	3.5	27.1	5.5
Prop In Lane	1.00		1.00	0.30		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	177	185	158	417	0	0	195	823	822	81	1417	634
V/C Ratio(X)	0.45	0.75	0.54	0.96	0.00	0.00	0.88	0.63	0.63	0.78	0.78	0.21
Avail Cap(c_a), veh/h	284	298	253	417	0	0	195	823	822	106	1417	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	43.8	42.8	38.0	0.0	0.0	43.9	20.3	20.3	47.2	26.1	19.6
Incr Delay (d2), s/veh	1.8	6.0	2.9	32.7	0.0	0.0	34.1	3.7	3.7	22.9	4.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	4.1	2.4	14.6	0.0	0.0	6.5	11.7	11.6	2.2	14.0	2.5
LnGrp Delay(d),s/veh	44.2	49.8	45.7	70.7	0.0	0.0	77.9	23.9	23.9	70.2	30.3	20.3
LnGrp LOS	D	D	D	E			E	C	C	E	C	C
Approach Vol, veh/h	303			398			1210			1296		
Approach Delay, s/veh	47.2			70.7			31.6			31.2		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	50.5		13.9	15.0	44.1		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	39.0		16.0	11.0	34.0		23.0				
Max Q Clear Time (g_c+I1), s	5.5	24.2		9.3	11.6	29.1		23.7				
Green Ext Time (p_c), s	0.0	11.7		0.7	0.0	4.4		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

AM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
Page 1

HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh	13.2										
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	177	0	546	52	0	692	640	149	22	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	177	0	546	52	0	692	640	149	22	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	903	273	692	0	0	546	0	0	965	346	
Stage 1	546	-	-	-	-	-	-	-	692	-	
Stage 2	357	-	-	-	-	-	-	-	273	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	232	725	899	-	-	1019	-	0	209	650	
Stage 1	490	-	-	-	-	-	-	0	400	-	
Stage 2	633	-	-	-	-	-	-	0	710	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	210	725	899	-	-	1019	-	-	158	650	
Mov Cap-2 Maneuver	210	-	-	-	-	-	-	-	158	-	
Stage 1	490	-	-	-	-	-	-	-	400	-	
Stage 2	602	-	-	-	-	-	-	-	537	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	11.6	0			0			114.1			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBRWBLn1	SBL	SBT				
Capacity (veh/h)	158	-	899	-	-	725	1019	-			
HCM Lane V/C Ratio	0.943	-	-	-	-	0.244	-	-			
HCM Control Delay (s)	114.1	0	0	-	-	11.6	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	6.9	-	0	-	-	1	0	-			

AM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	9	73	117	29	95	1	135	185	22	4	591	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	73	117	29	95	1	135	185	22	4	591	42
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	516	190	161	539	413	4	203	1372	161	7	1258	89
Arrive On Green	0.29	0.10	0.10	0.30	0.12	0.12	0.06	0.43	0.43	0.00	0.38	0.38
Sat Flow, veh/h	1774	1863	1583	1774	3588	38	3442	3191	375	1774	3352	238
Grp Volume(v), veh/h	9	73	117	29	47	49	135	102	105	4	312	321
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1856	1721	1770	1797	1774	1770	1821
Q Serve(g_s), s	0.4	3.7	7.2	1.2	2.4	2.4	3.8	3.5	3.6	0.2	13.3	13.4
Cycle Q Clear(g_c), s	0.4	3.7	7.2	1.2	2.4	2.4	3.8	3.5	3.6	0.2	13.3	13.4
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	516	190	161	539	204	214	203	761	773	7	664	683
V/C Ratio(X)	0.02	0.38	0.73	0.05	0.23	0.23	0.67	0.13	0.14	0.54	0.47	0.47
Avail Cap(c_a), veh/h	516	410	348	539	460	483	413	761	773	106	664	683
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	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	42.0	43.6	24.6	40.2	40.2	46.1	17.2	17.3	49.7	23.7	23.7
Incr Delay (d2), s/veh	0.0	1.3	6.1	0.0	0.6	0.5	3.6	0.3	0.3	48.8	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.2	2.0	3.4	0.6	1.2	1.3	1.9	1.8	1.8	0.2	6.9	7.1
LnGrp Delay(d),s/veh	25.3	43.3	49.6	24.7	40.8	40.8	49.7	17.6	17.6	98.5	26.0	26.0
LnGrp LOS	C	D	D	C	D	D	D	B	B	F	C	C
Approach Vol, veh/h	199			125			342			637		
Approach Delay, s/veh	46.2			37.0			30.2			26.5		
Approach LOS	D			D			C			C		
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	4.4	47.0	34.4	14.2	9.9	41.5	33.1	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	43.0	13.0	22.0	12.0	37.0	9.0	26.0				
Max Q Clear Time (g_c+I1), s	2.2	5.6	3.2	9.2	5.8	15.4	2.4	4.4				
Green Ext Time (p_c), s	0.0	5.9	0.0	1.0	0.2	5.3	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	31.5											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	37	28	34	11	27	26	28	303	15	52	629	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	37	28	34	11	27	26	28	303	15	52	629	73
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	47	285	346	19	650	547	38	782	665	67	1394	162
Arrive On Green	0.03	0.37	0.37	0.01	0.36	0.36	0.02	0.42	0.42	0.04	0.44	0.44
Sat Flow, veh/h	1774	767	931	1774	1825	1536	1774	1863	1583	1774	3197	370
Grp Volume(v), veh/h	37	0	62	11	26	27	28	303	15	52	348	354
Grp Sat Flow(s),veh/h/ln	1774	0	1698	1774	1770	1592	1774	1863	1583	1774	1770	1797
Q Serve(g_s), s	2.1	0.0	2.4	0.6	1.0	1.1	1.6	11.3	0.6	2.9	13.8	13.8
Cycle Q Clear(g_c), s	2.1	0.0	2.4	0.6	1.0	1.1	1.6	11.3	0.6	2.9	13.8	13.8
Prop In Lane	1.00		0.55	1.00		0.97	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	47	0	631	19	630	567	38	782	665	67	772	784
V/C Ratio(X)	0.79	0.00	0.10	0.59	0.04	0.05	0.73	0.39	0.02	0.78	0.45	0.45
Avail Cap(c_a), veh/h	177	0	631	106	630	567	177	782	665	195	772	784
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	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	48.4	0.0	20.5	49.3	21.1	21.1	48.6	20.1	17.0	47.7	19.8	19.8
Incr Delay (d2), s/veh	25.2	0.0	0.3	26.1	0.1	0.2	23.0	1.4	0.1	16.4	1.8	1.8
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(-26165%),veh/ln	0.0	1.2	0.4	0.5	0.5	1.0	6.1	0.3	1.7	7.1	7.2	7.2
LnGrp Delay(d),s/veh	73.6	0.0	20.8	75.4	21.2	21.3	71.7	21.5	17.0	64.1	21.6	21.6
LnGrp LOS	E	C	E	C	C	C	E	C	B	E	C	C
Approach Vol, veh/h	99			64			346			754		
Approach Delay, s/veh	40.5			30.5			25.4			24.5		
Approach LOS	D			C			C			C		
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	46.0	5.1	41.2	6.2	47.6	6.6	39.6					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	42.0	6.0	25.0	10.0	43.0	10.0	21.0					
Max Q Clear Time (g_c+I1), s	13.3	2.6	4.4	3.6	15.8	4.1	3.1					
Green Ext Time (p_c), s	0.0	7.2	0.0	0.5	0.0	7.1	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay	26.3											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	147	343	595	88	27	160		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	147	343	595	88	27	160		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	178	2442	1701	251	408	364		
Arrive On Green	0.20	1.00	0.55	0.55	0.23	0.23		
Sat Flow, veh/h	1774	3632	3188	457	1774	1583		
Grp Volume(v), veh/h	147	343	340	343	27	160		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1782	1774	1583		
Q Serve(g_s), s	7.9	0.0	10.7	10.8	1.2	8.7		
Cycle Q Clear(g_c), s	7.9	0.0	10.7	10.8	1.2	8.7		
Prop In Lane	1.00			0.26	1.00	1.00		
Lane Grp Cap(c), veh/h	178	2442	972	979	408	364		
V/C Ratio(X)	0.82	0.14	0.35	0.35	0.07	0.44		
Avail Cap(c_a), veh/h	408	2442	972	979	408	364		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.1	0.0	12.6	12.6	30.1	33.0		
Incr Delay (d2), s/veh	9.0	0.1	1.0	1.0	0.3	3.8		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	5.5	5.5	0.6	8.2		
LnGrp Delay(d),s/veh	48.1	0.1	13.6	13.6	30.4	36.8		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h	490	683		187				
Approach Delay, s/veh	14.5	13.6		35.9				
Approach LOS	B	B		D				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				73.0		27.0	14.1	58.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				69.0		23.0	23.0	42.0
Max Q Clear Time (g_c+I1), s				2.0		10.7	9.9	12.8
Green Ext Time (p_c), s				8.4		0.4	0.3	7.6
Intersection Summary								
HCM 2010 Ctrl Delay			17.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↕↕	↕	↩	↕↕	↕↕	↕		
Volume (veh/h)	429	266	69	703	505	74		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	429	0	69	703	505	74		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2296	1027	89	2615	623	287		
Arrive On Green	0.21	0.00	0.10	1.00	0.18	0.18		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	429	0	69	703	505	74		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	9.9	0.0	3.8	0.0	14.1	4.0		
Cycle Q Clear(g_c), s	9.9	0.0	3.8	0.0	14.1	4.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2296	1027	89	2615	623	287		
V/C Ratio(X)	0.19	0.00	0.78	0.27	0.81	0.26		
Avail Cap(c_a), veh/h	2296	1027	266	2615	1205	554		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.98	0.00	0.94	0.94	1.00	1.00		
Uniform Delay (d), s/veh	17.7	0.0	44.4	0.0	39.3	35.2		
Incr Delay (d2), s/veh	0.2	0.0	12.6	0.2	2.6	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	2.2	0.1	6.9	1.8		
LnGrp Delay(d),s/veh	17.9	0.0	57.1	0.2	41.9	35.6		
LnGrp LOS	B		E	A	D	D		
Approach Vol, veh/h	429			772	579			
Approach Delay, s/veh	17.9			5.3	41.1			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		22.1	9.0	68.9				77.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		35.0	15.0	38.0				57.0
Max Q Clear Time (g_c+I1), s		16.1	5.8	11.9				2.0
Green Ext Time (p_c), s		2.0	0.1	8.8				10.4
Intersection Summary								
HCM 2010 Ctrl Delay			20.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	388	202	91	834	315	417	437	108	195	346	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	129	388	202	91	834	315	417	437	108	195	346	105
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	226	1688	755	459	1688	755	797	1568	702	751	1191	356
Arrive On Green	0.95	0.95	0.95	0.48	0.48	0.48	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	487	3539	1583	823	3539	1583	1815	3539	1583	1665	2687	804
Grp Volume(v), veh/h	129	388	202	91	834	315	417	437	108	195	226	225
Grp Sat Flow(s), veh/h/ln	487	1770	1583	823	1770	1583	908	1770	1583	832	1770	1721
Q Serve(g_s), s	20.7	0.7	0.8	6.6	16.1	13.0	19.1	7.8	4.1	8.4	8.2	8.4
Cycle Q Clear(g_c), s	36.9	0.7	0.8	7.2	16.1	13.0	27.5	7.8	4.1	16.3	8.2	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	226	1688	755	459	1688	755	797	1568	702	751	784	763
V/C Ratio(X)	0.57	0.23	0.27	0.20	0.49	0.42	0.52	0.28	0.15	0.26	0.29	0.29
Avail Cap(c_a), veh/h	242	1805	807	486	1805	807	797	1568	702	751	784	763
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	1.2	1.2	15.8	17.9	17.1	26.6	17.7	16.6	22.9	17.8	17.8
Incr Delay (d2), s/veh	2.8	0.1	0.2	0.2	0.2	0.3	2.5	0.4	0.5	0.8	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.3	0.3	1.5	7.9	5.8	5.0	3.9	1.9	2.0	4.2	4.1	
LnGrp Delay(d),s/veh	11.2	1.3	1.4	16.0	18.1	17.4	29.1	18.1	17.1	23.7	18.7	18.8
LnGrp LOS	B	A	A	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	719			1240			962			646		
Approach Delay, s/veh	3.1			17.8			22.8			20.3		
Approach LOS	A			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	48.3		51.7		48.3		51.7					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	41.0		51.0		41.0		51.0					
Max Q Clear Time (g_c+I1), s	29.5		38.9		18.3		18.1					
Green Ext Time (p_c), s	7.3		8.8		11.3		17.1					
Intersection Summary												
HCM 2010 Ctrl Delay	16.6											
HCM 2010 LOS	B											

AM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh		0.4										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	717	0	0	1278	49	0	0	0	1	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	11	717	0	0	1278	49	0	0	0	1	0	45
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	1327	0	0	717	0	0	1684	2042	664			
Stage 1	-	-	-	-	-	-	1303	1303	-			
Stage 2	-	-	-	-	-	-	381	739	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	516	-	-	880	-	-	85	56	403			
Stage 1	-	-	-	-	-	-	218	229	-			
Stage 2	-	-	-	-	-	-	660	422	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	516	-	-	880	-	-	83	0	403			
Mov Cap-2 Maneuver	-	-	-	-	-	-	83	0	-			
Stage 1	-	-	-	-	-	-	218	0	-			
Stage 2	-	-	-	-	-	-	646	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0.2			0			16					
HCM LOS							C					
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	516	-	-	880	-	-	372					
HCM Lane V/C Ratio	0.021	-	-	-	-	-	0.124					
HCM Control Delay (s)	12.1	-	-	0	-	-	16					
HCM Lane LOS	B	-	-	A	-	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

AM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑		
Volume (veh/h)	553	282	16	1293	51	178		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	553	0	16	1293	51	178		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2442	1092	660	2442	408	364		
Arrive On Green	1.00	0.00	0.46	0.46	0.23	0.23		
Sat Flow, veh/h	3632	1583	852	3632	1774	1583		
Grp Volume(v), veh/h	553	0	16	1293	51	178		
Grp Sat Flow(s),veh/h/ln	1770	1583	852	1770	1774	1583		
Q Serve(g_s), s	0.0	0.0	1.0	26.0	2.3	9.8		
Cycle Q Clear(g_c), s	0.0	0.0	1.0	26.0	2.3	9.8		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2442	1093	660	2442	408	364		
I/C Ratio(X)	0.23	0.00	0.02	0.53	0.12	0.49		
Avail Cap(c_a), veh/h	2442	1093	660	2442	408	364		
HCM Platoon Ratio	2.00	2.00	0.67	0.67	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.0	8.6	15.3	30.5	33.4		
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.8	0.6	4.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	0.0	0.3	12.9	1.2	4.7		
LnGrp Delay(d),s/veh	0.2	0.0	8.7	16.2	31.2	38.0		
LnGrp LOS	A		A	B	C	D		
Approach Vol, veh/h	553			1309	229			
Approach Delay, s/veh	0.2			16.1	36.5			
Approach LOS	A			B	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		73.0				73.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		69.0				69.0
Max Q Clear Time (g_c+I1), s		11.8		2.0				28.0
Green Ext Time (p_c), s		0.5		25.0				20.7
Intersection Summary								
HCM 2010 Ctrl Delay				14.1				
HCM 2010 LOS				B				

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑↑		↓	↑↑		↓	↑		↓	↑	↑
Volume (veh/h)	22	767	94	100	932	16	119	15	90	41	49	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	22	767	94	100	932	16	119	15	90	41	49	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	32	2336	284	128	2002	34	149	53	319	52	327	278
Arrive On Green	0.02	0.51	0.51	0.02	0.19	0.19	0.08	0.23	0.23	0.03	0.18	0.18
Sat Flow, veh/h	1774	4595	559	1774	3560	61	1774	231	1387	1774	1863	1583
Grp Volume(v), veh/h	22	565	296	100	463	485	119	0	105	41	49	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1764	1774	1770	1852	1774	0	1618	1774	1863	1583
Q Serve(g_s), s	1.2	9.8	9.9	5.6	23.3	23.3	6.6	0.0	5.3	2.3	2.2	1.6
Cycle Q Clear(g_c), s	1.2	9.8	9.9	5.6	23.3	23.3	6.6	0.0	5.3	2.3	2.2	1.6
Prop In Lane	1.00		0.32	1.00		0.03	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	32	1724	897	128	995	1042	149	0	372	52	327	278
V/C Ratio(X)	0.68	0.33	0.33	0.78	0.47	0.47	0.80	0.00	0.28	0.79	0.15	0.11
Avail Cap(c_a), veh/h	106	1724	897	248	995	1042	266	0	372	142	327	278
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	14.5	14.5	48.0	27.3	27.3	45.0	0.0	31.7	48.2	34.9	34.7
Incr Delay (d2), s/veh	0.5	1.0	0.5	1.0	9.8	1.6	1.5	9.4	0.0	1.9	22.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	4.7	5.0	3.1	11.9	12.4	3.6	0.0	2.6	1.5	1.2	0.8	0.8
LnGrp Delay(d),s/veh	70.7	15.0	15.5	57.8	28.9	28.8	54.3	0.0	33.6	70.8	35.9	35.4
LnGrp LOS	E	B	B	E	C	C	D		C	E	D	D
Approach Vol, veh/h		883			1048			224			120	
Approach Delay, s/veh		16.6			31.6			44.6			47.7	
Approach LOS		B			C			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	27.0	11.2	54.8	12.4	21.5	5.8	60.2					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	23.0	14.0	39.0	15.0	16.0	6.0	47.0					
Max Q Clear Time (g_c+I1), s	7.3	7.6	11.9	8.6	4.2	3.2	25.3					
Green Ext Time (p_c), s	0.0	0.8	0.1	14.5	0.1	0.7	0.0	12.7				
Intersection Summary												
HCM 2010 Ctrl Delay					27.9							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

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
Volume (veh/h)	2	828	98	81	1008	3	49	2	47	2	1	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	828	98	81	1008	3	49	2	47	2	1	0
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2183	258	0	2479	7	63	0	372	0	298	0
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.04	0.24	0.24	0.00	0.16	0.00
Sat Flow, veh/h	0	3188	377	0	3620	11	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	460	466	0	493	518	49	0	47	0	1	0
Grp Sat Flow(s),veh/h/ln	0	1770	1796	0	1770	1861	1774	0	1583	0	1863	0
Q Serve(g_s), s	0.0	11.1	11.1	0.0	12.2	12.2	2.7	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.1	11.1	0.0	12.2	12.2	2.7	0.0	2.3	0.0	0.0	0.0
Prop In Lane	0.00		0.21	0.00		0.01	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1212	1230	0	1212	1274	63	0	372	0	298	0
V/C Ratio(X)	0.00	0.38	0.38	0.00	0.41	0.41	0.78	0.00	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1212	1230	0	1212	1274	71	0	372	0	298	0
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)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.7	6.7	0.0	6.9	6.9	47.9	0.0	30.1	0.0	35.3	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.0	1.0	1.0	38.5	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.7	5.7	0.0	6.2	6.5	2.0	0.0	1.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.6	7.6	0.0	7.9	7.9	86.3	0.0	30.3	0.0	35.3	0.0
LnGrp LOS	A	A		A	A	F		C		D		
Approach Vol, veh/h	926			1011			96			1		
Approach Delay, s/veh	7.6			7.9			58.9			35.3		
Approach LOS	A			A			E			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/0.0	27.5	0.0	72.5	7.5	20.0	0.0	72.5					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	16.0	4.0	60.0	4.0	16.0	4.0	60.0					
Max Q Clear Time (g_c+10), s	4.3	0.0	13.1	4.7	2.0	0.0	14.2					
Green Ext Time (p_c), s	0.0	0.1	0.0	20.4	0.0	0.1	20.2					
Intersection Summary												
HCM 2010 Ctrl Delay	10.2											
HCM 2010 LOS	B											

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

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
Volume (veh/h)	0	0	0	339	1	14	509	72	0	0	39	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	0	0	1863	1900			
Adj Flow Rate, veh/h	339	1	14	509	72	0	0	39	65			
Adj No. of Lanes	0	1	1	0	1	0	1	0	0	1	0	0
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	0	0	2	2			
Cap, veh/h	383	1	343	787	111	0	0	101	168			
Arrive On Green	0.22	0.22	0.22	0.84	0.84	0.00	0.00	0.16	0.16			
Sat Flow, veh/h	1769	5	1583	1563	221	0	0	629	1049			
Grp Volume(v), veh/h	340	0	14	581	0	0	0	0	104			
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1785	0	0	0	0	1678			
Q Serve(g_s), s	18.6	0.0	0.7	11.4	0.0	0.0	0.0	0.0	5.6			
Cycle Q Clear(g_c), s	18.6	0.0	0.7	11.4	0.0	0.0	0.0	0.0	5.6			
Prop In Lane	1.00		1.00	0.88		0.00	0.00		0.62			
Lane Grp Cap(c), veh/h	385	0	343	898	0	0	0	0	268			
V/C Ratio(X)	0.88	0.00	0.04	0.65	0.00	0.00	0.00	0.00	0.39			
Avail Cap(c_a), veh/h	479	0	427	898	0	0	0	0	268			
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	37.9	0.0	30.9	4.9	0.0	0.0	0.0	0.0	37.6			
Incr Delay (d2), s/veh	15.1	0.0	0.0	3.6	0.0	0.0	0.0	0.0	4.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	10.7	0.0	0.3	6.0	0.0	0.0	0.0	0.0	2.9			
LnGrp Delay(d),s/veh	53.0	0.0	31.0	8.5	0.0	0.0	0.0	0.0	41.8			
LnGrp LOS	D		C	A					D			
Approach Vol, veh/h			354			581			104			
Approach Delay, s/veh			52.2			8.5			41.8			
Approach LOS			D			A			D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s	54.3					20.0		25.7				
Change Period (Y+Rc), s	4.0					4.0		4.0				
Max Green Setting (Gmax), s	45.0					16.0		27.0				
Max Q Clear Time (g_c+10), s	13.4					7.6		20.6				
Green Ext Time (p_c), s	4.5					0.3		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay	26.7											
HCM 2010 LOS	C											

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	1	294	0	0	0	0	526	342	7	396	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	25	1	294	0	0	0	0	526	342	7	396	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	936	936	396	396	0	0	526	0	0	-	-	-
Stage 1	410	410	-	-	-	-	-	-	-	-	-	-
Stage 2	526	526	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	294	265	653	1163	-	-	1041	-	-	-	-	-
Stage 1	670	595	-	-	-	-	-	-	-	-	-	-
Stage 2	593	529	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	291	0	653	1163	-	-	1041	-	-	-	-	-
Mov Cap-2 Maneuver	416	0	-	-	-	-	-	-	-	-	-	-
Stage 1	664	0	-	-	-	-	-	-	-	-	-	-
Stage 2	593	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.8	-	-	0	-	-	0.1	-	-	-	-	-
HCM LOS	B	-	-	-	-	-	-	-	-	-	-	-
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1163	-	-	416	653	1041	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	0.063	0.45	0.007	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	14.2	14.9	8.5	0	-	-	-	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	2.3	0	-	-	-	-	-	-

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	256	101	260	235	40	128	410	214	143	859	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	256	101	260	235	40	128	410	214	143	859	65
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	83	391	175	296	816	365	158	1049	541	175	1580	120
Arrive On Green	0.05	0.11	0.11	0.17	0.23	0.23	0.09	0.46	0.46	0.10	0.47	0.47
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2260	1166	1774	3335	252
Grp Volume(v), veh/h	64	256	101	260	235	40	128	320	304	143	456	468
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1657	1774	1770	1818
Q Serve(g_s), s	3.6	6.9	6.1	14.3	5.5	2.0	7.1	11.8	12.0	7.9	18.3	18.3
Cycle Q Clear(g_c), s	3.6	6.9	6.1	14.3	5.5	2.0	7.1	11.8	12.0	7.9	18.3	18.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.70	1.00		0.14
Lane Grp Cap(c), veh/h	83	391	175	296	816	365	158	821	769	175	838	861
V/C Ratio(X)	0.78	0.65	0.58	0.88	0.29	0.11	0.81	0.39	0.40	0.82	0.54	0.54
Avail Cap(c_a), veh/h	160	566	253	390	1026	459	213	821	769	266	838	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	42.7	42.3	40.7	31.7	30.4	44.7	17.5	17.6	44.2	18.6	18.6
Incr Delay (d2), s/veh	14.3	1.9	3.0	16.2	0.2	0.1	15.5	1.4	1.5	11.1	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	3.5	2.8	8.3	2.7	0.9	4.2	6.1	5.8	4.4	9.4	9.7
LnGrp Delay(d),s/veh	61.4	44.5	45.3	56.9	31.9	30.5	60.2	18.9	19.1	55.3	21.2	21.1
LnGrp LOS	E	D	D	E	C	C	E	B	B	E	C	C
Approach Vol, veh/h	421			535			752			1067		
Approach Delay, s/veh	47.3			43.9			26.0			25.7		
Approach LOS	D			D			C			C		
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	13.9	50.4	20.7	15.0	12.9	51.4	8.7	27.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	15.0	31.0	22.0	16.0	12.0	34.0	9.0	29.0				
Max Q Clear Time (g_c+1), s	9.9	14.0	16.3	8.9	9.1	20.3	5.6	7.5				
Green Ext Time (p_c), s	0.1	9.3	0.4	2.1	0.1	8.1	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay	32.6											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	632	1	4	670	258	9	19	8	500	26	334
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	632	1	4	670	258	9	19	8	500	26	334
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	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	85	1136	2	7	953	426	16	701	295	1517	957	813
Arrive On Green	0.05	0.31	0.31	0.00	0.27	0.27	0.01	0.56	0.56	0.51	0.51	0.51
Sat Flow, veh/h	1774	3626	6	1774	3539	1583	1774	1246	524	2673	1863	1583
Grp Volume(v), veh/h	66	308	325	4	670	258	9	0	27	500	26	334
Grp Sat Flow(s), veh/h/ln	1770	1770	1862	1774	1770	1583	1774	0	1770	1336	1863	1583
Q Serve(g_s), s	3.7	14.5	14.5	0.2	17.1	14.2	0.5	0.0	0.7	11.2	0.7	13.0
Cycle Q Clear(g_c), s	3.7	14.5	14.5	0.2	17.1	14.2	0.5	0.0	0.7	11.2	0.7	13.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	85	554	583	7	953	426	16	0	996	1517	957	813
V/C Ratio(X)	0.77	0.56	0.56	0.54	0.70	0.61	0.57	0.00	0.03	0.33	0.03	0.41
Avail Cap(c_a), veh/h	195	708	745	71	1168	523	71	0	996	1517	957	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	28.6	28.6	49.7	32.9	31.9	49.4	0.0	9.7	14.5	12.0	15.0
Incr Delay (d2), s/veh	13.7	0.9	0.8	48.8	1.5	1.4	28.9	0.0	0.1	0.6	0.1	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	7.2	7.5	0.2	8.5	6.4	6.4	0.4	0.0	0.3	4.2	0.4	6.0
LnGrp Delay(d), s/veh	60.8	29.4	29.4	98.5	34.4	33.3	78.3	0.0	9.8	15.1	12.0	16.5
LnGrp LOS	E	C	C	F	C	C	E		A	B	B	B
Approach Vol, veh/h	699			932			36			860		
Approach Delay, s/veh	32.4			34.4			26.9			15.6		
Approach LOS	C			C			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	60.3	4.4	35.3	4.9	55.4	8.8	30.9					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	44.0	4.0	40.0	4.0	36.0	11.0	33.0					
Max Q Clear Time (g_c+I1), s	2.7	2.2	16.5	2.5	15.0	5.7	19.1					
Green Ext Time (p_c), s	3.8	0.0	10.6	0.0	3.5	0.0	7.9					
Intersection Summary												
HCM 2010 Ctrl Delay	27.3											
HCM 2010 LOS	C											

HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	4.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	842	65	302	1027	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	842	65	302	1027	2	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	907	0	1993	454
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	1118	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	434	-	71	473
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	268	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	434	-	22	473
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	82	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.9		25.5	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	184	-	-	434	-	
HCM Lane V/C Ratio	0.043	-	-	0.696	-	
HCM Control Delay (s)	25.5	-	-	30.2	-	
HCM Lane LOS	D	-	-	D	-	
HCM 95th %tile Q(veh)	0.1	-	-	5.2	-	

HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	5.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	47	76	38	304	116	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	47	76	38	304	116	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	208	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	170	-
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	1572	-	-	0	780	1034
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	-	756	1034
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	833	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.8		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	756	1034	1572	-	-	
HCM Lane V/C Ratio	0.153	0.011	0.03	-	-	
HCM Control Delay (s)	10.6	8.5	7.4	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	0.5	0	0.1	-	-	

HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	264	68	74	171	39	123	1194	175	53	706	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	241	264	68	74	171	39	123	1194	175	53	706	149
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	295	310	263	80	184	42	153	1443	211	68	1478	661
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.47	0.47	0.04	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	468	1081	247	1774	3100	453	1774	3539	1583
Grp Volume(v), veh/h	241	264	68	284	0	0	123	680	689	53	706	149
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1796	0	0	1774	1770	1783	1774	1770	1583
Q Serve(g_s), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	33.3	33.7	3.0	14.5	6.0
Cycle Q Clear(g_c), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	33.3	33.7	3.0	14.5	6.0
Prop In Lane	1.00		1.00	0.26		0.14	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	295	310	263	305	0	0	153	824	830	68	1478	661
V/C Ratio(X)	0.82	0.85	0.26	0.93	0.00	0.00	0.80	0.82	0.83	0.78	0.48	0.23
Avail Cap(c_a), veh/h	337	354	301	305	0	0	231	824	830	71	1478	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	40.5	36.3	40.9	0.0	0.0	44.9	23.2	23.3	47.7	21.2	18.7
Incr Delay (d2), s/veh	13.0	16.2	0.5	33.8	0.0	0.0	11.5	9.2	9.5	40.5	1.1	0.8
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(-26165%),veh/ln	7.5	8.5	1.7	10.6	0.0	0.0	3.8	18.3	18.7	2.2	7.3	2.8
LnGrp Delay(d),s/veh	53.3	56.7	36.8	74.7	0.0	0.0	56.4	32.4	32.8	88.2	22.3	19.5
LnGrp LOS	D	E	D	E			E	C	C	F	C	B
Approach Vol, veh/h	573			284			1492			908		
Approach Delay, s/veh	52.9			74.7			34.5			25.7		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	50.6		20.6	12.6	45.8		21.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	44.0		19.0	13.0	35.0		17.0				
Max Q Clear Time (g_c+I1), s	5.0	35.7		15.8	8.8	16.5		17.6				
Green Ext Time (p_c), s	0.0	7.0		0.9	0.1	13.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	38.8											
HCM 2010 LOS	D											

PM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh		295.9									
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	108	0	894	26	0	612	258	511	18	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	108	0	894	26	0	612	258	511	18	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	1209	447	612	0	0	894	0	0	1059	306	
Stage 1	894	-	-	-	-	-	-	-	612	-	
Stage 2	315	-	-	-	-	-	-	-	447	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	139	559	963	-	-	755	-	0	~ 179	690	
Stage 1	302	-	-	-	-	-	-	0	~ 447	-	
Stage 2	671	-	-	-	-	-	-	0	560	-	
Platoon blocked, %			-	-	-			-			
Mov Cap-1 Maneuver	123	559	963	-	-	755	-	-	~ 144	690	
Mov Cap-2 Maneuver	123	-	-	-	-	-	-	-	~ 144	-	
Stage 1	302	-	-	-	-	-	-	-	~ 447	-	
Stage 2	646	-	-	-	-	-	-	-	~ 452	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	13	0			0			\$ 1210.7			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBRWBLn1	SBL	SBT				
Capacity (veh/h)	144	-	963	-	-	559	755	-			
HCM Lane V/C Ratio	3.549	-	-	-	-	0.193	-	-			
HCM Control Delay (s)	\$ 1210.7	0	0	-	-	13	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	49.7	-	0	-	-	0.7	0	-			
Notes											
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon											

PM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	62	244	170	38	223	3	206	487	102	9	236	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	244	170	38	223	3	206	487	102	9	236	45
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	579	327	278	560	589	8	283	992	207	16	793	149
Arrive On Green	0.33	0.18	0.18	0.32	0.16	0.16	0.08	0.34	0.34	0.01	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	1774	3576	48	3442	2917	608	1774	2975	558
Grp Volume(v), veh/h	62	244	170	38	110	116	206	294	295	9	139	142
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1854	1721	1770	1756	1774	1770	1764
Q Serve(g_s), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	13.2	13.3	0.5	6.2	6.4
Cycle Q Clear(g_c), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	13.2	13.3	0.5	6.2	6.4
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.35	1.00		0.32
Lane Grp Cap(c), veh/h	579	327	278	560	291	305	283	602	597	16	472	470
V/C Ratio(X)	0.11	0.75	0.61	0.07	0.38	0.38	0.73	0.49	0.49	0.57	0.29	0.30
Avail Cap(c_a), veh/h	579	596	507	560	495	519	551	602	597	106	472	470
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	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	39.1	38.1	23.9	37.2	37.2	44.8	26.1	26.2	49.4	29.2	29.2
Incr Delay (d2), s/veh	0.1	3.4	2.2	0.1	0.8	0.8	2.6	2.1	2.1	28.9	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.2	6.7	4.5	0.7	2.8	2.9	2.9	6.7	6.8	0.4	3.3	3.3
LnGrp Delay(d),s/veh	23.6	42.5	40.2	24.0	38.0	38.0	47.4	28.2	28.3	78.3	30.8	30.9
LnGrp LOS	C	D	D	C	D	D	D	C	C	E	C	C
Approach Vol, veh/h	476			264			795			290		
Approach Delay, s/veh	39.2			36.0			33.2			32.3		
Approach LOS	D			D			C			C		
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	4.9	38.0	35.6	21.6	12.2	30.7	36.7	20.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	34.0	12.0	32.0	16.0	24.0	16.0	28.0				
Max Q Clear Time (g_c+I1), s	2.5	15.3	3.5	14.4	7.8	8.4	4.4	7.6				
Green Ext Time (p_c), s	0.0	5.2	0.0	3.1	0.4	4.8	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay	35.0											
HCM 2010 LOS	D											

HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	103	73	103	14	47	49	204	636	36	30	418	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	103	73	103	14	47	49	204	636	36	30	418	52
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	220	311	23	449	402	239	913	776	40	1197	148
Arrive On Green	0.07	0.31	0.31	0.01	0.25	0.25	0.13	0.49	0.49	0.02	0.38	0.38
Sat Flow, veh/h	1774	700	988	1774	1770	1583	1774	1863	1583	1774	3171	392
Grp Volume(v), veh/h	103	0	176	14	47	49	204	636	36	30	232	238
Grp Sat Flow(s),veh/h/ln	1774	0	1688	1774	1770	1583	1774	1863	1583	1774	1770	1794
Q Serve(g_s), s	5.7	0.0	8.0	0.8	2.0	2.4	11.2	26.4	1.2	1.7	9.4	9.5
Cycle Q Clear(g_c), s	5.7	0.0	8.0	0.8	2.0	2.4	11.2	26.4	1.2	1.7	9.4	9.5
Prop In Lane	1.00		0.59	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	130	0	531	23	449	402	239	913	776	40	668	677
V/C Ratio(X)	0.79	0.00	0.33	0.61	0.10	0.12	0.85	0.70	0.05	0.75	0.35	0.35
Avail Cap(c_a), veh/h	213	0	531	71	449	402	355	913	776	106	668	677
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	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	45.6	0.0	26.2	49.1	28.6	28.7	42.3	19.7	13.3	48.6	22.3	22.3
Incr Delay (d2), s/veh	10.2	0.0	1.7	23.7	0.5	0.6	12.2	4.4	0.1	23.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	4.0	0.5	1.1	1.1	6.3	14.5	0.5	1.1	4.8	5.0	5.0
LnGrp Delay(d),s/veh	55.7	0.0	27.9	72.8	29.1	29.3	54.5	24.1	13.4	71.8	23.7	23.7
LnGrp LOS	E	C	E	C	C	C	D	C	B	E	C	C
Approach Vol, veh/h	279			110			876			500		
Approach Delay, s/veh	38.2			34.7			30.8			26.6		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s6.3	53.0	5.3	35.4	17.5	41.8	11.3	29.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	4.0	4.0	25.0	20.0	35.0	12.0	17.0					
Max Q Clear Time (g_c+I1), s	2.8	2.8	10.0	13.2	11.5	7.7	4.4					
Green Ext Time (p_c), s	0.0	7.6	0.0	1.4	0.3	8.0	0.1	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay	31.0											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

								
Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	149	812	503	49	86	224		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	149	812	503	49	86	224		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	181	2230	1591	155	514	459		
Arrive On Green	0.20	1.00	0.49	0.49	0.29	0.29		
Sat Flow, veh/h	1774	3632	3353	317	1774	1583		
Grp Volume(v), veh/h	149	812	272	280	86	224		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1807	1774	1583		
Q Serve(g_s), s	8.0	0.0	9.3	9.4	3.6	11.7		
Cycle Q Clear(g_c), s	8.0	0.0	9.3	9.4	3.6	11.7		
Prop In Lane	1.00			0.18	1.00	1.00		
Lane Grp Cap(c), veh/h	181	2230	864	882	514	459		
V/C Ratio(X)	0.82	0.36	0.32	0.32	0.17	0.49		
Avail Cap(c_a), veh/h	426	2230	864	882	514	459		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.91	0.91	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.0	0.0	15.5	15.5	26.5	29.4		
Incr Delay (d2), s/veh	8.4	0.4	1.0	0.9	0.7	3.7		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%), veh/ln	0.1	4.8	4.9	1.9	11.0			
LnGrp Delay(d),s/veh	47.3	0.4	16.4	16.4	27.2	33.0		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	961	552		310				
Approach Delay, s/veh	7.7	16.4		31.4				
Approach LOS	A	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		33.0	14.2	52.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		29.0	24.0	35.0
Max Q Clear Time (g_c+I1), s				2.0		13.7	10.0	11.4
Green Ext Time (p_c), s				13.1		0.9	0.3	10.1
Intersection Summary								
HCM 2010 Ctrl Delay	14.4							
HCM 2010 LOS	B							

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations								
Volume (veh/h)	816	551	145	602	403	131		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	816	0	145	602	403	131		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2245	1005	175	2737	505	232		
Arrive On Green	0.21	0.00	0.20	1.00	0.15	0.15		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	816	0	145	602	403	131		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	19.7	0.0	7.8	0.0	11.3	7.7		
Cycle Q Clear(g_c), s	19.7	0.0	7.8	0.0	11.3	7.7		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2245	1005	175	2737	505	232		
V/C Ratio(X)	0.36	0.00	0.83	0.22	0.80	0.56		
Avail Cap(c_a), veh/h	2245	1005	337	2737	757	348		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.85	0.00	0.94	0.94	1.00	1.00		
Uniform Delay (d), s/veh	22.3	0.0	39.3	0.0	41.2	39.7		
Incr Delay (d2), s/veh	0.4	0.0	8.9	0.2	3.6	2.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	4.2	0.1	5.6	3.5		
LnGrp Delay(d),s/veh	22.6	0.0	48.2	0.2	44.9	41.8		
LnGrp LOS	C		D	A	D	D		
Approach Vol, veh/h	816			747	534			
Approach Delay, s/veh	22.6			9.5	44.1			
Approach LOS	C			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.7	13.9	67.4				81.3
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		22.0	19.0	47.0				70.0
Max Q Clear Time (g_c+I1), s		13.3	9.8	21.7				2.0
Green Ext Time (p_c), s		1.3	0.2	11.4				15.0
Intersection Summary								
HCM 2010 Ctrl Delay			23.4					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	303	965	357	168	523	283	260	642	140	257	382	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	303	965	357	168	523	283	260	642	140	257	382	82
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	392	1957	875	300	1957	875	629	1300	581	447	1067	227
Arrive On Green	1.00	1.00	1.00	0.55	0.55	0.55	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	673	3539	1583	413	3539	1583	1794	3539	1583	1335	2906	618
Grp Volume(v), veh/h	303	965	357	168	523	283	260	642	140	257	231	233
Grp Sat Flow(s), veh/h/ln	673	1770	1583	413	1770	1583	897	1770	1583	668	1770	1754
Q Serve(g_s), s	34.0	0.0	0.0	30.6	7.8	9.7	12.4	14.0	6.1	18.4	9.5	9.7
Cycle Q Clear(g_c), s	41.7	0.0	0.0	30.6	7.8	9.7	22.1	14.0	6.1	32.4	9.5	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	392	1957	875	300	1957	875	629	1300	581	447	650	644
V/C Ratio(X)	0.77	0.49	0.41	0.56	0.27	0.32	0.41	0.49	0.24	0.57	0.36	0.36
Avail Cap(c_a), veh/h	403	2017	902	308	2017	902	629	1300	581	447	650	644
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.9	0.0	0.0	16.8	11.7	12.2	31.1	24.5	22.0	37.0	23.0	23.1
Incr Delay (d2), s/veh	8.8	0.2	0.3	2.0	0.1	0.2	2.0	1.3	1.0	5.3	1.5	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(26165%), veh/ln	0.1	0.1	0.1	3.6	3.8	4.3	3.2	7.1	2.8	3.7	4.9	4.9
LnGrp Delay(d), s/veh	11.7	0.2	0.3	18.9	11.8	12.4	33.1	25.8	22.9	42.3	24.6	24.7
LnGrp LOS	B	A	A	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h	1625			974			1042			721		
Approach Delay, s/veh	2.4			13.2			27.2			30.9		
Approach LOS	A			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	40.7		59.3		40.7		59.3					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	35.0		57.0		35.0		57.0					
Max Q Clear Time (g_c+I1), s	24.1		43.7		34.4		32.6					
Green Ext Time (p_c), s	7.8		11.5		0.5		19.5					
Intersection Summary												
HCM 2010 Ctrl Delay	15.4											
HCM 2010 LOS	B											

HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	1631	0	0	853	7	0	0	0	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	2	1631	0	0	853	7	0	0	0	0	0	8
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	860	0	0	1631	0	0	1677	2492	430			
Stage 1	-	-	-	-	-	-	857	857	-			
Stage 2	-	-	-	-	-	-	820	1635	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	777	-	-	394	-	-	86	29	573			
Stage 1	-	-	-	-	-	-	376	372	-			
Stage 2	-	-	-	-	-	-	393	157	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	777	-	-	394	-	-	86	0	573			
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	0	-			
Stage 1	-	-	-	-	-	-	376	0	-			
Stage 2	-	-	-	-	-	-	392	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0			0			11.4					
HCM LOS	B											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	777	-	-	394	-	-	573					
HCM Lane V/C Ratio	0.003	-	-	-	-	-	0.014					
HCM Control Delay (s)	9.6	-	-	0	-	-	11.4					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	1284	764	84	771	32	325		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1284	0	84	771	32	325		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2230	997	293	2230	514	459		
Arrive On Green	0.84	0.00	0.21	0.21	0.29	0.29		
Sat Flow, veh/h	3632	1583	429	3632	1774	1583		
Grp Volume(v), veh/h	1284	0	84	771	32	325		
Grp Sat Flow(s),veh/h/ln	1770	1583	429	1770	1774	1583		
Q Serve(g_s), s	11.4	0.0	17.4	18.6	1.3	18.3		
Cycle Q Clear(g_c), s	11.4	0.0	28.7	18.6	1.3	18.3		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2230	997	293	2230	514	459		
V/C Ratio(X)	0.58	0.00	0.29	0.35	0.06	0.71		
Avail Cap(c_a), veh/h	2230	997	293	2230	514	459		
HCM Platoon Ratio	1.33	1.33	0.33	0.33	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	3.9	0.0	31.1	22.0	25.7	31.7		
Incr Delay (d2), s/veh	1.1	0.0	2.4	0.4	0.2	8.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	5.6	0.0	2.3	9.2	0.7	9.2		
LnGrp Delay(d),s/veh	5.0	0.0	33.5	22.4	25.9	40.6		
LnGrp LOS	A		C	C	C	D		
Approach Vol, veh/h	1284			855	357			
Approach Delay, s/veh	5.0			23.5	39.3			
Approach LOS	A			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		33.0		67.0				67.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		29.0		63.0				63.0
Max Q Clear Time (g_c+I1), s		20.3		13.4				30.7
Green Ext Time (p_c), s		0.8		28.6				21.9
Intersection Summary								
HCM 2010 Ctrl Delay			16.3					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	1852	121	53	614	52	108	41	122	45	33	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	1852	121	53	614	52	108	41	122	45	33	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	77	2681	175	68	1798	152	136	91	271	57	327	278
Arrive On Green	0.04	0.55	0.55	0.05	0.72	0.72	0.08	0.22	0.22	0.03	0.18	0.18
Sat Flow, veh/h	1774	4879	318	1774	3304	279	1774	414	1232	1774	1863	1583
Grp Volume(v), veh/h	60	1285	688	53	328	338	108	0	163	45	33	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1807	1774	1770	1813	1774	0	1645	1774	1863	1583
Q Serve(g_s), s	3.3	27.5	27.7	3.0	6.8	6.8	6.0	0.0	8.6	2.5	1.5	1.6
Cycle Q Clear(g_c), s	3.3	27.5	27.7	3.0	6.8	6.8	6.0	0.0	8.6	2.5	1.5	1.6
Prop In Lane	1.00		0.18	1.00		0.15	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	77	1863	993	68	963	987	136	0	362	57	327	278
V/C Ratio(X)	0.78	0.69	0.69	0.78	0.34	0.34	0.79	0.00	0.45	0.79	0.10	0.11
Avail Cap(c_a), veh/h	160	1863	993	124	963	987	213	0	362	106	327	278
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	16.3	16.4	47.0	7.2	7.2	45.4	0.0	33.8	48.0	34.6	34.6
Incr Delay (d2), s/veh	15.1	2.1	4.0	17.3	1.0	0.9	10.5	0.0	4.0	20.5	0.6	0.8
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(-26165%),veh/ln	13.4	14.8	1.8	3.6	3.6	3.3	0.0	4.3	1.6	0.8	0.8	0.8
LnGrp Delay(d),s/veh	62.4	18.5	20.4	64.4	8.2	8.2	55.9	0.0	37.8	68.5	35.2	35.4
LnGrp LOS	E	B	C	E	A	A	E		D	E	D	D
Approach Vol, veh/h		2033			719			271			108	
Approach Delay, s/veh		20.4			12.3			45.0			49.2	
Approach LOS		C			B			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), s7.2	26.0	7.8	58.9	11.7	21.6	8.4	58.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	22.0	7.0	49.0	12.0	16.0	9.0	47.0					
Max Q Clear Time (g_c+I1), s	10.6	5.0	29.7	8.0	3.6	5.3	8.8					
Green Ext Time (p_c), s	0.0	0.9	0.0	16.3	0.1	0.9	0.0	28.3				
Intersection Summary												
HCM 2010 Ctrl Delay					21.7							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↖		↗	↔		
Volume (veh/h)	3	1804	35	71	689	2	108	0	208	3	1	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	0	1863	1900	1863	1900
Adj Flow Rate, veh/h	3	1804	35	71	689	2	108	0	208	3	1	3
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2	2	2	2
Cap, veh/h	0	2380	46	0	2425	7	89	0	0	0	66	197
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.05	0.00	0.00	0.25	0.16	0.16
Sat Flow, veh/h	0	3551	69	0	3620	11	1774	108	0	411	1234	
Grp Volume(v), veh/h	0	897	942	0	337	354	108	212.7	0	0	4	
Grp Sat Flow(s), veh/h/ln	0	1770	1851	0	1770	1861	1774	F	0	0	1645	
Q Serve(g_s), s	0.0	33.9	34.2	0.0	7.8	7.8	5.0		0.0	0.0	0.2	
Cycle Q Clear(g_c), s	0.0	33.9	34.2	0.0	7.8	7.8	5.0		0.0	0.0	0.2	
Prop In Lane	0.00		0.04	0.00		0.01	1.00		0.00		0.75	
Lane Grp Cap(c), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
V/C Ratio(X)	0.00	0.76	0.76	0.00	0.28	0.28	1.22		0.00	0.00	0.02	
Avail Cap(c_a), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00		0.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	11.0	11.1	0.0	6.7	6.7	47.5		0.0	0.0	35.4	
Incr Delay (d2), s/veh	0.0	4.5	4.4	0.0	0.6	0.6	165.2		0.0	0.0	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(-26165%),veh/ln	17.7	18.8	0.0	3.9	4.1	6.5			0.0	0.0	0.1	
LnGrp Delay(d),s/veh	0.0	15.6	15.5	0.0	7.3	7.3	212.7		0.0	0.0	35.5	
LnGrp LOS	B			A			F				D	
Approach Vol, veh/h	1839			691						4		
Approach Delay, s/veh	15.5			7.3						35.5		
Approach LOS	B			A						D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0		0.0	71.0	9.0	20.0	0.0	71.0				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	4.0		4.0	59.0	5.0	16.0	4.0	59.0				
Max Q Clear Time (g_c+10), s	0.0		0.0	36.2	7.0	2.2	0.0	9.8				
Green Ext Time (p_c), s	0.0		0.0	18.7	0.0	0.0	0.0	33.8				
Intersection Summary												
HCM 2010 Ctrl Delay	21.5											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↖	↗		↖	↗		↖	↗
Volume (veh/h)	0	0	0	367	4	21	396	155	0	0	71	157
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				367	4	21	396	155	0	0	71	157
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				413	4	372	627	245	0	0	83	183
Arrive On Green				0.24	0.24	0.24	0.81	0.81	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1756	19	1583	1292	506	0	0	517	1144
Grp Volume(v), veh/h				371	0	21	551	0	0	0	0	228
Grp Sat Flow(s), veh/h/ln				1775	0	1583	1798	0	0	0	0	1661
Q Serve(g_s), s				20.2	0.0	1.0	11.9	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				20.2	0.0	1.0	11.9	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.99		1.00	0.72		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				417	0	372	872	0	0	0	0	266
V/C Ratio(X)				0.89	0.00	0.06	0.63	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				515	0	459	872	0	0	0	0	266
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				37.0	0.0	29.6	6.0	0.0	0.0	0.0	0.0	40.9
Incr Delay (d2), s/veh				14.9	0.0	0.1	3.5	0.0	0.0	0.0	0.0	28.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				11.6	0.0	0.5	6.4	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh				51.9	0.0	29.7	9.5	0.0	0.0	0.0	0.0	69.2
LnGrp LOS				D		C	A				E	
Approach Vol, veh/h				392			551			228		
Approach Delay, s/veh				50.7			9.5			69.2		
Approach LOS				D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		52.5				20.0		27.5				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				16.0		29.0				
Max Q Clear Time (g_c+10), s		13.9				15.4		22.2				
Green Ext Time (p_c), s		4.1				0.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	34.9											
HCM 2010 LOS	C											

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	13	297	0	0	0	0	453	794	10	423	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	57	13	297	0	0	0	0	453	794	10	423	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	896	896	423	423	0	0	453	0	0	-	-	-
Stage 1	443	443	-	-	-	-	-	-	-	-	-	-
Stage 2	453	453	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	311	280	631	1136	-	-	1108	-	-	-	-	-
Stage 1	647	576	-	-	-	-	-	-	-	-	-	-
Stage 2	640	570	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	307	0	631	1136	-	-	1108	-	-	-	-	-
Mov Cap-2 Maneuver	430	0	-	-	-	-	-	-	-	-	-	-
Stage 1	639	0	-	-	-	-	-	-	-	-	-	-
Stage 2	640	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	15.6	-	-	0	-	-	0.2	-	-	-	-	-
HCM LOS	C	-	-	-	-	-	-	-	-	-	-	-
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1136	-	-	430	631	1108	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	0.163	0.471	0.009	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	15	15.7	8.3	0	-	-	-	-	-
HCM Lane LOS	A	-	-	C	C	A	A	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.5	0	-	-	-	-	-	-

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	125	233	165	238	362	178	220	927	182	172	596	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	125	233	165	238	362	178	220	927	182	172	596	62
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	155	484	217	270	714	320	256	1287	252	204	1316	137
Arrive On Green	0.09	0.14	0.14	0.15	0.20	0.20	0.14	0.44	0.44	0.11	0.41	0.41
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2951	579	1774	3237	336
Grp Volume(v), veh/h	125	233	165	238	362	178	220	556	553	172	325	333
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1761	1774	1770	1803
Q Serve(g_s), s	6.9	6.1	10.0	13.1	9.1	10.1	12.1	25.8	25.9	9.5	13.4	13.4
Cycle Q Clear(g_c), s	6.9	6.1	10.0	13.1	9.1	10.1	12.1	25.8	25.9	9.5	13.4	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.19
Lane Grp Cap(c), veh/h	155	484	217	270	714	320	256	772	768	204	719	733
V/C Ratio(X)	0.81	0.48	0.76	0.88	0.51	0.56	0.86	0.72	0.72	0.85	0.45	0.45
Avail Cap(c_a), veh/h	231	566	253	302	714	320	373	772	768	231	719	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	39.9	41.6	41.5	35.5	35.9	41.8	23.2	23.2	43.4	21.6	21.6
Incr Delay (d2), s/veh	12.0	0.7	10.9	22.9	0.6	2.1	12.8	5.7	5.8	22.0	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.9	3.0	5.0	8.1	4.5	4.6	6.8	13.7	13.7	5.9	6.9	7.1
LnGrp Delay(d),s/veh	56.8	40.6	52.5	64.4	36.1	38.0	54.6	28.9	29.0	65.4	23.6	23.6
LnGrp LOS	E	D	D	E	D	D	D	C	C	E	C	C
Approach Vol, veh/h	523			778			1329			830		
Approach Delay, s/veh	48.2			45.2			33.2			32.3		
Approach LOS	D			D			C			C		
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	15.5	47.6	19.2	17.7	18.4	44.7	12.7	24.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	38.0	17.0	16.0	21.0	30.0	13.0	20.0				
Max Q Clear Time (g_c+1), s	11.5	27.9	15.1	12.0	14.1	15.4	8.9	12.1				
Green Ext Time (p_c), s	0.1	7.3	0.1	1.6	0.3	9.6	0.1	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay	38.0											
HCM 2010 LOS	D											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	197	713		5	6	1027	632	6	38	6	271	36	143
Number	7	4		14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863	
Adj Flow Rate, veh/h	197	713		5	6	1027	632	6	38	6	271	36	143
Adj No. of Lanes	1	2		0	1	2	1	1	1	0	2	1	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	232	1890		13	11	1416	633	11	549	87	942	565	480
Arrive On Green	0.13	0.52		0.52	0.01	0.40	0.40	0.01	0.35	0.35	0.30	0.30	0.30
Sat Flow, veh/h	1774	3603		25	1774	3539	1583	1774	1571	248	2632	1863	1583
Grp Volume(v), veh/h	197	350		368	6	1027	632	6	0	44	271	36	143
Grp Sat Flow(s), veh/h/ln	1774	1770		1858	1774	1770	1583	1774	0	1819	1316	1863	1583
Q Serve(g_s), s	10.9	11.7		11.7	0.3	24.5	39.9	0.3	0.0	1.6	8.0	1.4	6.9
Cycle Q Clear(g_c), s	10.9	11.7		11.7	0.3	24.5	39.9	0.3	0.0	1.6	8.0	1.4	6.9
Prop In Lane	1.00			0.01	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	232	928		975	11	1416	633	11	0	635	942	565	480
V/C Ratio(X)	0.85	0.38		0.38	0.55	0.73	1.00	0.55	0.00	0.07	0.29	0.06	0.30
Avail Cap(c_a), veh/h	337	973		1022	71	1416	633	71	0	635	942	565	480
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	14.1		14.1	49.6	25.4	30.0	49.6	0.0	21.7	27.1	24.8	26.7
Incr Delay (d2), s/veh	12.8	0.3		0.2	37.0	1.9	35.2	37.0	0.0	0.2	0.8	0.2	1.6
Initial Q Delay(d3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	5.8			6.1	0.3	12.4	23.6	0.3	0.0	0.8	3.0	0.7	3.2
LnGrp Delay(d), s/veh	55.3	14.3		14.3	86.6	27.2	65.2	86.6	0.0	21.9	27.8	25.0	28.3
LnGrp LOS	E	B		B	F	C	E	F		C	C	C	C
Approach Vol, veh/h	915			1665			50			450			
Approach Delay, s/veh	23.2			41.8			29.7			27.7			
Approach LOS	C			D			C			C			
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	38.9	4.6	56.5	4.6	34.3	17.1	44.0						
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0						
Max Green Setting (Gmax), s	29.0	4.0	55.0	4.0	21.0	19.0	40.0						
Max Q Clear Time (g_c+I1), s	3.6	2.3	13.7	2.3	10.0	12.9	41.9						
Green Ext Time (p_c), s	2.0	0.0	23.2	0.0	1.5	0.3	0.0						
Intersection Summary													
HCM 2010 Ctrl Delay	34.0												
HCM 2010 LOS	C												

HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1991	60	101	709	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1991	60	101	709	3	29
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	2051	0	2578	1026
Stage 1	-	-	-	-	2021	-
Stage 2	-	-	-	-	557	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	118	-	31	199
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	118	-	4	199
Mov Cap-2 Maneuver	-	-	-	-	31	-
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	75	-
Approach						
	EB		WB		NB	
HCM Control Delay, s	0		14.5		40.8	
HCM LOS	C		E		E	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	132	-	-	118	-	
HCM Lane V/C Ratio	0.242	-	-	0.856	-	
HCM Control Delay (s)	40.8	-	-	116.2	-	
HCM Lane LOS	E	-	-	F	-	
HCM 95th %tile Q(veh)	0.9	-	-	5.2	-	

HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	7.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	55	101	89	752	251	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	55	101	89	752	251	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	300	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	211	-
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	1506	-	-	0	691	969
Stage 1	-	-	-	0	934	-
Stage 2	-	-	-	0	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	664	969
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	792	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.6		0		13.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	664	969	1506	-	-	
HCM Lane V/C Ratio	0.378	0.011	0.037	-	-	
HCM Control Delay (s)	13.7	8.8	7.5	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	1.8	0	0.1	-	-	

APPENDIX G

**PROJECT DRIVEWAYS QUEUING AND LEVEL OF SERVICE
WORKSHEETS**

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HCM 2010 TWSC

101: Project Driveway North & Del Monte Blvd

10/30/2014

Intersection							
Int Delay, s/veh	0.1						
Movement	EBT	EBR	WBL	WBT	NWL	NWR	
Vol, veh/h	684	0	11	1323	1	0	
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	0	
Veh in Median Storage, #	0	-	-	0	1	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	684	0	11	1323	1	0	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	684	0	1368	342	
Stage 1	-	-	-	-	684	-	
Stage 2	-	-	-	-	684	-	
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	-	-	905	-	138	654	
Stage 1	-	-	-	-	462	-	
Stage 2	-	-	-	-	462	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	905	-	136	654	
Mov Cap-2 Maneuver	-	-	-	-	272	-	
Stage 1	-	-	-	-	462	-	
Stage 2	-	-	-	-	466	-	
Approach	EB		WB		NW		
HCM Control Delay, s	0		0.1		18.3		
HCM LOS					C		
Minor Lane/Major Mvmt	NWLn1	NWLn2	EBT	EBR	WBL	WBT	
Capacity (veh/h)	272	-	-	-	905	-	
HCM Lane V/C Ratio	0.004	-	-	-	0.012	-	
HCM Control Delay (s)	18.3	0	-	-	9	-	
HCM Lane LOS	C	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	-	0	-	

HCM 2010 TWSC

102: Project Driveway South & Del Monte Blvd

10/30/2014

Intersection							
Int Delay, s/veh	0						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Vol, veh/h	682	8	0	1324	0	2	
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	682	8	0	1324	0	2	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	690	0	1348	345	
Stage 1	-	-	-	-	686	-	
Stage 2	-	-	-	-	662	-	
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	-	-	900	-	142	651	
Stage 1	-	-	-	-	461	-	
Stage 2	-	-	-	-	475	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	900	-	142	651	
Mov Cap-2 Maneuver	-	-	-	-	142	-	
Stage 1	-	-	-	-	461	-	
Stage 2	-	-	-	-	475	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0		10.5		
HCM LOS					B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	651	-	-	900	-		
HCM Lane V/C Ratio	0.003	-	-	-	-		
HCM Control Delay (s)	10.5	-	-	0	-		
HCM Lane LOS	B	-	-	A	-		
HCM 95th %tile Q(veh)	0	-	-	0	-		

HCM 2010 TWSC

101: Project Driveway North & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1606	0	50	801	27	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	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1606	0	50	801	27	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1606	0	2107	803
Stage 1	-	-	-	-	1606	-
Stage 2	-	-	-	-	501	-
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	-	-	403	-	44	326
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	403	-	39	326
Mov Cap-2 Maneuver	-	-	-	-	117	-
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	503	-
Approach	EB		WB		NW	
HCM Control Delay, s	0		0.9		36.1	
HCM LOS					E	
Minor Lane/Major Mvmt	NWLn1	NWLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	117	326	-	-	403	-
HCM Lane V/C Ratio	0.231	0.037	-	-	0.124	-
HCM Control Delay (s)	44.8	16.5	-	-	15.2	-
HCM Lane LOS	E	C	-	-	C	-
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.4	-

HCM 2010 TWSC

102: Project Driveway South & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1555	33	0	828	0	51
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	1555	33	0	828	0	51
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1588	0	1986	794
Stage 1	-	-	-	-	1572	-
Stage 2	-	-	-	-	414	-
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	-	-	410	-	53	331
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	410	-	53	331
Mov Cap-2 Maneuver	-	-	-	-	53	-
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	635	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		17.8	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	331	-	-	410	-	
HCM Lane V/C Ratio	0.154	-	-	-	-	
HCM Control Delay (s)	17.8	-	-	0	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0.5	-	-	0	-	

HCM 2010 TWSC

101: Project Driveway North & Del Monte Blvd

10/30/2014

Intersection							
Int Delay, s/veh	0.1						
Movement	EBT	EBR	WBL	WBT	NWL	NWR	
Vol, veh/h	721	0	11	1356	1	0	
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	0	
Veh in Median Storage, #	0	-	-	0	1	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	721	0	11	1356	1	0	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	721	0	1421	361	
Stage 1	-	-	-	-	721	-	
Stage 2	-	-	-	-	700	-	
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	-	-	877	-	127	636	
Stage 1	-	-	-	-	443	-	
Stage 2	-	-	-	-	454	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	877	-	125	636	
Mov Cap-2 Maneuver	-	-	-	-	260	-	
Stage 1	-	-	-	-	443	-	
Stage 2	-	-	-	-	448	-	
Approach	EB		WB		NW		
HCM Control Delay, s	0		0.1		18.9		
HCM LOS					C		
Minor Lane/Major Mvmt	NWLn1	NWLn2	EBT	EBR	WBL	WBT	
Capacity (veh/h)	260	-	-	-	877	-	
HCM Lane V/C Ratio	0.004	-	-	-	0.013	-	
HCM Control Delay (s)	18.9	0	-	-	9.2	-	
HCM Lane LOS	C	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	-	0	-	

HCM 2010 TWSC

102: Project Driveway South & Del Monte Blvd

10/30/2014

Intersection							
Int Delay, s/veh	0						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Vol, veh/h	719	8	0	1357	0	2	
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	719	8	0	1357	0	2	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	727	0	1402	364	
Stage 1	-	-	-	-	723	-	
Stage 2	-	-	-	-	679	-	
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	-	-	872	-	131	633	
Stage 1	-	-	-	-	441	-	
Stage 2	-	-	-	-	465	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	872	-	131	633	
Mov Cap-2 Maneuver	-	-	-	-	131	-	
Stage 1	-	-	-	-	441	-	
Stage 2	-	-	-	-	465	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0		10.7		
HCM LOS					B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	633	-	-	872	-		
HCM Lane V/C Ratio	0.003	-	-	-	-		
HCM Control Delay (s)	10.7	-	-	0	-		
HCM Lane LOS	B	-	-	A	-		
HCM 95th %tile Q(veh)	0	-	-	0	-		

HCM 2010 TWSC

101: Project Driveway North & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1682	0	50	874	27	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	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1682	0	50	874	27	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1682	0	2219	841
Stage 1	-	-	-	-	1682	-
Stage 2	-	-	-	-	537	-
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	-	-	377	-	37	308
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	550	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	377	-	32	308
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	477	-
Approach	EB		WB		NW	
HCM Control Delay, s	0		0.9		40	
HCM LOS					E	
Minor Lane/Major Mvmt	NWLn1	NWLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	106	308	-	-	377	-
HCM Lane V/C Ratio	0.255	0.039	-	-	0.133	-
HCM Control Delay (s)	50.2	17.2	-	-	16	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0.5	-

HCM 2010 TWSC

102: Project Driveway South & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1631	33	0	860	0	51
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	1631	33	0	860	0	51
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1664	0	2078	832
Stage 1	-	-	-	-	1648	-
Stage 2	-	-	-	-	430	-
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	-	-	383	-	46	312
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	624	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	383	-	46	312
Mov Cap-2 Maneuver	-	-	-	-	46	-
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	624	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		18.8	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	312	-	-	383	-	
HCM Lane V/C Ratio	0.163	-	-	-	-	
HCM Control Delay (s)	18.8	-	-	0	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0.6	-	-	0	-	

APPENDIX H

MITIGATED LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
2: Del Monte Blvd & Fremont Blvd

10/30/2014

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations	↰	↰			↱			↱	↱	↰		↱
Volume (veh/h)	0	0	177	0	541	50	0	680	630	146	0	21
Number	3	3	18	5	2	12	1	6	16	7	14	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	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	1900	0	1863	1900	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	192	0	588	54	0	739	0	159	0	0
Adj No. of Lanes	1	1	0	0	2	0	0	2	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	251	251	224	0	2553	234	0	2756	2170	0	0	0
Arrive On Green	0.00	0.00	0.14	0.00	0.78	0.78	0.00	0.78	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1774	1583	0	3372	301	0	3632	2787	0		
Grp Volume(v), veh/h	0	0	192	0	317	325	0	739	0	0.0		
Grp Sat Flow(s),veh/h/ln	1774	1774	1583	0	1770	1810	0	1770	1393			
Q Serve(g_s), s	0.0	0.0	11.8	0.0	4.8	4.8	0.0	5.8	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	11.8	0.0	4.8	4.8	0.0	5.8	0.0			
Prop In Lane	1.00	1.00	1.00	0.00		0.17	0.00		1.00			
Lane Grp Cap(c), veh/h	251	251	224	0	1378	1409	0	2756	2170			
V/C Ratio(X)	0.00	0.00	0.86	0.00	0.23	0.23	0.00	0.27	0.00			
Avail Cap(c_a), veh/h	390	390	348	0	1378	1409	0	2756	2170			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	41.9	0.0	3.0	3.0	0.0	3.1	0.0			
Incr Delay (d2), s/veh	0.0	0.0	12.1	0.0	0.4	0.4	0.0	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.9	0.0	2.4	2.5	0.0	2.9	0.0			
LnGrp Delay(d),s/veh	0.0	0.0	54.0	0.0	3.4	3.4	0.0	3.3	0.0			
LnGrp LOS			D		A	A		A				
Approach Vol, veh/h	192	192			642			739				
Approach Delay, s/veh	54.0	54.0			3.4			3.3				
Approach LOS	D	D			A			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		81.9				81.9		18.1				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				43.0		22.0				
Max Q Clear Time (g_c+I1), s		6.8				7.8		13.8				
Green Ext Time (p_c), s		12.0				11.9		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			9.5									
HCM 2010 LOS			A									

Existing AM Plus Project With Mitigation
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
2: Del Monte Blvd & Fremont Blvd

10/30/2014

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations	↰	↰			↱			↱	↱	↰		↱
Volume (veh/h)	0	0	108	0	880	20	0	602	252	501	0	16
Number	3	3	18	5	2	12	1	6	16	7	14	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	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	1900	0	1863	1900	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	117	0	957	22	0	654	0	545	0	0
Adj No. of Lanes	1	1	0	0	2	0	0	2	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	166	166	148	0	2616	60	0	2618	2062	0	0	0
Arrive On Green	0.00	0.00	0.09	0.00	0.74	0.74	0.00	0.74	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1774	1583	0	3630	81	0	3632	2787	0		
Grp Volume(v), veh/h	0	0	117	0	479	500	0	654	0	0.0		
Grp Sat Flow(s),veh/h/ln	1774	1774	1583	0	1770	1848	0	1770	1393			
Q Serve(g_s), s	0.0	0.0	3.5	0.0	4.6	4.6	0.0	2.8	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	3.5	0.0	4.6	4.6	0.0	2.8	0.0			
Prop In Lane	1.00	1.00	1.00	0.00		0.04	0.00		1.00			
Lane Grp Cap(c), veh/h	166	166	148	0	1309	1367	0	2618	2062			
V/C Ratio(X)	0.00	0.00	0.79	0.00	0.37	0.37	0.00	0.25	0.00			
Avail Cap(c_a), veh/h	591	591	528	0	1309	1367	0	2618	2062			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	21.3	0.0	2.2	2.2	0.0	2.0	0.0			
Incr Delay (d2), s/veh	0.0	0.0	9.0	0.0	0.8	0.8	0.0	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.9	0.0	2.4	2.5	0.0	1.4	0.0			
LnGrp Delay(d),s/veh	0.0	0.0	30.3	0.0	3.0	3.0	0.0	2.2	0.0			
LnGrp LOS			C		A	A		A				
Approach Vol, veh/h	117	117			979			654				
Approach Delay, s/veh	30.3	30.3			3.0			2.2				
Approach LOS	C	C			A			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.5				39.5		8.5				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		16.0				16.0		16.0				
Max Q Clear Time (g_c+I1), s		6.6				4.8		5.5				
Green Ext Time (p_c), s		6.5				7.5		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			4.5									
HCM 2010 LOS			A									

Existing PM Plus Project With Mitigation
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
2: Del Monte Blvd & Fremont Blvd

10/30/2014

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations	↰	↰			↱			↱	↱	↰		↱
Volume (veh/h)	0	0	177	0	546	52	0	692	640	149	0	22
Number	3	3	18	5	2	12	1	6	16	7	14	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	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	1900	0	1863	1900	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	192	0	593	57	0	752	0	162	0	0
Adj No. of Lanes	1	1	0	0	2	0	0	2	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	250	250	223	0	2542	244	0	2757	2170	0	0	0
Arrive On Green	0.00	0.00	0.14	0.00	0.78	0.78	0.00	0.78	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1774	1583	0	3357	313	0	3632	2787	0		
Grp Volume(v), veh/h	0	0	192	0	321	329	0	752	0	0.0		
Grp Sat Flow(s),veh/h/ln	1774	1774	1583	0	1770	1807	0	1770	1393			
Q Serve(g_s), s	0.0	0.0	11.9	0.0	4.9	4.9	0.0	6.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	11.9	0.0	4.9	4.9	0.0	6.0	0.0			
Prop In Lane	1.00	1.00	1.00	0.00		0.17	0.00		1.00			
Lane Grp Cap(c), veh/h	250	250	223	0	1378	1408	0	2757	2170			
V/C Ratio(X)	0.00	0.00	0.86	0.00	0.23	0.23	0.00	0.27	0.00			
Avail Cap(c_a), veh/h	373	373	332	0	1378	1408	0	2757	2170			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	42.0	0.0	3.0	3.0	0.0	3.1	0.0			
Incr Delay (d2), s/veh	0.0	0.0	13.7	0.0	0.4	0.4	0.0	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.0	0.0	2.5	2.5	0.0	2.9	0.0			
LnGrp Delay(d),s/veh	0.0	0.0	55.6	0.0	3.4	3.4	0.0	3.3	0.0			
LnGrp LOS			E		A	A		A				
Approach Vol, veh/h	192	192			650			752				
Approach Delay, s/veh	55.6	55.6			3.4			3.3				
Approach LOS	E	E			A			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		81.9				81.9		18.1				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				43.0		21.0				
Max Q Clear Time (g_c+I1), s		6.9				8.0		13.9				
Green Ext Time (p_c), s		12.2				12.1		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			9.7									
HCM 2010 LOS			A									

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HCM 2010 Signalized Intersection Summary
2: Del Monte Blvd & Fremont Blvd

10/30/2014

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations	↰	↰			↱			↱	↱	↰		↱
Volume (veh/h)	0	0	108	0	894	26	0	612	258	511	0	18
Number	3	3	18	5	2	12	1	6	16	7	14	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	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	1900	0	1863	1900	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	117	0	972	28	0	665	0	555	0	0
Adj No. of Lanes	1	1	0	0	2	0	0	2	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	160	160	143	0	2914	84	0	2936	2312	0	0	0
Arrive On Green	0.00	0.00	0.09	0.00	0.83	0.83	0.00	0.83	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1774	1583	0	3606	101	0	3632	2787	0		
Grp Volume(v), veh/h	0	0	117	0	490	510	0	665	0	0.0		
Grp Sat Flow(s),veh/h/ln	1774	1774	1583	0	1770	1845	0	1770	1393			
Q Serve(g_s), s	0.0	0.0	7.3	0.0	6.5	6.5	0.0	3.9	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	7.3	0.0	6.5	6.5	0.0	3.9	0.0			
Prop In Lane	1.00	1.00	1.00	0.00		0.05	0.00		1.00			
Lane Grp Cap(c), veh/h	160	160	143	0	1468	1530	0	2936	2312			
V/C Ratio(X)	0.00	0.00	0.82	0.00	0.33	0.33	0.00	0.23	0.00			
Avail Cap(c_a), veh/h	284	284	253	0	1468	1530	0	2936	2312			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	44.7	0.0	2.0	2.0	0.0	1.8	0.0			
Incr Delay (d2), s/veh	0.0	0.0	10.7	0.0	0.6	0.6	0.0	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.6	0.0	3.4	3.5	0.0	1.9	0.0			
LnGrp Delay(d),s/veh	0.0	0.0	55.4	0.0	2.6	2.6	0.0	2.0	0.0			
LnGrp LOS			E		A	A		A				
Approach Vol, veh/h	117	117			1000			665				
Approach Delay, s/veh	55.4	55.4			2.6			2.0				
Approach LOS	E	E			A			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		87.0				87.0		13.0				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		34.0				34.0		16.0				
Max Q Clear Time (g_c+I1), s		8.5				5.9		9.3				
Green Ext Time (p_c), s		13.1				13.8		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			5.8									
HCM 2010 LOS			A									

Cumulative PM Plus Project With Mitigation
LSA Associates, Inc.

Synchro 8 Report
Page 1

RESOLUTION NO. 15-XX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SEASIDE, STATE OF CALIFORNIA, APPROVING A COASTAL DEVELOPMENT PERMIT TO ALLOW FOR THE CONSTRUCTION OF A 3,750 SQUARE-FOOT RESTAURANT WITH ASSOCIATED SITE IMPROVEMENTS (E.G. PARKING LOT, LANDSCAPING, SIGNS) AT 1350 DEL MONE BOULEVARD IN THE COASTAL VISITOR SERVING COMMERCIAL (CVSC) ZONING DISTRICT.

WHEREAS, In-N-Out Burger, applicant, and the Successor Agency to the Redevelopment Agency of the City of Seaside, property owner, have applied for a Coastal Development Permit for:

1. In accordance with Title 18 (Coastal Implementation Plan) of the Seaside Municipal Code (SMC), the applicant is requesting the approval of a Coastal Development Permit for the construction of a new one story, 3,750 square foot In-N-Out Burger restaurant with associated site improvements (e.g. Drive Through Window/Aisle, Parking Lot, Landscaping, Lighting and Signs) on a 2.19 ac. site at 1350 Del Monte Boulevard (APN: 011-401-023).

WHEREAS, the proposed project requires discretionary approval, and it is the responsibility of the Planning Commission to consider and weigh the merits of the application and public input in relation to the policies, standards and intent of the Seaside General Plan and the Seaside Local Coastal Program, and

WHEREAS, the Seaside Planning Commission considered oral comments and written information concerning the proposed amendment at a duly noticed public hearing at a special public meeting held on March 25, 2015, and

WHEREAS, in accordance with the Guidelines for Implementation of the California Environmental Quality Act (CEQA) (Article 11, Section 15164), an Addendum to the Seaside In-N-Out Restaurant FEIR (Exhibit "A") was prepared to describe minor technical modifications to the Seaside In-N-Out Burger Drive-Through Restaurant Project for which a FEIR was previously certified for a similar In-N-Out project by the City Council on July 21, 2011.

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission adopts the following findings for Coastal Development Application No. CDP-14-01:

1. **The establishment, maintenance, or operation of the use or structure applied for will not under the circumstances of the particular case, be detrimental to health, safety, peace, morals, comfort and general welfare of persons residing or working in the neighborhood of such proposed use, or be detrimental or injurious to property and improvement in the neighborhood, or to the general welfare of the City.**

Evidence: The proposed development would be subject to the regulations set forth in the Seaside General Plan and the Local Coastal Program and would result in an improved site that would enhance the character of the community.

Evidence: A lighting plan has been prepared for the project which demonstrates that all lighting will be directed to the project site and that no lighting greater than one-foot candle will bleed onto an adjoining residential parcel.

Evidence: Prior to the issuance of a building permit, a drainage and erosion control plan will be reviewed and approved by the City of Seaside Resource Management Services Department. The erosion and drainage plan will include, but not be limited to, control of surface runoff, protection of exposed soils, drainage diversion features, or other methods approved by the Resource Management Services Department. Drainage shall be retained on-site and discharge in a manner away from improvements and adjoining properties in accordance with the requirements of the City's National Pollutant Discharge Elimination System Permit (NPDES).

Evidence: In accordance with Mitigation Measure 4.9.2 of the Seaside In-N-Out FEIR, the project site plan will include the construction of a six-foot tall barrier made of CMU block along the entire southwest boundary of the site. The sound wall will protect the residential neighborhood to the south from noise generated by vehicles in the parking lot and drive-through aisle.

Evidence: A sea level rise analysis has been prepared as part of an addendum to the certified FEIR for the In-N-Out Restaurant which demonstrates that the project will not be affected by potential Sea Level Rise for a period between 75-100 years.

Evidence: The following greenhouse gas (GHG) reduction strategies, some of which are required under the CALGreen Building Standards that went into effect on January 1, 2011 (required CALGreen building standards are noted by an asterisk), have been incorporated into the proposed project design to reduce potential GHG emissions associated with construction and operation of the proposed project:

- Use "Green Building Materials," such as those materials that are resource-efficient, and recycled and manufactured in an environmentally friendly way, including low-volatile organic compound (VOC) materials.
- Design all project buildings to exceed the California Building Code's (CBC) Title 24 energy standard, including, but not limited to, the following:
 - o Increase insulation such that heat transfer and thermal bridging are minimized;
 - o Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption; and
 - o Incorporate ENERGY STAR or better rated windows, space heating and cooling equipment, light fixtures, appliances, or other applicable electrical equipment.
- Install water-efficient fixtures and appliances, including low-flow faucets, dual-flush toilets, and waterless urinals.
- Install energy-efficient heating and cooling systems, appliances and equipment, and control systems.
- Provide a landscape and development plan for the proposed project which includes*:
 - o Native drought-tolerant plants;

- o Water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls;*
- o Restricted watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.*
 - Recycle construction waste (including, but not limited to, concrete, lumber, metal, and cardboard).*
 - Provide interior and exterior storage areas for recyclables and green waste for restaurant operational uses, as well as adequate recycling containers located in public areas for restaurant patrons.*
 - Provide employee education about reducing waste and available recycling services.*

Evidence: Access to the project site would be from two driveways along Del Monte Boulevard. The westernmost driveway (next to the City of Monterey boundary) would be a right-in/right-out only and the other would be a full-access driveway. The proposed service area is designed to provide a one-way counterclockwise traffic movement around the project site. The drive-through service area, which is located on the east-southeast side of the building, would provide one lane of queuing for ordering and food pick-up. Approximately 250 linear feet would be available for queuing of vehicles in the drive-through lane and additional vehicle storage would be available on site in the adjacent parking lot and drive aisles. Proposed vehicle queuing in the drive-through lane would accommodate 14 vehicles from the entry sign, in the west-southwest corner of the project site to the drive-through pick-up window on the east-southeast side of the project site.

Evidence: All necessary utility services (e.g., wastewater, water, and storm water) are located adjacent to the project site; the project would not require the development of new service utility lines. The sanitary sewer line would connect to an existing lift station 30 ft northwest of the northwesterly corner of the site. Water connections (fire and domestic) would be made at the existing main in the on-site public utility easement fronting Del Monte. Storm water runoff from new impervious surfaces would be treated by means of vegetated swales and catch basins with filter inserts before being discharged into the municipal storm drain system on Del Monte Boulevard, which discharges into Laguna Grande Lake. The City requires that post development runoff not exceed predevelopment runoff.

The Monterey Peninsula Water Management District must issue a water permit for any development or redevelopment activity that would involve the connection or modification of a connection to an existing water distribution system, such as the project. Due to below adequate levels of water on the Monterey Peninsula, the Seaside City Council is restricting the allocation of water it has received from the Monterey Peninsula Water Management District to specific high priority economic development projects, such as redevelopment projects like the project. The Monterey Peninsula Water Management District issued a water permit for the project with consent from the Seaside City Council. Water for the project would be supplied by California American Water Company (CAL-AM).

Evidence: The drive-through aisle for the restaurant will provide for a queue of 14 vehicles to ensure that vehicle traffic/circulation on site will not impact nearby roadways.

Additionally, the drive-through lane pick-up window will be placed on the north side of the site so that it would oriented away from the residential neighborhood to the south.

- 2. The subject property is in compliance with all rules and regulations pertaining to zoning, uses, subdivision, and other applicable provisions of Title 18.10 of the Seaside Municipal Code, and any zoning violations have been resolved, including any abatement costs have been paid.**

Evidence: The location, size, and operating characteristics of the project will be compatible with the character of the site, and the land uses and development intended for the surrounding neighborhood by the Seaside General Plan and Local Coastal Program.

Evidence: The subject property consists of an existing 2.19 ac vacant lot. There are no land uses on the subject property which would lead to the establishment of any zoning violations.

- 3. The proposed project conforms to the public access and recreation policies of the Coastal Act.**

Evidence: An existing decomposed granite and partial asphalt pedestrian/bicycle trail borders Laguna Grande Regional Park and Lake and the southeastern project site boundary. The existing trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The project would extend the pedestrian/bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension would be made of decomposed granite. Portions of the existing pedestrian/bicycle trail within the project boundaries that are asphalt would be replaced with decomposed granite so that the pedestrian/bicycle trail would be cohesive throughout the project site. Five benches with trash receptacles would be placed along the pedestrian/bicycle trail- one at the northern edge of the project site where the pedestrian/bicycle trail tees and connects to the restaurant approximately half-way between the wooden pedestrian bridge and Del Monte Boulevard, and the others spaced along the path where the project site terminates at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake (refer to Figure 3, Conceptual Site Plan, in Appendix A).

Evidence: The trail extension would provide pedestrian and bicycle access to the restaurant from Laguna Grande Regional Park and Lake, the adjacent hotel property to the northeast, and Del Monte Boulevard. The trail extension would also provide pedestrian and bicycle access from the restaurant to the trail around Laguna Grande Lake, as well as to the Monterey Bay Coastal Bike Trail, which is located along Del Monte Boulevard and which connects, via Canyon Del Rey Boulevard, to the coastal trail fronting the beach on the north side of SR-1.

4. The proposed development use is in conformance with plans, policies,, and requirements of the certified Local Coastal Program Land Use Plam and complies with all regulations of the Certified Implementation Program.

- a. *The proposed development protects vegetation, natural habitats, and natural resoirces consistent with the LUP.*

Evidence: The previously certified EIR concluded that the proposed project has the potential to temporarily impact special-status species, riparian habitat, federally protected wetlands, and temporarily disturb wildlife movements during construction. Implementation of the proposed project would increase human and vehicular activity at the proposed project site, which would negatively impact wildlife and wildlife habitat. As described in the previously certified EIR, mitigation (including biotic habitat protection, biological monitoring during construction, construction employee education programs, and preconstruction surveys) would reduce these potential impacts to less than significant levels.

Furthermore, the previously certified EIR concluded that the proposed project would not:

- Have a substantial permanent adverse effect on federally protected wetlands or other jurisdictional waters;*
- Conflict with the Conservation/Open Space Element or the City's Tree Ordinance;*
- Conflict with adopted Habitat Conservation Plans or Natural Community Conservation Plans for the proposed project site since none currently exist; or*
- Contribute significantly to cumulative impacts associated with biological resources.*

The previously certified EIR concluded that the proposed project would conflict with the Zoning Code that requires 20 ft setbacks from riparian vegetation; therefore, the previous project required a zoning code amendment. However, the proposed project is consistent with all required setbacks prescribed in the City's 2013 LCP. Therefore, a zoning code amendment is no longer required as part of the proposed project.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, and the removal of two lampposts with double-head lights) would not result in a change to the significance conclusions associated with biological resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified EIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on biological resources, and the mitigation identified in the previously certified EIR remains applicable to the proposed project. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
 - B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
 - C. None of the proposed project changes would significantly affect this environmental resource.
- b. The design, location, size, and operating characteristics of the proposed development is consistent with any applicable design plans and/or area plans incorporated into the LUP.

Evidence: The proposed project will be consistent with the Land Use Plan of the Local Coastal Plan as listed on the Land Use Plan Consistency Checklist provided as Exhibit "B".

Evidence: The proposed project will be consistent with the Coastal Implementation Plan of the Local Coastal Program as listed on the Coastal Implementation Plan Checklist provided as Exhibit "C".

Evidence: The proposed use is consistent with the City's General Plan Policy LU-1.3: The proposed project will enhance the identity of the City with the construction of a new restaurant and associated site improvements (e.g. parking lot, landscaping, lighting, and signs) at the City's southern gateway entrance.

Evidence: The proposed use is consistent with the City's General Plan Policy LU-2.4: The redevelopment of the project site will include the use of quality architectural materials consistent with the development standards outlined in the Coastal Implementation Plan and Section 17.62.030. E of Title 17 of the Seaside Municipal Code.

Evidence: The proposed use is consistent with the City's General Plan Policy LU-4.1: The location of the commercial structure, parking lot, access driveways, landscaping, lighting and signs for the development will not result in any detrimental impact to the health, safety, and general welfare of the community.

Evidence: The proposed use is consistent with the City's General Plan Policy ED-8.1: The proposed project will continue to provide jobs to the local community to improve the jobs/housing ratio.

Evidence: The proposed use is consistent with the City's General Plan Policy C-4.3: The proposed project will include a well-landscaped border on all frontages to screen the parking areas and access drives from the adjoining public streets and neighboring residential dwelling units to the east.

- c. The proposed development maintains public access to and along the coast as set forth in the LUP.

Evidence: Evidence: The proposed project site improvements (e.g. building, parking lot design, parking spaces, public access points through the site to Laguna Grande Lake and Park and signage delineation at public access points for the public, public access pathways and bike trails, landscaping, signs, sound wall, and lighting) will be sited and constructed in accordance with the adopted development standards of the Coastal Implementation Plan for the City's certified Local Coastal Plan.

- d. The proposed development is consistent with the LUP of providing visitor serving needs as appropriate.

Evidence: The proposed project will consist of a visitor serving commercial land use that would be placed an entry way gateway of the City. The project will be designed to provide a quality serving restaurant. The proposed design will incorporate improvements to provide for coastal access to and from Laguna Grande Lake and Park and will provide five parking spaces on-site that would serve as reciprocating parking for lake visitors.

- e. The proposed development is consistent with LUP goal of encouraging costal dependent and related uses as appropriate.

Evidence: The project is zoned as Coastal Visitor Serving Commercial. The project site would be developed with a coastal visitor serving drive-through restaurant to serve the local and regional community. The site will also provide food services for coastal visitors accessing the Seaside State Beach to the west, the Monterey Bay Coastal Bike Trail that crosses in front of the site, and the Laguna Grande Regional Lake and Park.

- f. The proposed development protects and where feasible enhances coastal resources.

Evidence: The granting of a Coastal Development Permit will not create significant noise, limitations on public access to the coastal zone, traffic, visual interference, or other conditions or situations that may be objectionable or detrimental to other permitted uses in the vicinity or adverse to the public interest, health, safety, convenience, or welfare of the City.

Evidence: The proposed project will provide for enhanced connectivity to the Laguna Grande Lake and Park recreational/bike path. The enhanced coastal access will serve to provide a synergy between the adjacent open space and the new commercial development that will benefit the community and region as whole.

5. **The site is physically suitable for the type, density and intensity of use being proposed, including access, utilities, and the absence of physical constraints.**

Evidence: The project site is served by existing water, wastewater, and electrical infrastructure and facilities with adequate capacity to serve the proposed project.

6. **Granting the permit would not be detrimental to the public interest, health, safety, convenience, or welfare, or materially injurious to persons, property, or improvements in the vicinity and zone district in which the property is located.**

Evidence: The project site design And compliance with the adopted Mitigation Measures of the Seaside In-N-Out FEIR will ensure that the proposed development will not create any adverse impact on the health, safety, and general welfare of the community and adjoining neighbors.

BE IT FURTHER RESOLVED, that the Planning Commission approves Coastal Development Permit Application No. CDP-14-01 subject to the following conditions:

Project Specific

Planning:

1. Prior to the issuance of a Grading Permit, the architectural design, outdoor lighting, landscaping, and signage improvements shall be reviewed and approved by the Board of Architectural Review.
2. Except as modified by required conditions of approval, plans submitted for Architectural Review approval shall substantially conform to the plans identified as “Seaside In-N-Out Burger” stamped as received on March 9, 2015 and as approved by the Planning Commission on March 25, 2015. The project plans are provided as Exhibit “D”.
3. Deceased plant materials must be removed and replaced within one month with the same species and size specified in the BAR approved plans.
4. Replacement of an existing mature tree shall be transplanted from a minimum 24-inch box size container.
5. All trees shall be adequately supported when planted. The supports shall be maintained until the trees are capable of withstanding the force of wind on their own and removed before damage could potentially occur to the tree trunk.
6. The property owner shall maintain all landscaping in a healthful and thriving condition at all times and in perpetuity, free of weeds, debris, and deceased plants.

7. Irrigation systems and their components shall be maintained in a fully functional manner consistent with the originally approved design.
8. Regular maintenance shall include checking, adjusting, and repairing irrigation equipment; resetting automatic controllers; aerating and dethatching lawn areas; adding/replenishing mulch, fertilizer, and soil amendments; and mowing, pruning, trimming, and watering all landscaped areas.
9. Watering shall be scheduled at times of minimal wind conflict and evaporation loss.
10. Water waste in existing developments resulting from inefficient landscape irrigation leading to excessive runoff, low head drainage, overspray, and other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures is prohibited.
11. The ground cover and shrubs located within the traffic visibility areas along Del Monte Boulevard must be maintained at a height of 36 inches.
12. Trees located within the traffic visibility areas along Del Monte Boulevard must be trimmed so the bottom of the canopy is maintained a minimum of six feet in height measured from finished grade.
13. Failure to maintain landscape areas in compliance with the Conditions shall be deemed a public nuisance, and shall be subject to abatement in compliance with the Municipal Code, and/or the applicable planning permit may be revoked in compliance with Chapter 17.69 (Enforcement and Penalties).
14. Prior to final inspection or occupancy approval, all required landscaping shall pass an inspection to be performed by the Planning Division.
15. Permanently installed lighting shall not blink, flash, or be of unusually high intensity or brightness. Lighting components must be replaced within two weeks of initial malfunction.
16. The clear glass storefront windows shall not later be treated or so as to become opaque, or to be blocked so as to prevent visibility of the ground floor interior from the sidewalk.
17. The project shall be constructed and operated in compliance with the Mitigation and Monitoring Reporting Program (MMRP) adopted as part of the Final Environmental Impact Report by the City Council on July 21, 2011. The MMRP is provided as Exhibit "E".
18. Prior to the issuance of a grading or building permit, the applicant shall complete Transportation Agency of Monterey County Trip Generation Worksheet and provide payment for the estimated trips that would be generated for the project.

Public Works:

19. The proposed trash and recycling enclosure and wash area shall drain to a properly-sized interceptor and plumbed to the sanitary sewer. No storm water surface runoff shall be allowed to enter or leave these enclosures.
20. All curb returns fronting the property shall include ADA ramps. All public sidewalks shall include an accessible path across proposed driveways and into the proposed facilities.
21. The applicant shall verify and accurately show the locations of all utilities crossing the site and connecting to the proposed facilities.
22. The sewer adjacent to the subject site is owned and operated by the City of Monterey. Applicant shall coordinate sewer connection for the site with the City of Monterey.
23. The Kitchen shall be plumbed to a properly-sized grease interceptor. The interceptor shall be sized and installed in accordance with the Plumbing Code.
24. Submit a grading and drainage plan that shows the following:
 - a. Retention of all stormwater on-site.
 - b. Grades for all accessible pathways.
 - c. Maintenance and control of exiting stormwater flows from offsite sources to minimize negative impacts to adjacent properties and right of way.
25. A Stormwater Quality Control Plan (SWCP), as required by the Central Coast Water Board Resolution No. R3-2013-0032 shall be prepared and submitted for approval by the City prior to obtaining final project approval.
26. Applicant shall submit a SWPPP for approval prior to issuance of a grading or building permit.
27. A Soils and Groundwater Management Plan shall be prepared and submitted for approval to the Monterey County Environmental Health Department prior to final project approval;
28. A Site Health and Safety Plan shall be prepared and submitted for approval to the Monterey County Environmental Health Department prior to final project approval;
29. Infiltration from precipitation or irrigation shall be permitted onsite without further remediation or study;
30. Infiltration of stormwater runoff from new impervious surfaces shall be permitted through stormwater control measures designed in accordance with Resolution No. R3-2013-0032.

31. The landscaping and undeveloped areas of the project will be classified as "undisturbed or planted areas" for the purpose of determining the Retention Tributary Area.
32. Complete FEMA letter of Map Amendment-Fill (LOMR-F). Submit to City of Seaside for review.
33. Provide Proof of Ongoing maintenance of Stormwater Control Measures (SCMs) by providing a maintenance plan stating that the property owner will conduct, and accepts responsibility for, maintenance of all SCMs. The plan shall describe the methods and procedures for conducting periodic inspections and maintenances of all SCMs. The property owner shall provide to the City no less than once per year a statement certified by a Licensed Civil Engineer or a Licensed Architect registered in the State of California stating that the SCM maintenance is in accordance with the maintenance plan. The SCM maintenance plan shall be submitted to the City for acceptance prior to final project approval. The maintenance plan shall be recorded as a deed restriction which transfers responsibility for maintenance of SCMs to future owners of the property.
34. Project must include an area for washing of equipment and accessories. Area must drain to a grease interceptor. If outside, it must be covered, paved, and have secondary containment.

Fire Department:

35. The proposed project shall be constructed in accordance with the requirements of the 2013 California Fire Code.
36. All new construction must meet the requirements of the California Fire Code, Section 903.2 as amended by the City of Seaside. All new construction is required to have automatic fire sprinklers installed. The automatic fire sprinkler system must conform to the NFPA Standard 13. Separate plans must be submitted to the Fire Department for approval before the building framing inspection is completed.
37. The building must also conform to the California Fire Code, Section 903.4, 903.4.1, and 903.4.2 in regards to the automatic fire sprinkler system monitoring and alarms. The system shall have water-flow and water supply valve monitoring by a UL Central Station company and approved audible water flow alarms on the exterior of the building. In accordance with NFPA Standard 72, one pull station shall also be located at the main exit door from the building.
38. The automatic fire-extinguishing system in the kitchen is required to be monitored by the same system as the fire alarm system for the water flow notification.
39. The applicant shall provide a KNOX emergency access key box for emergency fire department building entrance. The key box is only for Fire Department operations after

business operations have stopped and prevents the need to damage doors or windows to gain entrance.

40. All new commercial kitchen cooking equipment and hoods shall comply with Section 609 of the California Fire Code in regards to installation, maintenance, and fire protection.

Building Department:

41. The proposed project shall be constructed in accordance with the requirements of the 2013 California Building Code.
42. Soils report must be submitted with structural plans.
43. In the vent the project site in inundated by sea level rise or impacted by a geologic event which causes the structure to be removed in the future, the applicant must comply with any mandate provided by the Seaside Building Official for obtaining the necessary building permit for the demolition and disposal of any hazardous building materials in accordance with local and state regulations.

Standard:

44. Use Permit approval is subject to revocation procedures contained in S.M.C.S. 17.69.060 in the event any of the conditions of this approval are violated, this discretionary permit was granted on the basis of false or misleading information, written or oral, given willingly or negligently by the applicant or property owner, and/or there has been a discontinuance of the use, or purposed for which the permit was issued, for a period of 180 days or more.
45. This Coastal Development Permit is subject to procedures and requirements of Section 3.8 for the implementation of the project improvements, and those related to appeals and revocation in Section 3.12 of Title 18.10 of the Seaside Municipal.
46. The applicant agrees as a condition and in consideration of the approval of this discretionary permit that it will defend, indemnify and hold harmless the City of Seaside or its agents, officers and employees from any claim, action or proceeding against the City or its agents, officers or employees to attack, set aside, void or annul this approval. The applicant will reimburse the City for any court costs and attorney's fees, which the City may be required by a court to pay as a result of such action. City may, at its sole discretion, participate in the defense of such action; but such participation shall not relieve applicant of his obligations under this condition. The City shall promptly notify the applicant of any such claim, action, or proceeding, and the City shall cooperate fully in the defense thereof.
47. Any proposed future development shall comply with the requirements of the Fire, Health, Planning, Code Enforcement, Building and Public Works Departments.
48. The project shall comply with the requirements and the applicable ordinances of the Monterey Peninsula Water Management District (MPWMD).

49. The project shall be responsible for all applicable local and/or regional development and/or impact fees including, but not limited to, sewer, water, and traffic fees, which shall be paid prior to building permit issuance.
50. The permit shall have no force or effect unless and until accepted, and the terms thereof agreed to, in writing, by the applicant and property owner within fifteen (15) days from the date of its approval.
51. This shall expire and become void 24 months from the date of approval, or upon the expiration of another time limit established by the review authority, unless use has commenced within the required time limit or the Planning Commission has granted an extension of time. In accordance with Section 3.8 of the CIP, the applicant must file request for time extension prior to expiration date of the Coastal Development Permit in order to receive consideration of a one-year time extension by the Commission.
52. For purposes of assuring compliance, the applicant, agents, representatives or their assignees agree not to deny or impede access to the subject property by City employees in the performance of their duties.

PASSED AND ADOPTED at the special meeting of the Planning Commission of the City of Seaside, State of California, on the 25th of March, 2015, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

John Owens, Chairperson

ATTEST:

Planning Commission Secretary

COASTAL DEVELOPMENT PERMIT APPLICATION NO. CDP-14-01

These permits are hereby accepted upon the express terms and conditions hereof, and shall have no force or effect unless and until agreed to, in writing, by the applicant and property owner(s).

The undersigned hereby acknowledge the approved terms and conditions and agree to fully conform to, and comply with, said terms and conditions within the time frames approved by the City of Seaside Planning Commission.

Applicant's Signature

Date

Property Owner's Signature (*if different from above*)

Date

**ADDENDUM TO THE
FINAL ENVIRONMENTAL IMPACT REPORT

FOR
THE IN-N-OUT BURGER DRIVE-THROUGH RESTAURANT
PROJECT**

Prepared for

**City of Seaside
440 Harcourt Avenue
Seaside, California 93955**

Prepared by

**LSA Associates, Inc.
1998 Santa Barbara Street, Suite 120
San Luis Obispo, California 93401**

March 2015

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**ADDENDUM TO THE
ENVIRONMENTAL IMPACT REPORT
FOR
THE IN-N-OUT BURGER DRIVE-THROUGH RESTAURANT PROJECT**

1. Purpose

This Addendum is prepared to augment the Final Environmental Impact Report (FEIR) that previously was certified by the City Council of the City of Seaside on July 21, 2011, for the In-N-Out Burger Drive-Through Restaurant Project (<http://www.ci.seaside.ca.us/Modules/ShowDocument.aspx?documentid=9844>) The previously certified FEIR is hereinafter referred to as “the FEIR.” Although the FEIR was certified, the previous project was not approved by the City Council. The previous project design has been modified by the project applicant and a new application has been submitted to the City of Seaside (City) for consideration. The modified project is herein referred to as the “proposed project”. This Addendum, together with the above-mentioned FEIR, serve as the environmental review of the proposed project, known generally as the In-N-Out Burger Drive-Through Restaurant Project and more fully described below, as required pursuant to the provisions of the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Section 21000 et. seq. and the State and local CEQA Guidelines.

Pursuant to the provisions of CEQA and the State and local CEQA Guidelines, the City is the Lead Agency and is charged with the responsibility of deciding whether or not to approve the proposed project (In-N-Out Burger Drive-Through Restaurant). As part of the decision-making process, the City is required to review and consider the potential environmental effects that could result from the modification of the project analyzed in the previously certified FEIR. As part of the decision-making process, the City will determine whether the project’s modifications constitute necessary changes and/or additions to the previously certified FEIR that can be addressed in this Addendum pursuant to Section 15164 of the CEQA Guidelines, as amended, because these modifications do not represent substantial changes to the project description requiring major changes to the FEIR, or new information of substantial importance that could not have been known at the time the FEIR was certified.

2. The Previous Project As Described and Analyzed in The Certified FEIR

A. Project Site Location and Setting

The project is located in the City of Seaside, a coastal community of approximately 35,000 residents overlooking Monterey Bay to the north-northwest. The City is within the County of Monterey (County) and is located approximately 18 miles (mi) southwest of Salinas and 3 mi east-northeast of Monterey city center (refer to Figure 1, Project Vicinity Map, in Appendix A to this Addendum). The project site is located on the southeast side of Del Monte Boulevard facing Roberts Lake to the north-northwest and is bordered by Laguna Grande Regional Park and Lake to the southeast. The channel connecting Roberts Lake with Laguna Grande Lake runs along the east-northeast boundary of the project site. The west-southwest boundary of the project site lies on the Seaside-Monterey city limits line (refer to Figure 3, Conceptual Site Plan, in Appendix A).

The approximately 2.28-acre (ac) project site is comprised of an approximately 2.19 ac (95,317-square-foot [sf]) parcel (Assessor’s Parcel Number [APN] 011-401-023) and an approximately 0.094

In-N-Out Burger Drive-Through Restaurant

ac City right-of-way (ROW) easement that will be used for additional landscaping, curb, driveway, and sidewalk features. The project site was formerly the site of an automobile wrecking yard and is currently vacant. The project site was owned by the City until July 2010, at which point it was transferred to the Redevelopment Agency of the City of Seaside for the purpose of developing it with a visitor-serving commercial use. The project would develop an approximately 3,750 sf In-N-Out Burger Drive-Through Restaurant and associated facilities, including indoor and outdoor patio dining totaling 159 seats and a drive-through window. The proposed restaurant would provide approximately 54 parking spaces, including three Americans with Disabilities Act (ADA) accessible spaces, three bicycle racks, and two motorcycle parking stalls (refer to Figure 3, Conceptual Site Plan, in Appendix A).

The northwest boundary of the project site is located along the border between the City of Seaside and the City of Monterey. Land uses within the vicinity of the project site include hotel, commercial, retail, and recreational facilities. Immediately east-northeast of the project site boundary is a 4-story, 143-room Holiday Inn Express. A 12-story, 225-room Embassy Suites Hotel is located east of the Holiday Inn Express at the southeast corner of Del Monte Boulevard and Canyon Del Rey Boulevard. A 2-story La Quinta Inn motel is located across from the project site on Del Monte Boulevard to the west northwest. Shopping and service facilities are in close proximity to the project site. Biking, hiking, and walking trails are located south of the project site around Laguna Grande Regional Park and Lake and along the Monterey Bay Coastal Bike Trail located along Del Monte Boulevard. Nearby beaches located across State Route 1 (SR-1) to the west are within walking distance of the project site.

The project site is visible from Cabrillo Highway (SR-1) and is located within 0.5 mi of the on- and off-ramps at Canyon Del Rey Boulevard (State Route 218 [SR-218]). Additional regional access to the project site is provided by the Monterey-Salinas Highway (State Route 68 [SR-68]) (refer to the Regional Inset Map on Figure 1). These highways connect the project site to the cities of the Monterey Peninsula, Salinas, San Jose, and San Francisco Bay area.

Local access to the project site is provided by Del Monte Boulevard, which creates the north-northwest boundary of the project site, as well as Canyon Del Rey Boulevard to the north and nearby Fremont Boulevard to the east.

B. Project Objectives

The objectives of the project are to:

- Develop the site in accordance with the City's Strategic Plan for economic development in order to generate tax revenue for the City;
- Develop a fast food drive-through restaurant that is convenient to and meets the demands of the local residents and visitors to the area;
- Implement the goals of the City General Plan; and
- Increase and enhance the visual gateway of the City.

C. Project Technical, Economic, and Environmental Characteristics

The 2004 Seaside General Plan designates the 2.19 ac portion of the project site as Regional Commercial (RCC). The City Zoning Code Title 17 designates the project site as Regional

In-N-Out Burger Drive-Through Restaurant

Commercial (CRG). Drive-through services within the CRG zone are limited to establishments existing in the City prior to December 4, 2006. Approval of the project with the drive-through service would then be contingent upon the approval of an amendment to the existing Zoning Code that would allow a drive-through restaurant at the project site, followed by the issuance of a Use Permit for the same. Further discussion of the proposed code amendment is provided in the Coastal Zone section below.

(1) Coastal Zone

Portions of the project site (i.e., a 125-foot [ft] wide buffer along the edge of Laguna Grande Lake that borders the property and a 100 ft wide buffer along the western boundary of the channel connecting Roberts Lake and Laguna Grande Lake [PRC Section 30160(c)]) are within the California Coastal Zone Boundary (refer to Figure 4, Coastal Zone Boundary, in Appendix A). The majority of the project's restaurant building, outdoor dining, surface parking, landscaping, proposed extension of a pedestrian/bicycle trail, and the entire drive-through service area are proposed for the portion of the project site that is within the Coastal Zone. Development within the Coastal Zone may not commence until a Coastal Development Permit (CDP) has been issued by either the California Coastal Commission (Coastal Commission) or by a local government that has a certified Local Coastal Program (LCP).

An LCP consists of two major parts: the Land Use Plan (LUP) and the Coastal Implementation Plan (CIP). The City has an LUP¹ that was drafted in 1983 and was certified by the Coastal Commission. However, the City never prepared a CIP. Therefore, the City does not have a certified LCP, and all development within the City's Coastal Zone must receive a CDP from the Coastal Commission².

The City is currently updating its LCP for certification and, in doing so, the City's LUP has been individualized rather than prepared as a joint document with the City of Monterey and includes a CIP. A public comment period was open for the Draft Initial Study (IS)/Proposed Negative Declaration (ND) for the LCP from August 5, 2010, through September 7, 2010. Comments received during that time were reviewed for incorporation in the Draft LCP and were presented to the City Council for the first of two required readings on Thursday, November 18, 2010. The City Council approved the Draft LCP at its first reading and approved the Draft LCP at its second reading on February 3, 2011. City staff have submitted an application to the Coastal Commission requesting LCP certification.

Because the LCP has not yet been approved by the Coastal Commission, the project is being assessed based on the existing Coastal Zone Standards outlined in Chapter 17.24.070 of the City's Municipal Code rather than on those that were approved on February 3, 2011, by the City Council. Since the project is being reviewed and approved under the existing regulations and the City does not yet have a certified LCP in place, the project would require a CDP from the Coastal Commission. If the updated LCP is certified prior to approval of the project, the applicant would have the choice to apply for a CDP through the City or the Coastal Commission.

According to the Seaside Zoning Code (Section 17.24.070.D), developments within the CRG zone and Coastal Zone and adjacent to Roberts Lake and Laguna Grande Lake are required to be set back a minimum of 50 ft from the marsh or riparian vegetation. However, this setback may be reduced to 20 ft where recreational trails and/or nature observation platforms or piers are proposed.

¹ The City's 1983 LUP was adopted as a joint LUP with the City of Monterey.

² Please refer to Section 9, Land Use and Planning, for a discussion of the proposed project's consistency with the City's certified LCP.

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Portions of the existing and the proposed pedestrian/bicycle trail and proposed landscape areas are within 0–20 ft of the riparian vegetation of Laguna Grande Lake (refer to Figure 5, Coastal Zone Setback, in Appendix A). As currently designed, the project would violate the City's existing setback requirements within the Coastal Zone and would require a Zoning Code amendment in order to allow development within 20 ft of the riparian vegetation of Laguna Grande Lake.

Additionally, Section 17.24.070.E of the Seaside Zoning Code requires that proposed structures within 100 ft of Laguna Grande Lake do not exceed a maximum height of 15 ft. The height of the main building of the proposed restaurant would be 20 ft tall, and the three architectural towers proposed for generally the north, northwest, and southeast sides of the building would be 29 ft each (refer to Figure 6, Floor Plan and Elevations, in Appendix A). As currently designed, the project would exceed the City's existing height limits within the Coastal Zone and would require a Zoning Code amendment to modify the City's height requirements within 100 ft of Laguna Grande Lake.

If the updated LCP is certified by the Coastal Commission prior to approval of the project, the Zoning Code amendments would not be required for approval of the project because the project would be in compliance with the standards set forth in the updated LCP. However, the timing of certification of the updated LCP by the Coastal Commission is uncertain. Therefore, Zoning Code Amendments have been included as components of the project, and the environmental effects of the Zoning Code amendments have been analyzed in this FEIR.

City of Seaside Coastal Implementation Plan (CIP), Title 18, *Draft*. As noted above, the City is currently amending the LCP, which will include a CIP. The Draft CIP, Title 18, after being approved by the City Council and certified by the Coastal Commission, would replace Chapter 17.24 of the Zoning Code, Title 17. Title 18 and Chapter 17.24 are similar in many respects. However, under Title 18:

- Drive-through restaurants would be considered an allowable use within the CRG zone after the approval of a Use Permit by the Planning Commission;
- Allowable building heights within 100 ft of Laguna Grande Lake would be increased to a maximum of 20 ft, with allowances for architectural features up to a maximum height of 30 ft; and
- Buffers and setbacks would be a minimum of 50 ft as measured from the inland extent of wetland/riparian areas, but smaller setbacks would be allowed based on site constraints, the development of recreational trails and or/nature observation platforms or piers, or if a professional biologist concludes that a smaller setback provides sufficient resource protection.

Therefore, although the project is being reviewed under the current Coastal Zone Ordinance (Title 17) and would require Zoning Code amendments in order to remain consistent with the current Coastal Zone Ordinance, the project would be consistent with the Draft CIP, Title 18 (without requiring any Zoning Code Amendments) once the Draft CIP has been certified by the Coastal Commission.

(2) Project Components

The proposed 1-story restaurant would occupy a total of 3,750 sf of the 99,397 sf of the project site as itemized in Table 2.1. The 1-story 3,750 sf restaurant is equivalent to a Floor Area Ratio (FAR) of 0.04, which is within the maximum permitted FAR of 1.0 for the CRG zone (except that hotels are allowed a maximum FAR of 3.0.). Development on the remainder of the project site is

Table 2.1: Proposed Building Uses and Square Footages

Project Building Use	Total Square Footage
Dining and Vestibules	1,735 square feet
Kitchen	1,143 square feet
Offices	278 square feet
Restrooms	392 square feet
Storage Area	142 square feet
Electrical/Fire Closet	60 square feet
Total Building	3,750 square feet
Outdoor Patio Seating/Hardscape	4,650 square feet
Parking and Drive-Through Service Area	31,850 square feet
Driveway, Curb, Sidewalk (City easement)	2,933 square feet
Landscaping (irrigated, main parcel)	21,477 square feet
Landscaping (irrigated, City easement)	1,147 square feet
Natural Vegetation	6,560 square feet
Wetland Areas (undevelopable)	20,540 square feet
Pedestrian/Bicycle Trail Extension	6,490 square feet
Total Project Site	99,397 square feet

proposed to include an outdoor dining area (patio), drive-through service area, 54³ parking spaces, landscaping, and a pedestrian/bicycle trail.

(3) Architectural Style and Lighting

The architectural style of the project would be designed to be harmonious with the existing land uses in the area as well as be consistent with the design guidelines of the West Broadway Urban Village Specific Plan to provide a suitable gateway entrance to the City. The Board of Architectural Review (BAR) would be responsible for reviewing and approving the project's final architectural design and lighting plans before the project is considered and approved by the Planning Commission. Review and approval of the architectural design plans by the BAR would not result in a change to the project's plans in such a way as to substantially deviate from that which is detailed in the FEIR.

Figure 6 (provided in Appendix A) shows the Floor Plan and Elevations. The proposed architectural design includes a stucco building with a textured finish, stone veneer along the base of the proposed restaurant building, brown awnings on two sides of the building (facing north and facing west), and three tower elements with terracotta tile roofs. In-N-Out Restaurants are characterized by their bright red and yellow signature colors, so a 14 ft x 11 ft red and yellow cabinet sign would be constructed on the west side of the easternmost entrance off of Del Monte Boulevard and red and yellow illuminated wall signs would be constructed on all building sides. The project includes clear anodized aluminum storefront doors and windows and a covered drive-through pick-up canopy facing east toward the Holiday Inn Express.

The outdoor lighting plan would include the following components: four lampposts with single-head lights flanking the two driveways along Del Monte Boulevard; three lampposts with double-head lights within the median of the parking lot and one near the trash and recycling enclosure; four lampposts with double-head lights along the drive-through service area; two lampposts with double-head lights and one single-head light along the building entrance; nine square down-lights along the

³ The City's Zoning Code requires a minimum of 1 parking space for every 3 restaurant seats, or 53 parking spaces. The proposed project includes 54 parking spaces, which is 1 more than the minimum required.

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building eaves; and six enclosed industrial lamps along the building facing the outdoor patio area. The proposed restaurant would include eight internally illuminated signs, four of which would be mounted on the building walls.

(4) Landscaping

The project would be landscaped on all four sides of the parcel with a variety of native drought-tolerant trees, shrubs, annuals, and landscape materials, such as local river stone (refer to Figure 7, Landscape Plan, in Appendix A). Native plants proposed for planting on the project site include, but are not limited to, Manzanita (*Arctostaphylos Manzanita*), Island bush snapdragon (*Galvezia speciosa*), toyon (*Heteromeles arbutifolia*), sticky monkey flower (*Mimulus aurantiacus*), fuchsia flowering gooseberry (*Ribes speciosum*), black sage (*Salvia mellifera*), western sword fern (*Polystichum munitum*), emerald carpet manzanita (*Arctostaphylos uva-ursi*), beach daisy (*Erigeron glaucus*), California fescue (*Festuca californica*), island alum root (*Heurchera maxima*), douglas iris (*Iris douglasiana*), blue wild rye (*Leymus condensatus*), deer grass (*Muhlenbergia rigens*), California wild rose (*Rosa californica*), western redbud (*Cercis occidentalis*), and Monterey cypress (*Cupressus macrocarpa*). Two Mexican fan palms (*Washingtonia robusta*) would be planted in the corner of the parking lot adjacent to the building entrance. The two Mexican fan palms, a signature design feature for In-N-Out Restaurants, are the only nonnative plants included in the proposed landscape plan. On the south and east project site boundaries, a landscape buffer would extend from the edge of the drive-through service area to the existing and proposed pedestrian/bicycle trail. On the west project site boundary a landscape buffer would extend from the edge of the parking lot to the property boundary. The irrigation system would comply with the State Water Conservation Ordinance by using native drought-tolerant plants. The BAR would be responsible for reviewing and approving the project's final landscaping plan before the project is considered by the Planning Commission and the City Council and they approve the issuance of a building permit.

(5) Greenhouse Gas Reduction Strategies

The following greenhouse gas (GHG) reduction strategies, some of which are required under the CALGreen building standards that went into effect on January 1, 2011 (required CALGreen building standards are noted by an asterisk), have been incorporated into the project design to reduce potential GHG emissions associated with construction and operation of the project:

Use "Green Building Materials," such as those materials that are resource-efficient, and recycled and manufactured in an environmentally friendly way, including low-volatile organic compound (VOC) materials.

Design all project buildings to exceed the California Building Code's (CBC) Title 24 energy standard, including, but not limited to, the following:

- Increase insulation such that heat transfer and thermal bridging are minimized;
- Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption; and
- Incorporate ENERGY STAR or better rated windows, space heating and cooling equipment, light fixtures, appliances, or other applicable electrical equipment.

Install water-efficient fixtures and appliances, including low-flow faucets, dual-flush toilets, and waterless urinals.

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Install energy-efficient heating and cooling systems, appliances and equipment, and control systems*.

Provide a landscape and development plan for the project which includes*:

- Native drought-tolerant plants;
- Water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls*;
- Restricted watering methods (e.g., prohibit systems that apply water to nonvegetated surfaces) and control runoff*.

Recycle construction waste (including, but not limited to, concrete, lumber, metal, and cardboard)*.

Provide interior and exterior storage areas for recyclables and green waste for restaurant operational uses, as well as adequate recycling containers located in public areas for restaurant patrons*.

Provide employee education about reducing waste and available recycling services.

(6) Access and Circulation

Access to the project site would be from two driveways along Del Monte Boulevard. The westernmost driveway (next to the City of Monterey boundary) would be a right-in/right-out only and the other would be a full-access driveway. The proposed service area is designed to provide a one-way counterclockwise traffic movement around the project site. The drive-through service area, which is located on the east-southeast side of the building, would provide one lane of queuing for ordering and food pick-up. Approximately 250 linear feet would be available for queuing of vehicles in the drive-through lane and additional vehicle storage would be available on site in the adjacent parking lot and drive aisles. Proposed vehicle queuing in the drive-through lane would accommodate 14 vehicles from the entry sign, in the west-southwest corner of the project site to the drive-through pick-up window on the east-southeast side of the project site.

(7) Utilities and Water

All necessary utility services (e.g., wastewater, water, and storm water) are located adjacent to the project site; the project would not require the development of new service utility lines. The sanitary sewer line would connect to an existing lift station 30 ft northwest of the northwesterly corner of the site. Water connections (fire and domestic) would be made at the existing main in the on-site public utility easement fronting Del Monte.

Storm water runoff from new impervious surfaces would be treated by means of vegetated swales and catch basins with filter inserts before being discharged into the municipal storm drain system on Del Monte Boulevard, which discharges into Laguna Grande Lake. The City requires that post development runoff not exceed predevelopment runoff.

The Monterey Peninsula Water Management District must issue a water permit for any development or redevelopment activity that would involve the connection or modification of a connection to an existing water distribution system, such as the project. Due to below adequate levels of water on the Monterey Peninsula, the Seaside City Council is restricting the allocation of water it has received

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from the Monterey Peninsula Water Management District to specific high priority economic development projects, such as redevelopment projects like the project. The Monterey Peninsula Water Management District issued a water permit for the project⁴ with consent from the Seaside City Council. Water for the project would be supplied by California American Water Company (CAL-AM).

(8) Pedestrian/Bicycle Extension

An existing decomposed granite and partial asphalt pedestrian/bicycle trail borders Laguna Grande Regional Park and Lake and the southeastern project site boundary. The existing trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The project would extend the pedestrian/bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension would be made of decomposed granite. Portions of the existing pedestrian/bicycle trail within the project boundaries that are asphalt would be replaced with decomposed granite so that the pedestrian/bicycle trail would be cohesive throughout the project site. Two benches with trash receptacles would be placed along the pedestrian/bicycle trail- one at the northern edge of the project site where the pedestrian/bicycle trail tees and connects to the restaurant approximately half-way between the wooden pedestrian bridge and Del Monte Boulevard, and one at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake (refer to Figure 3, Conceptual Site Plan, in Appendix A).

The trail extension would provide pedestrian and bicycle access to the restaurant from Laguna Grande Regional Park and Lake, the adjacent hotel property to the northeast, and Del Monte Boulevard. The trail extension would also provide pedestrian and bicycle access from the restaurant to the trail around Laguna Grande Lake, as well as to the Monterey Bay Coastal Bike Trail, which is located along Del Monte Boulevard and which connects, via Canyon Del Rey Boulevard, to the coastal trail fronting the beach on the north side of SR-1.

D. Discretionary Actions

The discretionary actions required to be taken by the City as part of the project include:

- City Council approval of a Zoning Code amendment to Chapter 17.24, Commercial Zones, of the City's Zoning Code allowing drive-through retail uses.⁵
- City Council approval of a Zoning Code amendment to Chapter 17.24.070.E of the City's Zoning Code allowing development within 100 ft of Laguna Grande Lake to exceed 15 ft in height.¹
- City Council approval of a Zoning Code amendment to Chapter 17.24.070 of the City's Zoning Code allowing development within 0 ft to 20 ft of Laguna Grande Lake.¹
- City Council approval of a Development and Disposition Agreement (DDA) by the Redevelopment Agency of the City of Seaside conditioned on the subsequent approval of a Conditional Use Permit for a drive-through restaurant by the City Planning Commission.

⁴ This water permit remains valid for the proposed project.

⁵ If the updated LCP is certified by the Coastal Commission prior to approval of the proposed project, the Zoning Code Amendments would not be required for approval of the proposed project as the proposed project would be in compliance with the standards set forth in the updated LCP.

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- Review and approval by the City Planning Commission of a Conditional Use Permit for the development of an approximately 3,750 sf In-N-Out Burger Drive-Through Restaurant, including indoor dining, outdoor patio seating, and a drive-through facility.
- Review and approval of project site plans and elevations, lighting, and landscape plans by the City's BAR.

Additional approvals required by other agencies:

- California Coastal Commission Coastal Development Permit for portions of the project within the Coastal Zone (If the City's proposed LCP is certified by the Coastal Commission prior to certification of this FEIR, the project applicant would have the choice of applying for a CDP from the Coastal Commission or applying for a CDP from the City.)
- United States Army Corps of Engineers (Corps) Preconstruction Notification pursuant to Section 404 of the Clean Water Act (CWA).
- Regional Water Quality Control Board (RWQCB) Water Quality Certification pursuant to Section 401 of the CWA.
- California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (SAA) pursuant to Section 1602 of the Fish and Game Code.

The project was not approved by the City Council; however, the FEIR was certified in July of 2011.

3. The Previous FEIR

The previous FEIR analyzed the potential environmental impacts of the In-N-Out Burger Drive-Through Restaurant Project. The previous FEIR determined that the In-N-Out Burger Drive-Through Restaurant Project would not have the potential for creating a significant environmental effect on any environmental resource except for the following:

- **Aesthetics:** The project's exterior lighting sources have the potential to significantly impact the nighttime views from the adjacent Laguna Grande Lake and surrounding area. Implementation of a Final Lighting Plan ensuring that all exterior lighting would be unobtrusive, down-lit, and harmonious with the local area as determined by the City, and that all off-site glare would be fully controlled, would reduce potential impacts to less than significant levels.
- **Biological Resources:** The project has the potential to temporarily impact special-status species, riparian habitat, federally protected wetlands, or other sensitive natural communities during construction operations. Implementation of biotic habitat protection (including the retention of a qualified biologist to implement avoidance and minimization measures such as pre-construction nesting bird surveys, presence/absences surveys for California red-legged frogs, coast range newts, and burrowing owls, monitoring during construction, installation of barriers around sensitive habitats, and construction personnel training and education program) would reduce potential impacts to less than significant levels. Construction of the project would increase human and vehicular activity at the project site, which would negatively impact wildlife and wildlife habitat. Implementation of weed management and installation of signage instructing pedestrians to remain on the maintained trail would reduce potential impacts to less than significant levels.

- **Cultural Resources:** The project has the potential to impact previously unidentified historical or archaeological resources, paleontological resources, and human remains. In the unlikely event that one of these resources were discovered during construction, implementation of standard conditions (including halting work, professional evaluation of the situation, and appropriate treatment/handling of the discovery) would reduce potential impacts to less than significant levels.
- **Geology and Soils:** Structures and buildings associated with the project have the potential to be significantly impacted by strong seismic-related ground shaking, ground lurching, liquefaction, lateral spreading, subsidence, slope instability, and seismic settlement. Implementation of standard conditions (including designing all structures in accordance with the seismic parameters presented in the project-specific geotechnical engineering report and applicable section of the CBC) would reduce potential impacts to less than significant levels. Construction of the project has the potential to increase soil erosion on the project site. Implementation of standard conditions requiring the inclusion of erosion control measures (e.g., control of surface runoff, protection of exposed soils, and drainage diversion features on all project plans) would reduce potential impacts to less than significant levels.
- **Hazards and Hazardous Materials:** Construction of the project has the potential to create a significant hazard to the public or environment through accidental release of hazardous materials into the environment. A Phase I Environmental Site Assessment and a Supplemental Site Assessment Report were prepared for the project which identified contaminated soils and groundwater on the project site. Implementation of a site-specific Soil and Groundwater Management Plan would reduce potential impacts to less than significant levels. Development of the project (including site grading, excavation, and other land-disturbing activities) could result in the exposure of construction personnel or site occupants to health and safety risks from prior uses of the project site. Implementation of a site-specific Health and Safety Plan and periodic monitoring of grading activity by a qualified environmental professional would reduce potential impacts to less than significant levels.
- **Hydrology and Water Quality:** Construction of the project has the potential to violate water quality standards or waste discharge requirements. Implementation of an Erosion and Sediment Control Plan, a Storm Water Pollution Prevention Plan (SWPPP), and Best Management Practices (BMPs) for project construction and operations (including specific details about the type of garbage receptacles to be used at the project site, the frequency of garbage pickups, litter control, signage prohibiting the feeding of wildlife, and stormwater treatment within the project site) would reduce potential impacts to less than significant levels. The project would result in the placement of fill within the Federal Emergency Management Agency (FEMA) Zone AE boundary, which would reduce flood storage capacity on the project site. Approval of a Letter of Map Revision based on Fill (LOMR-F) from the City and FEMA prior to building occupancy would reduce potential impacts to less than significant.
- **Noise:** Construction and operational activities associated with the project have the potential to expose sensitive receptors to noise levels that exceed normally acceptable standards. Implementation of standard conditions that ensure the construction contractor implements noise reduction measures would reduce potential noise impacts associated with project construction to less than significant. The construction of a 6 ft barrier made out of concrete or other heavy solid material that runs the length of the entire southwest project boundary

would reduce potential noise impacts associated with project operations to less than significant.

- **Traffic and Transportation:** The project would exacerbate an existing deficiency at the Fremont Boulevard/Del Monte Boulevard and SR-1 southbound on-ramp/Del Monte Boulevard intersections. Furthermore, the project would contribute to a cumulative increase in traffic at the following already deficient intersections: Fremont Boulevard/Del Monte Boulevard intersection, SR-1 southbound on-ramp/Del Monte Boulevard, and Canyon del Rey Boulevard/SR-1 northbound ramps. No feasible mitigation measures were identified; therefore, these impacts were identified as significant and unavoidable.
- **Utilities and Service Systems:** The project would require a new or expanded supply of water and associated treatment facilities, the provision of which would potentially cause significant environmental impacts. Providing the City with verification from CAL-AM that CAL-AM has the legal authority and physical capacity to provide water to the project would reduce potential impacts to less than significant levels.

4. Actions Subsequent to the Certification of the FEIR

The previous FEIR was certified in July of 2011; however, the City Council did not approve the In-N-Out Burger Drive-Through Restaurant Project at that time. At the time the previous FEIR was certified, the City did not have an LCP that was certified by the Coastal Commission. A portion of the previous project is within the Coastal Zone. The Coastal Commission certified the City's LCP in June 2013. Additionally, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032) in July 2013. The Post-Construction Requirements became effective on March 6, 2014 and mandate that development projects use Low Impact Development (LID) BMPs, which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. Therefore, the project is required to comply with the Post-Construction Requirements to implement LID BMPs and infiltrate stormwater runoff on-site.

Therefore, In-N-Out Burger has modified the previous project to address policy and regulatory changes contained within the certified LCP as well as post-construction requirements for implementation of LID BMPs and infiltration of stormwater runoff on-site. In-N-Out submitted a new application to the City for consideration. A Phase II Environmental Site Assessment was prepared for the project site in February of 2015, as described in Section 8 under Hydrology and Water Quality. The modifications and revisions to the previous project description, as specified in the new application, include the following:

- Removal of one parking space and the addition of one RV parking space. The proposed project now includes 53 parking spaces and 1 RV parking space.
- Addition of five benches with trash receptacles in the following locations:
 - Two benches along the southeastern edge of the project site adjacent to Laguna Grande Lake;
 - One bench on the southwestern edge of the project site at the northern extension of the pathway where it ends in the parking lot;

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- One bench along the east side of the property, south of the wood bridge; and
- One additional bench at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake.
- Removal of one 14 x 11 ft red-and-yellow cabinet wall sign on the west side of the easternmost entrance off of Del Monte Boulevard.
- Replacement of the four lampposts with double-head lights along the drive-through service area with single-head lights, and removal of the two lampposts with double-head lights along the building entrance.
- Addition of a series of biofiltration planters for stormwater capture, treatment, retention, and infiltration to replace the previously proposed BMPs (vegetated swale or catch basin filter insert).

As a result of the modifications and revisions to the previous project description, the discretionary actions required as part of the proposed project have also changed. Changes to the required discretionary actions include the following:

- Previously required discretionary actions that are no longer necessary include:
 - City Council approval of Zoning Code Amendments to Chapter 17.24
 - City Council approval of a Development and Disposition Agreement (DDA)
- Discretionary actions that are still required as part of the proposed project include:
 - Review and approval by the City Planning Commission of a Conditional Use Permit
 - Coastal Development Permit
 - Review and approval of the proposed project site plans and elevations, lighting, and landscape plans by the City's BAR
 - United States Army Corps of Engineers Preconstruction Notification
 - Regional Water Quality Control Board Water Quality Certification
 - California Department of Fish and Wildlife Lake and Streambed Alteration Agreement

In response to the revised application, this Addendum to the FEIR was prepared to consider the impacts associated with the modifications and changes to the In-N-Out Burger Drive-Through Restaurant Project. This Addendum focuses on the changes between the project as evaluated in the previously certified FEIR and the modifications to the site plan, including parking, benches, signs, lighting, and drainage as discussed above (refer to site plan figures provided in Appendix B).

5. Project Changes Addressed in this Addendum

As previously stated, the project is the In-N-Out Burger Drive-Through Restaurant Project. This project is the same as the previous In-N-Out Burger Drive-Through Restaurant Project, except for the modifications to the site plan that include parking, benches, signs, and lighting. Specifically, the application that is pending now would change the project from what was previously approved in the following ways:

- **Parking:** One parking space has been removed and one RV parking space has been added. The proposed project now includes 53 parking spaces and 1 RV parking space.
- **Benches:** Five benches with trash receptacles have been added in the following locations:
 - Two benches have been added along the southeastern edge of the project site adjacent to Laguna Grande Lake;
 - One bench has been added on the southwestern edge of the project site at the northern extension of the pathway where it ends in the parking lot;
 - One bench has been added along the east side of the property, south of the wood bridge; and
 - One additional bench has been added at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake.
- **Signs:** One 14 x 11 ft red-and-yellow cabinet wall sign on the west side of the easternmost entrance off of Del Monte Boulevard has been removed.
- **Lighting:** The four lampposts with double-head lights along the drive-through service area have been replaced with single-head lights, and the two lampposts with double-head lights along the building entrance have been removed.
- **Stormwater BMPs:** The previously proposed BMPs (vegetated swale or catch basin insert) have been replaced with a series of biofiltration planters to capture, treat, retain, and infiltrate stormwater runoff.

6. Required Findings for Use of an Addendum

Section 15164 of the State CEQA Guidelines states that an Addendum to an earlier adopted Mitigated Negative Declaration (MND) or certified EIR shall be prepared if some changes or additions are necessary to the previously adopted document, but none of the conditions described in Section 15162 calling for preparation of a subsequent MND or EIR have occurred. Section 15162 of the State CEQA Guidelines identifies the conditions that require preparation of a subsequent EIR. A proposed change in a project will require preparation of a subsequent environmental document if:

- A. *The change in the project is substantial.*

Substantial changes in the project are those that would require major revision of the previous environmental document due to the involvement of new significant environmental effects, or if a substantial increase in the severity of previously identified significant effects has occurred.

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- B. The circumstances under which the project is undertaken have substantially changed.*

Substantial changes in circumstances are those defined as those that would require major revisions of the previous environmental document in order to describe and analyze new significant environmental effects, or any changes that would cause a substantial increase in the severity of the previously identified significant effects.

- C. New information of substantial importance, which was not known and could not have been known, with the exercise of reasonable diligence at the time the previous environmental document was approved, shows:*

- (1) The project will have one or more significant effects not discussed in the previous environmental document;
- (2) The significant effects previously examined will be substantially more severe than identified in the previous environmental document;
- (3) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or
- (4) Mitigation measures or alternatives that are considerably different from those analyzed in the previous environmental document would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

If none of the above conditions are met, the City may prepare an Addendum in order to make minor changes to the previously certified EIR and to document the City's analysis as to why no further environmental review is required.

In performing the required analysis and determining that the criteria is met for use of an Addendum, this Addendum relies on use of a Modified Environmental Checklist Form, as suggested in Section 15063(d)(3) of the State CEQA Guidelines. Section 8 of this document contains the Modified Environmental Checklist Form and explains the basis for each response to the questions on that Form. This Addendum has evaluated each of the changes to the In-N-Out Burger Drive-Through Restaurant Project between the version in the 2011 certified FEIR and the version now presented, and measures the impacts of those changes against the checklist of questions presented in Section 8 of this document.

Based on differences between the project description within the previously certified FEIR and the proposed project as described above and the accompanying environmental analysis of these differences in this Addendum, there is no evidence that the proposed project requires major changes to the previously certified FEIR pursuant to Section 15164 of the CEQA Guidelines. Comparison of the previous project with the proposed project, as described in Section 5 of this document, indicates there are no new significant environmental impacts associated with implementation of the In-N-Out Burger Drive-Through Restaurant Project. In addition, there is no substantial evidence that the circumstances under which the project is undertaken have substantially changed, and there is no evidence of new or more severe environmental impacts arising out of the proposed changes to the In-N-Out Burger Drive-Through Restaurant Project.

7. Evaluation of Environmental Impacts

As indicated above, the Modified Environmental Checklist Form included in Section 8 of this Addendum was used to identify the potential environmental effects of the proposed project changes. Each project change was referenced against the standard environmental categories listed in Appendix G of the State CEQA Guidelines. A summary of the proposed project changes, the resulting potential impacts, and the reasons why an Addendum is appropriate in this situation are set forth below.

The following modifications and revisions have been made to the site plan for the proposed project:

- One parking space has been removed and one RV parking space has been added to the proposed project. The proposed project now includes 53 parking spaces and 1 RV parking space.
- Five benches with trash receptacles have been added to the proposed project in the following locations:
 - Two benches have been added along the southeastern edge of the project site adjacent to Laguna Grande Lake;
 - One bench has been added on the southwestern edge of the project site at the northern extension of the pathway where it ends in the parking lot;
 - One bench has been added along the east side of the property, south of the wood bridge; and
 - One additional bench has been added at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake.
- One 14 x 11 ft red-and-yellow cabinet wall sign on the west side of the easternmost entrance off of Del Monte Boulevard has been removed from the proposed project.
- The four lampposts with double-head lights along the drive-through service area have been replaced with single-head lights, and the two lampposts with double-head lights along the building entrance have been removed from the proposed project.
- The previously proposed BMPs (vegetated swale or catch basin insert) have been replaced with a series of biofiltration planters to capture, treat, retain, and infiltrate stormwater runoff.

Per CEQA Guidelines Section 15382, a significant effect on the environment is defined as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” The minor modifications and revisions to the site plan described above would not result in a change to the physical environmental conditions of the proposed project site and therefore would not change the environmental impact conclusions of the previously certified FEIR. None of the conditions described in Section 15162 of the CEQA Guidelines calling for preparation of a subsequent MND or EIR have occurred; therefore, an Addendum is the appropriate environmental document to address the minor modifications and revisions to the In-N-Out Burger Drive-Through Restaurant Project.

8. Modified Environmental Checklist Form

This Checklist Form is used to compare the anticipated environmental effects of the project with those disclosed in the previous FEIR and to review whether any of the conditions set forth in Section 15162 of the State CEQA Guidelines requiring preparation of a subsequent environmental document are met. The Form is used to review the potential environmental effects of the proposed project for each of the following areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems
- Mandatory Findings of Significance

There are six possible responses to each of the questions included on the Form:

A. Substantial Change in Project Requiring Major Revision of Previous EIR

This response is used when the project has changed to such an extent that major revisions of the previous EIR are required due to the involvement of new significant environmental effects or an increase in the severity of the previously identified significant effects.

B. Substantial Change in Circumstances under which Project is Undertaken Requiring Major Revision of Previous EIR

This response is used when the circumstances under which the project is undertaken have changed to such an extent that major revisions of the previous EIR are required because such changes would result in the project having new significant environmental effects or would substantially increase the severity of the previously identified significant effects.

C. New Information of Substantial Importance Showing New or Greater Significant Effects Than Identified in Previous EIR

This response is used when new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted, shows that the project would have a new significant environmental effect or more severe significant effect than identified in the previous EIR.

D. New Information of Substantial Importance Showing Ability to Substantially Reduce Significant Impacts Identified in Previous EIR

This response is used when new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted, shows:

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1. The significant environmental effects of the project could be substantially reduced through imposition of mitigation measures or alternatives that although previously found to be infeasible are in fact now feasible, but the project proponent declines to adopt them; or
2. The significant environmental effects of the project could be substantially reduced through imposition of mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR, but the project proponent declines to adopt them.

E. Less Than Significant Impact/No Changes or Circumstances and No New Information That Would Require the Preparation of a New EIR

This response is used when: (1) the potential impact of the project is determined to be below known or measurable thresholds of significance and would not require mitigation; or (2) there are no changes in the project or circumstances and no new information that would require the preparation of a new EIR and/or EIR pursuant to Public Resources Code Section 21166 and Section 15162 of the State CEQA Guidelines.

F. No Impact

This response is used when the proposed project does not have any measurable environmental impact.

The Form and accompanying evaluation of the responses provide the information and analysis upon which the City of Seaside makes its determination that no subsequent environmental document is required for the In-N-Out Burger Drive-Through Restaurant Project.

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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1. AESTHETICS. Would the project:						
a) Have a substantial adverse effect on a scenic vista?					X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?					X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?					X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?					X	
The previously certified FEIR concluded that the proposed project: • Would not result in a substantial adverse effect on a scenic vista; • Is not located within a State Scenic Highway corridor or route nor would it damage any individual scenic resources; • Would not substantially degrade the existing visual character or quality of the site and its surroundings; and • Would not have a cumulatively considerable impact on aesthetics in the project area. The previously certified FEIR concluded that the proposed project's exterior lighting sources would have the potential to significantly impact the nighttime views from the adjacent Laguna Grande Lake and surrounding area. As described in the previously certified FEIR, mitigation including implementation of a Final Lighting Plan ensuring that all exterior lighting would be unobtrusive, down-lit, and harmonious with the local area as determined by the City and that all off-site glare would be fully controlled would reduce these potential impacts to less than significant levels. The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with aesthetics. The replacement of double-head lights with single-head lights may result in a minor reduction in the off-site glare but not to such an extent that it would eliminate the need for the prescribed mitigation measure to address exterior lighting on the project site. The minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on aesthetics, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds: - Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred; - New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and - None of the proposed project changes would significantly affect this environmental resource.						

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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2. AGRICULTURE RESOURCES. Would the project:

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?						X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?						X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?						X

As concluded in the previously certified FEIR, the proposed project site, zoned Regional Commercial, is currently vacant and was a previously filled and otherwise disturbed lot in an urbanized area of the City. There are no agricultural resources located on or near the proposed project site. The previously certified FEIR concluded that the proposed project would not:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural uses;
- Conflict with any existing zoning for agricultural use or a Williamson Act contract; and
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with agricultural resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on agricultural resources. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

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:

a) Conflict with or obstruct implementation of the applicable air quality plan?					X	
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Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					X	
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)?					X	
d) Expose sensitive receptors to substantial pollutant concentrations?						X
e) Create objectionable odors affecting a substantial number of people?					X	

GREENHOUSE GAS EMISSIONS. Would the project:

f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?					X	
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?					X	

The previously certified FEIR concluded that the proposed project is consistent with the policies outlined in the City's General Plan and the Monterey Bay Unified Air Pollution Control District (MBUAPCD) 2008 Air Quality Management Plan and that emissions generated during construction would be below MBUAPCD thresholds of significance. The proposed project would implement standard dust control measures and standard air pollution reduction measures during construction to ensure that project-related impacts to air quality remain below the level of significance.

The previously certified FEIR concluded that:

- Long-term operation of the proposed project would not exceed MBUAPCD daily emissions thresholds for any criteria pollutant for which the project region is in non-attainment;
- The proposed project is not located in an area of known naturally occurring asbestos and would not expose sensitive receptors to substantial concentrations of naturally occurring asbestos or other pollutants;
- The proposed project would not generate odors that would result in injury, nuisance or annoyance to a considerable number of persons or endanger the comfort, health or safety of the public. Although construction activities could result in some short-term odors, they would not be significant;
- The proposed project would not generate GHG emissions, either directly or indirectly, that might have a significant impact on the environment;
- The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases; and

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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- The proposed project would not contribute significantly to cumulative impacts associated with air quality.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with air quality or greenhouse gas emissions. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on air quality and greenhouse gases, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

4. BIOLOGICAL RESOURCES. Would the project:

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?					X	
b) Have 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?					X	
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?						X
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?					X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?						X

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Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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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?						X
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The previously certified FEIR concluded that the proposed project has the potential to temporarily impact special-status species, riparian habitat, federally protected wetlands, and temporarily disturb wildlife movements during construction. Implementation of the proposed project would increase human and vehicular activity at the proposed project site, which would negatively impact wildlife and wildlife habitat. As described in the previously certified FEIR, mitigation (including biotic habitat protection, biological monitoring during construction, construction employee education programs, and preconstruction surveys) would reduce these potential impacts to less than significant levels.

Furthermore, the previously certified FEIR concluded that the proposed project would not:

- Have a substantial permanent adverse effect on federally protected wetlands or other jurisdictional waters;
- Conflict with the Conservation/Open Space Element or the City's Tree Ordinance;
- Conflict with adopted Habitat Conservation Plans or Natural Community Conservation Plans for the proposed project site since none currently exist; or
- Contribute significantly to cumulative impacts associated with biological resources.

The previously certified FEIR concluded that the proposed project would conflict with the Zoning Code that requires 20 ft setbacks from riparian vegetation; therefore, the previous project required a zoning code amendment. However, the proposed project is consistent with all required setbacks prescribed in the City's 2013 LCP. Therefore, a zoning code amendment is no longer required as part of the proposed project.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with biological resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on biological resources, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

5. CULTURAL RESOURCES. Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines?					X	
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Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines?					X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?					X	
d) Disturb any human remains, including those interred outside of formal cemeteries?					X	

The previously certified FEIR concluded that implementation of the proposed project has the potential to impact previously unidentified historic, archaeological, and paleontological resources or previously unidentified human remains, although considered unlikely. As described in the previously certified FEIR, these potential impacts would be reduced to less than significant levels with implementation of standard conditions that specify procedures to be followed should an unidentified resource be discovered during construction. Furthermore, the previously certified FEIR concluded that the proposed project would not have a considerable contribution to cumulative impacts on known historical, archeological, or paleontological resources or human remains.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with cultural resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on cultural resources, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

6. GEOLOGY AND SOILS. Would the project:

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 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.					X	
ii) Strong seismic ground shaking?					X	

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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iii) Seismic-related ground failure, including liquefaction?					X	
iv) Landslides?					X	
b) Result in substantial soil erosion or the loss of topsoil?					X	
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?					X	
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property?					X	
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?					X	

The previously certified FEIR concluded that:

- The proposed project is not located in a currently designated Alquist-Priolo Earthquake zone and therefore would not result in significant impacts resulting from fault rupture on the proposed project site;
- The structures and buildings associated with the proposed project have the potential to be significantly impacted by strong seismic-related ground shaking and ground lurching;
- The structures and buildings associated with the proposed project have the potential to be significantly impacted by liquefaction, lateral spreading, subsidence, slope instability, and seismic settlement;
- The potential for landslides to impact the proposed project is low;
- The construction of the proposed project has the potential to increase soil erosion on the proposed project site;
- The proposed project site consists predominantly of nonplastic and silty sands having a low potential for expansion;
- The proposed project design would be consistent with the City of Seaside General Plan Safety Element pertaining to geologic and seismic hazards; and
- The proposed project would not contribute significantly to cumulative impacts associated with geologic and soil hazards.

As described in the previously certified FEIR, implementation of standard conditions (including compliance with the CBC and seismic standards; review and approval of the proposed project's building plans by a soils engineer to ensure the potentials for liquefaction, cyclic softening, lateral spreading, and soil settlement have been addressed; and implementation of standard erosion control measures) would reduce these potential impacts to less than significant levels.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-

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head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with geology and soils. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on geology and soils, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

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7. HAZARDS AND HAZARDOUS MATERIALS. Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					X	
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?					X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school?						X
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?					X	
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?						X
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?						X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?					X	
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?						X

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The previously certified FEIR concluded that:

- The proposed project would not create a significant hazard to the public or environment through routine transport, use, or disposal of hazardous materials;
- Construction of the proposed project has the potential to create a significant hazard to the public or environment through accidental release of hazardous materials into the environment;
- The proposed project would not result in significant impacts related to the emission or handling of hazardous substances near a school;
- Development of the proposed project, including site grading, excavation, and other land-disturbing activities, could result in the exposure of construction personnel or site occupants to health and safety risks from prior uses of the proposed project site;
- The proposed project would not result in impacts to airport operations or create airport-related safety hazards;
- The proposed project is not within the vicinity of a private airstrip and would not result in impacts to airport operations or create airport-related safety hazards;
- No impacts to emergency vehicle access at the proposed project site are anticipated, and impacts associated with Emergency Response and Evacuation Plans would not be significant;
- The proposed project site does not lie within or adjacent to a wildland area, and there is no potential for the proposed project to create a risk of wildland fires or to be affected by a wildland fire; and
- The proposed project would not have a significant contribution to cumulative impacts associated with hazards and hazardous materials.

As described in the previously certified FEIR, implementation of mitigation including preparation of a Soil and Groundwater Management Plan and a Health and Safety Plan, and periodic monitoring of grading activity during construction by an environmental professional, would reduce potential impacts to less than significant levels.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with hazards and hazardous materials. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on hazards and hazardous materials, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would affect this environmental resource.

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8. HYDROLOGY AND WATER QUALITY. Would the project:						
a) Violate any water quality standards or waste discharge requirements?					X	
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 able level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?					X	
c) Substantially alter the existing drainage pattern of the site or areas 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?					X	
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?					X	
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?					X	
f) Otherwise substantially degrade water quality?					X	
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?						X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?					X	
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?						X
j) Inundation by seiche, tsunami, or mudflow?					X	

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The previously certified FEIR concluded that:

- Construction of the proposed project has the potential to violate water quality standards or waste discharge requirements;
- The proposed project would have a significant impact on water quality if pollutants in post-project operation storm water discharges were not controlled to the maximum extent through BMPs;
- Implementation of the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge;
- The proposed project would not substantially alter the existing drainage pattern of the proposed project site with the proposed storm water drainage system;
- The proposed project would not create or contribute runoff water exceeding the capacity of the municipal storm water drainage system;
- Dewatering may be necessary due to shallow groundwater levels. Handling of extracted water must be tested prior to disposal due to the low levels of petroleum hydrocarbons detected in groundwater below the site;
- The proposed project would not place housing within a 100-year flood hazard area;
- The proposed project would result in the placement of fill within the FEMA Zone AE boundary, which would reduce flood storage capacity on the proposed project site;
- There is no risk of levee or dam failure upstream of the proposed project site because these types of flood control facilities have not been constructed along Canyon Del Rey Creek;
- Although, the proposed project would be subject to inundation by a tsunami, the risks are less than significant because of the existing emergency planning mechanisms implemented by the City of Seaside; and
- The proposed project would not contribute to cumulative impacts associated with hydrology and water quality.

As described in the previously certified FEIR, implementation of mitigation (including preparation of an Erosion and Sediment Control Plan and a SWPPP along with implementation of BMPs for project operations) would reduce potential impacts to less than significant levels.

As noted previously, the project FEIR was certified in 2011. On July 12, 2013, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032). The Post-Construction Requirements became effective on March 6, 2014 and mandate that development projects use Low Impact Development (LID) BMPs, which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. These Post Construction Requirements are referenced in Section 2.7.G.5 of the City's CIP. Therefore, the project is required to comply with the Post-Construction Requirements to implement LID BMPs and infiltrate stormwater runoff on-site.

When the project FEIR was certified in 2011, infiltrating stormwater runoff on site was deemed inappropriate to avoid mobilization of contaminated soils and groundwater. However, a Phase II Environmental Site Assessment was prepared for the project site in February of 2015, which determined that the low levels of contamination in the existing soils and groundwater would not present a public or environmental health risk if stormwater was infiltrated on-site. Given this information and the fact that the Central Coast Regional Water Quality Control Board (CCRWQCB) is requiring that all development implement LID Best Management Practices and the Monterey County Department of Health has concurred with the CCRWQCB's direction (refer to Appendix D, Letters from the CCRWQCB and the Monterey County Department of Health), the Project Applicant has prepared a revised stormwater control plan that complies with the Monterey Regional Stormwater Management Program, including the Post-Construction Requirements.

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Post construction, stormwater runoff will be retained and infiltrated on-site for storm events up to the 95th percentile rainfall event. The stormwater control plan will rely on a series of biofiltration planters to capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots), remove pollutants from runoff, and retain and infiltrate the runoff. Consistent with the BMPs identified in the certified FEIR, implementation of the 2013 post construction requirements including LID BMPs and stormwater runoff infiltration would reduce potential impacts to less than significant levels. Compliance with the 2013 post construction requirements would not result in a change to the significance conclusions associated with hydrology and water quality. The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) and compliance with the 2013 post construction requirements would not result in a change to the significance conclusions associated with hydrology and water quality. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on hydrology and water quality, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

9. LAND USE AND PLANNING. Would the project:

a) Physically divide an established community?						X
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?						X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?						X

A portion of the previous (and current) project is within the Coastal Zone. Because a majority of the proposed project's restaurant building, outdoor dining, surface parking, landscaping, proposed extension of a pedestrian and bicycle trail, and the entire drive-through service area are proposed for the portion of the project site that is within the Coastal Zone, for planning purposes, it was assumed that the entire project site was in the Coastal Zone.

The FEIR for the previous project was certified in July of 2011. At that time, the City did not have a certified LCP. The Coastal Commission certified the City's LCP in June 2013.

Because the LCP had not yet been approved by the Coastal Commission at the time the previous FEIR was certified, the previous project was assessed based on the goals, policies, and regulations provided in the City of Seaside's General Plan (2004) and Title 17 of the City's Municipal Code.

Title 17 of the City's Municipal Code contains the City's Zoning Code. Title 17 designated the project site as CRG. The previous

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project would have required the following Zoning Code Amendments in order to be approved:

- **Title 17, Table 2-4, Allowable Uses and Permit Requirements for Commercial Zones:** Drive-through services within the CRG zone are limited to establishments existing in the City prior to December 2006. Therefore, an amendment to the existing Zoning Code allowing a drive-through restaurant at the project site would have been required.
- **Section 17.24.070D:** According to Section 17.24.070D, developments within the CRG zone and Coastal Zone and adjacent to Roberts Lake and Laguna Grande Lake are required to be set back a minimum of 50 ft from the marsh or riparian vegetation. While this setback may be reduced to 20 ft where recreational trails and/or nature observation platforms or piers are proposed, portions of the pedestrian/bicycle trail and landscape areas are within 0–20 ft of the riparian vegetation of Laguna Grande Lake. Therefore, the previous project would have violated the City's setback requirements and required a Zoning Code amendment in order to allow development within 20 ft of the riparian vegetation of Laguna Grande Lake.
- **Section 17.24.070E:** According to Section 17.24.070DE, structures within 100 ft of Laguna Grande Lake cannot exceed a maximum height of 15 ft. The height of the main building of the previous project was designed to be 20 ft, and the three architectural towers on three sides of the building were designed to be 29 ft tall each. Both the main building and the architectural towers would have exceeded the City's height limit within 100 ft of Laguna Grande Lake. Therefore, the previous project would have violated the City's height requirements and required a zoning amendment in order to allow the main building to be 20 ft tall and the architectural towers to be 29 ft tall within 100 ft of Laguna Grande Lake.

As noted above, the Coastal Commission certified the City's LCP in June 2013. An LCP consists of two major parts: the LUP and the CIP. Whereas the LUP designates the kinds, location, and intensity of land and water uses and presents applicable resource protection and development policies, the CIP provides development regulations for specific Coastal Zone activities needed to carry out the LUP. The CIP is referred to as Title 18, Zoning Ordinance for the City of Seaside (Applicable to Areas Within the Coastal Zone), and applies to all development within the Coastal Zone.

According to Title 18:

- Drive-through restaurants would be considered a conditionally permitted use within the zoning designation Coastal Visitor-Serving Commercial (CVSC), as identified in Figure 1a (Coastal Zoning Map) in the City's CIP;
- Allowable building heights within 100 ft of Laguna Grande Lake would be increased to a maximum height of 20 ft, with allowances for architectural features up to a maximum height of 30 ft; and
- Buffers and setbacks would be a minimum of 50 ft from wetland/riparian areas, but smaller setbacks would be allowed for the development of recreational trails and/or nature observation platforms based on site constraints.

The In-N-Out Burger Drive-Through Restaurant Project is consistent with the City's certified LCP (refer to Appendix C for a full analysis of the project's consistency with the LCP's LUP and CIP and a report addressing the proposed project with regard to Sea Level Rise) and would not require any zoning code amendments. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

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10. MINERAL RESOURCES. Would the project:

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?						X
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?						X

The previously certified FEIR concluded that:

- No mineral resources have been identified at the proposed project site;
- There are no known mineral resources within the proposed project area;
- Implementation of the proposed project would not result in the loss or availability of a known mineral resource that would be of value to the region and the residents of the State of California; and
- Implementation of the proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated in the local LUP.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with mineral resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on mineral resources. Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- None of the proposed project changes would significantly affect this environmental resource.

11. NOISE. Would the project result in:

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?					X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?						X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?					X	

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d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
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?						X
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?						X

The previously certified FEIR concluded that:

- Construction and operational activities associated with the proposed project have the potential to expose sensitive receptors to noise levels that exceed normally acceptable standards;
- Operation of the proposed project would not result in excessive ground-borne vibration or ground-borne noise levels;
- Construction activities could temporarily expose noise-sensitive residential uses to perceptible ground-borne vibration or noise levels;
- The proposed project would not result in a substantial permanent increase in ambient traffic noise levels;
- On-site noise from parking lot and delivery activities could reach up to 76 dBA L_{max} (maximum instantaneous noise level measured in A-weighted decibels);
- The proposed project would not result in a substantial temporary or periodic increase in ambient noise levels due to limits of construction hours specified in the City's Municipal Code;
- The proposed project is not within the vicinity of a private airstrip; and
- The proposed project would not have a substantial contribution to cumulative impacts associated with traffic and stationary noise sources.

As described in the previously certified FEIR, implementation of mitigation (including implementation of standard construction noise reduction measures and construction of a 6 ft sound barrier along the length of the entire southwest project boundary) would reduce potential impacts to less than significant levels.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with noise. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on noise, and the mitigation identified in the previously certified FEIR remains applicable to the proposed project. Therefore, the City finds:

A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in

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the severity of previously identified significant effects have not occurred; B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and C. None of the proposed project changes would significantly affect this environmental resource.
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12. POPULATION AND HOUSING. Would the project:

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)?						X
b) Displace substantial numbers of existing housing, necessitating the construction of the replacement housing elsewhere?						X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?						X

The previously certified FEIR concluded that the proposed project would not:

- Induce substantial population grown in the area, either directly or indirectly;
- Displace substantial numbers of existing housing, thereby necessitating the construction of the replacement housing elsewhere; and
- Displace substantial numbers of people, thereby necessitating the construction of replacement housing elsewhere.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with population and housing. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on population and housing. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

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13. PUBLIC SERVICES

a) 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:?						
i) Fire protection?					X	
ii) Police protection?					X	
iii) Schools?						X
iv) Parks?					X	
v) Other public facilities?						X

The previously certified FEIR concluded that the proposed project would not result in the need for additional government facilities, the construction of which would cause a significant environmental impact, in order to maintain acceptable service ratios and response times or meet other performance objectives for fire protection, police protection, public schools, public parks, or other public facilities. Furthermore, the proposed project would not contribute to cumulative impacts associated with the provision of public services. The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with public services. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on public services. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

14. RECREATION.

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?					X	
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In-N-Out Burger Drive-Through Restaurant

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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?					X	
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The previously certified FEIR concluded that the proposed project's construction of a pedestrian/bicycle trail connecting the existing pedestrian/bicycle trail that borders Laguna Grande Regional Park and Lake with the sidewalk along Del Monte Boulevard would enhance public access to recreational and riparian coastal resources by linking the Monterey Bay Coastal Bike Trail along Del Monte Boulevard with the pedestrian/bicycle trail around the Laguna Grande Regional Park and Lake. Furthermore, because the proposed trail would be located in primarily ruderal (disturbed) habitat, its construction would not result in a significant physical impact. The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with recreational resources. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on recreation. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

15. TRANSPORTATION/TRAFFIC. Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?					X	
b) Exceed either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?						X
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?						X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?					X	
e) Result in inadequate emergency access?						X

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
---	---	---	--	--	--	-----------

f) Result in inadequate parking capacity?					X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?						X

As part of this Addendum, a new *Traffic Impact Analysis* (TIA) (refer to Appendix E) including new traffic counts at 17 intersections within the study area was prepared. The new TIA concluded that the proposed project would have the same traffic impacts as those identified in the previously certified FEIR, with the exception of the following two impacts which would be eliminated under the proposed project:

- There are currently no impacts at the Canyon Del Rey Boulevard/SR-1 northbound ramp intersection where previously there was a cumulatively significant and unavoidable impact because the intersection was previously operating at a deficient level of service (LOS) in the existing condition, and the addition of any project traffic to an intersection that is already operating at a deficient LOS is considered significant. Currently, however, the intersection is no longer operating at a deficient LOS as stated in the new TIA, and the addition of project traffic to this intersection would not result in a deficient LOS. Therefore, there is no longer a cumulatively significant and unavoidable impact at the Canyon Del Rey Boulevard/SR-1 northbound ramp intersection.
- The full-access driveway at which the previous TIA identified a deficiency (LOS F) for the outbound movements (combined left turns and right turns) has improved to satisfactory LOS E because the new traffic counts show slightly lower volumes along Del Monte Boulevard in 2014 vs. 2010.

Therefore, the City finds:

- Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred.
- New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified.
- None of the proposed project changes would affect this environmental resource.

16. UTILITIES AND SERVICE SYSTEMS. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					X	
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?					X	
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?					X	

In-N-Out Burger Drive-Through Restaurant

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?					X	
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?					X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?						X

The previously certified FEIR concluded that the proposed project:

- Would not exceed wastewater treatment requirements of the applicable RWQCB;
- Would not require or result in the construction of new wastewater treatment facilities or an expansion of existing facilities;
- Would not require the construction of new municipal storm water drainage facilities or an expansion of existing facilities;
- Would require a new or expanded supply of water and associated treatment facilities, the provision of which would potentially cause significant environmental impacts;
- Is in compliance with all federal, State, and local statutes and regulation related to solid waste;
- Would not contribute to cumulative impacts associated with the provision of wastewater treatment facilities or solid waste disposal facilities; and
- Would require a new or expanded supply of water and associated treatment facilities, the provision of which would potentially be cumulatively considerable.

As stated in the previously certified FEIR, a water permit for the proposed project was issued by the Monterey Peninsula Water Management District with consent from the Seaside City Council. This water permit remains valid for the proposed project. Water for the proposed project would be supplied by CAL-AM.

Furthermore, the previously certified FEIR concluded there is adequate capacity at the wastewater treatment facility to serve the proposed project and that the Marine Sanitary Landfill has adequate capacity to accommodate the proposed project's solid waste disposal needs.

The minor modifications to the site plan (including the addition of an RV parking space, the addition of five benches, the removal of one wall sign, the replacement of four double-head lights with single-head lights, the removal of two lampposts with double-head lights, and the replacement of previously proposed stormwater BMPs with a series of new BMPs to capture, treat, retain, and infiltrate stormwater runoff) would not result in a change to the significance conclusions associated with utilities and service systems. Furthermore, the minor modifications to the site plan would not result in any impacts other than those considered in the previously certified FEIR. The minor modifications would not alter the type or degree of impact that the In-N-Out Burger Drive-Through Restaurant Project will have on utilities and service systems. Therefore, the City finds:

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
---	---	---	--	--	--	-----------

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;
- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would affect this environmental resource.

17. MANDATORY FINDINGS OF SIGNIFICANCE:

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?					X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?					X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?					X	

The previously certified FEIR considered the impacts of the proposed project on special-status species and cultural resources. The previously certified FEIR concluded that the proposed project has the potential to temporarily impact special-status species, riparian habitat, federally protected wetlands, and temporarily disturb wildlife movements during construction. Implementation of the proposed project would increase human and vehicular activity at the proposed project site, which would negatively impact wildlife and wildlife habitat. In addition, implementation of the proposed project has the potential to impact previously unidentified historic, archaeological, and paleontological resources or previously unidentified human remains, although it is considered unlikely. As mentioned in the previously certified FEIR, these potential impacts would be reduced to less than significant levels with implementation of standard conditions and mitigation. The revisions contemplated in this modified project do not change the intended outcomes and thus do not change the likely cumulative impacts of the project. The changes made to the In-N-Out Burger Drive-Through Restaurant Project would not result in a change to the physical environmental conditions of the proposed project site; therefore, there is no anticipated change in the impacts to biological resources and no anticipated change to the project's contribution to cumulative impacts. Therefore, the City finds:

- A. Substantial changes in the project and project circumstances resulting in new significant effects or a substantial increase in the severity of previously identified significant effects have not occurred;

Issues and Supporting Information Sources	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing New or Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce, but not Eliminate Significant Effects in Previous EIR	Less than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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- B. New information of substantial importance with respect to this environmental resource/impact resulting in new significant effects or a substantial increase in the severity of previously identified effects has not been identified; and
- C. None of the proposed project changes would significantly affect this environmental resource.

APPENDIX A

Previously Certified FEIR Figures

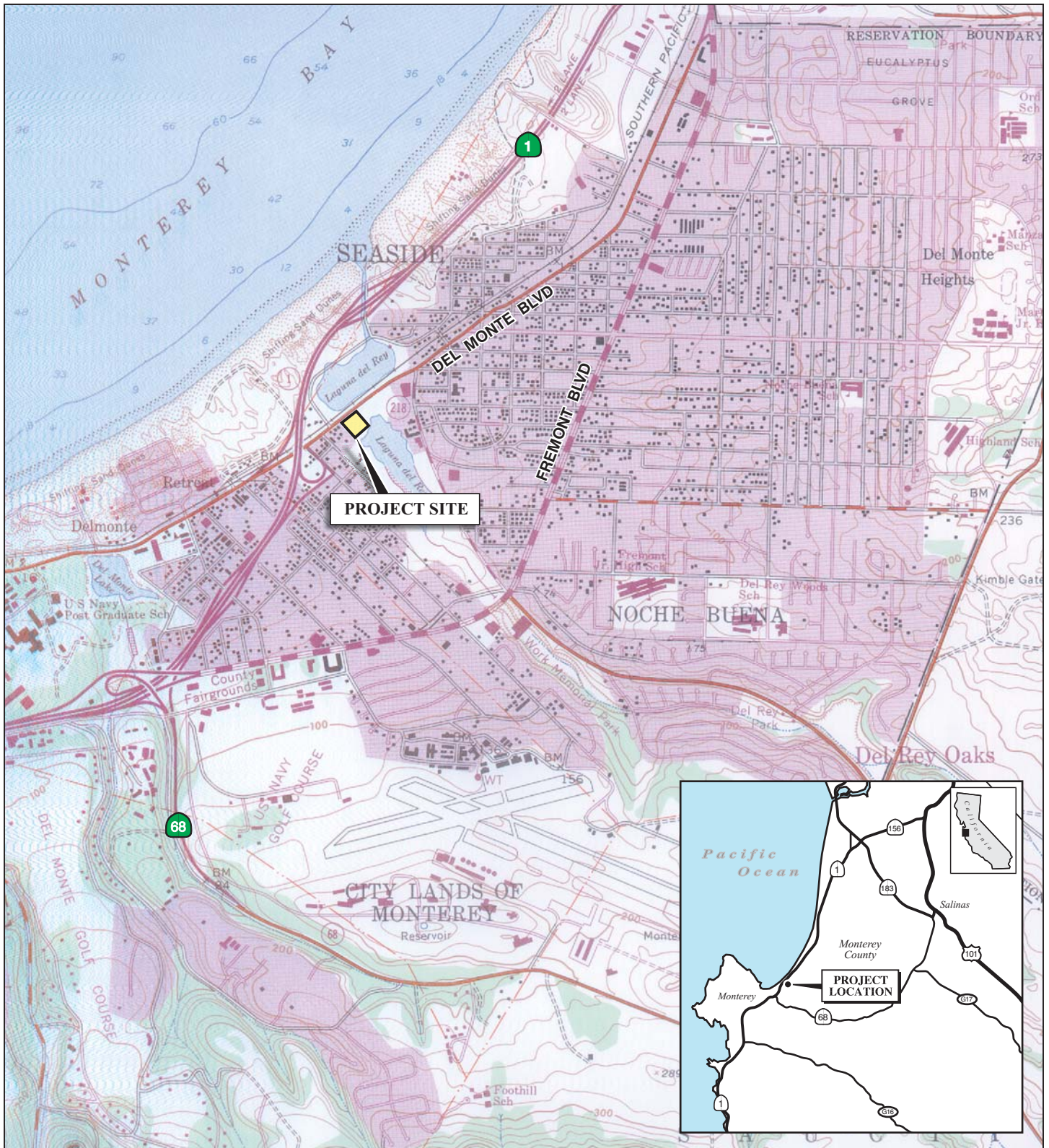


FIGURE 1

LSA



0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Seaside, Ca.

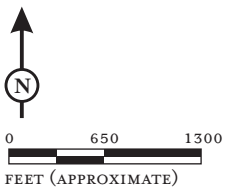
I:\SEZ1001\G\Location.cdr (12/3/10)

In-N-Out Burger Drive-Through Restaurant EIR
Project Location



LSA

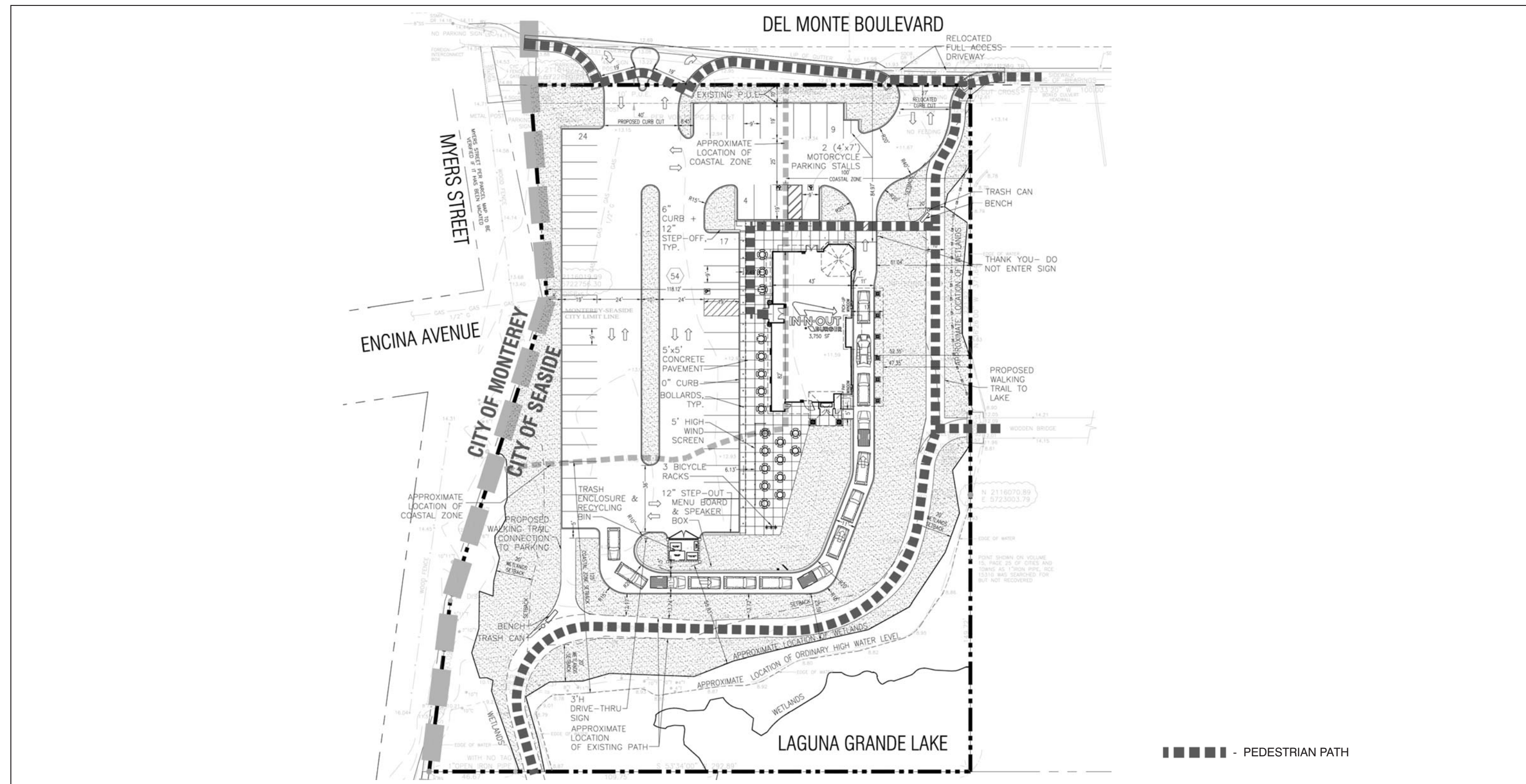
FIGURE 2



SOURCE: Google Earth

I:\SEZ1001\G\Jurisdictional Boundaries.cdr (12/3/10)

In-N-Out Burger Drive-Through Restaurant EIR
Jurisdictional Boundaries



LSA

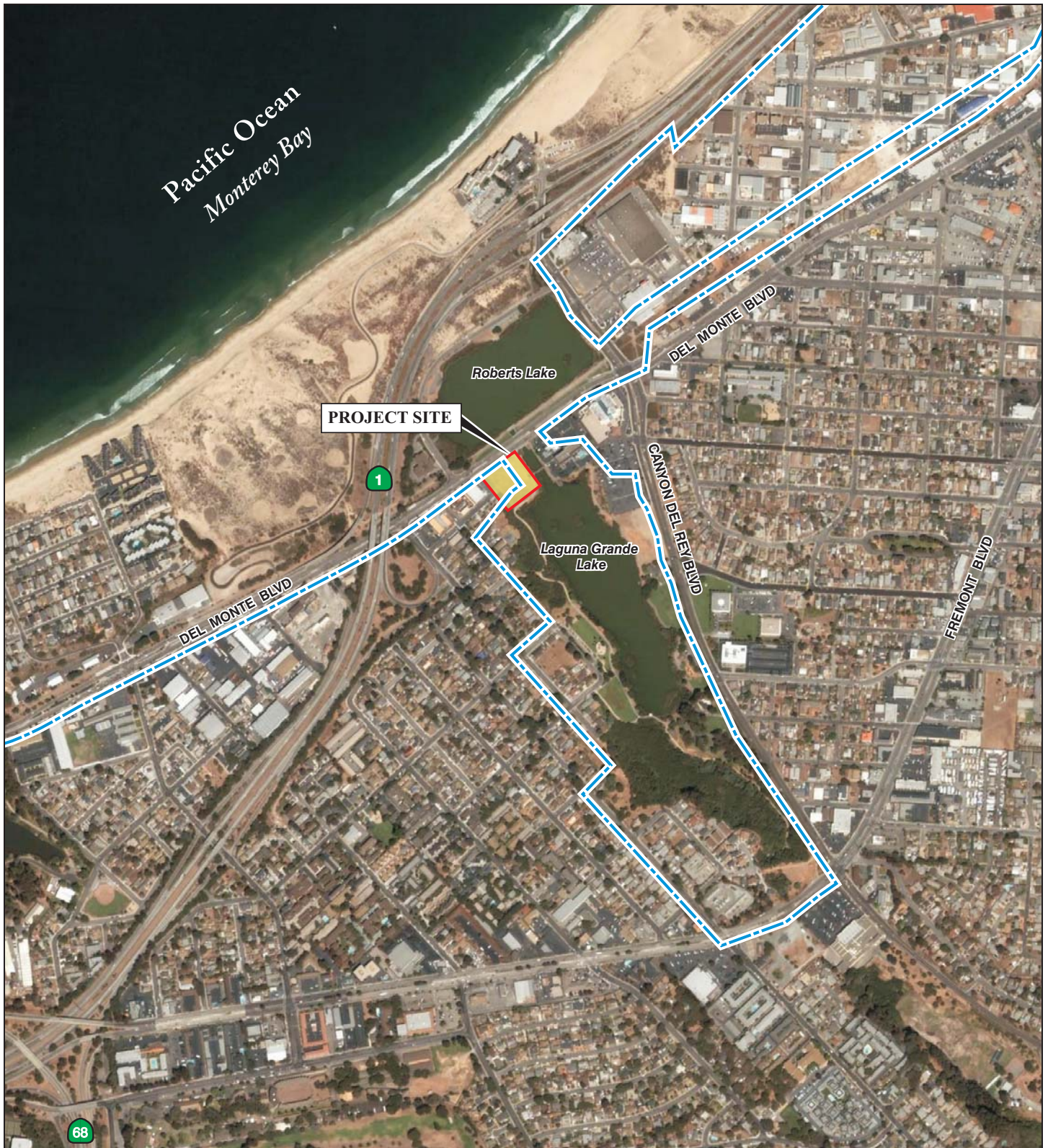


SOURCE: GreenbergFarrow

I:\SEZ1001\G\Site Plan.cdr (12/3/10)

FIGURE 3

In-N-Out Burger Drive-Through Restaurant EIR
Conceptual Site Plan

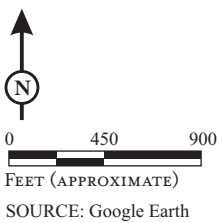


LSA

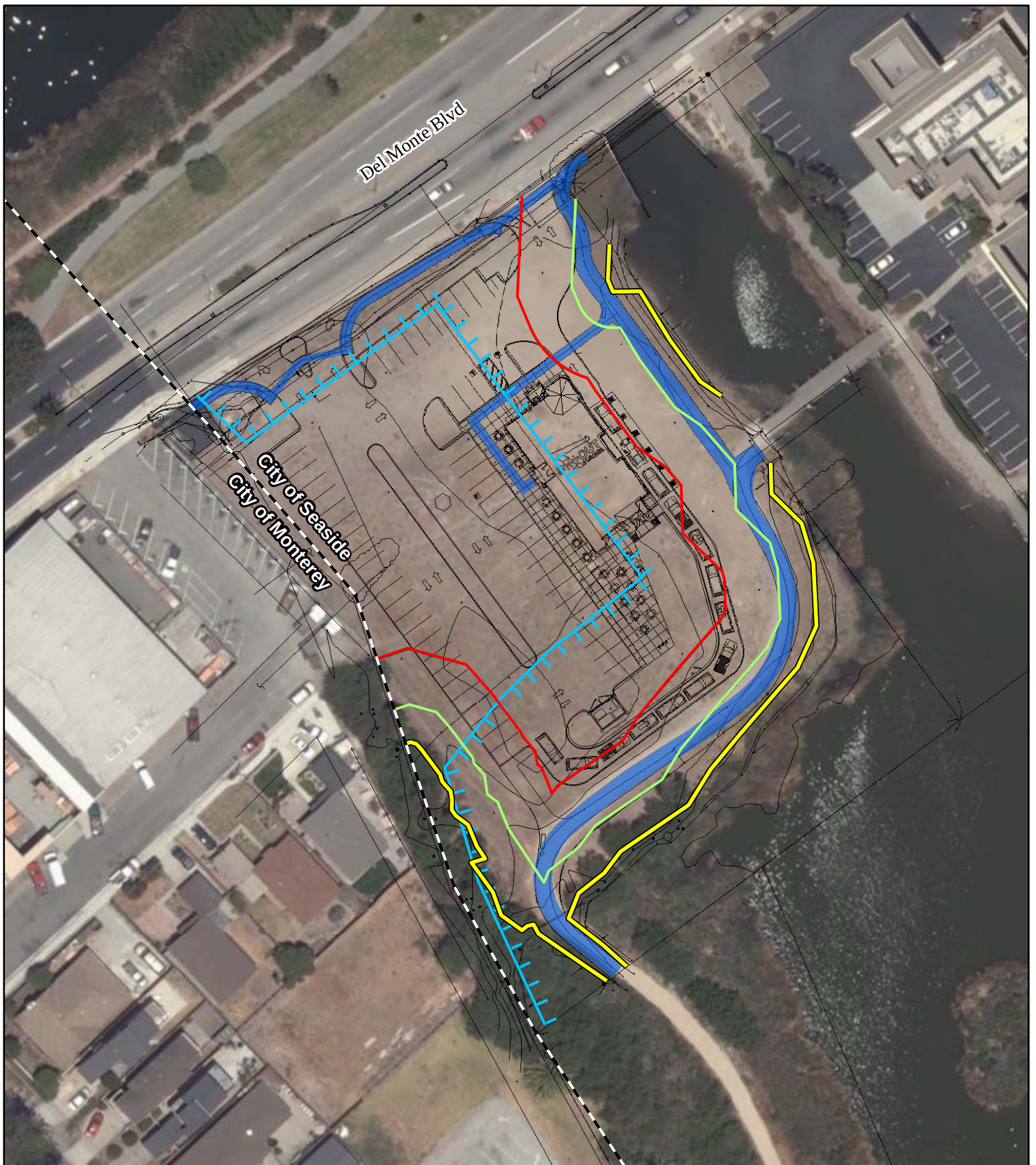
LEGEND

 - Coastal Zone Boundary

FIGURE 4



In-N-Out Burger Drive-Through Restaurant EIR
Coastal Zone Boundary



LSA

LEGEND

- Wetland Boundary
- Coastal Zone Boundary
- 20 Foot Setback
- 50 Foot Setback
- City Boundaries
- Pedestrian/Bicycle Trail



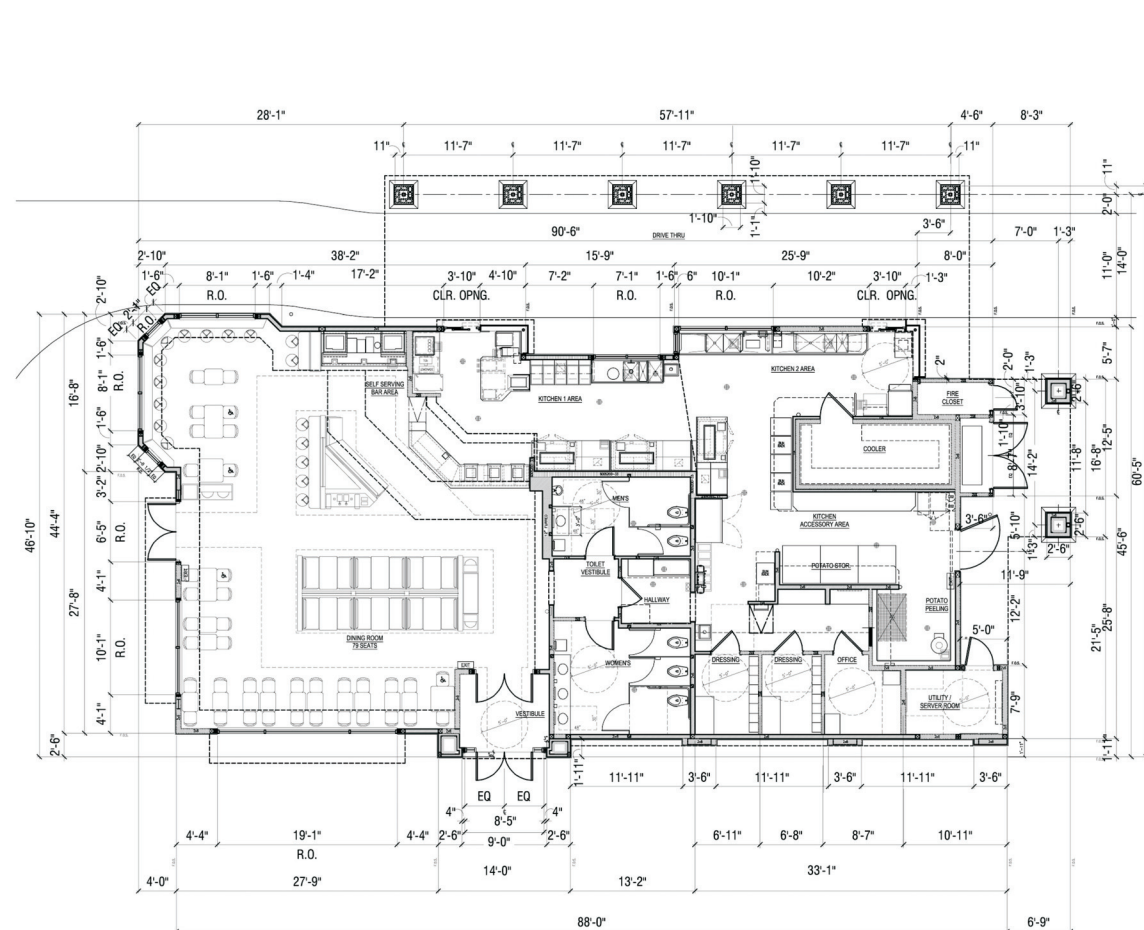
0 37.5 75
FEET

SOURCE: Bing Maps (2009); GreenbergFarrow (2010); City of Seaside (2010)

I:\SEZ1001\GIS\Coastal_Zone_Setback.mxd (12/3/2010)

FIGURE 5

In-N-Out Burger Drive-Through Restaurant EIR
Coastal Zone Setback



FINISH SCHEDULE

▲	FINISH MATERIAL
1	TILE ROOF
2	STUCCO WITH SAND FLOAT TEXTURE FINISH
3	CLEAR ANODIZED ALUMINUM STOREFRONT DOORS
4	CLEAR ANODIZED ALUMINUM WINDOWS
5	PVC COATED WICK AWNINGS
6	STONE VENEER
7	ILLUMINATED LOGO SIGN UNDER SEPARATE PERMIT
8	L.E.D. DOUBLE BAND LIGHTING UNDER SEPARATE PERMIT
9	WOOD BEAM RAFTER TAIL STAINED
▼	FINISH COLOR
A	SHERWIN WILLIAMS - SW7036 - ACCESSIBLE BEIGE
B	SHERWIN WILLIAMS - SW6109 - HOPSACK
C	SHERWIN WILLIAMS - SW7041 - VAN DYKE BROWN
R	DUNN EDWARDS STAIN TO MATCH DE6042 BEAR IN MIND
S	CORONADO STONE - CARMEL MOUNTAIN EASTERN LEDGESTONE
T	EAGLE ROOFING PRODUCTS CAPISTRANO STYLE 3125 TERRACOTTA
W	IN-N-OUT CUSTOM COLORS - SW7041 - VAN DYKE BROWN

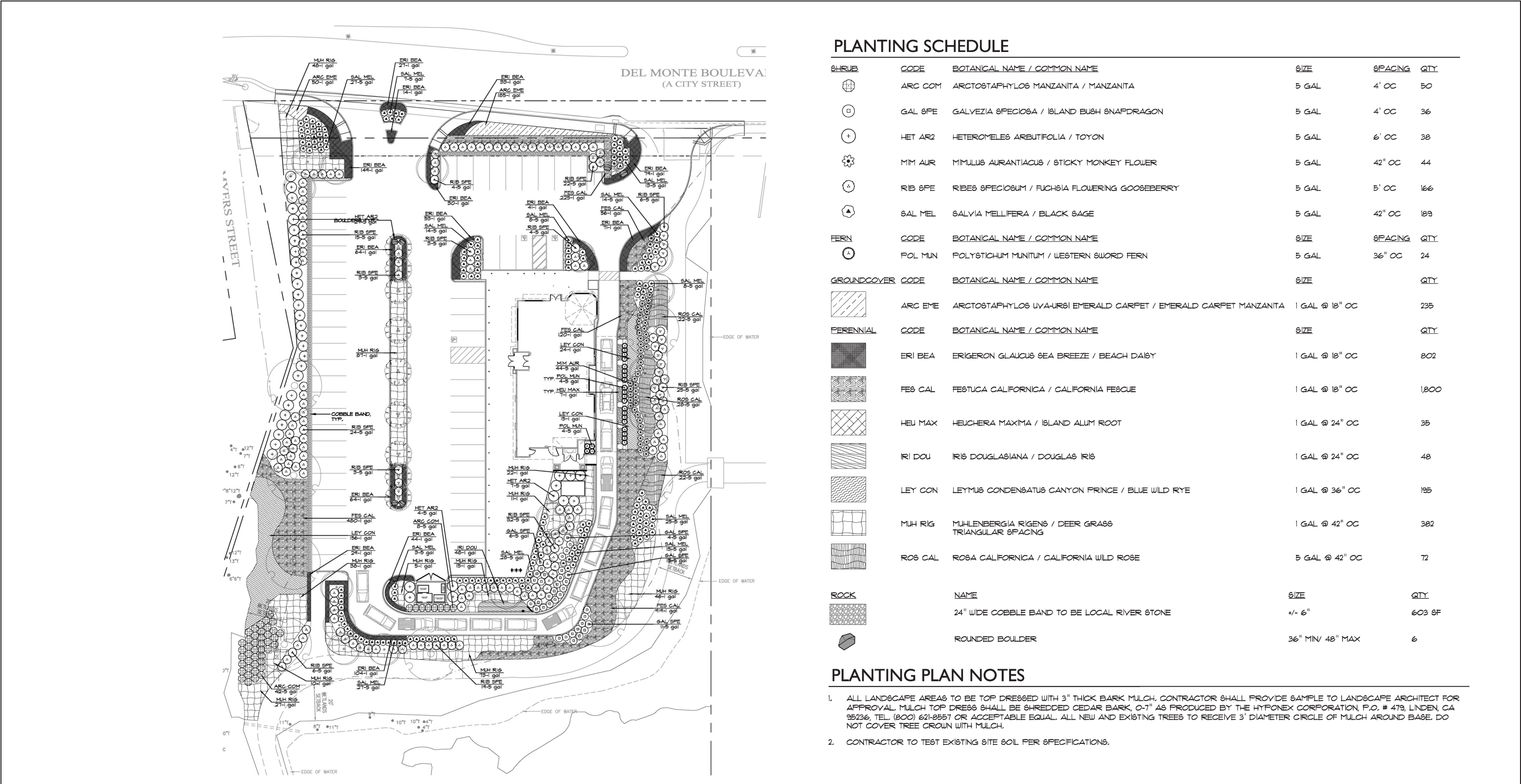
Note:
Colors shown on these elevations are for illustration
purposes only. For actual colors, refer to manufacturer's
samples.

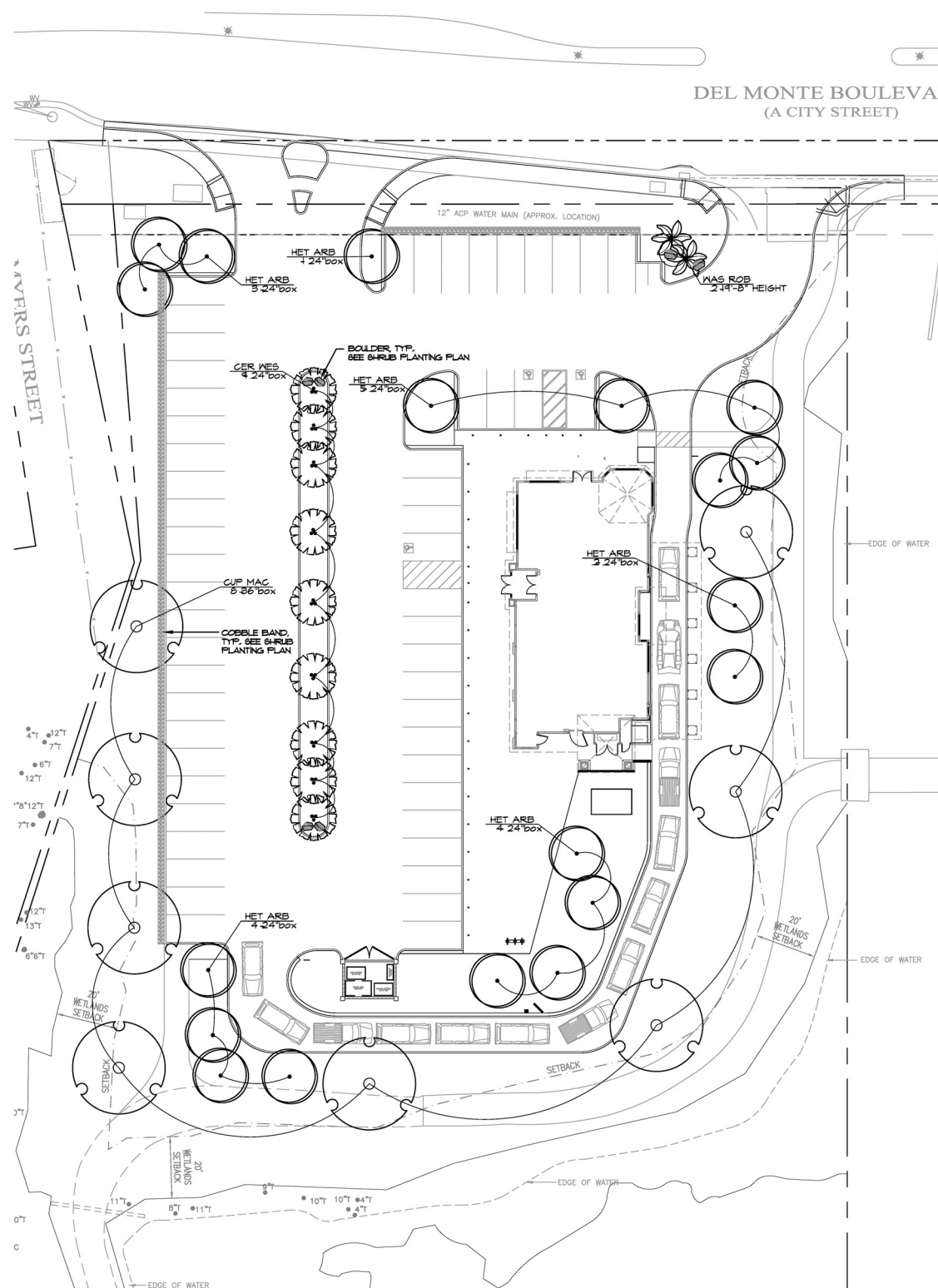
SCALE: 1/8"=1'-0"



FIGURE 6

In-N-Out Burger Drive-Through Restaurant EIR
Floor Plan and Elevations





TREE SCHEDULE

CODE	BOTANICAL NAME / COMMON NAME	SIZE	QTY
CER WES	CERCIS OCCIDENTALIS / WESTERN REDBUD MULTI-TRUNK	24"BOX	9
CUP MAC	CUPRESSUS MACROCARPA / MONTEREY CYPRESS	36"BOX	8
HET ARB	HETEROMELES ARBUTIFOLIA / TOYON	24"BOX	19
WAS ROB	WASHINGTONIA ROBUSTA / MEXICAN FAN PALM	19-8" HEIGHT	2

TREE PLANTING NOTES

- ALL LANDSCAPE AREAS TO BE TOP DRESSED WITH 3" THICK BARK MULCH. CONTRACTOR SHALL PROVIDE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL. MULCH TOP DRESS SHALL BE SHREDDED CEDAR BARK, 0-7" AS PRODUCED BY THE HYPONEX CORPORATION, P.O. # 479, LINDEN, CA 95236, TEL. (800) 621-8557 OR ACCEPTABLE EQUAL. ALL NEW AND EXISTING TREES TO RECEIVE 3' DIAMETER CIRCLE OF MULCH AROUND BASE. DO NOT COVER TREE CROWN WITH MULCH.
- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.

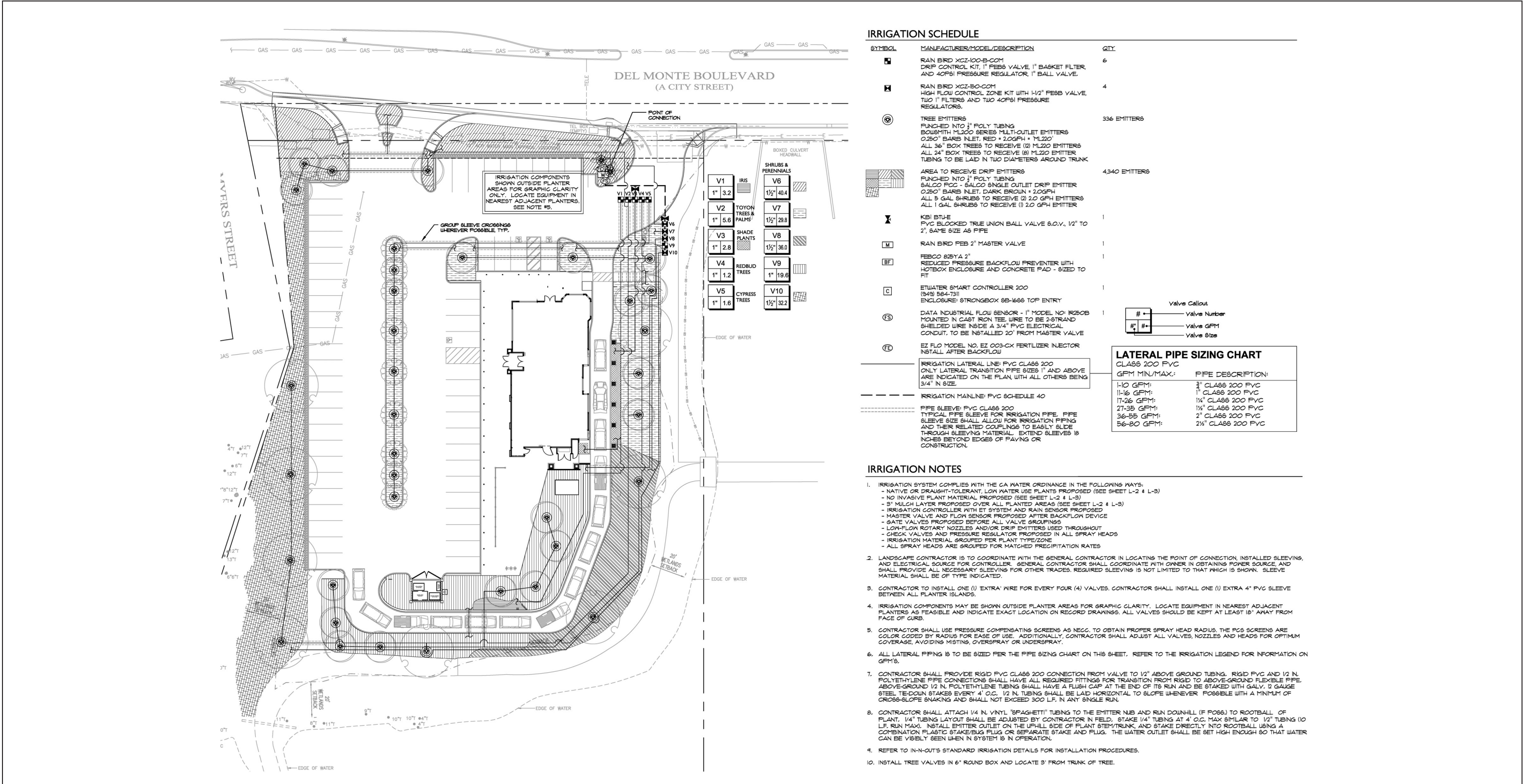
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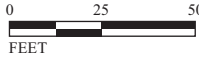
SOURCE: SSA Landscape Architects Incorporated

I:\SEZ1001\G\Landscape Plan-b.cdr (3/1/11)

FIGURE 7b



LSA



SOURCE: SSA Landscape Architects Incorporated

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FIGURE 7c

In-N-Out Burger Drive-Through Restaurant EIR
Landscape Plan

APPENDIX B

Revised Site Plan Figures



DEL MONTE BOULEVARD
(A CITY STREET WEST VARIOUS)

SITE AREA

IN-N-OUT BURGER NET SITE AREA	±1.71 AC (±74,599 SF)
WETLANDS AREA	±0.48 AC (±20,719 SF)
TOTAL IN-N-OUT SITE AREA	±2.19 AC(±95,317 SF)
TOTAL HARDCAPE:	±36.43 SF
TOTAL IMPERVIOUS SURFACES:	±40,183 SF
TOTAL SITE COVERAGE:	±42.2%

DINING AND VESTIBULES

DINING AND VESTIBULES	1,735 SF
KITCHEN	1,143 SF
OFFICES	278 SF
RESTROOMS	392 SF
STORAGE AREA	142 SF
ELECTRICAL/FIRE CLOSET	60 SF
TOTAL IN-N-OUT BURGER BUILDING AREA	3,750 SF
F.A.R.	0.04

PARKING SUMMARY

USER	RATIO	SPACES REQUIRED	SPACES PROVIDED
IN-N-OUT BURGER: 1 SP/3 SEATS (INDOOR SEATING: 83 SEATS/3=28) (OUTDOOR SEATING: 76 SEATS/3=25) STANDARD (9' X 19'):		53	53
HANDICAP:			49
PV:			3
			1
BICYCLE PARKING: 5% REQ. VEHICULAR			3
MOTORCYCLE PKG: 6% PROV. AUTO PKG.			2
TOTAL PARKING RATIO:			±14.4 SP/1000 SF
TOTAL STACKING PROVIDED:			14 VEHICLES

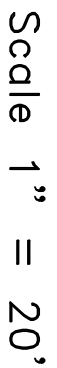
BUILDING/LANDSCAPE SETBACKS

	PROVIDED	REQUIRED
BLDG. SETBACK - FRONT & REAR	84'-11"	0'-0"
BLDG. SETBACK - SIDE	47'-4"	30'-0"*
LANDSCAPE SETBACK - STREET	10'-0"	10'-0"
LANDSCAPE SETBACK - SIDE & REAR	8'-0"	8'-0"

*30' TOTAL: 18' MIN. ON ONE SIDE, 12' MIN. ON OPPOSITE SIDE

LANDSCAPE AREAS

	PROVIDED
TOTAL PROJECT SITE LANDSCAPE AREA*	13,350 SF
TOTAL LANDSCAPE ADJACENT TO PARKING	11,105 SF
PARKING LOT PAVEMENT AREA	31,584 SF
* DOES NOT INCLUDE LANDSCAPE ADJACENT TO PARKING	



PURPOSE:

THE PROJECT NARRATIVE IS TO ACCOMPANY THE LOCAL COASTAL USE PERMIT AND THE COASTAL DEVELOPMENT PERMIT APPLICATIONS FOR AN IN-N-OUT BURGER, A QUICK SERVICE RESTAURANT WITH DRIVE-THROUGH, TO BE LOCATED AT 1350 DEL MONTE BLVD. IN THE CITY OF SEASIDE.

PROJECT OVERVIEW:

THE SUBJECT SITE IS CURRENTLY VACANT. THE +3, 3,750 SQUARE FOOT RESTAURANT WILL HAVE INDOOR DINING, OUTDOOR PATIO SEATING AND A DRIVE-THROUGH WINDOW. PROPOSED VEHICLE CIRCULING IN THE DRIVE-THROUGH LAKE AREA ACCOMMODATE FOURTEEN (14) VEHICLES FROM THE DRIVE-THROUGH LAKE. THERE ARE APPROXIMATELY FIFTY-THREE (53) PARKING SPACES, INCLUDING THREE (3) ADA ACCESSIBLE SPACES ARE PROPOSED TO BE PROVIDED. ALL SERVICE EQUIPMENT (SUCH AS TRASH ENCLOSURES AND TRANSFORMERS) WILL BE ADEQUATELY SCREENED FROM PUBLIC VIEW.

THE IN-N-OUT BURGER'S HOURS OF OPERATION ARE SUNDAY THRU THURSDAY 10:30 A.M. TO 1:00 A.M. AND 10:30 A.M. TO 1:30 A.M. ON FRIDAY AND SATURDAY. THERE ARE FIFTY (50) FULL AND PART TIME EMPLOYEES WITH AN AVERAGE OF SIXTEEN (16) EMPLOYEES PER SHIFT. THE TYPICAL IN-N-OUT BURGER HAS TWO SHIFTS PER DAY.

THE SUBJECT SITE IS ZONED REGIONAL COMMERCIAL (CRG). PROPERTIES TO THE NORTH, EAST, AND WEST OF THE SITE ARE ZONED OPEN SPACE RECREATIONAL (OSR). FURTHER TO THE NORTH PROPERTIES ARE ZONED CRG. PROPERTIES TO THE SOUTH ARE LOCATED IN THE CITY OF MONTEREY. THE PROPOSED IN-N-OUT RESTAURANT IS COMPATIBLE WITH EXISTING USES IN THE AREA.

ACCESS TO THE SUBJECT SITE IS PROPOSED TO BE FROM TWO DRIVEWAYS ALONG DEL MONTE BLVD. ONE DRIVEWAY WILL BE A RIGHT-IN/RIGHT-OUT ONLY AND THE OTHER WILL BE FULL-ACCESS. TRAFFIC AND PARKING DATA FOR A COMPARABLE IN-N-OUT BURGER FACILITY WILL BE SUBMITTED AS A SUPPLEMENT TO THE ABOVE MENTIONED APPLICATIONS.

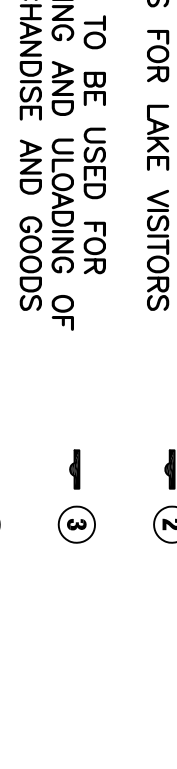
THE PROPOSED IN-N-OUT BUILDING HAS BEEN DESIGNED TO BE IN HARMONY WITH THE EXISTING USES AS WELL AS TO COMPLY WITH DESIGN GUIDELINES PER THE DIRECTION OF THE CITY OF SEASIDE. THE DESIGN INCLUDES TOWER ELEMENTS WITH TILE ROOFS TO BREAK UP BUILDING MASS, AWNINGS, AND A COVERED DRIVE THRU PICK UP CANOPY.

CONCLUSION:

IN-N-OUTBURER WILL WORK CLOSELY WITH THE CITY OF SEASIDE TO ENSURE THAT ALL THE PROJECT DOCUMENTS WILL BE COORDINATED AND THE ENTITLEMENT APPROVALS, PLAN CHECK, PERMITTING AND CONSTRUCTION PROCESSES WILL PROCEED IN AN ORDERLY FASHION.

THE PROPOSED IN-N-OUT WILL BE A POSITIVE ADDITION TO THE CITY OF SEASIDE. THE COMPANY'S FOCUS ON CUSTOMER SERVICE AND CONSISTENTLY HIGH QUALITY FOOD PRODUCT WILL BE ENJOYED AND TREASURED BY THE NEARBY RESIDENTS

LEGEND



The diagram illustrates a proposed pedestrian pathway and lakefront access. A dashed line represents the 'PEDESTRIAN PATH' along the lakefront. Key features include:

- PEDESTRIAN PATHWAY SIGN TO LAKE FRONTAGE:** A signpost with a directional arrow pointing towards the lake.
- REPROPORTIONING PARKING SIGNS FOR LAKE VISITORS:** A signpost with a directional arrow pointing towards the lake.
- AREA TO BE USED FOR COORDINATED HANDLING OF MERCHANDISE AND GOODS:** A designated area for handling goods, marked with a signpost and a directional arrow.
- ACCESSIBLE RAMP:** A ramp leading to the lakefront, marked with a signpost and a directional arrow.
- Lighting and Safety:** A signpost with a directional arrow pointing towards the lake, and a signpost with a directional arrow pointing towards the lake.

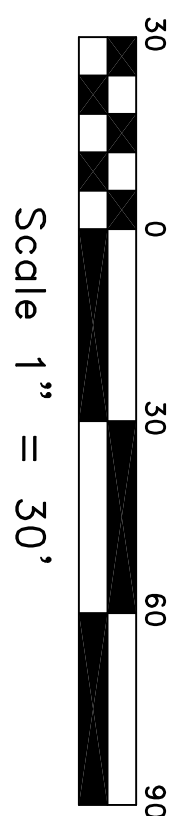
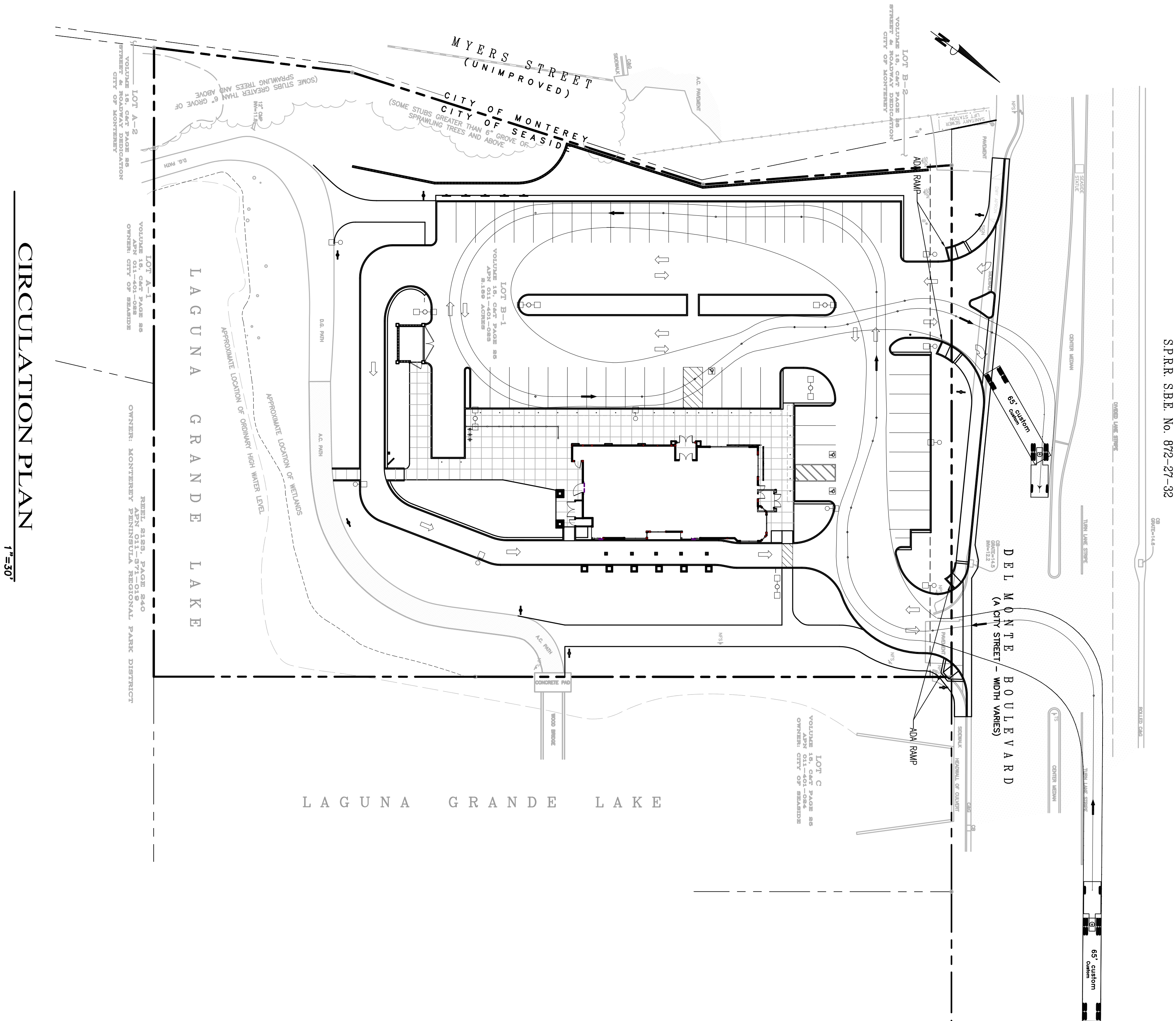
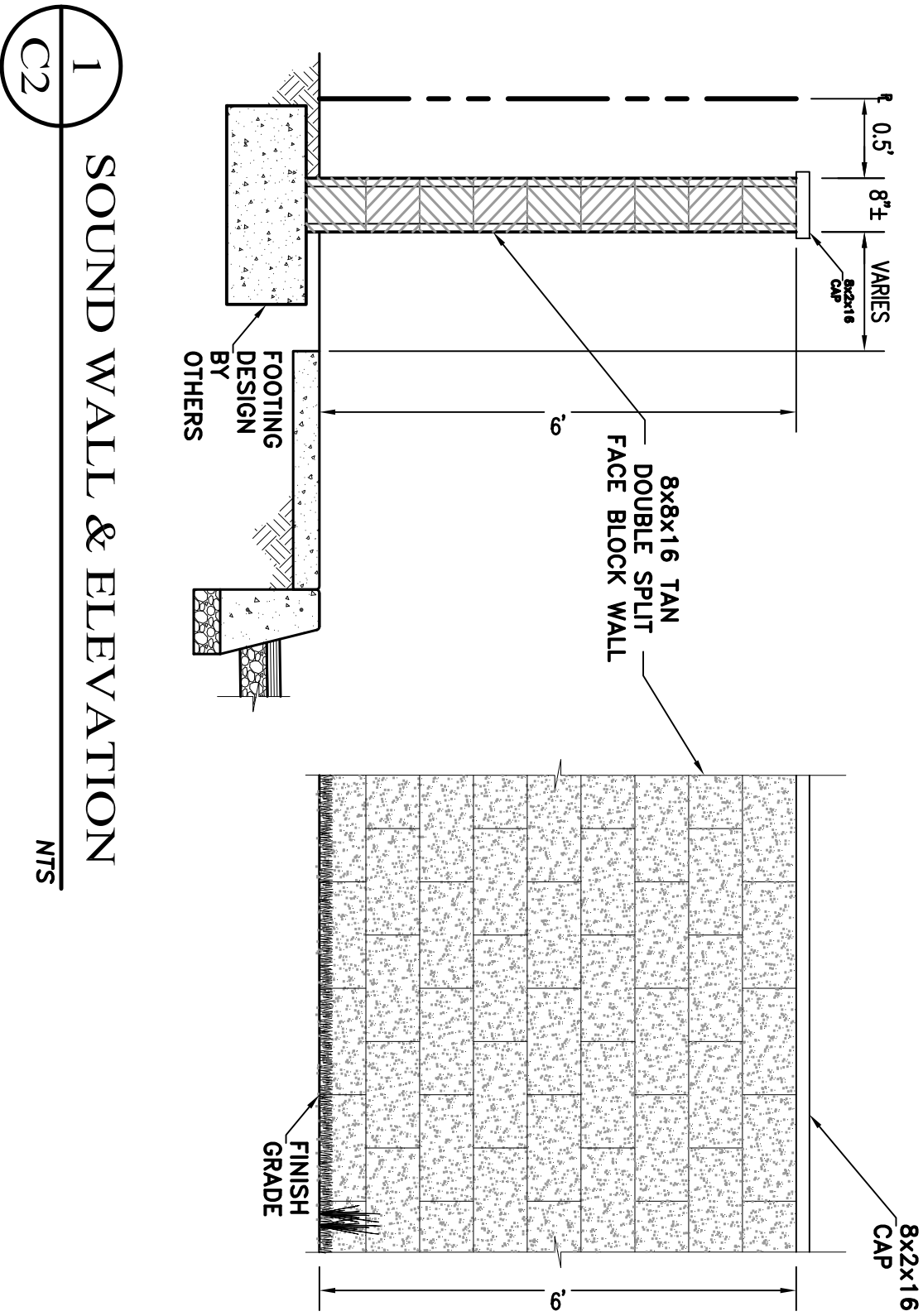
IN-N-OUT BURGER
APN# 011-401-023-000

Project Location: 1350 DEL MONTE BLVD. SEASIDE, CA
PREPARED FOR: GREENBERGFARROW 1920 MAIN ST., SUITE 1150 IRVINE, CA



Civil Engineering Land Development Drafting
126 Bonifacio Place, Suite C, Monterey, CA 93940
Phone: (831) 647-1192 Fax (831) 647-1194
mail@C3Engineering.net

			
			
			
			
			
			
			
			
			
REV.	DATE	DESCRIPTION	BY



			
			
			
			
			
			
			
			
			
REV.	DATE	DESCRIPTION	BY

Packet Page 421

CIRCULATION PLAN

IN-N-OUT BURGER
APN# 011-401-023-000

Project Location: 1350 DEL MONTE BLVD. SEASIDE, CA
PREPARED FOR: GREENBERGFARROW 1920 MAIN ST., SUITE 1150 IRVINE, CA



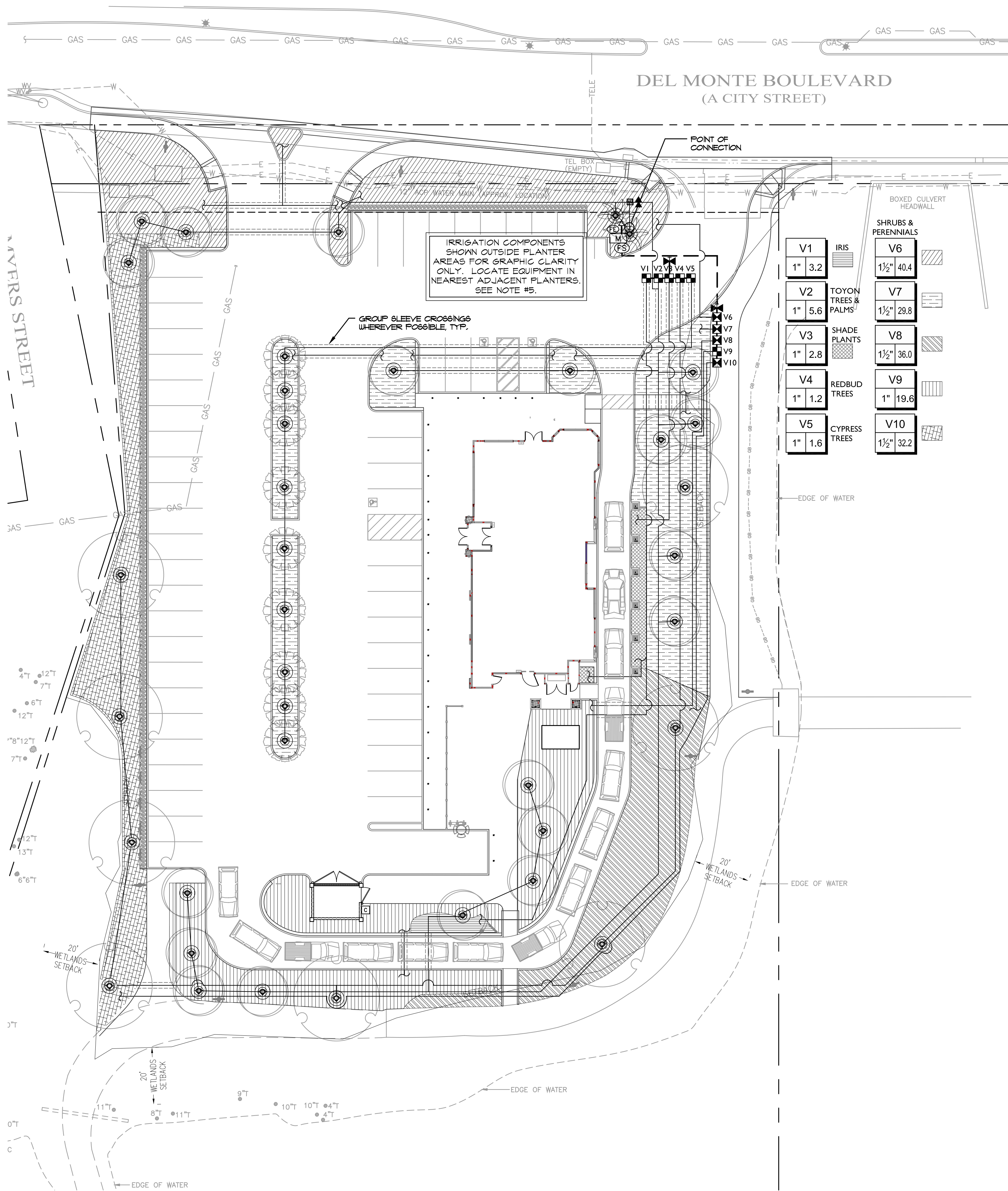
Civil Engineering Land Development Drafting
126 Bonifacio Place, Suite C, Monterey, CA 93940
Phone: (831) 647-1192 Fax (831) 647-1194
mail@C3Engineering.net

SCALE:	AS NOTED
DATE:	10-09-2014
DESIGN BY:	FJC
DRAWN BY:	ECH
CHECKED BY:	FJC
SHEET NUMBER:	

C2

OF 2 SHEETS

PROJECT# 114147



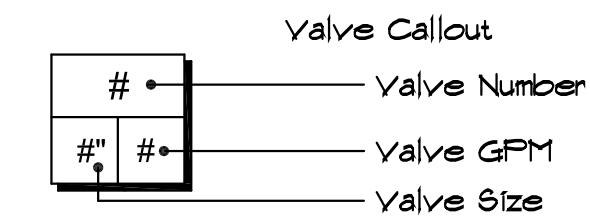
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY.
■	RAIN BIRD XCZ-100-B-COM DRIP CONTROL KIT, 1" FESB VALVE, 1" NETAFIM DISC FILTER AND 40PSI PRESSURE REGULATOR, 1" BALL VALVE.	6
■	RAIN BIRD XCZ-150-COM HIGH FLOW CONTROL ZONE KIT WITH 1-1/2" FESB VALVE, TWO 1" NETAFIM DISC FILTERS AND TWO 40PSI PRESSURE REGULATORS, 1-1/2" BALL VALVE.	4
⊙	TREE EMITTERS RAINBIRD RW8-B-C-1402 DEEP ROOT WATERING SYSTEM W/ 0.5 GPM BUBBLER INSTALL (2) PER SYMBOL	PER PLAN
■	AREA TO RECEIVE DRIP EMITTERS NETAFIM TLCV6-1210 PSI COMP. DRIPLINE W/ CHECK VALVE SET PRS-D AT 45 PSI, TECHLINE SHALL BE SPACED APPROX. 3' OFF PERIMETER AND 18" O.C. AS SHOWN PER PLAN. FOOTERS AND HEADERS SHALL BE 3/4" PVC PIPE U.O.N.	PER PLAN
⌵	KBI BTU-E PVC BLOCKED TRUE UNION BALL VALVE S.O.V., 1/2" TO 2", SAME SIZE AS PIPE	1
M	1/2" HYDROMETER - COMBINATION MASTER VALVE FLOW SENSOR. INSTALL IN PLANTER AREA TYP.	1
BF	FEBCO 8251A 2" REDUCED PRESSURE BACKFLOW PREVENTER WITH HOTBOX ENCLOSURE AND CONCRETE PAD - SIZED TO FIT	1
C	ETWATER SMART CONTROLLER 200 (949) 584-7311 ENCLOSURE: STRONGBOX SB-1666 TOP ENTRY	1
FS	1/2" HYDROMETER - COMBINATION MASTER VALVE FLOW SENSOR. INSTALL IN PLANTER AREA TYP.	1
FE	EZ FLO MODEL NO. EZ 003-CX FERTILIZER INJECTOR INSTALL AFTER BACKFLOW	1

IRRIGATION LATERAL LINE: PVC CLASS 200
ONLY LATERAL TRANSITION PIPE SIZES 1" AND ABOVE
ARE INDICATED ON THE PLAN, WITH ALL OTHERS BEING
3/4" IN SIZE.

IRRIGATION MAINLINE: PVC SCHEDULE 40

PIPE SLEEVE: PVC CLASS 200
TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE
SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING
AND THEIR RELATED COUPLINGS TO EASILY SLIDE
THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18
INCHES BEYOND EDGES OF PAVING OR
CONSTRUCTION.



LATERAL PIPE SIZING CHART

CLASS 200 PVC

GPM MIN./MAX.:	PIPE DESCRIPTION:
1-10 GPM:	3/4" CLASS 200 PVC
11-16 GPM:	1" CLASS 200 PVC
17-26 GPM:	1 1/4" CLASS 200 PVC
27-35 GPM:	1 1/2" CLASS 200 PVC
36-55 GPM:	2" CLASS 200 PVC
56-80 GPM:	2 1/2" CLASS 200 PVC

IRRIGATION NOTES

- IRRIGATION SYSTEM COMPLIES WITH THE CA WATER ORDINANCE IN THE FOLLOWING WAYS:
 - NATIVE OR DRAUGHT-TOLERANT, LOW WATER USE PLANTS PROPOSED (SEE SHEET L-2 & L-3)
 - NO INVASIVE PLANT MATERIAL PROPOSED (SEE SHEET L-2 & L-3)
 - 3" MULCH LAYER PROPOSED OVER ALL PLANTED AREAS (SEE SHEET L-2 & L-3)
 - IRRIGATION CONTROLLER WITH ET SYSTEM AND RAIN SENSOR PROPOSED
 - MASTER VALVE AND FLOW SENSOR PROPOSED AFTER BACKFLOW DEVICE
 - GATE VALVES PROPOSED BEFORE ALL VALVE GROUPINGS
 - LOW-FLOW ROTARY NOZZLES AND/OR DRIP EMITTERS USED THROUGHOUT
 - CHECK VALVES AND PRESSURE REGULATOR PROPOSED IN ALL SPRAY HEADS
 - IRRIGATION MATERIAL GROUPED PER PLANT TYPE/ZONE
 - ALL SPRAY HEADS ARE GROUPED FOR MATCHED PRECIPITATION RATES
- LANDSCAPE CONTRACTOR IS TO COORDINATE WITH THE GENERAL CONTRACTOR IN LOCATING THE POINT OF CONNECTION, INSTALLED SLEEVING, AND ELECTRICAL SOURCE FOR CONTROLLER. GENERAL CONTRACTOR SHALL COORDINATE WITH OWNER IN OBTAINING POWER SOURCE, AND SHALL PROVIDE ALL NECESSARY SLEEVING FOR OTHER TRADES. REQUIRED SLEEVING IS NOT LIMITED TO THAT WHICH IS SHOWN. SLEEVE MATERIAL SHALL BE OF TYPE INDICATED.
- CONTRACTOR TO INSTALL ONE (1) 'EXTRA' WIRE FOR EVERY FOUR (4) VALVES. CONTRACTOR SHALL INSTALL ONE (1) EXTRA 4" PVC SLEEVE BETWEEN ALL PLANTER ISLANDS.
- IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTER AREAS FOR GRAPHIC CLARITY. LOCATE EQUIPMENT IN NEAREST ADJACENT PLANTERS AS FEASIBLE AND INDICATE EXACT LOCATION ON RECORD DRAWINGS. ALL VALVES SHOULD BE KEPT AT LEAST 18" AWAY FROM FACE OF CURB.
- ALL LATERAL PIPING IS TO BE SIZED PER THE PIPE SIZING CHART ON THIS SHEET. REFER TO THE IRRIGATION LEGEND FOR INFORMATION ON GPM'S.
- REFER TO IN-N-OUT'S STANDARD IRRIGATION DETAILS FOR INSTALLATION PROCEDURES.
- INSTALL TREE VALVES IN 6" ROUND BOX AND LOCATE 3' FROM TRUNK OF TREE.

IRRIGATION PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE CA

AGENCY APPROVAL

REVISIONS
NO. DATE PURPOSE

DRAWN BY * MB

CHECKED * RSR

SCALE * 1" = 20' - 0"

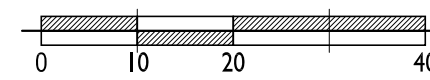
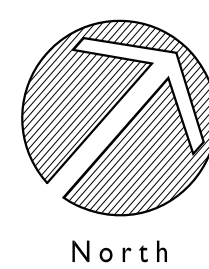
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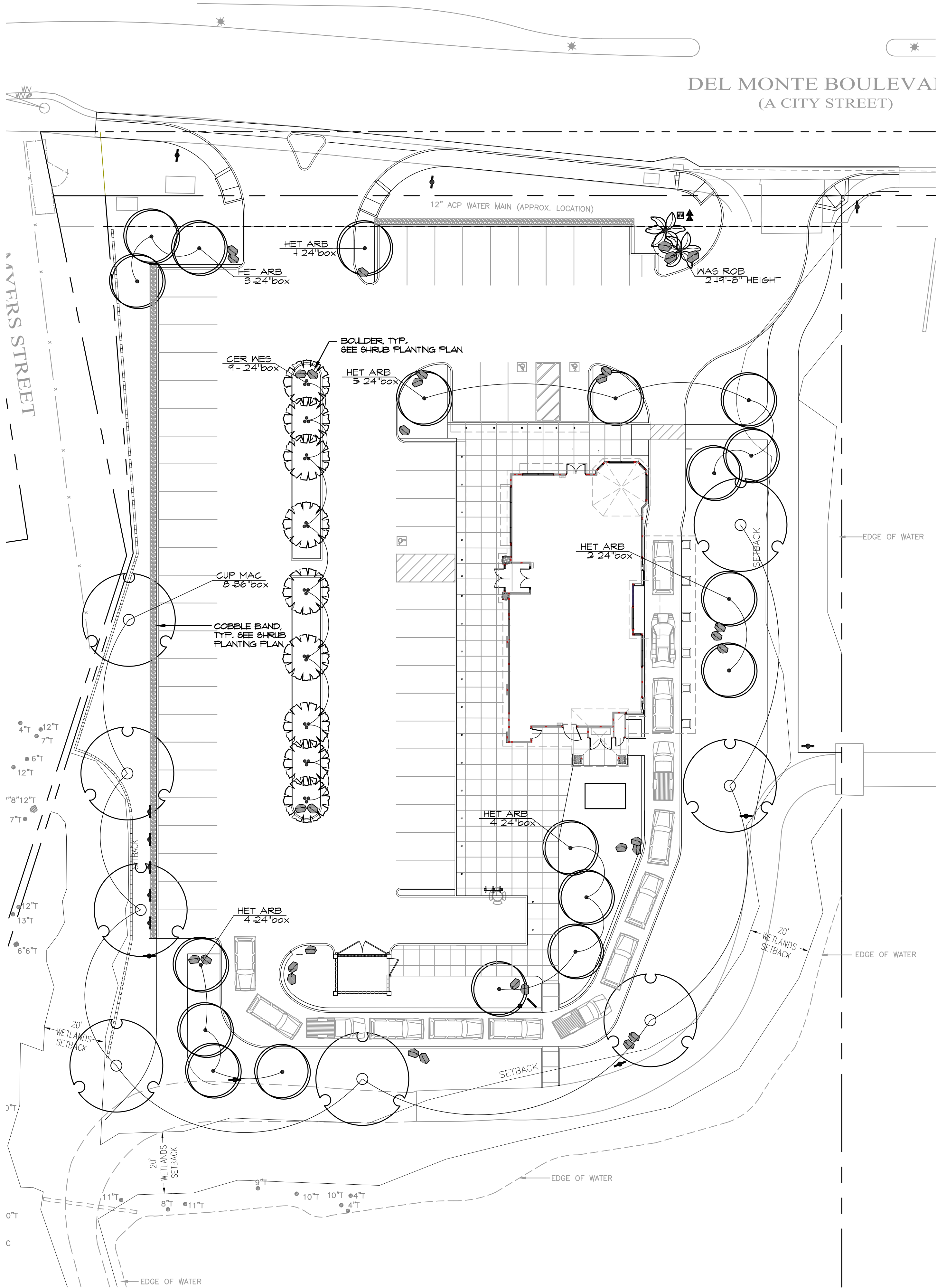
JOB * 090004.00

IRRIGATION PLAN

SHEET

L-1





TREE SCHEDULE

CODE	BOTANICAL NAME / COMMON NAME	SIZE	QTY
CER WES	CERCIS OCCIDENTALIS / WESTERN REDBUD MULTI-TRUNK	24"BOX	9
CUP MAC	CUPRESSUS MACROCARPA / MONTEREY CYPRESS	36"BOX	8
HET ARB	HETEROMELES ARBUTIFOLIA / TOYON	24"BOX	19
WAS ROB	WASHINGTONIA ROBUSTA / MEXICAN FAN PALM	19-8" HEIGHT	2

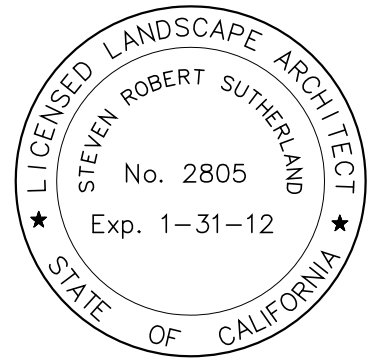
TREE PLANTING NOTES

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- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.

SSA

LANDSCAPE ARCHITECTS INCORPORATED

303 Potrero St Ste 40-C
Santa Cruz, CA 95060-2778
PH: (831) 459-0455
FX: (831) 459-0484
www.ssala.com
C R L A # 2 8 0 5



TREE PLANTING PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE, CA

AGENCY APPROVAL

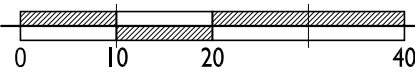
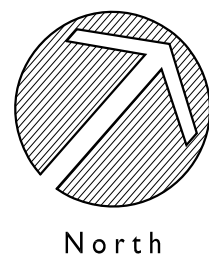
REVISIONS	NO.	DATE	PURPOSE

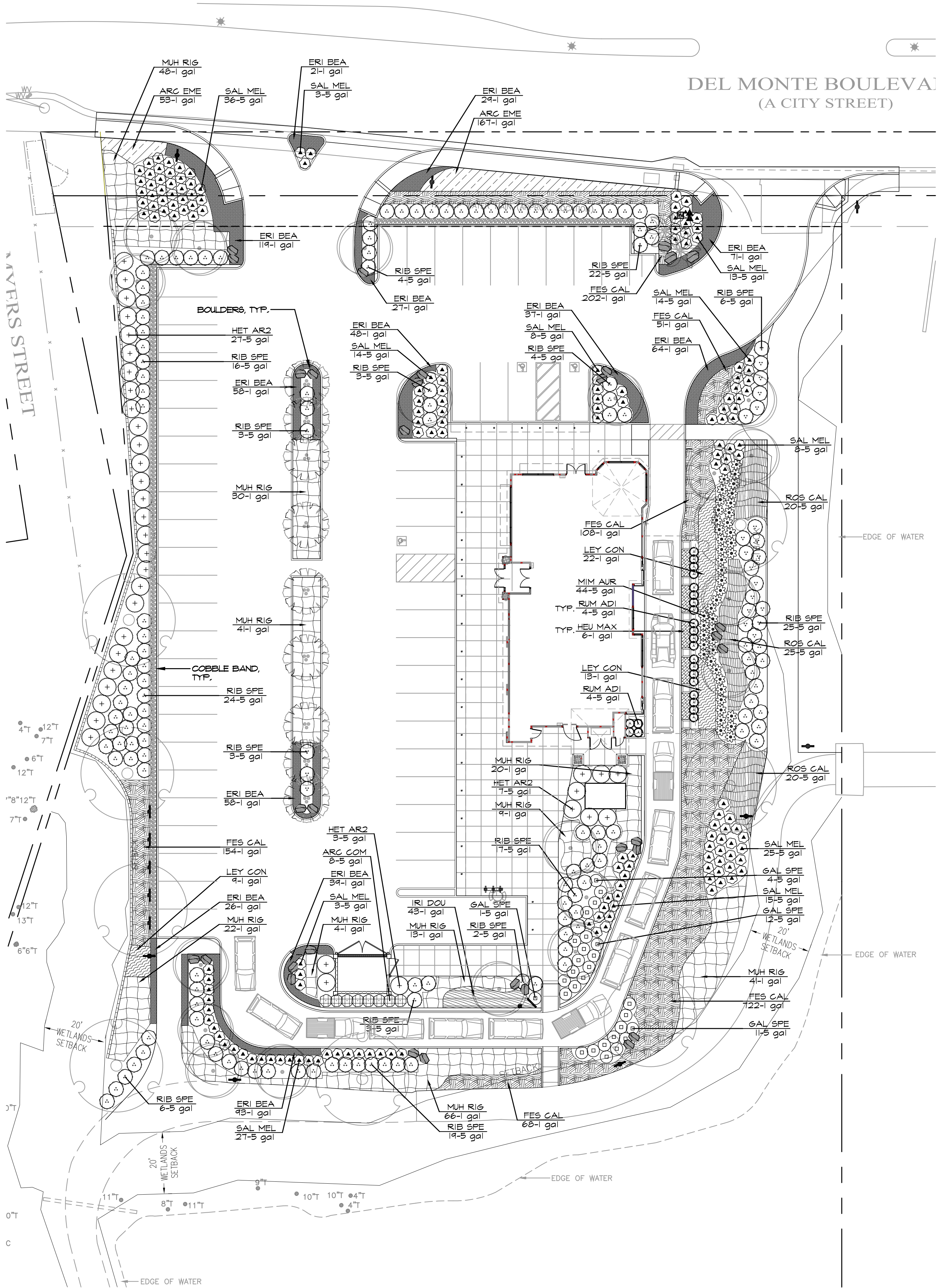
DRAWN BY	•	MB
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SCALE	•	1" = 20' - 0"
DATE	•	03.17.15
JOB	•	090004.00

TREE PLANTING PLAN

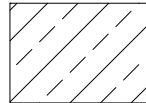
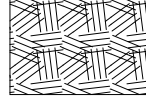
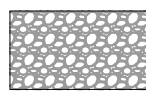
SHEET

L-2





PLANTING SCHEDULE

SHRUB	CODE	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QTY
	ARC COM	ARCTOSTAPHYLOS X. 'SUNSET' / SUNSET MANZANITA	5 GAL	4' OC	8
	GAL SPE	GALVEZIA SPECIOSA / ISLAND BUSH SNAPDRAGON	5 GAL	4' OC	28
	HET AR2	HETEROMELES ARBUTIFOLIA / TOYON	5 GAL	6' OC	37
	MIM AUR	MIMULUS AURANTIACUS / STICKY MONKEY FLOWER	5 GAL	42" OC	44
	RIB SPE	RIBES SPECIOSUM / RUCHIA FLOWERING GOOSEBERRY	5 GAL	5' OC	157
	SAL MEL	SALVIA MELLIFERA / BLACK SAGE	5 GAL	42" OC	166
FERN	CODE	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QTY
	RUM ADI	RUMOHRA ADIANTIFORMIS / LEATHERLEAF FERN	5 GAL	36" OC	24
GROUNDCOVER	CODE	BOTANICAL NAME / COMMON NAME	SIZE		QTY
	ARC EME	ARCTOSTAPHYLOS UVA-URS! EMERALD CARPET / EMERALD CARPET MANZANITA	1 GAL @ 18" OC		220
PERENNIAL	CODE	BOTANICAL NAME / COMMON NAME	SIZE		QTY
	ERI BEA	ERIGERON GLAUCUS SEA BREEZE / BEACH DAISY	1 GAL @ 18" OC		690
	FES CAL	FESTUCA CALIFORNICA / CALIFORNIA FESCUE	1 GAL @ 18" OC		1305
	HEU MAX	HEUCHERA MAXIMA / ISLAND ALUM ROOT	1 GAL @ 24" OC		30
	IRI DOU	IRIS DOUGLASIANA PCH / DOUGLAS IRIS PACIFIC COAST HYBRID	1 GAL @ 24" OC		43
	LEY CON	LEYMUS CONDENSATUS CANYON PRINCE / BLUE WILD RYE	1 GAL @ 36" OC		44
	MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS TRIANGULAR SPACING	1 GAL @ 42" OC		289
	ROS CAL	ROSA CALIFORNICA / CALIFORNIA WILD ROSE	5 GAL @ 42" OC		65
ROCK		NAME	SIZE		QTY
		24" WIDE COBBLE BAND TO BE LOCAL RIVER STONE	+/- 6"		603 SF
		ROUNDED BOULDER	24" MIN/ 48" MAX		34

PLANTING PLAN NOTES

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- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.

SHRUB PLANTING PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE CA

AGENCY APPROVAL

REVISIONS
NO. DATE PURPOSE

DRAWN BY * MB

CHECKED * RSR

SCALE * 1" = 20' - 0"

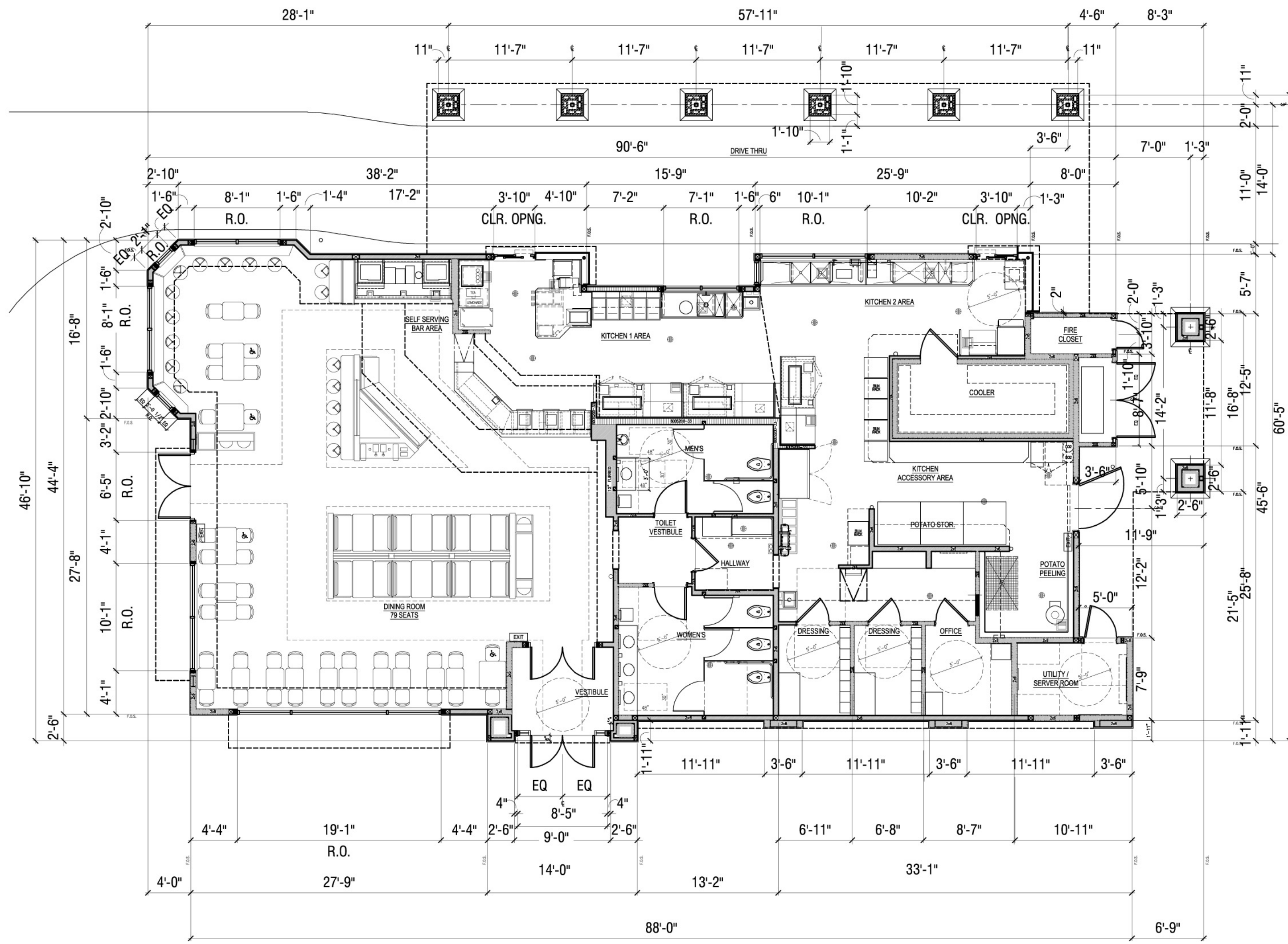
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JOB * 090004.00

SHRUB PLANTING
PLAN

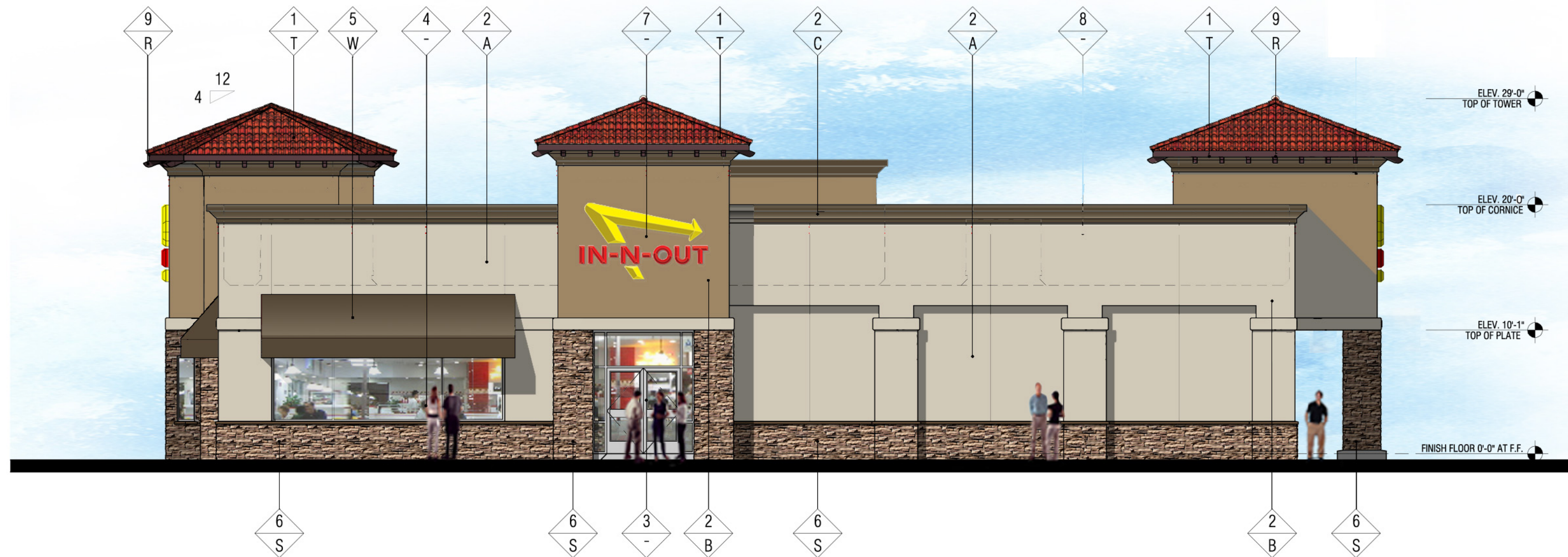
SHEET

L-3



FLOOR PLAN

SCALE: 1/8"=1'-0"



NORTH ELEVATION

SCALE: 1/8"=1'-0"



EAST ELEVATION

SCALE: 1/8"=1'-0"



WEST ELEVATION

SCALE: 1/8"=1'-0"



SOUTH ELEVATION

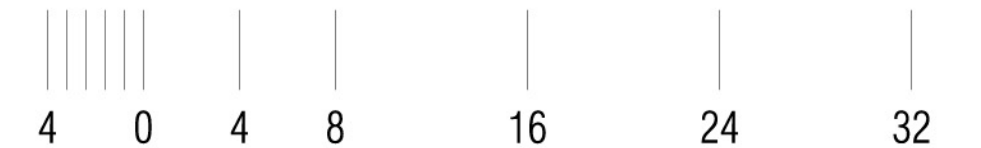
SCALE: 1/8"=1'-0"

FINISH SCHEDULE

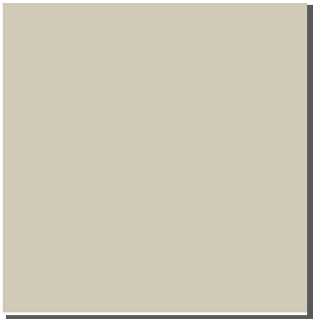
FINISH MATERIAL
1 TILE ROOF
2 STUCCO WITH SAND FLOAT TEXTURE FINISH
3 CLEAR ANODIZED ALUMINUM STOREFRONT DOORS
4 CLEAR ANODIZED ALUMINUM WINDOWS
5 PVC COATED WICK AWNINGS
6 STONE VENEER
7 ILLUMINATED LOGO SIGN UNDER SEPARATE PERMIT
8 NOT USED
9 WOOD BEAM RAFTER TAIL STAINED
FINISH COLOR
A SHERWIN WILLIAMS - SW7036 - ACCESSIBLE BEIGE
B SHERWIN WILLIAMS - SW6109 - HOPSACK
C SHERWIN WILLIAMS - SW7041 - VAN DYKE BROWN
R DUNN EDWARDS STAIN TO MATCH DE6042 BEAR IN MIND
S CORONADO STONE - CARMEL MOUNTAIN EASTERN LEDGESTONE
T EAGLE ROOFING PRODUCTS CAPISTRANO STYLE 3602 CONCORD BLEND
W IN-N-OUT CUSTOM COLORS - SW7041 - VAN DYKE BROWN

Note:
Colors shown on these elevations are for illustration
purposes only. For actual colors, refer to manufacturers
samples.

SCALE: 1/8"=1'-0"



COLOR AND MATERIAL BOARD



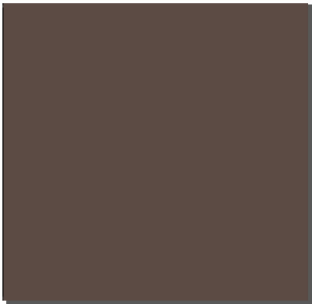
Color A
Shermin Willams SW7036 - Beige



Color B
Shermin Willams SW6109 - Hopsack



Color/Material C & W
Shermin Williams SW7041 -
Van Dyke Brown - Awnings with
PVC wick resistant erandicable polyester and color Van Dyke Brown



Color R
Dunn Edwards DE6042 -
Bear In Mind



Material S
Coronado Stone -
Carmel Mountain &
Eastern LedgeStone



Material T
Eagle Roofing Products
Capistrano Style -
3602 Concord Blend



1350 hamburger ln.
Baldwin Park, CA 91706

IN-N-OUT BURGER
1350 DEL MONTE
SEASIDE, CA

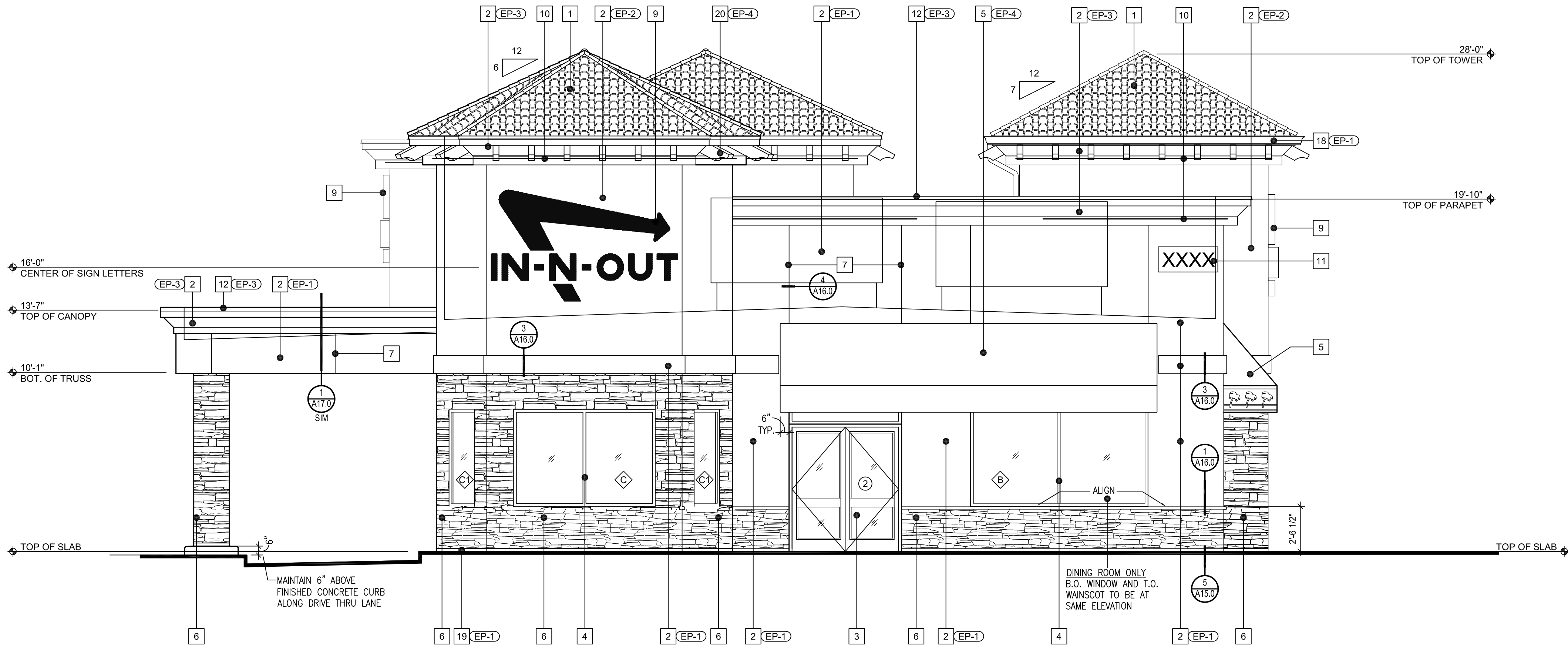
**COLOR AND
MATERIAL BOARD**
05-13-11

KEY NOTES

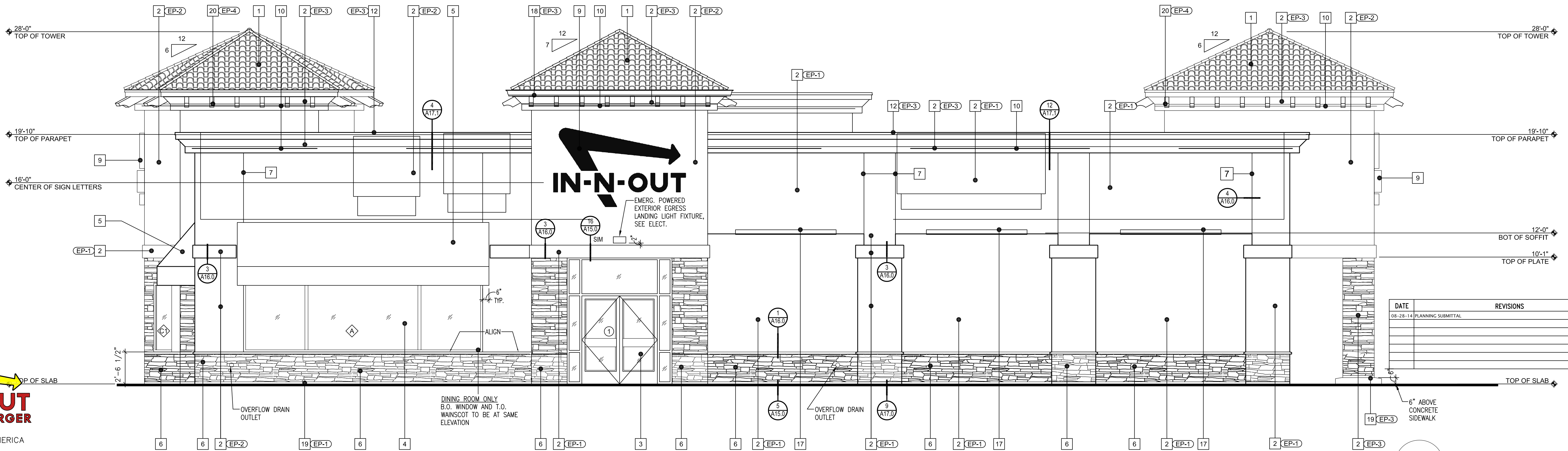
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4	ALUMINUM WINDOWS: CLEAR ANODIZED ALUMINUM.
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6	STONE VENEER - CARMEL MOUNTAIN EASTERN LEDGE BY CORONADO STONE WITH MATCHING CORONADO STONE WAINSCOT SILL. APPLY PER MFR RECOMMENDATIONS. DRY STACK.
7	1/4" WIDE METAL PENN SCREED: SEE DETAIL 4/A16.0. ALIGN CONTROL JOINTS ON DRIVE-THRU CANOPY FASCIA WITH CONTROL JOINTS ON BOTTOM OF SOFFIT.
8	SLOPED ALUMINUM WINDOWS: U.S. ALUMINUM S-010. GLASS JOINTS TO HAVE POLISHED EDGES WITH SILICONE JOINTS. PAINT WOOD FRAME "EP-4".
9	IN-N-OUT BURGER ILLUMINATED LOGO SIGN: UNDER SEPARATE PERMIT.
10	L.E.D. COVE LIGHTING: UNDER SEPARATE PERMIT.
11	BUILDING ADDRESS NUMBERS TO BE 12" HIGH, 4" MIN. W/ MIN. STROKE WIDTH OF 0.5 INCH PER FIRE DEPARTMENT AND CITY JURISDICTION ADDRESS REQUIREMENTS: 1. ADDRESS SHALL BE DISPLAYED & VISIBLE FROM BOTH STREET DIRECTIONS OF APPROACHING VEHICLES. 2. PERMANENT NUMBERS AND LETTERS SHALL BE MADE OF DURABLE AND CLEARLY VISIBLE MATERIAL SUCH AS WOOD, METAL, CERAMIC, PLASTIC AND VINYL. (PAINTED OR GLUED ON NUMBERS ARE NOT ACCEPTABLE MATERIALS). 3. NUMBERS SHALL BE OF COLORS CONTRASTING WITH BACKGROUND TO WHICH THEY ARE ATTACHED. 4. NUMBERS SHALL BE A MINIMUM PROPORTION RATIO OF 6:1 (HEIGHT TO WIDTH). 5. NUMBERS CANNOT BE SPELLED.
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14	5'-0" HIGH STUB OUT FOR Co2 LINE
15	4" MIN. HIGH WHITE LETTERING "RISER ROOM" ON RED BACKGROUND SIGN. MOUNT ON RISER ROOM DOOR
16	RECESSED KNOX BOX AT 5'-0" HIGH TO THE RIGHT OF FIRE RISER ROOM. SEE DETAIL 10/A17.0
17	RECESSED 8" FLUORESCENT LIGHT FIXTURE IN SOFFIT. SEE DETAIL 9/A17.1
18	GUTTER AND DOWNSPOUT. REFER TO DETAIL 8/A17.2
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20	EXPOSED RAFTER TAIL

EXTERIOR PAINT SCHEDULE

NO.	MFR.	MODEL	COLOR #	COLOR NAME	FINISH	REMARKS
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EP-2	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW6109	HOPSACK	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-3	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW7041	VAN DYKE BROWN	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-4	DUNN EDWARDS	SYN-LUSTRO WATER BASE	DE6042	BEAR IN MIND		AWNING



2 EAST ELEVATION
SCALE: 1/4" = 1'-0"



1 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ELEVATION-1

SHEET OF 1

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SEASIDE, CA

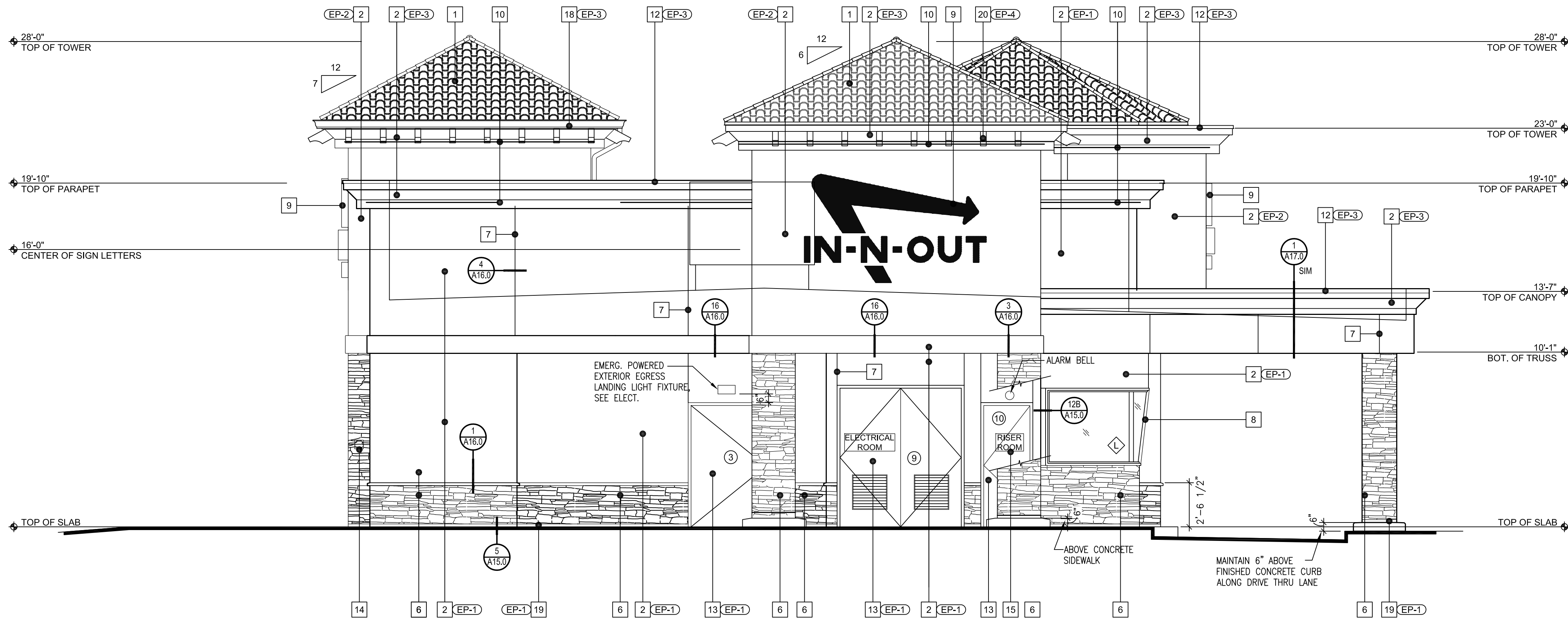
1350 DEL MONTE BOULEVARD

DATE	REVISIONS
08-28-14	PLANNING SUBMITTAL

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





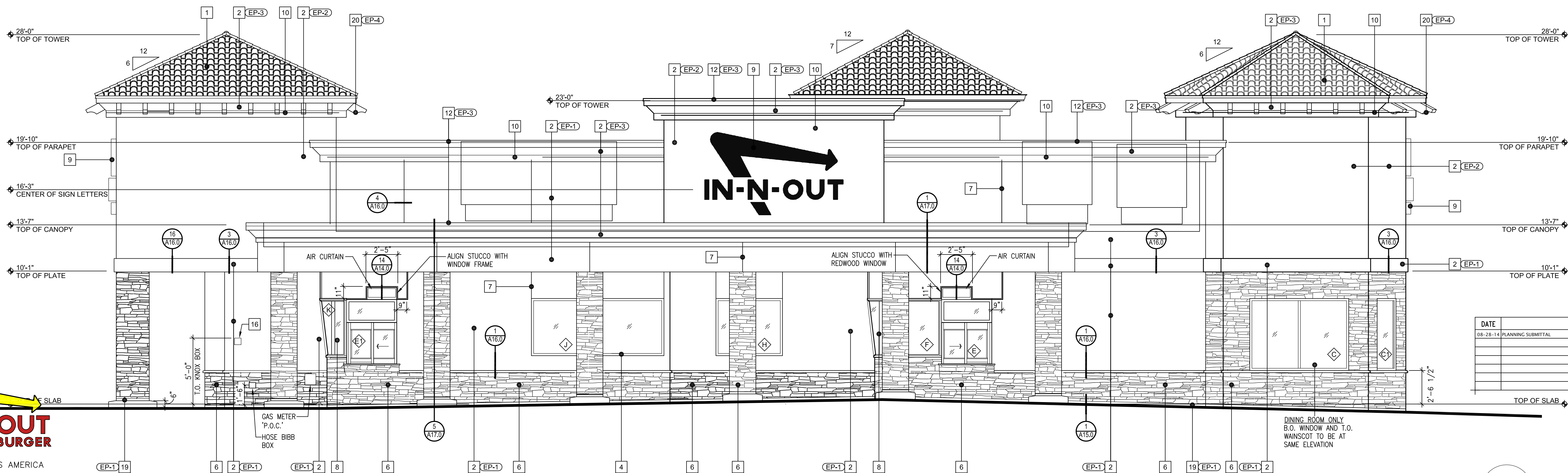
2 WEST ELEVATION
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1 SOUTH ELEVATION
A9.0 SCALE: 1/4" = 1'-0"

DATE	REVISIONS
08-28-14	PLANNING SUBMITTAL



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ELEVATION-2

SHEET OF 1

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SEASIDE, CA

1350 DEL MONTE BOULEVARD

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

FLOOR PLAN

SHEET OF 1

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SEASIDE, CA

1350 DEL MONTE BOULEVARD

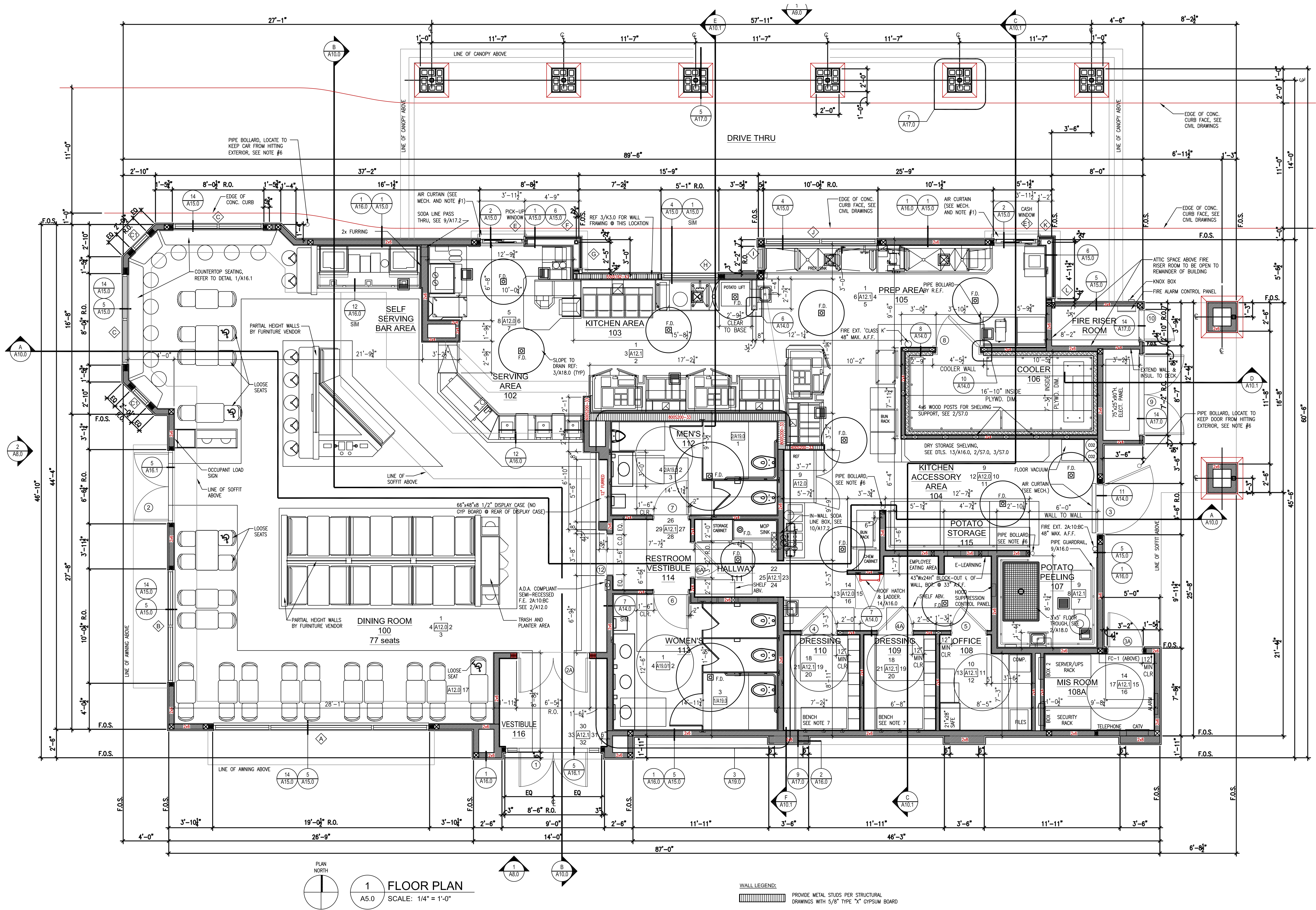
DATE	REVISIONS

0' 5' 10'
SCALE: 1/4"=1'-0"

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

08-26-14

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA



WALL LEGEND:

PROVIDE METAL STUDS PER STRUCTURAL
DRAWINGS WITH 5/8" TYPE "X" GYPSUM BOARD



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ROOF PLAN

SHEET OF 1

THE INFORMATION, DRAWINGS AND SPECIFICATIONS SHOWN ARE AND SHALL REMAIN THE PROPERTY OF IN-N-OUT BURGER.
THESE DOCUMENTS MAY NOT BE USED WITHOUT THE EXPRESSED WRITTEN CONSENT OF IN-N-OUT BURGER.



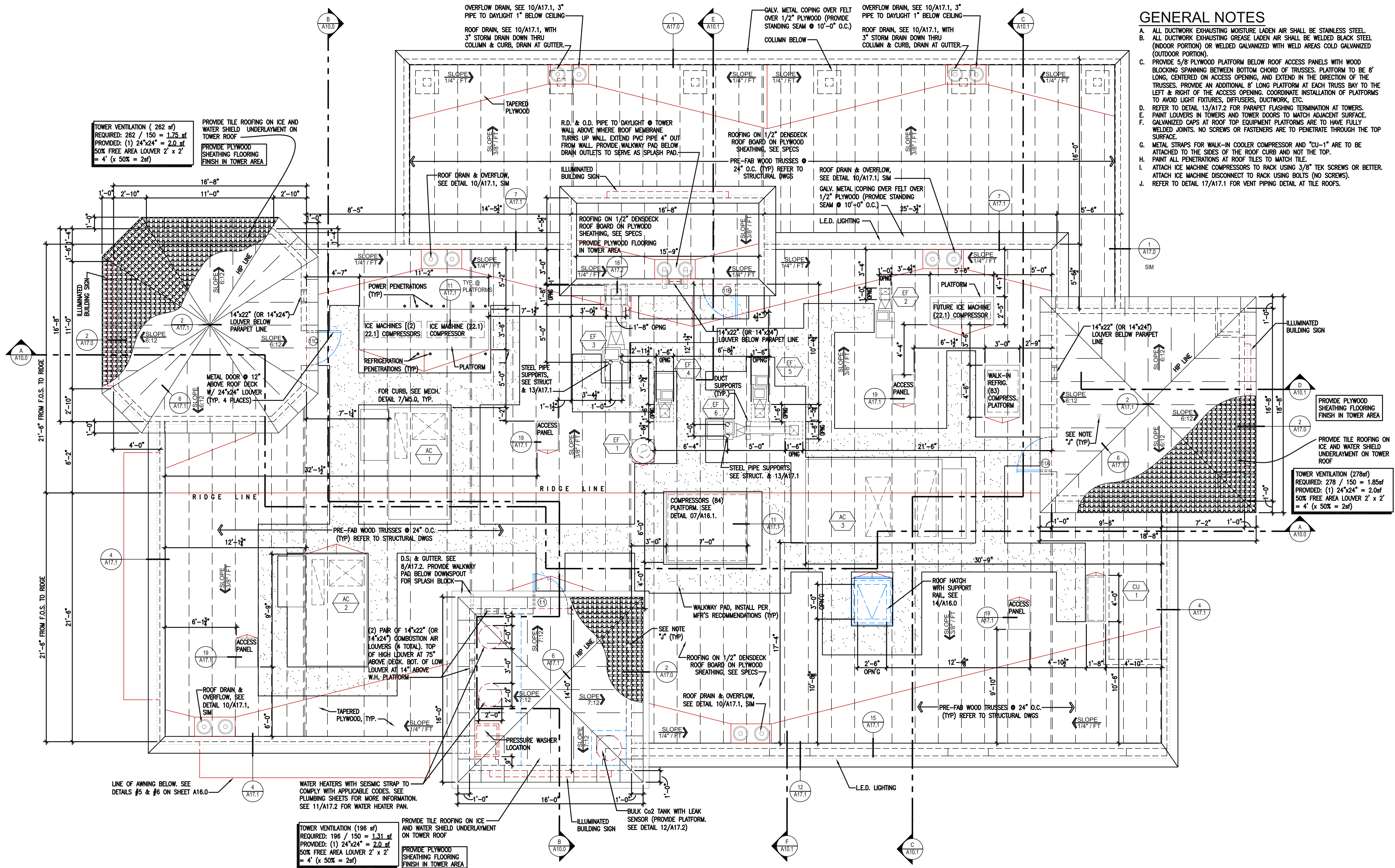
1 ROOF PLAN
A6.0 SCALE: 1/4"=1'-0"

SEASIDE, CA

1350 DEL MONTE BOULEVARD

GENERAL NOTES

- ALL DUCTWORK EXHAUSTING MOISTURE LADEN AIR SHALL BE STAINLESS STEEL.
- ALL DUCTWORK EXHAUSTING GREASE LADEN AIR SHALL BE WELDED BLACK STEEL (INDOOR PORTION) OR WELDED GALVANIZED WITH WELD AREAS COLD GALVANIZED (OUTDOOR PORTION).
- PROVIDE 5/8" PLYWOOD PLATFORM BELOW ROOF ACCESS PANELS WITH WOOD BLOCKING SPANNING BETWEEN BOTTOM CHORD OF TRUSSES. PLATFORM TO BE 8' LONG, CENTERED ON ACCESS OPENING, AND EXTEND IN THE DIRECTION OF THE TRUSSES. PROVIDE AN ADDITIONAL 8' LONG PLATFORM AT EACH TRUSS BAY TO THE LEFT & RIGHT OF THE ACCESS OPENING. COORDINATE INSTALLATION OF PLATFORMS TO AVOID LIGHT FIXTURES, DIFFUSERS, DUCTWORK, ETC.
- REFER TO DETAIL 13/A17.2 FOR PARAPET FLASHING TERMINATION AT TOWERS.
- PAINT LOUVERS IN TOWERS AND TOWER DOORS TO MATCH ADJACENT SURFACE.
- GALVANIZED CAPS AT ROOF TOP EQUIPMENT PLATFORMS ARE TO HAVE FULLY WELDED JOINTS. NO SCREWS OR FASTENERS ARE TO PENETRATE THROUGH THE TOP SURFACE.
- METAL STRAPS FOR WALK-IN COOLER COMPRESSOR AND "CU-1" ARE TO BE ATTACHED TO THE SIDES OF THE ROOF CURB AND NOT THE TOP.
- PAINT ALL PENETRATIONS AT ROOF TILES TO MATCH TILE.
- ATTACH ICE MACHINE COMPRESSORS TO RACK USING 3/8" TEK SCREWS OR BETTER. ATTACH ICE MACHINE DISCONNECT TO RACK USING BOLTS (NO SCREWS).
- REFER TO DETAIL 17/A17.1 FOR VENT PIPING DETAIL AT TILE ROOFS.



DATE	REVISIONS
08-28-14	PLANNING SUBMITTAL

0' 5' 10'
SCALE: 1/4"=1'-0"

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)



Architecture / Development
14110 Quorum Drive
Suite 300
Dallas Texas 75254
Ph: (972) 239-8884
Fax: (972) 239-8064

ISSUE RECORD

DATE DESCRIPTION
2014 CLASSIC PROTOTYPE 14C
10.15.14 SITE PHOTOMETRIC ISSUE FOR REVIEW

REVISION RECORD

PROFESSIONAL SEAL

J:\141013
LIPPE AND ASSOCIATES
CONSULTING ENGINEERS
15950 MIDWAY ROAD (972) 387-3500
ADDISON, TEXAS 75001 FAX (972) 387-3849

PROTOTYPE VERSION
14C

PROJECT NAME

IN-N-OUT
BURGER

Seaside
California

1350 Del Monte Blvd.
Seaside, CA. 92XXX



GOD BLESS AMERICA

PROJECT NUMBER

XXXXXX

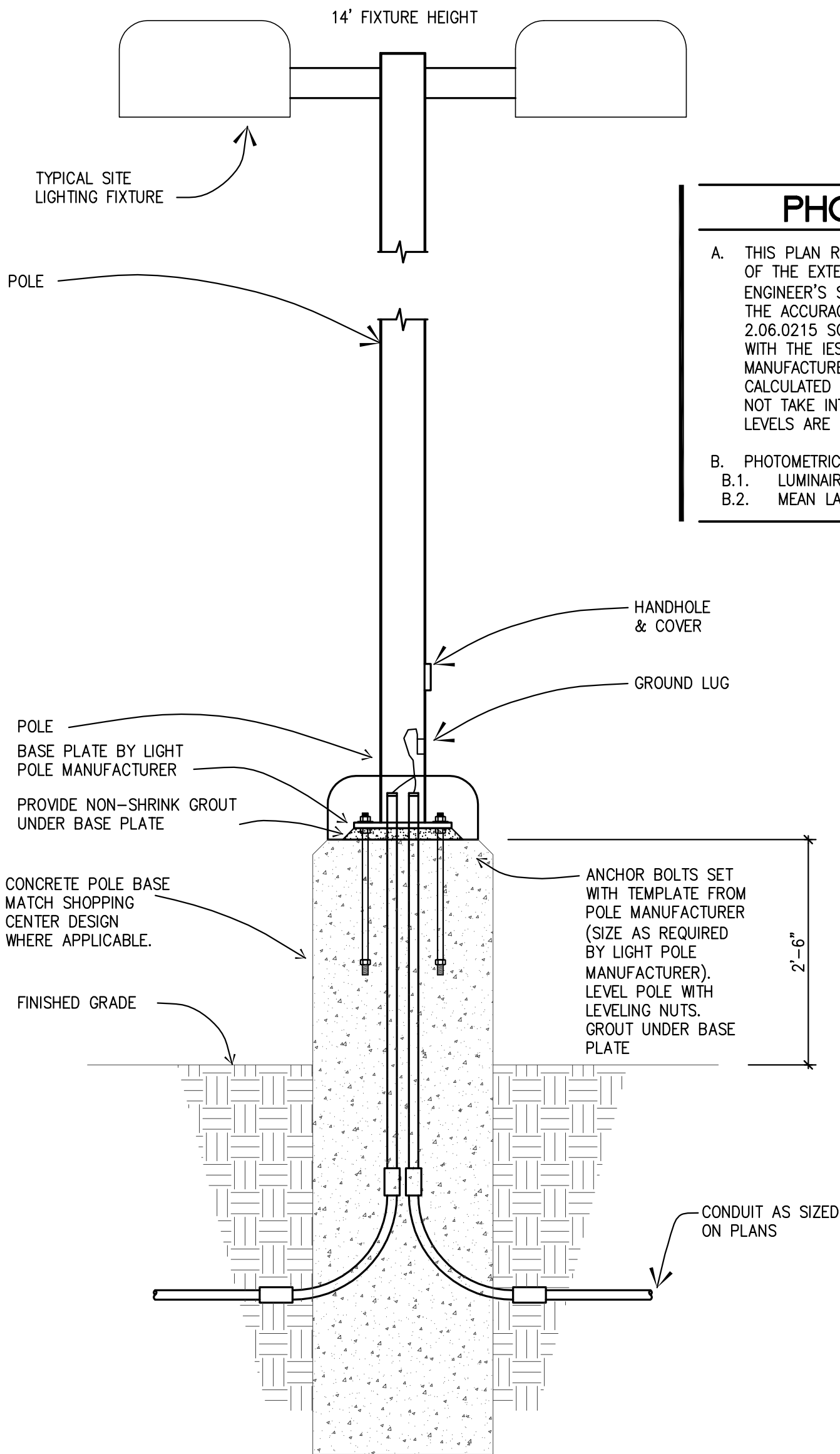
SHEET TITLE

SITE LIGHTING
PHOTOMETRIC PLAN

SHEET NUMBER

E11.0

SITE LIGHTING FIXTURE SCHEDULE				
TYPE	MANUFACTURER	VOLTAGE	LAMPS	DESCRIPTION
OC2	LITHONIA LIGHTING #KSF2 150M R4W, 208 SP12 SCWA WITH (2) TYPE IV WIDE OPTICS, POLE #SSS 11.5 5G DM28 DDB	208	(2) 150W MH (378 VA TOTAL LOAD)	208V TWIN HEAD, 150W METAL HALIDE, 14' AFG, TOTAL FIXTURE HEIGHT (11'-6" POLE + 2'-6" BASE).
OD1	LITHONIA LIGHTING #KSF2 150M R4W, 208 SP12 SCWA WITH (2) TYPE IV WIDE OPTICS, POLE #SSS 11.5 5G DM28 DDB	208	(1) 150W MH (189 VA TOTAL LOAD)	208V SINGLE HEAD, 150W METAL HALIDE, 14' AFG, TOTAL FIXTURE HEIGHT (11'-6" POLE + 2'-6" BASE).
M	GOHAM LIGHTING #LAH-70MH-12FW-FFL-120	120	(1) 70W MH (90 VA TOTAL LOAD)	120V RECESSED MOUNTED WITH ZERO DEGREE BALLAST, 70W METAL HALIDE, PROVIDE VANDAL RESISTANT COVER.
S	LITHONIA #TDM-232-120-GEBS	120	(4) FO32T8/41K (112 VA TOTAL LOAD)	8' EXTERIOR WALL MOUNTED BACK LIGHTING WITH ZERO DEGREE BALLAST, WALL MOUNTED UNDER AWNING AT 9'-6" AFG.
S1	LITHONIA #DM-232-120-GEBS10RS	120	(2) FO32T8/41K (56 VA TOTAL LOAD)	4' EXTERIOR WALL MOUNTED BACK LIGHTING WITH ZERO DEGREE BALLAST, WALL MOUNTED UNDER AWNING AT 9'-6" AFG.
W1	VOIGT LIGHTING #TIMO-400-1T8-32W-120-OP-TRW-8-WH	120	(4) FO32T8/41K (141 VA TOTAL LOAD)	8' EXTERIOR RECESSED FIXTURE. LOCATE IN EXTERIOR NICHE (DAMP LOCATION) WITH ZERO DEGREE BALLAST.



PHOTOMETRIC NOTES

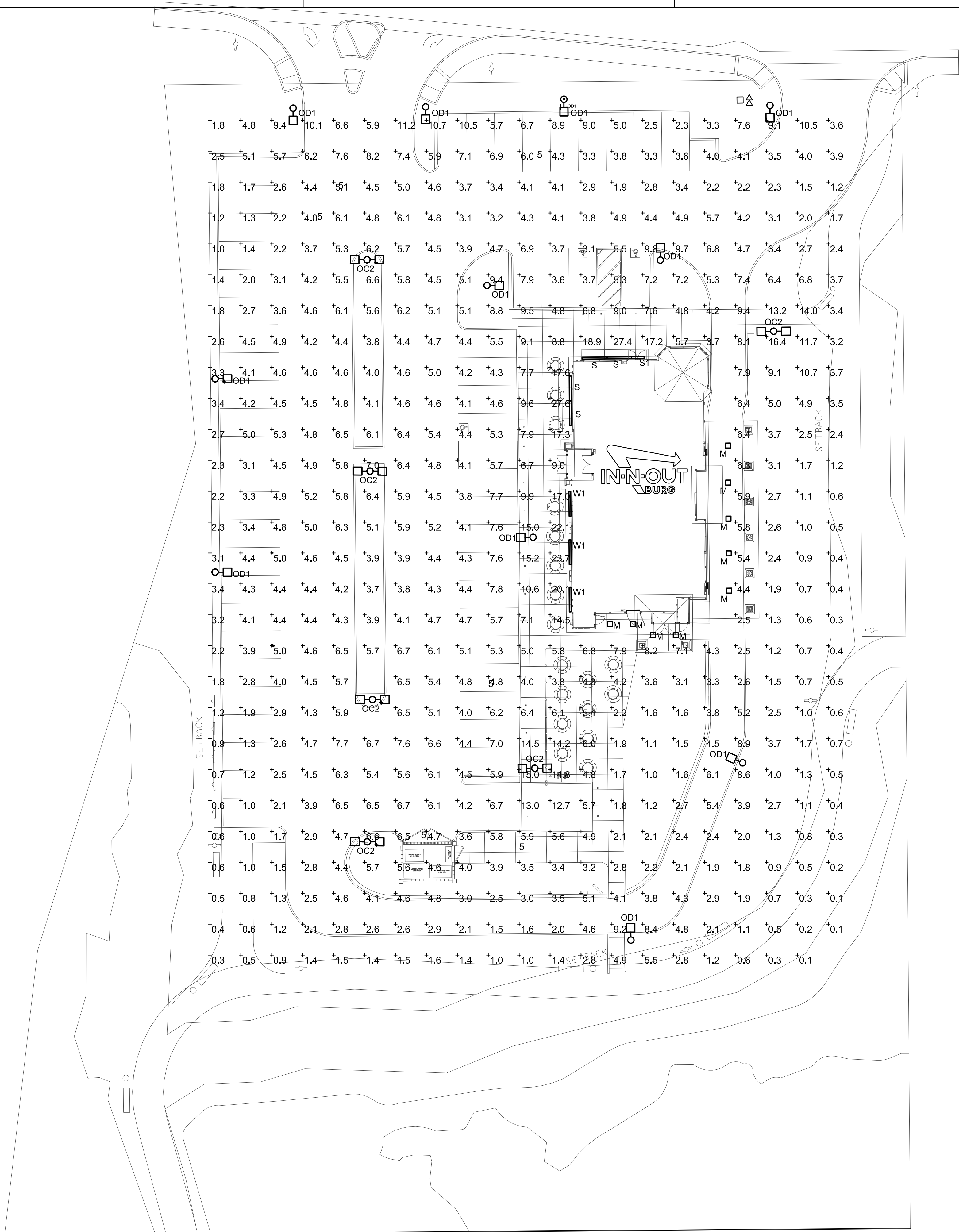
- A. THIS PLAN REPRESENTS A SOFTWARE SIMULATED PHOTOMETRIC STUDY OF THE EXTERIOR SITE LIGHTING. IT WAS CREATED UNDER THE ENGINEER'S SUPERVISION; HOWEVER THE ENGINEER DOES NOT WARRANT THE ACCURACY OF THE SOFTWARE OR LIGHT FIXTURE DATA. VISUAL 2.06.0215 SOFTWARE WAS USED TO GENERATE THIS DOCUMENT ALONG WITH THE IES DATA FILES PROVIDED BY THE LIGHT FIXTURE MANUFACTURER. THIS PLAN INDICATES THE SIMULATED LIGHT INTENSITY CALCULATED IN FOOT CANDLES AT GRAD LEVEL. THE SIMULATION DOES NOT TAKE INTO EFFECT A CHANGE IN GRADE ELEVATION. THE LIGHT LEVELS ARE CALCULATED ON A HORIZONTAL PLANE 0 FT AFG.
- B. PHOTOMETRIC CALCULATION DATA:
B.1. LUMINAIRE LIGHT LOSS FACTOR EQUALS 0.75.
B.2. MEAN LAMP LUMENS WERE USED FOR IES CALCULATIONS

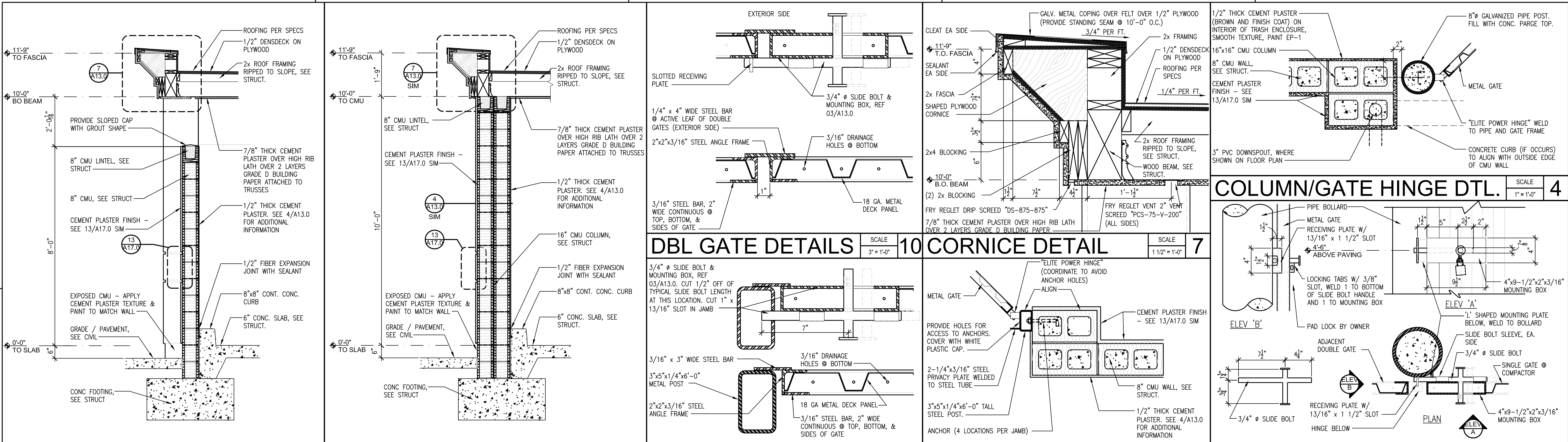
02 SITE LIGHTING STANDARD
SCALE: NOT TO SCALE

GENERAL NOTE:
REFER TO STRUCTURAL PLANS FOR POLE BASE STRUCTURAL DETAIL 08/SD01.

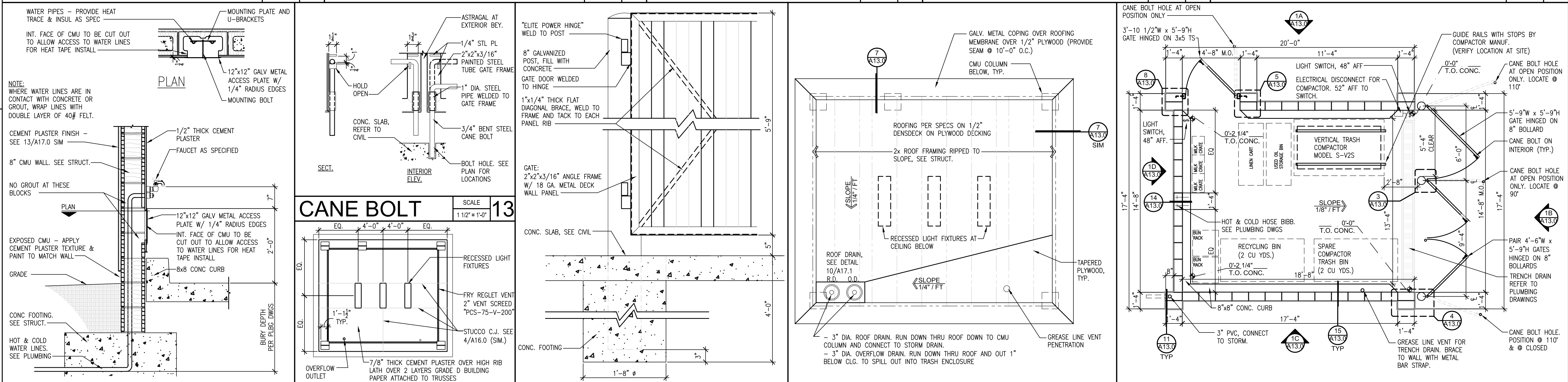


01 SITE PHOTOMETRIC PLAN
SCALE: 1"=20'-0"

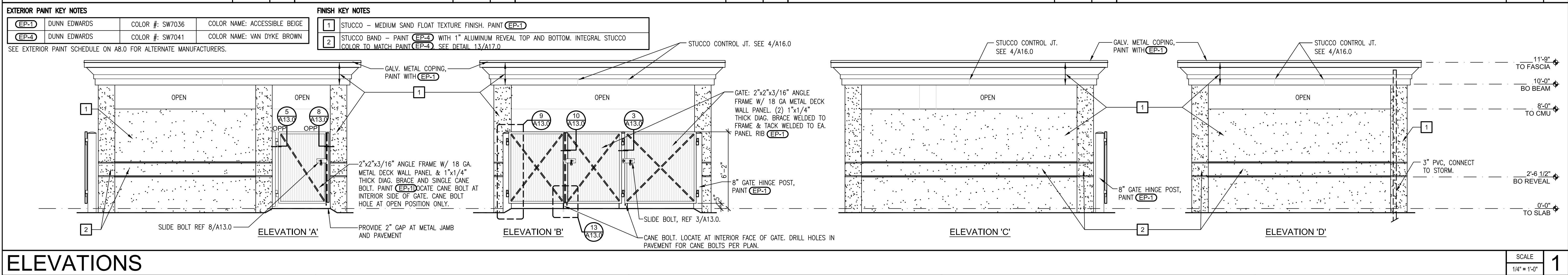




WALL SECTION 15 WALL SECTION 11 MAN GATE DTLS 8 MAN GATE - HINGE JAMB 5 COMPACTOR GATE - LOCK



HOSE BIB DETAIL 14 R.C.P. 12 GATE HINGE DETAIL 9 ROOF PLAN 6 FLOOR PLAN



ELEVATIONS

REVISION RECORD

PROFESSIONAL SEAL

PROTOTYPE VERSION 12C.0

PROJECT NAME

IN-N-OUT BURGER

SEASIDE CA

1350 DEL MONTE BOULEVARI

PROJECT NUMBER

XXXXX

SHEET TITLE

TRASH ENCLOSURE PLANS, ELEVATIONS, SECTIONS & DETAILS

SHEET NUMBER

A13.0

APPENDIX C

**Local Coastal Plan: Land Use Plan, Coastal Implementation Plan
Consistency Analysis, and Sea Level Rise Report**

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

Natural Coastal Resources	
Natural Habitat Areas	
Policy NCR-CZ 1.1.A – Promote Sustainable Development New development shall promote environmental sustainability which is essential to reducing impacts to natural resources, habitat loss, and air and water resources.	Consistent. The proposed project will include a variety of design features aimed at environmental conservation and sustainability. Specifically, the proposed project will include native drought-tolerant vegetation, water-efficient irrigation systems and devices, Green Building Materials, water-efficient fixtures (i.e., low-flow faucets, dual-flush toilets, and waterless urinals), energy-efficient heating and cooling systems, and interior and exterior storage areas for recyclables and green waste. In addition, the proposed project will also comply with standard conditions and mitigation measures outlined throughout the 2011 Certified Environmental Impact Report (EIR) aimed at reducing impacts to natural resources and habitats and air and water resources.
Policy NCR-CZ 1.1.B – Promote Sustainability of Biological Productivity The City shall identify and pursue appropriate methods of native enhancement and restoration that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at the long-term sustainability of the surrounding coastal habitats and those species that are reliant on such habitats. As required by Measure 4.3.1, Biotic Habitat Protection, the Applicant will be required to retain a qualified biologist who will implement various actions during project construction in order to minimize construction impacts to sensitive biotic habitats adjacent to the project boundaries. Implementation of Measures 4.3.2 through 4.3.4, which outline measures to minimize project-related impacts to special-status species (including northern harriers, other nesting birds, California red-legged frog, and coast range newt) will also be required to ensure the long-term preservation of these species. The proposed project will be required to comply with Measure 4.3.5, Weed Management and Signage, which mandates the placement and ongoing maintenance of signs along the pedestrian trail instructing pedestrians to stay on the trail in order to preserve neighboring biotic habitats. Measure 4.3.5 will also require the eradication of noxious common reed within the project area. An existing pedestrian and bicycle trail that circles Laguna Grande Lake will connect the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The proposed project will extend the pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will increase connectivity between the project

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

	site and the Laguna Grande Park and Lake, the adjacent hotel property, Del Monte Boulevard, the Laguna Grande Regional Park Trail, and the Monterey Bay Coastal Bike Trail, thereby increasing recreational opportunities in the area and promoting appreciation for the biological productivity of the coastal area.
Policy NCR-CZ 1.1.C – Minimize Adverse Effects to Natural Coastal Resources New development shall be located in areas where it will not have a significant adverse effect either individually or cumulatively on natural coastal resources and public access and recreation.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will disturb a very small amount of relatively low-quality habitat; however, the 2011 Certified EIR found and concluded that the proposed project would not have a significant individual or cumulative impact on natural coastal resources. As discussed above under Policy NCR-CZ 1.1B, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will connect the project site with the Laguna Grande Park and Lake, the adjacent hotel property, Del Monte Boulevard, the Laguna Grande Regional Park, and the Monterey Bay Coastal Bike Trail, thereby increasing access to coastal resources and recreational opportunities.
Policy NCR-CZ 1.2.A – Designation of ESHA Areas of particular habitat value and fragility consistent with Policy LUD-CZ 1.3.B are considered Environmentally Sensitive Habitat Areas (ESHA). Figure 2-2 represents a preliminary mapping of lands containing potential ESHA. Actual determination of ESHA boundaries shall be based on facts on the ground at the time development is considered. Policy NCR-CZ 1.2.B – Protection of ESHA i. ESHAs shall be protected against significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. ii. Development in areas adjacent to ESHAs shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat areas. iii. Site-specific surveys to confirm the presence and extent of identifiable plant and animal life or habitats shall be required for all new development in, and adjacent to, ESHA. iv. Site-specific surveys shall be prepared by a qualified biologist and shall include recommended mitigation	Consistent. The project site does not contain any ESHAs; however, potential riparian, emergent wetland, and estuarine ESHAs are present to the south, north, and east of the project site (refer to Figure 2-2, Potentially Environmentally Sensitive Habitat Area (ESHA) within the Coastal Zone, of the City's Local Coastal Program Land Use Plan (LUP). As part of the Biological Resources Report prepared for the 2011 Certified EIR, six site-specific field surveys were conducted to determine existing plant and animal species present on and adjacent to the project site. The Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site that are incorporated into the 2011 Certified EIR as Measures 4.3.1 through 4.3.4. The 2011 Certified EIR found and concluded that the proposed project would not result in significant impacts to neighboring sensitive habitats, including potential ESHAs with implementation of prescribed mitigation measures. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

measures to avoid, and where avoidance is not possible, minimize sensitive habitat impacts.	
Policy NCR-CZ 1.3.A – Designation of Wetlands Areas periodically or permanently covered with water that meet the definition of wetland in Coastal Act Section 30121, are considered to be wetlands. The presence of either hydrology, soils, or vegetation must be evidenced for an area to qualify as a wetland. The wetlands identified on Figure 2-3 shall represent a preliminary mapping of lands containing potential wetlands. Actual determination of wetland boundaries shall be based on facts on the ground at the time development is considered.	Consistent. There are no National Wetlands Inventory (NWI) types located on the project site (refer to Figure 2-3, Potential Wetlands within the Coastal Zone Area, of the City's Local Coastal Program LUP). The Laguna Grande Lake and its associated Freshwater Pond Wetland are located directly east of the eastern boundary of the project site. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, approximately 0.5 acre of jurisdictional waters has been identified on the project site, of which approximately 0.32 acre is seasonal wetlands dominated by red willow and 0.16 acre consists of perennial waters in the form of aquatic palustrine habitat.
Policy NCR-CZ 1.3.B – Protection of Wetlands i. The biological health and productivity of wetland areas shall be maintained, and where feasible, restored. ii. Development that may have an adverse effect on a wetland shall not be allowed. iii. The biological productivity of coastal waters, streams, wetlands, estuaries, and lakes, shall be maintained and restored, where feasible, to maintain optimum populations of marine organisms and to protect human health where applicable. Maintenance and restoration efforts shall support biological productivity by minimizing adverse effects of wastewater discharges and entrainment; controlling runoff, preventing substantial interference with surface water flow, and minimizing alteration of natural streams; preventing depletion of groundwater supplies; encouraging wastewater reclamation; and maintaining natural vegetation buffer areas that protect riparian habitats.	Consistent. There are no NWI types located on the project site (refer to Figure 2-3, Potential Wetlands within the Coastal Zone Area, of the City's Local Coastal Program LUP). The Laguna Grande Lake and its associated Freshwater Pond Wetland are located directly east of the eastern boundary of the project site. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, approximately 0.5 acre of jurisdictional waters has been identified on the project site, of which approximately 0.32 are is seasonal wetlands dominated by red willow and 0.16 acre consists of perennial waters in the form of aquatic palustrine habitat. Temporary impacts to these jurisdictional waters could result during construction activities. As such, the proposed project will be required to comply with Measure 4.3.1 to minimize temporary impacts to on-site jurisdictional waters. No permanent impacts to on-site jurisdictional waters will occur as a result of project implementation and operation. Stormwater runoff for storm events up to the 95th percentile rainfall event will be treated, and retained and infiltrated on-site with a series of biofiltration planters which will capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots). No impacts to Laguna Grande Lake will occur. In addition, implementation of Measure 4.7.1 will require the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and an Erosion and Sediment Control Plan to minimize impacts related to runoff from the project site during construction. The 2011 Certified EIR found and concluded that the proposed project would not substantially deplete groundwater supplies. None of the proposed project changes would change the conclusions on this issue as discussed in

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

	the certified 2011 EIR.
Policy NCR-CZ 1.4.A – Designation of Marine Resources All significant bodies of water including the Monterey Bay, Laguna Grande Lake, and Roberts Lake are recognized as marine resources.	Consistent. As discussed in the consistency analysis for Policy NRC-CZ 1.3.B, Protection of Wetlands, the proposed project will not include any improvements to, or result in any significant impacts to, the adjacent Laguna Grande Lake. Furthermore, the proposed project will not result in any significant impacts to Roberts Lake.
Policy NCR-CZ 1.4.B – Protection of Marine Resources i. Marine resources shall be maintained, enhanced, and, to the extent feasible, restored. Uses of the marine environment shall be carried out in a manner that will improve habitat quality and will sustain the biological productivity of coastal waters. ii. In addition to Policies NCR-CZ 1.3.B and 1.5.C, methods for maintenance and enhancement of marine resources include, but are not limited to, trash removal, sediment removal, nonnative vegetation removal and native revegetation, and any other feasible methods to improve water quality (refer to Policies NCR-CZ 1.3.B, 1.5.C, 1.5.D, and 4.1.A). iii. The City shall seek opportunities to consolidate and/or eliminate reliance on storm water outfalls that daylight onto the beach and convey storm water into Monterey Bay. Such storm water shall be filtered and treated prior to discharge. iv. All development shall adequately collect, filter, and treat its associated runoff. Low impact development concepts (e.g., limiting impervious surfaces, use of vegetated areas for runoff treatment, etc.) shall be encouraged.	Consistent. Refer to the consistency analyses under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, and Policy NCR-CZ 1.2.B, Protection of ESHA. The proposed project will neither result in any significant impacts to marine resources, including sensitive species and habitat, nor will the proposed project interfere with the biological productivity of nearby coastal waters. The proposed project will be landscaped on all four sides of the parcel with a variety of native drought-tolerant trees, shrubs, annuals, and landscape materials. Additionally, the proposed project will include trash receptacles inside and outside the restaurant facility to minimize littering near the project site and its associated potential impacts on coastal wildlife and habitats. In-N-Out employees will be responsible for emptying the trash receptacles and for daily grounds maintenance. In addition, as discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will implement Measure 4.3.5, which will require the removal of the small patch of common reed, which is a noxious weed that is prevalent along the shores of Laguna Grande Lake. The proposed project will include Best Management Practices (BMPs) during project construction and operation to minimize project-related impacts to water quality. The proposed project will increase impervious surface area by approximately 1.0 acre. A series of biofiltration planters will capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots), remove pollutants from runoff, and retain and infiltrate the runoff. The 2011 Certified EIR found and concluded that the proposed project would not result in significant impacts related to water quality. None of the proposed project changes would change the conclusions on this issue as discussed in the Certified 2011 EIR.

**City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination**

Policy NCR-CZ 1.4.C – Diking, Filling, Dredging of Marine Resources Diking, filling, or dredging activities shall be permitted in accordance with the other applicable provisions of the LCP, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: • Placement of structural pilings for public recreational piers that provide public access and recreation; • Incidental public services (i.e., maintenance of existing outfalls); • Mineral extraction, including for restoring beaches, except in environmentally sensitive habitat areas; • Restoration purposes; • Nature study, aquaculture, or similar resource dependent activities Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems. In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary.	Not Applicable.
Policy NCR-CZ 1.5.A – Designation of the Canyon Del Rey Creek Watershed The Canyon Del Rey Watershed includes lands from multiple jurisdictions. Lands contained within these jurisdictions have been designated as follows: • 2010 General Plan of Monterey County: Rural Density/Permanent Grazing • 2004 General Plan of City of Seaside: Parks and Open Space • 2004 General Plan of the City of Monterey: Industrial/Park	Not Applicable.

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

and Open Space • 1997 Zoning Ordinance of Del Rey Oaks: Residential/Commercial/Park and Open Space	
Policy NCR-CZ 1.5.B – Evaluation of the Canyon Del Rey Creek Watershed Support ongoing efforts to prepare the <i>Canyon del Rey Watershed Master Drainage Plan Update</i> as part of the update to the Monterey Peninsula, Carmel Bay, and South Monterey Bay Integrated Regional Water Management Plan. Once adopted, the City shall incorporate the <i>Master Drainage Plan</i> results, goals, policies, and objectives into the codes and programs of the City's Municipal Code, and general Plan, where applicable.	Not Applicable.
Policy NCR-CZ 1.5.C – Protection of the Canyon Del Rey Creek Watershed i. The City shall continue to implement the following erosion control and sedimentation mitigation measures: • Continue enforcement of the Urban Storm Water Quality Management and Discharge Control ordinance, as amended (Chapter 18.46 of the Seaside Municipal Code), for all future construction in the watershed. • Design of street drainage to maximize retention and minimize impervious surface area and street flooding. • Regulate construction activities on unstable slopes that are susceptible to erosion. • Prevent additional gullyng of alluvial terraces by maintaining riparian vegetation. ii. The City shall continue to implement, monitor, comply with and update (as needed) the Monterey Regional Storm Water Management Plan (SWMP) as a participating entity in order to be in compliance with Final Phase II National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 adopted by the State Water Resources Control Board on April 30, 2003.	Consistent. The proposed project will be consistent with and will further the City's goal of protecting the Canyon Del Rey Creek Watershed by implementing and complying with relevant storm water permits and requirements. The proposed project will be required to obtain coverage under the NPDES Construction General Permit and prepare a SWPPP and comply with the City's Phase II NPDES permit requirements to include Low Impact Development Standards (LID) and retain storm water runoff on the project site. In addition, the proposed project will be required to comply with the City's Municipal Code and prepare a project Erosion and Sediment Control Plan (ESCP) outlining components for erosion control, such as phasing of grading, diversion of runoff or run-on away from disturbed areas, and the provision for revegetation or mulching as required by Measure 4.7.1 in the 2011 Certified EIR.

**City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination**

Policy NCR-CZ 1.5.D – Management of the Canyon Del Rey Creek Watershed – Update of the Seaside Wetland Management /Enhancement and Restoration Program i. The functioning of the Canyon Del Rey Creek Watershed has potential implications for the entire Seaside coastal zone (potential flooding, erosion, water quality etc.). As such, the City of Seaside shall update the <i>Wetlands Management/ Enhancement and Restoration Program for the Laguna Grande/Roberts Lake LCP</i> (1983) (Appendix B) to incorporate the findings of the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i> upon completion (identified in Policy NCR-CZ 1.5.B). The updated <i>Wetlands Management/Enhancement and Restoration Program for the Laguna Grande/Roberts Lake LCP</i> shall be incorporated into the LCP through an LCP amendment and certification by the Coastal Commission. In addition to incorporating the findings of the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i>, the <i>Wetlands Management/Enhancement and Restoration Program</i> update shall include the following elements (at minimum): • A clear statement of the goals of the native restoration and enhancement of habitat types and water quality within the Canyon Del Rey Creek Watershed that will sustain biological productivity, including a description of the existing habitat types and quality to provide a benchmark for developing performance criteria. • Guidelines, programs, and funding sources for water quality improvements that are consistent with maintenance, reestablishment, and enhancement of existing wetland habitats and water quality improvement objectives. • Guidelines, in consultation with the appropriate state and federal resource agencies, for the preservation and/or reestablishment of equivalent (size and biological value) areas of riparian and marsh vegetation. • Guidelines which identify the appropriate method(s) of resource restoration and enhancement that will sustain the biological productivity of coastal waters (which may include dredging and filling if identified to be for the	Not Applicable.
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City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

exclusive purpose of resource restoration or habitat enhancement only). • Guidelines for the maintenance and management of all resource areas in the watershed after restoration or enhancement. • Guidelines for design of recreational improvements and maintenance of all shoreline improvements in both Laguna Grande and Roberts Lake. • A timeline of near-, mid-, and long-term restoration opportunities. • An identification of technical, planning, and design assistance needed to foster plan development. • A Vegetation Management Plan that includes the following: • Identification of vegetation and habitat types within the Seaside coastal zone. • Guidelines for improvement, maintenance, and management of all identified resource areas including a Weed Eradication Plan, Planting Plan, Maintenance Plan, and Monitoring Plan, as appropriate. • Guidelines for stabilization of the dune areas including the area adjacent to Roberts Lake utilizing best available methods such as planting and maintaining native vegetation. • Identification of vegetative shoreline improvements that will encourage use by native, non-invasive, and non-nuisance wildlife. • Identification of areas appropriate for use as a community garden. • Identification of appropriate responsible parties for improvement, maintenance, and management of all resources. • A summary of relative cost and funding responsibilities. ii. Until the update to the <i>Wetlands Management/Enhancement and Restoration Program</i> for the Local Coastal Program Land Use Plan, including the Laguna Grande and Roberts subareas, is completed, the City shall continue to implement and promote management/enhancement and restoration measures that meet the following objectives:	
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City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

• Stabilize the water surface area and depth of Laguna Grande and Roberts Lake by removing accumulated sediment and controlling the influx of new sediment. • Improve water quality to a degree sufficient to support a recreational fishery, provide enhanced aesthetic qualities and permit recreational boating; • Provide shoreline improvements that enhance public opportunities for observation and enjoyment of the natural habitat areas, that complement the natural character of the wetlands and riparian areas and are consistent with the protection of these areas, and that are compatible with existing recreational facilities and with the use of the adjoining private properties.	
Policy NCR-CZ 1.6.A – Control of Canada Goose Population The City, in coordination with the Monterey Peninsula Regional Park District, shall explore and implement humane methods of controlling goose populations.	Not Applicable.
Visual Resources	
Policy NCR-CZ 2.1.A – Designation of Visual Resources The scenic and visual qualities of lakes and coastal areas, including Roberts Lake, Laguna Grande, the coastal sand dunes, and Monterey Bay/Pacific Ocean, including from State Highway 1, shall be considered visual resources of public importance. Scenic resources identified on Figure 2-4 shall represent a preliminary mapping of visually sensitive areas. Other scenic resources may be identified to be present based on existing conditions at the time proposed development is considered.	Consistent. As discussed in Section 4.1, Aesthetics, of the 2011 Certified EIR, the proposed project's visual impacts were assessed from three key vantage points surrounding the project site (i.e., from southbound State Route 1 [SR-1] north of Roberts Lake, from Laguna Grande Regional Park on the south shore of Laguna Grande Lake, and from the residential area 1.5 miles east of the project site). These vantage points are consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in significant effects to visual resources.
Policy NCR-CZ 2.1.B – Protection of Visual Resources - Coastal visual resources shall be protected as a resource of public importance. - Visual resources and important view corridors shall be preserved. Figure 2-4 shall be used to assist the City in identifying significant public views of visual resources, view corridors, viewshed enhancement areas, and visually sensitive areas where height and bulk limits shall be required to preserve visibility. - Development determined to have a significant adverse effect on a visual resource or substantially limit visibility of visual	Consistent. As discussed above under Policy NCR-CZ 2.1A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key vantage points surrounding the project site. These vantage points are consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not limit the visibility of visual resources because the proposed project is barely visible from public views. In addition, the proposed project will be consistent with Section 2.6, Site Development Standards, of the City's Coastal Implementation Plan (CIP). Furthermore, building and landscaping design included as part of the proposed project

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resource shall not be allowed. iv. Public trails, recreation areas, and public viewing areas shall be developed adjacent and/or accessible to scenic view corridors, where feasible. v. New development shall be sited and designed to protect visual resources, minimize the alteration of natural land forms, preserve view corridors, be visually compatible with the character of surrounding areas, and, where feasible, restore and enhance visual quality in visually degraded areas. vi. Views of the Seaside coastal zone from State Highway 1 shall be protected and enhanced through regulation of siting, design, and landscaping of all new development. vii. New structures shall be sited and designed to harmonize with the natural setting and to not be visually intrusive. Structures, including fences, shall be subordinate to and blended into the environment, which may be accomplished through use of appropriate materials that will achieve that effect. Where necessary, modification shall be required for siting, structural design, shape, lighting, color, texture, building materials, access, and screening to protect public views. When structures cannot be sited outside of common public viewing areas, structures in scenic areas shall provide screening, which may be accomplished through the use of non-invasive native vegetation and topography to help provide visual compatibility.	will be approved by the Board of Architectural Resources (BAR), ensuring that the architectural design of the project will not degrade the existing visual character and quality of the project site and its surroundings. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will also include extending the existing pedestrian and bicycle trail to connect to the Laguna Grande Regional Park and Monterey Bay Coastal Bike Trail. Therefore, the proposed project will be consistent with the City's goal of developing public trails adjacent to scenic view corridors.
Water Resources Policy NCR-CZ 3.1.A – Provision for Potable Water Supply i. The City shall participate in local and regional efforts to secure a safe and adequate/sustainable supply of water. ii. New development shall be sited in areas with adequate public utility services (i.e., water treatment and delivery) and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. Where existing public utility services, including water, can accommodate only a limited amount of new development, priority uses including essential public services, public recreation, and visitor-serving commercial land uses shall have priority over other	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project would have an adequate and sustainable supply of water.

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development/uses.	
Policy NCR-CZ 3.1.B – Protection of Potable Water Supply – Water Conservation The City shall require that all new development, changes of ownership, and changes or expansions of use within the Coastal Zone meet or exceed Monterey Peninsula Water District's Water Efficiency Standards.	Consistent. The Monterey Peninsula Water District Water Efficiency Standards include nonresidential water efficiency standards for new structures. As discussed above under Policy NCR-CZ 1.1A, Promote Sustainable Development, the proposed project will minimize water usage and meet efficiency standards by installing water-efficient fixtures and appliances, native drought-tolerant plants, and water-efficient irrigation systems and devices, including restricted watering methods (i.e., prohibiting systems that apply water). Systems that use excessive and/or inefficient water systems will be prohibited. Therefore, the proposed project will meet the Monterey Peninsula Water District's Water Efficiency Standards.
Policy NCR-CZ 3.1.C – Management of Potable Water Supply Monitor water use in the City to ensure the availability of water to fulfill the goals of the LUP.	Not Applicable.
Policy NCR-CZ 3.1.D – Adequate Water Development may only be approved if it is demonstrated to have a safe, adequate, and sustainable water supply.	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project will have a safe, adequate, and sustainable supply of water.
Policy NCR-CZ 3.2.A – Water Reserves The City shall continue to support regional efforts to develop an alternative water supply for the City of Seaside.	Not Applicable.
Water Quality	
Policy NCR-CZ 4.1.A – Water Quality i. The City shall actively pursue methods of improving water quality of lakes, streams, and other waterways throughout the LCP area by improving the quality of dry-weather and stormwater runoff flows through the adoption of adequate stormwater pollution prevention and Low Impact Development strategies. ii. The biological productivity and quality of coastal waters, streams, wetlands, and lakes shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural	Consistent. As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the proposed project will include source control and treatment BMPs during project construction and operation. With the implementation of BMPs, the proposed project will result in improved water quality runoff when compared to the project site's existing conditions. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at sustaining biological productivity in the areas surrounding the project site and protecting water quality in bodies of water surrounding the project site. For example, as required by Measure 4.3.1, Biotic Habitat Protection, the Applicant will be required to retain a qualified biologist who will implement various actions during project construction in order to minimize construction impacts to sensitive biotic habitats adjacent

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streams.	to the project boundaries. In addition, Measures 4.3.2 through 4.3.4, which outline avoidance and minimization measures to minimize project-related impacts to special-status species (including northern harriers, other nesting birds, California red-legged frog, and Coast range newt) will be required to minimize impacts to sensitive species in the area. The proposed project will also be required to comply with Measure 4.3.5, Weed Management and Signage, mandating the placement and ongoing maintenance of signs along the pedestrian trail instructing pedestrians to stay on the trail in order to preserve neighboring biotic habitats and eradicate noxious common reed within the project area.
Natural Hazards	
Policy NCR-CZ 5.1.A – Designation of Natural Hazard Areas The hazard areas identified on Figures 2-5, 2-6, and 2-7 shall represent a preliminary mapping of potential hazards within the LCP area. Actual determination of hazard areas shall be based on facts on the ground at the time development is considered.	Consistent. The project site is located within an existing 100-year floodplain, is within 2,400 meters of a moderate fire threat and directly west of the Chupines Fault, and is within 0–5 meters of a tsunami evacuation zone (as respectively referred to on Figure 2-5 [Flood Hazard Areas], Figure 2-6 [Faults and Wildland Fire Threat Categories], and Figure 2-7 [Tsunami Evacuation Areas] in the City's Local Coastal Program LUP). As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, a majority of the project site is within the boundary of Federal Emergency Management Agency (FEMA) Zone AE, which is defined as areas inundated by the calculated 100-year flood event. Southwest portions of the project site lie within the boundary of a FEMA Zone X, which is potentially subject to flooding from the 500-year flood occurrence storm event. A small area in the southeast corner, adjacent to the channel and Roberts Lake, lies within a FEMA-designated floodway and must be kept free from encroachment; however, no project improvements are proposed at this location. The Base Flood Elevation at the project site is between 16 feet and 17 feet for the 100-year flood event. The proposed project will include the import of approximately 1,000 cubic yards of fill, which will raise elevations of the restaurant's first floor to 18 feet (i.e., 1 foot above the Base Flood Elevation). Therefore, the 2011 Certified EIR found and concluded that the proposed project would not be subject to on-site flooding. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR. As discussed in Section 4.6, Hazards and Hazardous Materials, of the 2011 Certified EIR, the project site is not located within a wildland area at risk of damage due to a wildfire. Therefore, the 2011 Certified EIR found and

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	concluded that the proposed project would not be at risk of a wildland fire. As discussed in Section 2.5, Geology and Soils, of the 2011 Certified EIR, the project site is located in a region characterized by moderate to high seismic activity, as is most of California. Due to this distance, the project site has the potential of experiencing strong ground shaking from earthquakes on regional and/or local causative faults. The closest active fault to the project site is the Chupines Fault, which lies 900 feet to the northeast of the project site (refer to Figure 2-6 of the Local Coastal Program LUP). Therefore, the project site is not subject to hazards associated with surface rupture; however, seismically induced ground shaking will be expected to occur as a result of seismic activity along the Chupines Fault. The proposed project will be required to comply with the California Building Code Compliance and Seismic Standards as required by Standard Condition 4.5.1 in the 2011 Certified EIR to reduce potential impacts associated with seismic ground shaking to less than significant levels. In addition, Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR found and concluded that the project site is located at an elevation of approximately 10 to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the proposed project in the event of a tsunami.
Policy NCR-CZ 5.1.B - Protection from Natural Hazards i. All new development in areas subject to natural hazards, including geologic, flood, tsunami, sea level rise, ocean storm and surge, and fire hazard, shall be sited, designed, and sized to minimize risk to life, property, and the environment from natural disaster as warranted based on assessed risk and conditions on the ground. ii. Applications for new development and redevelopment in natural hazard areas shall include an Adaptive Management Plan that identifies the expected lifetime of the proposed development and strategies to decommission the development once it has been determined that the development's lifetime has been reached due to hazards. Strategies identified in the Adaptive Management Plan may include, but are not limited to, removing the development and restoring the site to pre-development conditions;	Consistent. The project site is located within an existing 100-year flood zone, is within 2,400 meters of a Moderate Fire Threat and directly west of the Chupines Fault, and is within 5 meters of a tsunami evacuation zone (as respectively referred to on Figure 2-5 [Flood Hazard Areas], Figure 2-6 [Faults and Wildland Fire Threat Categories], and Figure 2-7 [Tsunami Evacuation Areas] of the City's Local Coastal Program LUP). The proposed project will be designed to minimize risk to life, property, and the environment from natural disaster as discussed below. In addition, as part of the proposed project, a quantitative analysis of sea level rise has been prepared that concluded the proposed project is above the sea level rise projections for the next 100 years. As discussed above under Policy NCR-CZ 5.1.A, Designation of Natural Hazard Areas, a majority of the project site is within the boundary of FEMA Zone AE, which is defined as areas inundated by the calculated 100-year flood event. The proposed project will raise elevations of the restaurant's

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managed retreat; and/or other hazard abatement strategies. New development shall only be approved if the approval includes an Adaptive Management Plan with enforceable provisions for both determining when a development's lifetime has been reached due to hazards, and for implementing the required abatement strategy at that time. iii. New development shall assure structural stability over the lifetime of the project as determined by the Adaptive Management Plan. iv. Proposed development shall be consistent with the following applicable goals and actions of the <i>City of Seaside Local Hazard Mitigation Plan</i> (LHMP), as modified to protect coastal resources: • Goal 1: Minimize loss of life and property from hazard events. • Goal 2: Improve safety for residents, business owners, and property in the City of Seaside. • Goal 3: Mitigate for disasters. • Action 3.09: Continue to actively implement existing state law that requires the City to maintain lists of addresses of unreinforced masonry buildings and inform property owners that they own this type of hazardous structure. • Action 3.10: Ensure that all new construction is completed using the latest earthquake-resistant design techniques that will limit damage caused by earthquakes. • Action 3.11: Identify mitigation measures for areas that flood annually. • Action 3.12: Ensure that all new construction that is now, or as modified by rising sea level will be, within the 100-year flood zone is sited to avoid flood hazards to the maximum extent possible and otherwise constructed using design techniques that will limit damage caused by floods consistent with policies NCR-CZ 5.2.A, and NCR-CZ 5.2.C and by using the latest edition of the California Building Code. • Action 3.15: Ensure that new development pays its fair share of improvements to the storm drainage system	first floor by approximately 1 foot above the Base Flood Elevation. Therefore there will be no significant impacts associated with on-site flooding to buildings proposed as part of the project. Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR also found and concluded that the project site is located at an elevation about 10 to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the proposed project in the event of a tsunami. Mitigation is also outlined in this section of the 2011 Certified EIR in order to further ensure that impacts related to flooding and other events causing inundation on the project site will be less than significant. As discussed in Section 4.6, Hazards and Hazardous Materials, of the 2011 Certified EIR, the project site is not located within a wildland area at risk of damage due to a wildfire (refer to Figure 2-7 of the City's Local Coastal Program LUP). Therefore, the 2011 Certified EIR found and concluded that the proposed project would not be at risk of a wildland fire. As discussed in Section 2.5, Geology and Soils, of the 2011 Certified EIR, the project site is located in a region characterized by moderate to high seismic activity, as is most of California. Therefore, the project site has the potential of experiencing strong ground shaking from earthquakes on regional and/or local causative faults. The closest active fault to the project site is the Chupines Fault, which lies 900 feet to the northeast (refer to Figure 2-6 of the City's Local Coastal Program LUP). Due to this distance, the project site is not subject to hazards associated with surface rupture; however, seismically induced ground shaking will be expected to occur as a result of seismic activity along the Chupines Fault. The proposed project will be required to comply with the California Building Code Compliance and Seismic Standards as required by Standard Condition 4.5.1 in the 2011 Certified EIR to reduce potential impacts associated with seismic ground shaking to less than significant levels. In addition, the proposed project will implement Standard Condition 4.5.2, which will require the review and approval of plans in order to ensure consistency with recommendations outlined in a geotechnical report prepared for the proposed project, to minimize impacts associated with seismic events. Therefore, due to the reasons discussed above, the proposed project will be consistent with the applicable goals and actions of the City of Seaside Local Hazard Mitigation Plan (LHMP).
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necessary to accommodate increased flows from the development. • Action 3.16: Ensure that new developments are designed to reduce or eliminate flood damage by requiring lots and rights-of-way are laid out for the provision of approved sewer and drainage facilities, providing on-site detention facilities whenever practical. • Action 3.17: Encourage homeowners in flood-prone areas to participate in home elevation programs and other methods to adapt to sea level rise. • Action 3.22: Ensure that all new construction in areas susceptible to fires is completed using fire-resistant design techniques that will limit damage caused by wildfires. For example, require Class A roofing materials for all homes in areas susceptible to fires. • Action 3.27: Adopt a City ordinance that requires the following measures to reduce fire ignition due to earthquakes: bracing of gas-fired appliances and equipment; flexible couplings on gas appliances and equipment; and the bolting of homes to their foundations and strengthening of cripple walls. • Action 3.33: Provide technical assistance to homeowners whose homes were damaged by natural hazards in order to site and design the residences to better avoid future hazards. Allow a streamlined permitting process for the rebuilding after a disaster. • Action 3.34: Encourage the retrofitting of unreinforced masonry structures that have not been retrofitted. • Action 3.37: Pass a City ordinance that will limit building in high-risk areas. • Goal 4: Increase public education and awareness of hazards so that City residents can better anticipate and prepare for them. • Action 4.15: Educate property owners on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event through appropriate City public education outlets. • Goal 6: Assure that continuity of local government operations will not be significantly disrupted by disasters.	As noted above, The proposed project will raise elevations of the restaurant's first floor by approximately 1 foot above the Base Flood Elevation. Additionally, the area is 10-15 feet above the mean tide level and is protected by City streets and a 40-foot dune. Finally, a quantitative analysis of sea level rise has been prepared that concluded the proposed project is above the sea level rise projections for the next 100 years. Therefore, based on known environmental hazards, the expected lifetime of the project is more than 100 years. In the event that specific geologic hazards and/or changes in Sea Level create conditions which warrant the demolition of the structure and on-site improvements, the property owner and applicant shall be responsible for obtaining the required Coastal Development Permits and City of Seaside demolition permits for the removal and disposal of the structure and on-site improvements. The demolition process shall adhere to all state requirements for the recycling of materials and disposal of hazardous wastes.
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• Action 6.10: Participate in the Office of Emergency Services Safety Assessment Program (SAP) which formalizes arrangements with engineers, building officials, and other qualified people to report to the City, assess damage, and determine if buildings can be reoccupied after a disaster. • Goal 7: Ensure the continuous function of utilities and critical transportation facilities. • Action 7.10: Encourage replacing aboveground utility lines with underground facilities. • Action 7.11: Assure that utility lines are installed underground for new development. • Action 7.22: Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage. • Goal 8: Assure that the economic vitality of the community will not be threatened by future hazards. • Action 8.01: Encourage business owners to participate in a program similar to San Francisco's Building Occupancy Resumption Program (BORP). This program permits owners of buildings to hire qualified structural engineers (California licensed structural engineers with relevant experience) to create facility-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City inspectors for these buildings in the event of a disaster. This program allows rapid reoccupancy of the buildings. • Action 8.02: Provide technical assistance to businesses damaged by natural hazards in order to site and design development to better avoid future hazards. Allow a streamlined permitting process for the rebuilding of businesses after a disaster.	
Policy NCR-CZ 5.2.A – Designation of Sea Level Rise Hazards The City shall collaborate with local jurisdictions and identify properties and stakeholders most likely affected by rising sea levels. Collaboration between these agencies would be beneficial to the citizens of the Monterey Bay area. Adaptation to the effects of sea level rise by the local jurisdictions and	Not Applicable.

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agencies is necessary to reduce the potential negative impacts sea level rise may have upon the economy and infrastructure of the Monterey Bay area.	
Policy NCR-CZ 5.2.B – Protection from Sea Level Rise Hazards i. Collaboration between jurisdictions and agencies could lead to the development and successful implementation of adaptation measures to the threat of sea level rise. Other jurisdictions that may be affected by sea level rise within the Monterey Bay area include: • California State Parks, • California Department of Transportation, • Cities of Monterey, Marina, Del Rey Oaks, Sand City, Pacific Grove, and Carmel-by-the-Sea, • Monterey County, • Monterey Regional Water Pollution Control District, • Association of Monterey Bay Area Governments, • Transportation Agency for Monterey County, • Monterey Peninsula Regional Park District, • Monterey Peninsula Waste Management District, and • California Coastal Commission. ii. Organize educational workshops for local citizens to inform them of the concerns and potential impacts of sea level rise in the Monterey Bay area. • Seek partnerships with educational and institutional organizations to assist with the facilitation of educational workshops. • Support ongoing efforts to develop and implement practical, science-based, long-term solutions and adaptation strategies for minimizing potential adverse impacts of sea level rise.	Not Applicable.
Policy NCR-CZ 5.2.C – Management of Sea Level Rise Hazards i. The City shall prepare periodic updates to the Local Hazard Mitigation Plan (2005) to address the potential impacts sea level rise will have on the City of Seaside. The plan update process shall include input of local citizens, businesses, educational institutions, and neighboring jurisdictions and the following components:	Not Applicable.

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a. A Vulnerability Assessment that identifies and analyzes areas within the city that are most at risk to the impacts of sea level rise. The Vulnerability Assessment will establish how far and how high coastal storms and ocean levels would inundate the city, including consideration of erosion and sedimentation factors. b. A Beachfront Area Plan that addresses the impacts sea level rise will have on the Beach Subarea. The Area Plan shall propose methods to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over a minimum of 100 years. The Area Plan shall also include a wave uprush and impact report and contain an analysis prepared by a licensed engineer with expertise in coastal engineering that addresses and demonstrates the effects of sea level rise in relation to the following: • Beach profile • Impacts to beach public access and recreation opportunities • Areas most affected by wave uprush • Evaluation of shoreline protection alternatives • Protection alternatives for freshwater table • Future projections of regional sea level rise • Location changes of potential mean high tide lines c. An identification of resources (including, but not limited to, visual resources, lakes, wetlands, parks, wildlife, and habitat), infrastructure improvements, public beach access and public trails (i.e., California Coastal Trail and Monterey Bay Recreation Trail), and properties that are potentially at risk to inundation or damage, and guidance for their protection. d. Evaluation of potential salinity changes and water level rise impacts to wetlands, Laguna Grande, and Roberts Lake. e. An identification of City policies that must change and recommendations for necessary policy changes that will make future development and area conservation projects more responsive and adaptive to sea level rise, including LCP policies through a LCP amendment.	
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f. An assessment of impacts to the city's local economy and recommendations for maintaining the economic viability of vulnerable areas. g. Mitigation and adaptation measures that can be implemented, as well as an analysis of the potential impacts of the measures. h. A framework for future revisions to the plan and a proposed method for disseminating information to the public.	
Policy NCR-CZ 5.3.A – Protection from Tsunami Hazards All development located within the tsunami inundation zone shown on Figure 2-7 (and as updated by the most recent state or local California Emergency Management Agency maps), shall be designed and sited to minimize and mitigate flood hazards to the maximum extent possible including by designing all habitable space above the maximum flood elevation as defined by a qualified coastal geologist with experience in tsunami.	Consistent. As discussed in Section 4.5, Geology and Soils, of the 2011 Certified EIR, the project site is located approximately 2,000 feet from Monterey Bay at an elevation of approximately 10 to 15 feet above mean sea level. Historically, there is no record of any tsunamis more than 9 feet high occurring along the County coast. Furthermore, the project site is protected by 20- to 40-foot sand dunes between the project site and the ocean that will minimize impacts to the project site in the event of a tsunami. Therefore, the 2011 Certified EIR found and concluded that the potential for a tsunami to affect the project site would be low.
Policy NCR-CZ 5.3.B – Management of Tsunami Hazards The City of Seaside shall prepare a Tsunami Preparedness Plan for mitigating the hazards associated with tsunamis, which shall include the following elements: • Review local and distant tsunami inundation maps for Seaside and the southern Monterey Bay as they are developed to identify susceptible areas and plan evacuation routes. • Periodically review and update tsunami preparation and response policies/practices to reflect current inundation maps and design standards. • Participate in any regional effort to develop and implement workable response plans that the City's emergency services can adopt immediately for evacuation in the case of a tsunami warning. • Prepare and deploy a system of tsunami detection and early warning systems as warranted based on assessed risk. • Include tsunami evacuation route information as part of any overall evacuation route sign program implemented in the City. Evacuation routes that lead away from low-lying areas	Not Applicable.

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around Roberts Lake, Laguna Grande, and the beach should be clearly posted. An evacuation route traffic monitoring system that provides real-time information on the traffic flow at critical roadways should be considered. • Develop and implement a tsunami educational program for residents, visitors, and people who work in the susceptible areas. • Require overnight visitor-serving facilities in susceptible areas to provide tsunami information and evacuation plans. • Encourage the Monterey County Office of Education to include in their earthquake-preparedness curriculum information specifically related to the natural hazards that Seaside and Monterey citizens could face and what to do about them. • Support tsunami research in the Southern Monterey Bay areas.	
Public Access & Recreation	
Policy PAR-CZ 1.1.A – Designation of Public Access and Recreational Opportunities The public access areas identified on Figure 2-8 shall represent a preliminary generalized mapping of access points and passages to significant coastal features and recreational opportunities. Actual determination of public access areas shall be based on facts on the ground at the time development is considered.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will maintain all access points from the project site to the pedestrian and bicycle trail around Laguna Grande Lake. In addition, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail (refer to Figure 2-8, Public Access Points and Passages, of the City's Local Coastal Program LUP).
Policy PAR-CZ 1.1.B – Protection of Public Access and Recreational Opportunities Maximize and protect public access including pedestrian and bicycle connectivity and recreational opportunities in the coastal zone consistent with resource conservation principles, public safety, public rights, and the rights of private property owners.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail consistent with resource conservation principles, public safety, public rights, and the rights of private property owners.

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Policy PAR-CZ 1.1.C – Management of Public Access and Recreational Opportunities i. As development occurs, the City shall develop and implement a coastal access/directional sign program for all public access points, including those shown on Figure 2-8. The sign program shall include informational signs identifying the location of the Monterey Bay and California Coastal Trail alignments within Seaside. ii. The City shall maximize opportunities for environmental education opportunities within the coastal zone through methods such as interpretive signage, outreach programs, on-site programs, guided walks along access and park trails, nature walks, publications, newsletters, brochures, exhibits/displays, and websites. iii. The City shall explore development of a Peninsula Visitors Center at a location within, or at a compatible location adjacent to, the coastal zone, provided the site has ample access to the lakes, parks, and beach to serve visitors to Seaside and the Monterey Bay area. iv. Ensure the ability of the California Coastal Trail and Monterey Bay Recreation trail to adapt to changes in sea level rise.	Not Applicable.
Policy PAR-CZ 1.1.D – Provision of Recreational Facilities Lower cost visitor serving and public recreational facilities shall be protected, encouraged, and where feasible, provided.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail, encouraging the use of recreational facilities in the Coastal Zone.
Policy PAR-CZ 1.2.A – Designation of Parking for Public Access and Recreational Opportunities i. The City shall provide free and unrestricted parking at all public access and public parking areas within the coastal zone during daylight hours (i.e., from one hour before sunrise to one hour after sunset) including those identified in Figures 2-8 and 2-9. ii. Explore expanding public access parking opportunities at the Embassy Suites Hotel parking lot.	Consistent. The project site is designated as a shared off-street parking area (refer to Figure 2-9, Public Parking Area, of the City's Local Coastal Program LUP). Although the proposed project will develop this property with a restaurant use, thereby eliminating this property as an off-street public parking area, the proposed project will provide sufficient parking to serve visitors to the project site and surrounding areas. Specifically, the proposed project will provide approximately 53 parking spaces, including three Americans with Disabilities Act (ADA) accessible spaces, three bicycle racks, two motorcycle parking stalls, and one recreational vehicle (RV)

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	parking space. In addition, there are two public parking lots located on the north side of Laguna Grande Park that can be accessed from Canyon Del Rey Boulevard that would remain available for public use. The project site is accessible from these public parking lots by an existing pedestrian pathway that circles around Laguna Grande Park.
Policy PAR-CZ 1.3.A – Designation of Trails The City shall establish, designate, and maintain a system of trails and an inter-connected trail / park network as components of the California Coastal Trail and Monterey Bay recreational trail alignments to the extent feasible.	Not Applicable.
Policy PAR-CZ 1.4.A – Public Access Improvements Improve water quality and the recreational experience of southern Monterey Bay area beaches, including by pursuing opportunities to consolidate and/or eliminate reliance on storm water outfalls that convey storm water directly to the beach (Policy NCR-CZ 1.4.B.iii). Such storm water shall be filtered and treated prior to discharge.	Not Applicable.
Land Use & Development	
Land Use Designations & Definitions	
Policy LUD-CZ 1.1.A – Land Use Designations Within the Coastal Zone The following land use designations establish the type, density, and intensity of land use within the coastal zone. The maximum densities allowed for each land use are defined in the Development Standards provided in the Coastal Implementation Plan portion of the LCP. The permitted development intensities shall be limited to those that adequately provide for public access and recreation needs and that address site constraints. Consistency with applicable policies of the LCP will ensure that site constraints are adequately addressed by requiring protection from natural hazards and the preservation and enhancement of natural coastal and scenic visual resources (including provisions for appropriate buffers). The types of land uses allowed within the Coastal Zone are described below: • Coastal Parks and Open Space (CPOS): This designation is appropriate in areas where the City wants to protect and preserve natural resources and habitat, views, and other visual amenities and protect people and property from	Consistent. The northeastern, eastern, and southern portions of the project site are designated Coastal Visitor-Serving Commercial (CVSC) (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). CVSC permitted uses include food service and recreation-related commercial uses; therefore, the development of a restaurant facility and extension of the existing pedestrian and bicycle trail as part of the proposed project will be consistent with permitted uses in the CVSC land use designation as outlined in the City's Local Coastal Program LUP. Furthermore, the proposed project will develop the property at a floor area ratio (FAR) of 0.04, which is well below the maximum FAR of 1.0:1 that is permitted by the land use designation.

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natural and man-made hazards. This designation also identifies existing or planned parkland. Public use areas include the sandy beach, access ways, parks, trails, walkways, and other recreational amenities that are publicly owned or over which easements or similar instruments are required as a condition of development. The maximum floor area ratio (FAR) within this designation is 0.01:1. • Coastal Visitor-Serving Commercial (CVSC): Principal permitted visitor-serving commercial uses include hotels/motels, food service, retail establishments, visitor/traveler support services (such as visitor information centers), and recreational-related commercial uses. The maximum FAR is 1.0:1, except that hotels are allowed a maximum FAR of 1.5:1. • Coastal Visitor-Serving Recreation (CVSR): Principal permitted visitor-serving recreation uses include recreational equipment rental centers (such as bicycle, boat, and other recreational equipment) and visitor-serving support services (such as visitor information centers). Commercial uses such as hotels/motels, restaurants, and retail establishments are not allowed. However, counter food service (such as a snack bar), which is ancillary to a primary permitted use, is permissible. The maximum FAR is 0.5:1. • Coastal Regional Commercial (CCRG): Regional commercial uses are defined as large scale commercial development with retail, entertainment, and/or service uses of a scale and function to serve a regional market. These uses are allowed where existing regional commercial uses are developed within the coastal zone. Permitted regional commercial uses include general, grocery, and outdoor retail; shopping center; health and fitness facilities; and restaurants with table service. The maximum FAR is 1.0:1. • Coastal Heavy Commercial (CCH): Heavy Commercial uses are intended for subregional commercial activities such as auto and truck repair, contractor yards, warehousing, and light manufacturing. These uses are permitted where existing heavy commercial uses are developed within the coastal zone (i.e. near railroad right-of-way adjacent to Sand City boundary). The maximum FAR is 0.5:1.	
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• Coastal Mixed Use/West Broadway Urban Village Specific Plan (CMX/WBUVSP): Seaside has developed a Mixed Use designation as a way to promote pedestrian- and transit-oriented activity centers that have a mixture of residential, commercial, office, and civic uses. This designation is appropriate in the Del Monte Subarea to be consistent and compatible with the West Broadway Urban Village Specific Plan. The applicable Development Standards and Design Guidelines have been included in Appendix C of the CIP. • Coastal Transportation Corridor (CTC): The City of Seaside shall maintain the State Highway One right-of-way and the former Southern Pacific Railroad right-of-way as essential public transportation corridors. Principal permitted uses of the corridors are for motorized and non-motorized forms of transportation. The former Southern Pacific Railroad right-of-way shall be reserved for possible light rail, bus rapid transit route, or other non-motorized forms of transportation including pedestrian and/or bicycle paths.	
Policy LUD-CZ 1.2.A – Definitions within the Coastal Zone The following definitions shall be specific to the LCP. These definitions are intended to provide clarification and guidance for use of terminology used throughout the LCP. i. An “adverse effect on a visual resource” shall be defined as development that impacts common public viewing areas to and along the ocean and scenic coastal areas, alters natural land forms, conflicts with the character of surrounding areas, and/or, does little to restore and enhance the visual quality within visually degraded areas. ii. “Canyon Del Rey Watershed” is the area beginning near the intersection of Quail Ridge Lane and State Route 68, continuing along State Route 68 toward the City of Monterey until the intersection of Canyon Del Rey Boulevard and State Route 68, and extending along Canyon Del Rey Boulevard until the terminus of Canyon Del Rey Creek at the southeastern end of Laguna Grande, has been determined to have exceptional value and public importance.	Not Applicable.

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iii. "Common public viewing area" is a public area such as a public street, road, designated vista point, or public park from which the general public ordinarily views the surrounding viewshed. iv. "Cumulatively" or "cumulative effect" means the incremental effects of an individual project shall be reviewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. v. "Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511). vi. "Environmentally Sensitive habitat area" (ESHA) means any area in which plant or animal life or their habitats are either rare, or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. vii. "Floor area ratio" (FAR) expresses the intensity of use on a lot. The FAR represents the ratio between the total gross floor area of all buildings on a lot and the total land area of	
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that lot. viii. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. ix. The "Fremont Corridor" is an area encompassing 19 acres of land located on the east side of Fremont Boulevard between La Salle Avenue and Olympia Avenue within the Laguna Grande Subarea. x. "Marine Resource" is a broad, encompassing term that incorporates all marine life and marine habitats, including the flora and fauna of the Monterey Bay Marine Sanctuary and all water bodies within the coastal zone that, due to their aesthetics, function, or contribution to the social and environmental ecosystem, are considered to have exceptional value and public importance. xi. A "Mitigation/Restoration and Monitoring Program," prepared pursuant to Section 15097 of the CEQA Guidelines, describes the processes for implementing identified mitigation measures and/or restoration measures and the persons responsible for implementing and/or overseeing those mitigations xii. "Natural Hazard" is defined as threat of an atmospheric, earth, or water-related occurrence that will have a negative effect on life, property, or the environment. Natural hazards within Seaside's coastal zone include the following: Seismic; Fire; Flood; Sea level rise; High wave event storms; surges; and tsunamis. xiii. "Public Access" is defined as the ability of residents and visitors to use and enjoy areas within the coastal zone for recreational uses such as hiking, bicycling, and picnicking. Public access includes the provision of open access way to coastal features and connectivity to other existing coastal features and inland trail networks such as walkways and bicycle paths. xiv. "Sea level rise" is defined as the anticipated sea level changes due to the greenhouse effect and associated global warming and climate changes. xv. "Sustainable development" is development that meets the	
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needs of the present without compromising the ability of future generations to meet their own needs. xvi. “Viewshed enhancement areas” are those areas that can be restored or enhanced to improve visual quality of degraded conditions. xvii. “Visually sensitive areas” are those areas that require height and bulk development restrictions to preserve the public’s ability to view visual resources. xviii. “Wetland” is any area which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.	
Development & Land Use Requirements	
Policy LUD-CZ 2.1.A – Designation of Land Uses Within the Coastal Zone Land use designations for the Local Coastal Plan area are shown on Figures 2-10a and 2-10b.	Consistent. The northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City’s Local Coastal Program LUP).
Policy LUD-CZ 2.1.B – Compliance with Land Use Plan Policies New development shall be required to demonstrate compliance with the Land Use Plan policies applicable to the particular project under consideration.	Consistent. This LCP-LUP Consistency Analysis provides the required information that demonstrates the proposed project is consistent with all applicable LUP policies.
Policy LUD-CZ 2.1.C – Land Use Densities Within the Coastal Zone The densities described in LUD-CZ 1.1.A represent a maximum. As required by the applicable policies of the LUP, permitted development intensities shall be limited to those which adequately address constraints including, but not limited to, public access and recreation needs, coastal hazards, natural habitats (i.e. sand dunes, wetlands, riparian, ESHA, and marine resources, etc.) and their appropriate buffers, natural landforms and scenic views.	Consistent. The northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City’s Local Coastal Program LUP). The proposed project will include the development of a restaurant facility, consistent with conditionally permitted uses in the CVSC land use designation (refer to the CIP Consistency Analysis). The proposed project adequately addresses all constraints as discussed in the LCP.
Policy LUD-CZ 2.1.D - Coastal Development Permit Required A Coastal Development Permit shall be required for all development within the Coastal Zone.	Consistent. The proposed project is located within the Coastal Zone and is seeking approval of a Coastal Development Permit (CDP).
Policy LUD-CZ 2.1.E – Minimize Adverse Effects New development shall be located in areas where it will not have significant adverse effect either individually or cumulatively on natural coastal resources and public access and recreation	Consistent. The 2011 Certified EIR found and concluded that the proposed project would result in neither project-specific nor cumulatively significant impacts to natural coastal resources or public access and recreation. None of the proposed project changes would change the conclusions on this

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(Policy NCR-CZ 1.1.C).	issue as discussed in the certified 2011 EIR.
General Permit Considerations	
Policy LUD-CZ 3.1.A – Considerations for Natural Habitat Areas - ESHA i. Proposed development in areas adjacent to an ESHA (as identified earlier by Policies NCR-CZ 1.2.A and 1.3.A), shall be required to demonstrate that it is sited and designed to be compatible with the protection of these resources. ii. Proposed development in areas adjacent to an ESHA (including wetlands) shall be required to provide a site-specific resource report prepared by a qualified biologist. The report shall include, at a minimum, the following: a. A site-specific survey evaluating existing known resources at the time of proposed development. b. A map identifying existing known resources within the project's identified area of potential impact at the time of proposed development. c. An evaluation of necessary buffers and/or setbacks required around any identified ESHA, wetland or riparian vegetation to ensure the long-term biological integrity of the resource. All identified necessary buffers and/or setbacks required to ensure the biological integrity of the resource shall be mapped. • Buffers or setbacks are required around Natural Habitat Areas including ESHA, riparian vegetation, and wetlands of a sufficient size to ensure the biological integrity of the resource, including under changing sea level conditions. • A minimum buffer of 50 feet as measured from the extent of identified habitat type shall be required, unless a biological assessment results in information indicating that expanded or reduced setback/buffer would ensure the biological integrity of the resource. Smaller setbacks or buffers may be allowed only if it can be demonstrated that: (1) the required minimum 50-foot buffer would render the site unusable for its designated use; and (2) the buffer has been adjusted downward only to a point where the designated use can be accommodated. Under no	Consistent. The project site does not contain any ESHAs; however, potential riparian, emergent wetland, and estuarine ESHAs are present to the north, south, and east of the project site (refer to Figure 2-2, Potentially Environmentally Sensitive Habitat Area [ESHA] within the Coastal Zone, of the City's Local Coastal Program LUP). As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, it was determined that with implementation of Measures 4.3.1, 4.3.2, 4.3.3, and 4.3.4, the proposed project will result in less than significant impacts on neighboring sensitive habitats, including potential ESHAs. In addition, six site-specific field surveys were conducted as part of the Biological Resources Report prepared for the 2011 Certified EIR to determine existing plant and animal species present on and adjacent to the project site. The Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site that are incorporated into the 2011 Certified EIR as Measures 4.3.1 through 4.3.4. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR. Furthermore, according to the City's CIP, developments are required to be set back a minimum of 50 feet from Laguna Grande Lake (a designated marine resource area). However, smaller setbacks may be allowed if public recreational trails are provided within the buffer zone. The proposed project will construct the trail extension within the 50-foot buffer zone; however, the restaurant facility will be set back a minimum of 50 feet from Laguna Grande Lake.

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circumstances shall the buffer be reduced to less than 25-feet. If the buffer/setback is adjusted downward, additional mitigation measures developed in consultation with the Department of Fish & Game shall be implemented. • No permanent structures shall be permitted within the required buffer/setback area except for structures of a minor nature that do not lead to significant degradation of the resource such as fences or at grade improvements for public access and/or recreation purposes (i.e. paths, trails, platforms, parking). d. Identification of all biological impacts of proposed development. e. Alternatives and/or mitigation for avoiding and/or reducing any identified impacts to a less than a significant level. f. Mitigation/Restoration and Monitoring Program for any mitigation required, including identification of appropriate acre replacement/ restoration ratios for any unavoidable impacts.	
Policy LUD-CZ 3.1.B – Considerations for Natural Habitat Areas – Wetland Vegetation Management i. For proposed development within the coastal zone, a <i>Vegetation Management Report</i> prepared by a qualified biologist shall be required. The report shall consist, at a minimum, of the following: a. A site-specific survey of the vegetation and habitat types at the time of proposed development. b. A map identifying existing vegetation and habitat types relative to the identified project area, and identification of all potential impacts associated with the proposed development. c. Identification of appropriate native plant species for use in restoration activities. d. Identification of appropriate buffers, or setbacks, necessary to protect identified vegetation. e. Alternatives and/or mitigation for avoiding and/or minimizing identified impacts. Mitigation shall include	Consistent. As part of the 2011 Certified EIR, a Biological Resources Report was prepared for the proposed project. The Biological Resources Report included six site-specific field surveys to determine existing plant species and vegetation types present on and adjacent to the project site. All existing vegetation and habitat species were identified in this report, as were impacts and prescribed mitigation measures.

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procedures and planting/maintenance plans that will encourage, enhance, or reestablish desirable plant communities. ii. The <i>Vegetation Management Report</i> shall be consistent with the most current version of the Wetland Management/Enhancement and Restoration Program (refer to Policy NCR-CZ 1.5.D).	
Policy LUD-CZ 3.1.C – Considerations for Natural Habitat Areas – Wetlands and Marine Resources i. Applicants for new development within the coastal zone located within, adjacent to, or that has watershed connection to a marine resource shall be required to submit a site-specific Wetland Management / Enhancement and Restoration Program (refer to Policy NCR-CZ 1.5.D) including, at a minimum, the following elements: a. A wetland delineation prepared by a qualified biologist with expertise in identifying wetlands and wetland indicators (i.e. soils, hydrology or vegetation). b. Identification of the current conditions of the site including flooding potential, water quality, and natural systems. c. Identification of all habitat types and known water quality concerns within the project area. d. Guidelines for water quality management and/or improvement that is consistent with maintenance, reestablishment, and enhancement of existing wetland habitats and water quality. e. An identification of appropriate methods of native enhancement and restoration that will sustain the biological productivity of existing wetland habitats. f. An identification of structural and nonstructural best management practices that will: • Maintain, and as feasible enhance, habitat and support natural systems of Laguna Grande, Roberts Lake and Monterey Bay, • Maintain, and as feasible improve, water quality, • Control erosion and sedimentation deposit, and • Provide flood protection. g. Guidelines, after consultation with the appropriate state	Consistent. A Jurisdictional Delineation (JD) was prepared to identify jurisdictional waters, including wetlands on and adjacent to the project site. Section 4.3, Biological Resources, of the 2011 Certified EIR describes existing natural systems and habitat types on the project site that are consistent with the findings in the Biological Resources Report and the JD prepared for the proposed project. Section 4.3, Biological Resources, of the 2011 Certified EIR includes mitigation measures aimed at minimizing, and if at all possible avoiding, impacts to existing native habitats and species on the project site. Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR describes existing conditions related to the flooding potential on the project site. As discussed above under Policy NCR-CZ 5.1.A, Designation of Natural Hazard Areas, the majority of the project site lies within the boundary of FEMA Zone AE, where the 100-year flood event will result in inundation to elevations between 16 feet and 17 feet. The current project grading plan proposes to import slightly more than 1,000 cubic yards (net) of fill. This volume of fill will raise the elevations of developed portions of the project site above 15 feet, and will raise the elevation of the first floor of the restaurant building to 18 feet, which is more than 1 foot above the Base Flood Elevation. In addition, as discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, implementation of Measures 4.7.1 and 4.7.2 will incorporate BMPs to reduce pollutants of concern in storm water runoff during project construction and operation.

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and federal resource agencies, for the preservation and/or reestablishment of equivalent (size and biological value) areas of riparian and marsh vegetation (if appropriate) including implementation and maintenance. h. Identification of technical, planning, and design mechanisms for plan implementation and maintenance.	
Policy LUD-CZ 3.1.D – Considerations for Natural Habitat Areas - Watershed/Water Quality Design and manage proposed development (new development or redevelopment) to eliminate or minimize dry-weather flows to Roberts Lake, Laguna Grande, and Monterey Bay in order to protect and enhance the biological productivity and diversity of fresh, intertidal, and marine organisms. i. All proposed development shall prepare Storm Water Pollution Prevention Plan (SWPPP) that includes, construction, and maintenance of erosion control, and water quality BMPs to be implemented during construction to prevent any construction related runoff and/or sediment from discharging to coastal waters including Roberts Lake, Laguna Grande, and the Beach Subareas as applicable. ii. All proposed development shall include a post-construction drainage plan that identifies the appropriate types of BMPs to be used at the site, implementation and maintenance scheduling, monitoring requirements, and responsibilities. iii. All proposed development shall include, to the extent feasible and as applicable to the type of development proposed, Site Design and Planning, Pollution Prevention, Source Control, and Treatment Control strategies that: • Minimize impervious surface, reduce the volume of runoff, and maximize infiltration of runoff. • Incorporate Pollution Prevention and Source Control BMPs / techniques that eliminate or minimize sources of pollution generated on the site. • Incorporate Low Impact Development (LID) design techniques (also known as Integrated Management Practices (IMPs)) that minimize and disconnect impervious surfaces and are integrated into the landscape design and distributed throughout the site.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at ensuring the sustainability of biological productivity in the areas surrounding the project site. In addition, as required by Measure 4.7.1 outlined in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the proposed project will be required to prepare an ESCP as well as a SWPPP to minimize potentially significant impacts to water quality during construction. In addition, as required by Measure 4.7.2, the proposed project will be required to implement appropriate Source Control and Treatment BMPs to minimize impacts to water quality during project operation. Furthermore, on July 12, 2013, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032). The Post-Construction Requirements mandate that development projects use Low Impact Development (LID), which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. These Post Construction Requirements are referenced in Section 2.7.G.5 of the City's CIP. Therefore, the project is required to comply with the Post-Construction Requirements to implement LIDs and infiltrate storm water runoff on-site.

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• Incorporate Source Control and Treatment Control BMPs that capture and treat polluted runoff prior to entering the municipal storm drainage system or receiving waters. Treatment Control BMPs shall be consistent with Seaside Municipal Code Chapter 18.46, Urban Storm Water Quality Management and Discharge Control, the Monterey Regional Storm Water Management Plan (SWMP), the Central Coast Regional Water Quality Control Board post-construction requirements and the regional NPDES Permit requirements. • All development shall include in construction documents operational and maintenance provisions to ensure ongoing effectiveness of BMPs. • All development shall be conditioned to require ongoing maintenance that is necessary for effective operation of all required water quality structural and non-structural BMPs for the life of the project. • Consolidate and/or eliminate storm drain outfall where feasible. Emphasis shall be placed on eliminating / redirecting dry weather and storm water flows away from the Bay Street and former Fort Ord storm water outfalls.	
Policy LUD-CZ 3.2.A – Considerations for Visual Resources - Proposals for new development shall include a map and visual analysis prepared by a qualified professional identifying the development's visual impacts, including potential impacts on scenic views and viewsheds including, but not limited to, those identified on Figure 2-4. - Development shall be sited and designed to protect, and where feasible enhance, public views to Roberts Lake, Laguna Grande, Monterey Bay, and the Pacific Ocean, including from Highway 1, which may be accomplished by minimizing the alteration of the natural land forms and by designing development to be visually compatible with the character of the surrounding areas. • Where feasible, development shall restore and enhance visual quality in visually degraded areas. - Landscaping shall be sited and installed to screen parking and utility areas from public view (including views from the	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, as part of the visual analysis prepared for the proposed project, three key views consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP were identified and analyzed to see if the project would have an impact on key views. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect on a scenic vista. In addition, the proposed project will be consistent with Section 2.6, Site Development Standards, of the City's CIP. Additionally, the proposed project must be reviewed and approved by the BAR to ensure that the character of the project site is compatible with the surrounding area. The proposed project will include landscaping along all boundaries of the project site. Furthermore, on-site lighting will be designed to be directed downward, will

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water and other recreation areas), provided such landscaping itself also protects and does not degrade views. iv. Outdoor lighting and signs shall be designed to protect sensitive habitats, public recreation areas, public views, and night sky from intrusion, including by prohibiting signs with moving parts or flashing lights, minimizing glare, and shielding and directing lighting within the development areas.	include directional lumens, and will be located in those areas requiring nighttime lighting, thereby reducing impacts on nighttime views as required by Measure 4.1.1, Lighting Plan, in Section 4.1, Aesthetics, of the 2011 Certified EIR. No lighting as part of the proposed project will include moving or flashing parts.
Policy LUD-CZ 3.3.A – Considerations for Water Resources/Utilities i. Installation of new water utility infrastructure shall be provided in a manner which allows development at densities and locations consistent with the land use designations defined in Policy LUD-CZ 1.1.A and taking into account the natural resource protection policies of this plan. ii. Prior to the approval of any development within the coastal zone, adequate water capacity shall be demonstrated consistent with the provisions and requirements of the Monterey Peninsula Water Management District. iii. Capacity for additional water service shall be reserved according to the following ranking of priorities: (a) essential public services; (b) new and existing recreational or open space uses within the coastal zone; and (c) visitor-serving commercial uses. iv. Applications for development shall demonstrate an adequate, sustainable, public (i.e., publicly owned and/or managed) water supply to support the proposed development. Private water supplies are prohibited to serve existing and new development.	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project would have an adequate and sustainable supply of water.
Policy LUD-CZ 3.3.B – Considerations for Water Resources-Water Supply/Conservation i. All new development, changes of ownership, and changes or expansions of use within the Coastal Zone receiving a water permit on or after January 1, 2010 shall meet or exceed the following Water Efficiency Standards (Policy NCR-CZ 3.1.B): • Ultra-Low Flush Toilets shall be installed; • Urinals installed in residential uses shall be designed to flush with one (1) gallon of water. Urinals installed in non-residential uses shall be pint urinals or zero water	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include a variety of design features aimed at reducing water and energy usage. The water efficiency standards outlined under Policy LUD-CZ 3.3.B shall be included in the General Contractor's construction specifications. Therefore, the proposed project would meet or exceed the Water Efficiency Standards.

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consumption urinals and shall be clearly specified on the final construction drawings. Zero water consumption urinals shall be encouraged in settings where there is a regular maintenance staff; • Showerheads, Rain Bars, or Body Spray Nozzles shall be installed that were designed to emit a maximum of 2.0 gallons per minute of water. All shower fixtures should be equipped with scald protection valves rated for 2.0 gallons per minute showerheads. Installation of multiple Showerheads in one stall shall require timers for each Showerhead, Rain Bar, or Body Spray Nozzle. No timer shall operate with greater than a three (3) minute operating increment; • Residential lavatory sink faucets shall emit a maximum of 2.2 gallons of water per minute at 60 psi and residential kitchen sink faucets shall emit a maximum of 2.2 gallons of water per minute at 60 psi; 8. Public lavatory faucets shall emit a maximum of 0.5 gallon of water per minute at 60 psi and public lavatory sinks equipped with automatic shut off devices or sensor faucets shall operate with a maximum flow of 0.25 gallons per cycle; • High efficiency clothes washers shall be installed when a clothes washer is installed in a new structure; • High efficiency dishwashers or high efficiency commercial dishwashers shall be installed and maintained on the site when a dishwasher is installed in a new structure permitted by a Water Permit; • Instant-access hot water system(s) shall be installed for hot water access points to ensure that hot water is available within ten (10) seconds • All hot water pipes shall be insulated; • Sodium chloride (salt) water softeners shall be discouraged in New Construction. Alternate technologies such as potassium chloride shall be recommended. When a sodium chloride water softener is to be installed, the unit shall use demand-initiated regeneration which senses when the resin must be recharged, either electronically or with a meter that measures and	
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calculates usage. This requirement shall be specified on the Construction Drawings; • Water Efficient Pre-Rinse Spray Valves shall be utilized when a pre-rinse spray valve is installed; • There shall be no single-pass water use systems in ice machines, hydraulic equipment, refrigeration condensers, X-ray processing equipment, air compressors, vacuum pumps, etc. Air-cooled or better technology shall be installed; • Water cooled refrigeration equipment shall be prohibited when there is alternative cooling technology available; • Cooling Towers shall be equipped with conductivity controllers that are used to increase the number of cycles that can be achieved; • Boilerless steamers or connectionless steamers shall be installed in place of boiler-based steamers when a steamer is installed in new construction; • All landscape shall comply and identify on the landscape plan the following requirements: - o Group planting by hydrozones (water requirements). - o Irrigation systems shall include the installation, use and maintenance of Weather-Based Irrigation System Controllers (e.g. Smart Controllers). Weather-Based Irrigation System Controllers shall include functioning Soil Moisture Sensors and a Rain Sensor as components of the system. - o Drip Irrigation shall be utilized for watering all non-turf irrigated plantings. - o Rotating Sprinkler Nozzles shall be utilized for turf irrigation. - o Overhead spray irrigation shall not be used to water non-turf landscaping, including trees and shrubs. - o Irrigation systems shall operate with at least 70 percent efficiency. ii. Rainwater and graywater collection/irrigation systems are encouraged to supplement irrigation for new landscaping. New structures shall be encouraged to include one or more rainwater cisterns and a system to provide at least 75 percent of exterior irrigation during normal rainfall years.	
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Systems must be compliant with local catchment system standards, including Monterey County Department of Environmental Health. All sites utilizing a graywater reuse system shall install and maintain a backflow prevention device as required by the water distribution system operator that supplies water to the site.	
Policy LUD-CZ 3.4.A – Considerations for Water Quality/Wastewater i. Prior to the approval of any new development within the coastal zone, adequate sewage treatment facility capacity shall be demonstrated consistent with the provisions and requirements of the California Regional Water Quality Control Board. ii. Capacity for additional wastewater collection, conveyance and treatment shall be verified. iii. Alternatives for demonstrating additional wastewater treatment capacity for permitted development may be considered, including but not limited to, (a) construction of a package treatment plant at the Seaside treatment facility to handle all projected sewage for the City's LUP land use designations; or (b) the construction of a new sewer line to the Monterey treatment facility to handle the same sewage capacities.	Consistent. As discussed in Section 4.12, Utilities and Service Systems, of the 2011 Certified EIR, on November 10, 1992, an Agreement to Allow Connection to Sanitary Sewer Systems (Agreement) was entered into by the City of Monterey and the Seaside County Sanitation District (SCSD). Through this agreement, the City of Monterey will allow the SCSD to utilize the City of Monterey's sanitary sewer collection system for sewer services for the parcel of land (1350 Del Monte Boulevard) on which the proposed project will be developed. The proposed project is projected to experience average daily wastewater flows of approximately 3,850 gallons per day (gpd) and peak flows of approximately 5,775 gpd. The wastewater treatment needs of the proposed project, therefore, will not exceed the average and peak flow limits of 4,000 gpd and 8,000 gpd, respectively, set forth in the Agreement between the SCSD and the City of Monterey. Furthermore, the Monterey Regional Water Pollution Control Agency (MRWPCA) estimates that sufficient flow capacity will be available at the facility to meet all needs through the service area for the next 20 years. Therefore, the wastewater treatment needs of the proposed project will not exceed the permitted capacity of the MRWPCA facility.
Policy LUD-CZ 3.5.A – Considerations for Natural Hazards i. Applications for new development shall include an analysis of all potential hazards, site constraints, alternatives, and appropriate mitigation. The analysis shall also include a determination that the site is suitable for the proposed development and that it will be safe from hazards over the lifetime of the development without reliance on seawalls, deep piers, or similar engineering measures. ii. Proposed development shall be consistent with applicable goals and policies of the LCP. iii. All required geologic engineering reports shall be prepared by a qualified geotechnical engineer. Reports shall address site stability under static and pseudo-static conditions. iv. Geologic reports submitted to the City shall be in conformance with guidelines established for such reports by	Consistent. An analysis of all potential hazards, site constraints, alternatives, potential impacts, and corresponding mitigation measures were outlined in applicable topical sections of the 2011 Certified EIR for the proposed project. As discussed throughout this LCP-LUP Consistency Analysis, the proposed project will be consistent with applicable policies included in the City's LUP. As required by Standard Condition 4.5.2, a site-specific geotechnical report for the proposed project will be prepared by a qualified engineer. The project site is located within 5 meters of a tsunami evacuation zone (refer to Figure 2-7, Tsunami Evacuation Areas, in the City's Local Coastal Program LUP). As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the project site is located at an elevation about 10

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the California Division of Mines and Geology and the Uniform Building Code, including the following: • Geologic reports shall include information on the regional and local geologic setting, topography, significant landforms, soil types and thickness of soil or depth to bedrock, geologic hazards, soil/rock types, geologic structures, groundwater conditions, and other relevant properties, such as erosion potential and mineral economic resources. • The geologic report shall contain the following ten major sections: - o Summary - o Description of Project Alternatives - o Impacts - o Geology of the Project Area - o Geologic and Seismic Impacts - o Mitigation of Impacts - o Coordination with Other Agencies, Groups, or Consultants - o Conclusions and Recommendations - o Report Preparer's Qualifications - o References v. All development proposed within an area that is subject to ocean wave, tsunami, or flooding shall prepare an analysis of wave up-rush / shoreline erosion, and be adequately set back from the area of hazard to be safe for the life of the development or a 100-year period, whichever is greater, without reliance on seawalls, deep piers, or similar engineering measures. vi. Require all coastal development permit applications for all development on a beach or sand dune property subject to wave action to assess the potential for flooding or damage from waves, storm surge, or seiches, through a wave uprush and impact report prepared by a licensed civil engineer with expertise in coastal processes. The conditions that shall be considered in a wave uprush study are: a seasonally eroded beach combined with long-term (75 years) erosion; high tide conditions, combined with long-term (75 years) projects for sea level rise; storm waves from a 100-year storm event or a	to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the project site in the event of a tsunami. Mitigation measures are also outlined in this section of the 2011 Certified EIR in order to further ensure that impacts related to flooding and other events causing inundation on the project site will be less than significant. A sea level rise quantitative analysis was prepared to examine site development relative to projected 75-year and 100-year sea level rise scenarios. The sea level rise quantitative analysis incorporated wave up-rush and beach/shoreline erosion as part of the analysis.
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storm that compares to the 1982/83 El Niño event.	
Policy LUD-CZ 3.5.B – Considerations for Sea Level Rise i. Geotechnical reports prepared for proposed development shall include a comprehensive evaluation of potential sea level rise impacts. This evaluation shall include the following: • A Vulnerability Assessment that identifies and analyzes areas within the city that are most at risk to the impacts of sea level rise. The Vulnerability Assessment shall establish how far and how high coastal storms and ocean levels would inundate the city, including consideration of erosion, inland flooding, and sedimentation factors. • Identification of any site-dependent infrastructure that is at risk from sea level rise. • Identify and prioritize mitigation and adaptation measures that can be implemented as well as an analysis of the potential impacts of the adaptation measures. Mitigation and adaptation measures shall be scaled to the local and regional hydrologic events projected. These measures may include, but are not limited to, riparian habitat restoration, living shoreline projects, management of invasive species, regional sediment management, and innovative designs. • If the City's Local Hazard Mitigation Plan update (required by Policy NCR-CZ 5.2.C) has been prepared at the time the site-specific comprehensive evaluation of sea level rise impacts are being evaluated, then the evaluations shall be consistent with the intent of that plan update.	Consistent. As required by Standard Condition 4.5.2, a site-specific geotechnical report for the proposed project will be prepared by a qualified engineer. This report will be prepared in compliance with all State and City requirements.
Policy LUD-CZ 3.6.A – Considerations for Public Access and Recreation i. Development shall not interfere with the public's right of access to the shore and significant coastal recreation features. ii. New development shall plan for and provide public access to coastal features.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will provide increased connectivity to the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. Therefore, the proposed project will increase public access to coastal features.

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Policy LUD-CZ 3.7.A –Considerations for Cultural Resources i. Identify and protect archaeological resources within Seaside. ii. Require a Phase I Archaeological Study performed by a Registered Professional Archaeologist to determine whether significant archeological resources may be present when excavation activities are proposed. iii. Mitigations are to be required as a condition of development where it would adversely impact any archaeological or paleontological resources, including, but not limited to, those qualified individuals as identified by the State Historic Preservation Officer.	Consistent. As part of the 2011 Certified EIR, a Cultural Resources Report was prepared outlining the proposed project's impacts to cultural resources. As discussed in Section 4.4, Cultural and Paleontological Resources, of the 2011 Certified EIR, no significant archaeological resources were identified. Nevertheless, Mitigation Measure 4.4.1, Historic and Archaeological Resources, has been included to address unknown archaeological resources that may be encountered during construction activities.
Policy LUD-CZ 3.8.A – Considerations for Transportation and Circulation i. Development shall be approved only where adequate circulation and parking have been provided. ii. Retain the former Southern Pacific Railroad right-of-way as a transportation corridor. Prohibit development that would interfere with future uses of the corridor identified in Policy LUD-CZ 1.1.A. iii. Encourage non-motorized and other alternative forms of transportation in all new development. iv. Maintenance of the existing highway, landscaping, and drainage facilities within the Highway 1 corridor may be permitted with a coastal development permit. Activities that involve an expansion of capacity or widening or realigning of the highway pavement or route shall require an amendment to the LCP.	Consistent. Parking has been provided consistent with all the LCP requirements. A Traffic Impact Analysis was prepared (November 2014) and concluded that both on-site and off-site circulation was sufficient. In addition, non-motorized and other alternative forms of transportation will be encouraged through the maintenance of the existing pedestrian and bicycle trail around Laguna Grande Lake and the provision of the extension of the existing pedestrian and bicycle trail over the foot bridge to the north to connect to the existing sidewalk along Del Monte Boulevard.
Proposed Implementation Actions	
Support efforts to prepare the <i>Canyon del Rey Watershed Master Drainage Plan Update</i> (Policy NCR-CZ 1.5.B)	Not Applicable.
Implement erosion control and sedimentation mitigation measures (Policy NCR-CZ 1.5.C.i)	Consistent. The proposed project will be required to prepare an ESCP and a SWPPP as required by Measure 4.7.1 in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR. Both plans will include components for erosion control and prescribe treatment measures to trap sediment once it has been mobilized at a scale and density appropriate to the size and slope of the catchment basin. For the project site, these measures might include inlet protection, straw bale barriers, straw mulching, straw wattles, and silt fencing. Therefore, mitigation measures have been identified in the

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	2011 Certified EIR to reduce the potential for erosion, thereby reducing sediment levels in storm water runoff.
Implement, monitor, comply and update (as needed) the <i>Monterey Regional Storm Water Management Plan</i> (SWMP) as a participating entity (Policy NCR-CZ 1.5.C.ii).	Not Applicable.
Implement, monitor, and comply with the Regional Water Quality Control Board's Post-Construction stormwater requirements for new and redevelopment for the Central Coast Region; and update appropriate policies, programs and documents, including Municipal Code Chapter 18.46, as needed.	Consistent. As discussed in Section 4.7, Hydrology and Water Quality, the proposed project would have a significant water quality impact if direct releases of pollutants or storm water discharges to Laguna Grande Lake during construction exceeded narrative or numerical water quality standards established by the Central Coast Regional Board, or violated the conditions set forth in the City Municipal Code. Implementation of Measures 4.7.1 and 4.7.2 will reduce potential short-term, construction-phase impacts and long-term operational impacts to water quality to below the level of significance. Additionally, as required by the Resolution No. R3-2013-0032, the proposed project will be required to comply with the Low Impact Development Standards (LID) and infiltrate storm water on-site.
Update the <i>Wetland Management/Enhancement and Restoration Program</i> (1983) based on the Canyon del Rey Watershed Master Drainage Plan Update (Policy NCR-CZ 1.5.D.i).	Not Applicable.
Implement and promote management/enhancement and restoration measures that meet the objectives of the current of <i>Wetland Management/Enhancement and Restoration Program</i> (Policy NCR-CZ 1.5.D.ii).	Not Applicable.
Explore and implement humane methods of controlling goose population (Policy NCR-CZ 1.6.A)	Not Applicable.
Participate in local and regional efforts to secure a safe and adequate/sustainable supply of water (Policy NCR-CZ 3.1.A.i).	Not Applicable.
Require new development, changes of ownership, and changes or expansions of use to meet or exceed Monterey Peninsula Water Management District's water efficiency standards (Policy NCR-CZ 3.1.B.i).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will install water-efficient fixtures and appliances, native drought-tolerant plants, and water-efficient irrigation systems and devices, and will include restricted watering methods (i.e., prohibiting systems that apply water). These water efficiency standards will be included in the General Contractor's construction specifications. Therefore, the proposed project will meet the Monterey Peninsula Water Management District's water efficiency standards.
Monitor water use within the City (Policy NCR-CZ 3.1.C).	Not Applicable.
Support regional efforts to develop an alternative water supply (Policy NCR-CZ 3.2.A).	Not Applicable.

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Actively pursue methods of improving water quality of lakes, streams, and other waterways throughout the coastal zone (Policy NCR-CZ 4.1.A.i).	Not Applicable.
Collaborate with local jurisdictions and identify properties and stakeholders most likely affected by rising sea levels (Policy NCR-CZ 5.2.A).	Not Applicable.
Organize educational workshops to inform public of the concerns and potential impacts of sea level rise (Policy NCR-CZ 5.2.B.ii).	Not Applicable.
Update Local Hazard Mitigation Plan to address potential impacts of sea level rise (Policy NCR-CZ 5.2.C).	Not Applicable.
Develop and implement a coastal access/directional sign program (Policy PAR-CZ 1.1.C.i).	Not Applicable.
Maximize opportunities for environmental education within the coastal zone (Policy PAR-CZ 1.1.C.ii).	Not Applicable.
Explore development of a Visitors Center (Policy PAR-CZ 1.1.C.iii).	Not Applicable.
Provide free unrestricted parking at all public access and public parking areas (Policy PAR-CZ 1.2.A.i).	Consistent. As discussed above under Policy PAR-CZ 2.1.A, Designation of Parking for Public Access and Recreational Opportunities, the project site is designated as a shared off-street parking area (refer to Figure 2-9, Public Parking Area, of the City's Local Coastal Program LUP). Although the proposed project will develop this property with a restaurant use, thereby eliminating this property as an off-street public parking area, the proposed project will provide sufficient parking to serve visitors to the project site and surrounding areas. In addition, there are two public parking lots located on the north side of Laguna Grande Park that be accessed from Canyon Del Rey Boulevard that would remain available for public use. The project site is accessible from these public parking lots by an existing pedestrian pathway that circles around Laguna Grande Park.
Explore expanding public access parking at the existing Embassy Suites Hotel parking lot (Policy PAR-CZ 1.2.A.ii).	Not Applicable.
Establish and maintain a system of trails that provides future connectivity to various California Coastal Trail and recreational alignments (Policy PAR-CZ 1.3.A).	Not Applicable.
Participate in the regional planning efforts to restore light rail service along the Monterey Peninsula and through Seaside.	Not Applicable.

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Laguna Grande Subarea	
Natural Coastal Resources	
Natural Habitat Areas	
Policy NCR-LG 1.1.A – Vegetation Management The City of Seaside shall work cooperatively with the City of Monterey, State Parks, and Regional Parks to stabilize area adjacent to Laguna Grande utilizing methods identified in the Vegetation Management Plan for the Seaside Coastal Zone (identified in Policy NCR-CZ 1.5.D.i), or if the plan is not complete, utilizing best available methods such as exotic and invasive plant removal, and planting and maintaining native vegetation.	Not Applicable.
Visual Resources	
Policy NCR-LG 2.1.A – Protection of Visual Resources Development within the Laguna Grande Subarea shall limit building height and bulk in order to minimize adverse impact on public views of the lake and park. Maintain a 50 foot buffer around Laguna Grande Lake and the channel connecting Laguna Grande Lake and Roberts Lake as shown in Figure 2-4 .	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key views (i.e., from southbound SR-1 north of Roberts Lake, from Laguna Grande Regional Park on the south shore of Laguna Grande Lake, and from the residential area 1.5 miles east of the project site), consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect on public views in the area. According to the City's CIP, developments are required to be set back a minimum of 50 feet from Laguna Grande Lake (a designated marine resource area). However, smaller setbacks may be allowed if public recreational trails are provided within the buffer zone. The proposed project will construct the trail extension within the 50-foot buffer zone; however, the restaurant facility will be set back a minimum of 50 feet from Laguna Grande Lake.
Policy NCR-LG 2.1.B – Management of Visual Resources i. Coordinate with the Regional Park District to provide viewshed improvements to areas identified on Figure 2-4 as a component of Coastal Visitor-Serving Commercial land use development and park improvements proposed for Laguna Grande. ii. The City shall develop Gateway Guidelines for the Fremont Corridor adjacent to Laguna Grande Park.	Not Applicable.

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Water Resources	
Policy NCR-LG 3.1.A – Protection of Potable Water Supply The City shall protect potable water supply within the Laguna Grande Subarea by utilizing methods identified in Policy NCR-CZ 3.1.B , as well as by using non-potable water supplies (e.g., from Laguna Grande) for non-potable uses such as park landscaping or as recharge if such use would not have a significant adverse effect on the lake or associated habitat.	Not Applicable.
Water Quality	
Policy NCR-LG 4.1.A – Management of Water Quality Improve the water quality of Laguna Grande, thus improving the recreational opportunities and preserving and enhancing the habitat value of Laguna Grande by carrying out the recommendations of the updated <i>Wetland Management/Enhancement and Restoration Program</i> (identified as Policy NCR-CZ 1.5.D.i), enforcing the Urban Storm Water Quality Management and Discharge Ordinance (Policy NCR-CA 1.5.C.i; Chapter 18.46), continued implementation of the <i>Monterey Regional Storm Water Management Plan</i> (Policy NCR-CZ 1.5.C.ii), and following the recommendations from the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i> (Policy NCR-CZ 1.5.B).	Not Applicable.
Policy NCR-LG 4.2.A – Water Quality Enhancement Investigate opportunities for habitat enhancement, impervious site coverage reduction, and restoration of previously disturbed areas.	Not Applicable.
Natural Hazards	
Policy NCR-LG 5.1.A – Management of Sea Level Rise Hazards The City shall protect and maintain the functionality of Laguna Grande and the adjacent park lands from impacts associated with sea level rise.	Not Applicable.
Policy NCR-LG 5.2.A – Management of Flooding Hazards i. In order to maintain stormwater flows and prevent flooding that could otherwise result in hazardous conditions and property damage, the City shall maintain the outfall at Laguna Grande under Fremont Street. A coastal development permit shall be required for maintenance activities including periodic cleaning and removal of sand	Not Applicable.

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and debris to facilitate stormwater flows. ii. The City shall accommodate for flooding impacts by increasing buffer areas around Laguna Grande and investigating opportunities for increasing lake capacity via sediment and fill removal.	
Public Access & Recreation	
Policy PAR-LG 1.1.A – Protection of Public Access and Recreational Opportunities The City shall maintain, and enhance, pedestrian and bicycle connectivity within the Laguna Grande Subarea, and to Roberts Lake, and the beach to maximize public access and recreation opportunities to these coastal resources.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will connect to the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will increase public access to coastal features.
Policy PAR-LG 1.1.B – Management of Public Access and Recreational Opportunities i. The City shall develop interpretive signage along access trails around Laguna Grande as part of ongoing park improvements and maintenance efforts. ii. The City shall maintain the portion of Laguna Grande Park and facilities that are within the city, including restrooms, for the recreation purposes of its citizens and visitors. iii. The City shall maintain and seek to enhance the developed pedestrian walkway/bikeway, including potential additions to it. The walkway/bikeway shall be maintained at a minimum width of 10 feet and so as to have a minimum impact on the wetland.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect the proposed project to the greater Laguna Grande Regional Park Trail. The trail width will be maintained at a minimum width of 10 feet. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean.
Policy PAR-LG 1.1.C – Provisions for Public Access and Recreational Opportunities i. Develop pedestrian access along lands adjoining Laguna Grande. Where passing through or near the wildlife habitat area in Laguna Grande, this access is to be designed so as to protect wetland areas (e.g., a required setback from the inland extent of emergent wetland vegetation, overpass, etc.). ii. New development shall be required to provide public access easements and access improvements, consistent with habitat protection, from public rights-of-way to the access	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect the proposed project to the greater Laguna Grande Regional Park Trail. The trail will be designed to protect the wetland areas by adhering to the required setback from Laguna Grande Lake.

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trail. iii. Upon the significant improvement in water quality of Laguna Grande (consistent with objectives presented in Policy NCR-LG 4.1.A), the City shall coordinate with the Monterey Peninsula Regional Park District to explore additional recreational water uses within Laguna Grande such as a fishing/fly-casting pier or paddle boat concession. iv. The City shall coordinate with the Monterey Peninsula Regional Park District to provide additional active and passive recreational opportunities in and around Laguna Grande (such as a fishing pier, par course, disk golf or similar). v. The City shall coordinate with the Monterey Peninsula Regional Park District for provision of additional programs and/or facilities for use by senior citizens and community groups (such as community garden, outdoor class area, horseshoe pit, bocce ball area, wildlife viewing station).	
Land Use & Development	
Land Use Designations & Definitions	
Policy LUD-LG 1.1.A – Land Use Designations Within the Laguna Grande Subarea The land use designation establishes the type, density, and intensity of land uses allowed. The Development Standards and Design Guidelines provided in the Coastal Implementation Plan portion of the LCP provide further guidance regarding the density and intensity of development allowed within each land use designation. Land within the Laguna Grande Subarea is designated as Coastal Parks and Open Space (CPOS) and Coastal Visitor-Serving Commercial (CVSC), which are defined as follows: • Coastal Parks and Open Space (CPOS): This designation is appropriate in areas where the City wants to protect and preserve natural resources and habitat, views, and other visual amenities and protect people and property from natural and man-made hazards. This designation also identifies existing or planned parkland. Public use areas include the sandy beach, access ways, parks, trails, walkways, and other recreational amenities that are publicly	Consistent. As discussed above under Policy LUD-CZ 1.1.A, Land Use Designations within the Coastal Zone, the northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). The proposed project will include the development of a restaurant facility, consistent with conditionally permitted uses in the CVSC land use designation as outlined in the City's Local Coastal Program LUP and CIP. Furthermore, the proposed project will develop the property at a FAR of 0.04, which will be well below the maximum FAR of 1.0:1 permitted by the City's CIP.

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owned or over which easements are required as a condition of development (IV.A.3.e). The maximum floor area ratio (FAR) within this designation is 0.01:1. • Coastal Visitor-Serving Commercial (CVSC): Principal permitted visitor-serving commercial uses include hotels/motels, food service, retail establishments, visitor/traveler support services (such as visitor information centers), and recreational-related commercial uses. The maximum floor area ratio (FAR) is 1.0:1, except that hotels are allowed a maximum FAR of 1.5:1.	
Development & Land Use Requirements	
Policy LUD-LG 2.1.A – Designation of Land Uses Within the Laguna Grande Subarea Land use designations in the Laguna Grande Subarea are shown earlier in Figure 2-10a of this plan. Gen	Consistent. As discussed above under Policy LUD-CZ 1.1.A, Land Use Designations within the Coastal Zone, the northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). The proposed project will include the development of a restaurant facility consistent with conditionally permitted uses in the CVSC land use designation as outlined in the City's CIP.
Policy LUD-LG 3.1.A – Considerations for Visual Resources • Permitted development shall be sited and designed to protect public views to Laguna Grande and be compatible with the regional park. Consideration of public views of the lake and park must be carefully considered as a component of the visual analysis required by Policy LUD-CZ 3.2.A. • To protect views of Laguna Grande, proposed development should avoid placing structures in close proximity to the channel. Preferred development within 50-feet of the channel would consist of low-profile, and non-structural development including parking lots and recreational amenities (such as formalized viewing areas, off-street parking, and improved bike paths and trailways).	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key views consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect to public views of Laguna Grande Lake. Furthermore, the proposed project will not be developed within such close proximity to the Channel that it will subsequently result in obstruction of public views of the Laguna Grande Lake.
Policy LUD-LG 3.2.A – Considerations for Public Access • All relevant access improvements outlined in the Public Access section of this chapter are to be carried out as a condition of development. • Proposed development in the Laguna Grande Subarea shall be required to provide public access easements and access improvements, consistent with habitat protection, to the access trail from the public right-of-way to the access trail.	Consistent. The proposed project will be consistent with all relevant public access and recreation policies outlined in the City's Local Coastal Program LUP. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect to the greater Laguna Grande Regional Park Trail. The trail is 10 feet wide, will be designed to protect the wetland areas by adhering to the required setback from Laguna Grande Lake, and will include signage to require people to

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- Proposed development will maintain and seek to enhance the developed pedestrian walkway/bikeway, including potential additions to it, as applicable. The walkway/bikeway shall be maintained at a minimum width of 10 feet and so as to have a minimum impact on the wetland. - Proposed development within the Laguna Grande Subarea will be required to provide additional/enhanced public access through means such as directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard.	stay on the designated trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will add to the City's and region's existing pedestrian and bicycle trail system.
Proposed Implementation Actions	
Stabilize the areas adjacent to Laguna Grande utilizing methods identified in the Vegetation Management Plan for the Seaside Coastal Zone or, if the plan is not complete, utilizing best available methods (Policy NCR-LG 1.1.A).	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to adhere to a variety of mitigation measures that will minimize project-related impacts to on-site and surrounding sensitive species and habitats. Implementation of these mitigation measures will further ensure the long-term stabilization of those habitats surrounding the Laguna Grande Lake area.
Coordinate with the Regional Park District to provide viewshed improvements as a component of park improvements proposed for Laguna Grande (Policy NCR-LG 3.1.A).	Not Applicable.
Develop Gateway Guidelines for the Fremont Corridor (Policy NCR-LG 2.1.B.ii). Improve water quality of Laguna Grande through implementation of the current water quality policies and programs, and the current Wetland Management / Enhancement and Restoration Program (Policy NCR-LG 4.1.A).	Not Applicable.
Improve water quality and the recreational experience of southern Monterey Bay area beaches, including by properly maintaining the outfall at Laguna Grande under Fremont Street and by pursuing opportunities to consolidate and/or eliminate reliance on storm water outfalls which convey storm water directly to the beach. Such storm water shall be filtered and treated prior to discharge (Policy NCR-LG 5.2.A).	Not Applicable.
Maintain, and where necessary improve, pedestrian and bicycle connectivity within the Laguna Grande Subarea (Policy PAR-LG 1.1.A).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian/ and bicycle trail to connect with the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides

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	direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will increase connectivity within the Laguna Grande Subarea.
Develop interpretive signage along access trails around Laguna Grande (Policy PAR-LG 1.1.B.i).	Not Applicable.
Maintain the portion of Laguna Grande Park and facilities that are within the city (Policy PAR-LG 1.1.B.ii).	Not Applicable.
Maintain the developed pedestrian walkway/bikeway (Policy PAR-LG 1.1.B.iii). Expand recreational water uses within Laguna Grande (Policy PAR-LG 1.1.C.iii).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail to connect with the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will enhance recreational access to the coastal area. The Applicant will be responsible for ensuring the trail extension is maintained.
Coordinate with the Monterey Peninsula Regional Park District to provide additional active recreational opportunities around Laguna Grande (Policy PAR-LG 1.1.C.iv).	Not Applicable.
The City shall coordinate with the Monterey Peninsula Regional Park District for provision of additional programs and/or facilities for the use by senior citizens and community groups (Policy PAR-LG 1.1.C.v).	Not Applicable.

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Coastal Implementation Plan – Consistency Determination

Coastal Implementation Plan	
Chapter 2 Coastal Zone Districts, Uses, Regulations and Requirements	
2.3 Establishment and Designation of Coastal Zoning Districts	The portion of the project area that is within the Coastal Zone is designated Coastal Visitor-Serving Commercial (CVSC), as identified in Figure 1a (Coastal Zoning Map) in the City of Seaside's (City) Coastal Implementation Plan (CIP). As stated in Table 1 (Coastal Zoning Districts) in the City's CIP, the purpose of the CVSC land designation is to establish areas to service the needs of visitors to the City and the surrounding area.
2.4 Development Requiring Coastal Development Permit	All development in the Coastal Zone requires either a Coastal Development Permit (CDP) or a Coastal Administrative Permit (CAP). Development, as defined by the City's General Plan, includes "...the construction... of any structure ...or land disturbance." Therefore, the proposed project is considered a development per the City's General Plan. Projects with certain characteristics may not be approved via a CAP and would require a CDP. The proposed project will require a CDP because it is: (1) a development that is deemed to have the potential to cause a significant environmental impact pursuant to the California Environmental Quality Act (CEQA); (2) a development within a visual resource area as identified on Figure 2-4 (Views and Viewsheds to Visual Resources); and (3) a development within 100 feet of mapped or field-identified wetlands or Environmentally Sensitive Habitat Areas (ESHA).
2.5 Allowed Land Uses and Permit Requirements for Coastal Zoning Districts	Consistent. The land use "restaurant, café-fast food" is conditionally permitted in areas zoned CVSC (refer to Table 2 of the City's CIP). Therefore, the proposed project is consistent with the allowable uses in the Coastal Zone subject to the issuance of a CDP.
2.6 Site Development Standards	Consistent. Table 3 (Site Development Standards) in the City's CIP establishes the development standards for property in the Coastal Zone. In specific subareas, additional standards apply. The project area is within the Laguna Grande Subarea (Section 2.7[I.2]), which has specific standards for visual resources, public access and recreation, and dune management in addition to the Site Development Standards provided in Table 3. The following Special Site Development Standards for the Laguna Grande Subarea apply to the proposed project: a. Consistent. Height: Development within 100 feet of Laguna Grande Lake will be limited to one-story and not exceed a maximum height of 20 feet, except for design/architectural features, which can be up to 30 feet in height. The maximum height of the proposed project will be 19 feet 10 inches to the top of the parapet and 28 feet to the top of the corner tower (which is considered a design/architectural feature). b. Consistent. Views: Development will not be placed within close proximity to the channel between Roberts Lake and Laguna Grande Lake (Channel) except for such improvements as parking lots and recreational amenities. The buildings that are part of the proposed project will be set back approximately 63 feet from the Channel.

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	c. Consistent. <i>Public Access:</i> All public paths will be designed at a minimum width of 10 feet. The public path included as part of the proposed project has a minimum width of 10 feet. d. Consistent. <i>Public Access:</i> All walkways/bikeways will be maintained at a minimum width of 10 feet. The extension of the pedestrian and bicycle trail included as part of the proposed project will have a minimum width of 10 feet. e. Consistent. <i>Public Access:</i> Public access will be expanded and/or enhanced through directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard. The existing pedestrian and bicycle trail that ends at the wood bridge across the canal will be extended to Del Monte Boulevard as part of the proposed project. f. Consistent. <i>Views:</i> Development between 100 feet and 500 feet of Laguna Grande, including the Channel area, will be limited to a maximum of five stories and 60 feet in height, and will be oriented parallel to the Channel. In addition, upper floors will be set back from lower floors, and building facades will include articulation. The maximum height of the proposed project will be 19 feet 10 inches at the top of the parapet and 28 feet at the top of the corner tower. Additionally, the building facades will include articulation that would blend into the surroundings. The following Site Development Standards (Table 3) apply to the proposed project: • Consistent. <i>Maximum Building Site Coverage:</i> The maximum building site coverage is 90%. The total site area covered by the proposed building will be approximately 42%. • Consistent. <i>Minimum Lot Area:</i> The minimum lot area is 1 acre. The project site will be approximately 2.28 acres. • Not Applicable. <i>Minimum Lot Width:</i> The project site is a legal lot of record and these standards do not apply. • Not Applicable. <i>Minimum Lot Depth:</i> The project site is a legal lot of record and these standards do not apply. • Consistent. <i>Floor Area Ratio (FAR):</i> The FAR standard is 1.0:1. The proposed project's FAR is 0.04.
2.6A. Parking Requirements	Consistent. As indicated in Table 4 (Parking Requirements by Land Use), the restaurant land use type is required to have 1 space for every 3 seats. The proposed project will include development of indoor and outdoor patio dining totaling 159 seats. The proposed project will include 53 parking spaces, which equals 1 space for every 3 seats.
2.6A(2)(e) Recreational Vehicle (RV) Parking Spaces	Consistent. RV parking spaces are to be provided at a minimum ratio of 1 RV space for each 40 off-street vehicle parking spaces. The proposed project will include 53 parking spaces and 1 RV parking space.

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2.6A(3)(a) Disabled Parking Requirements	Consistent. In accordance with the Americans with Disabilities Act (ADA) standards, 1 disabled parking space is required to be provided for every 25 parking spaces and any fraction thereof for non-residential developments. The parking spaces required for the disabled would count toward the minimum number of off-street parking spaces as discussed in Section 2.6A, Parking Requirements. The disabled parking spaces will have a minimum width of 14 feet. In addition, the disabled parking spaces will be located so that: (1) there is easy access from the closest parking area to the major entrances; (2) the disabled individual would not have to wheel or walk behind parked cars other than his or her own; and (3) a pedestrian way accessible to physically disabled persons will be provided from each parking space to the related facilities, including curb cuts and/or ramps. The proposed project will include 53 parking spaces, and 3 of these spaces will be designated as disabled parking spaces. The disabled parking spaces will have a minimum width of 14 feet, will be located adjacent to the northern and western entrances of the restaurant facility, and will comply with all of the above requirements.
2.6A(3)(b) Bicycle Parking Requirements	Consistent. Nonresidential developments are required to provide bicycle parking that equals a minimum of 5% of the required vehicle parking spaces. The proposed project will include 53 parking spaces requiring the project to include at least 3 bicycle parking spaces. The proposed project will also include 3 bicycle parking facilities which can typically accommodate two bicycles. The provision of 3 bicycle parking facilities, (parking for 6 bicycles) is more than 5% of the total required bicycle parking spaces.
2.6A(3)(c) Motorcycle Parking Requirements	Consistent. A parking lot with 50 or more vehicle parking spaces is required to provide motorcycle parking spaces near the main entrance of the structures. A minimum of 1 motorcycle parking space is required for each 50 vehicle spaces or fraction thereof. The proposed project will include 2 motorcycle parking stalls near the northern entrance of the restaurant.
2.6A(3)(d) Public Access Parking	Consistent. The project will include five parking stalls at the southeast corner of the project site that will serve as public parking for lake visitors, in addition to parking for the restaurant.
2.6A(4)(h) Water Quality Requirement	Consistent. The project will incorporate post-construction Best Management Practices (BMPs) and water quality measures, including Low Impact Development (LID) techniques established by the RWQCB to minimize impacts from storm water runoff and dry weather flows.
2.6B Landscaping Requirements	
2.6B(1) General Landscaping Requirements	Consistent. The project site will be landscaped on all four sides of the parcel with a variety of drought-tolerant plant species. In addition, where feasible and practical, landscaping will be designed to address post-construction water quality site design and Low Impact Design (LID) requirements.

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2.6B(2) Landscaping of Parking Lots	Consistent. Landscaping is required within each outdoor parking area at a minimum ratio of ten percent of the gross area of the parking lot for commercial uses. The project will include 35% of landscaping around the immediate area of the parking lot and will provide at least one shade tree for every five parking spaces. Landscaping will be a combination of groundcover, shrubs, and trees and will be concentrated along the perimeter of the project site, including at the primary entrances to help screen the restaurant from the street and adjoining properties. Shade trees will be provided at the minimum required rate of one for every twenty-five linear feet of landscaped areas and the proposed landscaping will also be properly oriented to provide pedestrian access to the restaurant without requiring them to cross unpaved landscaped areas.
2.6C Lighting Requirements	
2.6C(1)(a) Lighting General Requirements- Maximum Height	Consistent. The lights installed as part of the proposed project will not exceed the height of 14 feet or the height of the nearest structure.
2.6C(1)(b) Energy-Efficiency	Consistent. The outdoor lighting included as part of the proposed project will be consistent with Title 24, Building Energy Efficiency Standards. In addition, the outdoor lighting plan will be reviewed and approved by the City's Board of Architectural Review (BAR), which will ensure that energy-efficient lighting technology is used.
2.6C(1)(c) Position of Light Fixtures	Consistent. All lighting fixtures included as part of the proposed project will be consistent with Section 2.6C, Lighting Requirements of the City's CIP. In addition, all lighting fixtures will be reviewed and approved by the City's BAR. The City will ensure that the light fixtures are directed downward to prevent light spill and glare onto adjacent properties, will ensure that the light source is not visible off site, and will confine glare and reflections within the boundaries of the project site to the maximum extent feasible.
2.6C(1)(d) Maximum Illumination	Consistent. The lighting plan included as part of the proposed project will be consistent with Section 2.6C, Lighting Requirements, of the City's CIP. In addition, the lighting plan will be reviewed and approved by the City's BAR in order to ensure that the maximum illumination is not exceeded.
2.6D Sign Requirements	Consistent. The signs included as part of the proposed project will be consistent with Section 2.6D, Sign Requirements, of the City's CIP. In addition, the City's BAR will review and approve the signage plans as part of the application for the proposed project. The proposed project will include the construction of red and yellow external illuminated wall signs on the west and south side of the building. In addition, the proposed restaurant will include six internally illuminated signs, four of which would be mounted on the building walls.
2.7 Special Development Standards	
2.7B Environmentally Sensitive Habitat Area (ESHA)	
2.7B(1) Biological Report Requirements	Consistent. A Biological Resources Report was prepared for the 2011 Certified Environmental Impact Report (EIR). As part of the Biological Resources Report, six site-specific field surveys were conducted in an effort to determine existing plant and animal

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	species present on and adjacent to the project site. In addition, the Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7B(2) Development Within or Adjacent to an ESHA	Consistent. A small portion of the southern boundary of the project area is adjacent to a riparian ESHA (refer to Figure 2-2 in the City's Land Use Plan [LUP]). The proposed project has been designed to avoid impacts to the riparian area. Furthermore, the structures associated with the proposed project will be set back greater than 50 feet from the riparian area.
2.7C Marine Resource Area	
2.7C(1) Designation of Marine Resource Area	The project area is adjacent to Laguna Grande Lake, which is identified in the City's LUP as a marine resource area.
2.7C(2) Biological Study	Consistent. A qualified biologist prepared a Biological Resources Report for the 2011 Certified EIR. The Biological Resources Report included the criteria set forth above in 2.7B(1). None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7C(3) Buffer	Consistent. The proposed project is adjacent to Laguna Grande Lake. Development of the proposed project will be set back at a minimum of 50 feet from Laguna Grande Lake in order to ensure the biological integrity of the wetland and estuarine habitat. The 50-foot buffer can be reduced to 25-feet if public recreational facilities are provided. Consistent with Section 2.7C(3), the bicycle and pedestrian trail will be provided within that minimum 50-foot buffer zone between the edge of Laguna Grande Lake and the project site.
2.7C(4) Wetland Management and Enhancement Study for Development Within or Adjacent to a Marine Resource	Consistent. A Jurisdictional Delineation (JD) and Water Quality Assessment Report (WQAR) were prepared as part of the 2011 Certified EIR. These reports identified the current flooding potential and water quality in the project area, best management practices (BMPs), and jurisdictional features. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7C(4) Diking, Filling, Dredging of Marine Resource Areas	Not Applicable.
2.7D Visually Sensitive Areas	
2.7D(1) Identification of Visual Resources	Consistent. The project area is located within a visually sensitive area (refer to Figure 2-4 in the City's LUP). The proposed project will be one-story in height and will provide view corridors on the north and south sides of the project site providing views of the dunes surrounding Roberts Lake.
2.7D(2) Consideration of Visual Resources	Consistent. The project area is located within a visually sensitive area. The 2011 Certified EIR found and concluded that the proposed project did not result in any significant impacts to visual resources.
2.7E Natural Hazard Areas	

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2.7E(1) Designation of Natural Hazard Areas	The project site is located within an existing 100-year floodplain, is within 2,400 meters (m) of a moderate fire threat and directly west of the Chupines Fault, and is within 0 to 5 m of a tsunami evacuation zone (refer to Figure 2-5, Flood Hazard Areas; Figure 2-6, Faults and Wildland Fire Threat Categories; and Figure 2-7, Tsunami Evacuation Areas in the City's LUP, respectively).
2.7E(2) Protection from Natural Hazards	Consistent. The 2011 Certified EIR found and concluded that the proposed project would not result in any significant impacts from natural hazards with implementation of prescribed Mitigation Measures. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7F Vegetation Management Report	Consistent. A Biological Resources Report was prepared as part of the 2011 Certified EIR. The Biological Resource Report included six site-specific field surveys to determine existing plant species and habitat types present on and adjacent to the project site. In addition, the Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7G Water Quality	Consistent. The proposed project will comply with the City's Phase II National Pollutant Discharge Elimination System (NPDES) permit requirements and with the Post-Construction Requirements of Resolution No. R3-2013-0032 of the California Regional Water Quality Control Board (RWQCB), Central Coast Region. As required by the Resolution No. R3-2013-0032, the proposed project will comply with the Low Impact Development Standards (LID) to infiltrate stormwater on-site. Additionally, as discussed in Section 4.7 (Hydrology and Water Quality) of the 2011 Certified EIR, implementation of Mitigation Measure 4.7.1 will require the preparation of an Erosion and Sediment Control Plan (ESCP) and a Storm Water Pollution Prevention Plan (SWPPP) to reduce pollutants of concern during construction. Implementation of Mitigation Measure 4.7.2 will require the implementation of post-construction BMPs to reduce pollutants of concern during operation.
2.7H Public Access & Recreation	Consistent. An existing bicycle and pedestrian trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge that extends over the canal connecting Roberts Lake with Laguna Grande Lake. The proposed project will extend the pedestrian and bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension will increase connectivity between the project site and the Laguna Grande Park and Laguna Grande Lake, the adjacent hotel property, Del Monte Boulevard, and the Laguna Grande Regional Park Trail and Monterey Bay Coastal Bike Trail, thereby maximizing public recreational access opportunities. Seven benches with trash receptacles will be placed along the segment of the bicycle and pedestrian trail that is on the project site. In addition, five parking stalls will be provided at the southeast corner that will serve as public parking for lake visitors.
2.7I Additional Standards for Laguna Grande	Consistent. Refer to response 2.6, Site Development Standards.

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Subarea	
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November 20, 2014

LSA Associates, Inc.
1998 Santa Barbara Street, Suite 120
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Attention: Pam Reading – Senior Environmental Planner (Pam.Reading@lsa-assoc.com)

Re: Quantitative Analysis of Sea Level Rise

Dear Ms. Reading,

Sea Engineering, Inc. (SEI) is pleased to present the following quantitative analysis to LSA Associates, Inc. (LSA) of projected Sea Level Rise (SLR) for a proposed site development in Seaside, CA.

The following steps contain a quantitative analysis for Sea Level Rise (SLR) based on the October 14, 2013 California Coastal Commission (CCC) Draft Sea-Level Rise Policy Guidance document as well as other SLR sources.

1. Determine appropriate planning horizon or expected project life.

Design life proposed for analysis is 75 and 100 years as recommended by the CCC.

2. Determine regional sea level projections for planning horizon or expected project life.

Appendix B of the Draft Sea-Level Rise Policy Guidance allows use of quadratic fit for SLR from NRC Report (NRC 2012). Assuming a completion date of 2015, years used for 75 year design life and 100 year design life are 2090 and 2115, respectively.

Note: Due to increased uncertainty in sea level rise projections, and the related escalation in the range between high and low projections over the longer time spans, the project team will use median values for 75 year and 100 year projections.

75 years - 2090

Upper Range - $SLR(2090) = 0.0093t^2 + 0.7457t$ (cm) -> 142.44 cm = 4.67'
Lower Range - $SLR(2090) = 0.0038t^2 + 0.039t$ (cm) -> 34.29 cm = 1.13'
 $SLR(2090) = \text{Median}(\text{Upper}, \text{Lower}) = 2.9'$

100 years - 2115

Upper Range - $SLR(2115) = 0.0093t^2 + 0.7457t$ (cm) -> 208.75 cm = 6.85'
Lower Range - $SLR(2115) = 0.0038t^2 + 0.039t$ (cm) -> 54.74 cm = 1.795'
 $SLR(2115) = \text{Median}(\text{Upper}, \text{Lower}) = 4.32'$

3. Modify regional sea-level rise projects for local vertical land motion.

The project location does not lie in the area between Humboldt Bay, CA and Crescent City, CA (where local modification is recommended in CCC SLR Appendix B), therefore the project team will use sea-level rise values calculated in Step 2, above.

4. Project tidal elevations and future inundation.

Future Water Elevation = Current Water Elevation + Projected Sea-level Rise

Current MHHW Elev. (Mean Higher High Water, Relative to NAVD88, NOAA Tide Station 9413450, Monterey, CA) = 5.48'

Future Higher High Tide Elevation (75 year) = 5.48' + 2.9' = 8.38'

Future Higher High Tide Elevation (100 year) = 5.48' + 4.32' = 9.8'

5. Determine water level changes from surge, El Niños, PDOs, etc.

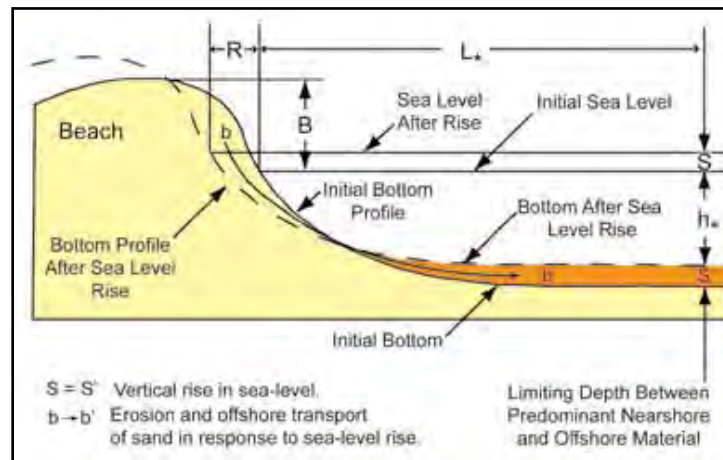
There is insufficient information to predict temporary changes in local water level caused by oceanographic phenomena such as El Niños and PDOs (Pacific Decadal Oscillation). However, the 2012 NRC document states that "Short-period fluctuations of sea level may sometimes exceed 20 cm (7.9 in.), and storm-driven wave heights of 1 m (3.28 ft) or even higher amplitudes than are seen in the historical record could easily occur." The project team uses storm estimation for extreme events which would encompass any extra surge due to phenomena such as El Niños and PDOs.

6. Estimate beach, bluff, and dune change from erosion

Erosion of beaches and dunes can be a very complex process with many factors that vary year to year. For this reason estimations and assumptions made for calculations are conservative in nature to account for possible unknown error.

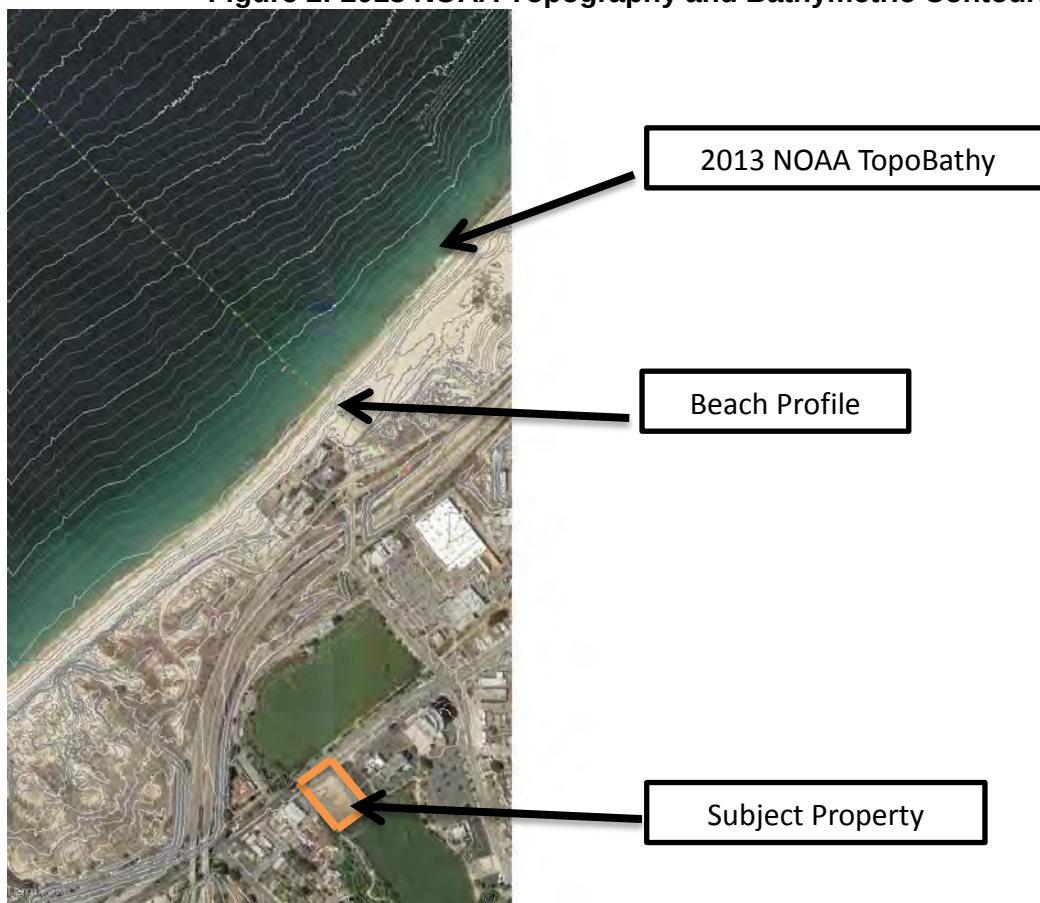
The major factor that plays into the process is manmade activity of structures and beach nourishment processes. Without beach nourishment processes, SLR will most likely result in shoreline changes for beaches and dunes. This has been proven with the Bruun Model as well as the Davidson – Arnott (RD-A) Model, in which the beach profile shift is likely higher and landward.

Figure 1: Illustrations showing Bruun Model concept and inputs (USGS, 2009)



In order to create a SLR adjusted beach profile, a 2013 NOAA Digital Elevation model was used for existing contours. This data set includes merged Light Detecting and Ranging (Lidar) Topography and Bathymetric data (See Figure 2).

Figure 2: 2013 NOAA Topography and Bathymetric Contours



The proposed location sits in a low lying basin between two land locked lagoons. These Topography and Bathymetric Contours show the locations sitting at 14-17 feet elevation NAVD88 which corresponds to the FEMA Flood Maps and presented drawings for the site (Appendix C).

Following the assumption that the basin surrounding the proposed development site will flood due to run up at the lowest section of shoreline, the inundation analyses are conducted for this location. A beach profile transect through this low point is selected as representative of elevations that control the physical processes related to runup and inundation well seaward of the project site. The profile extends from the backbeach out to the sloping beach bottom, several hundred feet offshore of the beach toe. The location of the profile also has the highest flood risk in this region's coastal dunes, as identified by the Pacific Institute's California Flood Risk: Sea Level Rise map of Seaside, CA (Appendix C).

Using the previously mentioned Bruun Model and an approximate profile adjustment process, the dune profile was shifted relative to the 100 and 75 year estimates for SLR (Step 2). This shift is upward with SLR and landward along the beach slope. Along with this, the road and parking lot are set impermeable and dune build up will form around and not on top. These calculations assume that no beach replenishment efforts take place seaward of Del Monte Blvd, Cabrillo Highway, Sand Dunes Drive, or the Best Western Beach Resort during this time period, allowing erosion and accretion processes to go unimpeded. Profiles for the shifted dune and beach slopes are included in Appendix A.

The seaward side of Cabrillo Highway, a significant transportation artery, is located no nearer than 750 feet seaward of the project site. There is a very low probability of coastal erosion resulting in shoreline regression beyond this existing infrastructure. Numerous infrastructure and resort improvements create a wide buffer between the proposed project site and the dynamic coastline in Monterey Bay, reducing the potential for either storm related or erosion related impacts to the property.

7. Determine potential flooding, wave impacts and run-up

$$\text{Future Flooding} = \text{Future Higher High Tide} + \text{Surge} + \text{Forcing} + \text{Wave Run-up}$$

Based on design conditions for Monterey Bay as laid out in a 2011 SEI assessment of Monterey Bay (See Appendix D), a significant wave height of 3 feet and 16 second period are assumed. Using the U.S. Army Corps of Engineers design program ACES: Surge, forcing and wave run-up can be calculated. The values are then added to the already calculated still water level for a Future Flooding elevation of 15.69 feet and 17.11 feet for the 75 and 100 year design conditions, respectively. This calculation also assumes no beach replenishment processes take place. It is important to remember that these elevations are projected for the coastal frontal dune and not necessarily the project site as seen in Figure A-4 of Appendix A.

Table 1: Design Condition Runup Elevations

75-yr Design Conditions					
Slope	Design Height (ft)	Average Wave Runup (ft)	Surge + Forcing (ft)	75-yr Stillwater Level (ft)	Total Elevation (ft)
1V:6.63H	3	5.83	1.48	8.38	15.69
100-yr Design Conditions					
Slope	Design Height (ft)	Average Wave Runup (ft)	Surge + Forcing (ft)	75-yr Stillwater Level (ft)	Total Elevation (ft)
1V:6.63H	3	5.83	1.48	9.8	17.11

The beach slope of 1V:6.63H is measured from Topography and Bathymetric contours and taken landward from the toe of the beach as seen in Figure A-2 of Appendix A. Likely during storm events beach profile slopes increase with the increased activity and more resemble dune slope (Coastal Engineering Manual V-4-1).

8. Examine potential flooding from extreme events

Storm:

Wave Conditions = 100(and 75)-year Design Storm + High Water + Eroded Beach

Using Coastal Data Information Program's (CDIP) Cabrillo Point Buoy 158, data was compiled for offshore Monterey Bay. This resulted in the following values for 75 and 100 year return period Significant Wave Heights:

Table 2: Return Period Significant Wave Heights

Return Period (years)	Offshore Significant Wave Height (Hs)
75	16.17
100	16.53

The 75 and 100 year return Offshore Significant wave heights are assigned to the 75 and 100 year design calculations, respectively, along with a statistically averaged wave period; these conditions are then used to calculate extreme event maximum runup with ACES. Using the same process as the design conditions, outlined in Appendix B, this gives an extreme total elevation for the 75 and 100 year storm of 23.04 and 24.57 feet, respectively. Relative to the top 10 recorded significant wave heights from 2007-2014, this approximation is a worst case scenario but large wave heights and elevations could occur within this range.

Table 3: Top 10 Recorded Significant Wave Heights (CDIP 158 Cabrillo Point)

YYYY-MM-DD HH	Hs (ft)	Tp (s)	Direction (deg.)
2013-04-08 13	12.40	10.53	345
2010-04-22 00	12.33	11.11	344
2009-04-15 01	12.27	11.11	349
2012-03-18 15	11.35	12.50	349
2008-12-26 05	10.56	11.76	347
2011-03-25 13	8.89	12.50	352
2014-01-12 18	8.27	14.29	2

It is important to note that this potential for extreme flooding is not due solely to SLR. Chance of abnormal weather of this magnitude can occur at any point in time and could cause flooding without sea level rise.

Tsunami:

The proposed location lies within the USGS Tsunami inundation area as well as California Emergency Management Agency's (CalEMA) Tsunami Inundation zone (Appendix C). The location lies in a low lying basin directly behind dunes. While it's hard to predict damage from initial bore of a Tsunami, it is clear the location will be flooded.

Since there is typically a period of warning prior to extreme events, like Tsunamis, there may be time to prepare preventative measures for building damage, such as the temporary installation of sand bags or other readily available barriers.

9. Repeat as necessary

N/A

Sea Level Rise Elevation

For the proposed location, there is significant protection from flooding because of the wide dune field and considerable improvement seaward of the project site. In addition, there is a considerable setback between the subject property and the shoreline, which also mitigates coastal flood potential. The existing flood map (Appendix C:FEMA Flood Map) shows the inland edge of the VE zone aligned with the current dune field, abutting an inland, shaded X zone, or the 0.2% annual chance of flooding. Both of these flood zones are located seaward of Cabrillo Highway, which is well seaward of the subject property. The subject property is located in an AE zone; however, this zone is related to inland, not coastal, flooding.

Portions of the undeveloped site, where existing elevations are between 14 and 17 feet (NAVD88) may be subject to flooding associated with the 75 and 100-year design conditions of 15.69 and 17.11 feet (NAVD88) of runup. For the proposed development, the main restaurant structure and most of the drive through facilities are elevated to a minimum of 17.87 feet (NAVD88) and would be above the 17.11 feet (NAVD88) runup elevation of 100 year return period wave. This would put the parking lot and beginning of the drive through under water as their elevations are closer to that of the undeveloped site, 14-17 feet (NAVD88). As would be expected, less flooding of the developed property would occur under the 75-year design condition. It should be noted that for a low lying basin, as exists in the area surrounding the project site, both the 75 and 100-year flood risk would require a breach in the coastal dunes and significant funneling of water through Roberts Lake and into Canyon Del Rey (Appendix C: FEMA Flood Map), which would make flooding from coastal events highly unlikely.

Along with this, beach nourishment has been utilized historically to augment the natural beach conditions and offset the impacts of chronic erosion along the Seaside and Sand City shoreline. It is likely that nourishment would again be utilized to protect the significant infrastructure and improvements seaward of the subject property. If nourishment maintains the dunes in their current location (Figure A-2, Appendix A), runup values and total elevation of 15.69 and 17.11 for the 75 and 100-year design, respectively, will be the same but distance of inland inundation will diminish considerably. This entails about a 100 ft horizontal difference, seaward, from the backbeach and a significantly lowered chance of dune breach. For more accurate inland inundation values, a 3-D model would need to be run. This is outside the current project scope.

The dune system acts as a barrier between ocean and inland coastal areas, dispersing wave energy and minimizing inland flooding. One advantage of beach nourishment is the preservation of the coastal frontal dune system. In the absence of nourishment, dunes will slowly retreat upward and landward with rising sea levels. Maintaining stable coastal frontal dunes, and inland dune fields is important for the region, as they protect the natural coastal ecosystem, the vital transportation arteries, and the substantial development, all of which are located seaward of the subject property.

Please don't hesitate to contact me if you have any questions.

Very truly yours,

SEA ENGINEERING, INC.



Paul L. Roberts, P.E.
West Coast Area Manager
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References

Coastal Engineering Manual. V-4-1 – “Engineering Aspects of Beach Fill Design.” United States Army Corp of Engineers.

Davidson-Arnott, R.G.D. 2005. “Conceptual Model of the Effects of Sea Level Rise on Sandy Coasts.” *Journal of Coastal Research*, Vol. 21, No. 6, p. 1166-1172.

National Research Council. 2012. Sea Level Rise for the Coasts of California, Oregon, and Washington. The National Academies Press. Washington, D.C.

NOAA Coastal California TopoBathy Merge Project Digital Elevation Model (DEM) 2013 . Charleston, SC NOAA's Ocean Service (NOS), Coastal Services Center (CSC)

Sea Engineering, Inc. December 2010. “Kailua Bay Dune and Beach management plan” – Appendix A.

Sea Engineering, Inc. March 2011. “BASIS OF DESIGN FOR SHORE PROTECTION AT MOSS LANDING HARBOR, MOSS LANDING, CA Monterey Bay Sanctuary Scenic Trail Project.” – Appendix D

Appendix A: Beach Profiles

Figure A- 1: 2013 NOAA Profile Elevation NAVD88 (ft)

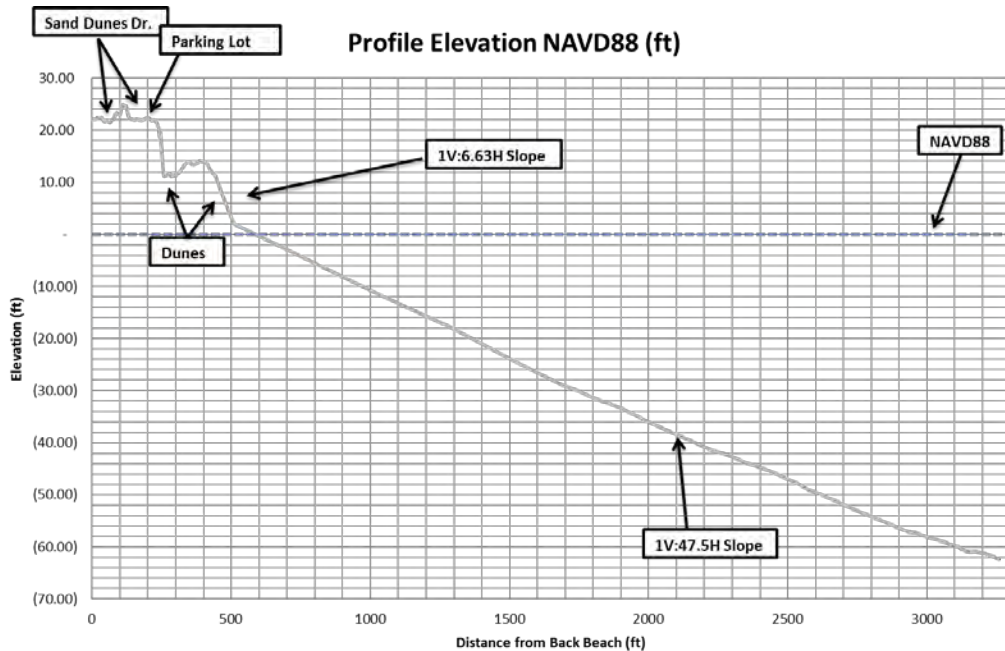


Figure A- 2: Projected Profiles – Bruun Model - NAVD88 (ft)

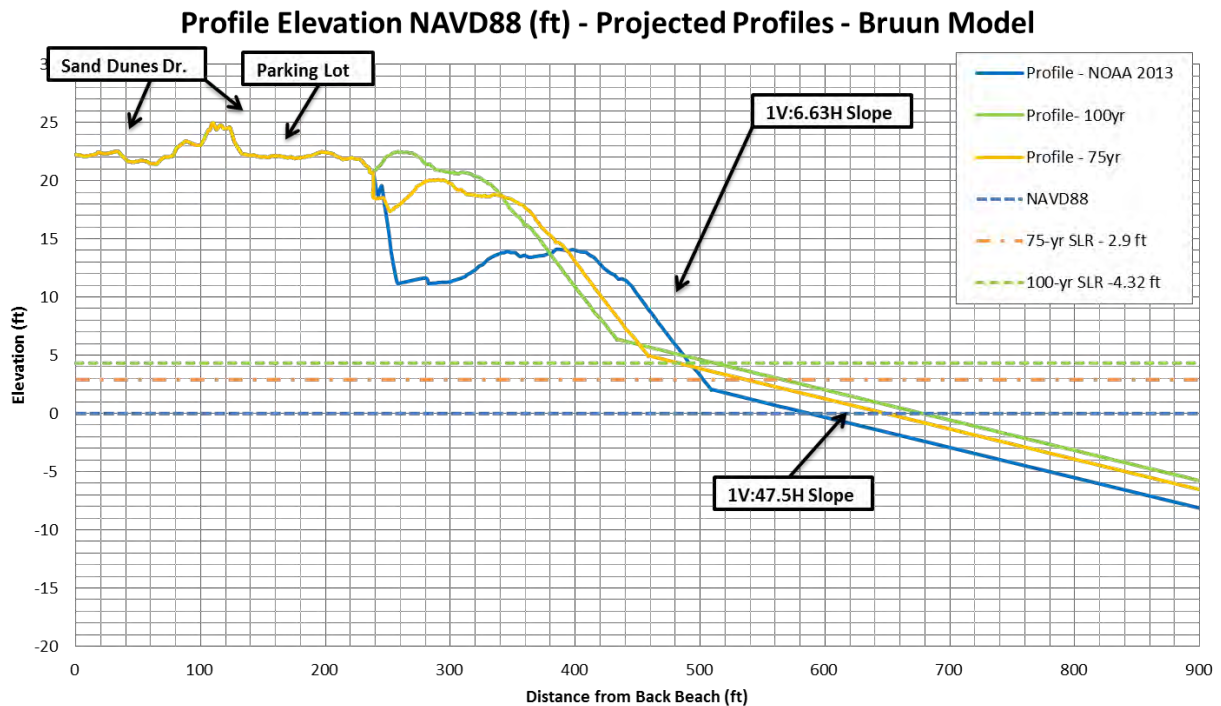


Figure A- 3: Projected Profiles – Beach Nourishment – NAVD88 (ft)

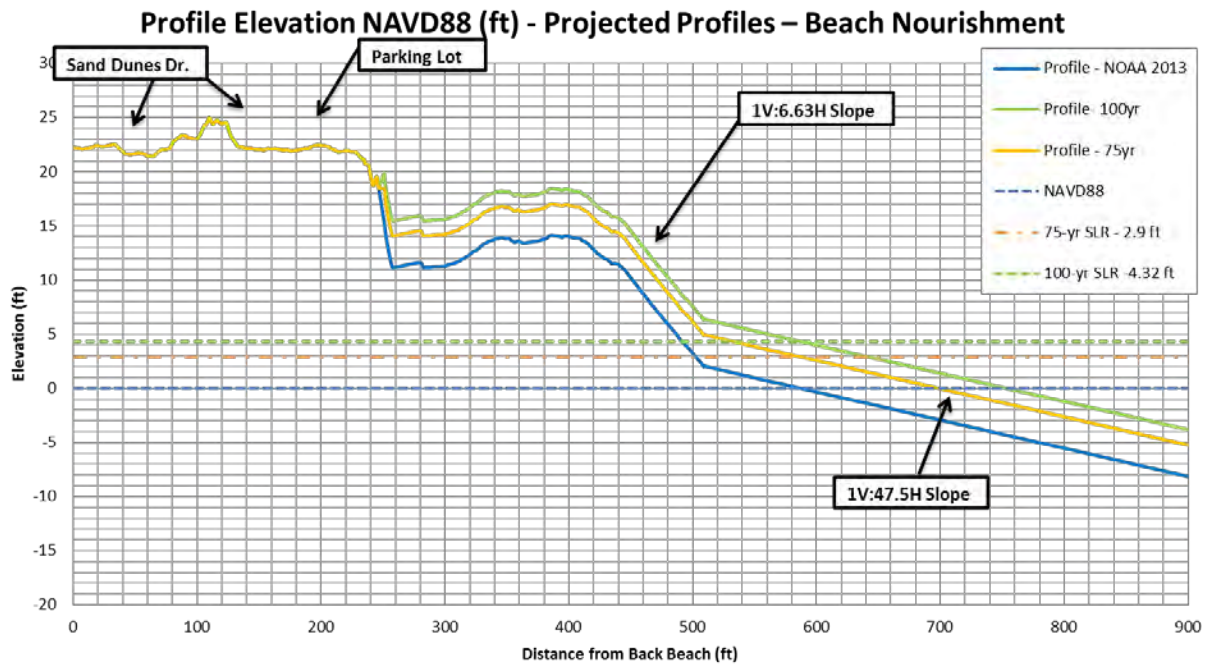
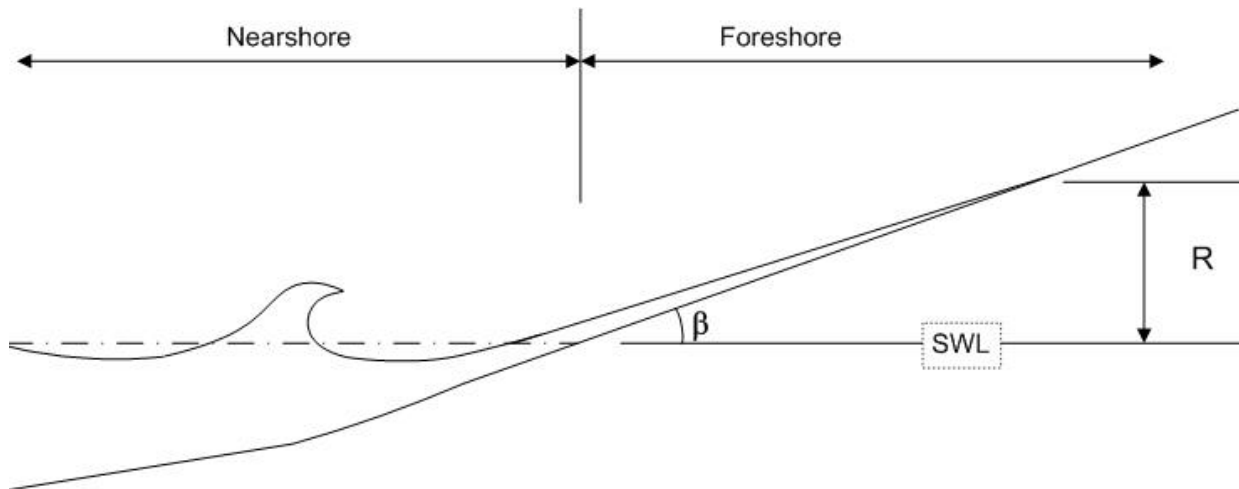


Figure A- 4: Wave Runup, R, on Beach above Still Water Level, SWL



Appendix B: Wave Runup Calculations

No Beach Nourishment

For the case of no beach nourishment, dune elevations are shifted upward and landward following the beach slope while sand volume is maintained. The beach transect holds the parking lot and Sand Dunes Dr. fixed while erosion and accretion processes take place without impedance on the seaward dune. The Approximated Bruun models are used for profile changes due to SLR (Figure A-2 in Appendix A).

Design:

Assuming the conditions given in the Moss Landing Revetment Basis of Design, a significant deepwater wave height of 3 feet at 16 seconds is used:

Table B-1: Wave Runup - Design Conditions

Case: Wave Runup-Design Conditions		
Irregular Wave Runup on Smooth Slope Linear Beaches		
Deepwater significant wave height:	3	ft
Peak energy wave period:	16	ft
Cotangent of beach slope:	6.63	ft
Average of highest 1/3 of runups	9.25	ft
Average wave runup:	5.83	ft

For design conditions the average wave runup of 5.83 feet is used for both 100 and 75 year design conditions.

Storm:

Data from the CDIP's Cabrillo Point Buoy is used due to its proximity to study location. This will give better approximation for location because of shadowing that occurs at certain swell angles. This can be seen in the SWAN model of Monterey Bay, Figure 2-1 in Moss Landing Revetment Basis of Design (Appendix D). The 100 and 75 year return period significant wave heights are calculated from the recorded data and are applied to the 100 and 75 year design lifetimes, respectively, in order to account for extreme conditions.

Along with this, location is assumed to be in deep water and a Goda Transformation at a direct heading is used to calculate wave height as it approaches dune. This transformation approximates wave propagation from deep to shallow water. Because of offshore slope steepness, wave will shoal and break, losing energy and reducing wave height upon reaching dune. The following transformation is used for the 100 and 75 year return period:

Table B-2: Goda Transformation - 75 year Return Period

Case: 75 year return period Hs=16.17 ft							
Irregular Wave Transformation (Goda's Method)							
Item	Subject Wave	Deepwater Wave	Units	Item	Subject	Wave	Deepwater Wave
Wave height (H _o)		16.17	ft		H _s	6.674	16.214
Sig wave period (T _s)	11.2	11.2	sec		H _{mean}	4.702	10.12
Water depth (d)	10	642.007	ft		H _{rms}	5.038	11.419
Nearshore slope (cot phi)	47.5	47.5			H _{10%}	7.636	20.571
Principal dir (theta)	0	0	deg		H _{02%}	8.423	25.27
					H _{max}	9.014	29.207
Shoaling Coeff. (K _s)	2.661	1					
Surf Beat RMS (zeta)	0.801	0.16	ft	Effec refract coe	ff (K _r)	0.956	
Wave setup (S _w)	0.576	-0.009	ft	Depth/height	(d/H _o)	0.584	39.704
Wave steepness (H _o /L _o)	0.025	0.025		Rel water depth	(d/L _o)	0.015	1

Table B-3: Goda Transformation - 100 year Return Period

Case: 100 year return period Hs=16.53 ft							
Irregular Wave Transformation (Goda's Method)							
Item	Subject Wave	Deepwater Wave	Units	Item	Subject	Wave	Deepwater Wave
Wave height (H _o)		16.53	ft		H _s	6.709	16.575
Sig wave period (T _s)	11.2	11.2	sec		H _{mean}	4.729	10.345
Water depth (d)	10	642.006	ft		H _{rms}	5.067	11.673
Nearshore slope (cot phi)	47.5	47.5			H _{10%}	7.664	21.029
Principal dir (theta)	0	0	deg		H _{02%}	8.5	25.832
					H _{max}	9.088	29.857
Shoaling Coeff. (K _s)	2.66	1					
Surf Beat RMS (zeta)	0.812	0.163	ft	Effec refract coe	ff (K _r)	0.956	
Wave setup (S _w)	0.59	-0.009	ft	Depth/height	(d/H _o)	0.574	38.839
Wave steepness (H _o /L _o)	0.026	0.026		Rel water depth	(d/L _o)	0.015	1

With an Incident wave height calculated for both conditions, dune runup can be modeled as smooth impermeable structure allowing for two slopes to be input, dune and offshore beach.

Table B-4: Wave Runup on Dune - 100yr Storm

Case: Wave Runup - 100yr Storm		
Wave Runup and Overtopping on Impermeable Structures		
Slope Type:	Smooth	
Wave type:	Monochromatic	
Rate estimate:	Runup	
Breaking criteria:	1	
Incident wave ht (H _i):	6.7	ft
Peak wave period (T):	11.2	
COTAN of nearshore slope (cot phi):	47.5	
Water depth at structure toe (d _s):	8.29	ft
COTAN of structure slope (cot theta):	6.63	
Structure height above toe (h _s):	12.95	ft
Wave Runup (R):	9.914	ft

Table B-5: Wave Runup on Dune - 75 yr Storm

Case: Wave Runup - 75yr Storm		
Wave Runup and Overtopping on Impermeable Structures		
Slope Type:	Smooth	
Wave type:	Monochromatic	
Rate estimate:	Runup	
Breaking criteria:	1	
Incident wave ht (H _i):	6.67	ft
Peak wave period (T):	11.2	
COTAN of nearshore slope (cot phi):	47.5	
Water depth at structure toe (d _s):	8.2	ft
COTAN of structure slope (cot theta):	6.63	
Structure height above toe (h _s):	12.423	ft
Wave Runup (R):	9.892	ft

This results in a wave runup of 9.914 and 9.892 feet for the 100 and 75 year storm conditions, respectively. Relative to the top 10 recorded significant wave heights for the buoy location, the 75 and 100 year return period waves are much larger. This is expected as the 100 and 75 year return period waves are the height of a wave which, on average, is met or exceeded once within the time period (100 and 75 years) for the given location.

Table B-6: Storm Condition Runup Elevations

75-yr Deisgn Conditions					
Dune Slope	Deisgn Height (ft)	Max Wave Runup (ft)	Surge + Forcing (ft)	Stillwater Level (ft)	Total Elevation (ft)
1V:6.63H	16.17	9.89	4.77	8.38	23.04
100-yr Deisgn Conditions					
Slope	Deisgn Height (ft)	Max Wave Runup (ft)	Surge + Forcing (ft)	Stillwater Level (ft)	Total Elevation (ft)
1V:6.63H	16.53	9.91	4.86	9.8	24.57

Beach Nourishment

Assuming that beach nourishment does take place and dune locations are kept in the same location, dune heights would continue to rise with rising sea levels. Profile elevations of dune would be kept in place with littoral cell sand volume supplemented through dredging and other processes. This additional volume is needed to maintain the existing vertical relationship between the beach, dunes, and ocean at higher sea levels (Figure A-3 of Appendix A).

Design:

Assuming the conditions given in the Moss Landing Revetment Basis of Design, average runup values for both design periods would be 5.83 feet, the same as the case without beach nourishment. This is because the same beach and offshore slope is maintained.

Storm:

With the same data set and conditions as the case without beach nourishment, the runup calculations will also be the same due to the slope being maintained.

Table B-7: Wave Runup on Dune - 75 yr Storm - Nourished Beach

Case: Wave Runup - 75yr Storm		
Wave Runup and Overtopping on Impermeable Structures		
Slope Type:	Smooth	
Wave type:	Monochromatic	
Rate estimate:	Runup	
Breaking criteria:	1	
Incident wave ht (Hi):	6.67	ft
Peak wave period (T):	11.2	
COTAN of nearshore slope (cot phi):	47.5	
Water depth at structure toe (ds):	8.2	ft
COTAN of structure slope (cot theta):	6.63	
Structure height above toe (hs):	11.74	ft
Wave Runup (R):	9.892	ft

Table B-8: Wave Runup on Dune - 100yr Storm – Nourished Beach

Case: Wave Runup - 100yr Storm		
Wave Runup and Overtopping on Impermeable Structures		
Slope Type:	Smooth	
Wave type:	Monochromatic	
Rate estimate:	Runup	
Breaking criteria:	1	
Incident wave ht (Hi):	6.7	ft
Peak wave period (T):	11.2	
COTAN of nearshore slope (cot phi):	47.5	
Water depth at structure toe (ds):	8.29	ft
COTAN of structure slope (cot theta):	6.63	
Structure height above toe (hs):	11.93	ft
Wave Runup (R):	9.914	ft

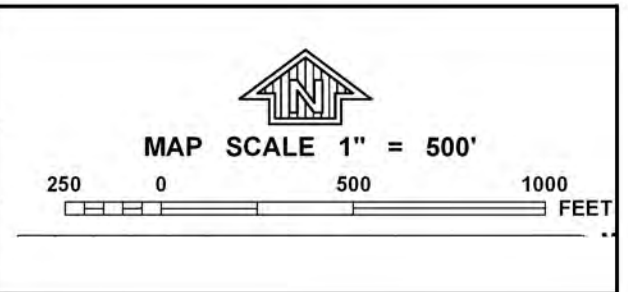
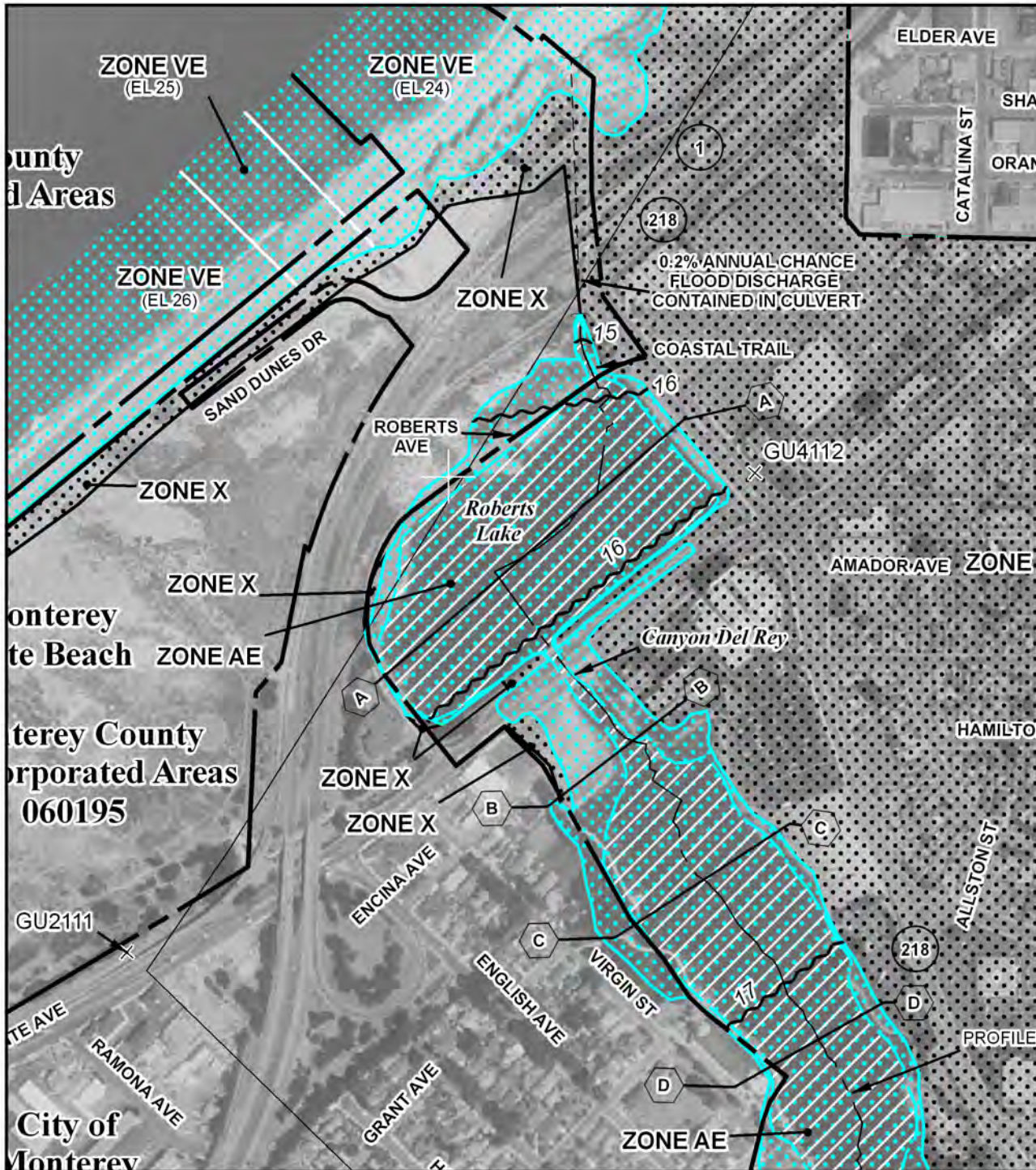
Table B-6: Storm Condition Runup Elevations - Nourished

75-yr Deisgn Conditions					
Dune Slope	Deisgn Height (ft)	Max Wave Runup (ft)	Surge + Forcing (ft)	Stillwater Level (ft)	Runup Elevation (ft)
1V:6.63H	16.17	9.89	4.77	8.38	23.04
100-yr Deisgn Conditions					
Slope	Deisgn Height (ft)	Max Wave Runup (ft)	Surge + Forcing (ft)	Stillwater Level (ft)	Runup Elevation (ft)
1V:6.63H	16.53	9.91	4.86	9.8	24.57

This will result in the same runup elevations. Higher frontal dunes will minimize the inland extent of inundation. Coastal frontal dunes and inland dune fields mitigate coastal inundation impacts before they reach crucial inland structures. This minimizes the inland extent of the coastal high hazard flood zones.

Indundation calculations for this scenario generate a more realistic model of flooding, given the current infrastructure located along the coastline. Calculations would need to be done for each beach transcet. For this reason a 3-D model of this senario would be needed to produce accurate values. This is outside the current project's scope.

Appendix C: Flood and Inundation Maps



NFIP

PANEL 0326G

FIRM

FLOOD INSURANCE RATE MAP

MONTEREY COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 326 OF 2050
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEL REY OAKS, CITY OF	060197	0326	G
MONTEREY COUNTY	060195	0326	G
MONTEREY, CITY OF	060200	0326	G
SAND CITY, CITY OF	060435	0326	G
SEASIDE, CITY OF	060203	0326	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

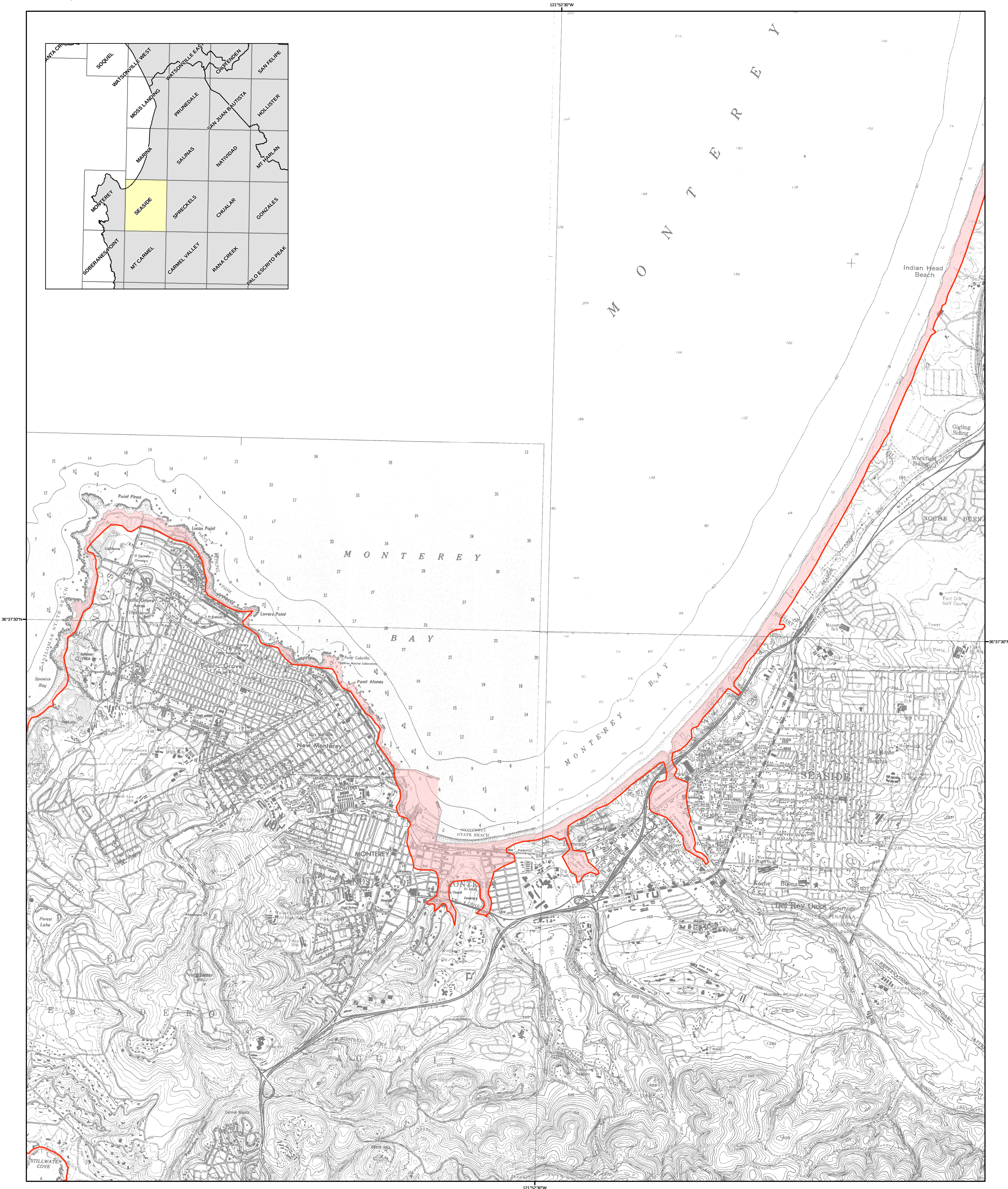
MAP NUMBER
06053C0326G

EFFECTIVE DATE
APRIL 2, 2009

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



METHOD OF PREPARATION

Initial tsunami modeling was performed by the University of Southern California (USC) Tsunami Research Center funded through the California Emergency Management Agency (CalEMA) by the National Tsunami Hazard Mitigation Program. The tsunami modeling process utilized the MOST (Method of Splitting Tsunamis) computational program (Version 0), which allows for wave evolution over a variable bathymetry and topography used for the inundation mapping (Titov and Gonzalez, 1997; Titov and Synolakis, 1998).

The bathymetric/topographic data that were used in the tsunami models consist of a series of nested grids. Near-shore grids with a 3 arc-second (75- to 90-meters) resolution or higher, were adjusted to "Mean High Water" sea-level conditions, representing a conservative sea level for the intended use of the tsunami modeling and mapping.

A suite of tsunami source events was selected for modeling, representing realistic local and distant earthquakes and hypothetical extreme undersea, near-shore landslides (Table 1). Local tsunami sources that were considered include offshore reverse-thrust faults, restraining bends on strike-slip fault zones and large submarine landslides capable of significant seafloor displacement and tsunami generation. Distant tsunami sources that were considered include great subduction zone events that are known to have occurred historically (1960 Chile and 1964 Alaska earthquakes) and others which can occur around the Pacific Ocean "Ring of Fire."

In order to enhance the result from the 75- to 90-meter inundation grid data, a method was developed utilizing higher-resolution digital topographic data (3- to 10-meters resolution) that better defines the location of the maximum inundation line (U.S. Geological Survey, 1993; Intermap, 2003; NOAA, 2004). The location of the enhanced inundation line was determined by using digital imagery and terrain data on a GIS platform with consideration given to historic inundation information (Lander, et al., 1993). This information was verified, where possible, by field work coordinated with local county personnel.

The accuracy of the inundation line shown on these maps is subject to limitations in the accuracy and completeness of available terrain and tsunami source information, and the current understanding of tsunami generation and propagation phenomena as expressed in the models. Thus, although an attempt has been made to identify a credible upper bound to inundation at any location along the coastline, it remains possible that actual inundation could be greater in a major tsunami event.

This map does not represent inundation from a single scenario event. It was created by combining inundation results for an ensemble of source events affecting a given region (Table 1). For this reason, all of the inundation region in a particular area will not likely be inundated during a single tsunami event.

References:

Intermap Technologies, Inc., 2003, Intermap product handbook and quick start guide: Intermap NEXTmap document on 5-meter resolution data, 112 p.

Lander, J.F., Lockridge, P.A., and Kozuch, M.J., 1993, Tsunamis Affecting the West Coast of the United States 1806-1992: National Geophysical Data Center Key to Geophysical Record Documentation No. 29, NOAA, NESDIS, NGDC, 242 p.

National Atmospheric and Oceanic Administration (NOAA), 2004, Interferometric Synthetic Aperture Radar (IFSAR) Digital Elevation Models from GeoSAR platform (EarthData): 3-meter resolution data.

Titov, V.V., and Gonzalez, F.I., 1997, Implementation and Testing of the Method of Tsunami Splitting (MOST): NOAA Technical Memorandum ERL PMEL – 112, 11 p.

Titov, V.V., and Synolakis, C.E., 1998, Numerical modeling of tidal wave runup: Journal of Waterways, Port, Coastal and Ocean Engineering, ASCE, 124 (4), pp 157-171.

U.S. Geological Survey, 1993, Digital Elevation Models: National Mapping Program, Technical Instructions, Data Users Guide 5, 49 p.

TSUNAMI INUNDATION MAP
FOR EMERGENCY PLANNING

State of California ~ County of Monterey
SEASIDE QUADRANGLE

July 1, 2009

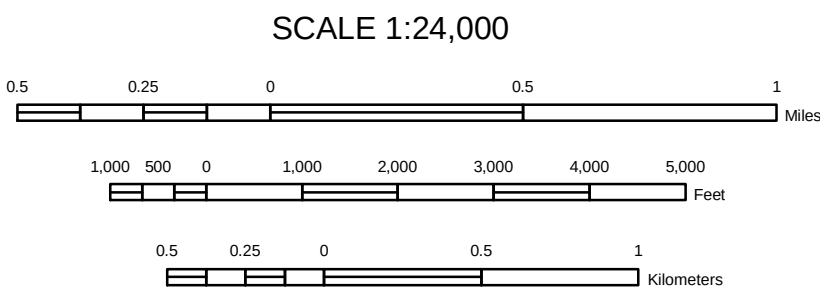


Table 1: Tsunami sources modeled for the Monterey County coastline.

Sources (M = moment magnitude used in modeled event)		Areas of Inundation Map Coverage and Sources Used		
		Santa Cruz	Monterey Bay Blg	Monterey
Local Source	Monterey Canyon Landslide		X	
Distant Sources	Cascadia Subduction Zone-full rupture (M9.0)	X		X
	Central Aleutians Subduction Zone #1 (M8.9)	X	X	X
	Central Aleutians Subduction Zone #2 (M8.9)	X		X
	Central Aleutians Subduction Zone #3 (M9.2)		X	
	Chile North Subduction Zone (M9.4)	X		X
	1960 Chile Earthquake (M9.3)	X		X
	1964 Alaska Earthquake (M9.2)	X	X	X
	Japan Subduction Zone #2 (M8.8)	X		X
	Kuril Islands Subduction Zone #2 (M8.8)	X		X
	Kuril Islands Subduction Zone #3 (M8.8)	X		X
	Kuril Islands Subduction Zone #4 (M8.8)	X		X
	Marianas Subduction Zone (M8.6)		X	X

MAP EXPLANATION

- Tsunami Inundation Line
- Tsunami Inundation Area

PURPOSE OF THIS MAP

This tsunami inundation map was prepared to assist cities and counties in identifying their tsunami hazard. It is intended for local jurisdictional, coastal evacuation planning uses only. This map, and the information presented herein, is not a legal document and does not meet disclosure requirements for real estate transactions nor for any other regulatory purpose.

The inundation map has been compiled with best currently available scientific information. The inundation line represents the maximum considered tsunami runup from a number of extreme, yet realistic, tsunami sources. Tsunamis are rare events; due to a lack of known occurrences in the historical record, this map includes no information about the probability of any tsunami affecting any area within a specific period of time.

Please refer to the following websites for additional information on the construction and/or intended use of the tsunami inundation map:

State of California Emergency Management Agency, Earthquake and Tsunami Program: <http://www.oes.ca.gov/WebPage/oeswebsite.nsf/Content/B1EC51BA215931768825741F005E8D80?OpenDocument>

University of Southern California – Tsunami Research Center: <http://www.usc.edu/dept/tsunamis/2005/index.php>

State of California Geological Survey Tsunami Information: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/index.htm

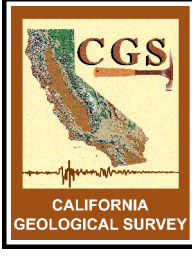
National Oceanic and Atmospheric Agency Center for Tsunami Research (MOST model): <http://nctr.pmel.noaa.gov/time/background/models.html>

MAP BASE

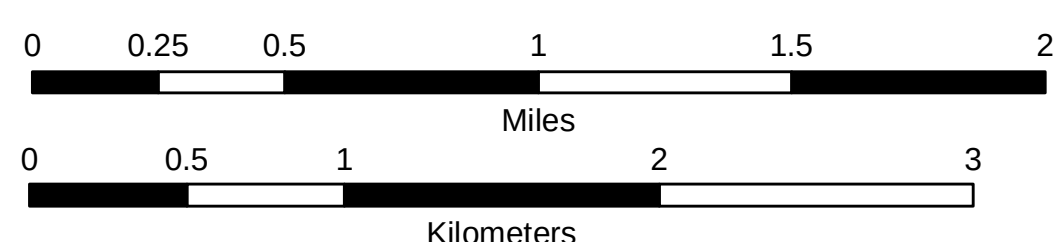
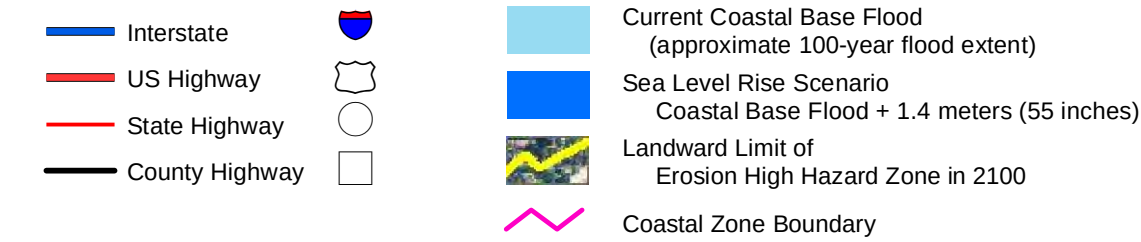
Topographic base maps prepared by U.S. Geological Survey as part of the 7.5-minute Quadrangle Map Series (originally 1:24,000 scale). Tsunami inundation line boundaries may reflect updated digital orthophotographic and topographic data that can differ significantly from contours shown on the base map.

DISCLAIMER

The California Emergency Management Agency (CalEMA), the University of Southern California (USC), and the California Geological Survey (CGS) make no representation or warranties regarding the accuracy of this inundation map nor the data from which the map was derived. Neither the State of California nor USC shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.



California Flood Risk: Sea Level Rise Seaside Quadrangle



Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council



Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Monterey OE N
2: Marina
3: Salinas
4: Monterey
5: *not printed*
6: Soberanes Point
7: *not printed*
8: *not printed*

Map extents match USGS 7.5 minute topographic maps



Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Phillip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Appendix D: Moss Landing Revetment basis of design

BASIS OF DESIGN FOR SHORE PROTECTION
AT MOSS LANDING HARBOR,
MOSS LANDING, CA

Monterey Bay Sanctuary Scenic Trail Project
March, 2011



Prepared for:

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3301 C Street, Bldg. 100-B
Sacramento, CA 95816

Prepared by:

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Santa Cruz, CA 95060



SEI Job No. 25245

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1. INTRODUCTION

1.1 Introduction and Project Location

The Monterey County Department of Public Works is designing a pedestrian and bicycle trail between the cities of Santa Cruz and Monterey to be known as the Monterey Bay Sanctuary Scenic Trail (MBSST). The Moss Landing segment runs from the north shore of Elkhorn Slough, across a proposed new bridge along the west side of California State Highway 1 (Hwy-1), through the Moss Landing Power Plant and south to Moss Landing Road. A 350-ft reach of shoreline immediately south of the new bridge is subject to erosion by ocean waves entering the slough from the Moss Landing entrance channel, and is in need of new shore protection. The proposed bridge and section of shoreline to be protected are within the California State Highway Right of Way.

The project site is located at the center of the Monterey Bay shoreline, in Central California (Figure 1-1). Moss Landing is small boat harbor used by both fishing and recreational vessels. Access to open waters of the Pacific Ocean is through a 400 ft-wide entrance channel protected by jetties on both sides. The jetties trend southwest, and offer some protection from large ocean waves and locally generated seas from the west and northwest. Monterey Bay is bisected by a large submarine canyon (Monterey Canyon) that is a dominant morphological feature in the region's bathymetry. The head of the canyon is located just offshore of the Moss Landing jetties (See Figure 1-1).

Figure 1-2 shows the project location inside the Moss Landing entrance channel in Elkhorn Slough.

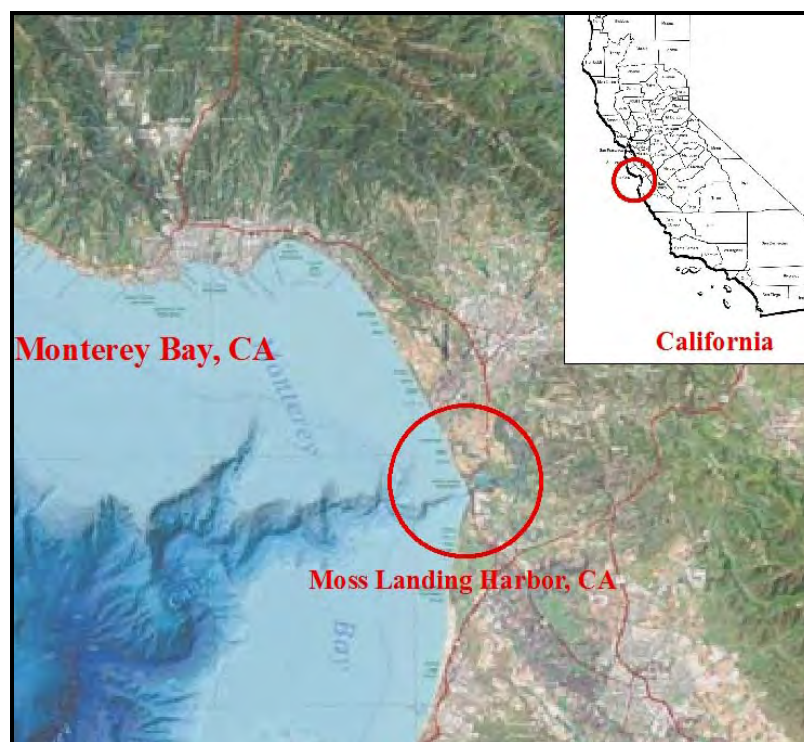


Figure 1-1. Project location in Central California

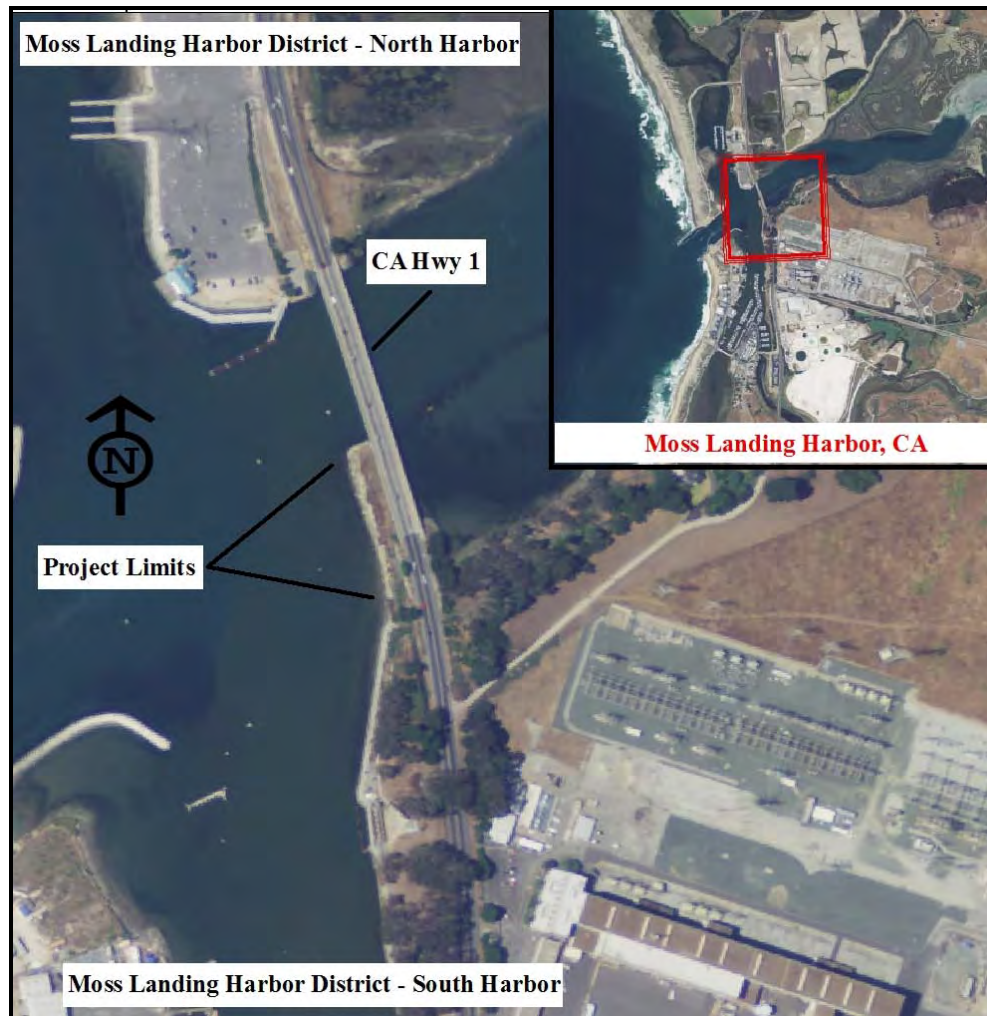


Figure 1-2. Project vicinity

1.2 Existing Site Condition and Characteristics

The project area is a small peninsula adjacent to the new Hwy-1 bridge (see Figure 1-2) and bounded on the channel side by the remnants of the the bridge abutment for the old (demolished) Hwy-1 bridge. Figure 1-3 is a photograph of the end of the peninsula showing the steel sheetpile abutment of the abandoned bridge. The curved steel sheetpile wingwalls of the abutment are concrete capped. The concrete piles and pile-supported beam in front of steel sheetpile were probably a support for the old bridge. Cement Rubble Masonry (CRM) facing between the piles has deteriorated to expose the steel sheepile behind.

There are two concrete bollard structures along the project reach, and one of these is shown in Figure 1-3. The purpose of these bollards is not clear.

The project shoreline south of the abutment is characterized by deteriorated non-engineered riprap shore protection constructed of concrete debris. Wave overtopping has eroded an approximate 3-ft scarp in the bluff landward of the riprap, and has contributed to the deposition of a sand, gravel, and cobble beach perched above the concrete riprap. These features are shown in Figure 1-4, a photograph illustrating typical conditions along the project reach.

There are no known buried utilities along the project reach. Abandoned 10-inch and 5-inch pipes have been exposed by erosion - the 5-inch pipe is visible in Figure 1-4. A 12-inch corrugated steel drain pipe (Figure 1-5) extends from a catchment basin adjacent to the Hwy-1 embankment and into the project area.

The project reach terminates to the South at a steel sheet pile retaining wall that protects a 20-inch steel oil delivery pipeline. (Figure 1-6). Although no longer in use, the pipeline is in a state of preservation in case of future need. The pipeline alignment appears to angle down to the seabed on the channel side, and bends to be sub-parallel to the shoreline on the landward side of the retaining wall. The alignment is such that construction of a sloping revetment in the vicinity of the pipe would be difficult, and might put the pipeline at risk.

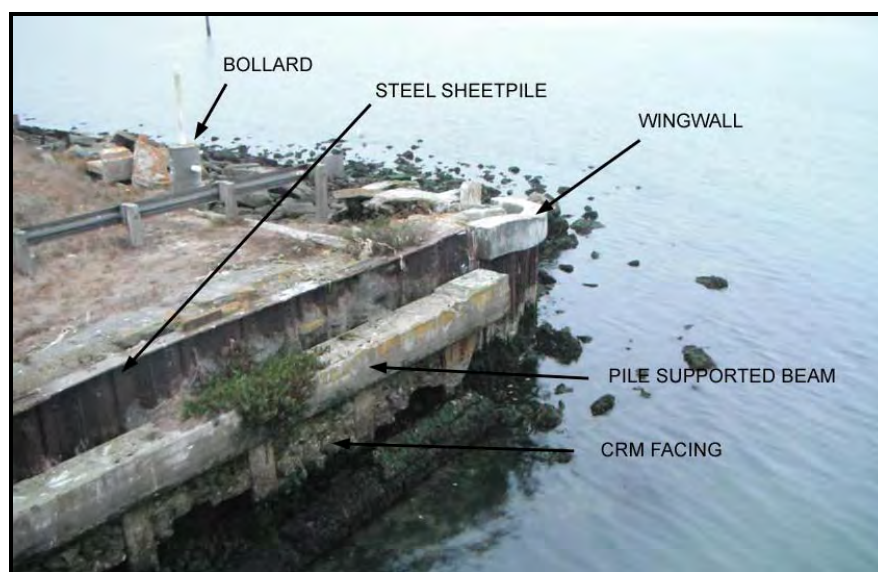


Figure 1-3. Abandoned abutment at the north end of the project reach



Figure 1-4. Typical site conditions



Figure 1-5. 12-inch corrugated steel drainage pipe



Figure 1-6. 20-inch oil delivery pipeline at the south end of project reach (view looking north).

2. OCEANOGRAPHIC CONDITIONS

2.1 Introduction

Monterey Bay experiences a Mediterranean type climate with cool summers and moderate winters. Rainfall averages 19 inches per year and falls almost exclusively between October and May. The seasonal shift between the dry spring/summer period and the wet fall/winter period is governed by the position of the northern hemisphere storm track and of the North Pacific High high pressure system.

This seasonal shift also governs the prevailing winds. In the winter, frequent storms pass through the area resulting in strong winds with variable direction. The spring transition, in March or April, marks the beginning of several months of predominantly strong winds from the northwest associated with the Pacific High. These are intermittently interrupted by periods of several days duration when the wind slackens and may come out of the west or south. In particular, a phenomenon known as a southerly surge will suddenly reverse the wind direction from blowing out of the northwest to coming out of the south, as it propagates northward along the coast.

The fall transition typically occurs in September and is a time of calm winds and sunny weather before the onset of the winter storms, usually in November. There can be significant year-to-year differences in the "typical" annual cycle.

2.2 Tide

The tides at Moss Landing are mixed semi-diurnal with two high tides and two low tides daily. The nearest NOAA tide gauge is located in Monterey, CA, approximately 15 miles to the south (Sta. 9413450). The mean tide range is 3.54 feet and the diurnal range is 5.34 feet. Tidal data are listed in Table 2-1.

Table 2-1. Tide elevations at Monterey, CA

Tide Datum	Height (ft) MLLW	Height (ft) NAVD 88
Mean higher high water	5.33	5.20
Mean high water	4.63	4.50
Mean sea level	2.83	2.70
Mean low water	1.09	0.96
Mean lower low water	0.00	-0.13
Highest water level (1/27/1983)	7.88	7.75

The project elevation datum is NAVD 88. Although the mean diurnal range is 5.34 ft, the range during spring tide conditions can be greater, and predicted high tide levels over 6 ft are not uncommon.

2.3 Wave Conditions

2.3.1 Deepwater Wave Data

The project site is sheltered within a harbor at the eastern edge of Central Monterey Bay. Because of the location within Monterey Bay, waves will only approach the harbor from a westerly direction. The National Oceanographic and Atmospheric Association (NOAA) National Data Buoy Center (NDBC) operates and maintains several offshore buoys in the vicinity of Monterey Bay which are exposed to deepwater waves generated south, west and north of Monterey Bay. Two of these, Sta. 46042 and Sta. 46236 are considered representative of the Monterey Bay region, due to their proximity, and are used in this analysis.

Sta. 46042 is located 27 nautical miles west of Monterey Bay. It is an NDBC moored 3-meter discus buoy located in greater than 1500 meters (5000 feet) water depth. Meteorological and oceanographic data have been collected with this buoy since 1987. Its water depth and long period of record makes it a suitable data source for deepwater wave conditions.

Sta. 46236 is located within Monterey Bay, over outer Monterey Canyon. It is a Coastal Data Information Program (CDIP) Waverider buoy (CDIP buoy #156) located in 168 meters (550 feet) of water depth. Data have been collected with this buoy since 2007. Both buoys record significant wave height (Hs), peak period (Tp) and mean wave direction (MWD).

Table 2-2, Table 2-3, and Table 2-4 show, respectively, wave height versus wave direction, wave period versus wave direction and wave height versus wave period joint frequency distributions that were generated data from NOAA NDBC buoy 46042. Only records from 1992-2009 were used in the analysis because the mean wave direction parameter was not measured prior to 1992. A few of the noteworthy observations from the datasets are:

- On a yearly average, less than 2% of the wave heights measured at buoy 46042 are larger than 4.5 meters (15.0 feet).
- The most frequent wave directions are from the directional sector of 270-330 degrees; eighty-three percent (83%) of the recorded waves approached from these directions.

Table 2-2. Percent Frequency of Deepwater Wave Heights vs. Wave Directions

(Period: 1992-2009; Source: NOAA NDBC)

Wave Height (ft)	Mean Wave Direction (deg from True North)												TOTAL
	0-30	30-60	60-90	90-120	120-150	150-180	180-210	210-240	240-270	270-300	300-330	330-360	
0	0.00	0.00	0.00	0.00	0.00	0.09	0.63	0.31	0.19	0.35	0.27	0.00	1.85
3	0.00	0.00	0.00	0.01	0.02	1.21	5.09	1.91	2.27	11.08	16.55	0.26	38.39
6	0.00	0.00	0.00	0.00	0.01	0.37	0.63	0.25	1.34	13.22	20.10	0.19	36.11
9	0.00	0.00	0.00	0.00	0.00	0.26	0.15	0.09	0.58	6.48	8.24	0.02	15.82
12	0.00	0.00	0.00	0.00	0.00	0.15	0.06	0.03	0.26	2.43	2.80	0.01	5.74
15	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.01	0.08	0.64	0.73	0.00	1.54
18	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.03	0.17	0.16	0.00	0.38
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.03	0.00	0.13
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.03
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
30	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
TOTAL	0.00	0.00	0.00	0.01	0.03	2.15	6.57	2.61	4.79	34.47	48.88	0.49	100.00

Table 2-3. Percent Frequency of Deepwater Wave Periods vs. Wave Directions
(Period: 1992-2009; Source: NOAA NDBC)

Wave Period (s)	Mean Wave Direction (deg from True North)												TOTAL
	0-30	30-60	60-90	90-120	120-150	150-180	180-210	210-240	240-270	270-300	300-330	330-360	
0-2	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
2-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.03
4-6	0.00	0.00	0.00	0.01	0.01	0.23	0.08	0.01	0.01	0.12	1.29	0.08	1.84
6-8	0.00	0.00	0.00	0.00	0.01	0.34	0.17	0.05	0.11	0.70	7.64	0.11	9.12
8-10	0.00	0.00	0.00	0.00	0.00	0.19	0.12	0.15	0.36	2.07	13.62	0.18	16.68
10-12	0.00	0.00	0.00	0.00	0.00	0.13	0.14	0.17	0.94	7.59	13.43	0.09	22.49
12-14	0.00	0.00	0.00	0.00	0.00	0.22	0.87	0.45	1.49	10.15	6.87	0.01	20.06
14-16	0.00	0.00	0.00	0.00	0.01	0.53	2.62	0.92	1.41	8.03	3.39	0.00	16.89
16-18	0.00	0.00	0.00	0.00	0.00	0.47	2.33	0.77	0.45	4.73	2.08	0.01	10.83
18-20	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.03	0.01	0.25	0.15	0.00	0.56
20-22	0.00	0.00	0.00	0.00	0.00	0.02	0.14	0.08	0.03	0.80	0.38	0.00	1.45
22-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.02
>24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.03
TOTAL	0.00	0.00	0.00	0.01	0.03	2.15	6.57	2.61	4.79	34.47	48.88	0.49	100.00

Table 2-4. Percent Frequency of Deepwater Wave Heights vs. Wave Periods
(Period: 1992-2009; Source: NOAA NDBC)

Wave Height (ft)	Wave Period (seconds)													Total
	0-2	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	>24	
0	0.00	0.01	0.04	0.08	0.19	0.29	0.51	0.51	0.20	0.01	0.01	0.00	0.00	1.85
3	0.00	0.03	1.44	5.03	7.04	8.07	5.80	6.20	4.22	0.19	0.36	0.00	0.00	38.39
6	0.00	0.00	0.35	3.40	7.17	9.29	7.68	4.41	3.04	0.21	0.54	0.01	0.01	36.11
9	0.00	0.00	0.01	0.50	1.84	3.47	4.41	3.38	1.73	0.09	0.37	0.01	0.01	15.82
12	0.00	0.00	0.00	0.09	0.37	1.07	1.29	1.75	1.02	0.05	0.11	0.00	0.00	5.74
15	0.00	0.00	0.00	0.01	0.05	0.24	0.30	0.48	0.39	0.01	0.04	0.00	0.00	1.54
18	0.00	0.00	0.00	0.00	0.01	0.06	0.05	0.11	0.13	0.01	0.01	0.00	0.00	0.38
21	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.07	0.00	0.00	0.00	0.00	0.13
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.03
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
30	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
Total	0.00	0.03	1.84	9.12	16.68	22.49	20.06	16.89	10.83	0.56	1.45	0.02	0.03	100.00

2.3.2 Extreme Wave Heights

Data from NOAA NDBC Sta. 46042 were used to generate a return period distributions of extreme wave height events at the buoy location. Results are listed in Table 2-5. The analysis indicates a yearly return period significant wave height (Hs) of 21.6 ft, and a 50-year return period wave height of 32.4 ft.

Table 2-5. Return Period Wave Heights for Buoy 46042

Return Period (years)	Offshore Significant Wave Height (Hs) (ft)
1	21.6
5	25.6
10	27.5
25	30.2
50	32.4

2.3.3 Nearshore Wave Heights

Wave Transformations in Shallow Water

As deepwater waves propagate toward shore, they begin to encounter and be transformed by the ocean bottom. In shallow water, the wave speed becomes related to the water depth. As waves slow down with decreasing depth, the process of *wave shoaling* steepens the wave and increases the wave height. *Wave breaking* occurs when the wave profile shape becomes too steep to be maintained. This typically occurs when the ratio of wave height to water depth is about 0.78, and is a mechanism for dissipating the wave energy. Wave energy is also dissipated due to bottom friction. The phenomenon of *wave refraction* is caused by differential wave speed along a wave crest as the wave passes over varying bottom contours, and will cause wave crests to converge or diverge and may locally increase or decrease wave heights. Not strictly a shallow water phenomenon, *wave diffraction* is the lateral transmission of wave energy along the wave crest, and will cause the spreading of waves in a shadow zone, such as occurs behind a breakwater or other barrier.

The seafloor bathymetry of Monterey Bay is dominated by a system of submarine canyons known as the Monterey Canyon System. Monterey Canyon itself begins directly offshore of Moss Landing Harbor. The varied offshore bathymetry causes wide differences in nearshore wave heights along the Monterey Bay shoreline as the process of wave refraction causes waves to converge or diverge at various locations.

Two numerical wave models were used to analyze the transition of waves from deepwater to the project site. The SWAN (Simulating Waves Nearshore) model was used to calculate the propagation of waves from the Buoy 46042 to nearshore sites offshore of Moss Landing Harbor. The numerical wave model CGWave was then used to model the refraction, diffraction, and shoaling characteristics of waves as they enter and pass through the harbor jetties and move to the project site.

Figure 2-1 is an example of the SWAN modeling, and shows the effects of deepwater waves approaching the Monterey Bay shoreline from the West. The color contours show the variation in nearshore wave height. The model indicates that a divergent zone – a zone of relatively smaller wave heights - exists at the mouth of Moss Landing Harbor, with wave energy essentially diverted to the north and south.

Figure 2-2 shows results from the CGWave analysis super-imposed on an aerial image from *Google-Earth*. The model boundary is a semi-circle offshore of the harbor. The crest lines diverge near the harbor mouth, and waves that enter the jetties are locally high adjacent to both the north and south jetties. Significant diffraction occurs inside the harbor. The flare geometry at the end of each jetty helps to spread and diffuse the wave energy into the harbor and away from the project site. Wave heights at the project site are approximately 10-percent of the wave height at the model boundary.

Design Wave Conditions

Based on the buoy statistics and wave modeling, a significant wave height of 3 ft and wave period of 16 seconds is used for the project site 50-year design condition, and a 2-ft wave height is used for an annual design condition.

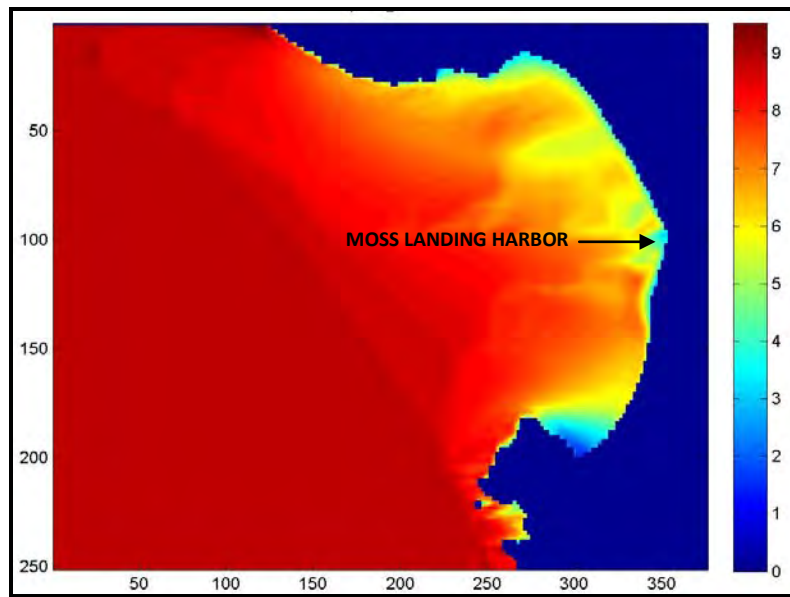


Figure 2-1. SWAN model showing the variation of wave heights in Monterey Bay



Figure 2-2. CGWave model for Moss Landing Harbor

2.4 Water Level Rise: Storm Surge and Wave Setup

During extreme storm events the water level at the shoreline will generally rise due to the combination of storm surge and wave setup.

Storm surge is an elevation of the coastal water level caused by the combined effects of strong wind stresses on the water surface and the reduction in atmospheric pressure within a storm that causes a rise in the water surface beneath the low pressure area.

Large waves breaking nearshore cause a significant water elevation rise known as wave setup. Wave setup is typically 10% to 15% of the average breaking wave height.

A water level rise analysis was conducted using the data from NOAA NDBC buoy Sta. 46042 and the tide gauge station in Monterey, CA. The months in which the 5 largest storms on record occurred were determined from the NOAA buoy records. Water level data records from the corresponding months were extracted from the tide gauge records. The water level data included both predicted tide levels and measured tide levels. The measured tide offsets are empirical data for the combined effect of storm surge and wave setup.

The differences between the measured and predicted tide levels were found to vary between 1.0 ft and 1.5 ft in during the largest storms on record. An example plot showing the difference between verified and predicted tides for the month of January, 2008 is shown in Figure 2-3. Data were smoothed using a 12-point (approximately 1 hour) running average filter. A combined storm surge and wave setup value of 1.5 ft is used for a 50-year design condition, and a 1-ft rise is used for an annual design condition.

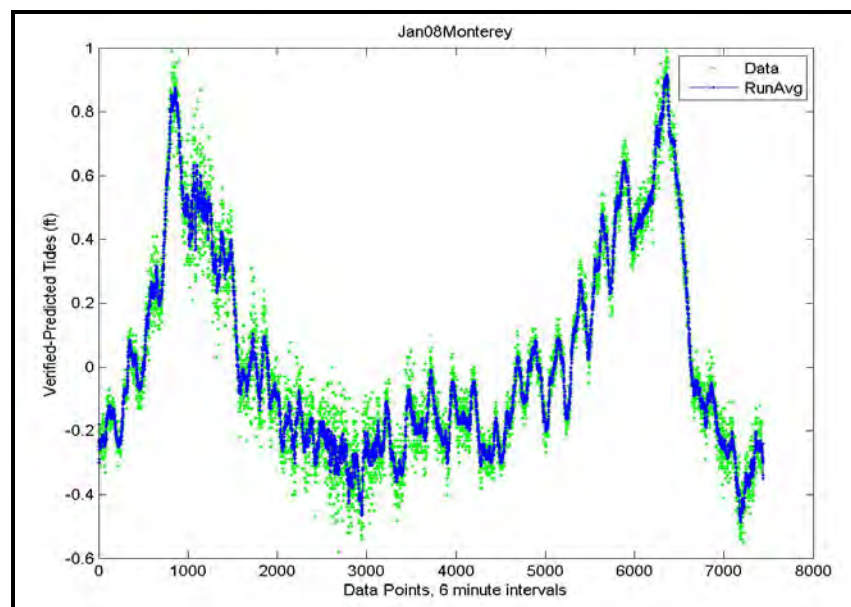


Figure 2-3. Differences between real and predicted water levels, January 2008

2.5 Global Sea Level Rise

It is widely recognized that global warming has caused a world-wide acceleration in sea level rise. Sea level rise predictions are not clear, and the state-of-the-science is in early stages.

Estimates vary, but a 3-foot rise by the end of the present century is in use as a reasonable figure (Fletcher, 2009). Given the uncertainties in stillwater elevation due to long-term phenomena, and the need for a long term coastal engineering design, an extra 1 ft of stillwater level rise has been added for the project design.

2.6 Design Still Water Level

Table 2-6 shows a 50-year design stillwater level of 8.5 ft to be a combination of astronomical tide (6.0 ft), combined storm surge and wave setup (1.5 ft), and an extra 1.0 ft to account for miscellaneous oceanographic phenomena including global warming induced sea level rise. A stillwater level of 7.0 ft is used for an annual design condition.

Table 2-6. Combined Stillwater Level for Design Conditions

Parameter	Stillwater Rise (ft – NAVD 88)
Tide	6.0
Storm Surge and Wave Setup	1.5
Other Phenomena	1.0
Design Stillwater Level	8.5

2.7 Wave Runup

In the design of shore protection structures, wave runup is the level to which the wash from breaking waves will rise on a structure, usually considered a rough planar slope (as in this case). Wave overtopping occurs when the structure is not sufficiently elevated and the wave will spill over the crest. Wave runup was calculated using the U.S. Army Corps of Engineers design program ACES based on methods by Ahrens and McCartney (1975).

The calculated runup value is 5.8 ft, and is added to the design stillwater elevation (8.5 ft) to give the non-overtopping elevation of 14.45 feet in Table 2-7.

Table 2-7. Wave runup for 50-year design conditions

Structure Slope	Design Wave Height (ft)	Wave Runup (ft)	Stillwater Level (ft)	Runup Elevation (ft)
1V :1.75H	3.0	5.95	8.5	14.45

The design wave and design stillwater level reflect relatively extreme conditions. Table 2-8 lists wave runup values using somewhat milder conditions based on a yearly return period wave height at the site of 2 ft, and a combined stillwater level of 7 ft:

Table 2-8. Wave runup for yearly design conditions

Structure Slope	Design Wave Height (ft)	Wave Runup (ft)	Stillwater Level (ft)	Runup Elevation (ft)
1V :1.75H	2.0	4.1	7.0	11.1

3. RIPRAP REVETMENT DESIGN

3.1 Stone Gradation – USACE SPM Method

The following riprap stone gradation calculations are slightly modified from methods found in the *USACE Shore Protection Manual*.

A 50-year design wave height of 3.0 ft is used for stone sizing and gradation. As the design wave height is less than 5 ft, a riprap, or graded stone size revetment is used.

The median weight (W_{50}) of armor stone required is determined by the Hudson formulation:

$$W_{50} = w_r H^3 / K (S_r - 1)^3 \cot \theta$$

Where,

- w_r = unit weight of stone (use 160 lbs/cu ft for basalt quarystone)
- H = design wave height ($H = 3.0$ ft)
- K = stability coefficient (use 2.2 rip rap)
- S_r = specific gravity of the stone relative to sea water (2.5)
- θ = side slope (use 1V to 1.75H)

$$W_{50} = 330 \text{ lbs}$$

$$W_{50} (\text{min}) = 0.75 W_{50} = 250 \text{ lbs}$$

$$W_{50} (\text{max}) = 1.25 W_{50} = 412 \text{ lbs}$$

A riprap revetment consists of a gradation of stone sizes based on the following 15th and 100th percentile mix of sizes:

$$W_{15} (\text{min}) = 0.4 W_{50} (\text{min}) = 100 \text{ lbs}, \quad W_{15} (\text{max}) = W_{50} (\text{min}) = 250 \text{ lbs}$$

$$W_{100} (\text{min}) = 2 W_{50} (\text{min}) = 500 \text{ lbs}, \quad W_{100} (\text{max}) = 4 W_{50} (\text{min}) = 1,000 \text{ lbs}$$

In summary, the armor stone gradation is as follows:

Table 3-1. SPM Riprap Stone Gradation ($H = 3$ ft)

Percentile	Minimum Weight	Maximum Weight
15	100 lbs	250 lbs
50	250 lbs	412 lbs
100	450 lbs	1,000 lbs

The graded riprap thickness (T) is twice the nominal diameter of a W_{50} stone (D_{50}):

$$D_{50} = (W_{50} / w_r)^{1/3} = 1.273 \text{ ft}$$

$$T = 2 \times D_{50} = 2.55 \text{ ft (use 2.5 ft)}$$

The riprap should be underlain by a bedding layer that is nominally 10% of the riprap W_{50} stone size, say 10 lb to 50 lb stone with a layer thickness of 1.25 ft.

3.2 Stone Gradation – CABS (Caltrans) Method

The following stone gradation method uses guidelines presented in *California Bank and Shore Rock Slope Protection Design*, (Caltrans Study No. F90TL03, October 2000) and known as the California Bank and Shore (CABS) layered Rock Slope Protection (RSP) design method. The method uses standard classes between 1 lb and 16 tons. Figure 3-1, a table of rock classes from the study, is derived from Section 72-2.02 of the State of California, Department of Transportation, Standard Specifications.

STANDARD Rock SIZE or Rock MASS or Rock WEIGHT		GRADING OF ROCK SLOPE PROTECTION PERCENTAGE LARGER THAN											
		RSP-Classes [A]											
		Method A Placement					Method B Placement						
		RSP-Classes other than Backing									Backing No.		
		8 ton	4 ton	2 ton	1 ton	1/2 ton	1 ton	1/2 ton	1/4 ton	Light	1 [B]	2	3
US unit	SI unit	8 T	4 T	2 T	1 T	1/2 T	1 T	1/2 T	1/4 T	Light	1 [B]	2	3
16 ton	14.5 tonne	0-5											
8 ton	7.25 tonne	50-100	0-5										
4 ton	3.6 tonne	95-100	50-100	0-5									
2 ton	1.8 tonne		95-100	50-100	0-5		0-5						
1 ton	900 kg			95-100	50-100	0-5	50-100	0-5					
1/2 ton	450 kg				95-100	50-100	-----	50-100	0-5				
1/4 ton	220 kg					95-100	95-100	-----	50-100	0-5			
200 lb	90 kg							95-100	-----	50-100	0-5		
75 lb	34 kg								95-100	-----	50-100	0-5	
25 lb	11 kg									95-100	90-100	25-75	0-5
5 lb	2.2 kg											90-100	25-75
1 lb	0.4 kg												90-100

[A] US customary names (units) of RSP-Classes listed above SI names, example US is "2 ton" metric is "2 T".
 [B] "Facing" has same gradation as "Backing No. 1". To conserve space "Facing" is not shown .

Example for determining RSP-Class of outside layer. By using Equation 1, if the calculated $W=135$ kg (minimum stable rock size):
 1. Enter table at left and select closest value of STANDARD Rock SIZE which is greater than calculated W , in this case 220 kg
 2. Trace to right and locate "50-100" entry 3. Trace upward and read column heading "1/4 T", then 1/4 T is first trial RSP-Class.

Figure 3-1. RSP classes for CABS method

The standard RSP class is the next heavier standard rock weight from the W_{50} stone size as calculated in Section 3.1. For a W_{50} of 330 lbs, the standard RSP class is 1/4 Ton using Method B placement. Method A placement is individually placed stone and is used for the heavier RSP classes. In Method B placement multiple stones are "dumped" and final placement is spread by machinery.

The 1/4 Ton RSP class gradation is summarized in Table 3-2. The graded riprap thickness (T) is twice the nominal diameter of a W_{50} stone (D_{50}):

$$D_{50} = (W_{50} / w_r)^{1/3} = 1.46 \text{ ft (note: } W_{50} \text{ is 500 lbs)}$$

$$T = 2 \times D_{50} = 2.9 \text{ ft (use 3.0 ft)}$$

Table 3-2. CABS Riprap Stone Gradation for ¼ Ton RSP Class

Percent Larger Than	Weight
95-100	75 lbs
50-100	500 lbs
0-5	1,000 lbs

According to the Caltrans study, both Backing No. 1 and Backing No. 2 (Figure 3-1) are appropriate underlayer material for the 1/4 ton RSP class. Backing No. 2 is closer to the SPM criteria, with most of the material in the 25 lb to 75 lb stone range, and is preferable for this shore protection design.

3.3 Revetment Crest

The overtopping elevation for 50-year design conditions is 14.45 ft (see Section 2.4). Pursuant to discussions with the design team concerning the desired level of protection, the revetment crest is set at 15 ft, and the revetment is designed as a non-overtopping structure.

3.4 Revetment Toe

The top of the revetment toe is set at -2 ft (NAVD 88). The elevation is approximately one annual design wave height below the MLLW tidal datum. This is considered a reasonable scour depth in the event of erosion of the nearshore substrate at the project reach. The toe has an apron that is 4 x D_{50} in width and designed for the soft sediment bottom conditions at the site.

3.5 Revetment Cross-Sections and Stone Size Discussion

Figure 3-2 is a section view of the revetment design using the SPM method (Section 3.1), with stone sizing and gradation from Table 3-1. Figure 3-3 is a section using the CABS method, with stone sizing and gradation for RSP Class 1/4 T from Table 3-2.

Although both stone sizing methods are similar, the CABS method is inherently more conservative as the “next size up” stone class is used, i.e. 500-lb stone is essentially substituted for 330-lb stone specified by the Hudson formulation, with a consequent increase in revetment dimensions. The CABS method stone size and gradation is recommended for a robust and conservatively designed structure. However the SPM structure is also conservatively designed, and can be substituted without reservation if the difference in cost becomes a significant issue.

3.6 Revetment Alignment

The revetment layout is shown on Figure 3-4 (north end) and Figure 3-5 (south end). The revetment is aligned so that the top of the revetment slope approximately follows the project

hinge line. Some departures from the hinge line were used to straighten the revetment crest and to provide a 5-ft minimum clearance to the edge of the bike path.

The north end of the revetment stops short of the old bridge abutment. An alternative alignment was considered that would have wrapped the revetment around the abutment into the channel. However, this alternative was abandoned as armor protection for the channel is essentially a very different project scope:

- High flow velocities can scour the channel walls and substrate. These are independent of the site wave conditions and require a different set of design parameters
- Proper channel protection might require a different design cross-section, and may result in extending the rock protection to the bottom of the channel

Care must be taken not to excavate near the abutment in order not to de-stabilize the existing sheetpile.

The south end of the alignment stops short of the 20-inch oil delivery pipeline. As the geometry of the site does not allow a significant return to be constructed, the revetment will grade into the existing armor rock on the shoreline.

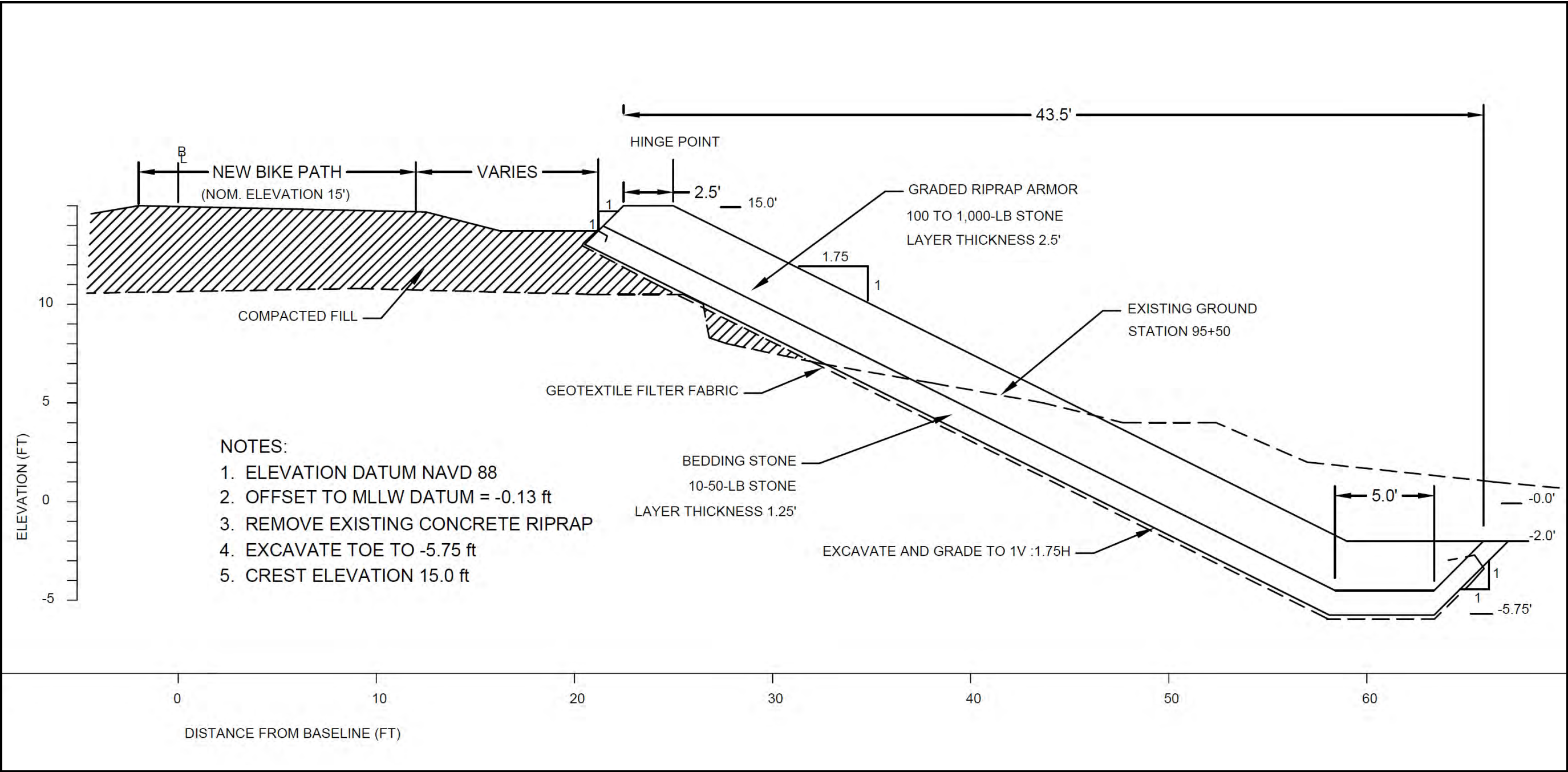
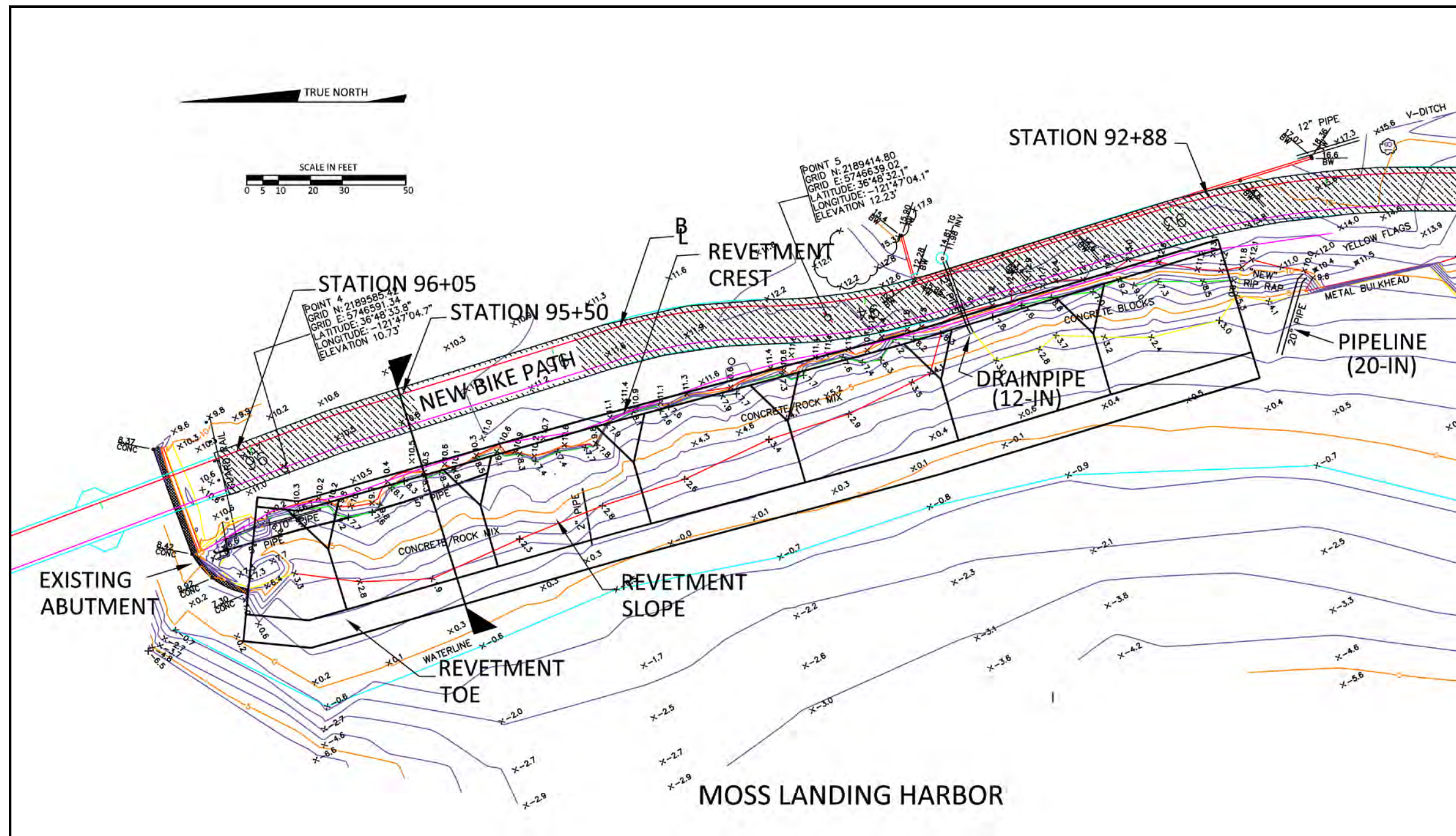


Figure 3-2. Design section for SPM method stone size and grading (see Section 3.1)





4. REFERENCES

Ahrens, J., and B.L. McCartney, 1975. "Wave Period Effect on the Stability of Riprap," *Proceedings of Civil Engineering in the Oceans, III*, ASCE pp. 1019-1034

Fletcher, C.H., 2009; Sea Level by the End of the 21st Century: A Review; *Shore and Beach* Vol. 77, No. 4, Fall 2009

USACOE, CERC, 1984, *Shore Protection Manual*.

State of California, Department of Transportation, 2000; *California Bank and Shore Rock Slope Protection Design*; Final Report No. FHWA-CA-TL-95-10 Caltrans Study No. F90TL03

APPENDIX D

**Letters from the Central Coast Regional Water Quality Control Board and
Monterey County Department of Health**

Central Coast Regional Water Quality Control Board

March 12, 2015

Tim O'Halloran, PE
City of Seaside Resource Management Services
440 Harcourt Avenue
Seaside, CA 93955
Email: tohallor@ci.seaside.ca.us

Sent via Electronic Mail

Dear Mr. O'Halloran:

**IMPLEMENTATION OF LOW IMPACT DEVELOPMENT REQUIREMENTS FOR THE
IN-AND-OUT BURGER CONSTRUCTION, 1350 DEL MONTE BOULEVARD, SEASIDE, CA -
ADDENDUM FOR THE PROJECT ENVIRONMENTAL IMPACT REPORT**

This letter confirms that Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff supports the City of Seaside making changes to the project to permit on-site stormwater management consistent with Central Coast Post-Construction Stormwater Management Requirements (Resolution No. R3-2013-0032) and the City's approach to reviewing and approving the project. Our evaluation of background and current site conditions indicates that current stormwater management techniques and requirements apply to this site.

Central Coast Water Board staff received your letter on February 27, 2015, for the above referenced project. That letter summarizes the history of work for the parcel development and the City's proposed approach to move forward on project review and approval.

One factor affecting parcel development is management of the onsite contamination from its former use as an auto wrecking yard. The Central Coast Water Board stated in a 1994 letter that capping the site is a recommended remediation method. If the site is capped, the residual contamination onsite is not considered a threat to water quality and no further investigation or cleanup of the groundwater is required.

Site investigations were conducted in December 2014 to characterize site contamination. Central Coast Water Board staff reviewed the report of the December 2014 investigation, which includes historical and new soil and groundwater contaminant data from 1992 to 2014. The data indicate petroleum related contamination has decreased over time to concentrations that are below detection limits (1 – 5 mg/kg soil; 0.5 – 1 µg/L groundwater). The conclusions in the report suggest the decrease in site contaminant concentrations is likely due to natural attenuation and that petroleum contamination is no longer a pollution threat¹.

¹ Stechmann Geoscience, Inc. Phase II Environmental Site Assessment 2.2-Acre Property, 1350 Del Monte Avenue Seaside, California. February 2015.

Based on this new information, and on the more contemporary imperative to manage stormwater on-site where feasible, Central Coast Water Board staff finds the recommended remediation method cited in the 1994 letter is no longer appropriate. As such, Central Coast Water Board staff supports changes to the project that permit on-site stormwater management consistent with Central Coast Post-Construction Stormwater Management Requirements (Resolution No. R3-2013-0032).

Your February 27, 2015 letter also recommended the following approach to complete the project. The developer must revise the project Draft Environmental Impact Report (DEIR) with an addendum addressing management of contaminants, if encountered, during construction, and proposing a redesign of the post-construction stormwater control measures in accordance with Resolution No. R3-2013-0032. The project DEIR addendum will include the following six items:

1. A Soils and Groundwater Management Plan shall be prepared and submitted for approval to the Monterey County Environmental Health Department prior to final project approval;
2. A Site Health and Safety Plan shall be prepared and submitted for approval to the Monterey County Environmental Health Department prior to final project approval;
3. Infiltration from precipitation or irrigation would be permitted onsite without further remediation or study;
4. Infiltration of stormwater runoff from new impervious surfaces through stormwater control measures designed in accordance with Resolution No. R3-2013-0032 would be permitted onsite without further remediation or study;
5. The landscaping and undeveloped areas of the project will be classified as "undisturbed or planted areas" for the purpose of determining the Retention Tributary Area; and
6. A Stormwater Quality Control Plan, as required by the Central Coast Water Board Resolution No. R3-2013-0032 shall be prepared and submitted for approval by the City prior to obtaining final project approval.

The Central Coast Water Board concurs with the approach to complete the project as described in the City's February 27, 2015 letter.

If you have any questions regarding this letter, please contact Julia Dyer at (805) 542-4624 (Julia.Dyer@waterboards.ca.gov) or Dominic Roques at (805) 542-4780.

Sincerely,

Kenneth A. Harris, Jr.
Executive Officer

cc: Scott Ottmar, City of Seaside

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MONTEREY COUNTY

DEPARTMENT OF HEALTH Ray Bullick, Director

ANIMAL SERVICES
BEHAVIORAL HEALTH
CLINIC SERVICES

EMERGENCY MEDICAL SERVICES
ENVIRONMENTAL HEALTH

PUBLIC HEALTH
PUBLIC ADMINISTRATOR/PUBLIC GUARDIAN



March 17, 2015

Tim O'Halloran, P.E.
City Engineer/Public Works Services Manager
City of Seaside
440 Harcourt Ave.
Seaside, CA 93955

Dear Mr. O'Halloran

Thank you for sending me copies of your correspondence with the Central Coast Regional Water Quality Control Board (CCRWQCB), regarding Stormwater issues with the proposed In and Out Burger facility at 1350 Del Monte Blvd., Seaside. We concur with the recommendation of the CCRWQCB regarding infiltration of the site Stormwater. Based on the most recent soil sampling information, concentrations of contaminants have been reduced to levels that should not impact water quality.

Please ensure that the project DEIR addendum does require a soil and groundwater management plan, and a site health and safety plan, to be submitted to my Bureau prior to final project approval. If you have any questions, or require additional information, please contact Mr. Bruce Welden, Supervisor, Hazardous Materials Management Services, at 831-755-4680 or weldenb@co.monterey.ca.us

Sincerely,

John Ramirez, REHS, MPA
Director, Environmental Health Bureau

Cc: Ric Encarnacion, Assistant Director, Environmental Health Bureau
Bruce Welden, Supervisor, Hazardous Materials Management Services
Sandra Tauriac, Supervisor, Hazardous Materials Management Services

APPENDIX E

Traffic Impact Analysis

TRAFFIC IMPACT ANALYSIS

IN-N-OUT BURGER DRIVE-THROUGH RESTAURANT

CITY OF SEASIDE, CALIFORNIA

LSA

November 2014

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TRAFFIC IMPACT ANALYSIS

IN-N-OUT BURGER DRIVE-THROUGH RESTAURANT

CITY OF SEASIDE, CALIFORNIA

Submitted to:

City of Seaside
Community Development Department
440 Harcourt Avenue
Seaside, California 93955

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

LSA Project No. SEZ1401

LSA

November 2014

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INTRODUCTION

The purpose of this Traffic Impact Analysis (TIA) is to identify the potential circulation impacts associated with the proposed construction of an In-N-Out Burger drive-through restaurant in the City of Seaside (City). The proposed project site is located on the south side of Del Monte Boulevard, north and west of Laguna Grande Lake. Figure 1 shows the location of the proposed project.

Issues addressed in this analysis include the operation of the intersections in the vicinity of the proposed project and site access. The traffic analysis for the proposed project will examine four scenarios:

1. Existing condition
2. Existing plus project condition
3. Cumulative condition (future short-term year, corresponding to project opening)
4. Cumulative plus project condition

The traffic analysis provides an assessment of traffic impacts and determination of traffic mitigation as required by the City and for California Environmental Quality Act (CEQA) compliance.

PROJECT DESCRIPTION

The proposed project considers the construction of a 3,750 square foot (sf) In-N-Out Burger drive-through restaurant northwest of Laguna Grande Lake and southeast of Del Monte Boulevard. According to the Project Applicant, the proposed drive-through restaurant is scheduled to be constructed by 2016. Figure 2 shows the site plan for the proposed project. Access to the proposed project site will be provided via two driveways on Del Monte Boulevard (an easterly full-access driveway and a westerly right-in/right-out [RIRO] driveway).

The proposed project site is located adjacent to existing lodging, manufacturing, and residential uses. It is bounded by Del Monte Boulevard to the northwest, Laguna Grande Lake to the southeast, and manufacturing and residential uses to the southwest. The proposed project site is located near commercial and office business corridors along Del Monte Boulevard and Canyon del Rey Boulevard.

METHODOLOGY

This TIA is prepared consistent with the objectives and requirements of the City and applicable provisions of CEQA.

The following study area intersections, as illustrated in Figure 3, are analyzed in this report:

Study Area Intersections

1. Fremont Boulevard/Monterey Road
2. Fremont Boulevard/Del Monte Boulevard

3. Playa Avenue/Del Monte Boulevard
4. Tioga Avenue/Del Monte Boulevard
5. Contra Costa Street/Del Monte Boulevard
6. Broadway Avenue/Del Monte Boulevard
7. Canyon del Rey Boulevard/Del Monte Boulevard
8. Roberts Avenue/Del Monte Boulevard
9. English Avenue/Del Monte Boulevard
10. Casa Verde Way/Del Monte Boulevard
11. Sloat Avenue/Del Monte Boulevard
12. Canyon del Rey Boulevard (State Route 218 [SR-218])/State Route 1 (SR-1) southbound ramps
13. Canyon del Rey Boulevard/SR-1 northbound ramps
14. Canyon del Rey Boulevard/Fremont Boulevard
15. Canyon del Rey Boulevard/State Route 68 (SR-68)
16. SR-1 southbound on-ramp/Del Monte Boulevard
17. SR-1 northbound ramps/English Avenue

Intersection Level of Service Methodology

The Synchro 8 software was used to determine the levels of service (LOS) at the study area intersections. The 2010 *Highway Capacity Manual* (HCM 2010) signalized intersection methodology presents levels of service (LOS) in terms of control delay (in seconds per vehicle). The HCM 2010 unsignalized methodology presents LOS in terms of total intersection control delay and approach delay of the major and minor streets (in seconds per vehicle). The resulting delay is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations. The table below describes the conditions that would be experienced with LOS A through F.



FIGURE 1

LSA



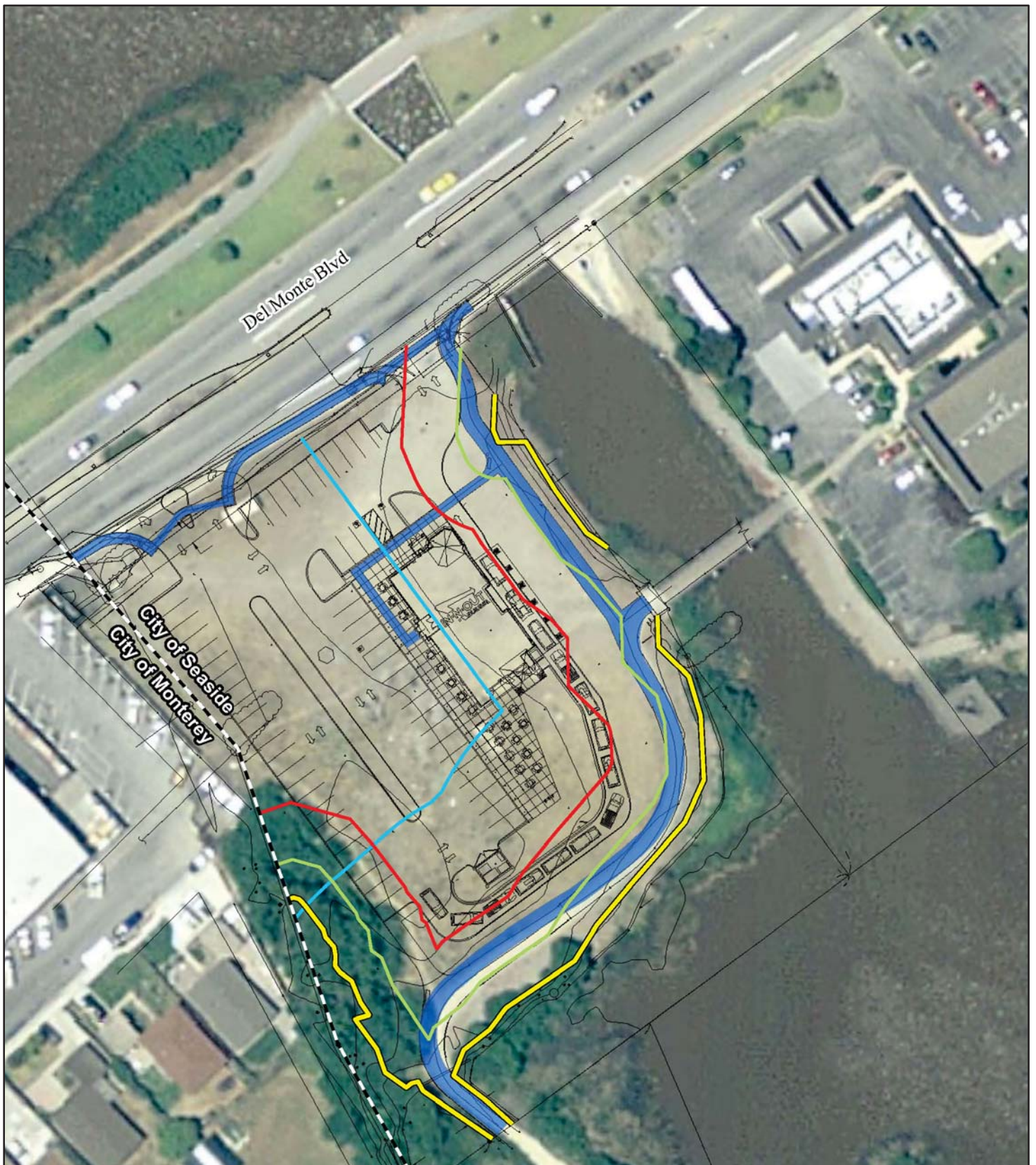
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In-N-Out Burger Drive-Through Restaurant
Project Vicinity

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LSA

LEGEND

- Wetland Boundary
- Coastal Zone Boundary
- 20 Foot Setback
- 50 Foot Setback
- City Boundaries
- Pedestrian/Bicycle Trail



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FEET

SOURCE: Bing Maps (2009); GreenbergFarrow (2010); City of Seaside (2010)

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FIGURE 2

In-N-Out Burger Drive-Through Restaurant
Site Plan

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LSA

LEGEND

- 1 - Study Area Intersections



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SOURCE: USGS 7.5' Quad - Seaside, Ca.

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FIGURE 3

In-N-Out Burger Drive-Through Restaurant
Study Area Intersections

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LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.
F	This level describes forced-flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.

The relationship between LOS and delay at signalized and unsignalized intersections is as follows:

Level of Service (LOS)	Signalized Intersection Delay per Vehicle (sec)	Unsignalized Intersection Delay per Vehicle (sec)
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

sec = second(s)

The City considers LOS C to be the upper limit of satisfactory operations for signalized intersections. Mitigation is required for any signalized intersection where project traffic causes the LOS to deteriorate from satisfactory (LOS C or better) to unsatisfactory (LOS D, E, or F); or the addition of project traffic increases the average delay more than 2.0 seconds at LOS D; or the addition of project traffic increases the average delay by more than 1.0 second at intersections operating at LOS E or F.

Within the study area, three facilities are State Routes under the jurisdiction of the California Department of Transportation (Caltrans). These facilities are SR-1, SR-68, and Canyon del Rey Boulevard (SR-218). According to the Caltrans *Guide for the Preparation of Traffic Impact Studies*, "Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D." As such, satisfactory operation for Caltrans intersections is the same as at City intersections. Caltrans has determined that a significant project impact occurs for any signalized intersection where project traffic causes the LOS to deteriorate from satisfactory (LOS C or better) to unsatisfactory (LOS D, E,

or F); or the addition of project traffic causes an increase in delay at an intersection already operating at unsatisfactory LOS (D, E, or F).

For unsignalized intersections, mitigation is required where the addition of project traffic causes the LOS to deteriorate from satisfactory (LOS E or better for two-way stop-controlled [TWSC] intersections, LOS C or better for all-way stop-controlled [AWSC] intersections) to unsatisfactory (LOS F for TWSC intersections; LOS D for AWSC intersections), or the addition of project traffic exacerbates unacceptable operations (LOS F for TWSC intersections; LOS D for AWSC intersections).

EXISTING CONDITIONS

Existing Circulation System

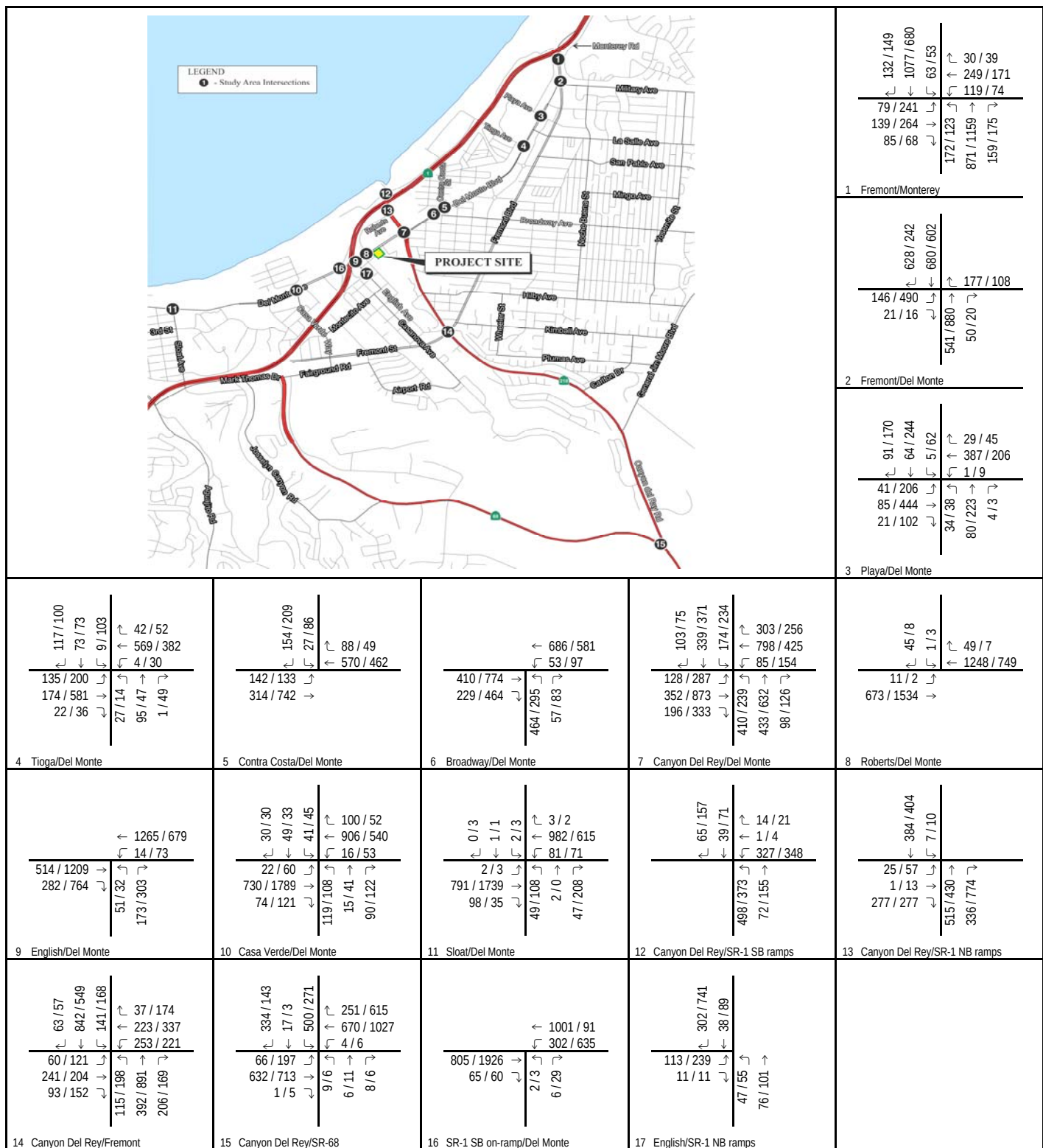
Key roadways in the vicinity of the proposed project are as follows:

- **SR-1:** SR-1 is a four-lane divided highway in the vicinity of the proposed project site. It connects the Monterey Peninsula with Santa Cruz County and the San Francisco Bay Area to the north and San Luis Obispo County to the south. The posted speed limit along this highway is 55 miles per hour (mph).
- **SR-68:** SR-68 is a four-lane undivided highway located southeast of the proposed project site. It connects the Cities of Pacific Grove and Salinas in Monterey County. The posted speed limit along this highway is 55 mph.
- **Canyon del Rey Boulevard (SR-218):** Canyon del Rey Boulevard is an undivided north-south arterial located east of the proposed project site that connects SR-1 with SR-68 through the City of Del Rey Oaks. It is a four-lane arterial between SR-1 and Fremont Boulevard and a two-lane roadway between Fremont Boulevard and SR-68. The posted speed limit along this roadway is 30 mph in Seaside and 45 mph in Del Rey Oaks.
- **Del Monte Boulevard:** Del Monte Boulevard is a four-lane divided north-south arterial that begins south of the City limits and ends at the SR-1 interchange at Fremont Boulevard. It extends along the northwest border of the proposed project site. Direct access to this site is provided via two driveways on Del Monte Boulevard. The posted speed limit along this roadway is 35 mph.
- **Fremont Boulevard:** Fremont Boulevard is a four-lane divided north-south arterial located south and east of the proposed project site. It begins south of the City limits and ends at the SR-1 interchange. The posted speed limit along Fremont Boulevard is 30 mph.

All other roadways in the study area are local serving roads.

Existing Traffic Volumes and Level of Service Analysis

The a.m. peak-hour (7:00 a.m.–9:00 a.m.) and p.m. peak-hour (4:00 p.m.–6:00 p.m.) intersection turn volumes at the study area intersections were collected by Quality Traffic Data LLC in September 2014. Traffic counts were collected when schools were in session. Figure 4 presents the existing a.m. and p.m. peak-hour turn movement volumes at the study area intersections. Appendix A provides the existing peak-hour count data.



LSA

FIGURE 4

123 / 456 AM / PM Volume

In-N-Out Burger Drive-Through Restaurant
Existing Peak-Hour Traffic Volumes

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Table A summarizes the results of the existing a.m. and p.m. peak-hour LOS analysis for the 17 study area intersections. As discussed previously, the LOS were determined using the HCM 2010 methodology and the Synchro 8 software. The existing LOS calculation worksheets are contained in Appendix B.

Table A: Existing Level of Service Summary

Intersection		Traffic Control	Baseline			
			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Fremont Blvd/Monterey Rd	Signal	37.6 ¹	D ¹	38.4 ¹	D ¹
2	Fremont Blvd/Del Monte Blvd	TWSC	102.5 ¹	F ¹	1,092.6 ¹	F ¹
3	Playa Ave/Del Monte Blvd	Signal	32.1	C	35.4 ¹	D ¹
4	Tioga Ave/Del Monte Blvd	Signal	25.4	C	31.2	C
5	Contra Costa St/Del Monte Blvd	Signal	17.2	B	14.1	B
6	Broadway Ave/Del Monte Blvd	Signal	19.2	B	20.2	C
7	Canyon del Rey Blvd/Del Monte Blvd	Signal	13.1	B	12.1	B
8	Roberts Ave/Del Monte Blvd	Signal	15.7	C	10.9	B
9	English Ave/Del Monte Blvd	Signal	9.3	A	15.5	B
10	Casa Verde Way/Del Monte Blvd	Signal	27.9	C	21.6	C
11	Sloat Ave/Del Monte Blvd ²	Signal	10.1	B	21.3	C
12	Canyon del Rey Blvd/SR-1 SB ramps	Signal	25.5	C	34.2	C
13	Canyon del Rey Blvd/SR-1 NB ramps	TWSC	14.2	B	14.7	B
14	Canyon del Rey Blvd/Fremont Blvd	Signal	31.6	C	36.1 ¹	D ¹
15	Canyon del Rey Blvd/SR-68	Signal	27.4	C	32.6	C
16	SR-1 SB on-ramp/Del Monte Blvd	TWSC	23.9	C	34.2 ³	D ³
17	SR-1 NB ramps/English Ave	TWSC	10.4	B	13.2	B

Notes: Delay is reported in seconds.

For signalized intersections, delay is the average control delay for the whole intersection.

For TWSC intersections, delay is the worst-case minor street approach delay.

The City and Caltrans consider signalized intersections operating at LOS C or better to be satisfactory LOS.

The City considers TWSC intersections operating at LOS E or better to be satisfactory LOS.

¹ Exceeds the City's LOS criteria

² The City of Monterey considers LOS D as the standard at this intersection.

³ Caltrans considers intersections operating at LOS D to be deficient.

City = City of Seaside

LOS = level of service

NB = northbound

SB = southbound

SR = State Route

TWSC = two-way stop-controlled

As Table A indicates, all study area intersections operate at an acceptable LOS during both peak hours, with the exception of the following:

- Fremont Boulevard/Monterey Road (LOS D during both peak hours)
- Fremont Boulevard/Del Monte Boulevard (LOS F during both peak hours)
- Playa Avenue/Del Monte Boulevard (LOS D during the p.m. peak hour)
- Canyon Del Rey Boulevard/Fremont Boulevard (LOS D during the p.m. peak hour)
- SR-1 southbound on-ramp/Del Monte Boulevard (LOS D during the p.m. peak hour)

CUMULATIVE BASELINE CONDITIONS

According to the Project Applicant, the proposed project will be completed and operational by 2016. In order to determine a cumulative (2016) condition, traffic volumes for other committed and/or approved (cumulative) developments were added to the existing baseline traffic volumes. Prior to the preparation of this analysis, LSA Associates, Inc. (LSA) obtained a list of approved/pending projects from the City Planning Department. A description of the cumulative projects, the respective trip generation, and the trip assignment through the study area intersections are provided in Appendix C. Eight cumulative projects were included as part of this analysis. The locations of these projects are provided in Figure 5. The eight cumulative projects are as follows:

1. West Broadway Urban Village Specific Plan
2. West Broadway Parking Structure and Library
3. Seaside Resort (Seaside Resort, LLC)
4. The Projects at Main Gate Specific Plan (adopted August 2010)
5. Senior Housing
6. Monterey Veterans Cemetery
7. Monterey Downs and Horse Park
8. East Seaside Master Plan

The trip generation, distribution, and assignment for cumulative projects 1 through 4 were based on traffic studies previously prepared. For cumulative projects 5 and 6, the trip generation, distribution, and assignment were based on the Institute of Transportation Engineers *Trip Generation* manual (9th Edition, 2012), as well as each project's location in relation to local/regional transportation facilities and origins/destinations. While the proposed Monterey Downs and Horse Park and the East Seaside Master Plan were considered in the cumulative projects list (projects 7 and 8), they are not included in the cumulative trip generation. These projects are not anticipated to be completed prior to the In-N-Out Burger drive-through restaurant project opening year (2016). Furthermore, based on review of these cumulative project locations, trips from these projects would affect intersections outside of the project study area.

Cumulative a.m. and p.m. peak-hour traffic volumes are shown in Figure 6.

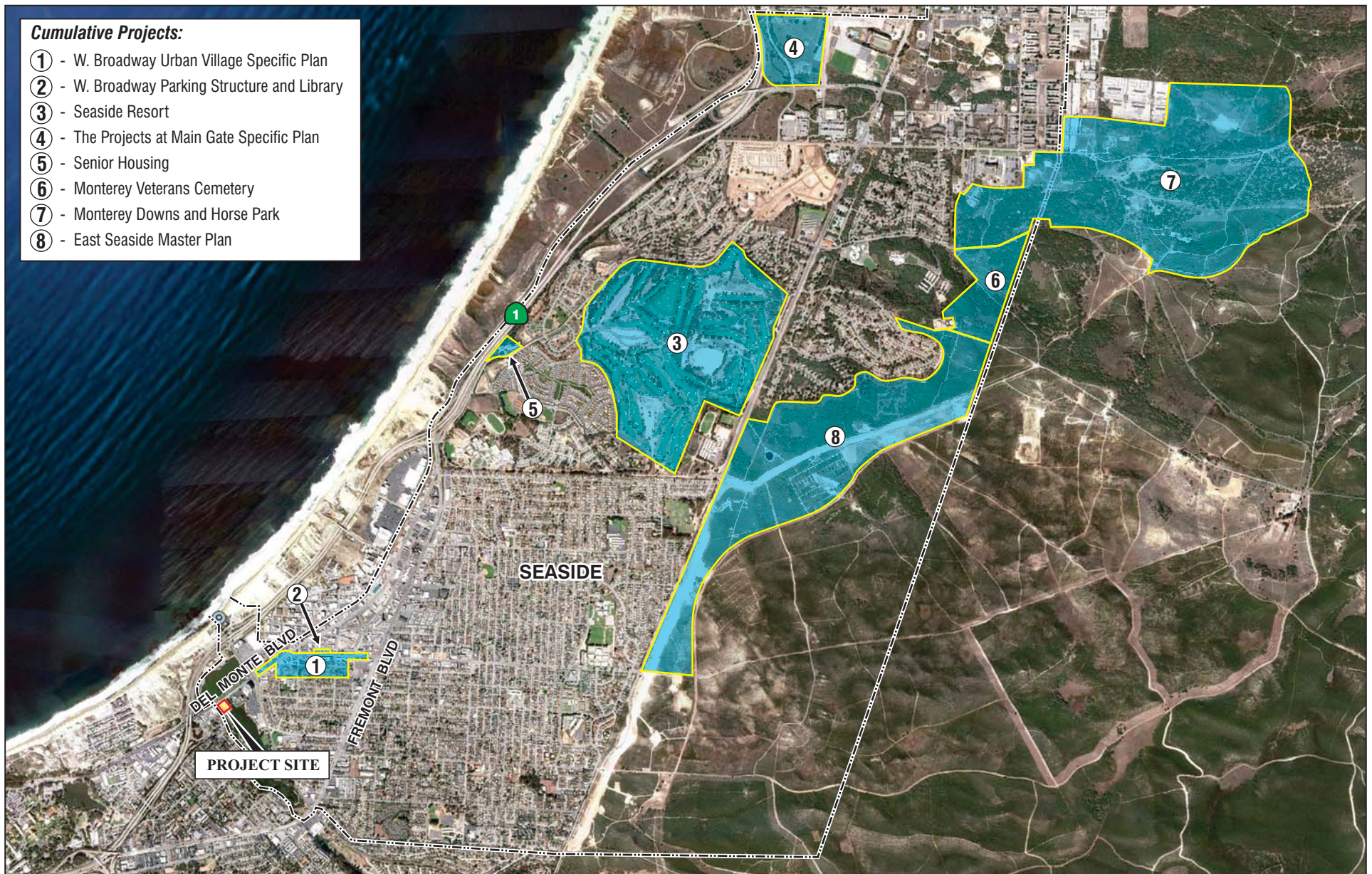


FIGURE 5

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SOURCE: Google Earth

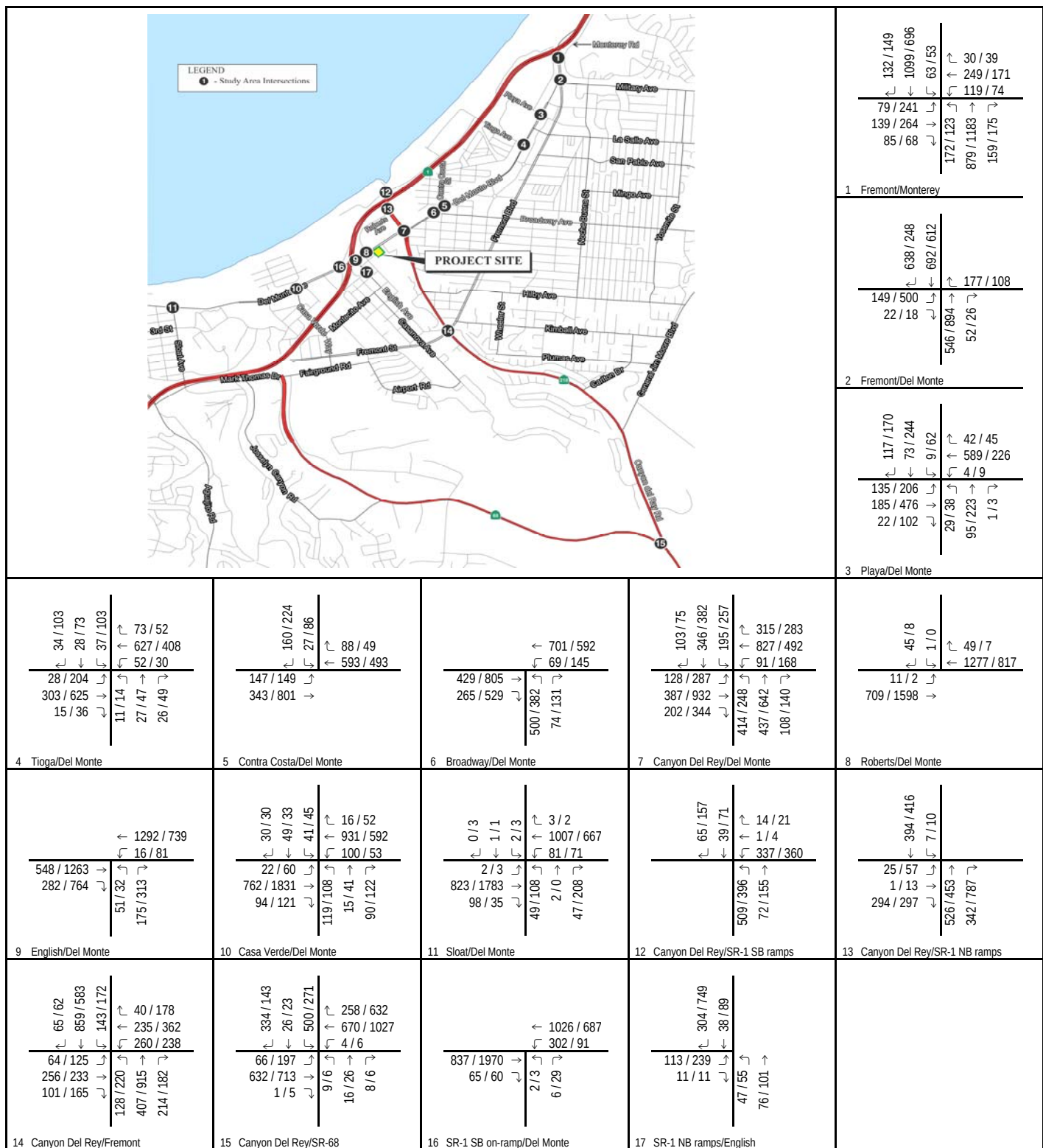
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LEGEND

----- Seaside City Boundary

*In-N-Out Burger Drive-Through Restaurant
Cumulative Project Locations*

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LSA

FIGURE 6

123 / 456 AM / PM Volume

In-N-Out Burger Drive-Through Restaurant
Cumulative Peak-Hour Traffic Volumes

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Table B summarizes the results of the cumulative a.m. and p.m. peak-hour LOS analyses for all study area intersections. The LOS worksheets are provided in Appendix D.

Table B: Cumulative Level of Service Summary

Intersection		Traffic Control	Baseline			
			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Fremont Blvd/Monterey Rd	Signal	37.8¹	D¹	38.7¹	D¹
2	Fremont Blvd/Del Monte Blvd	TWSC	114.1¹	F¹	1,176.6¹	F¹
3	Playa Ave/Del Monte Blvd	Signal	32.0	C	35.4¹	D¹
4	Tioga Ave/Del Monte Blvd	Signal	26.1	C	31.4	C
5	Contra Costa St/Del Monte Blvd	Signal	17.1	B	14.4	B
6	Broadway Ave/Del Monte Blvd	Signal	19.9	B	23.3	C
7	Canyon del Rey Blvd/Del Monte Blvd	Signal	13.1	B	11.7	B
8	Roberts Ave/Del Monte Blvd	Signal	16.0	C	11.2	B
9	English Ave/Del Monte Blvd	Signal	9.2	A	16.0	B
10	Casa Verde Way/Del Monte Blvd	Signal	27.9	C	21.6	C
11	Sloat Ave/Del Monte Blvd ²	Signal	10.2	B	21.4	C
12	Canyon del Rey Blvd/SR-1 SB ramps	Signal	26.5	C	34.5	C
13	Canyon del Rey Blvd/SR-1 NB ramps	TWSC	14.8	B	15.4	C
14	Canyon del Rey Blvd/Fremont Blvd	Signal	32.6	C	37.7¹	D¹
15	Canyon del Rey Blvd/SR-68	Signal	27.3	C	34.1	C
16	SR-1 SB on-ramp/Del Monte Blvd	TWSC	25.5³	D³	36.2³	E³
17	SR-1 NB ramps/English Ave	TWSC	10.4	B	13.2	B

Notes: Delay is reported in seconds.

For signalized intersections, delay is the average control delay for the whole intersection.

For TWSC intersections, delay is the worst-case minor street approach delay.

The City and Caltrans consider signalized intersections operating at LOS C or better to be satisfactory LOS.

The City considers TWSC intersections operating at LOS E or better to be satisfactory LOS.

¹ Exceeds the City's LOS criteria

² The City of Monterey considers LOS D as the standard at this intersection.

³ Caltrans considers intersections operating at LOS D to be deficient.

City = City of Seaside

LOS = level of service

NB = northbound

SB = southbound

SR = State Route

TWSC = two-way stop-controlled

As Table B indicates, all study area intersections are forecast to operate at acceptable LOS during both peak hours in the cumulative baseline condition, with the exception of the following:

- Fremont Boulevard/Monterey Road (LOS D during both peak hours)
- Fremont Boulevard/Del Monte Boulevard (LOS F during both peak hours)
- Playa Avenue/Del Monte Boulevard (LOS D during the p.m. peak hour)
- Canyon Del Rey Boulevard/Fremont Boulevard (LOS D during the p.m. peak hour)
- SR-1 southbound on-ramp/Del Monte Boulevard (LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)

PROJECT CONDITIONS

Trip Generation

The proposed project considers the construction of a 3,750 sf, 159-seat, In-N-Out Burger drive-through restaurant. In order to determine the trip rates for the proposed project, National Data & Surveying Services (NDS) conducted trip generation surveys at an existing In-N-Out Burger in the City of Salinas, which is similar to the proposed project in size and layout (2,912 sf and 151 seats). The trip generation surveys were collected on two typical weekdays (Tuesday, August 17, 2010, and Wednesday, August 18, 2010) during normal hours of operation (10:30 a.m. to 1:00 a.m.).

Fast-food restaurants generally generate more trips on a weekend day than on weekdays. However, the traffic analysis provides an evaluation of the adjacent streets during weekday peak hours, when ambient traffic is highest. Although the peak hour of trip generation for the In-N-Out Burger may occur on a Saturday or Sunday, traffic on the adjacent streets is usually lower on weekend days when compared to the weekday peak commute hours. Evaluation of weekend conditions is likely to result in better LOS; therefore, the worst-case weekday peak-hour conditions are evaluated to provide a more conservative analysis of the operation of adjacent streets. It should be noted that some In-N-Out Burger restaurant patrons will be making an intermediate stop (i.e., pass-by trip) between an origin and a destination. Although pass-by trips are not new trips on the circulation system, no adjustments/reductions have been made to the project trip generation to present a conservative analysis.

The 2-day survey data were averaged to determine the Salinas In-N-Out Burger trip generation. The In-N-Out Burger trip generation surveys are provided in Appendix A. The daily and peak-hour trips for the proposed project were calculated using the surveyed trip rates, as presented in Table C.

As Table C indicates, the proposed In-N-Out Burger is forecast to generate approximately 2,251 average daily traffic (ADT) trips, 22 a.m. peak-hour trips (19 inbound and 3 outbound), and 172 p.m. peak-hour trips (83 inbound and 89 outbound).

Table C: In-N-Out Burger Trip Generation Summary

Land Use	Size	Unit	ADT Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Observed Trip Generation ¹									
In-N-Out Burger	151	seats	2,138	19	3	22	79	84	163
Observed Trip Rates ²									
In-N-Out Burger		seats	14.16	0.12	0.02	0.14	0.52	0.56	1.08
Project Trip Generation									
In-N-Out Burger	159	seats	2,251	19	3	22	83	89	172

¹ The observed trip generation is based on trip generation surveys of an existing In-N-Out Burger drive-through restaurant in the City of Salinas. NDS conducted these surveys on Tuesday and Wednesday, August 17 and 18, 2010. There are two shifts per day and approximately 16 employees per shift. Employees on the first shift arrive in the a.m. peak hour (inbound trips only) and leave at the end of the shift (outbound trips occur outside of the a.m. and p.m. peak hours). Employees on the second shift arrive and leave outside of the a.m. and p.m. peak hours. It is anticipated that a maximum of three deliveries would occur in the a.m. peak hour.

² The a.m. peak-hour trip rates are based on estimated employees and deliveries. ADT and p.m. peak-hour trip rates are based on the NDS trip generation surveys.

ADT = average daily traffic

NDS = National Data & Surveying Services

Trip Distribution and Assignment

Trip distribution for the proposed project was based on proximity to major arterials (i.e., SR-1, SR-68, Del Monte Boulevard, and Canyon del Rey Boulevard). Project traffic volumes for vehicles both entering and exiting the proposed project site were distributed to the adjacent street system accordingly. Figure 7 shows the regional project trip distribution for the proposed project as well as the resulting project trip assignment for the study area intersections. As shown in the figure, approximately 25 percent of the project trips are destined west via Del Monte Boulevard, 15 percent are destined southwest via SR-1, 15 percent are destined southeast via Canyon del Rey Boulevard and SR-68, 25 percent are destined east via Broadway Avenue, and 20 percent are destined north via SR-1.

EXISTING PLUS PROJECT CONDITIONS

In order to determine the existing plus project conditions, the traffic generated by the proposed project was added to the existing baseline traffic volumes at the study area intersections. Figure 8 shows the resulting existing plus project a.m. and p.m. peak-hour traffic volumes. The existing plus project peak-hour LOS analysis is presented in Table D. The LOS worksheets are provided in Appendix E.

Table D: Existing Plus Project Level of Service Summary

Intersection		Traffic Control	Baseline				Plus Project				Peak-Hour	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Δ in Delay	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1	Fremont Blvd/Monterey Rd	Signal	37.6 ¹	D ¹	38.4 ¹	D ¹	37.6 ¹	D ¹	38.5 ¹	D ¹	0.0	0.1
2	Fremont Blvd/Del Monte Blvd	TWSC	102.5 ¹	F ¹	1,092.6 ¹	F ¹	102.5 ¹	F ¹	1,125.6 ²	F ²	0.0	33.0 ²
	<i>With Mitigation</i>	<i>Signal</i>	-	-	-	-	7.0	A	4.5	A	(95.5)	(1,121.1)
3	Playa Ave/Del Monte Blvd	Signal	32.1	C	35.4 ¹	D ¹	32.1	C	35.4 ¹	D ¹	0.0	0.0
4	Tioga Ave/Del Monte Blvd	Signal	25.4	C	31.2	C	25.4	C	31.5	C	0.0	0.3
5	Contra Costa St/Del Monte Blvd	Signal	17.2	B	14.1	B	17.2	B	14.1	B	0.0	0.0
6	Broadway Ave/Del Monte Blvd	Signal	19.2	B	20.2	C	19.2	B	20.5	C	0.0	0.3
7	Canyon del Rey Blvd/Del Monte Blvd	Signal	13.1	B	12.1	B	13.1	B	12.9	B	0.0	0.8
8	Roberts Ave/Del Monte Blvd	Signal	15.7	C	10.9	B	15.7	C	11.1	B	0.0	0.2
9	English St/Del Monte Blvd	Signal	9.3	A	15.5	B	14.1	B	15.9	B	4.8	0.4
10	Casa Verde Way/Del Monte Blvd	Signal	27.9	C	21.6	C	27.9	C	21.6	C	0.0	0.0
11	Sloat Ave/Del Monte Blvd ³	Signal	10.1	B	21.3	C	10.1	B	21.4	C	0.0	0.1
12	Canyon del Rey Blvd/SR-1 SB ramps	Signal	25.5	C	34.2	C	25.6	C	34.6	C	0.1	0.4
13	Canyon del Rey Blvd/SR-1 NB ramps	TWSC	14.2	B	14.7	B	14.3	B	14.8	B	0.1	0.1
14	Canyon del Rey Blvd/Fremont Blvd	Signal	31.6	C	36.1 ¹	D ¹	31.6	C	36.1 ¹	D ¹	0.0	0.0
15	Canyon del Rey Blvd/SR-68	Signal	27.4	C	32.6	C	27.4	C	32.5	C	0.0	(0.1)
16	SR-1 SB on-ramp/Del Monte Blvd	TWSC	23.9	C	34.2 ⁴	D ⁴	24.3	C	37.3 ⁵	E ⁵	0.4	3.1 ⁵
17	SR-1 NB ramps/English Ave	TWSC	10.4	B	13.2	B	10.4	B	13.5	B	0.0	0.3

Notes: Delay is reported in seconds.

For signalized intersections, delay is the average control delay for the whole intersection.

For TWSC intersections, delay is the worst-case minor street approach delay.

The City and Caltrans consider signalized intersections operating at LOS C or better to be satisfactory LOS. For deficient signalized intersections, the project causes an impact when it adds more than 2.0 seconds to an LOS D condition or more than 1.0 second to an LOS E or F condition.

The City considers TWSC intersections operating at LOS E or better to be satisfactory LOS. A project impact occurs at a TWSC intersection when the addition of project traffic causes the LOS to deteriorate from satisfactory to unsatisfactory, or when the addition of project traffic exacerbates unsatisfactory operations.

¹ Exceeds the City's LOS criteria

² Significant impact

³ The City of Monterey considers LOS D as the standard at this intersection.

⁴ Caltrans considers intersections operating at LOS D to be deficient.

⁵ Caltrans considers the addition of project traffic which causes an increase in delay at an intersection already operating at an unsatisfactory LOS (LOS D, E, or F) to be a significant impact.

Δ= change

SB = southbound

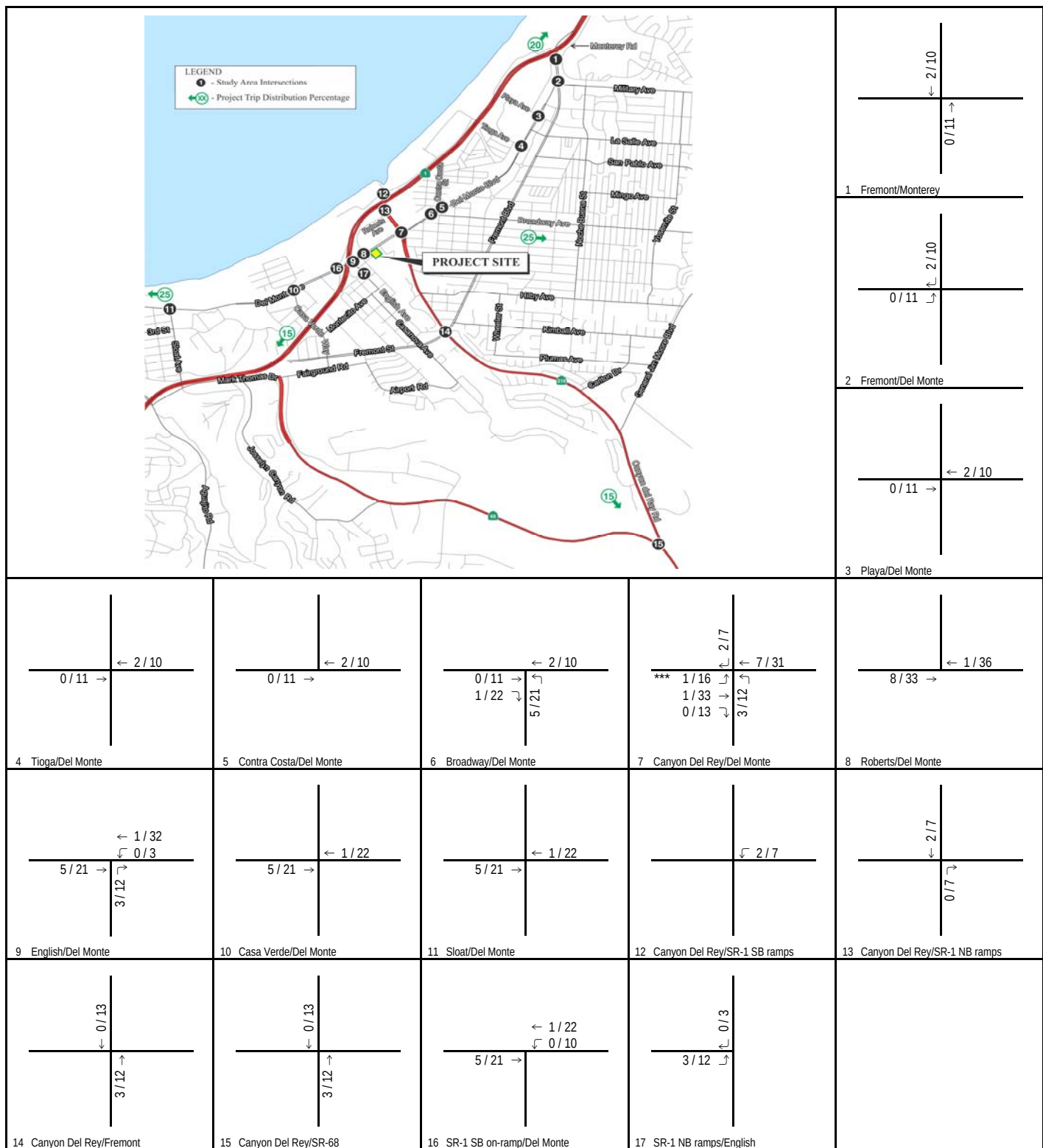
City = City of Seaside

SR = State Route

LOS = level of service

TWSC = two-way stop-controlled

NB = northbound



LSA

FIGURE 7

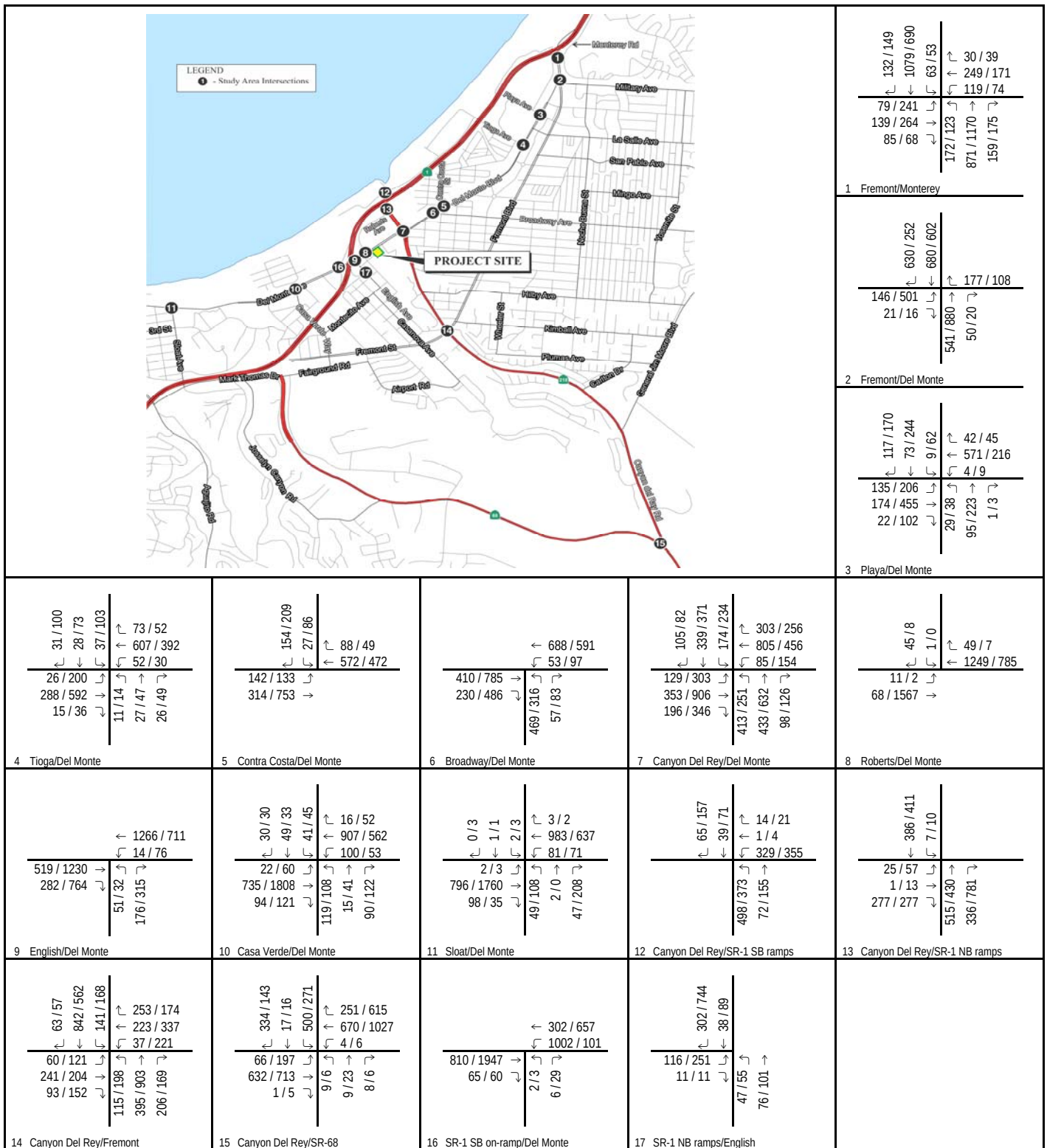
123 / 456

AM / PM Volume

*** Includes 9 U-Turns in the PM Peak Hour

In-N-Out Burger Drive-Through Restaurant
 Project Trip Distribution and Assignment

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LSA

FIGURE 8

123 / 456 AM / PM Volume

In-N-Out Burger Drive-Through Restaurant
Existing Plus Project Peak-Hour Traffic Volumes

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As Table D indicates, the proposed project would cause a significant impact at two study area intersections. The project increases the deficient 1,092.6-second delay by 33.0 seconds during the p.m. peak hour at the TWSC intersection of Fremont Boulevard/Del Monte Boulevard.¹ The proposed project also increases the deficient 34.2-second delay by 3.1 seconds during the p.m. peak hour at the TWSC intersection of the SR-1 southbound on-ramp/Del Monte Boulevard. Mitigation measures are discussed in a subsequent section.

CUMULATIVE PLUS PROJECT CONDITIONS

Traffic generated by the proposed project was added to the cumulative baseline traffic volumes at each study area intersection. Figure 9 illustrates the resulting cumulative plus project a.m. and p.m. peak-hour traffic volumes. Table E summarizes the results of the cumulative plus project a.m. and p.m. peak-hour LOS analysis for all study area intersections. The LOS worksheets are provided in Appendix F.

As Table E indicates, the proposed project would cause a significant impact at two study area intersections (similar to the existing condition). The project increases the deficient 1,176.6-second delay by 34.1 seconds during the p.m. peak hour at the TWSC intersection of Fremont Boulevard/Del Monte Boulevard. The project also increases the deficient 36.2-second delay by 4.6 seconds during the p.m. peak hour at the TWSC intersection of the SR-1 southbound on-ramp/Del Monte Boulevard. Mitigation measures are discussed in a subsequent section.

SITE ACCESS ANALYSIS

As illustrated in the site plan (Figure 2), access to the proposed project will be provided via two driveways on Del Monte Boulevard. The two project driveways are separated by approximately 150 feet (ft). The westerly driveway is located approximately 200 ft east of the unsignalized intersection at Roberts Avenue, and the easterly driveway is approximately 300 ft west of an adjacent driveway providing access to the Holiday Inn Express. The inbound and outbound peak-hour traffic volumes at the project driveways are shown in Figure 10.

A median exists along Del Monte Boulevard at the westerly project driveway, which is restricted to RIRO access only. There are no sight distance obstructions, such as on-street parking or landscaping, adjacent to the roadway along Del Monte Boulevard. Unimpeded vehicle egress/ingress is provided at the easterly full-access driveway, as a left-turn lane currently exists on Del Monte Boulevard fronting this access.

¹ LOS analyses were conducted at the Fremont Boulevard/Del Monte Boulevard intersection to see how many vehicular trips could be added to the eastbound left-turn lane before the delay increased by any amount over its current level, which is the threshold for impacts associated with an unsignalized intersection already operating at a deficient level. The LOS analysis showed that the addition of one vehicular trip in the existing plus project p.m. peak-hour scenario would add 3.0 seconds of delay. In other words, the addition of one vehicular trip would increase the existing delay of 1,092.6 seconds to 1,095.6 seconds. Therefore, adding even a single trip to the eastbound left turn would result in a significant impact to the Fremont Boulevard/Del Monte Boulevard intersection.

Table E: Cumulative Plus Project Level of Service Summary

Intersection		Traffic Control	Baseline				Plus Project				Peak-Hour	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Δ in Delay	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1	Fremont Blvd/Monterey Rd	Signal	37.8 ¹	D ¹	38.7 ¹	D ¹	37.8 ¹	D ¹	38.8 ¹	D ¹	0.0	0.1
2	Fremont Blvd/Del Monte Blvd	TWSC	114.1 ¹	F ¹	1,176.6 ¹	F ¹	114.1 ¹	F ¹	1,210.7 ²	F ²	0.0	34.1 ²
	<i>With Mitigation</i>	<i>Signal</i>	-	-	-	-	9.7	A	5.8	A	(104.4)	(1,204.9)
3	Playa Ave/Del Monte Blvd	Signal	32.0	C	35.4 ¹	D ¹	31.5	C	35.0 ¹	D ¹	(0.5)	(0.4)
4	Tioga Ave/Del Monte Blvd	Signal	26.1	C	31.4	C	26.3	C	31.0	C	0.2	(0.4)
5	Contra Costa St/Del Monte Blvd	Signal	17.1	B	14.4	B	17.0	B	14.4	B	(0.1)	0.0
6	Broadway Ave/Del Monte Blvd	Signal	19.9	B	23.3	C	20.0	B	23.4	C	0.1	0.1
7	Canyon del Rey Blvd/Del Monte Blvd	Signal	13.1	B	11.7	B	13.1	B	12.6	B	0.0	0.9
8	Roberts Ave/Del Monte Blvd	Signal	16.0	C	11.2	B	16.0	C	11.4	B	0.0	0.2
9	English St/Del Monte Blvd	Signal	9.2	A	16.0	B	14.1	B	16.3	B	4.9	0.3
10	Casa Verde Way/Del Monte Blvd	Signal	27.9	C	21.6	C	27.9	C	21.7	C	0.0	0.1
11	Sloat Ave/Del Monte Blvd ³	Signal	10.2	B	21.4	C	10.2	B	21.5	C	0.0	0.1
12	Canyon del Rey Blvd/SR-1 SB ramps	Signal	26.5	C	34.5	C	26.7	C	34.9	C	0.2	0.4
13	Canyon del Rey Blvd/SR-1 NB ramps	TWSC	14.8	B	15.4	C	14.8	B	15.6	C	0.0	0.2
14	Canyon del Rey Blvd/Fremont Blvd	Signal	32.6	C	37.7 ¹	D ¹	32.6	C	38.0 ¹	D ¹	0.0	0.3
15	Canyon del Rey Blvd/SR-68	Signal	27.3	C	34.1	C	27.3	C	34.0	C	0.0	(0.1)
16	SR-1 SB on-ramp/Del Monte Blvd	TWSC	25.5 ⁴	D ⁴	36.2 ⁴	E ⁴	25.5 ⁴	D ⁴	40.8 ⁵	E ⁵	0.0	4.6 ⁵
17	SR-1 NB ramps/English Ave	TWSC	10.4	B	13.2	B	10.4	B	13.5	B	0.0	0.3

Notes: Delay is reported in seconds.

For signalized intersections, delay is the average control delay for the whole intersection.

For TWSC intersections, delay is the worst-case minor street approach delay.

The City and Caltrans consider signalized intersections operating at LOS C or better to be satisfactory LOS. For deficient signalized intersections, the project causes an impact when it adds more than 2.0 seconds to an LOS D condition or more than 1.0 second to an LOS E or F condition.

The City considers TWSC intersections operating at LOS E or better to be satisfactory LOS. A project impact occurs at a TWSC intersection when the addition of project traffic causes the LOS to deteriorate from satisfactory to unsatisfactory, or when the addition of project traffic exacerbates unsatisfactory operations.

¹ Exceeds the City's LOS criteria

² Significant impact

³ The City of Monterey considers LOS D as the standard at this intersection.

⁴ Caltrans considers intersections operating at LOS D to be deficient.

⁵ Caltrans considers the addition of project traffic which causes an increase in delay at an intersection already operating at an unsatisfactory LOS (LOS D, E, or F) to be a significant impact.

Δ= change

SB = southbound

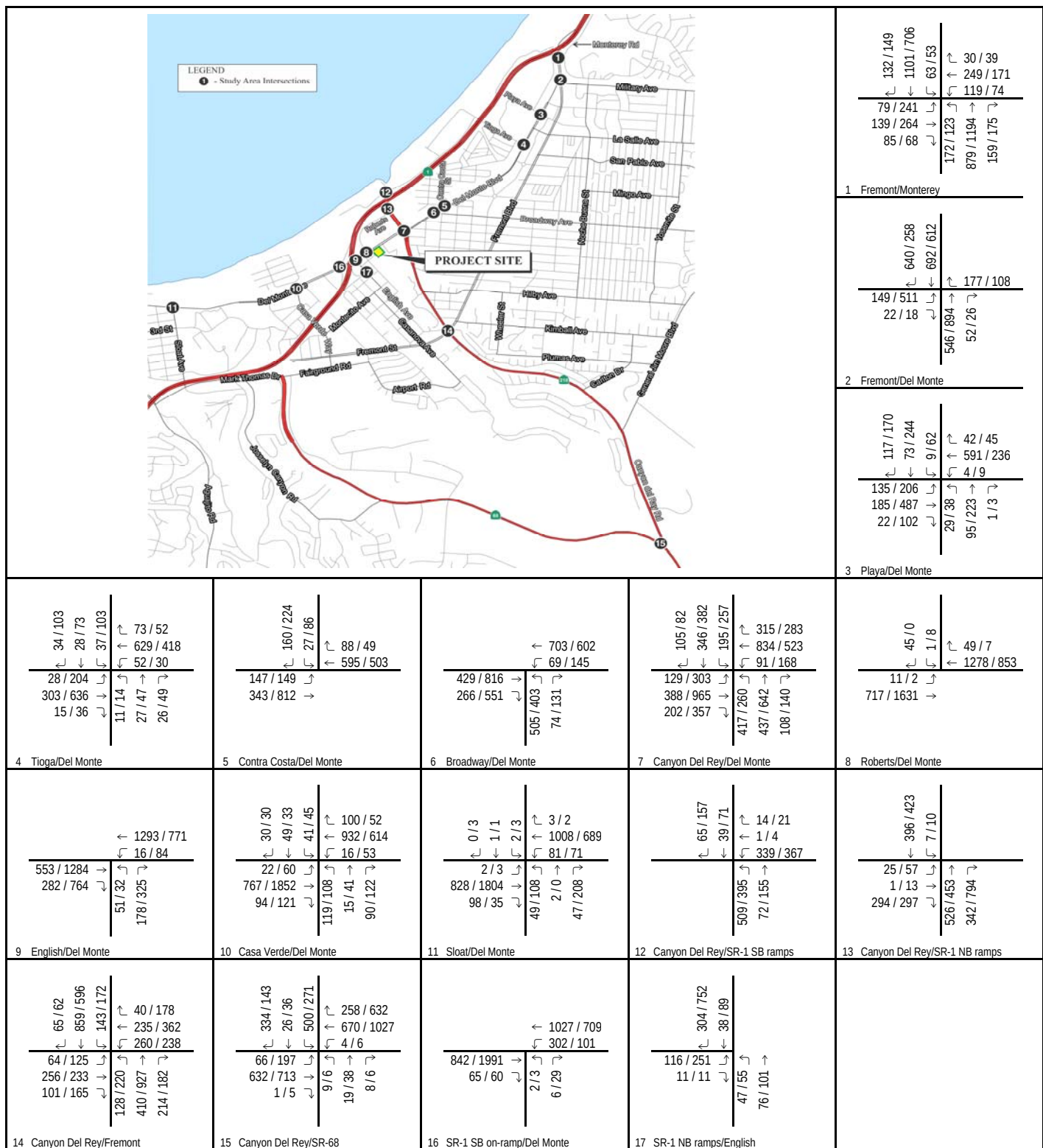
City = City of Seaside

SR = State Route

LOS = level of service

TWSC = two-way stop-controlled

NB = northbound



LSA

FIGURE 9

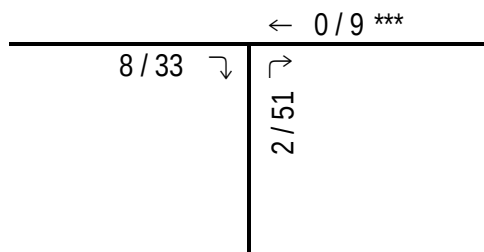
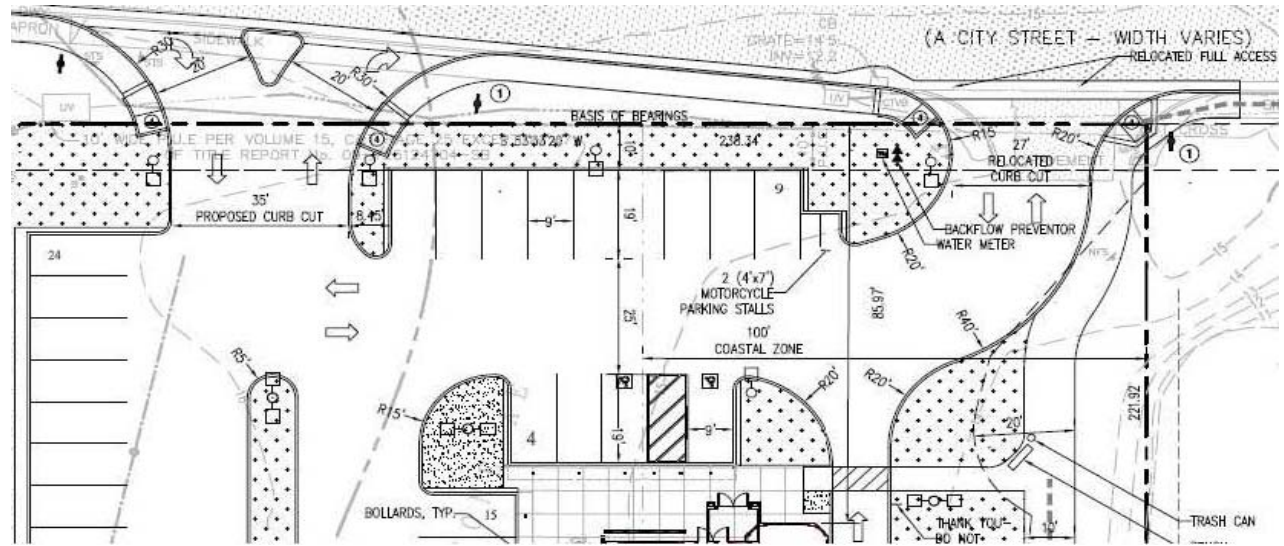
123 / 456 AM / PM Volume

In-N-Out Burger Drive-Through Restaurant
Cumulative Plus Project Peak-Hour Traffic Volumes

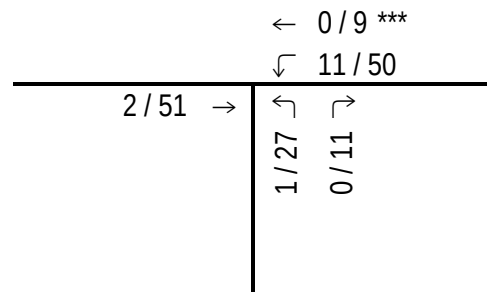
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RIRO Driveway

Full-Access Driveway



1 RIRO Driveway/Del Monte Boulevard



2 Full-Access Driveway/Del Monte Boulevard

LSA

FIGURE 10

123 / 456 AM / PM Volume

*** U-Turn Vehicles from
Canyon Del Rey Blvd/Del Monte Blvd

In-N-Out Burger Drive-Through Restaurant
Project Driveways Peak-Hour Traffic Volumes

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It is recommended that left-turn storage lengths for unsignalized intersections be designed to provide 1 ft per vehicle, based on the total hourly left-turning volume. This standard is based on the Oregon State University Transportation Research Institute *Discussion Paper No. 10 Left-Turn Bays* (1996). The existing left-turn lane is 100 ft long on Del Monte Boulevard. Therefore, adequate storage length is provided to accommodate a peak hour left-turn volume of 100 vehicles, which is adequate for the 50 left-turning p.m. peak-hour vehicles at the full-access driveway. This left-turn lane would remove left-turning inbound/outbound vehicles from the through lanes and store those vehicles in the median area until an acceptable gap is available.

The throat length at both project driveways is approximately 50 ft (measured from Del Monte Boulevard to the first parking space on site). The parking lot drive aisle along the RIRO driveway is approximately 200 ft from Del Monte Boulevard to the back of the drive-through lane. The parking lot drive aisle between the two project driveways is approximately 115 ft. Based on the recommended throat length in Figure 10-15 of the Transportation Research Board (TRB) *Access Management Manual* (2003), the driveways should provide approximately 50 ft of vehicle storage. The throat lengths of 50 ft at the RIRO and full-access driveways, as well as the two parking lot drive aisles (i.e., an additional 200 and 115 ft of storage at the RIRO and full-access driveways, respectively), are of sufficient length so that vehicles may enter, exit, or circulate on site without interfering with traffic on Del Monte Boulevard. Based on a vehicle length of 25 ft, approximately 16 vehicles could be stacked in the parking area and driveways in addition to the 14 vehicles that could be accommodated in the drive-through lane.

A peak-hour queuing and LOS summary of the TWSC project driveways is provided in Table F. The existing plus project and cumulative plus project queuing and LOS analysis worksheets are provided in Appendix G. As shown in Table F, both project driveways are forecast to operate at satisfactory LOS E or better. A maximum outbound queue of 23 ft (LOS E) occurs at the full-access driveway during the p.m. peak hour under cumulative plus project conditions. Based on 165 ft of total storage length at the full-access driveway (50 ft driveway throat and 115 ft parking lot drive aisle), the outbound queue could be accommodated on site. Vehicles on Del Monte Boulevard would not experience additional delay due to inbound/outbound In-N-Out Burger traffic.

Although some drivers may utilize local-serving streets to access the proposed project site, the additional traffic at these locations will be minimal. Deliveries (i.e., loading/unloading of lumber and supplies) at the M & S Building Supply and Home Center often occur along Myers Street, Encina Avenue, and Virgin Street; therefore, providing inefficient access to the proposed In-N-Out Burger restaurant.

The adjacent residential streets are relatively low-speed (i.e., 25 mph) and narrow, connecting TWSC, AWSC, and roundabout intersections. These streets would primarily serve the local neighborhood, and due to the circuitous routes and traffic control, minimal cut-through In-N-Out Burger traffic is anticipated.

In the event that drivers miss the driveway entrances to the proposed In-N-Out Burger restaurant, U-turns can be accommodated at the upstream and downstream intersections of Canyon del Rey Boulevard/Del Monte Boulevard and Casa Verde Way/Del Monte Boulevard, respectively.

Table F: Project Driveways Queuing and Level of Service Summary

Intersection	Traffic Control	AM Peak Hour					PM Peak Hour				
		Inbound (Left Turn)		Outbound		LOS	Inbound (Left Turn)		Outbound		LOS
		Queue	Delay	Queue	Delay		Queue	Delay	Queue	Delay	
Full-Access Driveway/Del Monte Blvd	TWSC										
Existing plus Project		0	0.1	0	18.3	C	10	0.9	20	36.1	E
Cumulative plus Project		0	0.1	0	18.9	C	13	0.9	23	40.0	E
RIRO Driveway/Del Monte Blvd	TWSC										
Existing plus Project		-	-	0	10.5	B	-	-	13	17.8	C
Cumulative plus Project		-	-	0	10.7	B	-	-	15	18.8	C

Notes:

Queue is reported in feet. A queue of 25 feet represents 1 vehicle.

Delay is reported in seconds. For TWSC intersections, LOS is based on the worst-case minor street approach delay, in this case the outbound delay.

City = City of Seaside

RIRO = right-in/right-out

TWSC = two-way stop-controlled

DRIVE-THROUGH QUEUING ANALYSIS

In order to determine the potential vehicle queues in the drive-through lane, queuing observations were conducted at an existing In-N-Out Burger location similar to the proposed project. NDS conducted queuing surveys at the Salinas In-N-Out Burger on two typical weekdays (Tuesday, August 17, 2010, and Wednesday, August 18, 2010) during the lunch (11:00 a.m. to 1:00 p.m.), dinner (5:00 p.m. to 7:00 p.m.), and late-night (9:00 p.m. to 11:00 p.m.) hours. The 2-day survey data were averaged. The In-N-Out Burger drive-through queuing surveys are provided in Appendix A.

The maximum number of vehicles queued from the pick-up window to the end of the queue was 17 vehicles at the existing 151-seat Salinas In-N-Out Burger location. Application of the observed queue to the proposed 159-seat In-N-Out Burger restaurant results in a maximum potential drive-through queue of 18 vehicles. The proposed drive-through lane would provide enough distance for 14 vehicles (10 vehicles from the pick-up window to the menu order board, and 4 vehicles from the menu order board to the back of the drive-through lane). The RIRO driveway and parking lot drive aisle are approximately 250 ft between Del Monte Boulevard and the back of the drive-through lane, which provides room for up to 10 vehicles to queue in the parking area. Therefore, the maximum drive-through queue of 18 vehicles could be accommodated within the 14-vehicle drive-through lane and the adjacent parking lot drive aisle without backing out onto Del Monte Boulevard.

During the peak hours, it is possible that the drive-through queue could interfere with parking maneuvers in the lot. However, the queuing data collected at the Salinas In-N-Out Burger location, provided in Appendix A, show that peak queues are usually reduced to a number of vehicles that could be accommodated in the drive-through lane within a 5-minute period. Therefore, minor delays associated with drive-through queuing would be localized and temporary. In addition, the proposed In-N-Out location may provide a service person to take customer orders rather than depend upon the menu board to improve traffic flow and service times during peak periods.

PARKING DEMAND ANALYSIS

The proposed In-N-Out Burger restaurant will have a parking supply of 53 spaces. In order to determine whether adequate parking will be provided for the proposed project, parking demand surveys were conducted at the existing Salinas In-N-Out Burger on two typical weekdays (Tuesday, August 17, 2010, and Wednesday, August 18, 2010) during normal hours of operation (10:30 a.m. to 1:00 a.m.). The In-N-Out Burger drive-through parking demand surveys are provided in Appendix A. Based on the average of the 2-day survey data, the maximum number of parked vehicles was 43 vehicles for the 151-seat Salinas In-N-Out Burger location. Applying the observed parking demand to the proposed 159-seat Seaside In-N-Out Burger restaurant would result in a parking demand of 46 parking spaces. Therefore, the 53-space parking supply is adequate for the proposed project. Seaside In-N-Out Burger restaurant patrons would not have to park along residential streets or in the M & S Building Supply and Home Center lot.

LSA also generated the parking requirement for the proposed project, consistent with the City Code parking rate of 1 space per 3 seats for restaurant use. Based on the City Code, the proposed 159-seat In-N-Out Burger restaurant would require a total of 53 parking spaces. Therefore, the proposed project could accommodate the forecasted 46-space parking demand and is consistent with the City's parking requirement of 53 spaces.

PEDESTRIAN AND BICYCLE PATHS

Sidewalks and pedestrian/bicycle paths currently exist along Del Monte Boulevard (i.e., the Monterey Bay Coastal Bike Path) and around Laguna Grande Regional Park and Lake and Roberts Lake (located north and east of the project site) that provide linkages to the proposed project. Grant Avenue, a local area-serving street south of the proposed project site, links with the existing Class I pedestrian/bicycle trail on the west side of Laguna Grande Regional Park and Lake. The proposed project will provide a pedestrian/bicycle trail along the northeast boundary of the site connecting the sidewalks along Del Monte Boulevard with an existing pedestrian/bicycle trail along the southern boundary of the site, which loops around Laguna Grande Regional Park and Lake. Therefore, the proposed project site is accessible via walking/biking from all neighborhood and regional locations.

The proposed project will also provide bicycle racks on site to promote alternative, nonautomotive means of transportation. All pedestrian/bicycle amenities will be designed to comply with applicable design criteria and increase connectivity to the existing circulation network. Where modes intersect (i.e., streets, sidewalks, and paths), accessible ramps will be incorporated. Safe access from the proposed project to the public street system (via Del Monte Boulevard) is currently provided. This is an important feature, as transit stops are located within close proximity to the project site (i.e., English Avenue/Del Monte Boulevard). Adjacent land uses include retail/commercial uses and employment centers. All these land use types are accessible by nonautomotive means.

MITIGATION MEASURES

The traffic analysis identifies a deficiency at the TWSC intersection of Fremont Boulevard/Del Monte Boulevard. This intersection is deficient in both the existing and cumulative baseline (no project) conditions. The addition of project traffic results in an increase of 33.0 seconds and 34.1 seconds to the average control delay at the intersection during the p.m. peak hour in the existing plus project and cumulative plus project conditions, respectively. However, Caltrans approved the *SR-1 Project Study Report* (PSR) in 2002, which identified several improvements to SR-1, Fremont Boulevard, and Del Monte Boulevard, including signalization of Fremont Boulevard/Del Monte Boulevard. As shown in Tables D and E, installation of a traffic signal would improve the p.m. peak-hour delay at Fremont Boulevard/Del Monte Boulevard to 4.5 seconds (LOS A) in the existing plus project condition and 5.8 seconds (LOS A) in the cumulative plus project condition, respectively. The mitigated LOS worksheets are provided in Appendix H.

At present, there is no plan to fund this signalization. Until and unless the signalization is programmed in a Capital Improvement Plan or similar City plan, the implementation of this signalization cannot be guaranteed or assumed. At this time, the City has not adopted a traffic impact fee program or other mechanism for collecting impact fees as a means of mitigating transportation impacts. A regional traffic impact fee program is in place and is administered by the Transportation Agency for Monterey County (TAMC); however, fees paid into this regional program are not used to mitigate impacts to local intersections. As a result, there is no mechanism at this time for a fair-share contribution to the signalization of Fremont Boulevard/Del Monte Boulevard. The only mitigation that would avoid the significant unavoidable impacts to the Fremont Boulevard/Del Monte Boulevard intersection would be full signalization of this intersection. The City, as Lead Agency, only has the constitutional legal authority to require mitigation that is roughly proportional to the impact of the proposed project (CEQA Guidelines 15126.4(a)(4)(B)) and the proposed project's impacts do not

merit a mitigation measure that requires full funding for a traffic signal at the Fremont Boulevard/Del Monte Boulevard intersection. Therefore, there is no feasible mitigation to avoid the significant and unavoidable impact identified for the Fremont Boulevard/Del Monte Boulevard intersection.

With respect to the SR-1 southbound on-ramp/Del Monte Boulevard intersection, an increase of 3.1 seconds and 4.6 seconds to the deficient delay at this intersection during the p.m. peak hour in the existing plus project and cumulative plus project conditions, respectively, would constitute a significant impact. The Caltrans threshold states that any increase in delay at an intersection already operating at an unsatisfactory LOS constitutes a significant impact.

The proposed project would add approximately 53 p.m. peak-hour project vehicles at the SR-1 southbound on-ramp/Del Monte Boulevard intersection. The additional project vehicles represent only 1.89 percent of the total existing plus project volume of 2,797 p.m. peak hour vehicles. Based on previous discussions with Caltrans, the Caltrans District 5 Traffic Engineer concluded that because the increase in delay is nominal relative to the total amount of traffic at this intersection, this increase in delay would not result in impacts to the operation or function of this intersection. In addition, mitigation would be neither warranted nor feasible. Because there is no feasible mitigation to address the project-related impact to the SR-1 southbound on-ramp/Del Monte Boulevard intersection, the impact is significant and unavoidable.

CONCLUSIONS

Based on the results of this TIA, the proposed construction of a 3,750 sf In-N-Out Burger drive-through restaurant on the proposed project site would result in significant and unavoidable impacts at the intersections of Fremont Boulevard/Del Monte Boulevard and the SR-1 southbound on-ramp/Del Monte Boulevard. The project is not expected to cause queuing onto the public street, and would provide adequate on-site circulation and parking capacity.

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APPENDIX A

EXISTING COUNTS AND SURVEYS

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PEAK HOUR ITM SUMMARY

#001 Fremont Blvd & Monterey Blvd

LOCATION#:	001	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Fremont Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Monterey Blvd	VICINITY:	Seaside	PM PEAK:	445 PM

Fremont Blvd

SOUTHBOUND LANES			
LN	1	2	1
AM	132	1077	63
MD	0	0	0
PM	149	680	53
TOTAL	281	1757	116



Monterey Blvd

LN	1.5	0.5	1	AM	MD	PM	TOTAL
EASTBOUND LANES	79	139	85	0	0	0	241
WESTBOUND LANES	241	403	153	0	0	0	320

SIGNALIZED

LN	1	0.5	1	AM	MD	PM	TOTAL
EASTBOUND LANES	30	249	119	0	0	0	39
WESTBOUND LANES	39	171	74	0	0	0	420

Monterey Blvd

NORTHBOUND LANES			
LN	1	2	0
AM	172	871	159
MD	0	0	0
PM	123	1159	175
TOTAL	295	2030	334

Fremont Blvd

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Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#002 Fremont Blvd & Del Monte Blvd–Military Ave

LOCATION#:	002	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Fremont Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Del Monte Blvd–Military Ave	VICINITY:	Seaside	PM PEAK:	445 PM

Fremont Blvd

SOUTHBOUND LANES			
LN	0	2	0
AM	628	680	0
MD	0	0	0
PM	242	602	0
TOTAL	870	1282	0



Del Monte Blvd–Military Ave

LN	1	0	0	AM	MD	PM	TOTAL
EASTBOUND LANES	146	0	0	0	0	0	490
WESTBOUND LANES	0	0	0	0	0	0	0

2-WAY STOP (E/W)

LN	1	0	0	AM	MD	PM	TOTAL
EASTBOUND LANES	285	108	0	0	0	0	177
WESTBOUND LANES	0	0	0	0	0	0	0

Del Monte Blvd–Military Ave

NORTHBOUND LANES			
LN	0	2	0
AM	0	541	50
MD	0	0	0
PM	0	880	20
TOTAL	0	1421	70

Fremont Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#003 Del Monte Blvd & Playa Ave

LOCATION#:	003	QTD PROJ#:	2014222	AM PEAK:	800 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Playa Ave	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	42	569	4	
MD	0	0	0	
PM	45	206	0	
TOTAL	87	775	13	



Playa Ave

EASTBOUND LANES				
LN	1	0	0	
AM	9	0	62	71
MD	73	0	244	317
PM	117	0	170	287

SIGNALIZED

WESTBOUND LANES				
TOTAL	4	2	0	1
PM	318	223	0	95
MD	67	38	0	29
AM				
LN				

Playa Ave

NORTHBOUND LANES				
TOTAL	341	618	124	
PM	206	444	102	
MD	0	0	0	
AM	135	174	22	
LN	2	1.5	0.5	

Del Monte Blvd

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#004 Del Monte Blvd & Tioga Ave

LOCATION#:	004	QTD PROJ#:	2014222	AM PEAK:	800 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Tioga Ave	VICINITY:	Seaside	PM PEAK:	415 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	73	605	52	
MD	0	0	0	
PM	52	382	30	
TOTAL	125	987	82	



Tioga Ave

EASTBOUND LANES				
LN	1	37	0	
AM	37	0	109	140
MD	28	0	73	101
PM	31	0	100	131

SIGNALIZED

WESTBOUND LANES				
TOTAL	75	49	0	26
PM	74	47	0	27
MD	25	14	0	11
AM				
LN				

Tioga Ave

NORTHBOUND LANES				
TOTAL	226	869	51	
PM	200	581	36	
MD	0	0	0	
AM	26	288	15	
LN	1	2	0	

Del Monte Blvd

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#005 Del Monte Blvd & Contra Costa St

LOCATION#:	005	QTD PROJ#:	2014222	AM PEAK:	745 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Contra Costa St	VICINITY:	Seaside	PM PEAK:	415 PM

Del Monte Blvd

SOUTHBOUND LANES			
LN	0	2	0
AM	88	570	0
MD	0	0	0
PM	49	462	0
TOTAL	137	1032	0



Contra Costa St

EASTBOUND LANES				
LN	1	27	0	86
AM	0	0	0	0
MD	1	154	0	209
PM				
TOTAL				

SIGNALIZED

WESTBOUND LANES				
LN	0	0	0	0
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0
TOTAL				

Contra Costa St

NORTHBOUND LANES			
LN	1	1	0
AM	142	314	0
MD	0	0	0
PM	133	742	0
TOTAL	275	1056	0

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#006 Del Monte Blvd & Broadway Ave

LOCATION#:	006	QTD PROJ#:	2014222	AM PEAK:	745 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Broadway Ave	VICINITY:	Seaside	PM PEAK:	415 PM

Del Monte Blvd

SOUTHBOUND LANES			
LN	0	2	1
AM	0	686	53
MD	0	0	0
PM	0	581	97
TOTAL	0	1267	150



Broadway Ave

EASTBOUND LANES				
LN	0	0	0	0
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0
TOTAL				

SIGNALIZED

WESTBOUND LANES				
LN	140	83	0	57
AM	0	0	0	0
MD	759	295	0	464
PM				
TOTAL				

Broadway Ave

NORTHBOUND LANES			
LN	0	2	0
AM	0	410	229
MD	0	0	0
PM	0	774	464
TOTAL	0	1184	693

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#007 Del Monte Blvd & Canyon Del Rey Blvd

LOCATION#:	007	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Canyon Del Rey Blvd	VICINITY:	Seaside	PM PEAK:	430 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	1	2	1	
AM	303	798	85	
MD	0	0	0	
PM	256	425	154	
TOTAL	559	1223	239	



Canyon Del Rey Blvd

EASTBOUND LANES				
LN	1	2	1	
AM	174	0	234	408
MD	339	0	371	710
PM	103	0	75	178

SIGNALIZED

WESTBOUND LANES				
LN	1	2	1	
AM	224	126	0	98
MD	1065	632	0	433
PM	649	239	0	430

Canyon Del Rey Blvd

NORTHBOUND LANES				
LN	1	2	1	
AM	415	1225	529	
MD	287	873	333	
PM	0	0	0	
TOTAL	128	352	196	

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#008 Del Monte Blvd & Roberts Ave

LOCATION#:	008	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	Roberts Ave	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	0	
AM	49	1248	0	
MD	0	0	0	
PM	7	749	0	
TOTAL	56	1997	0	



Roberts Ave

EASTBOUND LANES				
LN	1	2	1	
AM	0.5	1	0	1
MD	0	0	0	0
PM	0.5	45	0	53

1-WAY STOP (WB)

WESTBOUND LANES				
LN	1	2	1	
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0

Roberts Ave

NORTHBOUND LANES				
LN	1	1	0	
AM	13	2287	0	
MD	2	1534	0	
PM	0	0	0	
TOTAL	11	673	0	

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#009 Del Monte Blvd & English Ave

LOCATION#:	009	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	English Ave	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	0	1265	14	
MD	0	0	0	
PM	0	679	73	
TOTAL	0	1944	87	



English Ave

EASTBOUND LANES				
LN	0	0	0	0
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0
TOTAL	0	0	0	0

SIGNALIZED

WESTBOUND LANES				
TOTAL	476	303	0	173
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0
LN	0	0	0	0

English Ave

NORTHBOUND LANES				
LN	0	2	1	
AM	0	1209	764	
MD	0	0	0	
PM	0	514	282	
TOTAL	0	1723	1046	

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#010 Del Monte Blvd & Casa Verde Way

LOCATION#:	010	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	Casa Verde Way	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	16	906	100	
MD	0	0	0	
PM	52	540	53	
TOTAL	68	1446	153	



Casa Verde Way

EASTBOUND LANES				
LN	1	41	0	45
AM	1	49	0	33
MD	1	30	0	30
PM	1	30	0	30
TOTAL	1	41	0	45

SIGNALIZED

WESTBOUND LANES				
TOTAL	212	122	0	90
AM	56	41	0	15
MD	227	108	0	119
PM	227	108	0	119
LN	1	3	0	0

Casa Verde Way

NORTHBOUND LANES				
LN	1	3	0	
AM	22	730	94	
MD	0	0	0	
PM	60	1787	121	
TOTAL	82	2517	215	

Del Monte Blvd

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#011 Sloat Ave & Del Monte Blvd

LOCATION#:	011	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Sloat Ave	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	Del Monte Blvd	VICINITY:	Seaside	PM PEAK:	445 PM

Sloat Ave

SOUTHBOUND LANES			
LN	0	0	0
AM	0	1	2
MD	0	0	0
PM	2	1	2
TOTAL	3	2	5



Del Monte Blvd

EASTBOUND LANES			
LN	0	2	0
AM	2	0	3
MD	791	0	1739
PM	98	0	35
TOTAL	5	2530	133

SIGNALIZED

WESTBOUND LANES			
LN	0	0	0
AM	5	2	0
MD	1597	615	982
PM	152	71	81
TOTAL	2	982	0

Del Monte Blvd

NORTHBOUND LANES			
LN	1	0	1
AM	49	2	47
MD	0	0	0
PM	108	0	208
TOTAL	157	2	255

Sloat Ave

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AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#012 SR-1 SB Ramps & Canyon Del Rey Blvd

LOCATION#:	012	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	SR-1 SB Ramps	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Canyon Del Rey Blvd	VICINITY:	Seaside	PM PEAK:	400 PM

SR-1 SB Ramps

SOUTHBOUND LANES			
LN	1	0.5	0.5
AM	14	1	327
MD	0	0	0
PM	21	4	348
TOTAL	35	5	675



Canyon Del Rey Blvd

EASTBOUND LANES			
LN	0	0	0
AM	0	0	0
MD	1	39	0
PM	0	65	0
TOTAL	0	71	110

SIGNALIZED

WESTBOUND LANES			
LN	0	0	0
AM	0	0	0
MD	227	155	0
PM	871	373	0
TOTAL	0	72	1

Canyon Del Rey Blvd

NORTHBOUND LANES			
LN	0	0	0
AM	0	0	0
MD	0	0	0
PM	0	0	0
TOTAL	0	0	0

SR-1 SB Ramps

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Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#013 SR-1 NB Ramps & Canyon Del Rey Blvd

LOCATION#:	013	QTD PROJ#:	2014222	AM PEAK:	800 AM
NORTH / SOUTH:	SR-1 NB Ramps	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	Canyon Del Rey Blvd	VICINITY:	Seaside	PM PEAK:	430 PM

SR-1 NB Ramps

SOUTHBOUND LANES			
LN	0	0	0
AM	0	0	0
MD	0	0	0
PM	0	0	0
TOTAL	0	0	0



Canyon Del Rey Blvd

EASTBOUND LANES				
LN	0	7	0	10
AM	0	7	0	10
MD	0	0	0	0
PM	0	0	0	0
TOTAL	0	7	0	10

1-WAY STOP (NB)

WESTBOUND LANES				
LN	1	110	774	0
AM	1	110	774	0
MD	0	0	0	0
PM	0	0	0	0
TOTAL	1	110	774	0

Canyon Del Rey Blvd

NORTHBOUND LANES			
LN	0.5	0.5	1
AM	0.5	0.5	1
MD	0	0	0
PM	0	0	0
TOTAL	0.5	0.5	1

SR-1 NB Ramps

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Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#014 Fremont Blvd & Canyon Del Rey Blvd

LOCATION#:	014	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Fremont Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	Canyon Del Rey Blvd	VICINITY:	Seaside	PM PEAK:	430 PM

Fremont Blvd

SOUTHBOUND LANES			
LN	1	2	1
AM	63	842	141
MD	0	0	0
PM	57	549	168
TOTAL	120	1391	309



Canyon Del Rey Blvd

EASTBOUND LANES				
LN	1	60	0	121
AM	1	60	0	121
MD	0	0	0	0
PM	0	0	0	0
TOTAL	1	60	0	121

SIGNALIZED

WESTBOUND LANES				
LN	0.5	211	174	0
AM	0.5	211	174	0
MD	0	0	0	0
PM	0	0	0	0
TOTAL	0.5	211	174	0

Canyon Del Rey Blvd

NORTHBOUND LANES			
LN	1	2	1
AM	115	392	206
MD	0	0	0
PM	198	891	169
TOTAL	313	1283	375

Fremont Blvd

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9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#015 Canyon Del Rey Blvd & SR-68

LOCATION#:	015	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Canyon Del Rey Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	SR-68	VICINITY:	Seaside	PM PEAK:	415 PM

Canyon Del Rey Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	334	17	500	
MD	0	0	0	
PM	143	2	271	
TOTAL	477	20	771	



SR-68

EASTBOUND LANES				
LN	1	0.5	0.5	TOTAL
AM	66	0	197	263
MD	632	0	713	1345
PM	1	0	5	6

SIGNALIZED				
------------	--	--	--	--

WESTBOUND LANES				
LN	1	0.5	0.5	TOTAL
AM	866	615	0	251
MD	1697	1027	0	670
PM	10	6	0	4

SR-68

NORTHBOUND LANES				
LN	1	2	1	
AM	15	17	14	
MD	6	11	6	
PM	0	0	0	
TOTAL	9	6	8	

Canyon Del Rey Blvd

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Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#016 Del Monte Blvd & SR-1 SB On-Ramp

LOCATION#:	016	QTD PROJ#:	2014222	AM PEAK:	730 AM
NORTH / SOUTH:	Del Monte Blvd	DATE:	Wednesday, September 24, 2014	MD PEAK:	
EAST / WEST:	SR-1 SB On-Ramp	VICINITY:	Seaside	PM PEAK:	445 PM

Del Monte Blvd

SOUTHBOUND LANES				
LN	0	2	1	
AM	0	1001	302	
MD	0	0	0	
PM	0	635	91	
TOTAL	0	1636	393	



SR-1 SB On-Ramp

EASTBOUND LANES				
LN	0	0	0	0
AM	0	0	0	0
MD	0	0	0	0
PM	0	0	0	0

1-WAY STOP (NB)				
-----------------	--	--	--	--

WESTBOUND LANES				
LN	0.5	0.5	0.5	TOTAL
AM	35	29	0	6
MD	0	0	0	0
PM	5	3	0	2

SR-1 SB On-Ramp

NORTHBOUND LANES				
LN	0	2	0	
AM	0	2731	125	
MD	0	1926	60	
PM	0	0	0	
TOTAL	0	805	65	

Del Monte Blvd

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

PEAK HOUR ITM SUMMARY

#017 English Ave & SR-1 NB Ramps

LOCATION#:	017	QTD PROJ#:	2014222	AM PEAK:	715 AM
NORTH / SOUTH:	English Ave	DATE:	Tuesday, September 23, 2014	MD PEAK:	
EAST / WEST:	SR-1 NB Ramps	VICINITY:	Seaside	PM PEAK:	445 PM

English Ave

SOUTHBOUND LANES			
LN	1	1	0
AM	302	38	0
MD	0	0	0
PM	741	89	0
TOTAL	1043	127	0



SR-1 NB Ramps

EASTBOUND LANES	LN	AM	MD	PM	TOTAL
	0.5	113	0	239	352
	0	0	0	0	0
	0.5	11	0	11	22

1-WAY STOP (WB)

WESTBOUND LANES	TOTAL	PM	MD	AM	LN
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

SR-1 NB Ramps

NORTHBOUND LANES			
TOTAL	182	177	0
PM	55	101	0
MD	0	0	0
AM	47	76	0
LN	0	1	0

English Ave

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	6:00 PM

Salinas In-N-Out Trip Generation Surveys

Time	Tuesday 8/17/10			Wednesday 8/18/10			Average		
	In	Out	Total	In	Out	Total	In	Out	Total
10:30 AM	11	4	15	11	5	16	11	5	16
10:45 AM	10	14	24	11	17	28	11	16	26
11:00 AM	17	4	21	12	10	22	15	7	22
11:15 AM	25	14	39	18	11	29	22	13	34
11:30 AM	23	18	41	22	16	38	23	17	40
11:45 AM	20	17	37	23	19	42	22	18	40
12:00 PM	38	27	65	33	31	64	36	29	65
12:15 PM	45	52	97	45	49	94	45	51	96
12:30 PM	44	49	93	44	41	85	44	45	89
12:45 PM	35	37	72	33	39	72	34	38	72
1:00 PM	23	24	47	32	27	59	28	26	53
1:15 PM	25	29	54	30	29	59	28	29	57
1:30 PM	25	29	54	26	25	51	26	27	53
1:45 PM	23	24	47	26	29	55	25	27	51
2:00 PM	19	25	44	22	25	47	21	25	46
2:15 PM	22	19	41	22	19	41	22	19	41
2:30 PM	21	28	49	29	20	49	25	24	49
2:45 PM	23	16	39	11	20	31	17	18	35
3:00 PM	19	19	38	23	23	46	21	21	42
3:15 PM	22	18	40	26	22	48	24	20	44
3:30 PM	25	22	47	20	16	36	23	19	42
3:45 PM	24	27	51	17	24	41	21	26	46
4:00 PM	20	22	42	13	22	35	17	22	39
4:15 PM	24	17	41	16	14	30	20	16	36
4:30 PM	25	21	46	19	17	36	22	19	41
4:45 PM	20	21	41	23	11	34	22	16	38
5:00 PM	19	13	32	22	23	45	21	18	39
5:15 PM	12	27	39	23	23	46	18	25	43
5:30 PM	20	21	41	23	24	47	22	23	44
5:45 PM	19	16	35	20	20	40	20	18	38
6:00 PM	22	16	38	21	19	40	22	18	39
6:15 PM	12	18	30	22	23	45	17	21	38
6:30 PM	23	12	35	18	11	29	21	12	32
6:45 PM	14	17	31	15	15	30	15	16	31
7:00 PM	20	16	36	15	19	34	18	18	35
7:15 PM	25	18	43	27	21	48	26	20	46
7:30 PM	25	17	42	24	20	44	25	19	43
7:45 PM	17	24	41	21	16	37	19	20	39
8:00 PM	19	24	43	28	16	44	24	20	44
8:15 PM	15	18	33	18	20	38	17	19	36
8:30 PM	15	15	30	11	21	32	13	18	31
8:45 PM	20	15	35	17	14	31	19	15	33
9:00 PM	21	10	31	17	15	32	19	13	32
9:15 PM	19	21	40	9	12	21	14	17	31
9:30 PM	13	15	28	15	13	28	14	14	28
9:45 PM	10	25	35	12	12	24	11	19	30
10:00 PM	16	14	30	14	21	35	15	18	33
10:15 PM	12	9	21	9	11	20	11	10	21
10:30 PM	7	12	19	12	14	26	10	13	23
10:45 PM	5	12	17	13	16	29	9	14	23
11:00 PM	12	9	21	11	11	22	12	10	22
11:15 PM	4	8	12	8	14	22	6	9	15
11:30 PM	8	0	8	7	10	17	8	5	13
11:45 PM	7	5	12	7	11	18	7	8	15
12:00 AM	7	14	21	6	8	14	7	11	18
12:15 AM	1	8	9	5	5	10	3	7	10
12:30 AM	3	2	5	4	7	11	4	5	8
12:45 AM	4	5	9	2	3	5	3	4	7
Total	1,074	1,049	2,123	1,083	1,069	2,152	1,079	1,059	2,138

In-N-Out: Size (sf) Size (seats)
 2,912 151

Salinas In-N-Out Drive-Through Queuing Surveys

Time	Tuesday 8/17/10		Wednesday 8/18/10		Average	
	Total	Beyond Board	Total	Beyond Board	Total	Beyond Board
11:00 AM	0	0	0	0	0	0
11:05 AM	1	0	0	0	1	0
11:10 AM	3	2	4	0	4	1
11:15 AM	5	0	8	2	7	1
11:20 AM	6	2	6	3	6	3
11:25 AM	6	2	4	1	5	2
11:30 AM	9	2	5	1	7	2
11:35 AM	8	2	4	1	6	2
11:40 AM	4	0	8	4	6	2
11:45 AM	4	0	3	0	4	0
11:50 AM	2	0	2	0	2	0
11:55 AM	1	0	5	1	3	1
12:00 PM	3	0	4	2	4	1
12:05 PM	3	1	2	0	3	1
12:10 PM	14	6	12	5	13	6
12:15 PM	13	5	15	10	14	8
12:20 PM	12	6	13	7	13	7
12:25 PM	18	11	15	10	17	11
12:30 PM	10	3	9	3	10	3
12:35 PM	14	7	15	9	15	8
12:40 PM	16	8	18	11	17	10
12:45 PM	7	5	8	3	8	4
12:50 PM	8	3	7	3	8	3
12:55 PM	4	0	3	0	4	0
1:00 PM						
5:00 PM	13	7	6	0	10	4
5:05 PM	14	7	10	4	12	6
5:10 PM	8	2	3	1	6	2
5:15 PM	11	5	12	8	12	7
5:20 PM	5	0	10	3	8	2
5:25 PM	6	0	5	1	6	1
5:30 PM	5	0	7	3	6	2
5:35 PM	3	0	3	0	3	0
5:40 PM	4	1	5	2	5	2
5:45 PM	1	0	2	0	2	0
5:50 PM	1	0	3	2	2	1
5:55 PM	4	1	5	1	5	1
6:00 PM	6	0	8	2	7	1
6:05 PM	7	2	6	3	7	3
6:10 PM	7	3	9	3	8	3
6:15 PM	9	4	10	6	10	5
6:20 PM	6	1	4	0	5	1
6:25 PM	6	2	7	2	7	2
6:30 PM	7	1	8	4	8	3
6:35 PM	11	5	10	4	11	5
6:40 PM	13	8	12	6	13	7
6:45 PM	12	6	10	3	11	5
6:50 PM	15	10	13	8	14	9
6:55 PM	10	5	8	3	9	4
7:00 PM	10	7	6	1	8	4
9:05 PM	10	5	6	0	8	3
9:10 PM	14	8	4	0	9	4
9:15 PM	9	3	6	2	8	3
9:20 PM	13	8	7	1	10	5
9:25 PM	10	4	7	2	9	3
9:30 PM	8	1	9	4	9	3
9:35 PM	9	3	5	1	7	2
9:40 PM	10	3	6	0	8	2
9:45 PM	11	5	7	2	9	4
9:50 PM	7	2	9	4	8	3
9:55 PM	8	2	6	2	7	2
10:00 PM	7	2	4	1	6	2
10:05 PM	6	1	3	0	5	1
10:10 PM	4	0	2	0	3	0
10:15 PM	6	1	4	0	5	1
10:20 PM	5	0	3	0	4	0
10:25 PM	8	2	4	1	6	2
10:30 PM	5	1	7	3	6	2
10:35 PM	2	0	7	3	5	2
10:40 PM	3	0	6	2	5	1
10:45 PM	3	0	5	0	4	0
10:50 PM	3	0	4	1	4	1
10:55 PM	2	0	2	0	2	0

In-N-Out: Size (sf) Size (Seats)
 2,912 151

Salinas In-N-Out Parking Demand Surveys

Time	Parked Vehicles		
	Tues 8/17/10	Wed 8/18/10	Average
10:30 AM	11	13	12
11:00 AM	16	14	15
11:30 AM	32	28	30
12:00 PM	36	36	36
12:30 PM	35	44	40
1:00 PM	44	42	43
1:30 PM	40	38	39
2:00 PM	41	43	42
2:30 PM	32	38	35
3:00 PM	28	40	34
3:30 PM	35	36	36
4:00 PM	36	39	38
4:30 PM	37	31	34
5:00 PM	33	33	33
5:30 PM	31	29	30
6:00 PM	27	34	31
6:30 PM	28	39	34
7:00 PM	26	33	30
7:30 PM	29	28	29
8:00 PM	32	23	28
8:30 PM	28	27	28
9:00 PM	25	28	27
9:30 PM	34	24	29
10:00 PM	20	25	23
10:30 PM	20	21	21
11:00 PM	10	18	14
11:30 PM	13	15	14
12:00 AM	12	11	12
12:30 AM	10	12	11
1:00 AM	11	11	11

In-N-Out: Size (sf) Size (Seats)
 2,912 151

APPENDIX B

EXISTING LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Volume (veh/h)	79	139	85	119	249	30	172	871	159	63	1077	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	139	85	119	249	30	172	871	159	63	1077	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	177	185	158	125	261	31	195	1390	254	81	1417	634
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	542	1133	137	1774	2990	546	1774	3539	1583
Grp Volume(v), veh/h	79	139	85	398	0	0	172	515	515	63	1077	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1812	0	0	1774	1770	1766	1774	1770	1583
Q Serve(g_s), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.0	22.0	3.5	26.2	5.5
Cycle Q Clear(g_c), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.0	22.0	3.5	26.2	5.5
Prop In Lane	1.00		1.00	0.30		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	177	185	158	417	0	0	195	823	821	81	1417	634
V/C Ratio(X)	0.45	0.75	0.54	0.96	0.00	0.00	0.88	0.63	0.63	0.78	0.76	0.21
Avail Cap(c_a), veh/h	284	298	253	417	0	0	195	823	821	106	1417	634
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	43.8	42.8	38.0	0.0	0.0	43.9	20.2	20.2	47.2	25.8	19.6
Incr Delay (d2), s/veh	1.8	6.0	2.9	32.7	0.0	0.0	34.1	3.6	3.6	22.9	3.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	4.1	2.4	14.6	0.0	0.0	6.5	11.6	11.5	2.2	13.5	2.5
LnGrp Delay(d),s/veh	44.2	49.8	45.7	70.7	0.0	0.0	77.9	23.8	23.8	70.2	29.7	20.3
LnGrp LOS	D	D	D	E			E	C	C	E	C	C
Approach Vol, veh/h	303			398			1202			1272		
Approach Delay, s/veh	47.2			70.7			31.5			30.7		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	50.5		13.9	15.0	44.1		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	39.0		16.0	11.0	34.0		23.0				
Max Q Clear Time (g_c+I1), s	5.5	24.0		9.3	11.6	28.2		23.7				
Green Ext Time (p_c), s	0.0	11.7		0.7	0.0	5.1		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

AM Peak Hour Existing
LSA Associates, Inc.

Synchro 8 Report
Page 1

HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh	11.9										
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	177	0	541	50	0	680	628	146	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	177	0	541	50	0	680	628	146	21	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	892	271	680	0	0	541	0	0	951	340	
Stage 1	541	-	-	-	-	-	-	-	680	-	
Stage 2	351	-	-	-	-	-	-	-	271	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	237	727	908	-	-	1024	-	0	214	656	
Stage 1	493	-	-	-	-	-	-	0	407	-	
Stage 2	639	-	-	-	-	-	-	0	712	-	
Platoon blocked, %				-	-			-			
Mov Cap-1 Maneuver	216	727	908	-	-	1024	-	-	162	656	
Mov Cap-2 Maneuver	216	-	-	-	-	-	-	-	162	-	
Stage 1	493	-	-	-	-	-	-	-	407	-	
Stage 2	609	-	-	-	-	-	-	-	539	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	11.5	0			0			102.5			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	162	-	908	-	-	727	1024	-			
HCM Lane V/C Ratio	0.901	-	-	-	-	0.243	-	-			
HCM Control Delay (s)	102.5	0	0	-	-	11.5	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	6.5	-	0	-	-	1	0	-			

AM Peak Hour Existing
LSA Associates, Inc.

Synchro 8 Report
Page 3

HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	9	73	117	29	95	1	135	174	22	4	569	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	73	117	29	95	1	135	174	22	4	569	42
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	533	190	161	557	413	4	203	1330	166	7	1221	90
Arrive On Green	0.30	0.10	0.10	0.31	0.12	0.12	0.06	0.42	0.42	0.00	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	1774	3588	38	3442	3167	395	1774	3343	246
Grp Volume(v), veh/h	9	73	117	29	47	49	135	96	100	4	301	310
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1856	1721	1770	1793	1774	1770	1819
Q Serve(g_s), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.3	3.4	0.2	13.0	13.0
Cycle Q Clear(g_c), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.3	3.4	0.2	13.0	13.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.22	1.00		0.14
Lane Grp Cap(c), veh/h	533	190	161	557	204	214	203	743	753	7	647	665
V/C Ratio(X)	0.02	0.38	0.73	0.05	0.23	0.23	0.67	0.13	0.13	0.54	0.47	0.47
Avail Cap(c_a), veh/h	533	410	348	557	460	483	413	743	753	106	647	665
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	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	42.0	43.6	23.9	40.2	40.2	46.1	17.8	17.8	49.7	24.3	24.3
Incr Delay (d2), s/veh	0.0	1.3	6.1	0.0	0.6	0.5	3.6	0.3	0.3	48.8	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.2	2.0	3.4	0.6	1.2	1.3	1.9	1.7	1.8	0.2	6.8	7.0
LnGrp Delay(d),s/veh	24.6	43.3	49.6	24.0	40.8	40.8	49.7	18.1	18.2	98.5	26.7	26.6
LnGrp LOS	C	D	D	C	D	D	D	B	B	F	C	C
Approach Vol, veh/h	199			125			331			615		
Approach Delay, s/veh	46.2			36.9			31.0			27.1		
Approach LOS	D			D			C			C		
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	4.4	46.0	35.4	14.2	9.9	40.5	34.1	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	42.0	14.0	22.0	12.0	36.0	10.0	26.0				
Max Q Clear Time (g_c+I1), s	2.2	5.4	3.1	9.2	5.8	15.0	2.4	4.4				
Green Ext Time (p_c), s	0.0	5.6	0.0	1.0	0.2	5.0	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	32.1											
HCM 2010 LOS	C											

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HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	37	28	31	11	27	26	26	288	15	52	605	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	37	28	31	11	27	26	26	288	15	52	605	73
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	47	290	321	19	626	527	36	806	685	67	1432	172
Arrive On Green	0.03	0.36	0.36	0.01	0.34	0.34	0.02	0.43	0.43	0.04	0.45	0.45
Sat Flow, veh/h	1774	809	896	1774	1825	1536	1774	1863	1583	1774	3182	383
Grp Volume(v), veh/h	37	0	59	11	26	27	26	288	15	52	336	342
Grp Sat Flow(s),veh/h/ln	1774	0	1705	1774	1770	1592	1774	1863	1583	1774	1770	1795
Q Serve(g_s), s	2.1	0.0	2.3	0.6	1.0	1.1	1.5	10.4	0.5	2.9	12.9	12.9
Cycle Q Clear(g_c), s	2.1	0.0	2.3	0.6	1.0	1.1	1.5	10.4	0.5	2.9	12.9	12.9
Prop In Lane	1.00		0.53	1.00		0.97	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	47	0	612	19	607	546	36	806	685	67	796	808
V/C Ratio(X)	0.79	0.00	0.10	0.59	0.04	0.05	0.71	0.36	0.02	0.77	0.42	0.42
Avail Cap(c_a), veh/h	195	0	612	124	607	546	160	806	685	231	796	808
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	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	48.4	0.0	21.3	49.3	21.9	21.9	48.7	19.0	16.2	47.7	18.7	18.7
Incr Delay (d2), s/veh	25.1	0.0	0.3	26.1	0.1	0.2	22.5	1.2	0.1	16.3	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	1.1	0.4	0.5	0.5	0.9	5.6	0.2	0.7	6.6	6.7	6.7
LnGrp Delay(d),s/veh	73.5	0.0	21.6	75.4	22.0	22.1	71.2	20.3	16.3	64.0	20.2	20.2
LnGrp LOS	E	C	E	C	C	C	E	C	B	E	C	C
Approach Vol, veh/h	96			64			329			730		
Approach Delay, s/veh	41.6			31.2			24.1			23.3		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s7.8	47.3	5.1	39.9	6.1	49.0	6.6	38.3					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	41.0	7.0	23.0	9.0	45.0	11.0	19.0					
Max Q Clear Time (g_c+I1), s	12.4	2.6	4.3	3.5	14.9	4.1	3.1					
Green Ext Time (p_c), s	0.0	6.9	0.0	0.5	0.0	6.9	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	25.4											
HCM 2010 LOS	C											

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HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	142	314	570	88	27	154		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	142	314	570	88	27	154		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	173	2407	1668	257	426	380		
Arrive On Green	0.20	1.00	0.54	0.54	0.24	0.24		
Sat Flow, veh/h	1774	3632	3168	473	1774	1583		
Grp Volume(v), veh/h	142	314	327	331	27	154		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1779	1774	1583		
Q Serve(g_s), s	7.7	0.0	10.4	10.4	1.2	8.2		
Cycle Q Clear(g_c), s	7.7	0.0	10.4	10.4	1.2	8.2		
Prop In Lane	1.00			0.27	1.00	1.00		
Lane Grp Cap(c), veh/h	173	2407	960	965	426	380		
V/C Ratio(X)	0.82	0.13	0.34	0.34	0.06	0.41		
Avail Cap(c_a), veh/h	408	2407	960	965	426	380		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.4	0.0	12.8	12.9	29.3	32.0		
Incr Delay (d2), s/veh	9.0	0.1	1.0	1.0	0.3	3.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	5.3	5.4	0.6	7.8		
LnGrp Delay(d),s/veh	48.4	0.1	13.8	13.8	29.6	35.2		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h	456	658		181				
Approach Delay, s/veh	15.2	13.8		34.4				
Approach LOS	B	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				72.0		28.0	13.8	58.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				68.0		24.0	23.0	41.0
Max Q Clear Time (g_c+I1), s				2.0		10.2	9.7	12.4
Green Ext Time (p_c), s				7.8		0.4	0.3	7.0
Intersection Summary								
HCM 2010 Ctrl Delay			17.2					
HCM 2010 LOS			B					

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HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations								
Volume (veh/h)	410	229	53	686	464	57		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	410	0	53	686	464	57		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2384	1066	68	2661	578	266		
Arrive On Green	0.22	0.00	0.08	1.00	0.17	0.17		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	410	0	53	686	464	57		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	9.4	0.0	2.9	0.0	13.0	3.1		
Cycle Q Clear(g_c), s	9.4	0.0	2.9	0.0	13.0	3.1		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2384	1066	68	2661	578	266		
V/C Ratio(X)	0.17	0.00	0.78	0.26	0.80	0.21		
Avail Cap(c_a), veh/h	2384	1066	231	2661	1239	570		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.98	0.00	0.94	0.94	1.00	1.00		
Uniform Delay (d), s/veh	16.3	0.0	45.7	0.0	40.0	35.9		
Incr Delay (d2), s/veh	0.2	0.0	16.2	0.2	2.6	0.4		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	1.7	0.1	6.4	1.4		
LnGrp Delay(d),s/veh	16.5	0.0	62.0	0.2	42.6	36.3		
LnGrp LOS	B		E	A	D	D		
Approach Vol, veh/h	410			739	521			
Approach Delay, s/veh	16.5			4.7	41.9			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.8	7.8	71.4				79.2
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		36.0	13.0	39.0				56.0
Max Q Clear Time (g_c+I1), s		15.0	4.9	11.4				2.0
Green Ext Time (p_c), s		1.8	0.0	8.7				9.9
Intersection Summary								
HCM 2010 Ctrl Delay				19.2				
HCM 2010 LOS				B				

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HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	128	352	196	85	798	303	410	433	98	174	339	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	128	352	196	85	798	303	410	433	98	174	339	103
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	227	1632	730	458	1632	730	838	1624	727	791	1233	369
Arrive On Green	0.92	0.92	0.92	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	510	3539	1583	856	3539	1583	1830	3539	1583	1686	2686	804
Grp Volume(v), veh/h	128	352	196	85	798	303	410	433	98	174	222	220
Grp Sat Flow(s), veh/h/ln	510	1770	1583	856	1770	1583	915	1770	1583	843	1770	1721
Q Serve(g_s), s	19.7	1.0	1.3	6.1	15.7	12.8	17.9	7.5	3.6	7.1	7.7	8.0
Cycle Q Clear(g_c, s)	35.4	1.0	1.3	7.0	15.7	12.8	25.9	7.5	3.6	14.6	7.7	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	227	1632	730	458	1632	730	838	1624	727	791	812	790
V/C Ratio(X)	0.56	0.22	0.27	0.19	0.49	0.42	0.49	0.27	0.13	0.22	0.27	0.28
Avail Cap(c_a), veh/h	247	1770	792	492	1770	792	838	1624	727	791	812	790
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.6	2.1	2.1	16.7	18.7	18.0	24.8	16.7	15.6	21.2	16.7	16.8
Incr Delay (d2), s/veh	2.5	0.1	0.2	0.2	0.2	0.4	2.0	0.4	0.4	0.6	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.5	1.4	7.7	5.6	4.7	3.8	1.6	1.7	3.9	4.0	
LnGrp Delay(d),s/veh	12.1	2.2	2.3	16.9	19.0	18.3	26.9	17.1	16.0	21.8	17.6	17.7
LnGrp LOS	B	A	A	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	676			1186			941			616		
Approach Delay, s/veh	4.1			18.6			21.2			18.8		
Approach LOS	A			B			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	49.9		50.1		49.9		50.1					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	42.0		50.0		42.0		50.0					
Max Q Clear Time (g_c+I1), s	27.9		37.4		16.6		17.7					
Green Ext Time (p_c), s	8.2		8.7		11.4		15.8					
Intersection Summary												
HCM 2010 Ctrl Delay	16.5											
HCM 2010 LOS	B											

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	673	0	0	1248	49	0	0	0	1	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	11	673	0	0	1248	49	0	0	0	1	0	45
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	1297	0	0	673	0	0				1632	1968	649
Stage 1	-	-	-	-	-	-				1273	1273	-
Stage 2	-	-	-	-	-	-				359	695	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	4.02	3.32
Pot Cap-1 Maneuver	530	-	-	914	-	-				92	62	412
Stage 1	-	-	-	-	-	-				227	237	-
Stage 2	-	-	-	-	-	-				677	442	-
Platoon blocked, %	-	-	-	-	-	-						-
Mov Cap-1 Maneuver	530	-	-	914	-	-				90	0	412
Mov Cap-2 Maneuver	-	-	-	-	-	-				90	0	-
Stage 1	-	-	-	-	-	-				227	0	-
Stage 2	-	-	-	-	-	-				663	0	-
Approach	EB			WB			SB					
HCM Control Delay, s	0.2			0			15.7					
HCM LOS	C											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	530	-	-	914	-	-	382					
HCM Lane V/C Ratio	0.021	-	-	-	-	-	0.12					
HCM Control Delay (s)	11.9	-	-	0	-	-	15.7					
HCM Lane LOS	B	-	-	A	-	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	514	282	14	1265	51	173		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	514	0	14	1265	51	173		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2442	1092	681	2442	408	364		
Arrive On Green	1.00	0.00	0.69	0.69	0.23	0.23		
Sat Flow, veh/h	3632	1583	883	3632	1774	1583		
Grp Volume(v), veh/h	514	0	14	1265	51	173		
Grp Sat Flow(s),veh/h/ln	1770	1583	883	1770	1774	1583		
Q Serve(g_s), s	0.0	0.0	0.5	17.2	2.3	9.4		
Cycle Q Clear(g_c), s	0.0	0.0	0.5	17.2	2.3	9.4		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2442	1093	681	2442	408	364		
V/C Ratio(X)	0.21	0.00	0.02	0.52	0.12	0.48		
Avail Cap(c_a), veh/h	2442	1093	681	2442	408	364		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.0	4.9	7.5	30.5	33.3		
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.8	0.6	4.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	0.0	0.1	8.5	1.2	4.6		
LnGrp Delay(d),s/veh	0.2	0.0	4.9	8.3	31.2	37.7		
LnGrp LOS	A		A	A	C	D		
Approach Vol, veh/h	514			1279	224			
Approach Delay, s/veh	0.2			8.2	36.2			
Approach LOS	A			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		73.0				73.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		69.0				69.0
Max Q Clear Time (g_c+I1), s		11.4		2.0				19.2
Green Ext Time (p_c), s		0.5		23.4				21.3
Intersection Summary								
HCM 2010 Ctrl Delay				9.3				
HCM 2010 LOS				A				

AM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑↑		↓	↑↑		↓	↑		↓	↑	↑
Volume (veh/h)	22	730	94	100	906	16	119	15	90	41	49	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	22	730	94	100	906	16	119	15	90	41	49	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	32	2322	297	128	2001	35	149	53	319	52	327	278
Arrive On Green	0.02	0.51	0.51	0.02	0.19	0.19	0.08	0.23	0.23	0.03	0.18	0.18
Sat Flow, veh/h	1774	4567	583	1774	3558	63	1774	231	1387	1774	1863	1583
Grp Volume(v), veh/h	22	540	284	100	451	471	119	0	105	41	49	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1760	1774	1770	1852	1774	0	1618	1774	1863	1583
Q Serve(g_s), s	1.2	9.3	9.4	5.6	22.6	22.6	6.6	0.0	5.3	2.3	2.2	1.6
Cycle Q Clear(g_c), s	1.2	9.3	9.4	5.6	22.6	22.6	6.6	0.0	5.3	2.3	2.2	1.6
Prop In Lane		1.00		0.33	1.00	0.03	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	32	1724	895	128	995	1041	149	0	372	52	327	278
V/C Ratio(X)	0.68	0.31	0.32	0.78	0.45	0.45	0.80	0.00	0.28	0.79	0.15	0.11
Avail Cap(c_a), veh/h	124	1724	895	248	995	1041	266	0	372	142	327	278
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	14.4	14.4	48.0	27.0	27.0	45.0	0.0	31.7	48.2	34.9	34.7
Incr Delay (d2), s/veh	0.5	0.9	0.9	1.5	1.4	9.4	0.0	1.9	22.5	1.0	0.8	0.8
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(-26165%),veh/ln	4.5	4.8	3.1	11.5	12.0	3.6	0.0	2.6	1.5	1.2	0.8	0.8
LnGrp Delay(d),s/veh	70.7	14.9	15.3	57.8	28.5	28.5	54.3	0.0	33.6	70.8	35.9	35.4
LnGrp LOS	E	B	B	E	C	C	D		C	E	D	D
Approach Vol, veh/h		846			1022			224			120	
Approach Delay, s/veh		16.5			31.4			44.6			47.7	
Approach LOS		B			C			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		27.0	11.2	54.8	12.4	21.5	5.8	60.2				
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		23.0	14.0	39.0	15.0	16.0	7.0	46.0				
Max Q Clear Time (g_c+I1), s		7.3	7.6	11.4	8.6	4.2	3.2	24.6				
Green Ext Time (p_c), s		0.0	0.8	0.1	14.1	0.1	0.7	0.0	12.2			
Intersection Summary												
HCM 2010 Ctrl Delay					27.9							
HCM 2010 LOS					C							

AM Peak Hour Existing
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HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	2	791	98	81	982	3	49	2	47	2	1	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	791	98	81	982	3	49	2	47	2	1	0
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2171	269	0	2478	8	63	0	372	0	298	0
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.04	0.24	0.24	0.00	0.16	0.00
Sat Flow, veh/h	0	3170	393	0	3619	11	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	441	448	0	480	505	49	0	47	0	1	0
Grp Sat Flow(s),veh/h/ln	0	1770	1793	0	1770	1861	1774	0	1583	0	1863	0
Q Serve(g_s), s	0.0	10.5	10.5	0.0	11.7	11.7	2.7	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.5	10.5	0.0	11.7	11.7	2.7	0.0	2.3	0.0	0.0	0.0
Prop In Lane	0.00		0.22	0.00		0.01	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1212	1228	0	1212	1274	63	0	372	0	298	0
V/C Ratio(X)	0.00	0.36	0.36	0.00	0.40	0.40	0.78	0.00	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1212	1228	0	1212	1274	71	0	372	0	298	0
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)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.6	6.6	0.0	6.8	6.8	47.9	0.0	30.1	0.0	35.3	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	1.0	0.9	38.5	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.3	5.4	0.0	0.0	5.9	6.2	2.0	0.0	1.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.5	7.5	0.0	7.8	7.7	86.3	0.0	30.3	0.0	35.3	0.0
LnGrp LOS	A	A		A	A	F		C		D		
Approach Vol, veh/h		889			985			96			1	
Approach Delay, s/veh		7.5			7.8			58.9			35.3	
Approach LOS		A			A			E			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/0.0	27.5	0.0	72.5	7.5	20.0	0.0	72.5					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	16.0	4.0	60.0	4.0	16.0	4.0	60.0					
Max Q Clear Time (g_c+10), s	4.3	0.0	12.5	4.7	2.0	0.0	13.7					
Green Ext Time (p_c), s	0.0	0.1	0.0	19.4	0.0	0.1	0.0	19.2				
Intersection Summary												
HCM 2010 Ctrl Delay				10.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔	↔		↔	↔		↔	↔
Volume (veh/h)	0	0	0	327	1	14	498	72	0	0	39	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				327	1	14	498	72	0	0	39	65
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				374	1	335	793	115	0	0	101	168
Arrive On Green				0.21	0.21	0.21	0.85	0.85	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1769	5	1583	1559	225	0	0	629	1049
Grp Volume(v), veh/h				328	0	14	570	0	0	0	0	104
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1785	0	0	0	0	1678
Q Serve(g_s), s				17.9	0.0	0.7	10.3	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s				17.9	0.0	0.7	10.3	0.0	0.0	0.0	0.0	5.6
Prop In Lane				1.00		1.00	0.87		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				375	0	335	908	0	0	0	0	268
V/C Ratio(X)				0.87	0.00	0.04	0.63	0.00	0.00	0.00	0.00	0.39
Avail Cap(c_a), veh/h				497	0	443	908	0	0	0	0	268
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				38.2	0.0	31.4	4.5	0.0	0.0	0.0	0.0	37.6
Incr Delay (d2), s/veh				12.8	0.0	0.1	3.3	0.0	0.0	0.0	0.0	4.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				10.1	0.0	0.3	5.5	0.0	0.0	0.0	0.0	2.9
LnGrp Delay(d),s/veh				50.9	0.0	31.4	7.8	0.0	0.0	0.0	0.0	41.8
LnGrp LOS				D		C	A					D
Approach Vol, veh/h					342			570			104	
Approach Delay, s/veh					50.1			7.8			41.8	
Approach LOS					D			A			D	
Timer		1	2	3	4	5	6	7	8			
Assigned Phs			2				6		8			
Phs Duration (G+Y+Rc), s			54.9				20.0		25.1			
Change Period (Y+Rc), s			4.0				4.0		4.0			
Max Green Setting (Gmax), s			44.0				16.0		28.0			
Max Q Clear Time (g_c+10), s			12.3				7.6		19.9			
Green Ext Time (p_c), s			4.4				0.3		1.2			
Intersection Summary												
HCM 2010 Ctrl Delay					25.5							
HCM 2010 LOS					C							

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	1	277	0	0	0	0	515	336	7	384	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	25	1	277	0	0	0	0	515	336	7	384	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	913	913	384	384	0	0	515	0	0			
Stage 1	398	398	-	-	-	-	-	-	-	-	-	-
Stage 2	515	515	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	304	273	664	1174	-	-	1051	-	-	-	-	-
Stage 1	678	603	-	-	-	-	-	-	-	-	-	-
Stage 2	600	535	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	302	0	664	1174	-	-	1051	-	-	-	-	-
Mov Cap-2 Maneuver	425	0	-	-	-	-	-	-	-	-	-	-
Stage 1	673	0	-	-	-	-	-	-	-	-	-	-
Stage 2	600	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.2			0			0.2					
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1174	-	-	425	664	1051	-	-				
HCM Lane V/C Ratio	-	-	-	0.061	0.417	0.007	-	-				
HCM Control Delay (s)	0	-	-	14	14.2	8.4	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	2.1	0	-	-				

AM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	241	93	253	223	37	115	392	206	141	842	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	60	241	93	253	223	37	115	392	206	141	842	63
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	77	375	168	289	797	356	144	1069	554	173	1637	122
Arrive On Green	0.04	0.11	0.11	0.16	0.23	0.23	0.08	0.47	0.47	0.10	0.49	0.49
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2256	1170	1774	3338	250
Grp Volume(v), veh/h	60	241	93	253	223	37	115	306	292	141	446	459
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1656	1774	1770	1819
Q Serve(g_s), s	3.3	6.5	5.6	13.9	5.2	1.9	6.4	11.0	11.2	7.8	17.2	17.2
Cycle Q Clear(g_c), s	3.3	6.5	5.6	13.9	5.2	1.9	6.4	11.0	11.2	7.8	17.2	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.14
Lane Grp Cap(c), veh/h	77	375	168	289	797	356	144	838	785	173	867	892
V/C Ratio(X)	0.78	0.64	0.55	0.88	0.28	0.10	0.80	0.37	0.37	0.82	0.51	0.51
Avail Cap(c_a), veh/h	160	566	253	390	1026	459	213	838	785	266	867	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	42.9	42.5	40.9	32.0	30.7	45.2	16.7	16.8	44.2	17.4	17.4
Incr Delay (d2), s/veh	15.1	1.8	2.9	15.4	0.2	0.1	12.3	1.2	1.3	10.7	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.0	3.3	2.6	8.1	2.6	0.8	3.6	5.6	5.4	4.4	8.8	9.1
LnGrp Delay(d),s/veh	62.4	44.7	45.3	56.3	32.2	30.9	57.4	18.0	18.2	55.0	19.6	19.5
LnGrp LOS	E	D	D	E	C	C	E	B	B	D	B	B
Approach Vol, veh/h	394			513			713			1046		
Approach Delay, s/veh	47.6			44.0			24.4			24.3		
Approach LOS	D			D			C			C		
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	13.7	51.4	20.3	14.6	12.1	53.0	8.4	26.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	15.0	31.0	22.0	16.0	12.0	34.0	9.0	29.0				
Max Q Clear Time (g_c+1), s	9.8	13.2	15.9	8.5	8.4	19.2	5.3	7.2				
Green Ext Time (p_c), s	0.1	9.3	0.4	2.1	0.1	8.3	0.0	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay	31.6											
HCM 2010 LOS	C											

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HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	632	1	4	670	251	9	6	8	500	17	334
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	632	1	4	670	251	9	6	8	500	17	334
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	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	85	1135	2	7	953	426	16	408	544	1534	957	814
Arrive On Green	0.05	0.31	0.31	0.00	0.27	0.27	0.01	0.56	0.56	0.51	0.51	0.51
Sat Flow, veh/h	1774	3626	6	1774	3539	1583	1774	725	967	2704	1863	1583
Grp Volume(v), veh/h	66	308	325	4	670	251	9	0	14	500	17	334
Grp Sat Flow(s), veh/h/ln	1770	1770	1862	1774	1770	1583	1774	0	1692	1352	1863	1583
Q Serve(g_s), s	3.7	14.5	14.5	0.2	17.1	13.8	0.5	0.0	0.4	11.0	0.4	13.0
Cycle Q Clear(g_c), s	3.7	14.5	14.5	0.2	17.1	13.8	0.5	0.0	0.4	11.0	0.4	13.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	85	554	583	7	953	426	16	0	952	1534	957	814
V/C Ratio(X)	0.77	0.56	0.56	0.54	0.70	0.59	0.57	0.00	0.01	0.33	0.02	0.41
Avail Cap(c_a), veh/h	195	708	745	71	1168	523	71	0	952	1534	957	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	28.6	28.6	49.7	32.9	31.7	49.4	0.0	9.6	14.5	11.9	15.0
Incr Delay (d2), s/veh	13.7	0.9	0.8	48.8	1.5	1.3	28.9	0.0	0.0	0.6	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	7.2	7.5	0.2	8.5	6.1	0.4	0.0	0.0	0.2	4.2	0.2	6.0
LnGrp Delay(d), s/veh	60.8	29.5	29.4	98.5	34.4	33.0	78.3	0.0	9.7	15.1	12.0	16.5
LnGrp LOS	E	C	C	F	C	C	E		A	B	B	B
Approach Vol, veh/h	699			925			23			851		
Approach Delay, s/veh	32.4			34.3			36.5			15.6		
Approach LOS	C			C			D			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	60.3	4.4	35.3	4.9	55.4	8.8	30.9					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	44.0	4.0	40.0	4.0	36.0	11.0	33.0					
Max Q Clear Time (g_c+I1), s	2.4	2.2	16.5	2.5	15.0	5.7	19.1					
Green Ext Time (p_c), s	3.6	0.0	10.6	0.0	3.3	0.0	7.8					
Intersection Summary												
HCM 2010 Ctrl Delay	27.4											
HCM 2010 LOS	C											

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HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	3.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	805	65	302	1001	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	805	65	302	1001	2	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	870	0	1943	435
Stage 1	-	-	-	-	838	-
Stage 2	-	-	-	-	1105	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	452	-	76	487
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	452	-	25	487
Mov Cap-2 Maneuver	-	-	-	-	71	-
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	90	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.4		23.9	
HCM LOS	C				C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	198	-	-	452	-	
HCM Lane V/C Ratio	0.04	-	-	0.668	-	
HCM Control Delay (s)	23.9	-	-	27.6	-	
HCM Lane LOS	C	-	-	D	-	
HCM 95th %tile Q(veh)	0.1	-	-	4.8	-	

AM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	5.7					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	47	76	38	302	113	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	47	76	38	302	113	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	208	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	170	-
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	1572	-	-	0	780	1034
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	-	756	1034
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	833	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.8		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	756	1034	1572	-	-	
HCM Lane V/C Ratio	0.149	0.011	0.03	-	-	
HCM Control Delay (s)	10.6	8.5	7.4	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	0.5	0	0.1	-	-	

HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	264	68	74	171	39	123	1159	175	53	680	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	241	264	68	74	171	39	123	1159	175	53	680	149
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	295	310	263	80	184	42	153	1437	216	68	1478	661
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.47	0.47	0.04	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	468	1081	247	1774	3086	464	1774	3539	1583
Grp Volume(v), veh/h	241	264	68	284	0	0	123	663	671	53	680	149
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1796	0	0	1774	1770	1781	1774	1770	1583
Q Serve(g_s), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.0	32.3	3.0	13.9	6.0
Cycle Q Clear(g_c), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.0	32.3	3.0	13.9	6.0
Prop In Lane	1.00		1.00	0.26		0.14	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	295	310	263	305	0	0	153	824	829	68	1478	661
V/C Ratio(X)	0.82	0.85	0.26	0.93	0.00	0.00	0.80	0.80	0.81	0.78	0.46	0.23
Avail Cap(c_a), veh/h	337	354	301	305	0	0	231	824	829	71	1478	661
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	40.5	36.3	40.9	0.0	0.0	44.9	22.8	22.9	47.7	21.0	18.7
Incr Delay (d2), s/veh	13.0	16.2	0.5	33.8	0.0	0.0	11.5	8.2	8.4	40.5	1.0	0.8
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(-26165%),veh/ln	7.5	8.5	1.7	10.6	0.0	0.0	3.8	17.4	17.8	2.2	6.9	2.8
LnGrp Delay(d),s/veh	53.3	56.7	36.8	74.7	0.0	0.0	56.4	31.1	31.3	88.2	22.0	19.5
LnGrp LOS	D	E	D	E			E	C	C	F	C	B
Approach Vol, veh/h	573			284			1457			882		
Approach Delay, s/veh	52.9			74.7			33.3			25.6		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	50.6		20.6	12.6	45.8		21.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	44.0		19.0	13.0	35.0		17.0				
Max Q Clear Time (g_c+I1), s	5.0	34.3		15.8	8.8	15.9		17.6				
Green Ext Time (p_c), s	0.0	7.9		0.9	0.1	13.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	38.4											
HCM 2010 LOS	D											
User approved volume balancing among the lanes for turning movement.												

PM Peak Hour Existing
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh		261.9									
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	108	0	880	20	0	602	242	490	16	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	108	0	880	20	0	602	242	490	16	
Major/Minor	Minor1		Major1			Major2			Minor2		
Conflicting Flow All	1189	440	602	0	0	880	0	0	1042	301	
Stage 1	880	-	-	-	-	-	-	-	602	-	
Stage 2	309	-	-	-	-	-	-	-	440	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	143	565	971	-	-	764	-	0	~ 184	695	
Stage 1	308	-	-	-	-	-	-	0	~ 453	-	
Stage 2	676	-	-	-	-	-	-	0	566	-	
Platoon blocked, %			-	-	-						
Mov Cap-1 Maneuver	129	565	971	-	-	764	-	-	~ 149	695	
Mov Cap-2 Maneuver	129	-	-	-	-	-	-	-	~ 149	-	
Stage 1	308	-	-	-	-	-	-	-	~ 453	-	
Stage 2	654	-	-	-	-	-	-	-	~ 458	-	
Approach	WB		NB			SB			NE		
HCM Control Delay, s	12.9		0			0			\$ 1092.6		
HCM LOS	B								F		
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	149	-	971	-	-	565	764	-			
HCM Lane V/C Ratio	3.289	-	-	-	-	0.191	-	-			
HCM Control Delay (s)	\$ 1092.6	0	0	-	-	12.9	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	46.6	-	0	-	-	0.7	0	-			
Notes											
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon											

PM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	62	244	170	38	223	3	206	444	102	9	206	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	244	170	38	223	3	206	444	102	9	206	45
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	597	327	278	578	589	8	284	945	216	16	744	159
Arrive On Green	0.34	0.18	0.18	0.33	0.16	0.16	0.08	0.33	0.33	0.01	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	3576	48	3442	2864	653	1774	2901	621
Grp Volume(v), veh/h	62	244	170	38	110	116	206	273	273	9	124	127
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1854	1721	1770	1747	1774	1770	1753
Q Serve(g_s), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	12.2	12.4	0.5	5.6	5.8
Cycle Q Clear(g_c), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	12.2	12.4	0.5	5.6	5.8
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.37	1.00		0.35
Lane Grp Cap(c), veh/h	597	327	278	578	292	306	284	584	577	16	454	449
V/C Ratio(X)	0.10	0.75	0.61	0.07	0.38	0.38	0.73	0.47	0.47	0.57	0.27	0.28
Avail Cap(c_a), veh/h	597	596	507	578	495	519	585	584	577	106	454	449
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	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	39.1	38.1	23.2	37.2	37.2	44.8	26.5	26.6	49.4	29.7	29.8
Incr Delay (d2), s/veh	0.1	3.4	2.2	0.0	0.8	0.8	2.7	2.0	2.1	28.9	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.2	6.7	4.5	0.7	2.8	2.9	2.9	6.3	6.3	0.4	2.9	3.0
LnGrp Delay(d),s/veh	22.9	42.5	40.2	23.3	38.0	38.0	47.5	28.6	28.7	78.3	31.2	31.4
LnGrp LOS	C	D	D	C	D	D	D	C	C	E	C	C
Approach Vol, veh/h	476				264		752				260	
Approach Delay, s/veh	39.1				35.9		33.8				32.9	
Approach LOS	D				D		C				C	
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	4.9	37.0	36.6	21.6	12.3	29.6	37.6	20.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	33.0	13.0	32.0	17.0	22.0	17.0	28.0				
Max Q Clear Time (g_c+I1), s	2.5	14.4	3.5	14.4	7.8	7.8	4.4	7.6				
Green Ext Time (p_c), s	0.0	4.7	0.0	3.1	0.4	4.2	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay	35.4											
HCM 2010 LOS	D											

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HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	103	73	100	14	47	49	200	581	36	30	382	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	103	73	100	14	47	49	200	581	36	30	382	52
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	239	327	23	485	434	236	875	744	40	1127	152
Arrive On Green	0.07	0.33	0.33	0.01	0.27	0.27	0.13	0.47	0.47	0.02	0.36	0.36
Sat Flow, veh/h	1774	713	977	1774	1770	1583	1774	1863	1583	1774	3134	424
Grp Volume(v), veh/h	103	0	173	14	47	49	200	581	36	30	215	219
Grp Sat Flow(s),veh/h/ln	1774	0	1690	1774	1770	1583	1774	1863	1583	1774	1770	1788
Q Serve(g_s), s	5.7	0.0	7.6	0.8	2.0	2.3	11.0	24.0	1.2	1.7	8.8	9.0
Cycle Q Clear(g_c), s	5.7	0.0	7.6	0.8	2.0	2.3	11.0	24.0	1.2	1.7	8.8	9.0
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	130	0	565	23	485	434	236	875	744	40	636	643
V/C Ratio(X)	0.79	0.00	0.31	0.61	0.10	0.11	0.85	0.66	0.05	0.75	0.34	0.34
Avail Cap(c_a), veh/h	213	0	565	71	485	434	373	875	744	106	636	643
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	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	45.6	0.0	24.7	49.1	27.1	27.2	42.4	20.4	14.4	48.6	23.3	23.4
Incr Delay (d2), s/veh	10.2	0.0	1.4	23.7	0.4	0.5	10.1	4.0	0.1	23.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	3.8	0.5	1.0	1.1	6.1	13.2	0.6	1.1	4.5	4.6	
LnGrp Delay(d),s/veh	55.7	0.0	26.1	72.8	27.5	27.7	52.5	24.4	14.5	71.9	24.7	24.8
LnGrp LOS	E		C	E	C	C	D	C	B	E	C	C
Approach Vol, veh/h	276				110		817				464	
Approach Delay, s/veh	37.1				33.4		30.8				27.8	
Approach LOS	D				C		C				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s6.3	51.0	5.3	37.4	17.3	40.0	11.3	31.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	47.0	4.0	27.0	21.0	32.0	12.0	19.0					
Max Q Clear Time (g_c+I1), s	26.0	2.8	9.6	13.0	11.0	7.7	4.3					
Green Ext Time (p_c), s	0.0	6.9	0.0	1.4	0.3	6.9	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	31.2											
HCM 2010 LOS	C											

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HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	133	742	462	49	86	209		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	133	742	462	49	86	209		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	164	2265	1640	173	497	443		
Arrive On Green	0.18	1.00	0.51	0.51	0.28	0.28		
Sat Flow, veh/h	1774	3632	3324	341	1774	1583		
Grp Volume(v), veh/h	133	742	252	259	86	209		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1803	1774	1583		
Q Serve(g_s), s	7.2	0.0	8.2	8.3	3.7	10.9		
Cycle Q Clear(g_c), s	7.2	0.0	8.2	8.3	3.7	10.9		
Prop In Lane	1.00			0.19	1.00	1.00		
Lane Grp Cap(c), veh/h	164	2265	898	915	497	443		
V/C Ratio(X)	0.81	0.33	0.28	0.28	0.17	0.47		
Avail Cap(c_a), veh/h	426	2265	898	915	497	443		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.9	0.0	14.1	14.1	27.2	29.9		
Incr Delay (d2), s/veh	8.8	0.4	0.8	0.8	0.8	3.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	4.2	4.3	1.9	10.4			
LnGrp Delay(d),s/veh	48.7	0.4	14.9	14.9	28.0	33.4		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	875	511	295					
Approach Delay, s/veh	7.7	14.9	31.8					
Approach LOS	A	B	C					
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				68.0		32.0	13.2	54.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				64.0		28.0	24.0	36.0
Max Q Clear Time (g_c+I1), s				2.0		12.9	9.2	10.3
Green Ext Time (p_c), s				11.5		0.8	0.3	9.5
Intersection Summary								
HCM 2010 Ctrl Delay			14.1					
HCM 2010 LOS			B					

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HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

	→	↖	↗	↖	↗			
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↖↖	↖		↖↖	↖	↖		
Volume (veh/h)	774	464	97	581	295	83		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	774	0	97	581	295	83		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2469	1104	123	2856	389	179		
Arrive On Green	0.23	0.00	0.14	1.00	0.11	0.11		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	774	0	97	581	295	83		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	18.1	0.0	5.3	0.0	8.3	4.9		
Cycle Q Clear(g_c), s	18.1	0.0	5.3	0.0	8.3	4.9		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2469	1104	123	2856	389	179		
V/C Ratio(X)	0.31	0.00	0.79	0.20	0.76	0.46		
Avail Cap(c_a), veh/h	2469	1104	319	2856	723	332		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.87	0.00	0.96	0.96	1.00	1.00		
Uniform Delay (d), s/veh	18.6	0.0	42.4	0.0	43.0	41.5		
Incr Delay (d2), s/veh	0.3	0.0	10.2	0.2	3.0	1.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	2.9	0.1	4.1	2.2		
LnGrp Delay(d),s/veh	18.9	0.0	52.6	0.2	46.1	43.4		
LnGrp LOS	B		D	A	D	D		
Approach Vol, veh/h	774			678	378			
Approach Delay, s/veh	18.9			7.7	45.5			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		15.3	10.9	73.8				84.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		21.0	18.0	49.0				71.0
Max Q Clear Time (g_c+I1), s		10.3	7.3	20.1				2.0
Green Ext Time (p_c), s		1.0	0.1	11.4				13.9
Intersection Summary								
HCM 2010 Ctrl Delay			20.2					
HCM 2010 LOS			C					

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HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	287	873	333	154	425	256	239	632	126	234	371	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	287	873	333	154	425	256	239	632	126	234	371	75
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	392	1802	806	307	1802	806	736	1454	651	530	1208	242
Arrive On Green	1.00	1.00	1.00	0.34	0.34	0.34	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	756	3539	1583	462	3539	1583	1824	3539	1583	1366	2940	588
Grp Volume(v), veh/h	287	873	333	154	425	256	239	632	126	234	222	224
Grp Sat Flow(s),veh/h/ln	756	1770	1583	462	1770	1583	912	1770	1583	683	1770	1759
Q Serve(g_s), s	25.2	0.0	0.0	28.3	8.6	11.9	10.2	12.8	5.1	14.8	8.4	8.6
Cycle Q Clear(g_c), s	33.8	0.0	0.0	28.3	8.6	11.9	18.8	12.8	5.1	27.6	8.4	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	392	1802	806	307	1802	806	736	1454	651	530	727	723
V/C Ratio(X)	0.73	0.48	0.41	0.50	0.24	0.32	0.32	0.43	0.19	0.44	0.31	0.31
Avail Cap(c_a), veh/h	430	1982	887	331	1982	887	736	1454	651	530	727	723
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.9	0.0	0.0	25.5	19.0	20.1	26.2	21.1	18.9	31.0	19.8	19.9
Incr Delay (d2), s/veh	5.7	0.2	0.3	1.2	0.1	0.2	1.2	0.9	0.7	2.7	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.1	0.1	0.1	3.7	4.2	5.3	2.7	6.4	2.4	3.0	4.3	4.4
LnGrp Delay(d),s/veh	8.6	0.2	0.3	26.7	19.1	20.3	27.4	22.1	19.5	33.7	20.9	21.0
LnGrp LOS	A	A	A	C	B	C	C	C	B	C	C	C
Approach Vol, veh/h	1493			835			997			680		
Approach Delay, s/veh	1.8			20.9			23.0			25.3		
Approach LOS	A			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	45.1		54.9		45.1		54.9					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	36.0		56.0		36.0		56.0					
Max Q Clear Time (g_c+I1), s	20.8		35.8		29.6		30.3					
Green Ext Time (p_c), s	9.5		15.1		4.8		18.1					
Intersection Summary												
HCM 2010 Ctrl Delay	15.1											
HCM 2010 LOS	B											

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	1534	0	0	749	7	0	0	0	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	2	1534	0	0	749	7	0	0	0	0	0	8
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	756	0	0	1534	0	0				1524	2291	378
Stage 1	-	-	-	-	-	-				753	753	-
Stage 2	-	-	-	-	-	-				771	1538	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	4.02	3.32
Pot Cap-1 Maneuver	851	-	-	430	-	-				109	39	620
Stage 1	-	-	-	-	-	-				426	416	-
Stage 2	-	-	-	-	-	-				417	176	-
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	851	-	-	430	-	-				109	0	620
Mov Cap-2 Maneuver	-	-	-	-	-	-				109	0	-
Stage 1	-	-	-	-	-	-				426	0	-
Stage 2	-	-	-	-	-	-				416	0	-
Approach	EB			WB			SB					
HCM Control Delay, s	0			0			10.9					
HCM LOS	B											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	851	-	-	430	-	-	620					
HCM Lane V/C Ratio	0.002	-	-	-	-	-	0.013					
HCM Control Delay (s)	9.2	-	-	0	-	-	10.9					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	1209	764	73	679	32	303		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1209	0	73	679	32	303		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2194	982	307	2194	532	475		
Arrive On Green	0.82	0.00	0.20	0.20	0.30	0.30		
Sat Flow, veh/h	3632	1583	460	3632	1774	1583		
Grp Volume(v), veh/h	1209	0	73	679	32	303		
Grp Sat Flow(s),veh/h/ln	1770	1583	460	1770	1774	1583		
Q Serve(g_s), s	11.0	0.0	13.9	16.3	1.3	16.6		
Cycle Q Clear(g_c), s	11.0	0.0	24.9	16.3	1.3	16.6		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2194	982	307	2194	532	475		
V/C Ratio(X)	0.55	0.00	0.24	0.31	0.06	0.64		
Avail Cap(c_a), veh/h	2194	982	307	2194	532	475		
HCM Platoon Ratio	1.33	1.33	0.33	0.33	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.3	0.0	29.8	21.6	25.0	30.3		
Incr Delay (d2), s/veh	1.0	0.0	1.8	0.4	0.2	6.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	5.5	0.0	1.9	8.1	0.7	8.1		
LnGrp Delay(d),s/veh	5.3	0.0	31.7	22.0	25.2	36.7		
LnGrp LOS	A		C	C	C	D		
Approach Vol, veh/h	1209			752	335			
Approach Delay, s/veh	5.3			22.9	35.6			
Approach LOS	A			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.0		66.0				66.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		30.0		62.0				62.0
Max Q Clear Time (g_c+I1), s		18.6		13.0				26.9
Green Ext Time (p_c), s		0.9		24.9				20.8
Intersection Summary								
HCM 2010 Ctrl Delay				15.5				
HCM 2010 LOS				B				

PM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	1787	121	53	540	52	108	41	122	45	33	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	1787	121	53	540	52	108	41	122	45	33	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	77	2674	181	68	1776	171	136	91	271	57	327	278
Arrive On Green	0.04	0.55	0.55	0.05	0.72	0.72	0.08	0.22	0.22	0.03	0.18	0.18
Sat Flow, veh/h	1774	4866	329	1774	3264	313	1774	414	1232	1774	1863	1583
Grp Volume(v), veh/h	60	1244	664	53	292	300	108	0	163	45	33	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1805	1774	1770	1807	1774	0	1645	1774	1863	1583
Q Serve(g_s), s	3.3	26.1	26.2	3.0	5.8	5.9	6.0	0.0	8.6	2.5	1.5	1.6
Cycle Q Clear(g_c), s	3.3	26.1	26.2	3.0	5.8	5.9	6.0	0.0	8.6	2.5	1.5	1.6
Prop In Lane	1.00		0.18	1.00		0.17	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	77	1863	992	68	963	983	136	0	362	57	327	278
V/C Ratio(X)	0.78	0.67	0.67	0.78	0.30	0.30	0.79	0.00	0.45	0.79	0.10	0.11
Avail Cap(c_a), veh/h	160	1863	992	124	963	983	213	0	362	106	327	278
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	16.0	16.1	47.0	7.1	7.1	45.4	0.0	33.8	48.0	34.6	34.6
Incr Delay (d2), s/veh	15.1	1.9	3.6	17.3	0.8	0.8	10.5	0.0	4.0	20.5	0.6	0.8
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(-26165%),veh/ln	12.6	13.9	1.8	3.0	3.1	3.3	0.0	4.3	1.6	0.8	0.8	0.8
LnGrp Delay(d),s/veh	62.4	18.0	19.7	64.4	7.9	7.9	55.9	0.0	37.8	68.5	35.2	35.4
LnGrp LOS	E	B	B	E	A	A	E		D	E	D	D
Approach Vol, veh/h		1968			645			271			108	
Approach Delay, s/veh		19.9			12.6			45.0			49.2	
Approach LOS		B			B			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), s7.2	26.0	7.8	58.9	11.7	21.6	8.4	58.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	22.0	7.0	49.0	12.0	16.0	9.0	47.0					
Max Q Clear Time (g_c+I1), s	10.6	5.0	28.2	8.0	3.6	5.3	7.9					
Green Ext Time (p_c), s	0.0	0.9	0.0	16.8	0.1	0.9	0.0	27.3				
Intersection Summary												
HCM 2010 Ctrl Delay					21.6							
HCM 2010 LOS					C							

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HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔			↔↔			↖		↗	↔↔		
Volume (veh/h)	3	1739	35	71	615	2	108	0	208	3	1	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	0	1863	1900	1863	1900
Adj Flow Rate, veh/h	3	1739	35	71	615	2	108	0	208	3	1	3
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2	2	2	2
Cap, veh/h	0	2378	48	0	2424	8	89	0	0	0	66	197
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.05	0.00	0.00	0.25	0.16	0.16
Sat Flow, veh/h	0	3549	71	0	3619	12	1774	108	0	411	1234	
Grp Volume(v), veh/h	0	865	909	0	301	316	108	212.7	0	0	4	
Grp Sat Flow(s),veh/h/ln	0	1770	1850	0	1770	1861	1774	F	0	0	1645	
Q Serve(g_s), s	0.0	31.6	31.9	0.0	6.8	6.8	5.0		0.0	0.0	0.2	
Cycle Q Clear(g_c), s	0.0	31.6	31.9	0.0	6.8	6.8	5.0		0.0	0.0	0.2	
Prop In Lane	0.00		0.04	0.00		0.01	1.00		0.00		0.75	
Lane Grp Cap(c), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
V/C Ratio(X)	0.00	0.73	0.73	0.00	0.25	0.25	1.22		0.00	0.00	0.02	
Avail Cap(c_a), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(l)	0.00	1.00	1.00	0.00	1.00	1.00	1.00		0.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	10.7	10.7	0.0	6.6	6.6	47.5		0.0	0.0	35.4	
Incr Delay (d2), s/veh	0.0	4.0	3.9	0.0	0.5	0.5	165.2		0.0	0.0	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(-26165%),veh/ln	16.4	17.2	0.0	3.4	3.6	6.5			0.0	0.0	0.1	
LnGrp Delay(d),s/veh	0.0	14.6	14.6	0.0	7.1	7.1	212.7		0.0	0.0	35.5	
LnGrp LOS	B	B		A	A	F					D	
Approach Vol, veh/h	1774			617			4			4		
Approach Delay, s/veh	14.6			7.1			35.5			35.5		
Approach LOS	B			A			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0		0.0	71.0	9.0	20.0	0.0	71.0				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	4.0		4.0	59.0	5.0	16.0	4.0	59.0				
Max Q Clear Time (g_c+10), s	0.0		0.0	33.9	7.0	2.2	0.0	8.8				
Green Ext Time (p_c), s	0.0		0.0	19.4	0.0	0.0	0.0	31.8				
Intersection Summary												
HCM 2010 Ctrl Delay	21.3											
HCM 2010 LOS	C											

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HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↖	↗		↖	↗		↖	↗
Volume (veh/h)	0	0	0	348	4	21	373	155	0	0	71	157
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				348	4	21	373	155	0	0	71	157
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				395	5	356	629	261	0	0	83	183
Arrive On Green				0.23	0.23	0.23	0.83	0.83	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1755	20	1583	1271	528	0	0	517	1144
Grp Volume(v), veh/h				352	0	21	528	0	0	0	0	228
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1799	0	0	0	0	1661
Q Serve(g_s), s				19.2	0.0	1.0	10.0	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				19.2	0.0	1.0	10.0	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.99		1.00	0.71		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				400	0	356	890	0	0	0	0	266
V/C Ratio(X)				0.88	0.00	0.06	0.59	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				515	0	459	890	0	0	0	0	266
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				37.4	0.0	30.4	5.3	0.0	0.0	0.0	0.0	40.9
Incr Delay (d2), s/veh				13.4	0.0	0.1	2.9	0.0	0.0	0.0	0.0	28.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				10.9	0.0	0.5	5.3	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh				50.9	0.0	30.5	8.2	0.0	0.0	0.0	0.0	69.2
LnGrp LOS				D		C	A					E
Approach Vol, veh/h				373			528			228		
Approach Delay, s/veh				49.7			8.2			69.2		
Approach LOS				D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.5				20.0		26.5				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				16.0		29.0				
Max Q Clear Time (g_c+10), s		12.0				15.4		21.2				
Green Ext Time (p_c), s		3.9				0.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	34.2											
HCM 2010 LOS	C											

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HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	13	277	0	0	0	0	430	774	10	404	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	57	13	277	0	0	0	0	430	774	10	404	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	854	854	404	404	0	0	430	0	0	-	-	-
Stage 1	424	424	-	-	-	-	-	-	-	-	-	-
Stage 2	430	430	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	329	296	647	1155	-	-	1129	-	-	-	-	-
Stage 1	660	587	-	-	-	-	-	-	-	-	-	-
Stage 2	656	583	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	325	0	647	1155	-	-	1129	-	-	-	-	-
Mov Cap-2 Maneuver	445	0	-	-	-	-	-	-	-	-	-	-
Stage 1	653	0	-	-	-	-	-	-	-	-	-	-
Stage 2	656	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.7	-	-	0	-	-	0.2	-	-	-	-	-
HCM LOS	B	-	-	-	-	-	-	-	-	-	-	-
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1155	-	-	445	647	1129	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	0.157	0.428	0.009	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	14.6	14.7	8.2	0	-	-	-	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.1	0	-	-	-	-	-	-

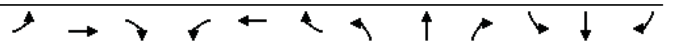
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HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	204	152	221	337	174	198	891	169	168	549	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	121	204	152	221	337	174	198	891	169	168	549	57
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	151	469	210	254	676	302	233	1341	254	200	1401	145
Arrive On Green	0.08	0.13	0.13	0.14	0.19	0.19	0.13	0.45	0.45	0.11	0.43	0.43
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2970	563	1774	3238	335
Grp Volume(v), veh/h	121	204	152	221	337	174	198	531	529	168	299	307
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1763	1774	1770	1804
Q Serve(g_s), s	6.7	5.3	9.2	12.2	8.5	10.0	10.9	23.5	23.5	9.3	11.6	11.6
Cycle Q Clear(g_c), s	6.7	5.3	9.2	12.2	8.5	10.0	10.9	23.5	23.5	9.3	11.6	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		0.19
Lane Grp Cap(c), veh/h	151	469	210	254	676	302	233	799	797	200	766	780
V/C Ratio(X)	0.80	0.44	0.72	0.87	0.50	0.58	0.85	0.66	0.66	0.84	0.39	0.39
Avail Cap(c_a), veh/h	231	566	253	302	708	317	355	799	797	231	766	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	39.9	41.6	41.9	36.2	36.8	42.4	21.5	21.5	43.5	19.4	19.4
Incr Delay (d2), s/veh	11.0	0.6	7.9	20.3	0.6	2.3	11.3	4.3	4.3	21.2	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.8	2.6	4.5	7.4	4.2	4.5	6.1	12.3	12.4	5.7	6.0	6.1
LnGrp Delay(d),s/veh	56.0	40.6	49.5	62.3	36.8	39.1	53.8	25.8	25.8	64.7	20.9	20.9
LnGrp LOS	E	D	D	E	D	D	D	C	C	E	C	C
Approach Vol, veh/h	477			732			1258			774		
Approach Delay, s/veh	47.3			45.0			30.2			30.4		
Approach LOS	D			D			C			C		
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	15.2	49.2	18.3	17.2	17.2	47.3	12.5	23.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	38.0	17.0	16.0	20.0	31.0	13.0	20.0				
Max Q Clear Time (g_c+1), s	11.3	25.5	14.2	11.2	12.9	13.6	8.7	12.0				
Green Ext Time (p_c), s	0.1	8.1	0.2	2.0	0.3	10.2	0.1	3.0				
Intersection Summary												
HCM 2010 Ctrl Delay	36.1											
HCM 2010 LOS	D											

PM Peak Hour Existing
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HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	197	713		5	6	1027	615	6	11	6	271	3 143
Number	7	4		14	3	8	18	5	2	12	1	6 16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	197	713		5	6	1027	615	6	11	6	271	3 143
Adj No. of Lanes	1	2		0	1	2	1	1	1	0	2	1 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
Percent Heavy Veh, %	2	2		2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1890		13	11	1416	633	11	396	216	962	565 480
Arrive On Green	0.13	0.52		0.52	0.01	0.40	0.40	0.01	0.35	0.35	0.30	0.30 0.30
Sat Flow, veh/h	1774	3603		25	1774	3539	1583	1774	1135	619	2697	1863 1583
Grp Volume(v), veh/h	197	350		368	6	1027	615	6	0	17	271	3 143
Grp Sat Flow(s),veh/h/ln	1774	1770		1858	1774	1770	1583	1774	0	1754	1349	1863 1583
Q Serve(g_s), s	10.9	11.7		11.7	0.3	24.5	38.1	0.3	0.0	0.6	7.8	0.1 6.9
Cycle Q Clear(g_c), s	10.9	11.7		11.7	0.3	24.5	38.1	0.3	0.0	0.6	7.8	0.1 6.9
Prop In Lane	1.00			0.01	1.00		1.00	1.00		0.35	1.00	1.00
Lane Grp Cap(c), veh/h	232	928		975	11	1416	633	11	0	612	962	565 480
V/C Ratio(X)	0.85	0.38		0.38	0.55	0.73	0.97	0.55	0.00	0.03	0.28	0.01 0.30
Avail Cap(c_a), veh/h	337	973		1022	71	1416	633	71	0	612	962	565 480
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00 1.00
Uniform Delay (d), s/veh	42.5	14.1		14.1	49.6	25.4	29.4	49.6	0.0	21.4	27.0	24.3 26.7
Incr Delay (d2), s/veh	12.8	0.3		0.2	37.0	1.9	28.5	37.0	0.0	0.1	0.7	0.0 1.6
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0
%ile BackOfQ(-26165%),veh/ln	5.8			6.1	0.3	12.4	21.6	0.3	0.0	0.3	3.0	0.1 3.2
LnGrp Delay(d),s/veh	55.3	14.3		14.3	86.6	27.2	58.0	86.6	0.0	21.5	27.7	24.3 28.3
LnGrp LOS	E	B		B	F	C	E	F		C	C	C C
Approach Vol, veh/h	915			1648			23			417		
Approach Delay, s/veh	23.2			38.9			38.4			27.9		
Approach LOS	C			D			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	38.9	4.6	56.5	4.6	34.3	17.1	44.0					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	29.0	4.0	55.0	4.0	21.0	19.0	40.0					
Max Q Clear Time (g_c+I1), s	2.6	2.3	13.7	2.3	9.8	12.9	40.1					
Green Ext Time (p_c), s	1.6	0.0	23.0	0.0	1.2	0.3	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	32.6											
HCM 2010 LOS	C											

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HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1926	60	91	635	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1926	60	91	635	3	29
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1986	0	2456	993
Stage 1	-	-	-	-	1956	-
Stage 2	-	-	-	-	500	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	127	-	37	210
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	556	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	127	-	10	210
Mov Cap-2 Maneuver	-	-	-	-	44	-
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	158	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		10.6		34.2	
HCM LOS	C		D		D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	155	-	-	127	-	
HCM Lane V/C Ratio	0.206	-	-	0.717	-	
HCM Control Delay (s)	34.2	-	-	84.5	-	
HCM Lane LOS	D	-	-	F	-	
HCM 95th %tile Q(veh)	0.7	-	-	4	-	

PM Peak Hour Existing
LSA Associates, Inc.

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HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	7.5					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	55	101	89	741	239	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	55	101	89	741	239	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	300	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	211	-
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	1506	-	-	0	691	969
Stage 1	-	-	-	0	934	-
Stage 2	-	-	-	0	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	664	969
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	792	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.6		0		13.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	664	969	1506	-	-	
HCM Lane V/C Ratio	0.36	0.011	0.037	-	-	
HCM Control Delay (s)	13.4	8.8	7.5	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	1.6	0	0.1	-	-	

APPENDIX C

CUMULATIVE PROJECTS LIST AND PEAK-HOUR VOLUMES

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In-N-Out Drive-Thru Restaurant Cumulative Projects List (October 2014)

No.	Project Name	Description	Location
1	West Broadway Urban Village Specific Plan (Adopted January 2010)	~ 40 acre Study Area ~ The goal of the West Broadway Urban Village (WBUV) Specific Plan is to revitalize Seaside's central business district. The Plan includes a mix of residential, ground floor retail and commercial uses, and public amenities along Broadway Avenue with supporting future transit-oriented development located along the west side of Del Monte Boulevard. Adopted Design Guidelines promote smart growth, pedestrian-oriented streets and green building practices. Two planned catalyst projects include a public library, parking structure and mixed-use development on Broadway Avenue and a gateway hotel and conference project at the southwest end of the plan area.	Area is bounded by Del Monte Blvd, Olympia, Fremont Blvd, Imperial St., Canyon Del Rey and Harcourt Ave.
2	West Broadway Parking Structure & Library (Pending)	A public library, parking structure and mixed-use development has been identified as an opportunity site. The proposed project includes the following components. Library: 20,000 sq ft Retail: 20,000 sq ft Residential: 80 units (senior/affordable) Parking: up to 500 spaces Public Plaza: 5,000 sq ft	2.1 acrea site bounded by W. Broadway and Olympia and includes the City corporation yard
3	Seaside Resort (Seaside Resort, LLC) (Pending)	330 room Fairmont Hotel; 175 timeshares; 125 residential lots	At the Bayonet and Black Horse Golf Course in the northwest area of the City on the former Fort Ord military base.
4	The Projects at Main Gate Specific Plan/EIR (Adopted August 2010)	Proposed 552,000 sq ft of regional retail/entertainment, including a department store and restaurants in a life style center that will include a 250 room hotel and spa	~ 60 acres at the former Fort Ord Main Gate bordered by Hwy 1, Light Fighter Drive, 2 nd Avenue, and 1 st Street
5	Senior Housing Living	Proposed assisted living and memory care facility that includes 111,237 square feet of floor area. The assisted living facility will consist of 83 units comprised of 41 studio units, 36 1-bedroom units, 6 2-bedroom units. The memory care facility will consist of 49 total units comprised of 37 private units and 12 companion units. The facility will include a commercial kitchen with full service dining for the residents and related support services.	5.4 acres at the terminus of Monterey Road and Coe Avenue (former Fort Ord)
6	Monterey Veterans Cemetery (Pending)	The Central Coast Veteran's Cemetery will honor the service of regional Veterans. The site will serve the surrounding four-county area with 11,500 traditional burial and crypt sites. A Final Development Master Plan includes 80 acres for the cemetery and two adjacent development opportunity parcels. Sale proceeds from the development parcels will generate an operational endowment for the cemetery.	~175 acres of the former Fort Ord Military Base within the City of Seaside and Monterey County
7	Monterey Downs Horse Park	Proposal includes a mix of residential housing units as part of a combination equestrian training facility, mixed us commercial office, retail hotel, residential, light industrial and non-profit equestrian and recreational facility located in Monterey County.	Approximately 40 acres to the northwest of the Veteran's Cemetery in the City of Seaside. Includes the Endowment Parcel
8	East Seaside	The City has established an advisory committee to formulate a high-level conceptual master plan for East Seaside. Proposed land uses include a trade and expo center, green technology park, sports complex with fields, a new school and residential neighborhoods. The conceptual master plan will be available Fall 2010.	The project site comprises approximately 700 acres and is bounded to the west by General Jim Moore Boulevard, Seaside proper, and a Habitat Management area under the Bureau of Land Management (BLM). The northern boundary is a military residential enclave and the Department of Defense Building. The City's southern boundary marks the southern boundary of the planned development area while Eucalyptus Road runs through the property generally west to east

Cumulative Projects Trip Generation

Land Use		Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Trip Rates ¹										
254	Assisted Living		Bed	2.74	0.12	0.06	0.18	0.15	0.15	0.29
566	Cemetery		Acre	4.73	0.12	0.05	0.17	0.28	0.56	0.84
Cumulative Projects Trip Generation										
1	West Broadway Urban Village Specific Plan ²									
	Total (excluding Library)			2,703	176	153	341	66	154	220
2	West Broadway Urban Village Library ²									
	Library (20,000 Square Feet)			1,080	15	6	21	68	74	142
3	Seaside Resort ³									
	210 Single-Family Homes and 330 Resort Hotel Rooms			5,672	145	122	267	180	182	362
4	Seaside Main Gate Retail Development ⁴									
	559,500 Square Feet of Retail Use and 250 Hotel Rooms			26,067	437	239	716	934	997	1,931
5	Senior Housing									
	132 Assisted Living Units	150	Beds	411	18	9	27	22	22	43
6	Monterey Veterans Cemetery									
	Total	80	Acres	378	10	4	14	22	45	67
Total				36,311	801	533	1,386	1,292	1,474	2,765

¹ Trip rates referenced from the Institute of Transportation Engineers *Trip Generation*, 9th Edition (2012).

² Trip generation referenced from West Broadway Urban Village Specific Plan Transportation Impact Study (Fehr & Peers, December 2008).

Includes 234,667 square feet (sf) of retail use, 96,533 sf of office use, a 20,000 sf library, 250 hotel rooms, 351 townhomes/condominiums, 66 apartments, and 82 senior housing units.

³ Trip generation referenced from the Seaside Resort Traffic Analysis Study (Higgins Associates, July 2001).

⁴ Trip generation referenced from the Seaside Main Gate Retail Development Transportation Analysis Study (Hexagon Transportation Consultants, Inc., March 2008).

Cumulative Project Trips

Intersection			Total Cumulative		1. West Broadway Urban Village		2. West Broadway Parking Structure		3. Seaside Resort		4. Main Gate Specific Plan		5. Senior Housing		6. Monterey Veterans	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1 Fremont Blvd/Monterey Rd																
	NL		0	0												
	NT		8	24	5	11							3	13		
	NR		0	0												
	SL		0	0												
	ST		22	16	8	9							14	7		
	SR		0	0												
	EL		0	0												
	ET		0	0												
	ER		0	0												
	WL		0	0												
	WT		0	0												
	WR		0	0												
2 Fremont Blvd/Del Monte Blvd																
	NL		0	0												
	NT		5	14	3	7							2	7		
	NR		2	6					2	6						
	SL		0	0												
	ST		12	10	5	6							7	4		
	SR		10	6	3	3							7	3		
	EL		3	10	2	4							1	6		
	ET		0	0												
	ER		1	2	1	2										
	WL		0	0												
	WT		0	0												
	WR		0	0												
3 Playa Ave/Del Monte Blvd																
	NL		0	0												
	NT		0	0												
	NR		0	0												
	SL		0	0												
	ST		0	0												
	SR		0	0												
	EL		0	0												
	ET		11	32	6	14	4	12					1	6		
	ER		0	0												
	WL		0	0												
	WT		20	20	10	11	3	6					7	3		
	WR		0	0												
4 Tioga Ave/Del Monte Blvd																
	NL		0	0												
	NT		0	0												
	NR		0	0												
	SL		0	0												
	ST		0	0												
	SR		3	3	3	3										
	EL		2	4	2	4										
	ET		15	44	6	14	8	24					1	6		
	ER		0	0												
	WL		0	0												
	WT		22	26	10	11	5	12					7	3		
	WR		0	0												
5 Contra Costa St/Del Monte Blvd																
	NL		0	0												
	NT		0	0												
	NR		0	0												
	SL		0	0												
	ST		0	0												
	SR		6	15	3	3	3	12								
	EL		5	16	2	4	3	12								
	ET		29	59	18	25	10	26			0	2	1	6		
	ER		0	0												
	WL		0	0												
	WT		23	31	8	9	7	17			1	2	7	3		
	WR		0	0												
6 Broadway Ave/Del Monte Blvd																
	NL		36	87	28	53	6	19			1	4			1	11
	NT		0	0												
	NR		17	48	3	6	13	38			1	4				
	SL		0	0												
	ST		0	0												
	SR		0	0												
	EL		0	0												
	ET		19	31	17	24			1	1			1	6		
	ER		36	65	26	35	5	20			2	4			3	6
	WL		16	48	4	5	10	39			2	4				
	WT		15	11	7	7			1	1			7	3		
	WR		0	0												

Cumulative Project Trips (continued)

Intersection	Total Cumulative		1. West Broadway Urban Village		2. West Broadway Parking Structure		3. Seaside Resort		4. Main Gate Specific Plan		5. Senior Housing		6. Monterey Veterans	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
7 Canyon Del Rey Blvd/Del Monte Blvd														
NL	4	9	2	4			2	3	0	2				
NT	4	10	2	5			2	3	0	2				
NR	10	14	8	9			2	3	0	2				
SL	21	23	21	23										
ST	7	11	2	3			2	3	3	5				
SR	0	0												
EL	0	0												
ET	35	59	28	32	3	15					1	6	3	6
ER	6	11	2	3			1	3	3	5				
WL	6	14	5	11			1	3						
WT	29	67	17	38	4	15					7	3	1	11
WR	12	27	12	27										
8 Roberts Ave/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	36	64	28	32	2	14	0	2	2	4	1	6	3	6
ER	0	0												
WL	0	0												
WT	29	68	17	38	4	14			0	2	7	3	1	11
WR	0	0												
9 English Ave/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	2	10			1	7	0	1	1	2				
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	34	54	28	32	1	7	0	1	1	2	1	6	3	6
ER	0	0												
WL	2	8			2	7			0	1				
WT	27	60	17	38	2	7			0	1	7	3	1	11
WR	0	0												
10 Casa Verde Way/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	32	44	28	32							1	6	3	6
ER	0	0												
WL	0	0												
WT	25	52	17	38							7	3	1	11
WR	0	0												
11 Sloat Ave/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	32	44	28	32							1	6	3	6
ER	0	0												
WL	0	0												
WT	25	52	17	38							7	3	1	11
WR	0	0												
12 Canyon Del Rey Blvd/Cabrillo Hwy SB Ramps														
NL	11	23	10	21			1	1	0	1				
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	0	0												
ER	0	0												
WL	10	12	8	9			1	1	1	2				
WT	0	0												
WR	0	0												

Cumulative Project Trips (continued)

Intersection	Total Cumulative		1. West Broadway Urban Village		2. West Broadway Parking Structure		3. Seaside Resort		4. Main Gate Specific Plan		5. Senior Housing		6. Monterey Veterans	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
13 Canyon Del Rey Blvd/Cabrillo Hwy NB Ramps														
NL	0	0												
NT	11	23	10	21			1	1	0	1				
NR	6	13	5	11			1	1	0	1				
SL	0	0												
ST	10	12	8	9			1	1	1	2				
SR	0	0												
EL	0	0												
ET	0	0												
ER	17	20	15	17			1	1	1	2				
WL	0	0												
WT	0	0												
WR	0	0												
14 Canyon Del Rey Blvd/Fremont Blvd														
NL	13	22					11	12	2	10				
NT	15	24	2	2			11	12	2	10				
NR	8	13	6	7							1	3	1	3
SL	2	4	2	4										
ST	17	34	1	3			8	13	8	18				
SR	2	5	2	5										
EL	4	4	4	4										
ET	15	20	12	13							1	4	2	3
ER	8	13					8	13						
WL	7	17	4	8							3	2	0	7
WT	12	25	7	16							4	2	1	7
WR	3	4	3	4										
15 Canyon Del Ray Rd/Salinas Hwy														
NL	0	0												
NT	10	15	8	9							1	3	1	3
NR	0	0												
SL	0	0												
ST	9	20	5	11							3	2	1	7
SR	0	0												
EL	0	0												
ET	0	0												
ER	0	0												
WL	0	0												
WT	0	0												
WR	7	17							7	17				
16 Cabrillo Hwy SB On-Ramp/Del Monte Blvd														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	0	0												
EL	0	0												
ET	32	44	28	32							1	6	3	6
ER	0	0												
WL	0	0												
WT	25	52	17	38							7	3	1	11
WR	0	0												
17 English Ave/Cabrillo Hwy NB Ramps														
NL	0	0												
NT	0	0												
NR	0	0												
SL	0	0												
ST	0	0												
SR	2	8			2	7			0	1				
EL	2	10			1	7	0	1	1	2				
ET	0	0												
ER	0	0												
WL	0	0												
WT	0	0												
WR	0	0												

APPENDIX D

CUMULATIVE LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Volume (veh/h)	79	139	85	119	249	30	172	879	159	63	1099	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	139	85	119	249	30	172	879	159	63	1099	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	177	185	158	125	261	31	195	1392	252	81	1417	634
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	542	1133	137	1774	2995	542	1774	3539	1583
Grp Volume(v), veh/h	79	139	85	398	0	0	172	519	519	63	1099	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1812	0	0	1774	1770	1767	1774	1770	1583
Q Serve(g_s), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.2	22.2	3.5	27.0	5.5
Cycle Q Clear(g_c), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.2	22.2	3.5	27.0	5.5
Prop In Lane	1.00		1.00	0.30		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	177	185	158	417	0	0	195	823	822	81	1417	634
V/C Ratio(X)	0.45	0.75	0.54	0.96	0.00	0.00	0.88	0.63	0.63	0.78	0.78	0.21
Avail Cap(c_a), veh/h	284	298	253	417	0	0	195	823	822	106	1417	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	43.8	42.8	38.0	0.0	0.0	43.9	20.3	20.3	47.2	26.1	19.6
Incr Delay (d2), s/veh	1.8	6.0	2.9	32.7	0.0	0.0	34.1	3.7	3.7	22.9	4.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	4.1	2.4	14.6	0.0	0.0	6.5	11.7	11.6	2.2	14.0	2.5
LnGrp Delay(d),s/veh	44.2	49.8	45.7	70.7	0.0	0.0	77.9	23.9	23.9	70.2	30.3	20.3
LnGrp LOS	D	D	D	E			E	C	C	E	C	C
Approach Vol, veh/h	303			398			1210			1294		
Approach Delay, s/veh	47.2			70.7			31.6			31.2		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	50.5		13.9	15.0	44.1		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	39.0		16.0	11.0	34.0		23.0				
Max Q Clear Time (g_c+I1), s	5.5	24.2		9.3	11.6	29.0		23.7				
Green Ext Time (p_c), s	0.0	11.7		0.7	0.0	4.4		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

AM Peak Hour Cumulative Trips
LSA Associates, Inc.

Synchro 8 Report
Page 1

HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh	13.2										
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	177	0	546	52	0	692	638	149	22	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	177	0	546	52	0	692	638	149	22	
Major/Minor	Minor1	Major1	Major2	Minor2							
Conflicting Flow All	903	273	692	0	0	546	0	0	965	346	
Stage 1	546	-	-	-	-	-	-	-	692	-	
Stage 2	357	-	-	-	-	-	-	-	273	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	232	725	899	-	-	1019	-	0	209	650	
Stage 1	490	-	-	-	-	-	-	0	400	-	
Stage 2	633	-	-	-	-	-	-	0	710	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	210	725	899	-	-	1019	-	-	158	650	
Mov Cap-2 Maneuver	210	-	-	-	-	-	-	-	158	-	
Stage 1	490	-	-	-	-	-	-	-	400	-	
Stage 2	602	-	-	-	-	-	-	-	537	-	
Approach	WB	NB	SB	NE							
HCM Control Delay, s	11.6	0	0	114.1							
HCM LOS	B			F							
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBRWBLn1	SBL	SBT				
Capacity (veh/h)	158	-	899	-	-	725	1019	-			
HCM Lane V/C Ratio	0.943	-	-	-	-	0.244	-	-			
HCM Control Delay (s)	114.1	0	0	-	-	11.6	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	6.9	-	0	-	-	1	0	-			

AM Peak Hour Cumulative Trips
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	9	73	117	29	95	1	135	185	22	4	589	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	73	117	29	95	1	135	185	22	4	589	42
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	533	190	161	557	413	4	203	1340	157	7	1225	87
Arrive On Green	0.30	0.10	0.10	0.31	0.12	0.12	0.06	0.42	0.42	0.00	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	1774	3588	38	3442	3191	375	1774	3352	239
Grp Volume(v), veh/h	9	73	117	29	47	49	135	102	105	4	311	320
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1856	1721	1770	1797	1774	1770	1821
Q Serve(g_s), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.5	3.6	0.2	13.5	13.6
Cycle Q Clear(g_c), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.5	3.6	0.2	13.5	13.6
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	533	190	161	557	204	214	203	743	755	7	647	665
V/C Ratio(X)	0.02	0.38	0.73	0.05	0.23	0.23	0.67	0.14	0.14	0.54	0.48	0.48
Avail Cap(c_a), veh/h	533	410	348	557	460	483	413	743	755	106	647	665
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	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	42.0	43.6	23.9	40.2	40.2	46.1	17.8	17.9	49.7	24.4	24.4
Incr Delay (d2), s/veh	0.0	1.3	6.1	0.0	0.6	0.5	3.6	0.4	0.4	48.8	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.2	2.0	3.4	0.6	1.2	1.3	1.9	1.8	1.9	0.2	7.0	7.2
LnGrp Delay(d),s/veh	24.6	43.3	49.6	24.0	40.8	40.8	49.7	18.2	18.2	98.5	27.0	26.9
LnGrp LOS	C	D	D	C	D	D	D	B	B	F	C	C
Approach Vol, veh/h	199			125			342			635		
Approach Delay, s/veh	46.2			36.9			30.6			27.4		
Approach LOS	D			D			C			C		
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	4.4	46.0	35.4	14.2	9.9	40.5	34.1	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	42.0	14.0	22.0	12.0	36.0	10.0	26.0				
Max Q Clear Time (g_c+I1), s	2.2	5.6	3.1	9.2	5.8	15.6	2.4	4.4				
Green Ext Time (p_c), s	0.0	5.9	0.0	1.0	0.2	5.2	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	32.0											
HCM 2010 LOS	C											

AM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	37	28	34	11	27	26	28	303	15	52	627	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	37	28	34	11	27	26	28	303	15	52	627	73
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	47	282	343	19	643	541	38	789	671	67	1406	163
Arrive On Green	0.03	0.37	0.37	0.01	0.35	0.35	0.02	0.42	0.42	0.04	0.44	0.44
Sat Flow, veh/h	1774	767	931	1774	1825	1536	1774	1863	1583	1774	3195	371
Grp Volume(v), veh/h	37	0	62	11	26	27	28	303	15	52	347	353
Grp Sat Flow(s),veh/h/ln	1774	0	1698	1774	1770	1592	1774	1863	1583	1774	1770	1797
Q Serve(g_s), s	2.1	0.0	2.4	0.6	1.0	1.1	1.6	11.2	0.6	2.9	13.7	13.7
Cycle Q Clear(g_c), s	2.1	0.0	2.4	0.6	1.0	1.1	1.6	11.2	0.6	2.9	13.7	13.7
Prop In Lane	1.00		0.55	1.00		0.97	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	47	0	625	19	623	560	38	789	671	67	779	791
V/C Ratio(X)	0.79	0.00	0.10	0.59	0.04	0.05	0.73	0.38	0.02	0.77	0.45	0.45
Avail Cap(c_a), veh/h	195	0	625	142	623	560	177	789	671	231	779	791
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	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	48.4	0.0	20.7	49.3	21.3	21.4	48.6	19.8	16.8	47.7	19.5	19.5
Incr Delay (d2), s/veh	25.1	0.0	0.3	26.1	0.1	0.2	23.0	1.4	0.1	16.2	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	1.2	0.4	0.5	0.5	1.0	6.0	0.3	1.7	7.0	7.1	7.1
LnGrp Delay(d),s/veh	73.5	0.0	21.1	75.4	21.4	21.5	71.7	21.2	16.8	63.9	21.2	21.2
LnGrp LOS	E	C	E	C	C	E	C	B	E	C	C	C
Approach Vol, veh/h	99			64			346			752		
Approach Delay, s/veh	40.7			30.7			25.1			24.2		
Approach LOS	D			C			C			C		
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	46.4	5.1	40.8	6.2	48.0	6.6	39.2					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	41.0	8.0	22.0	10.0	44.0	11.0	19.0					
Max Q Clear Time (g_c+I1), s	13.2	2.6	4.4	3.6	15.7	4.1	3.1					
Green Ext Time (p_c), s	0.0	7.1	0.0	0.5	0.0	7.2	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	26.1											
HCM 2010 LOS	C											

AM Peak Hour Cumulative Trips
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	147	343	593	88	27	160		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	147	343	593	88	27	160		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	178	2407	1669	247	426	380		
Arrive On Green	0.20	1.00	0.54	0.54	0.24	0.24		
Sat Flow, veh/h	1774	3632	3187	458	1774	1583		
Grp Volume(v), veh/h	147	343	339	342	27	160		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1782	1774	1583		
Q Serve(g_s), s	7.9	0.0	10.9	11.0	1.2	8.5		
Cycle Q Clear(g_c), s	7.9	0.0	10.9	11.0	1.2	8.5		
Prop In Lane	1.00			0.26	1.00	1.00		
Lane Grp Cap(c), veh/h	178	2407	955	961	426	380		
V/C Ratio(X)	0.82	0.14	0.35	0.36	0.06	0.42		
Avail Cap(c_a), veh/h	408	2407	955	961	426	380		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.1	0.0	13.1	13.1	29.3	32.1		
Incr Delay (d2), s/veh	9.0	0.1	1.0	1.0	0.3	3.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	5.5	5.6	0.6	8.1		
LnGrp Delay(d),s/veh	48.1	0.1	14.1	14.2	29.6	35.5		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h	490	681		187				
Approach Delay, s/veh	14.5	14.2		34.7				
Approach LOS	B	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				72.0		28.0	14.1	57.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				68.0		24.0	23.0	41.0
Max Q Clear Time (g_c+I1), s				2.0		10.5	9.9	13.0
Green Ext Time (p_c), s				8.4		0.5	0.3	7.5
Intersection Summary								
HCM 2010 Ctrl Delay			17.1					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↑↑	↑	↰	↑↑	↰	↑		
Volume (veh/h)	429	265	69	701	500	74		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	429	0	69	701	500	74		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2301	1030	89	2620	619	285		
Arrive On Green	0.21	0.00	0.10	1.00	0.18	0.18		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	429	0	69	701	500	74		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	9.9	0.0	3.8	0.0	13.9	4.0		
Cycle Q Clear(g_c), s	9.9	0.0	3.8	0.0	13.9	4.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2301	1030	89	2620	619	285		
V/C Ratio(X)	0.19	0.00	0.78	0.27	0.81	0.26		
Avail Cap(c_a), veh/h	2301	1030	231	2620	1239	570		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.98	0.00	0.93	0.93	1.00	1.00		
Uniform Delay (d), s/veh	17.6	0.0	44.5	0.0	39.4	35.3		
Incr Delay (d2), s/veh	0.2	0.0	12.7	0.2	2.6	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	2.2	0.1	6.8	1.8		
LnGrp Delay(d),s/veh	17.8	0.0	57.2	0.2	41.9	35.8		
LnGrp LOS	B		E	A	D	D		
Approach Vol, veh/h	429			770	574			
Approach Delay, s/veh	17.8			5.3	41.1			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		22.0	9.0	69.0				78.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		36.0	13.0	39.0				56.0
Max Q Clear Time (g_c+I1), s		15.9	5.8	11.9				2.0
Green Ext Time (p_c), s		2.0	0.1	8.9				10.3
Intersection Summary								
HCM 2010 Ctrl Delay			19.9					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	128	387	202	91	827	315	414	437	108	195	346	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	128	387	202	91	827	315	414	437	108	195	346	103
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	224	1666	746	453	1666	746	811	1590	711	762	1213	356
Arrive On Green	0.94	0.94	0.94	0.47	0.47	0.47	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	491	3539	1583	824	3539	1583	1819	3539	1583	1665	2700	792
Grp Volume(v), veh/h	128	387	202	91	827	315	414	437	108	195	225	224
Grp Sat Flow(s), veh/h/ln	491	1770	1583	824	1770	1583	909	1770	1583	832	1770	1723
Q Serve(g_s), s	20.8	0.8	1.0	6.7	16.1	13.1	18.7	7.8	4.0	8.3	8.0	8.2
Cycle Q Clear(g_c), s	36.9	0.8	1.0	7.5	16.1	13.1	26.9	7.8	4.0	16.1	8.0	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	224	1666	746	453	1666	746	811	1590	711	762	795	774
V/C Ratio(X)	0.57	0.23	0.27	0.20	0.50	0.42	0.51	0.27	0.15	0.26	0.28	0.29
Avail Cap(c_a), veh/h	238	1770	792	477	1770	792	811	1590	711	762	795	774
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	1.6	1.6	16.2	18.3	17.5	26.0	17.3	16.3	22.4	17.4	17.4
Incr Delay (d2), s/veh	2.9	0.1	0.2	0.2	0.2	0.4	2.3	0.4	0.5	0.8	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.3	0.4	1.5	7.9	5.8	4.9	3.9	1.9	2.0	4.1	4.1	
LnGrp Delay(d),s/veh	12.0	1.6	1.8	16.4	18.5	17.8	28.2	17.7	16.7	23.2	18.3	18.4
LnGrp LOS	B	A	A	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	717			1233			959			644		
Approach Delay, s/veh	3.5			18.2			22.2			19.8		
Approach LOS	A			B			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	48.9		51.1		48.9		51.1					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	42.0		50.0		42.0		50.0					
Max Q Clear Time (g_c+I1), s	28.9		38.9		18.1		18.1					
Green Ext Time (p_c), s	8.0		8.2		11.5		16.7					
Intersection Summary												
HCM 2010 Ctrl Delay	16.6											
HCM 2010 LOS	B											

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	709	0	0	1277	49	0	0	0	1	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	11	709	0	0	1277	49	0	0	0	1	0	45
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	1326	0	0	709	0	0				1679	2033	663
Stage 1	-	-	-	-	-	-				1302	1302	-
Stage 2	-	-	-	-	-	-				377	731	-
Critical Hdwy	4.14	-	-	4.14	-	-				6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-				3.52	4.02	3.32
Pot Cap-1 Maneuver	517	-	-	886	-	-				86	56	404
Stage 1	-	-	-	-	-	-				219	229	-
Stage 2	-	-	-	-	-	-				663	425	-
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	517	-	-	886	-	-				84	0	404
Mov Cap-2 Maneuver	-	-	-	-	-	-				84	0	-
Stage 1	-	-	-	-	-	-				219	0	-
Stage 2	-	-	-	-	-	-				649	0	-
Approach	EB			WB			SB					
HCM Control Delay, s	0.2			0			16					
HCM LOS							C					
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	517	-	-	886	-	-	373					
HCM Lane V/C Ratio	0.021	-	-	-	-	-	0.123					
HCM Control Delay (s)	12.1	-	-	0	-	-	16					
HCM Lane LOS	B	-	-	A	-	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑		
Volume (veh/h)	548	282	16	1292	51	175		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	548	0	16	1292	51	175		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2442	1092	662	2442	408	364		
Arrive On Green	1.00	0.00	0.69	0.69	0.23	0.23		
Sat Flow, veh/h	3632	1583	856	3632	1774	1583		
Grp Volume(v), veh/h	548	0	16	1292	51	175		
Grp Sat Flow(s),veh/h/ln	1770	1583	856	1770	1774	1583		
Q Serve(g_s), s	0.0	0.0	0.6	17.8	2.3	9.6		
Cycle Q Clear(g_c), s	0.0	0.0	0.6	17.8	2.3	9.6		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2442	1093	662	2442	408	364		
V/C Ratio(X)	0.22	0.00	0.02	0.53	0.12	0.48		
Avail Cap(c_a), veh/h	2442	1093	662	2442	408	364		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.0	4.9	7.6	30.5	33.3		
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.8	0.6	4.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	0.0	0.2	8.9	1.2	4.6		
LnGrp Delay(d),s/veh	0.2	0.0	5.0	8.4	31.2	37.8		
LnGrp LOS	A		A	A	C	D		
Approach Vol, veh/h	548			1308	226			
Approach Delay, s/veh	0.2			8.4	36.3			
Approach LOS	A			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		73.0				73.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		69.0				69.0
Max Q Clear Time (g_c+I1), s		11.6		2.0				19.8
Green Ext Time (p_c), s		0.5		24.8				22.3
Intersection Summary								
HCM 2010 Ctrl Delay			9.2					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑↑		↓	↑↑		↓	↑		↓	↑	↑
Volume (veh/h)	22	762	94	100	931	16	119	15	90	41	49	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	22	762	94	100	931	16	119	15	90	41	49	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	32	2334	286	128	2002	34	149	53	319	52	327	278
Arrive On Green	0.02	0.51	0.51	0.02	0.19	0.19	0.08	0.23	0.23	0.03	0.18	0.18
Sat Flow, veh/h	1774	4591	563	1774	3560	61	1774	231	1387	1774	1863	1583
Grp Volume(v), veh/h	22	561	295	100	463	484	119	0	105	41	49	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1763	1774	1770	1852	1774	0	1618	1774	1863	1583
Q Serve(g_s), s	1.2	9.8	9.9	5.6	23.3	23.3	6.6	0.0	5.3	2.3	2.2	1.6
Cycle Q Clear(g_c), s	1.2	9.8	9.9	5.6	23.3	23.3	6.6	0.0	5.3	2.3	2.2	1.6
Prop In Lane		1.00	0.32	1.00		0.03	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	32	1724	897	128	995	1042	149	0	372	52	327	278
V/C Ratio(X)	0.68	0.33	0.33	0.78	0.46	0.46	0.80	0.00	0.28	0.79	0.15	0.11
Avail Cap(c_a), veh/h	124	1724	897	248	995	1042	266	0	372	142	327	278
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	14.5	14.5	48.0	27.3	27.3	45.0	0.0	31.7	48.2	34.9	34.7
Incr Delay (d2), s/veh	0.5	1.0	1.0	9.8	1.6	1.5	9.4	0.0	1.9	22.5	1.0	0.8
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(-26165%),veh/ln	4.6	5.0	3.1	11.9	12.4	3.6	0.0	2.6	1.5	1.2	0.8	
LnGrp Delay(d),s/veh	70.7	15.0	15.5	57.8	28.9	28.8	54.3	0.0	33.6	70.8	35.9	35.4
LnGrp LOS	E	B	B	E	C	C	D		C	E	D	D
Approach Vol, veh/h		878			1047			224			120	
Approach Delay, s/veh		16.6			31.6			44.6			47.7	
Approach LOS		B			C			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		27.0	11.2	54.8	12.4	21.5	5.8	60.2				
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		23.0	14.0	39.0	15.0	16.0	7.0	46.0				
Max Q Clear Time (g_c+I1), s		7.3	7.6	11.9	8.6	4.2	3.2	25.3				
Green Ext Time (p_c), s		0.0	0.8	0.1	14.5	0.1	0.7	0.0	12.3			
Intersection Summary												
HCM 2010 Ctrl Delay					27.9							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

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
Volume (veh/h)	2	823	98	81	1007	3	49	2	47	2	1	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	823	98	81	1007	3	49	2	47	2	1	0
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2182	260	0	2479	7	63	0	372	0	298	0
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.04	0.24	0.24	0.00	0.16	0.00
Sat Flow, veh/h	0	3186	379	0	3620	11	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	457	464	0	492	518	49	0	47	0	1	0
Grp Sat Flow(s),veh/h/ln	0	1770	1796	0	1770	1861	1774	0	1583	0	1863	0
Q Serve(g, s), s	0.0	11.0	11.0	0.0	12.2	12.2	2.7	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g, c), s	0.0	11.0	11.0	0.0	12.2	12.2	2.7	0.0	2.3	0.0	0.0	0.0
Prop In Lane	0.00		0.21	0.00		0.01	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1212	1230	0	1212	1274	63	0	372	0	298	0
V/C Ratio(X)	0.00	0.38	0.38	0.00	0.41	0.41	0.78	0.00	0.13	0.00	0.00	0.00
Avail Cap(c, a), veh/h	0	1212	1230	0	1212	1274	71	0	372	0	298	0
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)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.7	6.7	0.0	6.9	6.9	47.9	0.0	30.1	0.0	35.3	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.0	1.0	1.0	38.5	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.6	5.7	0.0	6.2	6.5	2.0	0.0	1.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.6	7.6	0.0	7.9	7.8	86.3	0.0	30.3	0.0	35.3	0.0
LnGrp LOS	A	A		A	A	F		C		D		
Approach Vol, veh/h	921			1010			96			1		
Approach Delay, s/veh	7.6			7.9			58.9			35.3		
Approach LOS	A			A			E			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/0.0	27.5	0.0	72.5	7.5	20.0	0.0	72.5					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	16.0	4.0	60.0	4.0	16.0	4.0	60.0					
Max Q Clear Time (g_c+1), s	4.3	0.0	13.0	4.7	2.0	0.0	14.2					
Green Ext Time (p_c), s	0.0	0.1	0.0	20.3	0.0	0.1	20.1					
Intersection Summary												
HCM 2010 Ctrl Delay	10.2											
HCM 2010 LOS	B											

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HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

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
Volume (veh/h)	0	0	0	337	1	14	509	72	0	0	39	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	0	0	1863	1900			
Adj Flow Rate, veh/h	337	1	14	509	72	0	0	39	65			
Adj No. of Lanes	0	1	1	0	1	0	1	0	0	1	0	0
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	0	0	2	2			
Cap, veh/h	382	1	342	788	112	0	0	101	168			
Arrive On Green	0.22	0.22	0.22	0.84	0.84	0.00	0.00	0.16	0.16			
Sat Flow, veh/h	1769	5	1583	1563	221	0	0	629	1049			
Grp Volume(v), veh/h	338	0	14	581	0	0	0	0	104			
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1785	0	0	0	0	1678			
Q Serve(g, s), s	18.5	0.0	0.7	11.3	0.0	0.0	0.0	0.0	5.6			
Cycle Q Clear(g, c), s	18.5	0.0	0.7	11.3	0.0	0.0	0.0	0.0	5.6			
Prop In Lane	1.00		1.00	0.88		0.00	0.00		0.62			
Lane Grp Cap(c), veh/h	383	0	342	900	0	0	0	0	268			
V/C Ratio(X)	0.88	0.00	0.04	0.65	0.00	0.00	0.00	0.00	0.39			
Avail Cap(c, a), veh/h	479	0	427	900	0	0	0	0	268			
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	38.0	0.0	31.0	4.8	0.0	0.0	0.0	0.0	37.6			
Incr Delay (d2), s/veh	14.9	0.0	0.0	3.6	0.0	0.0	0.0	0.0	4.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	10.6	0.0	0.3	6.0	0.0	0.0	0.0	0.0	2.9			
LnGrp Delay(d),s/veh	52.9	0.0	31.1	8.4	0.0	0.0	0.0	0.0	41.8			
LnGrp LOS	D		C	A					D			
Approach Vol, veh/h			352			581			104			
Approach Delay, s/veh			52.0			8.4			41.8			
Approach LOS			D			A			D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s	54.4					20.0		25.6				
Change Period (Y+Rc), s	4.0					4.0		4.0				
Max Green Setting (Gmax), s	45.0					16.0		27.0				
Max Q Clear Time (g_c+1), s	13.3					7.6		20.5				
Green Ext Time (p_c), s	4.5					0.3		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay	26.5											
HCM 2010 LOS	C											

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HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

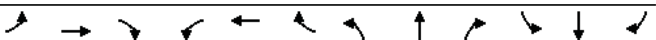
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Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	1	294	0	0	0	0	526	342	7	394	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	25	1	294	0	0	0	0	526	342	7	394	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	934	934	394	394	0	0	526	0	0			
Stage 1	408	408	-	-	-	-	-	-	-	-	-	-
Stage 2	526	526	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	295	266	655	1165	-	-	1041	-	-	-	-	-
Stage 1	671	597	-	-	-	-	-	-	-	-	-	-
Stage 2	593	529	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	292	0	655	1165	-	-	1041	-	-	-	-	-
Mov Cap-2 Maneuver	417	0	-	-	-	-	-	-	-	-	-	-
Stage 1	665	0	-	-	-	-	-	-	-	-	-	-
Stage 2	593	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.8			0			0.1					
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1165	-	-	417	655	1041	-	-				
HCM Lane V/C Ratio	-	-	-	0.062	0.449	0.007	-	-				
HCM Control Delay (s)	0	-	-	14.2	14.9	8.5	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	2.3	0	-	-				

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	256	101	260	235	40	128	407	214	143	859	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	256	101	260	235	40	128	407	214	143	859	65
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	83	391	175	296	816	365	158	1046	544	175	1580	120
Arrive On Green	0.05	0.11	0.11	0.17	0.23	0.23	0.09	0.46	0.46	0.10	0.47	0.47
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2254	1172	1774	3335	252
Grp Volume(v), veh/h	64	256	101	260	235	40	128	319	302	143	456	468
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1656	1774	1770	1818
Q Serve(g_s), s	3.6	6.9	6.1	14.3	5.5	2.0	7.1	11.8	12.0	7.9	18.3	18.3
Cycle Q Clear(g_c), s	3.6	6.9	6.1	14.3	5.5	2.0	7.1	11.8	12.0	7.9	18.3	18.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.14
Lane Grp Cap(c), veh/h	83	391	175	296	816	365	158	821	769	175	838	861
V/C Ratio(X)	0.78	0.65	0.58	0.88	0.29	0.11	0.81	0.39	0.39	0.82	0.54	0.54
Avail Cap(c_a), veh/h	160	566	253	390	1026	459	213	821	769	266	838	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	42.7	42.3	40.7	31.7	30.4	44.7	17.5	17.6	44.2	18.6	18.6
Incr Delay (d2), s/veh	14.3	1.9	3.0	16.2	0.2	0.1	15.5	1.4	1.5	11.1	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	3.5	2.8	8.3	2.7	0.9	4.2	6.1	5.8	4.4	9.4	9.7
LnGrp Delay(d),s/veh	61.4	44.5	45.3	56.9	31.9	30.5	60.2	18.9	19.1	55.3	21.2	21.1
LnGrp LOS	E	D	D	E	C	C	E	B	B	E	C	C
Approach Vol, veh/h	421			535			749			1067		
Approach Delay, s/veh	47.3			43.9			26.0			25.7		
Approach LOS	D			D			C			C		
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	13.9	50.4	20.7	15.0	12.9	51.4	8.7	27.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	15.0	31.0	22.0	16.0	12.0	34.0	9.0	29.0				
Max Q Clear Time (g_c+I1), s	9.9	14.0	16.3	8.9	9.1	20.3	5.6	7.5				
Green Ext Time (p_c), s	0.1	9.3	0.4	2.1	0.1	8.1	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay	32.6											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	66	632		1	4	670	258	9	16	8	500	26	334
Number	7	4		14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	66	632		1	4	670	258	9	16	8	500	26	334
Adj No. of Lanes	1	2		0	1	2	1	1	1	0	2	1	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	85	1136		2	7	953	426	16	660	330	1521	957	813
Arrive On Green	0.05	0.31		0.31	0.00	0.27	0.27	0.01	0.56	0.56	0.51	0.51	0.51
Sat Flow, veh/h	1774	3626		6	1774	3539	1583	1774	1173	586	2680	1863	1583
Grp Volume(v), veh/h	66	308		325	4	670	258	9	0	24	500	26	334
Grp Sat Flow(s), veh/h/ln	1770	1770		1862	1774	1770	1583	1774	0	1759	1340	1863	1583
Q Serve(g, s), s	3.7	14.5		14.5	0.2	17.1	14.2	0.5	0.0	0.6	11.2	0.7	13.0
Cycle Q Clear(g, c), s	3.7	14.5		14.5	0.2	17.1	14.2	0.5	0.0	0.6	11.2	0.7	13.0
Prop In Lane	1.00			0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	85	554		583	7	953	426	16	0	990	1521	957	813
V/C Ratio(X)	0.77	0.56		0.56	0.54	0.70	0.61	0.57	0.00	0.02	0.33	0.03	0.41
Avail Cap(c_a), veh/h	195	708		745	71	1168	523	71	0	990	1521	957	813
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	28.6		28.6	49.7	32.9	31.9	49.4	0.0	9.7	14.5	12.0	15.0
Incr Delay (d2), s/veh	13.7	0.9		0.8	48.8	1.5	1.4	28.9	0.0	0.0	0.6	0.1	1.5
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	7.2	7.5		0.5	0.2	8.5	6.4	0.4	0.0	0.3	4.2	0.4	6.0
LnGrp Delay(d),s/veh	60.8	29.4		29.4	98.5	34.4	33.3	78.3	0.0	9.7	15.1	12.0	16.5
LnGrp LOS	E	C		C	F	C	C	E		A	B	B	B
Approach Vol, veh/h	699			932			33			860			
Approach Delay, s/veh	32.4			34.4			28.4			15.6			
Approach LOS	C			C			C			B			
Timer	1	2	3	4	5	6	7	8					
Assigned Phs		2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s		60.3	4.4	35.3	4.9	55.4	8.8	30.9					
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s		44.0	4.0	40.0	4.0	36.0	11.0	33.0					
Max Q Clear Time (g_c+I1), s		2.6	2.2	16.5	2.5	15.0	5.7	19.1					
Green Ext Time (p_c), s		3.7	0.0	10.6	0.0	3.5	0.0	7.9					
Intersection Summary													
HCM 2010 Ctrl Delay	27.3												
HCM 2010 LOS	C												

AM Peak Hour Cumulative Trips
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HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	837	65	302	1026	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	837	65	302	1026	2	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	902	0	1987	451
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	1117	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	436	-	71	475
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	268	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	436	-	22	475
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	82	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.8		25.5	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	184	-	-	436	-	
HCM Lane V/C Ratio	0.043	-	-	0.693	-	
HCM Control Delay (s)	25.5	-	-	29.9	-	
HCM Lane LOS	D	-	-	D	-	
HCM 95th %tile Q(veh)	0.1	-	-	5.2	-	

AM Peak Hour Cumulative Trips
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HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	5.7					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	47	76	38	304	113	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	47	76	38	304	113	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	208	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	170	-
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	1572	-	-	0	780	1034
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	-	756	1034
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	833	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.8		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	756	1034	1572	-	-	
HCM Lane V/C Ratio	0.149	0.011	0.03	-	-	
HCM Control Delay (s)	10.6	8.5	7.4	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	0.5	0	0.1	-	-	

HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	264	68	74	171	39	123	1183	175	53	696	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	241	264	68	74	171	39	123	1183	175	53	696	149
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	295	310	263	80	184	42	153	1441	212	68	1478	661
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.47	0.47	0.04	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	468	1081	247	1774	3096	456	1774	3539	1583
Grp Volume(v), veh/h	241	264	68	284	0	0	123	674	684	53	696	149
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1796	0	0	1774	1770	1782	1774	1770	1583
Q Serve(g_s), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.9	33.3	3.0	14.3	6.0
Cycle Q Clear(g_c), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	32.9	33.3	3.0	14.3	6.0
Prop In Lane	1.00		1.00	0.26		0.14	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	295	310	263	305	0	0	153	824	830	68	1478	661
V/C Ratio(X)	0.82	0.85	0.26	0.93	0.00	0.00	0.80	0.82	0.82	0.78	0.47	0.23
Avail Cap(c_a), veh/h	337	354	301	305	0	0	231	824	830	71	1478	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	40.5	36.3	40.9	0.0	0.0	44.9	23.1	23.2	47.7	21.1	18.7
Incr Delay (d2), s/veh	13.0	16.2	0.5	33.8	0.0	0.0	11.5	8.9	9.1	40.5	1.1	0.8
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(-26165%),veh/ln	7.5	8.5	1.7	10.6	0.0	0.0	3.8	18.0	18.4	2.2	7.2	2.8
LnGrp Delay(d),s/veh	53.3	56.7	36.8	74.7	0.0	0.0	56.4	32.0	32.3	88.2	22.2	19.5
LnGrp LOS	D	E	D	E			E	C	C	F	C	B
Approach Vol, veh/h	573			284			1481			898		
Approach Delay, s/veh	52.9			74.7			34.1			25.6		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	50.6		20.6	12.6	45.8		21.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	44.0		19.0	13.0	35.0		17.0				
Max Q Clear Time (g_c+I1), s	5.0	35.3		15.8	8.8	16.3		17.6				
Green Ext Time (p_c), s	0.0	7.3		0.9	0.1	13.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	38.7											
HCM 2010 LOS	D											

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection										
Int Delay, s/veh	283.1									
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER
Vol, veh/h	0	108	0	894	26	0	612	248	500	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	Free	-	-
Storage Length	-	0	-	-	0	-	-	0	0	0
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	108	0	894	26	0	612	248	500	18
Major/Minor	Minor1	Major1			Major2			Minor2		
Conflicting Flow All	1209	447	612	0	0	894	0	0	1059	306
Stage 1	894	-	-	-	-	-	-	-	612	-
Stage 2	315	-	-	-	-	-	-	-	447	-
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32
Pot Cap-1 Maneuver	139	559	963	-	-	755	-	0	~ 179	690
Stage 1	302	-	-	-	-	-	-	0	~ 447	-
Stage 2	671	-	-	-	-	-	-	0	560	-
Platoon blocked, %			-	-	-		-			
Mov Cap-1 Maneuver	123	559	963	-	-	755	-	-	~ 144	690
Mov Cap-2 Maneuver	123	-	-	-	-	-	-	-	~ 144	-
Stage 1	302	-	-	-	-	-	-	-	~ 447	-
Stage 2	646	-	-	-	-	-	-	-	~ 452	-
Approach	WB	NB			SB			NE		
HCM Control Delay, s	13	0			0			\$ 1176.6		
HCM LOS	B							F		
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT		
Capacity (veh/h)	144	-	963	-	-	559	755	-		
HCM Lane V/C Ratio	3.472	-	-	-	-	0.193	-	-		
HCM Control Delay (s)	\$ 1176.6	0	0	-	-	13	0	-		
HCM Lane LOS	F	A	A	-	-	B	A	-		
HCM 95th %tile Q(veh)	48.4	-	0	-	-	0.7	0	-		
Notes										
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon										

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	62	244	170	38	223	3	206	476	102	9	226	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	244	170	38	223	3	206	476	102	9	226	45
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	597	327	278	578	589	8	284	958	204	16	757	148
Arrive On Green	0.34	0.18	0.18	0.33	0.16	0.16	0.08	0.33	0.33	0.01	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	3576	48	3442	2904	619	1774	2953	578
Grp Volume(v), veh/h	62	244	170	38	110	116	206	289	289	9	134	137
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1854	1721	1770	1754	1774	1770	1761
Q Serve(g_s), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	13.1	13.2	0.5	6.1	6.3
Cycle Q Clear(g_c), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	13.1	13.2	0.5	6.1	6.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.35	1.00		0.33
Lane Grp Cap(c), veh/h	597	327	278	578	292	306	284	584	579	16	454	451
V/C Ratio(X)	0.10	0.75	0.61	0.07	0.38	0.38	0.73	0.49	0.50	0.57	0.30	0.30
Avail Cap(c_a), veh/h	597	596	507	578	495	519	585	584	579	106	454	451
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	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	39.1	38.1	23.2	37.2	37.2	44.8	26.8	26.9	49.4	29.9	30.0
Incr Delay (d2), s/veh	0.1	3.4	2.2	0.0	0.8	0.8	2.6	2.2	2.2	28.9	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.2	6.7	4.5	0.7	2.8	2.9	2.9	6.7	6.8	0.4	3.2	3.3
LnGrp Delay(d),s/veh	22.9	42.5	40.2	23.3	38.0	38.0	47.4	29.0	29.1	78.3	31.6	31.7
LnGrp LOS	C	D	D	C	D	D	D	C	C	E	C	C
Approach Vol, veh/h		476			264			784			280	
Approach Delay, s/veh		39.1			35.9			33.9			33.1	
Approach LOS		D			D			C			C	
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	4.9	37.0	36.6	21.6	12.3	29.6	37.6	20.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	33.0	13.0	32.0	17.0	22.0	17.0	28.0				
Max Q Clear Time (g_c+I1), s	2.5	15.2	3.5	14.4	7.8	8.3	4.4	7.6				
Green Ext Time (p_c), s	0.0	5.0	0.0	3.1	0.4	4.4	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay				35.4								
HCM 2010 LOS				D								

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	103	73	103	14	47	49	204	625	36	30	408	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	103	73	103	14	47	49	204	625	36	30	408	52
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	227	321	23	467	418	239	894	760	40	1162	147
Arrive On Green	0.07	0.32	0.32	0.01	0.26	0.26	0.13	0.48	0.48	0.02	0.37	0.37
Sat Flow, veh/h	1774	700	988	1774	1770	1583	1774	1863	1583	1774	3161	401
Grp Volume(v), veh/h	103	0	176	14	47	49	204	625	36	30	227	233
Grp Sat Flow(s),veh/h/ln	1774	0	1688	1774	1770	1583	1774	1863	1583	1774	1770	1792
Q Serve(g_s), s	5.7	0.0	7.9	0.8	2.0	2.4	11.2	26.3	1.2	1.7	9.3	9.4
Cycle Q Clear(g_c), s	5.7	0.0	7.9	0.8	2.0	2.4	11.2	26.3	1.2	1.7	9.3	9.4
Prop In Lane	1.00		0.59	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	130	0	548	23	467	418	239	894	760	40	651	659
V/C Ratio(X)	0.79	0.00	0.32	0.61	0.10	0.12	0.85	0.70	0.05	0.75	0.35	0.35
Avail Cap(c_a), veh/h	213	0	548	71	467	418	355	894	760	106	651	659
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	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	45.6	0.0	25.5	49.1	27.8	28.0	42.3	20.3	13.8	48.6	22.9	23.0
Incr Delay (d2), s/veh	10.2	0.0	1.5	23.7	0.4	0.6	12.2	4.5	0.1	23.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	3.9	0.5	1.0	1.1	6.3	14.5	0.6	1.1	4.8	4.9	
LnGrp Delay(d),s/veh	55.7	0.0	27.0	72.8	28.3	28.5	54.5	24.9	14.0	71.8	24.4	24.4
LnGrp LOS	E	C	E	C	C	C	D	C	B	E	C	C
Approach Vol, veh/h		279			110			865			490	
Approach Delay, s/veh		37.6			34.0			31.4			27.3	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s6.3	52.0	5.3	36.4	17.5	40.8	11.3	30.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	48.0	4.0	26.0	20.0	34.0	12.0	18.0					
Max Q Clear Time (g_c+I1), s	28.3	2.8	9.9	13.2	11.4	7.7	4.4					
Green Ext Time (p_c), s	0.0	7.3	0.0	1.4	0.3	7.7	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay					31.4							
HCM 2010 LOS					C							

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	149	801	493	49	86	224		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	149	801	493	49	86	224		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	181	2230	1588	157	514	459		
Arrive On Green	0.20	1.00	0.49	0.49	0.29	0.29		
Sat Flow, veh/h	1774	3632	3346	322	1774	1583		
Grp Volume(v), veh/h	149	801	267	275	86	224		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1806	1774	1583		
Q Serve(g_s), s	8.0	0.0	9.1	9.2	3.6	11.7		
Cycle Q Clear(g_c), s	8.0	0.0	9.1	9.2	3.6	11.7		
Prop In Lane	1.00			0.18	1.00	1.00		
Lane Grp Cap(c), veh/h	181	2230	864	882	514	459		
V/C Ratio(X)	0.82	0.36	0.31	0.31	0.17	0.49		
Avail Cap(c_a), veh/h	426	2230	864	882	514	459		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.92	0.92	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.0	0.0	15.4	15.4	26.5	29.4		
Incr Delay (d2), s/veh	8.4	0.4	0.9	0.9	0.7	3.7		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	4.7	4.8	1.9	11.0			
LnGrp Delay(d),s/veh	47.4	0.4	16.4	16.4	27.2	33.0		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	950	542		310				
Approach Delay, s/veh	7.8	16.4		31.4				
Approach LOS	A	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		33.0	14.2	52.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		29.0	24.0	35.0
Max Q Clear Time (g_c+I1), s				2.0		13.7	10.0	11.2
Green Ext Time (p_c), s				12.8		0.9	0.3	10.0
Intersection Summary								
HCM 2010 Ctrl Delay			14.4					
HCM 2010 LOS			B					

PM Peak Hour Cumulative Trips
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HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations								
Volume (veh/h)	805	529	145	592	382	131		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	805	0	145	592	382	131		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2269	1015	175	2761	481	222		
Arrive On Green	0.21	0.00	0.20	1.00	0.14	0.14		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	805	0	145	592	382	131		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	19.4	0.0	7.8	0.0	10.7	7.8		
Cycle Q Clear(g_c), s	19.4	0.0	7.8	0.0	10.7	7.8		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2269	1015	175	2761	481	222		
V/C Ratio(X)	0.35	0.00	0.83	0.21	0.79	0.59		
Avail Cap(c_a), veh/h	2269	1015	337	2761	723	332		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.85	0.00	0.95	0.95	1.00	1.00		
Uniform Delay (d), s/veh	21.8	0.0	39.3	0.0	41.6	40.3		
Incr Delay (d2), s/veh	0.4	0.0	9.0	0.2	3.6	2.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	4.2	0.1	5.3	3.5			
LnGrp Delay(d),s/veh	22.2	0.0	48.2	0.2	45.2	42.8		
LnGrp LOS	C		D	A	D	D		
Approach Vol, veh/h	805			737	513			
Approach Delay, s/veh	22.2			9.6	44.6			
Approach LOS	C			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.0	13.9	68.1				82.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		21.0	19.0	48.0				71.0
Max Q Clear Time (g_c+I1), s		12.7	9.8	21.4				2.0
Green Ext Time (p_c), s		1.3	0.2	11.4				14.7
Intersection Summary								
HCM 2010 Ctrl Delay				23.3				
HCM 2010 LOS				C				

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HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	287	932	344	168	492	283	248	642	140	257	382	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	287	932	344	168	492	283	248	642	140	257	382	75
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	384	1863	834	299	1863	834	690	1393	623	490	1163	226
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	693	3539	1583	432	3539	1583	1805	3539	1583	1335	2956	575
Grp Volume(v), veh/h	287	932	344	168	492	283	248	642	140	257	227	230
Grp Sat Flow(s), veh/h/ln	693	1770	1583	432	1770	1583	903	1770	1583	668	1770	1761
Q Serve(g_s), s	28.2	0.0	0.0	30.1	7.6	10.3	11.1	13.4	5.9	17.7	8.9	9.1
Cycle Q Clear(g_c), s	35.8	0.0	0.0	30.1	7.6	10.3	20.2	13.4	5.9	31.1	8.9	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	384	1863	834	299	1863	834	690	1393	623	490	696	693
V/C Ratio(X)	0.75	0.50	0.41	0.56	0.26	0.34	0.36	0.46	0.22	0.52	0.33	0.33
Avail Cap(c_a), veh/h	407	1982	887	314	1982	887	690	1393	623	490	696	693
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.6	0.0	0.0	18.3	13.0	13.7	28.2	22.5	20.2	34.0	21.1	21.1
Incr Delay (d2), s/veh	7.0	0.2	0.3	2.0	0.1	0.2	1.5	1.1	0.8	4.0	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.1	0.1	0.1	3.7	3.7	4.5	2.9	6.7	2.7	3.5	4.6	4.6
LnGrp Delay(d),s/veh	9.6	0.2	0.3	20.3	13.1	13.9	29.7	23.6	21.0	38.0	22.3	22.4
LnGrp LOS	A	A	A	C	B	B	C	C	C	D	C	C
Approach Vol, veh/h	1563			943			1030			714		
Approach Delay, s/veh	2.0			14.6			24.7			28.0		
Approach LOS	A			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	43.4		56.6		43.4		56.6					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	36.0		56.0		36.0		56.0					
Max Q Clear Time (g_c+I1), s	22.2		37.8		33.1		32.1					
Green Ext Time (p_c), s	9.2		14.8		2.4		18.5					
Intersection Summary												
HCM 2010 Ctrl Delay	14.7											
HCM 2010 LOS	B											

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	1598	0	0	817	7	0	0	0	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	2	1598	0	0	817	7	0	0	0	0	0	8
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	824	0	0	1598	0	0	1624	2423	412			
Stage 1	-	-	-	-	-	-	821	821	-			
Stage 2	-	-	-	-	-	-	803	1602	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	802	-	-	406	-	-	93	32	589			
Stage 1	-	-	-	-	-	-	393	387	-			
Stage 2	-	-	-	-	-	-	401	163	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	802	-	-	406	-	-	93	0	589			
Mov Cap-2 Maneuver	-	-	-	-	-	-	93	0	-			
Stage 1	-	-	-	-	-	-	393	0	-			
Stage 2	-	-	-	-	-	-	400	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0			0			11.2					
HCM LOS	B											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	802	-	-	406	-	-	589					
HCM Lane V/C Ratio	0.002	-	-	-	-	-	0.014					
HCM Control Delay (s)	9.5	-	-	0	-	-	11.2					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	1263	764	81	739	32	313		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1263	0	81	739	32	313		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2194	982	291	2194	532	475		
Arrive On Green	0.82	0.00	0.20	0.20	0.30	0.30		
Sat Flow, veh/h	3632	1583	437	3632	1774	1583		
Grp Volume(v), veh/h	1263	0	81	739	32	313		
Grp Sat Flow(s),veh/h/ln	1770	1583	437	1770	1774	1583		
Q Serve(g_s), s	11.9	0.0	16.5	17.8	1.3	17.2		
Cycle Q Clear(g_c), s	11.9	0.0	28.4	17.8	1.3	17.2		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2194	982	291	2194	532	475		
V/C Ratio(X)	0.58	0.00	0.28	0.34	0.06	0.66		
Avail Cap(c_a), veh/h	2194	982	291	2194	532	475		
HCM Platoon Ratio	1.33	1.33	0.33	0.33	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.4	0.0	31.7	22.2	25.0	30.5		
Incr Delay (d2), s/veh	1.1	0.0	2.4	0.4	0.2	7.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	6.0	0.0	2.2	8.9	0.7	8.5		
LnGrp Delay(d),s/veh	5.5	0.0	34.1	22.6	25.2	37.5		
LnGrp LOS	A		C	C	C	D		
Approach Vol, veh/h	1263			820	345			
Approach Delay, s/veh	5.5			23.8	36.4			
Approach LOS	A			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.0		66.0				66.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		30.0		62.0				62.0
Max Q Clear Time (g_c+I1), s		19.2		13.9				30.4
Green Ext Time (p_c), s		0.9		27.0				20.9
Intersection Summary								
HCM 2010 Ctrl Delay			16.0					
HCM 2010 LOS			B					

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HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	1831	121	53	592	52	108	41	122	45	33	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	1831	121	53	592	52	108	41	122	45	33	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	77	2678	177	68	1792	157	136	91	271	57	327	278
Arrive On Green	0.04	0.55	0.55	0.05	0.72	0.72	0.08	0.22	0.22	0.03	0.18	0.18
Sat Flow, veh/h	1774	4875	321	1774	3293	289	1774	414	1232	1774	1863	1583
Grp Volume(v), veh/h	60	1272	680	53	318	326	108	0	163	45	33	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1806	1774	1770	1812	1774	0	1645	1774	1863	1583
Q Serve(g_s), s	3.3	27.1	27.2	3.0	6.5	6.5	6.0	0.0	8.6	2.5	1.5	1.6
Cycle Q Clear(g_c), s	3.3	27.1	27.2	3.0	6.5	6.5	6.0	0.0	8.6	2.5	1.5	1.6
Prop In Lane	1.00		0.18	1.00		0.16	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	77	1863	992	68	963	986	136	0	362	57	327	278
V/C Ratio(X)	0.78	0.68	0.69	0.78	0.33	0.33	0.79	0.00	0.45	0.79	0.10	0.11
Avail Cap(c_a), veh/h	160	1863	992	124	963	986	213	0	362	106	327	278
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	16.2	16.3	47.0	7.2	7.2	45.4	0.0	33.8	48.0	34.6	34.6
Incr Delay (d2), s/veh	15.1	2.1	3.8	17.3	0.9	0.9	10.5	0.0	4.0	20.5	0.6	0.8
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(-26165%),veh/ln	13.1	14.5	1.8	3.3	3.4	3.3	0.0	0.0	4.3	1.6	0.8	0.8
LnGrp Delay(d),s/veh	62.4	18.3	20.1	64.4	8.1	8.1	55.9	0.0	37.8	68.5	35.2	35.4
LnGrp LOS	E	B	C	E	A	A	E		D	E	D	D
Approach Vol, veh/h		2012			697			271			108	
Approach Delay, s/veh		20.2			12.4			45.0			49.2	
Approach LOS		C			B			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), s7.2	26.0	7.8	58.9	11.7	21.6	8.4	58.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	22.0	7.0	49.0	12.0	16.0	9.0	47.0					
Max Q Clear Time (g_c+I1), s	10.6	5.0	29.2	8.0	3.6	5.3	8.5					
Green Ext Time (p_c), s	0.0	0.9	0.0	16.5	0.1	0.9	0.0	28.0				
Intersection Summary												
HCM 2010 Ctrl Delay					21.6							
HCM 2010 LOS					C							

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HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔			↔↔			↖		↗	↔↔		
Volume (veh/h)	3	1783	35	71	667	2	108	0	208	3	1	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	0	1863	1900	1863	1900
Adj Flow Rate, veh/h	3	1783	35	71	667	2	108	0	208	3	1	3
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2	2	2	2
Cap, veh/h	0	2379	47	0	2425	7	89	0	0	0	66	197
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.05	0.00	0.00	0.25	0.16	0.16
Sat Flow, veh/h	0	3551	70	0	3620	11	1774	108	0	411	1234	
Grp Volume(v), veh/h	0	886	932	0	326	343	108	212.7	0	0	4	
Grp Sat Flow(s), veh/h/ln	0	1770	1850	0	1770	1861	1774	F	0	0	1645	
Q Serve(g_s), s	0.0	33.1	33.5	0.0	7.5	7.5	5.0		0.0	0.0	0.2	
Cycle Q Clear(g_c), s	0.0	33.1	33.5	0.0	7.5	7.5	5.0		0.0	0.0	0.2	
Prop In Lane	0.00		0.04	0.00		0.01	1.00		0.00		0.75	
Lane Grp Cap(c), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
V/C Ratio(X)	0.00	0.75	0.75	0.00	0.28	0.28	1.22		0.00	0.00	0.02	
Avail Cap(c_a), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(l)	0.00	1.00	1.00	0.00	1.00	1.00	1.00		0.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	10.9	11.0	0.0	6.7	6.7	47.5		0.0	0.0	35.4	
Incr Delay (d2), s/veh	0.0	4.3	4.2	0.0	0.6	0.6	165.2		0.0	0.0	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(-26165%),veh/ln	17.4	18.3	0.0	3.8	4.0	6.5			0.0	0.0	0.1	
LnGrp Delay(d),s/veh	0.0	15.2	15.2	0.0	7.2	7.2	212.7		0.0	0.0	35.5	
LnGrp LOS	B		B	A		A	F				D	
Approach Vol, veh/h	1818			669			4			228		
Approach Delay, s/veh	15.2			7.2			35.5			69.2		
Approach LOS	B			A			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.0		0.0	71.0	9.0	20.0	0.0	71.0				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	4.0		4.0	59.0	5.0	16.0	4.0	59.0				
Max Q Clear Time (g_c+10), s	0.0		0.0	35.5	7.0	2.2	0.0	9.5				
Green Ext Time (p_c), s	0.0		0.0	19.0	0.0	0.0	0.0	33.2				
Intersection Summary												
HCM 2010 Ctrl Delay	21.4											
HCM 2010 LOS	C											

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HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↖	↗		↖	↗		↖	↗
Volume (veh/h)	0	0	0	360	4	21	396	155	0	0	71	157
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				360	4	21	396	155	0	0	71	157
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				406	5	367	631	247	0	0	83	183
Arrive On Green				0.23	0.23	0.23	0.82	0.82	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1755	20	1583	1292	506	0	0	517	1144
Grp Volume(v), veh/h				364	0	21	551	0	0	0	0	228
Grp Sat Flow(s), veh/h/ln				1775	0	1583	1798	0	0	0	0	1661
Q Serve(g_s), s				19.8	0.0	1.0	11.6	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				19.8	0.0	1.0	11.6	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.99		1.00	0.72		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				411	0	367	878	0	0	0	0	266
V/C Ratio(X)				0.89	0.00	0.06	0.63	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				515	0	459	878	0	0	0	0	266
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				37.1	0.0	29.9	5.8	0.0	0.0	0.0	0.0	40.9
Incr Delay (d2), s/veh				14.4	0.0	0.1	3.4	0.0	0.0	0.0	0.0	28.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				11.3	0.0	0.5	6.2	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh				51.5	0.0	30.0	9.2	0.0	0.0	0.0	0.0	69.2
LnGrp LOS				D		C	A					E
Approach Vol, veh/h				385			551			228		
Approach Delay, s/veh				50.3			9.2			69.2		
Approach LOS				D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		52.9				20.0		27.1				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				16.0		29.0				
Max Q Clear Time (g_c+10), s		13.6				15.4		21.8				
Green Ext Time (p_c), s		4.1				0.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	34.5											
HCM 2010 LOS	C											

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HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	13	297	0	0	0	0	453	787	10	416	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	57	13	297	0	0	0	0	453	787	10	416	0
Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	889	889	416				416	0	0	453	0	0
Stage 1	436	436	-				-	-	-	-	-	-
Stage 2	453	453	-				-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22				4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-				-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318				2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	314	282	637				1143	-	-	1108	-	-
Stage 1	652	580	-				-	-	-	-	-	-
Stage 2	640	570	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	310	0	637				1143	-	-	1108	-	-
Mov Cap-2 Maneuver	432	0	-				-	-	-	-	-	-
Stage 1	644	0	-				-	-	-	-	-	-
Stage 2	640	0	-				-	-	-	-	-	-
Approach	EB						NB			SB		
HCM Control Delay, s	15.4						0			0.2		
HCM LOS	C											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1143	-	-	432	637	1108	-	-				
HCM Lane V/C Ratio	-	-	-	0.162	0.466	0.009	-	-				
HCM Control Delay (s)	0	-	-	14.9	15.5	8.3	0	-				
HCM Lane LOS	A	-	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	2.5	0	-	-				

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	125	233	165	238	362	178	220	915	182	172	583	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	125	233	165	238	362	178	220	915	182	172	583	62
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	155	492	220	271	725	324	256	1274	253	204	1303	138
Arrive On Green	0.09	0.14	0.14	0.15	0.20	0.20	0.14	0.43	0.43	0.12	0.40	0.40
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2944	585	1774	3229	343
Grp Volume(v), veh/h	125	233	165	238	362	178	220	550	547	172	319	326
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1759	1774	1770	1802
Q Serve(g_s), s	6.9	6.1	10.0	13.1	9.1	10.1	12.1	25.6	25.6	9.5	13.1	13.2
Cycle Q Clear(g_c), s	6.9	6.1	10.0	13.1	9.1	10.1	12.1	25.6	25.6	9.5	13.1	13.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.19
Lane Grp Cap(c), veh/h	155	492	220	271	725	324	256	766	762	204	714	727
V/C Ratio(X)	0.81	0.47	0.75	0.88	0.50	0.55	0.86	0.72	0.72	0.84	0.45	0.45
Avail Cap(c_a), veh/h	231	566	253	319	743	332	373	766	762	248	714	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	39.7	41.4	41.4	35.2	35.6	41.8	23.3	23.3	43.4	21.7	21.7
Incr Delay (d2), s/veh	12.0	0.7	10.1	20.7	0.5	1.8	12.8	5.7	5.8	19.2	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.9	3.0	5.0	8.0	4.5	4.5	6.8	13.6	13.5	5.7	6.8	6.9
LnGrp Delay(d),s/veh	56.8	40.4	51.5	62.1	35.8	37.4	54.6	29.1	29.1	62.6	23.7	23.7
LnGrp LOS	E	D	D	E	D	D	D	C	C	E	C	C
Approach Vol, veh/h	523			778			1317			817		
Approach Delay, s/veh	47.8			44.2			33.4			31.9		
Approach LOS	D			D			C			C		
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	15.5	47.3	19.3	17.9	18.4	44.4	12.7	24.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	14.0	36.0	18.0	16.0	21.0	29.0	13.0	21.0				
Max Q Clear Time (g_c+1), s	11.5	27.6	15.1	12.0	14.1	15.2	8.9	12.1				
Green Ext Time (p_c), s	0.1	6.2	0.2	1.9	0.3	9.1	0.1	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay	37.7											
HCM 2010 LOS	D											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	197	713		5	6	1027	632	6	26	6	271	23 143
Number	7	4		14	3	8	18	5	2	12	1	6 16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	197	713		5	6	1027	632	6	26	6	271	23 143
Adj No. of Lanes	1	2		0	1	2	1	1	1	0	2	1 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
Percent Heavy Veh, %	2	2		2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1890		13	11	1416	633	11	512	118	951	565 480
Arrive On Green	0.13	0.52		0.52	0.01	0.40	0.40	0.01	0.35	0.35	0.30	0.30 0.30
Sat Flow, veh/h	1774	3603		25	1774	3539	1583	1774	1465	338	2661	1863 1583
Grp Volume(v), veh/h	197	350		368	6	1027	632	6	0	32	271	23 143
Grp Sat Flow(s), veh/h/ln	1774	1770		1858	1774	1770	1583	1774	0	1803	1330	1863 1583
Q Serve(g_s), s	10.9	11.7		11.7	0.3	24.5	39.9	0.3	0.0	1.2	7.9	0.9 6.9
Cycle Q Clear(g_c), s	10.9	11.7		11.7	0.3	24.5	39.9	0.3	0.0	1.2	7.9	0.9 6.9
Prop In Lane	1.00			0.01	1.00		1.00	1.00		0.19	1.00	1.00
Lane Grp Cap(c), veh/h	232	928		975	11	1416	633	11	0	630	951	565 480
V/C Ratio(X)	0.85	0.38		0.38	0.55	0.73	1.00	0.55	0.00	0.05	0.29	0.04 0.30
Avail Cap(c_a), veh/h	337	973		1022	71	1416	633	71	0	630	951	565 480
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00 1.00
Uniform Delay (d), s/veh	42.5	14.1		14.1	49.6	25.4	30.0	49.6	0.0	21.6	27.0	24.6 26.7
Incr Delay (d2), s/veh	12.8	0.3		0.2	37.0	1.9	35.2	37.0	0.0	0.2	0.8	0.1 1.6
Initial Q Delay(d3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0
%ile BackOfQ(-26165%), veh/ln	5.8			6.1	0.3	12.4	23.6	0.3	0.0	0.6	3.0	0.5 3.2
LnGrp Delay(d), s/veh	55.3	14.3		14.3	86.6	27.2	65.2	86.6	0.0	21.7	27.8	24.7 28.3
LnGrp LOS	E	B		B	F	C	E	F		C	C	C C
Approach Vol, veh/h	915			1665				38		437		
Approach Delay, s/veh	23.2			41.8				31.9		27.8		
Approach LOS	C			D				C		C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	38.9	4.6	56.5	4.6	34.3	17.1	44.0					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	29.0	4.0	55.0	4.0	21.0	19.0	40.0					
Max Q Clear Time (g_c+I1), s	3.2	2.3	13.7	2.3	9.9	12.9	41.9					
Green Ext Time (p_c), s	1.8	0.0	23.2	0.0	1.4	0.3	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	34.1											
HCM 2010 LOS	C											

PM Peak Hour Cumulative Trips
LSA Associates, Inc.

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HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1970	60	91	687	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1970	60	91	687	3	29
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2030	0	2526	1015
Stage 1	-	-	-	-	2000	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	121	-	33	203
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	540	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	121	-	8	203
Mov Cap-2 Maneuver	-	-	-	-	40	-
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	134	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		11		36.2	
HCM LOS	C		E		E	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	147	-	-	121	-	
HCM Lane V/C Ratio	0.218	-	-	0.752	-	
HCM Control Delay (s)	36.2	-	-	93.8	-	
HCM Lane LOS	E	-	-	F	-	
HCM 95th %tile Q(veh)	0.8	-	-	4.3	-	

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HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	7.5					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	55	101	89	749	239	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	55	101	89	749	239	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	300	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	211	-
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	1506	-	-	0	691	969
Stage 1	-	-	-	0	934	-
Stage 2	-	-	-	0	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	664	969
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	792	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.6		0		13.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	664	969	1506	-	-	
HCM Lane V/C Ratio	0.36	0.011	0.037	-	-	
HCM Control Delay (s)	13.4	8.8	7.5	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	1.6	0	0.1	-	-	

APPENDIX E

EXISTING PLUS PROJECT LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Volume (veh/h)	79	139	85	119	249	30	172	871	159	63	1079	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	139	85	119	249	30	172	871	159	63	1079	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	177	185	158	125	261	31	195	1390	254	81	1417	634
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	542	1133	137	1774	2990	546	1774	3539	1583
Grp Volume(v), veh/h	79	139	85	398	0	0	172	515	515	63	1079	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1812	0	0	1774	1770	1766	1774	1770	1583
Q Serve(g_s), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.0	22.0	3.5	26.3	5.5
Cycle Q Clear(g_c), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.0	22.0	3.5	26.3	5.5
Prop In Lane	1.00		1.00	0.30		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	177	185	158	417	0	0	195	823	821	81	1417	634
V/C Ratio(X)	0.45	0.75	0.54	0.96	0.00	0.00	0.88	0.63	0.63	0.78	0.76	0.21
Avail Cap(c_a), veh/h	284	298	253	417	0	0	195	823	821	106	1417	634
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	43.8	42.8	38.0	0.0	0.0	43.9	20.2	20.2	47.2	25.9	19.6
Incr Delay (d2), s/veh	1.8	6.0	2.9	32.7	0.0	0.0	34.1	3.6	3.6	22.9	3.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	4.1	2.4	14.6	0.0	0.0	6.5	11.6	11.5	2.2	13.5	2.5
LnGrp Delay(d),s/veh	44.2	49.8	45.7	70.7	0.0	0.0	77.9	23.8	23.8	70.2	29.8	20.3
LnGrp LOS	D	D	D	E			E	C	C	E	C	C
Approach Vol, veh/h	303			398			1202			1274		
Approach Delay, s/veh	47.2			70.7			31.5			30.8		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	50.5		13.9	15.0	44.1		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	39.0		16.0	11.0	34.0		23.0				
Max Q Clear Time (g_c+I1), s	5.5	24.0		9.3	11.6	28.3		23.7				
Green Ext Time (p_c), s	0.0	11.8		0.7	0.0	5.0		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

AM Peak Hour Plus Project
LSA Associates, Inc.

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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh	11.9										
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	177	0	541	50	0	680	630	146	21	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	177	0	541	50	0	680	630	146	21	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	892	271	680	0	0	541	0	0	951	340	
Stage 1	541	-	-	-	-	-	-	-	680	-	
Stage 2	351	-	-	-	-	-	-	-	271	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	237	727	908	-	-	1024	-	0	214	656	
Stage 1	493	-	-	-	-	-	-	0	407	-	
Stage 2	639	-	-	-	-	-	-	0	712	-	
Platoon blocked, %				-	-			-			
Mov Cap-1 Maneuver	216	727	908	-	-	1024	-	-	162	656	
Mov Cap-2 Maneuver	216	-	-	-	-	-	-	-	162	-	
Stage 1	493	-	-	-	-	-	-	-	407	-	
Stage 2	609	-	-	-	-	-	-	-	539	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	11.5	0			0			102.5			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	162	-	908	-	-	727	1024	-			
HCM Lane V/C Ratio	0.901	-	-	-	-	0.243	-	-			
HCM Control Delay (s)	102.5	0	0	-	-	11.5	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	6.5	-	0	-	-	1	0	-			

AM Peak Hour Plus Project
LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	9	73	117	29	95	1	135	174	22	4	571	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	73	117	29	95	1	135	174	22	4	571	42
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	533	190	161	557	413	4	203	1330	166	7	1222	90
Arrive On Green	0.30	0.10	0.10	0.31	0.12	0.12	0.06	0.42	0.42	0.00	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	1774	3588	38	3442	3167	395	1774	3344	246
Grp Volume(v), veh/h	9	73	117	29	47	49	135	96	100	4	302	311
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1856	1721	1770	1793	1774	1770	1819
Q Serve(g_s), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.3	3.4	0.2	13.0	13.1
Cycle Q Clear(g_c), s	0.4	3.7	7.2	1.1	2.4	2.4	3.8	3.3	3.4	0.2	13.0	13.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.22	1.00		0.13
Lane Grp Cap(c), veh/h	533	190	161	557	204	214	203	743	753	7	647	665
V/C Ratio(X)	0.02	0.38	0.73	0.05	0.23	0.23	0.67	0.13	0.13	0.54	0.47	0.47
Avail Cap(c_a), veh/h	533	410	348	557	460	483	413	743	753	106	647	665
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	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	42.0	43.6	23.9	40.2	40.2	46.1	17.8	17.8	49.7	24.3	24.3
Incr Delay (d2), s/veh	0.0	1.3	6.1	0.0	0.6	0.5	3.6	0.3	0.3	48.8	2.4	2.4
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(-26165%),veh/ln	0.2	2.0	3.4	0.6	1.2	1.3	1.9	1.7	1.8	0.2	6.8	7.0
LnGrp Delay(d),s/veh	24.6	43.3	49.6	24.0	40.8	40.8	49.7	18.1	18.2	98.5	26.7	26.7
LnGrp LOS	C	D	D	C	D	D	D	B	B	F	C	C
Approach Vol, veh/h	199			125			331			617		
Approach Delay, s/veh	46.2			36.9			31.0			27.1		
Approach LOS	D			D			C			C		
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	4.4	46.0	35.4	14.2	9.9	40.5	34.1	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	42.0	14.0	22.0	12.0	36.0	10.0	26.0				
Max Q Clear Time (g_c+I1), s	2.2	5.4	3.1	9.2	5.8	15.1	2.4	4.4				
Green Ext Time (p_c), s	0.0	5.7	0.0	1.0	0.2	5.0	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	32.1											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	37	28	31	11	27	26	26	288	15	52	607	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	37	28	31	11	27	26	26	288	15	52	607	73
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	47	290	321	19	626	527	36	806	685	67	1432	172
Arrive On Green	0.03	0.36	0.36	0.01	0.34	0.34	0.02	0.43	0.43	0.04	0.45	0.45
Sat Flow, veh/h	1774	809	896	1774	1825	1536	1774	1863	1583	1774	3183	382
Grp Volume(v), veh/h	37	0	59	11	26	27	26	288	15	52	337	343
Grp Sat Flow(s),veh/h/ln	1774	0	1705	1774	1770	1592	1774	1863	1583	1774	1770	1795
Q Serve(g_s), s	2.1	0.0	2.3	0.6	1.0	1.1	1.5	10.4	0.5	2.9	12.9	13.0
Cycle Q Clear(g_c), s	2.1	0.0	2.3	0.6	1.0	1.1	1.5	10.4	0.5	2.9	12.9	13.0
Prop In Lane	1.00		0.53	1.00		0.97	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	47	0	612	19	607	546	36	806	685	67	796	808
V/C Ratio(X)	0.79	0.00	0.10	0.59	0.04	0.05	0.71	0.36	0.02	0.77	0.42	0.42
Avail Cap(c_a), veh/h	195	0	612	124	607	546	160	806	685	231	796	808
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	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	48.4	0.0	21.3	49.3	21.9	21.9	48.7	19.0	16.2	47.7	18.7	18.7
Incr Delay (d2), s/veh	25.1	0.0	0.3	26.1	0.1	0.2	22.5	1.2	0.1	16.3	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	1.1	0.4	0.5	0.5	0.9	5.6	0.2	0.7	6.6	6.7	6.7
LnGrp Delay(d),s/veh	73.5	0.0	21.6	75.4	22.0	22.1	71.2	20.3	16.3	64.0	20.2	20.2
LnGrp LOS	E	C	E	C	C	C	E	C	B	E	C	C
Approach Vol, veh/h	96			64			329			732		
Approach Delay, s/veh	41.6			31.2			24.1			23.4		
Approach LOS	D			C			C			C		
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	47.3	5.1	39.9	6.1	49.0	6.6	38.3					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	41.0	7.0	23.0	9.0	45.0	11.0	19.0					
Max Q Clear Time (g_c+I1), s	12.4	2.6	4.3	3.5	15.0	4.1	3.1					
Green Ext Time (p_c), s	0.0	6.9	0.0	0.5	0.0	6.9	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	25.4											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	142	314	572	88	27	154		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	142	314	572	88	27	154		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	173	2407	1669	256	426	380		
Arrive On Green	0.20	1.00	0.54	0.54	0.24	0.24		
Sat Flow, veh/h	1774	3632	3170	472	1774	1583		
Grp Volume(v), veh/h	142	314	328	332	27	154		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1779	1774	1583		
Q Serve(g_s), s	7.7	0.0	10.4	10.5	1.2	8.2		
Cycle Q Clear(g_c), s	7.7	0.0	10.4	10.5	1.2	8.2		
Prop In Lane	1.00			0.27	1.00	1.00		
Lane Grp Cap(c), veh/h	173	2407	960	965	426	380		
V/C Ratio(X)	0.82	0.13	0.34	0.34	0.06	0.41		
Avail Cap(c_a), veh/h	408	2407	960	965	426	380		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.4	0.0	12.9	12.9	29.3	32.0		
Incr Delay (d2), s/veh	9.0	0.1	1.0	1.0	0.3	3.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	5.4	5.4	0.6	7.8		
LnGrp Delay(d),s/veh	48.4	0.1	13.8	13.8	29.6	35.2		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h	456	660		181				
Approach Delay, s/veh	15.2	13.8		34.4				
Approach LOS	B	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				72.0		28.0	13.8	58.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				68.0		24.0	23.0	41.0
Max Q Clear Time (g_c+I1), s				2.0		10.2	9.7	12.5
Green Ext Time (p_c), s				7.8		0.4	0.3	7.1
Intersection Summary								
HCM 2010 Ctrl Delay			17.2					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations								
Volume (veh/h)	410	230	53	688	469	57		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	410	0	53	688	469	57		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2378	1064	68	2656	584	269		
Arrive On Green	0.22	0.00	0.08	1.00	0.17	0.17		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	410	0	53	688	469	57		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	9.4	0.0	2.9	0.0	13.1	3.1		
Cycle Q Clear(g_c), s	9.4	0.0	2.9	0.0	13.1	3.1		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	2378	1064	68	2656	584	269		
V/C Ratio(X)	0.17	0.00	0.78	0.26	0.80	0.21		
Avail Cap(c_a), veh/h	2378	1064	231	2656	1239	570		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.98	0.00	0.94	0.94	1.00	1.00		
Uniform Delay (d), s/veh	16.4	0.0	45.7	0.0	39.9	35.8		
Incr Delay (d2), s/veh	0.2	0.0	16.2	0.2	2.6	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	1.7	0.1	6.5	1.4		
LnGrp Delay(d),s/veh	16.6	0.0	62.0	0.2	42.6	36.2		
LnGrp LOS	B		E	A	D	D		
Approach Vol, veh/h	410			741	526			
Approach Delay, s/veh	16.6			4.6	41.9			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		21.0	7.8	71.2				79.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		36.0	13.0	39.0				56.0
Max Q Clear Time (g_c+I1), s		15.1	4.9	11.4				2.0
Green Ext Time (p_c), s		1.9	0.0	8.7				9.9
Intersection Summary								
HCM 2010 Ctrl Delay			19.2					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	353	196	85	805	303	413	433	98	174	339	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	129	353	196	85	805	303	413	433	98	174	339	105
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	229	1652	739	464	1652	739	824	1604	718	780	1211	370
Arrive On Green	0.93	0.93	0.93	0.47	0.47	0.47	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	507	3539	1583	855	3539	1583	1827	3539	1583	1686	2673	815
Grp Volume(v), veh/h	129	353	196	85	805	303	413	433	98	174	223	221
Grp Sat Flow(s),veh/h/ln	507	1770	1583	855	1770	1583	914	1770	1583	843	1770	1719
Q Serve(g_s), s	19.7	0.8	1.1	6.0	15.7	12.6	18.3	7.6	3.6	7.2	7.9	8.1
Cycle Q Clear(g_c), s	35.4	0.8	1.1	6.8	15.7	12.6	26.4	7.6	3.6	14.8	7.9	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	229	1652	739	464	1652	739	824	1604	718	780	802	779
V/C Ratio(X)	0.56	0.21	0.27	0.18	0.49	0.41	0.50	0.27	0.14	0.22	0.28	0.28
Avail Cap(c_a), veh/h	251	1805	807	501	1805	807	824	1604	718	780	802	779
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	1.8	1.8	16.3	18.4	17.6	25.4	17.0	15.9	21.6	17.1	17.2
Incr Delay (d2), s/veh	2.4	0.1	0.2	0.2	0.2	0.3	2.2	0.4	0.4	0.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(26165%),veh/ln	0.4	0.5	1.4	7.7	5.5	4.8	3.8	1.7	1.7	4.0	4.0	4.0
LnGrp Delay(d),s/veh	11.4	1.9	2.0	16.5	18.6	17.9	27.6	17.4	16.3	22.3	18.0	18.1
LnGrp LOS	B	A	A	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	678			1193			944			618		
Approach Delay, s/veh	3.7			18.3			21.8			19.2		
Approach LOS	A			B			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	49.3		50.7		49.3		50.7					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	41.0		51.0		41.0		51.0					
Max Q Clear Time (g_c+I1), s	28.4		37.4		16.8		17.7					
Green Ext Time (p_c), s	7.6		9.2		11.2		16.1					
Intersection Summary												
HCM 2010 Ctrl Delay	16.5											
HCM 2010 LOS	B											

HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	681	0	0	1249	49	0	0	0	1	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	11	681	0	0	1249	49	0	0	0	1	0	45
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	1298	0	0	681	0	0	1637	1977	649			
Stage 1	-	-	-	-	-	-	1274	1274	-			
Stage 2	-	-	-	-	-	-	363	703	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	530	-	-	907	-	-	91	61	412			
Stage 1	-	-	-	-	-	-	226	236	-			
Stage 2	-	-	-	-	-	-	674	438	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	530	-	-	907	-	-	89	0	412			
Mov Cap-2 Maneuver	-	-	-	-	-	-	89	0	-			
Stage 1	-	-	-	-	-	-	226	0	-			
Stage 2	-	-	-	-	-	-	660	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0.2			0			15.7					
HCM LOS	C											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	530	-	-	907	-	-	382					
HCM Lane V/C Ratio	0.021	-	-	-	-	-	0.12					
HCM Control Delay (s)	11.9	-	-	0	-	-	15.7					
HCM Lane LOS	B	-	-	A	-	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑		
Volume (veh/h)	519	282	14	1266	51	176		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	519	0	14	1266	51	176		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2442	1092	678	2442	408	364		
Arrive On Green	1.00	0.00	0.46	0.46	0.23	0.23		
Sat Flow, veh/h	3632	1583	879	3632	1774	1583		
Grp Volume(v), veh/h	519	0	14	1266	51	176		
Grp Sat Flow(s),veh/h/ln	1770	1583	879	1770	1774	1583		
Q Serve(g_s), s	0.0	0.0	0.9	25.3	2.3	9.6		
Cycle Q Clear(g_c), s	0.0	0.0	0.9	25.3	2.3	9.6		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2442	1093	678	2442	408	364		
V/C Ratio(X)	0.21	0.00	0.02	0.52	0.12	0.48		
Avail Cap(c_a), veh/h	2442	1093	678	2442	408	364		
HCM Platoon Ratio	2.00	2.00	0.67	0.67	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.0	8.6	15.1	30.5	33.4		
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.8	0.6	4.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	0.0	0.2	12.6	1.2	4.7		
LnGrp Delay(d),s/veh	0.2	0.0	8.6	15.9	31.2	37.9		
LnGrp LOS	A		A	B	C	D		
Approach Vol, veh/h	519			1280	227			
Approach Delay, s/veh	0.2			15.8	36.4			
Approach LOS	A			B	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		73.0				73.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		69.0				69.0
Max Q Clear Time (g_c+I1), s		11.6		2.0				27.3
Green Ext Time (p_c), s		0.5		23.5				19.9
Intersection Summary								
HCM 2010 Ctrl Delay				14.1				
HCM 2010 LOS				B				

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑↑		↓	↑↑		↓	↑		↓	↑	↑
Volume (veh/h)	22	735	94	100	907	16	119	15	90	41	49	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	22	735	94	100	907	16	119	15	90	41	49	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	32	2324	295	128	2001	35	149	53	319	52	327	278
Arrive On Green	0.02	0.51	0.51	0.02	0.19	0.19	0.08	0.23	0.23	0.03	0.18	0.18
Sat Flow, veh/h	1774	4570	580	1774	3559	63	1774	231	1387	1774	1863	1583
Grp Volume(v), veh/h	22	544	285	100	451	472	119	0	105	41	49	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1760	1774	1770	1852	1774	0	1618	1774	1863	1583
Q Serve(g_s), s	1.2	9.4	9.5	5.6	22.7	22.7	6.6	0.0	5.3	2.3	2.2	1.6
Cycle Q Clear(g_c), s	1.2	9.4	9.5	5.6	22.7	22.7	6.6	0.0	5.3	2.3	2.2	1.6
Prop In Lane		1.00	0.33	1.00		0.03	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	32	1724	895	128	995	1041	149	0	372	52	327	278
V/C Ratio(X)	0.68	0.32	0.32	0.78	0.45	0.45	0.80	0.00	0.28	0.79	0.15	0.11
Avail Cap(c_a), veh/h	124	1724	895	248	995	1041	266	0	372	142	327	278
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	14.4	14.4	48.0	27.0	27.0	45.0	0.0	31.7	48.2	34.9	34.7
Incr Delay (d2), s/veh	0.5	0.9	0.9	9.8	1.5	1.4	9.4	0.0	1.9	22.5	1.0	0.8
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(-26165%),veh/ln	4.5	4.8	3.1	11.5	12.1	3.6	0.0	0.0	2.6	1.5	1.2	0.8
LnGrp Delay(d),s/veh	70.7	14.9	15.4	57.8	28.5	28.5	54.3	0.0	33.6	70.8	35.9	35.4
LnGrp LOS	E	B	B	E	C	C	D		C	E	D	D
Approach Vol, veh/h		851			1023			224			120	
Approach Delay, s/veh		16.5			31.4			44.6			47.7	
Approach LOS		B			C			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	27.0	11.2	54.8	12.4	21.5	5.8	60.2					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	23.0	14.0	39.0	15.0	16.0	7.0	46.0					
Max Q Clear Time (g_c+I1), s	7.3	7.6	11.5	8.6	4.2	3.2	24.7					
Green Ext Time (p_c), s	0.0	0.8	0.1	14.1	0.1	0.7	12.2					
Intersection Summary												
HCM 2010 Ctrl Delay					27.9							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↔	↔	↔	↔	
Volume (veh/h)	2	796	98	81	983	3	49	2	47	2	1	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	796	98	81	983	3	49	2	47	2	1	0
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2173	267	0	2478	8	63	0	372	0	298	0
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.04	0.24	0.24	0.00	0.16	0.00
Sat Flow, veh/h	0	3173	391	0	3619	11	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	444	450	0	481	505	49	0	47	0	1	0
Grp Sat Flow(s),veh/h/ln	0	1770	1794	0	1770	1861	1774	0	1583	0	1863	0
Q Serve(g_s), s	0.0	10.6	10.6	0.0	11.8	11.8	2.7	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.6	10.6	0.0	11.8	11.8	2.7	0.0	2.3	0.0	0.0	0.0
Prop In Lane	0.00		0.22	0.00		0.01	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1212	1228	0	1212	1274	63	0	372	0	298	0
V/C Ratio(X)	0.00	0.37	0.37	0.00	0.40	0.40	0.78	0.00	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1212	1228	0	1212	1274	71	0	372	0	298	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.6	6.6	0.0	6.8	6.8	47.9	0.0	30.1	0.0	35.3	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.8	0.0	1.0	0.9	38.5	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.3	5.4	0.0	6.1	6.4	2.0	0.0	1.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.5	7.5	0.0	7.8	7.7	86.3	0.0	30.3	0.0	35.3	0.0
LnGrp LOS	A	A		A	A	F		C		D		
Approach Vol, veh/h		894			986			96			1	
Approach Delay, s/veh		7.5			7.8			58.9			35.3	
Approach LOS		A			A			E			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/0.0	27.5	0.0	72.5	7.5	20.0	0.0	72.5					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	16.0	4.0	60.0	4.0	16.0	4.0	60.0					
Max Q Clear Time (g_c+10), s	4.3	0.0	12.6	4.7	2.0	0.0	13.8					
Green Ext Time (p_c), s	0.0	0.1	0.0	19.5	0.0	0.1	0.0	19.3				
Intersection Summary												
HCM 2010 Ctrl Delay				10.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	0	0	0	329	1	14	498	72	0	0	39	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				329	1	14	498	72	0	0	39	65
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				376	1	336	791	114	0	0	101	168
Arrive On Green				0.21	0.21	0.21	0.85	0.85	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1769	5	1583	1559	225	0	0	629	1049
Grp Volume(v), veh/h				330	0	14	570	0	0	0	0	104
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1785	0	0	0	0	1678
Q Serve(g_s), s				18.0	0.0	0.7	10.4	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s				18.0	0.0	0.7	10.4	0.0	0.0	0.0	0.0	5.6
Prop In Lane				1.00		1.00	0.87		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				377	0	336	906	0	0	0	0	268
V/C Ratio(X)				0.88	0.00	0.04	0.63	0.00	0.00	0.00	0.00	0.39
Avail Cap(c_a), veh/h				497	0	443	906	0	0	0	0	268
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				38.1	0.0	31.3	4.5	0.0	0.0	0.0	0.0	37.6
Incr Delay (d2), s/veh				12.9	0.0	0.1	3.3	0.0	0.0	0.0	0.0	4.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				10.2	0.0	0.3	5.5	0.0	0.0	0.0	0.0	2.9
LnGrp Delay(d),s/veh				51.0	0.0	31.3	7.9	0.0	0.0	0.0	0.0	41.8
LnGrp LOS				D		C	A					D
Approach Vol, veh/h					344			570			104	
Approach Delay, s/veh					50.2			7.9			41.8	
Approach LOS					D			A			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		54.8				20.0		25.2				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		44.0				16.0		28.0				
Max Q Clear Time (g_c+10), s		12.4				7.6		20.0				
Green Ext Time (p_c), s		4.4				0.3		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				25.6								
HCM 2010 LOS				C								

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	1	277	0	0	0	0	515	336	7	386	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	25	1	277	0	0	0	0	515	336	7	386	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	915	915	386	386	0	0	515	0	0			
Stage 1	400	400	-	-	-	-	-	-	-	-	-	-
Stage 2	515	515	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	303	273	662	1172	-	-	1051	-	-	-	-	-
Stage 1	677	602	-	-	-	-	-	-	-	-	-	-
Stage 2	600	535	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	301	0	662	1172	-	-	1051	-	-	-	-	-
Mov Cap-2 Maneuver	424	0	-	-	-	-	-	-	-	-	-	-
Stage 1	672	0	-	-	-	-	-	-	-	-	-	-
Stage 2	600	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.3			0			0.2					
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1172	-	-	424	662	1051	-	-				
HCM Lane V/C Ratio	-	-	-	0.061	0.418	0.007	-	-				
HCM Control Delay (s)	0	-	-	14	14.3	8.4	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	2.1	0	-	-				

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	241	93	253	223	37	115	395	206	141	842	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	60	241	93	253	223	37	115	395	206	141	842	63
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	77	375	168	289	797	356	144	1072	552	173	1637	122
Arrive On Green	0.04	0.11	0.11	0.16	0.23	0.23	0.08	0.47	0.47	0.10	0.49	0.49
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2262	1165	1774	3338	250
Grp Volume(v), veh/h	60	241	93	253	223	37	115	308	293	141	446	459
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1657	1774	1770	1819
Q Serve(g_s), s	3.3	6.5	5.6	13.9	5.2	1.9	6.4	11.1	11.3	7.8	17.2	17.2
Cycle Q Clear(g_c), s	3.3	6.5	5.6	13.9	5.2	1.9	6.4	11.1	11.3	7.8	17.2	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.70	1.00		0.14
Lane Grp Cap(c), veh/h	77	375	168	289	797	356	144	838	785	173	867	892
V/C Ratio(X)	0.78	0.64	0.55	0.88	0.28	0.10	0.80	0.37	0.37	0.82	0.51	0.51
Avail Cap(c_a), veh/h	160	566	253	390	1026	459	213	838	785	266	867	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	42.9	42.5	40.9	32.0	30.7	45.2	16.8	16.8	44.2	17.4	17.4
Incr Delay (d2), s/veh	15.1	1.8	2.9	15.4	0.2	0.1	12.3	1.2	1.4	10.7	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.0	3.3	2.6	8.1	2.6	0.8	3.6	5.7	5.4	4.4	8.8	9.1
LnGrp Delay(d),s/veh	62.4	44.7	45.3	56.3	32.2	30.9	57.4	18.0	18.2	55.0	19.6	19.5
LnGrp LOS	E	D	D	E	C	C	E	B	B	D	B	B
Approach Vol, veh/h	394			513			716			1046		
Approach Delay, s/veh	47.6			44.0			24.4			24.3		
Approach LOS	D			D			C			C		
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	13.7	51.4	20.3	14.6	12.1	53.0	8.4	26.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	15.0	31.0	22.0	16.0	12.0	34.0	9.0	29.0				
Max Q Clear Time (g_c+1), s	9.8	13.3	15.9	8.5	8.4	19.2	5.3	7.2				
Green Ext Time (p_c), s	0.1	9.3	0.4	2.1	0.1	8.3	0.0	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay	31.6											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	632	1	4	670	251	9	9	8	500	17	334
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	632	1	4	670	251	9	9	8	500	17	334
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	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	85	1135	2	7	953	426	16	512	455	1530	957	814
Arrive On Green	0.05	0.31	0.31	0.00	0.27	0.27	0.01	0.56	0.56	0.51	0.51	0.51
Sat Flow, veh/h	1774	3626	6	1774	3539	1583	1774	911	809	2697	1863	1583
Grp Volume(v), veh/h	66	308	325	4	670	251	9	0	17	500	17	334
Grp Sat Flow(s), veh/h/ln	1770	1770	1862	1774	1770	1583	1774	0	1720	1349	1863	1583
Q Serve(g_s), s	3.7	14.5	14.5	0.2	17.1	13.8	0.5	0.0	0.4	11.1	0.4	13.0
Cycle Q Clear(g_c), s	3.7	14.5	14.5	0.2	17.1	13.8	0.5	0.0	0.4	11.1	0.4	13.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	85	554	583	7	953	426	16	0	968	1530	957	814
V/C Ratio(X)	0.77	0.56	0.56	0.54	0.70	0.59	0.57	0.00	0.02	0.33	0.02	0.41
Avail Cap(c_a), veh/h	195	708	745	71	1168	523	71	0	968	1530	957	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	28.6	28.6	49.7	32.9	31.7	49.4	0.0	9.7	14.5	11.9	15.0
Incr Delay (d2), s/veh	13.7	0.9	0.8	48.8	1.5	1.3	28.9	0.0	0.0	0.6	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	7.2	7.5	0.2	8.5	6.1	0.4	0.0	0.2	4.2	0.2	6.0	
LnGrp Delay(d), s/veh	60.8	29.5	29.4	98.5	34.4	33.0	78.3	0.0	9.7	15.1	12.0	16.5
LnGrp LOS	E	C	C	F	C	C	E		A	B	B	B
Approach Vol, veh/h	699			925			26			851		
Approach Delay, s/veh	32.4			34.3			33.4			15.6		
Approach LOS	C			C			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	60.3	4.4	35.3	4.9	55.4	8.8	30.9					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	44.0	4.0	40.0	4.0	36.0	11.0	33.0					
Max Q Clear Time (g_c+I1), s	2.4	2.2	16.5	2.5	15.0	5.7	19.1					
Green Ext Time (p_c), s	3.6	0.0	10.6	0.0	3.4	0.0	7.8					
Intersection Summary												
HCM 2010 Ctrl Delay	27.4											
HCM 2010 LOS	C											

HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	3.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	810	65	302	1002	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	810	65	302	1002	2	6
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	875	0	1948	438
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	1105	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	450	-	75	484
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	450	-	25	484
Mov Cap-2 Maneuver	-	-	-	-	70	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	89	-
Approach						
HCM Control Delay, s	0		6.4		24.3	
HCM LOS	C		C		C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	195	-	-	450	-	
HCM Lane V/C Ratio	0.041	-	-	0.671	-	
HCM Control Delay (s)	24.3	-	-	27.8	-	
HCM Lane LOS	C	-	-	D	-	
HCM 95th %tile Q(veh)	0.1	-	-	4.9	-	

HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	5.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	47	76	38	302	116	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	47	76	38	302	116	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	208	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	170	-
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	1572	-	-	0	780	1034
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	-	756	1034
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	833	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.8		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	756	1034	1572	-	-	
HCM Lane V/C Ratio	0.153	0.011	0.03	-	-	
HCM Control Delay (s)	10.6	8.5	7.4	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	0.5	0	0.1	-	-	

10/30/2014

Notes
User approved volume balancing among the lanes for turning movement.

Synchro 8 Report
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Synchro 8 Report
Page 3

HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	62	244	170	38	223	3	206	455	102	9	216	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	244	170	38	223	3	206	455	102	9	216	45
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	597	327	278	578	589	8	284	950	211	16	751	153
Arrive On Green	0.34	0.18	0.18	0.33	0.16	0.16	0.08	0.33	0.33	0.01	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	3576	48	3442	2878	641	1774	2928	599
Grp Volume(v), veh/h	62	244	170	38	110	116	206	279	278	9	129	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1854	1721	1770	1750	1774	1770	1757
Q Serve(g_s), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	12.5	12.7	0.5	5.8	6.0
Cycle Q Clear(g_c), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	12.5	12.7	0.5	5.8	6.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.37	1.00		0.34
Lane Grp Cap(c), veh/h	597	327	278	578	292	306	284	584	577	16	454	450
V/C Ratio(X)	0.10	0.75	0.61	0.07	0.38	0.38	0.73	0.48	0.48	0.57	0.28	0.29
Avail Cap(c_a), veh/h	597	596	507	578	495	519	585	584	577	106	454	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	39.1	38.1	23.2	37.2	37.2	44.8	26.6	26.7	49.4	29.8	29.9
Incr Delay (d2), s/veh	0.1	3.4	2.2	0.0	0.8	0.8	2.7	2.1	2.2	28.9	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.2	6.7	4.5	0.7	2.8	2.9	2.9	6.5	6.5	0.4	3.1	3.1
LnGrp Delay(d),s/veh	22.9	42.5	40.2	23.3	38.0	38.0	47.4	28.7	28.9	78.3	31.4	31.5
LnGrp LOS	C	D	D	C	D	D	D	C	C	E	C	C
Approach Vol, veh/h		476			264			763			270	
Approach Delay, s/veh		39.1			35.9			33.8			33.0	
Approach LOS		D			D			C			C	
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	4.9	37.0	36.6	21.6	12.3	29.6	37.6	20.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	33.0	13.0	32.0	17.0	22.0	17.0	28.0				
Max Q Clear Time (g_c+I1), s	2.5	14.7	3.5	14.4	7.8	8.0	4.4	7.6				
Green Ext Time (p_c), s	0.0	4.8	0.0	3.1	0.4	4.3	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay				35.4								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	103	73	100	14	47	49	200	592	36	30	392	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	103	73	100	14	47	49	200	592	36	30	392	52
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	239	327	23	485	434	235	875	744	40	1132	149
Arrive On Green	0.07	0.33	0.33	0.01	0.27	0.27	0.13	0.47	0.47	0.02	0.36	0.36
Sat Flow, veh/h	1774	713	977	1774	1770	1583	1774	1863	1583	1774	3145	414
Grp Volume(v), veh/h	103	0	173	14	47	49	200	592	36	30	219	225
Grp Sat Flow(s),veh/h/ln	1774	0	1690	1774	1770	1583	1774	1863	1583	1774	1770	1790
Q Serve(g_s), s	5.7	0.0	7.6	0.8	2.0	2.3	11.0	24.7	1.2	1.7	9.1	9.2
Cycle Q Clear(g_c), s	5.7	0.0	7.6	0.8	2.0	2.3	11.0	24.7	1.2	1.7	9.1	9.2
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	130	0	565	23	485	434	235	875	744	40	637	644
V/C Ratio(X)	0.79	0.00	0.31	0.61	0.10	0.11	0.85	0.68	0.05	0.75	0.34	0.35
Avail Cap(c_a), veh/h	213	0	565	71	485	434	355	875	744	106	637	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	45.6	0.0	24.7	49.1	27.1	27.2	42.4	20.6	14.4	48.6	23.4	23.4
Incr Delay (d2), s/veh	10.2	0.0	1.4	23.7	0.4	0.5	11.6	4.2	0.1	23.3	1.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	3.8	0.5	1.0	1.1	6.1	13.7	0.6	1.1	4.7	4.8
LnGrp Delay(d),s/veh	55.7	0.0	26.1	72.8	27.5	27.7	54.0	24.8	14.5	71.9	24.8	24.9
LnGrp LOS	E		C	E	C	C	D	C	B	E	C	C
Approach Vol, veh/h		276			110		828			474		
Approach Delay, s/veh		37.1			33.4		31.4			27.8		
Approach LOS		D			C		C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s6.3	51.0	5.3	37.4	17.3	40.0	11.3	31.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	47.0	4.0	27.0	20.0	33.0	12.0	19.0					
Max Q Clear Time (g_c+I1), s	26.7	2.8	9.6	13.0	11.2	7.7	4.3					
Green Ext Time (p_c), s	0.0	7.0	0.0	1.4	0.3	7.2	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay					31.5							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	133	753	472	49	86	209		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	133	753	472	49	86	209		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	164	2265	1644	170	497	443		
Arrive On Green	0.18	1.00	0.51	0.51	0.28	0.28		
Sat Flow, veh/h	1774	3632	3331	335	1774	1583		
Grp Volume(v), veh/h	133	753	257	264	86	209		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1804	1774	1583		
Q Serve(g_s), s	7.2	0.0	8.4	8.4	3.7	10.9		
Cycle Q Clear(g_c), s	7.2	0.0	8.4	8.4	3.7	10.9		
Prop In Lane	1.00			0.19	1.00	1.00		
Lane Grp Cap(c), veh/h	164	2265	899	916	497	443		
V/C Ratio(X)	0.81	0.33	0.29	0.29	0.17	0.47		
Avail Cap(c_a), veh/h	408	2265	899	916	497	443		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	40.0	0.0	14.2	14.2	27.2	29.9		
Incr Delay (d2), s/veh	8.8	0.4	0.8	0.8	0.8	3.6		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	4.3	4.4	1.9	10.4			
LnGrp Delay(d),s/veh	48.7	0.4	15.0	15.0	28.0	33.4		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	886	521	295					
Approach Delay, s/veh	7.6	15.0	31.8					
Approach LOS	A	B	C					
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				68.0		32.0	13.2	54.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				64.0		28.0	23.0	37.0
Max Q Clear Time (g_c+I1), s				2.0		12.9	9.2	10.4
Green Ext Time (p_c), s				11.8		0.8	0.3	9.8
Intersection Summary								
HCM 2010 Ctrl Delay	14.1							
HCM 2010 LOS	B							

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations								
Volume (veh/h)	785	486	97	591	316	83		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	785	0	97	591	316	83		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2445	1094	123	2832	412	190		
Arrive On Green	0.23	0.00	0.14	1.00	0.12	0.12		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	785	0	97	591	316	83		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	18.5	0.0	5.3	0.0	8.9	4.9		
Cycle Q Clear(g_c), s	18.5	0.0	5.3	0.0	8.9	4.9		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	2445	1094	123	2832	412	190		
V/C Ratio(X)	0.32	0.00	0.79	0.21	0.77	0.44		
Avail Cap(c_a), veh/h	2445	1094	302	2832	757	348		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.87	0.00	0.95	0.95	1.00	1.00		
Uniform Delay (d), s/veh	19.1	0.0	42.4	0.0	42.6	40.9		
Incr Delay (d2), s/veh	0.3	0.0	10.3	0.2	3.0	1.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	2.9	0.1	4.4	2.2			
LnGrp Delay(d),s/veh	19.4	0.0	52.6	0.2	45.7	42.5		
LnGrp LOS	B		D	A	D	D		
Approach Vol, veh/h	785			688	399			
Approach Delay, s/veh	19.4			7.6	45.0			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		16.0	10.9	73.1				84.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		22.0	17.0	49.0				70.0
Max Q Clear Time (g_c+I1), s		10.9	7.3	20.5				2.0
Green Ext Time (p_c), s		1.1	0.1	11.6				14.3
Intersection Summary								
HCM 2010 Ctrl Delay	20.5							
HCM 2010 LOS	C							

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	303	906	346	154	456	256	251	632	126	234	371	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	303	906	346	154	456	256	251	632	126	234	371	82
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	398	1891	846	308	1891	846	677	1365	610	488	1114	244
Arrive On Green	1.00	1.00	1.00	0.36	0.36	0.36	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	735	3539	1583	442	3539	1583	1812	3539	1583	1366	2889	632
Grp Volume(v), veh/h	303	906	346	154	456	256	251	632	126	234	226	227
Grp Sat Flow(s), veh/h/ln	735	1770	1583	442	1770	1583	906	1770	1583	683	1770	1751
Q Serve(g, s), s	30.6	0.0	0.0	29.2	9.1	11.6	11.4	13.4	5.3	15.5	9.0	9.2
Cycle Q Clear(g, c), s	39.6	0.0	0.0	29.2	9.1	11.6	20.5	13.4	5.3	28.8	9.0	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	398	1891	846	308	1891	846	677	1365	610	488	682	675
V/C Ratio(X)	0.76	0.48	0.41	0.50	0.24	0.30	0.37	0.46	0.21	0.48	0.33	0.34
Avail Cap(c_a), veh/h	417	1982	887	319	1982	887	677	1365	610	488	682	675
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.4	0.0	0.0	24.3	17.8	18.7	28.9	23.0	20.5	33.8	21.6	21.7
Incr Delay (d2), s/veh	7.7	0.2	0.3	1.2	0.1	0.2	1.6	1.1	0.8	3.3	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(26165%), veh/ln	0.0	0.0	0.1	3.7	4.4	5.2	3.0	6.7	2.4	3.2	4.6	4.7
LnGrp Delay(d), s/veh	11.0	0.2	0.3	25.5	17.9	18.9	30.5	24.1	21.3	37.1	22.9	23.0
LnGrp LOS	B	A	A	C	B	B	C	C	C	D	C	C
Approach Vol, veh/h	1555			866			1009			687		
Approach Delay, s/veh	2.3			19.5			25.3			27.8		
Approach LOS	A			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	42.6		57.4		42.6		57.4					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	36.0		56.0		36.0		56.0					
Max Q Clear Time (g_c+I1), s	22.5		41.6		30.8		31.2					
Green Ext Time (p_c), s	8.8		11.8		4.0		18.4					
Intersection Summary												
HCM 2010 Ctrl Delay	15.8											
HCM 2010 LOS	B											

HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	1567	0	0	785	7	0	0	0	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	2	1567	0	0	785	7	0	0	0	0	0	8
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	792			1567			1577 2360 396					
Stage 1	-			-			789 789 -					
Stage 2	-			-			788 1571 -					
Critical Hdwy	4.14			4.14			6.84 6.54 6.94					
Critical Hdwy Stg 1	-			-			5.84 5.54 -					
Critical Hdwy Stg 2	-			-			5.84 5.54 -					
Follow-up Hdwy	2.22			2.22			3.52 4.02 3.32					
Pot Cap-1 Maneuver	824			417			100 35 603					
Stage 1	-			-			408 400 -					
Stage 2	-			-			409 169 -					
Platoon blocked, %	-			-			-					
Mov Cap-1 Maneuver	824			417			100 0 603					
Mov Cap-2 Maneuver	-			-			100 0 -					
Stage 1	-			-			408 0 -					
Stage 2	-			-			408 0 -					
Approach	EB			WB			SB					
HCM Control Delay, s	0			0			11.1					
HCM LOS	A			B			B					
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	824	-	-	417	-	-	603					
HCM Lane V/C Ratio	0.002	-	-	-	-	-	0.013					
HCM Control Delay (s)	9.4	-	-	0	-	-	11.1					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑		
Volume (veh/h)	1230	764	76	711	32	315		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1230	0	76	711	32	315		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2194	982	301	2194	532	475		
Arrive On Green	0.82	0.00	0.20	0.20	0.30	0.30		
Sat Flow, veh/h	3632	1583	451	3632	1774	1583		
Grp Volume(v), veh/h	1230	0	76	711	32	315		
Grp Sat Flow(s),veh/h/ln	1770	1583	451	1770	1774	1583		
Q Serve(g_s), s	11.3	0.0	14.9	17.1	1.3	17.4		
Cycle Q Clear(g_c), s	11.3	0.0	26.2	17.1	1.3	17.4		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2194	982	301	2194	532	475		
V/C Ratio(X)	0.56	0.00	0.25	0.32	0.06	0.66		
Avail Cap(c_a), veh/h	2194	982	301	2194	532	475		
HCM Platoon Ratio	1.33	1.33	0.33	0.33	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.3	0.0	30.5	21.9	25.0	30.6		
Incr Delay (d2), s/veh	1.0	0.0	2.0	0.4	0.2	7.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	5.6	0.0	2.0	8.5	0.7	8.6		
LnGrp Delay(d),s/veh	5.4	0.0	32.5	22.3	25.2	37.7		
LnGrp LOS	A		C	C	C	D		
Approach Vol, veh/h	1230			787	347			
Approach Delay, s/veh	5.4			23.3	36.6			
Approach LOS	A			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.0		66.0				66.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		30.0		62.0				62.0
Max Q Clear Time (g_c+I1), s		19.4		13.3				28.2
Green Ext Time (p_c), s		0.9		25.9				21.0
Intersection Summary								
HCM 2010 Ctrl Delay			15.9					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	1808	121	53	562	52	108	41	122	45	33	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	1808	121	53	562	52	108	41	122	45	33	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	77	2676	179	68	1783	165	136	91	271	57	327	278
Arrive On Green	0.04	0.55	0.55	0.05	0.72	0.72	0.08	0.22	0.22	0.03	0.18	0.18
Sat Flow, veh/h	1774	4870	325	1774	3276	303	1774	414	1232	1774	1863	1583
Grp Volume(v), veh/h	60	1257	672	53	303	311	108	0	163	45	33	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1805	1774	1770	1809	1774	0	1645	1774	1863	1583
Q Serve(g_s), s	3.3	26.6	26.7	3.0	6.1	6.2	6.0	0.0	8.6	2.5	1.5	1.6
Cycle Q Clear(g_c), s	3.3	26.6	26.7	3.0	6.1	6.2	6.0	0.0	8.6	2.5	1.5	1.6
Prop In Lane	1.00		0.18	1.00		0.17	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	77	1863	992	68	963	984	136	0	362	57	327	278
V/C Ratio(X)	0.78	0.67	0.68	0.78	0.31	0.32	0.79	0.00	0.45	0.79	0.10	0.11
Avail Cap(c_a), veh/h	160	1863	992	124	963	984	213	0	362	106	327	278
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	16.1	16.2	47.0	7.1	7.2	45.4	0.0	33.8	48.0	34.6	34.6
Incr Delay (d2), s/veh	15.1	2.0	3.7	17.3	0.9	0.8	10.5	0.0	4.0	20.5	0.6	0.8
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(-26165%),veh/ln	12.9	14.3	1.8	3.2	3.2	3.3	0.0	0.0	4.3	1.6	0.8	0.8
LnGrp Delay(d),s/veh	62.4	18.1	19.9	64.4	8.0	8.0	55.9	0.0	37.8	68.5	35.2	35.4
LnGrp LOS	E	B	B	E	A	A	E		D	E	D	D
Approach Vol, veh/h		1989			667			271			108	
Approach Delay, s/veh		20.0			12.5			45.0			49.2	
Approach LOS		C			B			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), s7.2	26.0	7.8	58.9	11.7	21.6	8.4	58.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	22.0	7.0	49.0	12.0	16.0	9.0	47.0					
Max Q Clear Time (g_c+I1), s	10.6	5.0	28.7	8.0	3.6	5.3	8.2					
Green Ext Time (p_c), s	0.0	0.9	0.0	16.6	0.1	0.9	0.0	27.6				
Intersection Summary												
HCM 2010 Ctrl Delay					21.6							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↖		↗	↔		
Volume (veh/h)	3	1760	35	71	637	2	108	0	208	3	1	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	0	1863	1900	1863	1900
Adj Flow Rate, veh/h	3	1760	35	71	637	2	108	0	208	3	1	3
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2	2	2	2
Cap, veh/h	0	2378	47	0	2425	8	89	0	0	0	66	197
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.05	0.00	0.00	0.25	0.16	0.16
Sat Flow, veh/h	0	3550	70	0	3619	11	1774	108	0	411	1234	
Grp Volume(v), veh/h	0	875	920	0	311	328	108	212.7	0	0	4	
Grp Sat Flow(s), veh/h/ln	0	1770	1850	0	1770	1861	1774	F	0	0	1645	
Q Serve(g_s), s	0.0	32.3	32.6	0.0	7.0	7.0	5.0		0.0	0.0	0.2	
Cycle Q Clear(g_c), s	0.0	32.3	32.6	0.0	7.0	7.0	5.0		0.0	0.0	0.2	
Prop In Lane	0.00		0.04	0.00		0.01	1.00		0.00		0.75	
Lane Grp Cap(c), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
V/C Ratio(X)	0.00	0.74	0.74	0.00	0.26	0.26	1.22		0.00	0.00	0.02	
Avail Cap(c_a), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00		0.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	10.8	10.8	0.0	6.6	6.6	47.5		0.0	0.0	35.4	
Incr Delay (d2), s/veh	0.0	4.1	4.0	0.0	0.5	0.5	165.2		0.0	0.0	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(-26165%),veh/ln	16.9	17.7	0.0	3.6	3.7	6.5			0.0	0.0	0.1	
LnGrp Delay(d),s/veh	0.0	14.9	14.9	0.0	7.1	7.1	212.7		0.0	0.0	35.5	
LnGrp LOS	B	B		A	A	F					D	
Approach Vol, veh/h	1795			639			4			228		
Approach Delay, s/veh	14.9			7.1			35.5			69.2		
Approach LOS	B			A			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.0		0.0	71.0	9.0	20.0	0.0	71.0				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	4.0		4.0	59.0	5.0	16.0	4.0	59.0				
Max Q Clear Time (g_c+10), s	0.0		0.0	34.6	7.0	2.2	0.0	9.0				
Green Ext Time (p_c), s	0.0		0.0	19.3	0.0	0.0	0.0	32.5				
Intersection Summary												
HCM 2010 Ctrl Delay	21.4											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↖	↗		↖	↗		↖	↗
Volume (veh/h)	0	0	0	355	4	21	373	155	0	0	71	157
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				355	4	21	373	155	0	0	71	157
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				402	5	362	624	259	0	0	83	183
Arrive On Green				0.23	0.23	0.23	0.82	0.82	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1755	20	1583	1271	528	0	0	517	1144
Grp Volume(v), veh/h				359	0	21	528	0	0	0	0	228
Grp Sat Flow(s), veh/h/ln				1775	0	1583	1799	0	0	0	0	1661
Q Serve(g_s), s				19.6	0.0	1.0	10.3	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				19.6	0.0	1.0	10.3	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.99		1.00	0.71		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				406	0	362	884	0	0	0	0	266
V/C Ratio(X)				0.88	0.00	0.06	0.60	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				515	0	459	884	0	0	0	0	266
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				37.3	0.0	30.1	5.5	0.0	0.0	0.0	0.0	40.9
Incr Delay (d2), s/veh				14.0	0.0	0.1	3.0	0.0	0.0	0.0	0.0	28.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				11.2	0.0	0.5	5.6	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh				51.2	0.0	30.2	8.5	0.0	0.0	0.0	0.0	69.2
LnGrp LOS				D		C	A					E
Approach Vol, veh/h				380			528			228		
Approach Delay, s/veh				50.1			8.5			69.2		
Approach LOS				D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.1				20.0		26.9				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				16.0		29.0				
Max Q Clear Time (g_c+10), s		12.3				15.4		21.6				
Green Ext Time (p_c), s		3.9				0.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	34.6											
HCM 2010 LOS	C											

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	13	277	0	0	0	0	430	781	10	411	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	57	13	277	0	0	0	0	430	781	10	411	0
Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	861	861	411				411	0	0	430	0	0
Stage 1	431	431	-				-	-	-	-	-	-
Stage 2	430	430	-				-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22				4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-				-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318				2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	326	293	641				1148	-	-	1129	-	-
Stage 1	655	583	-				-	-	-	-	-	-
Stage 2	656	583	-				-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	322	0	641				1148	-	-	1129	-	-
Mov Cap-2 Maneuver	442	0	-				-	-	-	-	-	-
Stage 1	648	0	-				-	-	-	-	-	-
Stage 2	656	0	-				-	-	-	-	-	-
Approach	EB						NB			SB		
HCM Control Delay, s	14.8						0			0.2		
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1148	-	-	442	641	1129	-	-				
HCM Lane V/C Ratio	-	-	-	0.158	0.432	0.009	-	-				
HCM Control Delay (s)	0	-	-	14.7	14.8	8.2	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	2.2	0	-	-				

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	204	152	221	337	174	198	903	169	168	562	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	121	204	152	221	337	174	198	903	169	168	562	57
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	151	469	210	254	676	302	233	1345	252	200	1404	142
Arrive On Green	0.08	0.13	0.13	0.14	0.19	0.19	0.13	0.45	0.45	0.11	0.43	0.43
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2977	557	1774	3246	328
Grp Volume(v), veh/h	121	204	152	221	337	174	198	537	535	168	306	313
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1764	1774	1770	1805
Q Serve(g_s), s	6.7	5.3	9.2	12.2	8.5	10.0	10.9	23.9	23.9	9.3	11.9	11.9
Cycle Q Clear(g_c), s	6.7	5.3	9.2	12.2	8.5	10.0	10.9	23.9	23.9	9.3	11.9	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		0.18
Lane Grp Cap(c), veh/h	151	469	210	254	676	302	233	799	797	200	766	781
V/C Ratio(X)	0.80	0.44	0.72	0.87	0.50	0.58	0.85	0.67	0.67	0.84	0.40	0.40
Avail Cap(c_a), veh/h	231	566	253	302	708	317	355	799	797	231	766	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	39.9	41.6	41.9	36.2	36.8	42.4	21.6	21.6	43.5	19.5	19.5
Incr Delay (d2), s/veh	11.0	0.6	7.9	20.3	0.6	2.3	11.3	4.5	4.5	21.2	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.8	2.6	4.5	7.4	4.2	4.5	6.1	12.6	12.6	5.7	6.1	6.2
LnGrp Delay(d),s/veh	56.0	40.6	49.5	62.3	36.8	39.1	53.8	26.0	26.1	64.7	21.0	21.0
LnGrp LOS	E	D	D	E	D	D	D	C	C	E	C	C
Approach Vol, veh/h	477			732			1270			787		
Approach Delay, s/veh	47.3			45.0			30.4			30.3		
Approach LOS	D			D			C			C		
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	15.2	49.2	18.3	17.2	17.2	47.3	12.5	23.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	38.0	17.0	16.0	20.0	31.0	13.0	20.0				
Max Q Clear Time (g_c+1), s	11.3	25.9	14.2	11.2	12.9	13.9	8.7	12.0				
Green Ext Time (p_c), s	0.1	8.1	0.2	2.0	0.3	10.3	0.1	3.0				
Intersection Summary												
HCM 2010 Ctrl Delay	36.1											
HCM 2010 LOS	D											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	197	713		5	6	1027	615	6	23	6	271	16	143
Number	7	4		14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	197	713		5	6	1027	615	6	23	6	271	16	143
Adj No. of Lanes		1	2	0	1	2	1	1	1	0	2	1	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	232	1890		13	11	1416	633	11	498	130	953	565	480
Arrive On Green	0.13	0.52		0.52	0.01	0.40	0.40	0.01	0.35	0.35	0.30	0.30	0.30
Sat Flow, veh/h	1774	3603		25	1774	3539	1583	1774	1425	372	2668	1863	1583
Grp Volume(v), veh/h	197	350		368	6	1027	615	6	0	29	271	16	143
Grp Sat Flow(s), veh/h/ln	1774	1770		1858	1774	1770	1583	1774	0	1797	1334	1863	1583
Q Serve(g_s), s	10.9	11.7		11.7	0.3	24.5	38.1	0.3	0.0	1.1	7.9	0.6	6.9
Cycle Q Clear(g_c), s	10.9	11.7		11.7	0.3	24.5	38.1	0.3	0.0	1.1	7.9	0.6	6.9
Prop In Lane	1.00			0.01	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	232	928		975	11	1416	633	11	0	628	953	565	480
V/C Ratio(X)	0.85	0.38		0.38	0.55	0.73	0.97	0.55	0.00	0.05	0.28	0.03	0.30
Avail Cap(c_a), veh/h	337	973		1022	71	1416	633	71	0	628	953	565	480
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	14.1		14.1	49.6	25.4	29.4	49.6	0.0	21.5	27.0	24.5	26.7
Incr Delay (d2), s/veh	12.8	0.3		0.2	37.0	1.9	28.5	37.0	0.0	0.1	0.7	0.1	1.6
Initial Q Delay(d3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	5.8			6.1	0.3	12.4	21.6	0.3	0.0	0.6	3.0	0.3	3.2
LnGrp Delay(d), s/veh	55.3	14.3		14.3	86.6	27.2	58.0	86.6	0.0	21.7	27.8	24.6	28.3
LnGrp LOS	E	B		B	F	C	E	F		C	C	C	C
Approach Vol, veh/h	915			1648			35			430			
Approach Delay, s/veh	23.2			38.9			32.8			27.8			
Approach LOS	C			D			C			C			
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	38.9	4.6	56.5	4.6	34.3	17.1	44.0						
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0						
Max Green Setting (Gmax), s	29.0	4.0	55.0	4.0	21.0	19.0	40.0						
Max Q Clear Time (g_c+I1), s	3.1	2.3	13.7	2.3	9.9	12.9	40.1						
Green Ext Time (p_c), s	1.8	0.0	23.0	0.0	1.4	0.3	0.0						
Intersection Summary													
HCM 2010 Ctrl Delay	32.5												
HCM 2010 LOS	C												

HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	4.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1947	60	101	657	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1947	60	101	657	3	29
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	2007	0	2508	1004
Stage 1	-	-	-	-	1977	-
Stage 2	-	-	-	-	531	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	124	-	34	206
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	537	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	124	-	6	206
Mov Cap-2 Maneuver	-	-	-	-	36	-
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	100	-
Approach						
	EB		WB		NB	
HCM Control Delay, s	0		13.8		37.3	
HCM LOS	C		E		E	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	143	-	-	124	-	
HCM Lane V/C Ratio	0.224	-	-	0.815	-	
HCM Control Delay (s)	37.3	-	-	103.6	-	
HCM Lane LOS	E	-	-	F	-	
HCM 95th %tile Q(veh)	0.8	-	-	4.9	-	

HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	7.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	55	101	89	744	251	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	55	101	89	744	251	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	300	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	211	-
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	1506	-	-	0	691	969
Stage 1	-	-	-	0	934	-
Stage 2	-	-	-	0	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	664	969
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	792	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.6		0		13.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	664	969	1506	-	-	
HCM Lane V/C Ratio	0.378	0.011	0.037	-	-	
HCM Control Delay (s)	13.7	8.8	7.5	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	1.8	0	0.1	-	-	

APPENDIX F

CUMULATIVE PLUS PROJECT LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Volume (veh/h)	79	139	85	119	249	30	172	879	159	63	1101	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	139	85	119	249	30	172	879	159	63	1101	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	177	185	158	125	261	31	195	1392	252	81	1417	634
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	542	1133	137	1774	2995	542	1774	3539	1583
Grp Volume(v), veh/h	79	139	85	398	0	0	172	519	519	63	1101	132
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1812	0	0	1774	1770	1767	1774	1770	1583
Q Serve(g_s), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.2	22.2	3.5	27.1	5.5
Cycle Q Clear(g_c), s	4.2	7.3	5.1	21.7	0.0	0.0	9.6	22.2	22.2	3.5	27.1	5.5
Prop In Lane	1.00		1.00	0.30		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	177	185	158	417	0	0	195	823	822	81	1417	634
V/C Ratio(X)	0.45	0.75	0.54	0.96	0.00	0.00	0.88	0.63	0.63	0.78	0.78	0.21
Avail Cap(c_a), veh/h	284	298	253	417	0	0	195	823	822	106	1417	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	43.8	42.8	38.0	0.0	0.0	43.9	20.3	20.3	47.2	26.1	19.6
Incr Delay (d2), s/veh	1.8	6.0	2.9	32.7	0.0	0.0	34.1	3.7	3.7	22.9	4.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	4.1	2.4	14.6	0.0	0.0	6.5	11.7	11.6	2.2	14.0	2.5
LnGrp Delay(d),s/veh	44.2	49.8	45.7	70.7	0.0	0.0	77.9	23.9	23.9	70.2	30.3	20.3
LnGrp LOS	D	D	D	E			E	C	C	E	C	C
Approach Vol, veh/h	303			398			1210			1296		
Approach Delay, s/veh	47.2			70.7			31.6			31.2		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	50.5		13.9	15.0	44.1		27.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	39.0		16.0	11.0	34.0		23.0				
Max Q Clear Time (g_c+I1), s	5.5	24.2		9.3	11.6	29.1		23.7				
Green Ext Time (p_c), s	0.0	11.7		0.7	0.0	4.4		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

AM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh	13.2										
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	177	0	546	52	0	692	640	149	22	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	177	0	546	52	0	692	640	149	22	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	903	273	692	0	0	546	0	0	965	346	
Stage 1	546	-	-	-	-	-	-	-	692	-	
Stage 2	357	-	-	-	-	-	-	-	273	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	232	725	899	-	-	1019	-	0	209	650	
Stage 1	490	-	-	-	-	-	-	0	400	-	
Stage 2	633	-	-	-	-	-	-	0	710	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	210	725	899	-	-	1019	-	-	158	650	
Mov Cap-2 Maneuver	210	-	-	-	-	-	-	-	158	-	
Stage 1	490	-	-	-	-	-	-	-	400	-	
Stage 2	602	-	-	-	-	-	-	-	537	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	11.6	0			0			114.1			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	158	-	899	-	-	725	1019	-			
HCM Lane V/C Ratio	0.943	-	-	-	-	0.244	-	-			
HCM Control Delay (s)	114.1	0	0	-	-	11.6	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	6.9	-	0	-	-	1	0	-			

AM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	9	73	117	29	95	1	135	185	22	4	591	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	73	117	29	95	1	135	185	22	4	591	42
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	516	190	161	539	413	4	203	1372	161	7	1258	89
Arrive On Green	0.29	0.10	0.10	0.30	0.12	0.12	0.06	0.43	0.43	0.00	0.38	0.38
Sat Flow, veh/h	1774	1863	1583	1774	3588	38	3442	3191	375	1774	3352	238
Grp Volume(v), veh/h	9	73	117	29	47	49	135	102	105	4	312	321
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1856	1721	1770	1797	1774	1770	1821
Q Serve(g_s), s	0.4	3.7	7.2	1.2	2.4	2.4	3.8	3.5	3.6	0.2	13.3	13.4
Cycle Q Clear(g_c), s	0.4	3.7	7.2	1.2	2.4	2.4	3.8	3.5	3.6	0.2	13.3	13.4
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	516	190	161	539	204	214	203	761	773	7	664	683
V/C Ratio(X)	0.02	0.38	0.73	0.05	0.23	0.23	0.67	0.13	0.14	0.54	0.47	0.47
Avail Cap(c_a), veh/h	516	410	348	539	460	483	413	761	773	106	664	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	42.0	43.6	24.6	40.2	40.2	46.1	17.2	17.3	49.7	23.7	23.7
Incr Delay (d2), s/veh	0.0	1.3	6.1	0.0	0.6	0.5	3.6	0.3	0.3	48.8	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.2	2.0	3.4	0.6	1.2	1.3	1.9	1.8	1.8	0.2	6.9	7.1
LnGrp Delay(d),s/veh	25.3	43.3	49.6	24.7	40.8	40.8	49.7	17.6	17.6	98.5	26.0	26.0
LnGrp LOS	C	D	D	C	D	D	D	B	B	F	C	C
Approach Vol, veh/h	199			125			342			637		
Approach Delay, s/veh	46.2			37.0			30.2			26.5		
Approach LOS	D			D			C			C		
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	4.4	47.0	34.4	14.2	9.9	41.5	33.1	15.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	43.0	13.0	22.0	12.0	37.0	9.0	26.0				
Max Q Clear Time (g_c+I1), s	2.2	5.6	3.2	9.2	5.8	15.4	2.4	4.4				
Green Ext Time (p_c), s	0.0	5.9	0.0	1.0	0.2	5.3	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	31.5											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	37	28	34	11	27	26	28	303	15	52	629	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	37	28	34	11	27	26	28	303	15	52	629	73
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	47	285	346	19	650	547	38	782	665	67	1394	162
Arrive On Green	0.03	0.37	0.37	0.01	0.36	0.36	0.02	0.42	0.42	0.04	0.44	0.44
Sat Flow, veh/h	1774	767	931	1774	1825	1536	1774	1863	1583	1774	3197	370
Grp Volume(v), veh/h	37	0	62	11	26	27	28	303	15	52	348	354
Grp Sat Flow(s),veh/h/ln	1774	0	1698	1774	1770	1592	1774	1863	1583	1774	1770	1797
Q Serve(g_s), s	2.1	0.0	2.4	0.6	1.0	1.1	1.6	11.3	0.6	2.9	13.8	13.8
Cycle Q Clear(g_c), s	2.1	0.0	2.4	0.6	1.0	1.1	1.6	11.3	0.6	2.9	13.8	13.8
Prop In Lane	1.00		0.55	1.00		0.97	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	47	0	631	19	630	567	38	782	665	67	772	784
V/C Ratio(X)	0.79	0.00	0.10	0.59	0.04	0.05	0.73	0.39	0.02	0.78	0.45	0.45
Avail Cap(c_a), veh/h	177	0	631	106	630	567	177	782	665	195	772	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	48.4	0.0	20.5	49.3	21.1	21.1	48.6	20.1	17.0	47.7	19.8	19.8
Incr Delay (d2), s/veh	25.2	0.0	0.3	26.1	0.1	0.2	23.0	1.4	0.1	16.4	1.8	1.8
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(-26165%),veh/ln	0.0	1.2	0.4	0.5	0.5	1.0	6.1	0.3	1.7	7.1	7.2	7.2
LnGrp Delay(d),s/veh	73.6	0.0	20.8	75.4	21.2	21.3	71.7	21.5	17.0	64.1	21.6	21.6
LnGrp LOS	E	C	E	C	C	C	E	C	B	E	C	C
Approach Vol, veh/h	99			64			346			754		
Approach Delay, s/veh	40.5			30.5			25.4			24.5		
Approach LOS	D			C			C			C		
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	46.0	5.1	41.2	6.2	47.6	6.6	39.6					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	42.0	6.0	25.0	10.0	43.0	10.0	21.0					
Max Q Clear Time (g_c+I1), s	13.3	2.6	4.4	3.6	15.8	4.1	3.1					
Green Ext Time (p_c), s	0.0	7.2	0.0	0.5	0.0	7.1	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay	26.3											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	147	343	595	88	27	160		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	147	343	595	88	27	160		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	178	2442	1701	251	408	364		
Arrive On Green	0.20	1.00	0.55	0.55	0.23	0.23		
Sat Flow, veh/h	1774	3632	3188	457	1774	1583		
Grp Volume(v), veh/h	147	343	340	343	27	160		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1782	1774	1583		
Q Serve(g_s), s	7.9	0.0	10.7	10.8	1.2	8.7		
Cycle Q Clear(g_c), s	7.9	0.0	10.7	10.8	1.2	8.7		
Prop In Lane	1.00			0.26	1.00	1.00		
Lane Grp Cap(c), veh/h	178	2442	972	979	408	364		
V/C Ratio(X)	0.82	0.14	0.35	0.35	0.07	0.44		
Avail Cap(c_a), veh/h	408	2442	972	979	408	364		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.1	0.0	12.6	12.6	30.1	33.0		
Incr Delay (d2), s/veh	9.0	0.1	1.0	1.0	0.3	3.8		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	5.5	5.5	0.6	8.2		
LnGrp Delay(d),s/veh	48.1	0.1	13.6	13.6	30.4	36.8		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h	490	683		187				
Approach Delay, s/veh	14.5	13.6		35.9				
Approach LOS	B	B		D				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				73.0		27.0	14.1	58.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				69.0		23.0	23.0	42.0
Max Q Clear Time (g_c+I1), s				2.0		10.7	9.9	12.8
Green Ext Time (p_c), s				8.4		0.4	0.3	7.6
Intersection Summary								
HCM 2010 Ctrl Delay			17.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↕↕	↕	↩	↕↕	↕↕	↕		
Volume (veh/h)	429	266	69	703	505	74		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	429	0	69	703	505	74		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2296	1027	89	2615	623	287		
Arrive On Green	0.21	0.00	0.10	1.00	0.18	0.18		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	429	0	69	703	505	74		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	9.9	0.0	3.8	0.0	14.1	4.0		
Cycle Q Clear(g_c), s	9.9	0.0	3.8	0.0	14.1	4.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2296	1027	89	2615	623	287		
V/C Ratio(X)	0.19	0.00	0.78	0.27	0.81	0.26		
Avail Cap(c_a), veh/h	2296	1027	266	2615	1205	554		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.98	0.00	0.94	0.94	1.00	1.00		
Uniform Delay (d), s/veh	17.7	0.0	44.4	0.0	39.3	35.2		
Incr Delay (d2), s/veh	0.2	0.0	12.6	0.2	2.6	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	2.2	0.1	6.9	1.8		
LnGrp Delay(d),s/veh	17.9	0.0	57.1	0.2	41.9	35.6		
LnGrp LOS	B		E	A	D	D		
Approach Vol, veh/h	429			772	579			
Approach Delay, s/veh	17.9			5.3	41.1			
Approach LOS	B			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		22.1	9.0	68.9				77.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		35.0	15.0	38.0				57.0
Max Q Clear Time (g_c+I1), s		16.1	5.8	11.9				2.0
Green Ext Time (p_c), s		2.0	0.1	8.8				10.4
Intersection Summary								
HCM 2010 Ctrl Delay			20.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	388	202	91	834	315	417	437	108	195	346	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	129	388	202	91	834	315	417	437	108	195	346	105
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	226	1688	755	459	1688	755	797	1568	702	751	1191	356
Arrive On Green	0.95	0.95	0.95	0.48	0.48	0.48	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	487	3539	1583	823	3539	1583	1815	3539	1583	1665	2687	804
Grp Volume(v), veh/h	129	388	202	91	834	315	417	437	108	195	226	225
Grp Sat Flow(s), veh/h/ln	487	1770	1583	823	1770	1583	908	1770	1583	832	1770	1721
Q Serve(g_s), s	20.7	0.7	0.8	6.6	16.1	13.0	19.1	7.8	4.1	8.4	8.2	8.4
Cycle Q Clear(g_c), s	36.9	0.7	0.8	7.2	16.1	13.0	27.5	7.8	4.1	16.3	8.2	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	226	1688	755	459	1688	755	797	1568	702	751	784	763
V/C Ratio(X)	0.57	0.23	0.27	0.20	0.49	0.42	0.52	0.28	0.15	0.26	0.29	0.29
Avail Cap(c_a), veh/h	242	1805	807	486	1805	807	797	1568	702	751	784	763
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	1.2	1.2	15.8	17.9	17.1	26.6	17.7	16.6	22.9	17.8	17.8
Incr Delay (d2), s/veh	2.8	0.1	0.2	0.2	0.2	0.3	2.5	0.4	0.5	0.8	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.3	0.3	1.5	7.9	5.8	5.0	3.9	1.9	2.0	4.2	4.1	
LnGrp Delay(d),s/veh	11.2	1.3	1.4	16.0	18.1	17.4	29.1	18.1	17.1	23.7	18.7	18.8
LnGrp LOS	B	A	A	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	719			1240			962			646		
Approach Delay, s/veh	3.1			17.8			22.8			20.3		
Approach LOS	A			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	48.3		51.7		48.3		51.7					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	41.0		51.0		41.0		51.0					
Max Q Clear Time (g_c+I1), s	29.5		38.9		18.3		18.1					
Green Ext Time (p_c), s	7.3		8.8		11.3		17.1					
Intersection Summary												
HCM 2010 Ctrl Delay	16.6											
HCM 2010 LOS	B											

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HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

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Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	717	0	0	1278	49	0	0	0	1	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	11	717	0	0	1278	49	0	0	0	1	0	45
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	1327	0	0	717	0	0	1684	2042	664			
Stage 1	-	-	-	-	-	-	1303	1303	-			
Stage 2	-	-	-	-	-	-	381	739	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	516	-	-	880	-	-	85	56	403			
Stage 1	-	-	-	-	-	-	218	229	-			
Stage 2	-	-	-	-	-	-	660	422	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	516	-	-	880	-	-	83	0	403			
Mov Cap-2 Maneuver	-	-	-	-	-	-	83	0	-			
Stage 1	-	-	-	-	-	-	218	0	-			
Stage 2	-	-	-	-	-	-	646	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0.2			0			16					
HCM LOS							C					
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	516	-	-	880	-	-	372					
HCM Lane V/C Ratio	0.021	-	-	-	-	-	0.124					
HCM Control Delay (s)	12.1	-	-	0	-	-	16					
HCM Lane LOS	B	-	-	A	-	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

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HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↘	↙	↑↑	↘	↙		
Volume (veh/h)	553	282	16	1293	51	178		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	553	0	16	1293	51	178		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2442	1092	660	2442	408	364		
Arrive On Green	1.00	0.00	0.46	0.46	0.23	0.23		
Sat Flow, veh/h	3632	1583	852	3632	1774	1583		
Grp Volume(v), veh/h	553	0	16	1293	51	178		
Grp Sat Flow(s),veh/h/ln	1770	1583	852	1770	1774	1583		
Q Serve(g_s), s	0.0	0.0	1.0	26.0	2.3	9.8		
Cycle Q Clear(g_c), s	0.0	0.0	1.0	26.0	2.3	9.8		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2442	1093	660	2442	408	364		
V/C Ratio(X)	0.23	0.00	0.02	0.53	0.12	0.49		
Avail Cap(c_a), veh/h	2442	1093	660	2442	408	364		
HCM Platoon Ratio	2.00	2.00	0.67	0.67	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.0	8.6	15.3	30.5	33.4		
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.8	0.6	4.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	0.0	0.3	12.9	1.2	4.7		
LnGrp Delay(d),s/veh	0.2	0.0	8.7	16.2	31.2	38.0		
LnGrp LOS	A		A	B	C	D		
Approach Vol, veh/h	553			1309	229			
Approach Delay, s/veh	0.2			16.1	36.5			
Approach LOS	A			B	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		73.0				73.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		69.0				69.0
Max Q Clear Time (g_c+I1), s		11.8		2.0				28.0
Green Ext Time (p_c), s		0.5		25.0				20.7
Intersection Summary								
HCM 2010 Ctrl Delay				14.1				
HCM 2010 LOS				B				

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

	↖	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↖↖↖		↘	↖↖		↖	↖		↖	↖	↖	
Volume (veh/h)	22	767	94	100	932	16	119	15	90	41	49	30	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863	
Adj Flow Rate, veh/h	22	767	94	100	932	16	119	15	90	41	49	30	
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	32	2336	284	128	2002	34	149	53	319	52	327	278	
Arrive On Green	0.02	0.51	0.51	0.02	0.19	0.19	0.08	0.23	0.23	0.03	0.18	0.18	
Sat Flow, veh/h	1774	4595	559	1774	3560	61	1774	231	1387	1774	1863	1583	
Grp Volume(v), veh/h	22	565	296	100	463	485	119	0	105	41	49	30	
Grp Sat Flow(s),veh/h/ln1774	1695	1764	1774	1770	1852	1774	0	1618	1774	1863	1583		
Q Serve(g_s), s	1.2	9.8	9.9	5.6	23.3	23.3	6.6	0.0	5.3	2.3	2.2	1.6	
Cycle Q Clear(g_c), s	1.2	9.8	9.9	5.6	23.3	23.3	6.6	0.0	5.3	2.3	2.2	1.6	
Prop In Lane	1.00		0.32	1.00		0.03	1.00		0.86	1.00		1.00	
Lane Grp Cap(c), veh/h	32	1724	897	128	995	1042	149	0	372	52	327	278	
V/C Ratio(X)	0.68	0.33	0.33	0.78	0.47	0.47	0.80	0.00	0.28	0.79	0.15	0.11	
Avail Cap(c_a), veh/h	106	1724	897	248	995	1042	266	0	372	142	327	278	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	48.8	14.5	14.5	48.0	27.3	27.3	45.0	0.0	31.7	48.2	34.9	34.7	
Incr Delay (d2), s/veh	21.9	0.5	1.0	9.8	1.6	1.5	9.4	0.0	1.9	22.5	1.0	0.8	
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(-26165%),veh/ln	4.7	5.0	3.1	11.9	12.4	3.6	0.0	0.0	2.6	1.5	1.2	0.8	
LnGrp Delay(d),s/veh	70.7	15.0	15.5	57.8	28.9	28.8	54.3	0.0	33.6	70.8	35.9	35.4	
LnGrp LOS	E	B	B	E	C	C	D		C	E	D	D	
Approach Vol, veh/h		883			1048			224			120		
Approach Delay, s/veh		16.6			31.6			44.6			47.7		
Approach LOS		B			C			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), s6.9	27.0	11.2	54.8	12.4	21.5	5.8	60.2						
Change Period (Y+Rc), s 4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0						
Max Green Setting (Gmax), s 6.0	23.0	14.0	39.0	15.0	16.0	6.0	47.0						
Max Q Clear Time (g_c+I1), s 7.3	7.3	7.6	11.9	8.6	4.2	3.2	25.3						
Green Ext Time (p_c), s 0.0	0.0	0.8	0.1	14.5	0.1	0.7	0.0	12.7					
Intersection Summary													
HCM 2010 Ctrl Delay					27.9								
HCM 2010 LOS					C								

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

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
Volume (veh/h)	2	828	98	81	1008	3	49	2	47	2	1	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	828	98	81	1008	3	49	2	47	2	1	0
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2183	258	0	2479	7	63	0	372	0	298	0
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.04	0.24	0.24	0.00	0.16	0.00
Sat Flow, veh/h	0	3188	377	0	3620	11	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	460	466	0	493	518	49	0	47	0	1	0
Grp Sat Flow(s),veh/h/ln	0	1770	1796	0	1770	1861	1774	0	1583	0	1863	0
Q Serve(g_s), s	0.0	11.1	11.1	0.0	12.2	12.2	2.7	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.1	11.1	0.0	12.2	12.2	2.7	0.0	2.3	0.0	0.0	0.0
Prop In Lane	0.00		0.21	0.00		0.01	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1212	1230	0	1212	1274	63	0	372	0	298	0
V/C Ratio(X)	0.00	0.38	0.38	0.00	0.41	0.41	0.78	0.00	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1212	1230	0	1212	1274	71	0	372	0	298	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.7	6.7	0.0	6.9	6.9	47.9	0.0	30.1	0.0	35.3	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.0	1.0	1.0	38.5	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.7	5.7	0.0	6.2	6.5	2.0	0.0	1.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.6	7.6	0.0	7.9	7.9	86.3	0.0	30.3	0.0	35.3	0.0
LnGrp LOS	A	A		A	A	F		C		D		
Approach Vol, veh/h	926			1011			96			1		
Approach Delay, s/veh	7.6			7.9			58.9			35.3		
Approach LOS	A			A			E			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/0.0	27.5	0.0	72.5	7.5	20.0	0.0	72.5					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	16.0	4.0	60.0	4.0	16.0	4.0	60.0					
Max Q Clear Time (g_c+10), s	4.3	0.0	13.1	4.7	2.0	0.0	14.2					
Green Ext Time (p_c), s	0.0	0.1	0.0	20.4	0.0	0.1	20.2					
Intersection Summary												
HCM 2010 Ctrl Delay	10.2											
HCM 2010 LOS	B											

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

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
Volume (veh/h)	0	0	0	339	1	14	509	72	0	0	39	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	0	0	1863	1900			
Adj Flow Rate, veh/h	339	1	14	509	72	0	0	39	65			
Adj No. of Lanes	0	1	1	0	1	0	1	0	0	1	0	0
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	0	0	2	2			
Cap, veh/h	383	1	343	787	111	0	0	101	168			
Arrive On Green	0.22	0.22	0.22	0.84	0.84	0.00	0.00	0.16	0.16			
Sat Flow, veh/h	1769	5	1583	1563	221	0	0	629	1049			
Grp Volume(v), veh/h	340	0	14	581	0	0	0	0	104			
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1785	0	0	0	0	1678			
Q Serve(g_s), s	18.6	0.0	0.7	11.4	0.0	0.0	0.0	0.0	5.6			
Cycle Q Clear(g_c), s	18.6	0.0	0.7	11.4	0.0	0.0	0.0	0.0	5.6			
Prop In Lane	1.00		1.00	0.88		0.00	0.00		0.62			
Lane Grp Cap(c), veh/h	385	0	343	898	0	0	0	0	268			
V/C Ratio(X)	0.88	0.00	0.04	0.65	0.00	0.00	0.00	0.00	0.39			
Avail Cap(c_a), veh/h	479	0	427	898	0	0	0	0	268			
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00			
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	37.9	0.0	30.9	4.9	0.0	0.0	0.0	0.0	37.6			
Incr Delay (d2), s/veh	15.1	0.0	0.0	3.6	0.0	0.0	0.0	0.0	4.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	10.7	0.0	0.3	6.0	0.0	0.0	0.0	0.0	2.9			
LnGrp Delay(d),s/veh	53.0	0.0	31.0	8.5	0.0	0.0	0.0	0.0	41.8			
LnGrp LOS	D		C	A					D			
Approach Vol, veh/h			354			581			104			
Approach Delay, s/veh			52.2			8.5			41.8			
Approach LOS			D			A			D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s	54.3					20.0		25.7				
Change Period (Y+Rc), s	4.0					4.0		4.0				
Max Green Setting (Gmax), s	45.0					16.0		27.0				
Max Q Clear Time (g_c+10), s	13.4					7.6		20.6				
Green Ext Time (p_c), s	4.5					0.3		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay	26.7											
HCM 2010 LOS	C											

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

10/30/2014

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	1	294	0	0	0	0	526	342	7	396	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	25	1	294	0	0	0	0	526	342	7	396	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	936	936	396	396	0	0	526	0	0	-	-	-
Stage 1	410	410	-	-	-	-	-	-	-	-	-	-
Stage 2	526	526	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	294	265	653	1163	-	-	1041	-	-	-	-	-
Stage 1	670	595	-	-	-	-	-	-	-	-	-	-
Stage 2	593	529	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	291	0	653	1163	-	-	1041	-	-	-	-	-
Mov Cap-2 Maneuver	416	0	-	-	-	-	-	-	-	-	-	-
Stage 1	664	0	-	-	-	-	-	-	-	-	-	-
Stage 2	593	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	14.8	-	-	0	-	-	0.1	-	-	-	-	-
HCM LOS	B	-	-	-	-	-	-	-	-	-	-	-
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1163	-	-	416	653	1041	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	0.063	0.45	0.007	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	14.2	14.9	8.5	0	-	-	-	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	2.3	0	-	-	-	-	-	-

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	256	101	260	235	40	128	410	214	143	859	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	256	101	260	235	40	128	410	214	143	859	65
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	83	391	175	296	816	365	158	1049	541	175	1580	120
Arrive On Green	0.05	0.11	0.11	0.17	0.23	0.23	0.09	0.46	0.46	0.10	0.47	0.47
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2260	1166	1774	3335	252
Grp Volume(v), veh/h	64	256	101	260	235	40	128	320	304	143	456	468
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1657	1774	1770	1818
Q Serve(g_s), s	3.6	6.9	6.1	14.3	5.5	2.0	7.1	11.8	12.0	7.9	18.3	18.3
Cycle Q Clear(g_c), s	3.6	6.9	6.1	14.3	5.5	2.0	7.1	11.8	12.0	7.9	18.3	18.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.70	1.00		0.14
Lane Grp Cap(c), veh/h	83	391	175	296	816	365	158	821	769	175	838	861
V/C Ratio(X)	0.78	0.65	0.58	0.88	0.29	0.11	0.81	0.39	0.40	0.82	0.54	0.54
Avail Cap(c_a), veh/h	160	566	253	390	1026	459	213	821	769	266	838	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	42.7	42.3	40.7	31.7	30.4	44.7	17.5	17.6	44.2	18.6	18.6
Incr Delay (d2), s/veh	14.3	1.9	3.0	16.2	0.2	0.1	15.5	1.4	1.5	11.1	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	3.5	2.8	8.3	2.7	0.9	4.2	6.1	5.8	4.4	9.4	9.7
LnGrp Delay(d),s/veh	61.4	44.5	45.3	56.9	31.9	30.5	60.2	18.9	19.1	55.3	21.2	21.1
LnGrp LOS	E	D	D	E	C	C	E	B	B	E	C	C
Approach Vol, veh/h	421			535			752			1067		
Approach Delay, s/veh	47.3			43.9			26.0			25.7		
Approach LOS	D			D			C			C		
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	13.9	50.4	20.7	15.0	12.9	51.4	8.7	27.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	15.0	31.0	22.0	16.0	12.0	34.0	9.0	29.0				
Max Q Clear Time (g_c+1), s	9.9	14.0	16.3	8.9	9.1	20.3	5.6	7.5				
Green Ext Time (p_c), s	0.1	9.3	0.4	2.1	0.1	8.1	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay	32.6											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	632	1	4	670	258	9	19	8	500	26	334
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	632	1	4	670	258	9	19	8	500	26	334
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	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	85	1136	2	7	953	426	16	701	295	1517	957	813
Arrive On Green	0.05	0.31	0.31	0.00	0.27	0.27	0.01	0.56	0.56	0.51	0.51	0.51
Sat Flow, veh/h	1774	3626	6	1774	3539	1583	1774	1246	524	2673	1863	1583
Grp Volume(v), veh/h	66	308	325	4	670	258	9	0	27	500	26	334
Grp Sat Flow(s), veh/h/ln	1770	1770	1862	1774	1770	1583	1774	0	1770	1336	1863	1583
Q Serve(g, s), s	3.7	14.5	14.5	0.2	17.1	14.2	0.5	0.0	0.7	11.2	0.7	13.0
Cycle Q Clear(g, c), s	3.7	14.5	14.5	0.2	17.1	14.2	0.5	0.0	0.7	11.2	0.7	13.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	85	554	583	7	953	426	16	0	996	1517	957	813
V/C Ratio(X)	0.77	0.56	0.56	0.54	0.70	0.61	0.57	0.00	0.03	0.33	0.03	0.41
Avail Cap(c_a), veh/h	195	708	745	71	1168	523	71	0	996	1517	957	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	28.6	28.6	49.7	32.9	31.9	49.4	0.0	9.7	14.5	12.0	15.0
Incr Delay (d2), s/veh	13.7	0.9	0.8	48.8	1.5	1.4	28.9	0.0	0.1	0.6	0.1	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	7.2	7.5	0.2	8.5	6.4	6.4	0.4	0.0	0.3	4.2	0.4	6.0
LnGrp Delay(d), s/veh	60.8	29.4	29.4	98.5	34.4	33.3	78.3	0.0	9.8	15.1	12.0	16.5
LnGrp LOS	E	C	C	F	C	C	E		A	B	B	B
Approach Vol, veh/h	699			932			36			860		
Approach Delay, s/veh	32.4			34.4			26.9			15.6		
Approach LOS	C			C			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	60.3	4.4	35.3	4.9	55.4	8.8	30.9					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	44.0	4.0	40.0	4.0	36.0	11.0	33.0					
Max Q Clear Time (g_c+I1), s	2.7	2.2	16.5	2.5	15.0	5.7	19.1					
Green Ext Time (p_c), s	3.8	0.0	10.6	0.0	3.5	0.0	7.9					
Intersection Summary												
HCM 2010 Ctrl Delay	27.3											
HCM 2010 LOS	C											

HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	4.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	842	65	302	1027	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	842	65	302	1027	2	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	907	0	1993	454
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	1118	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	434	-	71	473
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	268	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	434	-	22	473
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	82	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.9		25.5	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	184	-	-	434	-	
HCM Lane V/C Ratio	0.043	-	-	0.696	-	
HCM Control Delay (s)	25.5	-	-	30.2	-	
HCM Lane LOS	D	-	-	D	-	
HCM 95th %tile Q(veh)	0.1	-	-	5.2	-	

HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	5.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	47	76	38	304	116	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	47	76	38	304	116	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	208	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	170	-
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	1572	-	-	0	780	1034
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	860	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	-	756	1034
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	833	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.8		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	756	1034	1572	-	-	
HCM Lane V/C Ratio	0.153	0.011	0.03	-	-	
HCM Control Delay (s)	10.6	8.5	7.4	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	0.5	0	0.1	-	-	

HCM 2010 Signalized Intersection Summary
1: Fremont Blvd. & Monterey Rd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	264	68	74	171	39	123	1194	175	53	706	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	241	264	68	74	171	39	123	1194	175	53	706	149
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	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	295	310	263	80	184	42	153	1443	211	68	1478	661
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.47	0.47	0.04	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	468	1081	247	1774	3100	453	1774	3539	1583
Grp Volume(v), veh/h	241	264	68	284	0	0	123	680	689	53	706	149
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1796	0	0	1774	1770	1783	1774	1770	1583
Q Serve(g_s), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	33.3	33.7	3.0	14.5	6.0
Cycle Q Clear(g_c), s	13.1	13.8	3.7	15.6	0.0	0.0	6.8	33.3	33.7	3.0	14.5	6.0
Prop In Lane	1.00		1.00	0.26		0.14	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	295	310	263	305	0	0	153	824	830	68	1478	661
V/C Ratio(X)	0.82	0.85	0.26	0.93	0.00	0.00	0.80	0.82	0.83	0.78	0.48	0.23
Avail Cap(c_a), veh/h	337	354	301	305	0	0	231	824	830	71	1478	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	40.5	36.3	40.9	0.0	0.0	44.9	23.2	23.3	47.7	21.2	18.7
Incr Delay (d2), s/veh	13.0	16.2	0.5	33.8	0.0	0.0	11.5	9.2	9.5	40.5	1.1	0.8
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(-26165%),veh/ln	7.5	8.5	1.7	10.6	0.0	0.0	3.8	18.3	18.7	2.2	7.3	2.8
LnGrp Delay(d),s/veh	53.3	56.7	36.8	74.7	0.0	0.0	56.4	32.4	32.8	88.2	22.3	19.5
LnGrp LOS	D	E	D	E			E	C	C	F	C	B
Approach Vol, veh/h	573			284			1492			908		
Approach Delay, s/veh	52.9			74.7			34.5			25.7		
Approach LOS	D			E			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	50.6		20.6	12.6	45.8		21.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	44.0		19.0	13.0	35.0		17.0				
Max Q Clear Time (g_c+I1), s	5.0	35.7		15.8	8.8	16.5		17.6				
Green Ext Time (p_c), s	0.0	7.0		0.9	0.1	13.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	38.8											
HCM 2010 LOS	D											

PM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 TWSC
2: Del Monte Blvd & Fremont Blvd.

10/30/2014

Intersection											
Int Delay, s/veh		295.9									
Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	
Vol, veh/h	0	108	0	894	26	0	612	258	511	18	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	Free	-	-	
Storage Length	-	0	-	-	0	-	-	0	0	0	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	108	0	894	26	0	612	258	511	18	
Major/Minor	Minor1	Major1			Major2			Minor2			
Conflicting Flow All	1209	447	612	0	0	894	0	0	1059	306	
Stage 1	894	-	-	-	-	-	-	-	612	-	
Stage 2	315	-	-	-	-	-	-	-	447	-	
Critical Hdwy	7.54	6.94	4.14	-	-	4.14	-	-	7.54	6.94	
Critical Hdwy Stg 1	6.54	-	-	-	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	6.54	-	-	-	-	-	-	-	6.54	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	2.22	-	-	3.52	3.32	
Pot Cap-1 Maneuver	139	559	963	-	-	755	-	0	~ 179	690	
Stage 1	302	-	-	-	-	-	-	0	~ 447	-	
Stage 2	671	-	-	-	-	-	-	0	560	-	
Platoon blocked, %			-	-	-			-			
Mov Cap-1 Maneuver	123	559	963	-	-	755	-	-	~ 144	690	
Mov Cap-2 Maneuver	123	-	-	-	-	-	-	-	~ 144	-	
Stage 1	302	-	-	-	-	-	-	-	~ 447	-	
Stage 2	646	-	-	-	-	-	-	-	~ 452	-	
Approach	WB	NB			SB			NE			
HCM Control Delay, s	13	0			0			\$ 1210.7			
HCM LOS	B							F			
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	NBR	WBLn1	SBL	SBT			
Capacity (veh/h)	144	-	963	-	-	559	755	-			
HCM Lane V/C Ratio	3.549	-	-	-	-	0.193	-	-			
HCM Control Delay (s)	\$ 1210.7	0	0	-	-	13	0	-			
HCM Lane LOS	F	A	A	-	-	B	A	-			
HCM 95th %tile Q(veh)	49.7	-	0	-	-	0.7	0	-			
Notes											
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon											

PM Peak Hour Cumulative Trips Plus Project
LSA Associates, Inc.

Synchro 8 Report
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HCM 2010 Signalized Intersection Summary
3: Del Monte Blvd & Playa Ave

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	62	244	170	38	223	3	206	487	102	9	236	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	244	170	38	223	3	206	487	102	9	236	45
Adj No. of Lanes	1	1	1	1	2	0	2	2	0	1	2	0
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	579	327	278	560	589	8	283	992	207	16	793	149
Arrive On Green	0.33	0.18	0.18	0.32	0.16	0.16	0.08	0.34	0.34	0.01	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	1774	3576	48	3442	2917	608	1774	2975	558
Grp Volume(v), veh/h	62	244	170	38	110	116	206	294	295	9	139	142
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1854	1721	1770	1756	1774	1770	1764
Q Serve(g_s), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	13.2	13.3	0.5	6.2	6.4
Cycle Q Clear(g_c), s	2.4	12.4	9.9	1.5	5.5	5.6	5.8	13.2	13.3	0.5	6.2	6.4
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.35	1.00		0.32
Lane Grp Cap(c), veh/h	579	327	278	560	291	305	283	602	597	16	472	470
V/C Ratio(X)	0.11	0.75	0.61	0.07	0.38	0.38	0.73	0.49	0.49	0.57	0.29	0.30
Avail Cap(c_a), veh/h	579	596	507	560	495	519	551	602	597	106	472	470
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	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	39.1	38.1	23.9	37.2	37.2	44.8	26.1	26.2	49.4	29.2	29.2
Incr Delay (d2), s/veh	0.1	3.4	2.2	0.1	0.8	0.8	2.6	2.1	2.1	28.9	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.2	6.7	4.5	0.7	2.8	2.9	2.9	6.7	6.8	0.4	3.3	3.3
LnGrp Delay(d),s/veh	23.6	42.5	40.2	24.0	38.0	38.0	47.4	28.2	28.3	78.3	30.8	30.9
LnGrp LOS	C	D	D	C	D	D	D	C	C	E	C	C
Approach Vol, veh/h		476			264			795			290	
Approach Delay, s/veh		39.2			36.0			33.2			32.3	
Approach LOS		D			D			C			C	
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	4.9	38.0	35.6	21.6	12.2	30.7	36.7	20.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	6.0	34.0	12.0	32.0	16.0	24.0	16.0	28.0				
Max Q Clear Time (g_c+I1), s	2.5	15.3	3.5	14.4	7.8	8.4	4.4	7.6				
Green Ext Time (p_c), s	0.0	5.2	0.0	3.1	0.4	4.8	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay					35.0							
HCM 2010 LOS					D							

HCM 2010 Signalized Intersection Summary
4: Tioga Ave & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (veh/h)	103	73	103	14	47	49	204	636	36	30	418	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	103	73	103	14	47	49	204	636	36	30	418	52
Adj No. of Lanes	1	1	0	1	2	0	1	1	1	1	2	0
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	220	311	23	449	402	239	913	776	40	1197	148
Arrive On Green	0.07	0.31	0.31	0.01	0.25	0.25	0.13	0.49	0.49	0.02	0.38	0.38
Sat Flow, veh/h	1774	700	988	1774	1770	1583	1774	1863	1583	1774	3171	392
Grp Volume(v), veh/h	103	0	176	14	47	49	204	636	36	30	232	238
Grp Sat Flow(s),veh/h/ln	1774	0	1688	1774	1770	1583	1774	1863	1583	1774	1770	1794
Q Serve(g_s), s	5.7	0.0	8.0	0.8	2.0	2.4	11.2	26.4	1.2	1.7	9.4	9.5
Cycle Q Clear(g_c), s	5.7	0.0	8.0	0.8	2.0	2.4	11.2	26.4	1.2	1.7	9.4	9.5
Prop In Lane	1.00		0.59	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	130	0	531	23	449	402	239	913	776	40	668	677
V/C Ratio(X)	0.79	0.00	0.33	0.61	0.10	0.12	0.85	0.70	0.05	0.75	0.35	0.35
Avail Cap(c_a), veh/h	213	0	531	71	449	402	355	913	776	106	668	677
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	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	45.6	0.0	26.2	49.1	28.6	28.7	42.3	19.7	13.3	48.6	22.3	22.3
Incr Delay (d2), s/veh	10.2	0.0	1.7	23.7	0.5	0.6	12.2	4.4	0.1	23.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	4.0	0.5	1.1	1.1	6.3	14.5	0.5	1.1	4.8	5.0	5.0
LnGrp Delay(d),s/veh	55.7	0.0	27.9	72.8	29.1	29.3	54.5	24.1	13.4	71.8	23.7	23.7
LnGrp LOS	E	C	E	C	C	C	D	C	B	E	C	C
Approach Vol, veh/h		279			110			876			500	
Approach Delay, s/veh		38.2			34.7			30.8			26.6	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s6.3	53.0	5.3	35.4	17.5	41.8	11.3	29.4					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	49.0	4.0	25.0	20.0	35.0	12.0	17.0					
Max Q Clear Time (g_c+I1), s	28.4	2.8	10.0	13.2	11.5	7.7	4.4					
Green Ext Time (p_c), s	0.0	7.6	0.0	1.4	0.3	8.0	0.1	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay					31.0							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
5: Del Monte Blvd & Contra Costa St

10/30/2014

Movement	EBL	EBT	WBT	WBR	SEL	SER		
Lane Configurations								
Volume (veh/h)	149	812	503	49	86	224		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	149	812	503	49	86	224		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	181	2230	1591	155	514	459		
Arrive On Green	0.20	1.00	0.49	0.49	0.29	0.29		
Sat Flow, veh/h	1774	3632	3353	317	1774	1583		
Grp Volume(v), veh/h	149	812	272	280	86	224		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1807	1774	1583		
Q Serve(g_s), s	8.0	0.0	9.3	9.4	3.6	11.7		
Cycle Q Clear(g_c), s	8.0	0.0	9.3	9.4	3.6	11.7		
Prop In Lane	1.00			0.18	1.00	1.00		
Lane Grp Cap(c), veh/h	181	2230	864	882	514	459		
V/C Ratio(X)	0.82	0.36	0.32	0.32	0.17	0.49		
Avail Cap(c_a), veh/h	426	2230	864	882	514	459		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.91	0.91	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.0	0.0	15.5	15.5	26.5	29.4		
Incr Delay (d2), s/veh	8.4	0.4	1.0	0.9	0.7	3.7		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.1	4.8	4.9	1.9	11.0			
LnGrp Delay(d),s/veh	47.3	0.4	16.4	16.4	27.2	33.0		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	961	552		310				
Approach Delay, s/veh	7.7	16.4		31.4				
Approach LOS	A	B		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		33.0	14.2	52.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		29.0	24.0	35.0
Max Q Clear Time (g_c+I1), s				2.0		13.7	10.0	11.4
Green Ext Time (p_c), s				13.1		0.9	0.3	10.1
Intersection Summary								
HCM 2010 Ctrl Delay	14.4							
HCM 2010 LOS	B							

HCM 2010 Signalized Intersection Summary
6: Broadway Ave & Del Monte Blvd

10/30/2014

	→	↖	↗	↖	↗			
Movement	EBT	EBR	WBL	WBT	NWL	NWR		
Lane Configurations	↖↖	↖		↖↖	↖	↖		
Volume (veh/h)	816	551	145	602	403	131		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	816	0	145	602	403	131		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2245	1005	175	2737	505	232		
Arrive On Green	0.21	0.00	0.20	1.00	0.15	0.15		
Sat Flow, veh/h	3632	1583	1774	3632	3442	1583		
Grp Volume(v), veh/h	816	0	145	602	403	131		
Grp Sat Flow(s),veh/h/ln	1770	1583	1774	1770	1721	1583		
Q Serve(g_s), s	19.7	0.0	7.8	0.0	11.3	7.7		
Cycle Q Clear(g_c), s	19.7	0.0	7.8	0.0	11.3	7.7		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2245	1005	175	2737	505	232		
V/C Ratio(X)	0.36	0.00	0.83	0.22	0.80	0.56		
Avail Cap(c_a), veh/h	2245	1005	337	2737	757	348		
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.85	0.00	0.94	0.94	1.00	1.00		
Uniform Delay (d), s/veh	22.3	0.0	39.3	0.0	41.2	39.7		
Incr Delay (d2), s/veh	0.4	0.0	8.9	0.2	3.6	2.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	4.2	0.1	5.6	3.5		
LnGrp Delay(d),s/veh	22.6	0.0	48.2	0.2	44.9	41.8		
LnGrp LOS	C		D	A	D	D		
Approach Vol, veh/h	816			747	534			
Approach Delay, s/veh	22.6			9.5	44.1			
Approach LOS	C			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.7	13.9	67.4				81.3
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		22.0	19.0	47.0				70.0
Max Q Clear Time (g_c+I1), s		13.3	9.8	21.7				2.0
Green Ext Time (p_c), s		1.3	0.2	11.4				15.0
Intersection Summary								
HCM 2010 Ctrl Delay			23.4					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
7: Del Monte Blvd & Canyon Del Rey Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	303	965	357	168	523	283	260	642	140	257	382	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	303	965	357	168	523	283	260	642	140	257	382	82
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	0
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	392	1957	875	300	1957	875	629	1300	581	447	1067	227
Arrive On Green	1.00	1.00	1.00	0.55	0.55	0.55	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	673	3539	1583	413	3539	1583	1794	3539	1583	1335	2906	618
Grp Volume(v), veh/h	303	965	357	168	523	283	260	642	140	257	231	233
Grp Sat Flow(s), veh/h/ln	673	1770	1583	413	1770	1583	897	1770	1583	668	1770	1754
Q Serve(g_s), s	34.0	0.0	0.0	30.6	7.8	9.7	12.4	14.0	6.1	18.4	9.5	9.7
Cycle Q Clear(g_c), s	41.7	0.0	0.0	30.6	7.8	9.7	22.1	14.0	6.1	32.4	9.5	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	392	1957	875	300	1957	875	629	1300	581	447	650	644
V/C Ratio(X)	0.77	0.49	0.41	0.56	0.27	0.32	0.41	0.49	0.24	0.57	0.36	0.36
Avail Cap(c_a), veh/h	403	2017	902	308	2017	902	629	1300	581	447	650	644
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.9	0.0	0.0	16.8	11.7	12.2	31.1	24.5	22.0	37.0	23.0	23.1
Incr Delay (d2), s/veh	8.8	0.2	0.3	2.0	0.1	0.2	2.0	1.3	1.0	5.3	1.5	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(26165%), veh/ln	0.1	0.1	0.1	3.6	3.8	4.3	3.2	7.1	2.8	3.7	4.9	4.9
LnGrp Delay(d), s/veh	11.7	0.2	0.3	18.9	11.8	12.4	33.1	25.8	22.9	42.3	24.6	24.7
LnGrp LOS	B	A	A	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h	1625			974			1042			721		
Approach Delay, s/veh	2.4			13.2			27.2			30.9		
Approach LOS	A			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	40.7		59.3		40.7		59.3					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	35.0		57.0		35.0		57.0					
Max Q Clear Time (g_c+I1), s	24.1		43.7		34.4		32.6					
Green Ext Time (p_c), s	7.8		11.5		0.5		19.5					
Intersection Summary												
HCM 2010 Ctrl Delay	15.4											
HCM 2010 LOS	B											

HCM 2010 TWSC
8: Del Monte Blvd & Roberts Ave

10/30/2014

Intersection												
Int Delay, s/veh		0										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	1631	0	0	853	7	0	0	0	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	145	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	1081438208	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	2	1631	0	0	853	7	0	0	0	0	0	8
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	860	0	0	1631	0	0	1677	2492	430			
Stage 1	-	-	-	-	-	-	857	857	-			
Stage 2	-	-	-	-	-	-	820	1635	-			
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-			
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32			
Pot Cap-1 Maneuver	777	-	-	394	-	-	86	29	573			
Stage 1	-	-	-	-	-	-	376	372	-			
Stage 2	-	-	-	-	-	-	393	157	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	777	-	-	394	-	-	86	0	573			
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	0	-			
Stage 1	-	-	-	-	-	-	376	0	-			
Stage 2	-	-	-	-	-	-	392	0	-			
Approach	EB			WB			SB					
HCM Control Delay, s	0			0			11.4					
HCM LOS	B											
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	777	-	-	394	-	-	573					
HCM Lane V/C Ratio	0.003	-	-	-	-	-	0.014					
HCM Control Delay (s)	9.6	-	-	0	-	-	11.4					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

HCM 2010 Signalized Intersection Summary
9: English Ave & Del Monte Blvd

10/30/2014

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑		
Volume (veh/h)	1284	764	84	771	32	325		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1284	0	84	771	32	325		
Adj No. of Lanes	2	1	1	2	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2230	997	293	2230	514	459		
Arrive On Green	0.84	0.00	0.21	0.21	0.29	0.29		
Sat Flow, veh/h	3632	1583	429	3632	1774	1583		
Grp Volume(v), veh/h	1284	0	84	771	32	325		
Grp Sat Flow(s),veh/h/ln	1770	1583	429	1770	1774	1583		
Q Serve(g_s), s	11.4	0.0	17.4	18.6	1.3	18.3		
Cycle Q Clear(g_c), s	11.4	0.0	28.7	18.6	1.3	18.3		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2230	997	293	2230	514	459		
I/C Ratio(X)	0.58	0.00	0.29	0.35	0.06	0.71		
Avail Cap(c_a), veh/h	2230	997	293	2230	514	459		
HCM Platoon Ratio	1.33	1.33	0.33	0.33	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	3.9	0.0	31.1	22.0	25.7	31.7		
Incr Delay (d2), s/veh	1.1	0.0	2.4	0.4	0.2	8.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(-26165%),veh/ln	5.6	0.0	2.3	9.2	0.7	9.2		
LnGrp Delay(d),s/veh	5.0	0.0	33.5	22.4	25.9	40.6		
LnGrp LOS	A		C	C	C	D		
Approach Vol, veh/h	1284			855	357			
Approach Delay, s/veh	5.0			23.5	39.3			
Approach LOS	A			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		33.0		67.0				67.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		29.0		63.0				63.0
Max Q Clear Time (g_c+I1), s		20.3		13.4				30.7
Green Ext Time (p_c), s		0.8		28.6				21.9
Intersection Summary								
HCM 2010 Ctrl Delay			16.3					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
10: Casa Verde Way & Del Monte Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	1852	121	53	614	52	108	41	122	45	33	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	1852	121	53	614	52	108	41	122	45	33	30
Adj No. of Lanes	1	3	0	1	2	0	1	1	0	1	1	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	77	2681	175	68	1798	152	136	91	271	57	327	278
Arrive On Green	0.04	0.55	0.55	0.05	0.72	0.72	0.08	0.22	0.22	0.03	0.18	0.18
Sat Flow, veh/h	1774	4879	318	1774	3304	279	1774	414	1232	1774	1863	1583
Grp Volume(v), veh/h	60	1285	688	53	328	338	108	0	163	45	33	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1807	1774	1770	1813	1774	0	1645	1774	1863	1583
Q Serve(g_s), s	3.3	27.5	27.7	3.0	6.8	6.8	6.0	0.0	8.6	2.5	1.5	1.6
Cycle Q Clear(g_c), s	3.3	27.5	27.7	3.0	6.8	6.8	6.0	0.0	8.6	2.5	1.5	1.6
Prop In Lane	1.00		0.18	1.00		0.15	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	77	1863	993	68	963	987	136	0	362	57	327	278
V/C Ratio(X)	0.78	0.69	0.69	0.78	0.34	0.34	0.79	0.00	0.45	0.79	0.10	0.11
Avail Cap(c_a), veh/h	160	1863	993	124	963	987	213	0	362	106	327	278
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	16.3	16.4	47.0	7.2	7.2	45.4	0.0	33.8	48.0	34.6	34.6
Incr Delay (d2), s/veh	15.1	2.1	4.0	17.3	1.0	0.9	10.5	0.0	4.0	20.5	0.6	0.8
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(-26165%),veh/ln	13.4	14.8	1.8	3.6	3.6	3.3	0.0	4.3	1.6	0.8	0.8	0.8
LnGrp Delay(d),s/veh	62.4	18.5	20.4	64.4	8.2	8.2	55.9	0.0	37.8	68.5	35.2	35.4
LnGrp LOS	E	B	C	E	A	A	E		D	E	D	D
Approach Vol, veh/h		2033			719			271			108	
Approach Delay, s/veh		20.4			12.3			45.0			49.2	
Approach LOS		C			B			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), s7.2	26.0	7.8	58.9	11.7	21.6	8.4	58.4					
Change Period (Y+Rc), s 4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s 6.0	22.0	7.0	49.0	12.0	16.0	9.0	47.0					
Max Q Clear Time (g_c+I1), s 5.0	10.6	5.0	29.7	8.0	3.6	5.3	8.8					
Green Ext Time (p_c), s 0.0	0.9	0.0	16.3	0.1	0.9	0.0	28.3					
Intersection Summary												
HCM 2010 Ctrl Delay					21.7							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
11: Sloat Ave & Del Monte Blvd.

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↖		↗	↔		
Volume (veh/h)	3	1804	35	71	689	2	108	0	208	3	1	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	0	1863	1900	1863	1900
Adj Flow Rate, veh/h	3	1804	35	71	689	2	108	0	208	3	1	3
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	0	1	0
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	0	2	2	2	2
Cap, veh/h	0	2380	46	0	2425	7	89	0	0	0	66	197
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.05	0.00	0.00	0.25	0.16	0.16
Sat Flow, veh/h	0	3551	69	0	3620	11	1774	108	0	411	1234	
Grp Volume(v), veh/h	0	897	942	0	337	354	108	212.7	0	0	4	
Grp Sat Flow(s), veh/h/ln	0	1770	1851	0	1770	1861	1774	F	0	0	1645	
Q Serve(g_s), s	0.0	33.9	34.2	0.0	7.8	7.8	5.0		0.0	0.0	0.2	
Cycle Q Clear(g_c), s	0.0	33.9	34.2	0.0	7.8	7.8	5.0		0.0	0.0	0.2	
Prop In Lane	0.00		0.04	0.00		0.01	1.00		0.00		0.75	
Lane Grp Cap(c), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
V/C Ratio(X)	0.00	0.76	0.76	0.00	0.28	0.28	1.22		0.00	0.00	0.02	
Avail Cap(c_a), veh/h	0	1186	1240	0	1186	1247	89		0	0	263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00		0.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	11.0	11.1	0.0	6.7	6.7	47.5		0.0	0.0	35.4	
Incr Delay (d2), s/veh	0.0	4.5	4.4	0.0	0.6	0.6	165.2		0.0	0.0	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(-26165%),veh/ln	17.7	18.8	0.0	3.9	4.1	6.5			0.0	0.0	0.1	
LnGrp Delay(d),s/veh	0.0	15.6	15.5	0.0	7.3	7.3	212.7		0.0	0.0	35.5	
LnGrp LOS	B			A			F				D	
Approach Vol, veh/h	1839			691						4		
Approach Delay, s/veh	15.5			7.3						35.5		
Approach LOS	B			A						D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0		0.0	71.0	9.0	20.0	0.0	71.0				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	4.0		4.0	59.0	5.0	16.0	4.0	59.0				
Max Q Clear Time (g_c+10), s	0.0		0.0	36.2	7.0	2.2	0.0	9.8				
Green Ext Time (p_c), s	0.0		0.0	18.7	0.0	0.0	0.0	33.8				
Intersection Summary												
HCM 2010 Ctrl Delay	21.5											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
12: SR-1 SB On Ramp/SR-1 SB Off Ramp & Canyon Del Rey Blvd

10/30/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↖	↗		↖	↗		↖	↗
Volume (veh/h)	0	0	0	367	4	21	396	155	0	0	71	157
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				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
Parking Bus, Adj				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	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				367	4	21	396	155	0	0	71	157
Adj No. of Lanes				0	1	1	0	1	0	0	1	0
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				413	4	372	627	245	0	0	83	183
Arrive On Green				0.24	0.24	0.24	0.81	0.81	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1756	19	1583	1292	506	0	0	517	1144
Grp Volume(v), veh/h				371	0	21	551	0	0	0	0	228
Grp Sat Flow(s), veh/h/ln				1775	0	1583	1798	0	0	0	0	1661
Q Serve(g_s), s				20.2	0.0	1.0	11.9	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				20.2	0.0	1.0	11.9	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.99		1.00	0.72		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				417	0	372	872	0	0	0	0	266
V/C Ratio(X)				0.89	0.00	0.06	0.63	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				515	0	459	872	0	0	0	0	266
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				37.0	0.0	29.6	6.0	0.0	0.0	0.0	0.0	40.9
Incr Delay (d2), s/veh				14.9	0.0	0.1	3.5	0.0	0.0	0.0	0.0	28.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				11.6	0.0	0.5	6.4	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh				51.9	0.0	29.7	9.5	0.0	0.0	0.0	0.0	69.2
LnGrp LOS				D		C	A					E
Approach Vol, veh/h				392			551			228		
Approach Delay, s/veh				50.7			9.5			69.2		
Approach LOS				D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		52.5				20.0		27.5				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				16.0		29.0				
Max Q Clear Time (g_c+10), s		13.9				15.4		22.2				
Green Ext Time (p_c), s		4.1				0.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	34.9											
HCM 2010 LOS	C											

HCM 2010 TWSC

13: Canyon Del Rey Blvd & SR-1 NB Off Ramp/SR-1 NB On Ramp

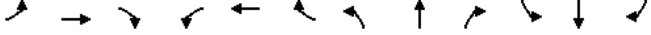
10/30/2014

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	13	297	0	0	0	0	453	794	10	423	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	140	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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
Mvmt Flow	57	13	297	0	0	0	0	453	794	10	423	0
Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	896	896	423	423	0	0	453	0	0	-	-	-
Stage 1	443	443	-	-	-	-	-	-	-	-	-	-
Stage 2	453	453	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	311	280	631	1136	-	-	1108	-	-	-	-	-
Stage 1	647	576	-	-	-	-	-	-	-	-	-	-
Stage 2	640	570	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	307	0	631	1136	-	-	1108	-	-	-	-	-
Mov Cap-2 Maneuver	430	0	-	-	-	-	-	-	-	-	-	-
Stage 1	639	0	-	-	-	-	-	-	-	-	-	-
Stage 2	640	0	-	-	-	-	-	-	-	-	-	-
Approach	EB			NB			SB					
HCM Control Delay, s	15.6	-	-	0	-	-	0.2	-	-	-	-	-
HCM LOS	C	-	-	-	-	-	-	-	-	-	-	-
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1136	-	-	430	631	1108	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	0.163	0.471	0.009	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	15	15.7	8.3	0	-	-	-	-	-
HCM Lane LOS	A	-	-	C	C	A	A	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.5	0	-	-	-	-	-	-

HCM 2010 Signalized Intersection Summary

14: Canyon Del Rey Blvd & Fremont Blvd

10/30/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	125	233	165	238	362	178	220	927	182	172	596	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	125	233	165	238	362	178	220	927	182	172	596	62
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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	155	484	217	270	714	320	256	1287	252	204	1316	137
Arrive On Green	0.09	0.14	0.14	0.15	0.20	0.20	0.14	0.44	0.44	0.11	0.41	0.41
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2951	579	1774	3237	336
Grp Volume(v), veh/h	125	233	165	238	362	178	220	556	553	172	325	333
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1761	1774	1770	1803
Q Serve(g_s), s	6.9	6.1	10.0	13.1	9.1	10.1	12.1	25.8	25.9	9.5	13.4	13.4
Cycle Q Clear(g_c), s	6.9	6.1	10.0	13.1	9.1	10.1	12.1	25.8	25.9	9.5	13.4	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.19
Lane Grp Cap(c), veh/h	155	484	217	270	714	320	256	772	768	204	719	733
V/C Ratio(X)	0.81	0.48	0.76	0.88	0.51	0.56	0.86	0.72	0.72	0.85	0.45	0.45
Avail Cap(c_a), veh/h	231	566	253	302	714	320	373	772	768	231	719	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	39.9	41.6	41.5	35.5	35.9	41.8	23.2	23.2	43.4	21.6	21.6
Incr Delay (d2), s/veh	12.0	0.7	10.9	22.9	0.6	2.1	12.8	5.7	5.8	22.0	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.9	3.0	5.0	8.1	4.5	4.6	6.8	13.7	13.7	5.9	6.9	7.1
LnGrp Delay(d),s/veh	56.8	40.6	52.5	64.4	36.1	38.0	54.6	28.9	29.0	65.4	23.6	23.6
LnGrp LOS	E	D	D	E	D	D	D	C	C	E	C	C
Approach Vol, veh/h	523			778			1329			830		
Approach Delay, s/veh	48.2			45.2			33.2			32.3		
Approach LOS	D			D			C			C		
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	15.5	47.6	19.2	17.7	18.4	44.7	12.7	24.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	38.0	17.0	16.0	21.0	30.0	13.0	20.0				
Max Q Clear Time (g_c+1), s	11.5	27.9	15.1	12.0	14.1	15.4	8.9	12.1				
Green Ext Time (p_c), s	0.1	7.3	0.1	1.6	0.3	9.6	0.1	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay	38.0											
HCM 2010 LOS	D											

HCM 2010 Signalized Intersection Summary
15: SR-68 & Canyon Del Rey Blvd

10/30/2014

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	197	713		5	6	1027	632	6	38	6	271	36	143
Number	7	4		14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0		0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1900	1863	1863	1863	1863	1900	1863	1863	1863	
Adj Flow Rate, veh/h	197	713		5	6	1027	632	6	38	6	271	36	143
Adj No. of Lanes	1	2		0	1	2	1	1	1	0	2	1	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	232	1890		13	11	1416	633	11	549	87	942	565	480
Arrive On Green	0.13	0.52		0.52	0.01	0.40	0.40	0.01	0.35	0.35	0.30	0.30	0.30
Sat Flow, veh/h	1774	3603		25	1774	3539	1583	1774	1571	248	2632	1863	1583
Grp Volume(v), veh/h	197	350		368	6	1027	632	6	0	44	271	36	143
Grp Sat Flow(s), veh/h/ln	1774	1770		1858	1774	1770	1583	1774	0	1819	1316	1863	1583
Q Serve(g_s), s	10.9	11.7		11.7	0.3	24.5	39.9	0.3	0.0	1.6	8.0	1.4	6.9
Cycle Q Clear(g_c), s	10.9	11.7		11.7	0.3	24.5	39.9	0.3	0.0	1.6	8.0	1.4	6.9
Prop In Lane	1.00			0.01	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	232	928		975	11	1416	633	11	0	635	942	565	480
V/C Ratio(X)	0.85	0.38		0.38	0.55	0.73	1.00	0.55	0.00	0.07	0.29	0.06	0.30
Avail Cap(c_a), veh/h	337	973		1022	71	1416	633	71	0	635	942	565	480
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	14.1		14.1	49.6	25.4	30.0	49.6	0.0	21.7	27.1	24.8	26.7
Incr Delay (d2), s/veh	12.8	0.3		0.2	37.0	1.9	35.2	37.0	0.0	0.2	0.8	0.2	1.6
Initial Q Delay(d3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%), veh/ln	5.8			6.1	0.3	12.4	23.6	0.3	0.0	0.8	3.0	0.7	3.2
LnGrp Delay(d), s/veh	55.3	14.3		14.3	86.6	27.2	65.2	86.6	0.0	21.9	27.8	25.0	28.3
LnGrp LOS	E	B		B	F	C	E	F		C	C	C	C
Approach Vol, veh/h	915			1665			50			450			
Approach Delay, s/veh	23.2			41.8			29.7			27.7			
Approach LOS	C			D			C			C			
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	38.9	4.6	56.5	4.6	34.3	17.1	44.0						
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0						
Max Green Setting (Gmax), s	29.0	4.0	55.0	4.0	21.0	19.0	40.0						
Max Q Clear Time (g_c+I1), s	3.6	2.3	13.7	2.3	10.0	12.9	41.9						
Green Ext Time (p_c), s	2.0	0.0	23.2	0.0	1.5	0.3	0.0						
Intersection Summary													
HCM 2010 Ctrl Delay	34.0												
HCM 2010 LOS	C												

HCM 2010 TWSC
16: SR-1 SB On- Ramp & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1991	60	101	709	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1991	60	101	709	3	29
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	2051	0	2578	1026
Stage 1	-	-	-	-	2021	-
Stage 2	-	-	-	-	557	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	118	-	31	199
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	118	-	4	199
Mov Cap-2 Maneuver	-	-	-	-	31	-
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	75	-
Approach						
	EB		WB		NB	
HCM Control Delay, s	0		14.5		40.8	
HCM LOS	C		E		E	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	132	-	-	118	-	
HCM Lane V/C Ratio	0.242	-	-	0.856	-	
HCM Control Delay (s)	40.8	-	-	116.2	-	
HCM Lane LOS	E	-	-	F	-	
HCM 95th %tile Q(veh)	0.9	-	-	5.2	-	

HCM 2010 TWSC
17: SR-1 NB On-Ramp & English Ave

10/30/2014

Intersection						
Int Delay, s/veh	7.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Vol, veh/h	55	101	89	752	251	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	0	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	55	101	89	752	251	11
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	300	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	211	-
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	1506	-	-	0	691	969
Stage 1	-	-	-	0	934	-
Stage 2	-	-	-	0	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	664	969
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	792	-
Approach	NB		SB		NE	
HCM Control Delay, s	2.6		0		13.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	
Capacity (veh/h)	664	969	1506	-	-	
HCM Lane V/C Ratio	0.378	0.011	0.037	-	-	
HCM Control Delay (s)	13.7	8.8	7.5	0	-	
HCM Lane LOS	B	A	A	A	-	
HCM 95th %tile Q(veh)	1.8	0	0.1	-	-	

APPENDIX G

**PROJECT DRIVEWAYS QUEUING AND LEVEL OF SERVICE
WORKSHEETS**

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HCM 2010 TWSC

101: Project Driveway North & Del Monte Blvd

10/30/2014

Intersection							
Int Delay, s/veh	0.1						
Movement	EBT	EBR	WBL	WBT	NWL	NWR	
Vol, veh/h	684	0	11	1323	1	0	
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	0	
Veh in Median Storage, #	0	-	-	0	1	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	684	0	11	1323	1	0	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	684	0	1368	342	
Stage 1	-	-	-	-	684	-	
Stage 2	-	-	-	-	684	-	
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	-	-	905	-	138	654	
Stage 1	-	-	-	-	462	-	
Stage 2	-	-	-	-	462	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	905	-	136	654	
Mov Cap-2 Maneuver	-	-	-	-	272	-	
Stage 1	-	-	-	-	462	-	
Stage 2	-	-	-	-	466	-	
Approach	EB		WB		NW		
HCM Control Delay, s	0		0.1		18.3		
HCM LOS					C		
Minor Lane/Major Mvmt	NWLn1	NWLn2	EBT	EBR	WBL	WBT	
Capacity (veh/h)	272	-	-	-	905	-	
HCM Lane V/C Ratio	0.004	-	-	-	0.012	-	
HCM Control Delay (s)	18.3	0	-	-	9	-	
HCM Lane LOS	C	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	-	0	-	

HCM 2010 TWSC

102: Project Driveway South & Del Monte Blvd

10/30/2014

Intersection							
Int Delay, s/veh	0						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Vol, veh/h	682	8	0	1324	0	2	
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	682	8	0	1324	0	2	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	690	0	1348	345	
Stage 1	-	-	-	-	686	-	
Stage 2	-	-	-	-	662	-	
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	-	-	900	-	142	651	
Stage 1	-	-	-	-	461	-	
Stage 2	-	-	-	-	475	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	900	-	142	651	
Mov Cap-2 Maneuver	-	-	-	-	142	-	
Stage 1	-	-	-	-	461	-	
Stage 2	-	-	-	-	475	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0		10.5		
HCM LOS					B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	651	-	-	900	-		
HCM Lane V/C Ratio	0.003	-	-	-	-		
HCM Control Delay (s)	10.5	-	-	0	-		
HCM Lane LOS	B	-	-	A	-		
HCM 95th %tile Q(veh)	0	-	-	0	-		

HCM 2010 TWSC

101: Project Driveway North & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1606	0	50	801	27	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	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1606	0	50	801	27	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1606	0	2107	803
Stage 1	-	-	-	-	1606	-
Stage 2	-	-	-	-	501	-
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	-	-	403	-	44	326
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	403	-	39	326
Mov Cap-2 Maneuver	-	-	-	-	117	-
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	503	-
Approach	EB		WB		NW	
HCM Control Delay, s	0		0.9		36.1	
HCM LOS					E	
Minor Lane/Major Mvmt	NWLn1	NWLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	117	326	-	-	403	-
HCM Lane V/C Ratio	0.231	0.037	-	-	0.124	-
HCM Control Delay (s)	44.8	16.5	-	-	15.2	-
HCM Lane LOS	E	C	-	-	C	-
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.4	-

HCM 2010 TWSC

102: Project Driveway South & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1555	33	0	828	0	51
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	1555	33	0	828	0	51
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1588	0	1986	794
Stage 1	-	-	-	-	1572	-
Stage 2	-	-	-	-	414	-
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	-	-	410	-	53	331
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	410	-	53	331
Mov Cap-2 Maneuver	-	-	-	-	53	-
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	635	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		17.8	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	331	-	-	410	-	
HCM Lane V/C Ratio	0.154	-	-	-	-	
HCM Control Delay (s)	17.8	-	-	0	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0.5	-	-	0	-	

HCM 2010 TWSC

101: Project Driveway North & Del Monte Blvd

10/30/2014

Intersection							
Int Delay, s/veh	0.1						
Movement	EBT	EBR	WBL	WBT	NWL	NWR	
Vol, veh/h	721	0	11	1356	1	0	
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	0	
Veh in Median Storage, #	0	-	-	0	1	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	721	0	11	1356	1	0	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	721	0	1421	361	
Stage 1	-	-	-	-	721	-	
Stage 2	-	-	-	-	700	-	
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	-	-	877	-	127	636	
Stage 1	-	-	-	-	443	-	
Stage 2	-	-	-	-	454	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	877	-	125	636	
Mov Cap-2 Maneuver	-	-	-	-	260	-	
Stage 1	-	-	-	-	443	-	
Stage 2	-	-	-	-	448	-	
Approach	EB		WB		NW		
HCM Control Delay, s	0		0.1		18.9		
HCM LOS					C		
Minor Lane/Major Mvmt	NWLn1	NWLn2	EBT	EBR	WBL	WBT	
Capacity (veh/h)	260	-	-	-	877	-	
HCM Lane V/C Ratio	0.004	-	-	-	0.013	-	
HCM Control Delay (s)	18.9	0	-	-	9.2	-	
HCM Lane LOS	C	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	-	0	-	

HCM 2010 TWSC

102: Project Driveway South & Del Monte Blvd

10/30/2014

Intersection							
Int Delay, s/veh	0						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Vol, veh/h	719	8	0	1357	0	2	
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	719	8	0	1357	0	2	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	727	0	1402	364	
Stage 1	-	-	-	-	723	-	
Stage 2	-	-	-	-	679	-	
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	-	-	872	-	131	633	
Stage 1	-	-	-	-	441	-	
Stage 2	-	-	-	-	465	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	872	-	131	633	
Mov Cap-2 Maneuver	-	-	-	-	131	-	
Stage 1	-	-	-	-	441	-	
Stage 2	-	-	-	-	465	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0		10.7		
HCM LOS					B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	633	-	-	872	-		
HCM Lane V/C Ratio	0.003	-	-	-	-		
HCM Control Delay (s)	10.7	-	-	0	-		
HCM Lane LOS	B	-	-	A	-		
HCM 95th %tile Q(veh)	0	-	-	0	-		

HCM 2010 TWSC

101: Project Driveway North & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	1682	0	50	874	27	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	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1682	0	50	874	27	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1682	0	2219	841
Stage 1	-	-	-	-	1682	-
Stage 2	-	-	-	-	537	-
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	-	-	377	-	37	308
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	550	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	377	-	32	308
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	477	-
Approach	EB		WB		NW	
HCM Control Delay, s	0		0.9		40	
HCM LOS					E	
Minor Lane/Major Mvmt	NWLn1	NWLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	106	308	-	-	377	-
HCM Lane V/C Ratio	0.255	0.039	-	-	0.133	-
HCM Control Delay (s)	50.2	17.2	-	-	16	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0.5	-

HCM 2010 TWSC

102: Project Driveway South & Del Monte Blvd

10/30/2014

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1631	33	0	860	0	51
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	1631	33	0	860	0	51
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1664	0	2078	832
Stage 1	-	-	-	-	1648	-
Stage 2	-	-	-	-	430	-
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	-	-	383	-	46	312
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	624	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	383	-	46	312
Mov Cap-2 Maneuver	-	-	-	-	46	-
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	624	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		18.8	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	312	-	-	383	-	
HCM Lane V/C Ratio	0.163	-	-	-	-	
HCM Control Delay (s)	18.8	-	-	0	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0.6	-	-	0	-	

APPENDIX H

MITIGATED LEVEL OF SERVICE WORKSHEETS

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HCM 2010 Signalized Intersection Summary
2: Del Monte Blvd & Fremont Blvd

10/30/2014

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations	↰	↰			↱			↱	↱	↰		↱
Volume (veh/h)	0	0	177	0	541	50	0	680	630	146	0	21
Number	3	3	18	5	2	12	1	6	16	7	14	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	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	1900	0	1863	1900	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	192	0	588	54	0	739	0	159	0	0
Adj No. of Lanes	1	1	0	0	2	0	0	2	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	251	251	224	0	2553	234	0	2756	2170	0	0	0
Arrive On Green	0.00	0.00	0.14	0.00	0.78	0.78	0.00	0.78	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1774	1583	0	3372	301	0	3632	2787	0		
Grp Volume(v), veh/h	0	0	192	0	317	325	0	739	0	0.0		
Grp Sat Flow(s),veh/h/ln	1774	1774	1583	0	1770	1810	0	1770	1393			
Q Serve(g_s), s	0.0	0.0	11.8	0.0	4.8	4.8	0.0	5.8	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	11.8	0.0	4.8	4.8	0.0	5.8	0.0			
Prop In Lane	1.00	1.00	1.00	0.00		0.17	0.00		1.00			
Lane Grp Cap(c), veh/h	251	251	224	0	1378	1409	0	2756	2170			
V/C Ratio(X)	0.00	0.00	0.86	0.00	0.23	0.23	0.00	0.27	0.00			
Avail Cap(c_a), veh/h	390	390	348	0	1378	1409	0	2756	2170			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	41.9	0.0	3.0	3.0	0.0	3.1	0.0			
Incr Delay (d2), s/veh	0.0	0.0	12.1	0.0	0.4	0.4	0.0	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.9	0.0	2.4	2.5	0.0	2.9	0.0			
LnGrp Delay(d),s/veh	0.0	0.0	54.0	0.0	3.4	3.4	0.0	3.3	0.0			
LnGrp LOS			D		A	A		A				
Approach Vol, veh/h	192	192			642			739				
Approach Delay, s/veh	54.0	54.0			3.4			3.3				
Approach LOS	D	D			A			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		81.9				81.9		18.1				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				43.0		22.0				
Max Q Clear Time (g_c+I1), s		6.8				7.8		13.8				
Green Ext Time (p_c), s		12.0				11.9		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			9.5									
HCM 2010 LOS			A									

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
2: Del Monte Blvd & Fremont Blvd

10/30/2014

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations	↰	↰			↱			↱	↱	↰		↱
Volume (veh/h)	0	0	108	0	880	20	0	602	252	501	0	16
Number	3	3	18	5	2	12	1	6	16	7	14	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	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	1900	0	1863	1900	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	117	0	957	22	0	654	0	545	0	0
Adj No. of Lanes	1	1	0	0	2	0	0	2	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	166	166	148	0	2616	60	0	2618	2062	0	0	0
Arrive On Green	0.00	0.00	0.09	0.00	0.74	0.74	0.00	0.74	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1774	1583	0	3630	81	0	3632	2787	0		
Grp Volume(v), veh/h	0	0	117	0	479	500	0	654	0	0.0		
Grp Sat Flow(s),veh/h/ln	1774	1774	1583	0	1770	1848	0	1770	1393			
Q Serve(g_s), s	0.0	0.0	3.5	0.0	4.6	4.6	0.0	2.8	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	3.5	0.0	4.6	4.6	0.0	2.8	0.0			
Prop In Lane	1.00	1.00	1.00	0.00		0.04	0.00		1.00			
Lane Grp Cap(c), veh/h	166	166	148	0	1309	1367	0	2618	2062			
V/C Ratio(X)	0.00	0.00	0.79	0.00	0.37	0.37	0.00	0.25	0.00			
Avail Cap(c_a), veh/h	591	591	528	0	1309	1367	0	2618	2062			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	21.3	0.0	2.2	2.2	0.0	2.0	0.0			
Incr Delay (d2), s/veh	0.0	0.0	9.0	0.0	0.8	0.8	0.0	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.9	0.0	2.4	2.5	0.0	1.4	0.0			
LnGrp Delay(d),s/veh	0.0	0.0	30.3	0.0	3.0	3.0	0.0	2.2	0.0			
LnGrp LOS			C		A	A		A				
Approach Vol, veh/h	117	117			979			654				
Approach Delay, s/veh	30.3	30.3			3.0			2.2				
Approach LOS	C	C			A			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.5				39.5		8.5				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		16.0				16.0		16.0				
Max Q Clear Time (g_c+I1), s		6.6				4.8		5.5				
Green Ext Time (p_c), s		6.5				7.5		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			4.5									
HCM 2010 LOS			A									

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LSA Associates, Inc.

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HCM 2010 Signalized Intersection Summary
2: Del Monte Blvd & Fremont Blvd

10/30/2014

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations	↰	↰			↱			↱	↱	↰		↱
Volume (veh/h)	0	0	177	0	546	52	0	692	640	149	0	22
Number	3	3	18	5	2	12	1	6	16	7	14	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	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	1900	0	1863	1900	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	192	0	593	57	0	752	0	162	0	0
Adj No. of Lanes	1	1	0	0	2	0	0	2	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	250	250	223	0	2542	244	0	2757	2170	0	0	0
Arrive On Green	0.00	0.00	0.14	0.00	0.78	0.78	0.00	0.78	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1774	1583	0	3357	313	0	3632	2787	0		
Grp Volume(v), veh/h	0	0	192	0	321	329	0	752	0	0.0		
Grp Sat Flow(s),veh/h/ln	1774	1774	1583	0	1770	1807	0	1770	1393			
Q Serve(g_s), s	0.0	0.0	11.9	0.0	4.9	4.9	0.0	6.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	11.9	0.0	4.9	4.9	0.0	6.0	0.0			
Prop In Lane	1.00	1.00	1.00	0.00		0.17	0.00		1.00			
Lane Grp Cap(c), veh/h	250	250	223	0	1378	1408	0	2757	2170			
V/C Ratio(X)	0.00	0.00	0.86	0.00	0.23	0.23	0.00	0.27	0.00			
Avail Cap(c_a), veh/h	373	373	332	0	1378	1408	0	2757	2170			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	42.0	0.0	3.0	3.0	0.0	3.1	0.0			
Incr Delay (d2), s/veh	0.0	0.0	13.7	0.0	0.4	0.4	0.0	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.0	0.0	2.5	2.5	0.0	2.9	0.0			
LnGrp Delay(d),s/veh	0.0	0.0	55.6	0.0	3.4	3.4	0.0	3.3	0.0			
LnGrp LOS			E		A	A		A				
Approach Vol, veh/h	192	192			650			752				
Approach Delay, s/veh	55.6	55.6			3.4			3.3				
Approach LOS	E	E			A			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		81.9				81.9		18.1				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		43.0				43.0		21.0				
Max Q Clear Time (g_c+I1), s		6.9				8.0		13.9				
Green Ext Time (p_c), s		12.2				12.1		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			9.7									
HCM 2010 LOS			A									

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HCM 2010 Signalized Intersection Summary
2: Del Monte Blvd & Fremont Blvd

10/30/2014

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations	↰	↰			↱			↱	↱	↰		↱
Volume (veh/h)	0	0	108	0	894	26	0	612	258	511	0	18
Number	3	3	18	5	2	12	1	6	16	7	14	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	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	1900	0	1863	1900	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	117	0	972	28	0	665	0	555	0	0
Adj No. of Lanes	1	1	0	0	2	0	0	2	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	2	2	2	2
Cap, veh/h	160	160	143	0	2914	84	0	2936	2312	0	0	0
Arrive On Green	0.00	0.00	0.09	0.00	0.83	0.83	0.00	0.83	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1774	1583	0	3606	101	0	3632	2787	0		
Grp Volume(v), veh/h	0	0	117	0	490	510	0	665	0	0.0		
Grp Sat Flow(s),veh/h/ln	1774	1774	1583	0	1770	1845	0	1770	1393			
Q Serve(g_s), s	0.0	0.0	7.3	0.0	6.5	6.5	0.0	3.9	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	7.3	0.0	6.5	6.5	0.0	3.9	0.0			
Prop In Lane	1.00	1.00	1.00	0.00		0.05	0.00		1.00			
Lane Grp Cap(c), veh/h	160	160	143	0	1468	1530	0	2936	2312			
V/C Ratio(X)	0.00	0.00	0.82	0.00	0.33	0.33	0.00	0.23	0.00			
Avail Cap(c_a), veh/h	284	284	253	0	1468	1530	0	2936	2312			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	44.7	0.0	2.0	2.0	0.0	1.8	0.0			
Incr Delay (d2), s/veh	0.0	0.0	10.7	0.0	0.6	0.6	0.0	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.6	0.0	3.4	3.5	0.0	1.9	0.0			
LnGrp Delay(d),s/veh	0.0	0.0	55.4	0.0	2.6	2.6	0.0	2.0	0.0			
LnGrp LOS			E		A	A		A				
Approach Vol, veh/h	117	117			1000			665				
Approach Delay, s/veh	55.4	55.4			2.6			2.0				
Approach LOS	E	E			A			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		87.0				87.0		13.0				
Change Period (Y+Rc), s		4.0				4.0		4.0				
Max Green Setting (Gmax), s		34.0				34.0		16.0				
Max Q Clear Time (g_c+I1), s		8.5				5.9		9.3				
Green Ext Time (p_c), s		13.1				13.8		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			5.8									
HCM 2010 LOS			A									

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Natural Coastal Resources	
Natural Habitat Areas	
Policy NCR-CZ 1.1.A – Promote Sustainable Development New development shall promote environmental sustainability which is essential to reducing impacts to natural resources, habitat loss, and air and water resources.	Consistent. The proposed project will include a variety of design features aimed at environmental conservation and sustainability. Specifically, the proposed project will include native drought-tolerant vegetation, water-efficient irrigation systems and devices, Green Building Materials, water-efficient fixtures (i.e., low-flow faucets, dual-flush toilets, and waterless urinals), energy-efficient heating and cooling systems, and interior and exterior storage areas for recyclables and green waste. In addition, the proposed project will also comply with standard conditions and mitigation measures outlined throughout the 2011 Certified Environmental Impact Report (EIR) aimed at reducing impacts to natural resources and habitats and air and water resources.
Policy NCR-CZ 1.1.B – Promote Sustainability of Biological Productivity The City shall identify and pursue appropriate methods of native enhancement and restoration that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at the long-term sustainability of the surrounding coastal habitats and those species that are reliant on such habitats. As required by Measure 4.3.1, Biotic Habitat Protection, the Applicant will be required to retain a qualified biologist who will implement various actions during project construction in order to minimize construction impacts to sensitive biotic habitats adjacent to the project boundaries. Implementation of Measures 4.3.2 through 4.3.4, which outline measures to minimize project-related impacts to special-status species (including northern harriers, other nesting birds, California red-legged frog, and coast range newt) will also be required to ensure the long-term preservation of these species. The proposed project will be required to comply with Measure 4.3.5, Weed Management and Signage, which mandates the placement and ongoing maintenance of signs along the pedestrian trail instructing pedestrians to stay on the trail in order to preserve neighboring biotic habitats. Measure 4.3.5 will also require the eradication of noxious common reed within the project area. An existing pedestrian and bicycle trail that circles Laguna Grande Lake will connect the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The proposed project will extend the pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will increase connectivity between the project

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	site and the Laguna Grande Park and Lake, the adjacent hotel property, Del Monte Boulevard, the Laguna Grande Regional Park Trail, and the Monterey Bay Coastal Bike Trail, thereby increasing recreational opportunities in the area and promoting appreciation for the biological productivity of the coastal area.
Policy NCR-CZ 1.1.C – Minimize Adverse Effects to Natural Coastal Resources New development shall be located in areas where it will not have a significant adverse effect either individually or cumulatively on natural coastal resources and public access and recreation.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will disturb a very small amount of relatively low-quality habitat; however, the 2011 Certified EIR found and concluded that the proposed project would not have a significant individual or cumulative impact on natural coastal resources. As discussed above under Policy NCR-CZ 1.1B, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will connect the project site with the Laguna Grande Park and Lake, the adjacent hotel property, Del Monte Boulevard, the Laguna Grande Regional Park, and the Monterey Bay Coastal Bike Trail, thereby increasing access to coastal resources and recreational opportunities.
Policy NCR-CZ 1.2.A – Designation of ESHA Areas of particular habitat value and fragility consistent with Policy LUD-CZ 1.3.B are considered Environmentally Sensitive Habitat Areas (ESHA). Figure 2-2 represents a preliminary mapping of lands containing potential ESHA. Actual determination of ESHA boundaries shall be based on facts on the ground at the time development is considered. Policy NCR-CZ 1.2.B – Protection of ESHA i. ESHAs shall be protected against significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. ii. Development in areas adjacent to ESHAs shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat areas. iii. Site-specific surveys to confirm the presence and extent of identifiable plant and animal life or habitats shall be required for all new development in, and adjacent to, ESHA. iv. Site-specific surveys shall be prepared by a qualified biologist and shall include recommended mitigation	Consistent. The project site does not contain any ESHAs; however, potential riparian, emergent wetland, and estuarine ESHAs are present to the south, north, and east of the project site (refer to Figure 2-2, Potentially Environmentally Sensitive Habitat Area (ESHA) within the Coastal Zone, of the City's Local Coastal Program Land Use Plan (LUP). As part of the Biological Resources Report prepared for the 2011 Certified EIR, six site-specific field surveys were conducted to determine existing plant and animal species present on and adjacent to the project site. The Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site that are incorporated into the 2011 Certified EIR as Measures 4.3.1 through 4.3.4. The 2011 Certified EIR found and concluded that the proposed project would not result in significant impacts to neighboring sensitive habitats, including potential ESHAs with implementation of prescribed mitigation measures. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.

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measures to avoid, and where avoidance is not possible, minimize sensitive habitat impacts.	
Policy NCR-CZ 1.3.A – Designation of Wetlands Areas periodically or permanently covered with water that meet the definition of wetland in Coastal Act Section 30121, are considered to be wetlands. The presence of either hydrology, soils, or vegetation must be evidenced for an area to qualify as a wetland. The wetlands identified on Figure 2-3 shall represent a preliminary mapping of lands containing potential wetlands. Actual determination of wetland boundaries shall be based on facts on the ground at the time development is considered.	Consistent. There are no National Wetlands Inventory (NWI) types located on the project site (refer to Figure 2-3, Potential Wetlands within the Coastal Zone Area, of the City's Local Coastal Program LUP). The Laguna Grande Lake and its associated Freshwater Pond Wetland are located directly east of the eastern boundary of the project site. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, approximately 0.5 acre of jurisdictional waters has been identified on the project site, of which approximately 0.32 acre is seasonal wetlands dominated by red willow and 0.16 acre consists of perennial waters in the form of aquatic palustrine habitat.
Policy NCR-CZ 1.3.B – Protection of Wetlands i. The biological health and productivity of wetland areas shall be maintained, and where feasible, restored. ii. Development that may have an adverse effect on a wetland shall not be allowed. iii. The biological productivity of coastal waters, streams, wetlands, estuaries, and lakes, shall be maintained and restored, where feasible, to maintain optimum populations of marine organisms and to protect human health where applicable. Maintenance and restoration efforts shall support biological productivity by minimizing adverse effects of wastewater discharges and entrainment; controlling runoff, preventing substantial interference with surface water flow, and minimizing alteration of natural streams; preventing depletion of groundwater supplies; encouraging wastewater reclamation; and maintaining natural vegetation buffer areas that protect riparian habitats.	Consistent. There are no NWI types located on the project site (refer to Figure 2-3, Potential Wetlands within the Coastal Zone Area, of the City's Local Coastal Program LUP). The Laguna Grande Lake and its associated Freshwater Pond Wetland are located directly east of the eastern boundary of the project site. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, approximately 0.5 acre of jurisdictional waters has been identified on the project site, of which approximately 0.32 are is seasonal wetlands dominated by red willow and 0.16 acre consists of perennial waters in the form of aquatic palustrine habitat. Temporary impacts to these jurisdictional waters could result during construction activities. As such, the proposed project will be required to comply with Measure 4.3.1 to minimize temporary impacts to on-site jurisdictional waters. No permanent impacts to on-site jurisdictional waters will occur as a result of project implementation and operation. Stormwater runoff for storm events up to the 95th percentile rainfall event will be treated, and retained and infiltrated on-site with a series of biofiltration planters which will capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots). No impacts to Laguna Grande Lake will occur. In addition, implementation of Measure 4.7.1 will require the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and an Erosion and Sediment Control Plan to minimize impacts related to runoff from the project site during construction. The 2011 Certified EIR found and concluded that the proposed project would not substantially deplete groundwater supplies. None of the proposed project changes would change the conclusions on this issue as discussed in

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	the certified 2011 EIR.
Policy NCR-CZ 1.4.A – Designation of Marine Resources All significant bodies of water including the Monterey Bay, Laguna Grande Lake, and Roberts Lake are recognized as marine resources.	Consistent. As discussed in the consistency analysis for Policy NRC-CZ 1.3.B, Protection of Wetlands, the proposed project will not include any improvements to, or result in any significant impacts to, the adjacent Laguna Grande Lake. Furthermore, the proposed project will not result in any significant impacts to Roberts Lake.
Policy NCR-CZ 1.4.B – Protection of Marine Resources i. Marine resources shall be maintained, enhanced, and, to the extent feasible, restored. Uses of the marine environment shall be carried out in a manner that will improve habitat quality and will sustain the biological productivity of coastal waters. ii. In addition to Policies NCR-CZ 1.3.B and 1.5.C, methods for maintenance and enhancement of marine resources include, but are not limited to, trash removal, sediment removal, nonnative vegetation removal and native revegetation, and any other feasible methods to improve water quality (refer to Policies NCR-CZ 1.3.B, 1.5.C, 1.5.D, and 4.1.A). iii. The City shall seek opportunities to consolidate and/or eliminate reliance on storm water outfalls that daylight onto the beach and convey storm water into Monterey Bay. Such storm water shall be filtered and treated prior to discharge. iv. All development shall adequately collect, filter, and treat its associated runoff. Low impact development concepts (e.g., limiting impervious surfaces, use of vegetated areas for runoff treatment, etc.) shall be encouraged.	Consistent. Refer to the consistency analyses under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, and Policy NCR-CZ 1.2.B, Protection of ESHA. The proposed project will neither result in any significant impacts to marine resources, including sensitive species and habitat, nor will the proposed project interfere with the biological productivity of nearby coastal waters. The proposed project will be landscaped on all four sides of the parcel with a variety of native drought-tolerant trees, shrubs, annuals, and landscape materials. Additionally, the proposed project will include trash receptacles inside and outside the restaurant facility to minimize littering near the project site and its associated potential impacts on coastal wildlife and habitats. In-N-Out employees will be responsible for emptying the trash receptacles and for daily grounds maintenance. In addition, as discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will implement Measure 4.3.5, which will require the removal of the small patch of common reed, which is a noxious weed that is prevalent along the shores of Laguna Grande Lake. The proposed project will include Best Management Practices (BMPs) during project construction and operation to minimize project-related impacts to water quality. The proposed project will increase impervious surface area by approximately 1.0 acre. A series of biofiltration planters will capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots), remove pollutants from runoff, and retain and infiltrate the runoff. The 2011 Certified EIR found and concluded that the proposed project would not result in significant impacts related to water quality. None of the proposed project changes would change the conclusions on this issue as discussed in the Certified 2011 EIR.

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Policy NCR-CZ 1.4.C – Diking, Filling, Dredging of Marine Resources Diking, filling, or dredging activities shall be permitted in accordance with the other applicable provisions of the LCP, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: • Placement of structural pilings for public recreational piers that provide public access and recreation; • Incidental public services (i.e., maintenance of existing outfalls); • Mineral extraction, including for restoring beaches, except in environmentally sensitive habitat areas; • Restoration purposes; • Nature study, aquaculture, or similar resource dependent activities Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems. In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary.	Not Applicable.
Policy NCR-CZ 1.5.A – Designation of the Canyon Del Rey Creek Watershed The Canyon Del Rey Watershed includes lands from multiple jurisdictions. Lands contained within these jurisdictions have been designated as follows: • 2010 General Plan of Monterey County: Rural Density/Permanent Grazing • 2004 General Plan of City of Seaside: Parks and Open Space • 2004 General Plan of the City of Monterey: Industrial/Park	Not Applicable.

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and Open Space • 1997 Zoning Ordinance of Del Rey Oaks: Residential/Commercial/Park and Open Space	
Policy NCR-CZ 1.5.B – Evaluation of the Canyon Del Rey Creek Watershed Support ongoing efforts to prepare the <i>Canyon del Rey Watershed Master Drainage Plan Update</i> as part of the update to the Monterey Peninsula, Carmel Bay, and South Monterey Bay Integrated Regional Water Management Plan. Once adopted, the City shall incorporate the <i>Master Drainage Plan</i> results, goals, policies, and objectives into the codes and programs of the City's Municipal Code, and general Plan, where applicable.	Not Applicable.
Policy NCR-CZ 1.5.C – Protection of the Canyon Del Rey Creek Watershed i. The City shall continue to implement the following erosion control and sedimentation mitigation measures: • Continue enforcement of the Urban Storm Water Quality Management and Discharge Control ordinance, as amended (Chapter 18.46 of the Seaside Municipal Code), for all future construction in the watershed. • Design of street drainage to maximize retention and minimize impervious surface area and street flooding. • Regulate construction activities on unstable slopes that are susceptible to erosion. • Prevent additional gullyng of alluvial terraces by maintaining riparian vegetation. ii. The City shall continue to implement, monitor, comply with and update (as needed) the Monterey Regional Storm Water Management Plan (SWMP) as a participating entity in order to be in compliance with Final Phase II National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 adopted by the State Water Resources Control Board on April 30, 2003.	Consistent. The proposed project will be consistent with and will further the City's goal of protecting the Canyon Del Rey Creek Watershed by implementing and complying with relevant storm water permits and requirements. The proposed project will be required to obtain coverage under the NPDES Construction General Permit and prepare a SWPPP and comply with the City's Phase II NPDES permit requirements to include Low Impact Development Standards (LID) and retain storm water runoff on the project site. In addition, the proposed project will be required to comply with the City's Municipal Code and prepare a project Erosion and Sediment Control Plan (ESCP) outlining components for erosion control, such as phasing of grading, diversion of runoff or run-on away from disturbed areas, and the provision for revegetation or mulching as required by Measure 4.7.1 in the 2011 Certified EIR.

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Policy NCR-CZ 1.5.D – Management of the Canyon Del Rey Creek Watershed – Update of the Seaside Wetland Management /Enhancement and Restoration Program i. The functioning of the Canyon Del Rey Creek Watershed has potential implications for the entire Seaside coastal zone (potential flooding, erosion, water quality etc.). As such, the City of Seaside shall update the <i>Wetlands Management/ Enhancement and Restoration Program for the Laguna Grande/Roberts Lake LCP</i> (1983) (Appendix B) to incorporate the findings of the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i> upon completion (identified in Policy NCR-CZ 1.5.B). The updated <i>Wetlands Management/Enhancement and Restoration Program for the Laguna Grande/Roberts Lake LCP</i> shall be incorporated into the LCP through an LCP amendment and certification by the Coastal Commission. In addition to incorporating the findings of the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i>, the <i>Wetlands Management/Enhancement and Restoration Program</i> update shall include the following elements (at minimum): • A clear statement of the goals of the native restoration and enhancement of habitat types and water quality within the Canyon Del Rey Creek Watershed that will sustain biological productivity, including a description of the existing habitat types and quality to provide a benchmark for developing performance criteria. • Guidelines, programs, and funding sources for water quality improvements that are consistent with maintenance, reestablishment, and enhancement of existing wetland habitats and water quality improvement objectives. • Guidelines, in consultation with the appropriate state and federal resource agencies, for the preservation and/or reestablishment of equivalent (size and biological value) areas of riparian and marsh vegetation. • Guidelines which identify the appropriate method(s) of resource restoration and enhancement that will sustain the biological productivity of coastal waters (which may include dredging and filling if identified to be for the	Not Applicable.
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exclusive purpose of resource restoration or habitat enhancement only). • Guidelines for the maintenance and management of all resource areas in the watershed after restoration or enhancement. • Guidelines for design of recreational improvements and maintenance of all shoreline improvements in both Laguna Grande and Roberts Lake. • A timeline of near-, mid-, and long-term restoration opportunities. • An identification of technical, planning, and design assistance needed to foster plan development. • A Vegetation Management Plan that includes the following: • Identification of vegetation and habitat types within the Seaside coastal zone. • Guidelines for improvement, maintenance, and management of all identified resource areas including a Weed Eradication Plan, Planting Plan, Maintenance Plan, and Monitoring Plan, as appropriate. • Guidelines for stabilization of the dune areas including the area adjacent to Roberts Lake utilizing best available methods such as planting and maintaining native vegetation. • Identification of vegetative shoreline improvements that will encourage use by native, non-invasive, and non-nuisance wildlife. • Identification of areas appropriate for use as a community garden. • Identification of appropriate responsible parties for improvement, maintenance, and management of all resources. • A summary of relative cost and funding responsibilities. ii. Until the update to the <i>Wetlands Management/Enhancement and Restoration Program</i> for the Local Coastal Program Land Use Plan, including the Laguna Grande and Roberts subareas, is completed, the City shall continue to implement and promote management/enhancement and restoration measures that meet the following objectives:	
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• Stabilize the water surface area and depth of Laguna Grande and Roberts Lake by removing accumulated sediment and controlling the influx of new sediment. • Improve water quality to a degree sufficient to support a recreational fishery, provide enhanced aesthetic qualities and permit recreational boating; • Provide shoreline improvements that enhance public opportunities for observation and enjoyment of the natural habitat areas, that complement the natural character of the wetlands and riparian areas and are consistent with the protection of these areas, and that are compatible with existing recreational facilities and with the use of the adjoining private properties.	
Policy NCR-CZ 1.6.A – Control of Canada Goose Population The City, in coordination with the Monterey Peninsula Regional Park District, shall explore and implement humane methods of controlling goose populations.	Not Applicable.
Visual Resources	
Policy NCR-CZ 2.1.A – Designation of Visual Resources The scenic and visual qualities of lakes and coastal areas, including Roberts Lake, Laguna Grande, the coastal sand dunes, and Monterey Bay/Pacific Ocean, including from State Highway 1, shall be considered visual resources of public importance. Scenic resources identified on Figure 2-4 shall represent a preliminary mapping of visually sensitive areas. Other scenic resources may be identified to be present based on existing conditions at the time proposed development is considered.	Consistent. As discussed in Section 4.1, Aesthetics, of the 2011 Certified EIR, the proposed project's visual impacts were assessed from three key vantage points surrounding the project site (i.e., from southbound State Route 1 [SR-1] north of Roberts Lake, from Laguna Grande Regional Park on the south shore of Laguna Grande Lake, and from the residential area 1.5 miles east of the project site). These vantage points are consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in significant effects to visual resources.
Policy NCR-CZ 2.1.B – Protection of Visual Resources - Coastal visual resources shall be protected as a resource of public importance. - Visual resources and important view corridors shall be preserved. Figure 2-4 shall be used to assist the City in identifying significant public views of visual resources, view corridors, viewshed enhancement areas, and visually sensitive areas where height and bulk limits shall be required to preserve visibility. - Development determined to have a significant adverse effect on a visual resource or substantially limit visibility of visual	Consistent. As discussed above under Policy NCR-CZ 2.1A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key vantage points surrounding the project site. These vantage points are consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not limit the visibility of visual resources because the proposed project is barely visible from public views. In addition, the proposed project will be consistent with Section 2.6, Site Development Standards, of the City's Coastal Implementation Plan (CIP). Furthermore, building and landscaping design included as part of the proposed project

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resource shall not be allowed. iv. Public trails, recreation areas, and public viewing areas shall be developed adjacent and/or accessible to scenic view corridors, where feasible. v. New development shall be sited and designed to protect visual resources, minimize the alteration of natural land forms, preserve view corridors, be visually compatible with the character of surrounding areas, and, where feasible, restore and enhance visual quality in visually degraded areas. vi. Views of the Seaside coastal zone from State Highway 1 shall be protected and enhanced through regulation of siting, design, and landscaping of all new development. vii. New structures shall be sited and designed to harmonize with the natural setting and to not be visually intrusive. Structures, including fences, shall be subordinate to and blended into the environment, which may be accomplished through use of appropriate materials that will achieve that effect. Where necessary, modification shall be required for siting, structural design, shape, lighting, color, texture, building materials, access, and screening to protect public views. When structures cannot be sited outside of common public viewing areas, structures in scenic areas shall provide screening, which may be accomplished through the use of non-invasive native vegetation and topography to help provide visual compatibility.	will be approved by the Board of Architectural Resources (BAR), ensuring that the architectural design of the project will not degrade the existing visual character and quality of the project site and its surroundings. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will also include extending the existing pedestrian and bicycle trail to connect to the Laguna Grande Regional Park and Monterey Bay Coastal Bike Trail. Therefore, the proposed project will be consistent with the City's goal of developing public trails adjacent to scenic view corridors.
Water Resources Policy NCR-CZ 3.1.A – Provision for Potable Water Supply i. The City shall participate in local and regional efforts to secure a safe and adequate/sustainable supply of water. ii. New development shall be sited in areas with adequate public utility services (i.e., water treatment and delivery) and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. Where existing public utility services, including water, can accommodate only a limited amount of new development, priority uses including essential public services, public recreation, and visitor-serving commercial land uses shall have priority over other	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project would have an adequate and sustainable supply of water.

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development/uses.	
Policy NCR-CZ 3.1.B – Protection of Potable Water Supply – Water Conservation The City shall require that all new development, changes of ownership, and changes or expansions of use within the Coastal Zone meet or exceed Monterey Peninsula Water District's Water Efficiency Standards.	Consistent. The Monterey Peninsula Water District Water Efficiency Standards include nonresidential water efficiency standards for new structures. As discussed above under Policy NCR-CZ 1.1A, Promote Sustainable Development, the proposed project will minimize water usage and meet efficiency standards by installing water-efficient fixtures and appliances, native drought-tolerant plants, and water-efficient irrigation systems and devices, including restricted watering methods (i.e., prohibiting systems that apply water). Systems that use excessive and/or inefficient water systems will be prohibited. Therefore, the proposed project will meet the Monterey Peninsula Water District's Water Efficiency Standards.
Policy NCR-CZ 3.1.C – Management of Potable Water Supply Monitor water use in the City to ensure the availability of water to fulfill the goals of the LUP.	Not Applicable.
Policy NCR-CZ 3.1.D – Adequate Water Development may only be approved if it is demonstrated to have a safe, adequate, and sustainable water supply.	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project will have a safe, adequate, and sustainable supply of water.
Policy NCR-CZ 3.2.A – Water Reserves The City shall continue to support regional efforts to develop an alternative water supply for the City of Seaside.	Not Applicable.
Water Quality	
Policy NCR-CZ 4.1.A – Water Quality i. The City shall actively pursue methods of improving water quality of lakes, streams, and other waterways throughout the LCP area by improving the quality of dry-weather and stormwater runoff flows through the adoption of adequate stormwater pollution prevention and Low Impact Development strategies. ii. The biological productivity and quality of coastal waters, streams, wetlands, and lakes shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural	Consistent. As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the proposed project will include source control and treatment BMPs during project construction and operation. With the implementation of BMPs, the proposed project will result in improved water quality runoff when compared to the project site's existing conditions. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at sustaining biological productivity in the areas surrounding the project site and protecting water quality in bodies of water surrounding the project site. For example, as required by Measure 4.3.1, Biotic Habitat Protection, the Applicant will be required to retain a qualified biologist who will implement various actions during project construction in order to minimize construction impacts to sensitive biotic habitats adjacent

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streams.	to the project boundaries. In addition, Measures 4.3.2 through 4.3.4, which outline avoidance and minimization measures to minimize project-related impacts to special-status species (including northern harriers, other nesting birds, California red-legged frog, and Coast range newt) will be required to minimize impacts to sensitive species in the area. The proposed project will also be required to comply with Measure 4.3.5, Weed Management and Signage, mandating the placement and ongoing maintenance of signs along the pedestrian trail instructing pedestrians to stay on the trail in order to preserve neighboring biotic habitats and eradicate noxious common reed within the project area.
Natural Hazards	
Policy NCR-CZ 5.1.A – Designation of Natural Hazard Areas The hazard areas identified on Figures 2-5, 2-6, and 2-7 shall represent a preliminary mapping of potential hazards within the LCP area. Actual determination of hazard areas shall be based on facts on the ground at the time development is considered.	Consistent. The project site is located within an existing 100-year floodplain, is within 2,400 meters of a moderate fire threat and directly west of the Chupines Fault, and is within 0–5 meters of a tsunami evacuation zone (as respectively referred to on Figure 2-5 [Flood Hazard Areas], Figure 2-6 [Faults and Wildland Fire Threat Categories], and Figure 2-7 [Tsunami Evacuation Areas] in the City's Local Coastal Program LUP). As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, a majority of the project site is within the boundary of Federal Emergency Management Agency (FEMA) Zone AE, which is defined as areas inundated by the calculated 100-year flood event. Southwest portions of the project site lie within the boundary of a FEMA Zone X, which is potentially subject to flooding from the 500-year flood occurrence storm event. A small area in the southeast corner, adjacent to the channel and Roberts Lake, lies within a FEMA-designated floodway and must be kept free from encroachment; however, no project improvements are proposed at this location. The Base Flood Elevation at the project site is between 16 feet and 17 feet for the 100-year flood event. The proposed project will include the import of approximately 1,000 cubic yards of fill, which will raise elevations of the restaurant's first floor to 18 feet (i.e., 1 foot above the Base Flood Elevation). Therefore, the 2011 Certified EIR found and concluded that the proposed project would not be subject to on-site flooding. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR. As discussed in Section 4.6, Hazards and Hazardous Materials, of the 2011 Certified EIR, the project site is not located within a wildland area at risk of damage due to a wildfire. Therefore, the 2011 Certified EIR found and

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	concluded that the proposed project would not be at risk of a wildland fire. As discussed in Section 2.5, Geology and Soils, of the 2011 Certified EIR, the project site is located in a region characterized by moderate to high seismic activity, as is most of California. Due to this distance, the project site has the potential of experiencing strong ground shaking from earthquakes on regional and/or local causative faults. The closest active fault to the project site is the Chupines Fault, which lies 900 feet to the northeast of the project site (refer to Figure 2-6 of the Local Coastal Program LUP). Therefore, the project site is not subject to hazards associated with surface rupture; however, seismically induced ground shaking will be expected to occur as a result of seismic activity along the Chupines Fault. The proposed project will be required to comply with the California Building Code Compliance and Seismic Standards as required by Standard Condition 4.5.1 in the 2011 Certified EIR to reduce potential impacts associated with seismic ground shaking to less than significant levels. In addition, Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR found and concluded that the project site is located at an elevation of approximately 10 to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the proposed project in the event of a tsunami.
Policy NCR-CZ 5.1.B - Protection from Natural Hazards i. All new development in areas subject to natural hazards, including geologic, flood, tsunami, sea level rise, ocean storm and surge, and fire hazard, shall be sited, designed, and sized to minimize risk to life, property, and the environment from natural disaster as warranted based on assessed risk and conditions on the ground. ii. Applications for new development and redevelopment in natural hazard areas shall include an Adaptive Management Plan that identifies the expected lifetime of the proposed development and strategies to decommission the development once it has been determined that the development's lifetime has been reached due to hazards. Strategies identified in the Adaptive Management Plan may include, but are not limited to, removing the development and restoring the site to pre-development conditions;	Consistent. The project site is located within an existing 100-year flood zone, is within 2,400 meters of a Moderate Fire Threat and directly west of the Chupines Fault, and is within 5 meters of a tsunami evacuation zone (as respectively referred to on Figure 2-5 [Flood Hazard Areas], Figure 2-6 [Faults and Wildland Fire Threat Categories], and Figure 2-7 [Tsunami Evacuation Areas] of the City's Local Coastal Program LUP). The proposed project will be designed to minimize risk to life, property, and the environment from natural disaster as discussed below. In addition, as part of the proposed project, a quantitative analysis of sea level rise has been prepared that concluded the proposed project is above the sea level rise projections for the next 100 years. As discussed above under Policy NCR-CZ 5.1.A, Designation of Natural Hazard Areas, a majority of the project site is within the boundary of FEMA Zone AE, which is defined as areas inundated by the calculated 100-year flood event. The proposed project will raise elevations of the restaurant's

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managed retreat; and/or other hazard abatement strategies. New development shall only be approved if the approval includes an Adaptive Management Plan with enforceable provisions for both determining when a development's lifetime has been reached due to hazards, and for implementing the required abatement strategy at that time. iii. New development shall assure structural stability over the lifetime of the project as determined by the Adaptive Management Plan. iv. Proposed development shall be consistent with the following applicable goals and actions of the <i>City of Seaside Local Hazard Mitigation Plan</i> (LHMP), as modified to protect coastal resources: • Goal 1: Minimize loss of life and property from hazard events. • Goal 2: Improve safety for residents, business owners, and property in the City of Seaside. • Goal 3: Mitigate for disasters. • Action 3.09: Continue to actively implement existing state law that requires the City to maintain lists of addresses of unreinforced masonry buildings and inform property owners that they own this type of hazardous structure. • Action 3.10: Ensure that all new construction is completed using the latest earthquake-resistant design techniques that will limit damage caused by earthquakes. • Action 3.11: Identify mitigation measures for areas that flood annually. • Action 3.12: Ensure that all new construction that is now, or as modified by rising sea level will be, within the 100-year flood zone is sited to avoid flood hazards to the maximum extent possible and otherwise constructed using design techniques that will limit damage caused by floods consistent with policies NCR-CZ 5.2.A, and NCR-CZ 5.2.C and by using the latest edition of the California Building Code. • Action 3.15: Ensure that new development pays its fair share of improvements to the storm drainage system	first floor by approximately 1 foot above the Base Flood Elevation. Therefore there will be no significant impacts associated with on-site flooding to buildings proposed as part of the project. Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR also found and concluded that the project site is located at an elevation about 10 to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the proposed project in the event of a tsunami. Mitigation is also outlined in this section of the 2011 Certified EIR in order to further ensure that impacts related to flooding and other events causing inundation on the project site will be less than significant. As discussed in Section 4.6, Hazards and Hazardous Materials, of the 2011 Certified EIR, the project site is not located within a wildland area at risk of damage due to a wildfire (refer to Figure 2-7 of the City's Local Coastal Program LUP). Therefore, the 2011 Certified EIR found and concluded that the proposed project would not be at risk of a wildland fire. As discussed in Section 2.5, Geology and Soils, of the 2011 Certified EIR, the project site is located in a region characterized by moderate to high seismic activity, as is most of California. Therefore, the project site has the potential of experiencing strong ground shaking from earthquakes on regional and/or local causative faults. The closest active fault to the project site is the Chupines Fault, which lies 900 feet to the northeast (refer to Figure 2-6 of the City's Local Coastal Program LUP). Due to this distance, the project site is not subject to hazards associated with surface rupture; however, seismically induced ground shaking will be expected to occur as a result of seismic activity along the Chupines Fault. The proposed project will be required to comply with the California Building Code Compliance and Seismic Standards as required by Standard Condition 4.5.1 in the 2011 Certified EIR to reduce potential impacts associated with seismic ground shaking to less than significant levels. In addition, the proposed project will implement Standard Condition 4.5.2, which will require the review and approval of plans in order to ensure consistency with recommendations outlined in a geotechnical report prepared for the proposed project, to minimize impacts associated with seismic events. Therefore, due to the reasons discussed above, the proposed project will be consistent with the applicable goals and actions of the City of Seaside Local Hazard Mitigation Plan (LHMP).
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necessary to accommodate increased flows from the development. • Action 3.16: Ensure that new developments are designed to reduce or eliminate flood damage by requiring lots and rights-of-way are laid out for the provision of approved sewer and drainage facilities, providing on-site detention facilities whenever practical. • Action 3.17: Encourage homeowners in flood-prone areas to participate in home elevation programs and other methods to adapt to sea level rise. • Action 3.22: Ensure that all new construction in areas susceptible to fires is completed using fire-resistant design techniques that will limit damage caused by wildfires. For example, require Class A roofing materials for all homes in areas susceptible to fires. • Action 3.27: Adopt a City ordinance that requires the following measures to reduce fire ignition due to earthquakes: bracing of gas-fired appliances and equipment; flexible couplings on gas appliances and equipment; and the bolting of homes to their foundations and strengthening of cripple walls. • Action 3.33: Provide technical assistance to homeowners whose homes were damaged by natural hazards in order to site and design the residences to better avoid future hazards. Allow a streamlined permitting process for the rebuilding after a disaster. • Action 3.34: Encourage the retrofitting of unreinforced masonry structures that have not been retrofitted. • Action 3.37: Pass a City ordinance that will limit building in high-risk areas. • Goal 4: Increase public education and awareness of hazards so that City residents can better anticipate and prepare for them. • Action 4.15: Educate property owners on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event through appropriate City public education outlets. • Goal 6: Assure that continuity of local government operations will not be significantly disrupted by disasters.	As noted above, The proposed project will raise elevations of the restaurant's first floor by approximately 1 foot above the Base Flood Elevation. Additionally, the area is 10-15 feet above the mean tide level and is protected by City streets and a 40-foot dune. Finally, a quantitative analysis of sea level rise has been prepared that concluded the proposed project is above the sea level rise projections for the next 100 years. Therefore, based on known environmental hazards, the expected lifetime of the project is more than 100 years. In the event that specific geologic hazards and/or changes in Sea Level create conditions which warrant the demolition of the structure and on-site improvements, the property owner and applicant shall be responsible for obtaining the required Coastal Development Permits and City of Seaside demolition permits for the removal and disposal of the structure and on-site improvements. The demolition process shall adhere to all state requirements for the recycling of materials and disposal of hazardous wastes.
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• Action 6.10: Participate in the Office of Emergency Services Safety Assessment Program (SAP) which formalizes arrangements with engineers, building officials, and other qualified people to report to the City, assess damage, and determine if buildings can be reoccupied after a disaster. • Goal 7: Ensure the continuous function of utilities and critical transportation facilities. • Action 7.10: Encourage replacing aboveground utility lines with underground facilities. • Action 7.11: Assure that utility lines are installed underground for new development. • Action 7.22: Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage. • Goal 8: Assure that the economic vitality of the community will not be threatened by future hazards. • Action 8.01: Encourage business owners to participate in a program similar to San Francisco's Building Occupancy Resumption Program (BORP). This program permits owners of buildings to hire qualified structural engineers (California licensed structural engineers with relevant experience) to create facility-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City inspectors for these buildings in the event of a disaster. This program allows rapid reoccupancy of the buildings. • Action 8.02: Provide technical assistance to businesses damaged by natural hazards in order to site and design development to better avoid future hazards. Allow a streamlined permitting process for the rebuilding of businesses after a disaster.	
Policy NCR-CZ 5.2.A – Designation of Sea Level Rise Hazards The City shall collaborate with local jurisdictions and identify properties and stakeholders most likely affected by rising sea levels. Collaboration between these agencies would be beneficial to the citizens of the Monterey Bay area. Adaptation to the effects of sea level rise by the local jurisdictions and	Not Applicable.

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agencies is necessary to reduce the potential negative impacts sea level rise may have upon the economy and infrastructure of the Monterey Bay area.	
Policy NCR-CZ 5.2.B – Protection from Sea Level Rise Hazards i. Collaboration between jurisdictions and agencies could lead to the development and successful implementation of adaptation measures to the threat of sea level rise. Other jurisdictions that may be affected by sea level rise within the Monterey Bay area include: • California State Parks, • California Department of Transportation, • Cities of Monterey, Marina, Del Rey Oaks, Sand City, Pacific Grove, and Carmel-by-the-Sea, • Monterey County, • Monterey Regional Water Pollution Control District, • Association of Monterey Bay Area Governments, • Transportation Agency for Monterey County, • Monterey Peninsula Regional Park District, • Monterey Peninsula Waste Management District, and • California Coastal Commission. ii. Organize educational workshops for local citizens to inform them of the concerns and potential impacts of sea level rise in the Monterey Bay area. • Seek partnerships with educational and institutional organizations to assist with the facilitation of educational workshops. • Support ongoing efforts to develop and implement practical, science-based, long-term solutions and adaptation strategies for minimizing potential adverse impacts of sea level rise.	Not Applicable.
Policy NCR-CZ 5.2.C – Management of Sea Level Rise Hazards i. The City shall prepare periodic updates to the Local Hazard Mitigation Plan (2005) to address the potential impacts sea level rise will have on the City of Seaside. The plan update process shall include input of local citizens, businesses, educational institutions, and neighboring jurisdictions and the following components:	Not Applicable.

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a. A Vulnerability Assessment that identifies and analyzes areas within the city that are most at risk to the impacts of sea level rise. The Vulnerability Assessment will establish how far and how high coastal storms and ocean levels would inundate the city, including consideration of erosion and sedimentation factors. b. A Beachfront Area Plan that addresses the impacts sea level rise will have on the Beach Subarea. The Area Plan shall propose methods to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over a minimum of 100 years. The Area Plan shall also include a wave uprush and impact report and contain an analysis prepared by a licensed engineer with expertise in coastal engineering that addresses and demonstrates the effects of sea level rise in relation to the following: • Beach profile • Impacts to beach public access and recreation opportunities • Areas most affected by wave uprush • Evaluation of shoreline protection alternatives • Protection alternatives for freshwater table • Future projections of regional sea level rise • Location changes of potential mean high tide lines c. An identification of resources (including, but not limited to, visual resources, lakes, wetlands, parks, wildlife, and habitat), infrastructure improvements, public beach access and public trails (i.e., California Coastal Trail and Monterey Bay Recreation Trail), and properties that are potentially at risk to inundation or damage, and guidance for their protection. d. Evaluation of potential salinity changes and water level rise impacts to wetlands, Laguna Grande, and Roberts Lake. e. An identification of City policies that must change and recommendations for necessary policy changes that will make future development and area conservation projects more responsive and adaptive to sea level rise, including LCP policies through a LCP amendment.	
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f. An assessment of impacts to the city's local economy and recommendations for maintaining the economic viability of vulnerable areas. g. Mitigation and adaptation measures that can be implemented, as well as an analysis of the potential impacts of the measures. h. A framework for future revisions to the plan and a proposed method for disseminating information to the public.	
Policy NCR-CZ 5.3.A – Protection from Tsunami Hazards All development located within the tsunami inundation zone shown on Figure 2-7 (and as updated by the most recent state or local California Emergency Management Agency maps), shall be designed and sited to minimize and mitigate flood hazards to the maximum extent possible including by designing all habitable space above the maximum flood elevation as defined by a qualified coastal geologist with experience in tsunami.	Consistent. As discussed in Section 4.5, Geology and Soils, of the 2011 Certified EIR, the project site is located approximately 2,000 feet from Monterey Bay at an elevation of approximately 10 to 15 feet above mean sea level. Historically, there is no record of any tsunamis more than 9 feet high occurring along the County coast. Furthermore, the project site is protected by 20- to 40-foot sand dunes between the project site and the ocean that will minimize impacts to the project site in the event of a tsunami. Therefore, the 2011 Certified EIR found and concluded that the potential for a tsunami to affect the project site would be low.
Policy NCR-CZ 5.3.B – Management of Tsunami Hazards The City of Seaside shall prepare a Tsunami Preparedness Plan for mitigating the hazards associated with tsunamis, which shall include the following elements: • Review local and distant tsunami inundation maps for Seaside and the southern Monterey Bay as they are developed to identify susceptible areas and plan evacuation routes. • Periodically review and update tsunami preparation and response policies/practices to reflect current inundation maps and design standards. • Participate in any regional effort to develop and implement workable response plans that the City's emergency services can adopt immediately for evacuation in the case of a tsunami warning. • Prepare and deploy a system of tsunami detection and early warning systems as warranted based on assessed risk. • Include tsunami evacuation route information as part of any overall evacuation route sign program implemented in the City. Evacuation routes that lead away from low-lying areas	Not Applicable.

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around Roberts Lake, Laguna Grande, and the beach should be clearly posted. An evacuation route traffic monitoring system that provides real-time information on the traffic flow at critical roadways should be considered. • Develop and implement a tsunami educational program for residents, visitors, and people who work in the susceptible areas. • Require overnight visitor-serving facilities in susceptible areas to provide tsunami information and evacuation plans. • Encourage the Monterey County Office of Education to include in their earthquake-preparedness curriculum information specifically related to the natural hazards that Seaside and Monterey citizens could face and what to do about them. • Support tsunami research in the Southern Monterey Bay areas.	
Public Access & Recreation	
Policy PAR-CZ 1.1.A – Designation of Public Access and Recreational Opportunities The public access areas identified on Figure 2-8 shall represent a preliminary generalized mapping of access points and passages to significant coastal features and recreational opportunities. Actual determination of public access areas shall be based on facts on the ground at the time development is considered.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will maintain all access points from the project site to the pedestrian and bicycle trail around Laguna Grande Lake. In addition, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail (refer to Figure 2-8, Public Access Points and Passages, of the City's Local Coastal Program LUP).
Policy PAR-CZ 1.1.B – Protection of Public Access and Recreational Opportunities Maximize and protect public access including pedestrian and bicycle connectivity and recreational opportunities in the coastal zone consistent with resource conservation principles, public safety, public rights, and the rights of private property owners.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail consistent with resource conservation principles, public safety, public rights, and the rights of private property owners.

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Policy PAR-CZ 1.1.C – Management of Public Access and Recreational Opportunities i. As development occurs, the City shall develop and implement a coastal access/directional sign program for all public access points, including those shown on Figure 2-8. The sign program shall include informational signs identifying the location of the Monterey Bay and California Coastal Trail alignments within Seaside. ii. The City shall maximize opportunities for environmental education opportunities within the coastal zone through methods such as interpretive signage, outreach programs, on-site programs, guided walks along access and park trails, nature walks, publications, newsletters, brochures, exhibits/displays, and websites. iii. The City shall explore development of a Peninsula Visitors Center at a location within, or at a compatible location adjacent to, the coastal zone, provided the site has ample access to the lakes, parks, and beach to serve visitors to Seaside and the Monterey Bay area. iv. Ensure the ability of the California Coastal Trail and Monterey Bay Recreation trail to adapt to changes in sea level rise.	Not Applicable.
Policy PAR-CZ 1.1.D – Provision of Recreational Facilities Lower cost visitor serving and public recreational facilities shall be protected, encouraged, and where feasible, provided.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail, encouraging the use of recreational facilities in the Coastal Zone.
Policy PAR-CZ 1.2.A – Designation of Parking for Public Access and Recreational Opportunities i. The City shall provide free and unrestricted parking at all public access and public parking areas within the coastal zone during daylight hours (i.e., from one hour before sunrise to one hour after sunset) including those identified in Figures 2-8 and 2-9. ii. Explore expanding public access parking opportunities at the Embassy Suites Hotel parking lot.	Consistent. The project site is designated as a shared off-street parking area (refer to Figure 2-9, Public Parking Area, of the City's Local Coastal Program LUP). Although the proposed project will develop this property with a restaurant use, thereby eliminating this property as an off-street public parking area, the proposed project will provide sufficient parking to serve visitors to the project site and surrounding areas. Specifically, the proposed project will provide approximately 53 parking spaces, including three Americans with Disabilities Act (ADA) accessible spaces, three bicycle racks, two motorcycle parking stalls, and one recreational vehicle (RV)

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	parking space. In addition, there are two public parking lots located on the north side of Laguna Grande Park that can be accessed from Canyon Del Rey Boulevard that would remain available for public use. The project site is accessible from these public parking lots by an existing pedestrian pathway that circles around Laguna Grande Park.
Policy PAR-CZ 1.3.A – Designation of Trails The City shall establish, designate, and maintain a system of trails and an inter-connected trail / park network as components of the California Coastal Trail and Monterey Bay recreational trail alignments to the extent feasible.	Not Applicable.
Policy PAR-CZ 1.4.A – Public Access Improvements Improve water quality and the recreational experience of southern Monterey Bay area beaches, including by pursuing opportunities to consolidate and/or eliminate reliance on storm water outfalls that convey storm water directly to the beach (Policy NCR-CZ 1.4.B.iii). Such storm water shall be filtered and treated prior to discharge.	Not Applicable.
Land Use & Development	
Land Use Designations & Definitions	
Policy LUD-CZ 1.1.A – Land Use Designations Within the Coastal Zone The following land use designations establish the type, density, and intensity of land use within the coastal zone. The maximum densities allowed for each land use are defined in the Development Standards provided in the Coastal Implementation Plan portion of the LCP. The permitted development intensities shall be limited to those that adequately provide for public access and recreation needs and that address site constraints. Consistency with applicable policies of the LCP will ensure that site constraints are adequately addressed by requiring protection from natural hazards and the preservation and enhancement of natural coastal and scenic visual resources (including provisions for appropriate buffers). The types of land uses allowed within the Coastal Zone are described below: • Coastal Parks and Open Space (CPOS): This designation is appropriate in areas where the City wants to protect and preserve natural resources and habitat, views, and other visual amenities and protect people and property from	Consistent. The northeastern, eastern, and southern portions of the project site are designated Coastal Visitor-Serving Commercial (CVSC) (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). CVSC permitted uses include food service and recreation-related commercial uses; therefore, the development of a restaurant facility and extension of the existing pedestrian and bicycle trail as part of the proposed project will be consistent with permitted uses in the CVSC land use designation as outlined in the City's Local Coastal Program LUP. Furthermore, the proposed project will develop the property at a floor area ratio (FAR) of 0.04, which is well below the maximum FAR of 1.0:1 that is permitted by the land use designation.

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natural and man-made hazards. This designation also identifies existing or planned parkland. Public use areas include the sandy beach, access ways, parks, trails, walkways, and other recreational amenities that are publicly owned or over which easements or similar instruments are required as a condition of development. The maximum floor area ratio (FAR) within this designation is 0.01:1. • Coastal Visitor-Serving Commercial (CVSC): Principal permitted visitor-serving commercial uses include hotels/motels, food service, retail establishments, visitor/traveler support services (such as visitor information centers), and recreational-related commercial uses. The maximum FAR is 1.0:1, except that hotels are allowed a maximum FAR of 1.5:1. • Coastal Visitor-Serving Recreation (CVSR): Principal permitted visitor-serving recreation uses include recreational equipment rental centers (such as bicycle, boat, and other recreational equipment) and visitor-serving support services (such as visitor information centers). Commercial uses such as hotels/motels, restaurants, and retail establishments are not allowed. However, counter food service (such as a snack bar), which is ancillary to a primary permitted use, is permissible. The maximum FAR is 0.5:1. • Coastal Regional Commercial (CCRG): Regional commercial uses are defined as large scale commercial development with retail, entertainment, and/or service uses of a scale and function to serve a regional market. These uses are allowed where existing regional commercial uses are developed within the coastal zone. Permitted regional commercial uses include general, grocery, and outdoor retail; shopping center; health and fitness facilities; and restaurants with table service. The maximum FAR is 1.0:1. • Coastal Heavy Commercial (CCH): Heavy Commercial uses are intended for subregional commercial activities such as auto and truck repair, contractor yards, warehousing, and light manufacturing. These uses are permitted where existing heavy commercial uses are developed within the coastal zone (i.e. near railroad right-of-way adjacent to Sand City boundary). The maximum FAR is 0.5:1.	
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• Coastal Mixed Use/West Broadway Urban Village Specific Plan (CMX/WBUVSP): Seaside has developed a Mixed Use designation as a way to promote pedestrian- and transit-oriented activity centers that have a mixture of residential, commercial, office, and civic uses. This designation is appropriate in the Del Monte Subarea to be consistent and compatible with the West Broadway Urban Village Specific Plan. The applicable Development Standards and Design Guidelines have been included in Appendix C of the CIP. • Coastal Transportation Corridor (CTC): The City of Seaside shall maintain the State Highway One right-of-way and the former Southern Pacific Railroad right-of-way as essential public transportation corridors. Principal permitted uses of the corridors are for motorized and non-motorized forms of transportation. The former Southern Pacific Railroad right-of-way shall be reserved for possible light rail, bus rapid transit route, or other non-motorized forms of transportation including pedestrian and/or bicycle paths.	
Policy LUD-CZ 1.2.A – Definitions within the Coastal Zone The following definitions shall be specific to the LCP. These definitions are intended to provide clarification and guidance for use of terminology used throughout the LCP. i. An “adverse effect on a visual resource” shall be defined as development that impacts common public viewing areas to and along the ocean and scenic coastal areas, alters natural land forms, conflicts with the character of surrounding areas, and/or, does little to restore and enhance the visual quality within visually degraded areas. ii. “Canyon Del Rey Watershed” is the area beginning near the intersection of Quail Ridge Lane and State Route 68, continuing along State Route 68 toward the City of Monterey until the intersection of Canyon Del Rey Boulevard and State Route 68, and extending along Canyon Del Rey Boulevard until the terminus of Canyon Del Rey Creek at the southeastern end of Laguna Grande, has been determined to have exceptional value and public importance.	Not Applicable.

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iii. "Common public viewing area" is a public area such as a public street, road, designated vista point, or public park from which the general public ordinarily views the surrounding viewshed. iv. "Cumulatively" or "cumulative effect" means the incremental effects of an individual project shall be reviewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. v. "Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511). vi. "Environmentally Sensitive habitat area" (ESHA) means any area in which plant or animal life or their habitats are either rare, or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. vii. "Floor area ratio" (FAR) expresses the intensity of use on a lot. The FAR represents the ratio between the total gross floor area of all buildings on a lot and the total land area of	
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that lot. viii. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. ix. The "Fremont Corridor" is an area encompassing 19 acres of land located on the east side of Fremont Boulevard between La Salle Avenue and Olympia Avenue within the Laguna Grande Subarea. x. "Marine Resource" is a broad, encompassing term that incorporates all marine life and marine habitats, including the flora and fauna of the Monterey Bay Marine Sanctuary and all water bodies within the coastal zone that, due to their aesthetics, function, or contribution to the social and environmental ecosystem, are considered to have exceptional value and public importance. xi. A "Mitigation/Restoration and Monitoring Program," prepared pursuant to Section 15097 of the CEQA Guidelines, describes the processes for implementing identified mitigation measures and/or restoration measures and the persons responsible for implementing and/or overseeing those mitigations xii. "Natural Hazard" is defined as threat of an atmospheric, earth, or water-related occurrence that will have a negative effect on life, property, or the environment. Natural hazards within Seaside's coastal zone include the following: Seismic; Fire; Flood; Sea level rise; High wave event storms; surges; and tsunamis. xiii. "Public Access" is defined as the ability of residents and visitors to use and enjoy areas within the coastal zone for recreational uses such as hiking, bicycling, and picnicking. Public access includes the provision of open access way to coastal features and connectivity to other existing coastal features and inland trail networks such as walkways and bicycle paths. xiv. "Sea level rise" is defined as the anticipated sea level changes due to the greenhouse effect and associated global warming and climate changes. xv. "Sustainable development" is development that meets the	
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needs of the present without compromising the ability of future generations to meet their own needs. xvi. “Viewshed enhancement areas” are those areas that can be restored or enhanced to improve visual quality of degraded conditions. xvii. “Visually sensitive areas” are those areas that require height and bulk development restrictions to preserve the public’s ability to view visual resources. xviii. “Wetland” is any area which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.	
Development & Land Use Requirements	
Policy LUD-CZ 2.1.A – Designation of Land Uses Within the Coastal Zone Land use designations for the Local Coastal Plan area are shown on Figures 2-10a and 2-10b.	Consistent. The northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City’s Local Coastal Program LUP).
Policy LUD-CZ 2.1.B – Compliance with Land Use Plan Policies New development shall be required to demonstrate compliance with the Land Use Plan policies applicable to the particular project under consideration.	Consistent. This LCP-LUP Consistency Analysis provides the required information that demonstrates the proposed project is consistent with all applicable LUP policies.
Policy LUD-CZ 2.1.C – Land Use Densities Within the Coastal Zone The densities described in LUD-CZ 1.1.A represent a maximum. As required by the applicable policies of the LUP, permitted development intensities shall be limited to those which adequately address constraints including, but not limited to, public access and recreation needs, coastal hazards, natural habitats (i.e. sand dunes, wetlands, riparian, ESHA, and marine resources, etc.) and their appropriate buffers, natural landforms and scenic views.	Consistent. The northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City’s Local Coastal Program LUP). The proposed project will include the development of a restaurant facility, consistent with conditionally permitted uses in the CVSC land use designation (refer to the CIP Consistency Analysis). The proposed project adequately addresses all constraints as discussed in the LCP.
Policy LUD-CZ 2.1.D - Coastal Development Permit Required A Coastal Development Permit shall be required for all development within the Coastal Zone.	Consistent. The proposed project is located within the Coastal Zone and is seeking approval of a Coastal Development Permit (CDP).
Policy LUD-CZ 2.1.E – Minimize Adverse Effects New development shall be located in areas where it will not have significant adverse effect either individually or cumulatively on natural coastal resources and public access and recreation	Consistent. The 2011 Certified EIR found and concluded that the proposed project would result in neither project-specific nor cumulatively significant impacts to natural coastal resources or public access and recreation. None of the proposed project changes would change the conclusions on this

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(Policy NCR-CZ 1.1.C).	issue as discussed in the certified 2011 EIR.
General Permit Considerations	
Policy LUD-CZ 3.1.A – Considerations for Natural Habitat Areas - ESHA i. Proposed development in areas adjacent to an ESHA (as identified earlier by Policies NCR-CZ 1.2.A and 1.3.A), shall be required to demonstrate that it is sited and designed to be compatible with the protection of these resources. ii. Proposed development in areas adjacent to an ESHA (including wetlands) shall be required to provide a site-specific resource report prepared by a qualified biologist. The report shall include, at a minimum, the following: a. A site-specific survey evaluating existing known resources at the time of proposed development. b. A map identifying existing known resources within the project's identified area of potential impact at the time of proposed development. c. An evaluation of necessary buffers and/or setbacks required around any identified ESHA, wetland or riparian vegetation to ensure the long-term biological integrity of the resource. All identified necessary buffers and/or setbacks required to ensure the biological integrity of the resource shall be mapped. • Buffers or setbacks are required around Natural Habitat Areas including ESHA, riparian vegetation, and wetlands of a sufficient size to ensure the biological integrity of the resource, including under changing sea level conditions. • A minimum buffer of 50 feet as measured from the extent of identified habitat type shall be required, unless a biological assessment results in information indicating that expanded or reduced setback/buffer would ensure the biological integrity of the resource. Smaller setbacks or buffers may be allowed only if it can be demonstrated that: (1) the required minimum 50-foot buffer would render the site unusable for its designated use; and (2) the buffer has been adjusted downward only to a point where the designated use can be accommodated. Under no	Consistent. The project site does not contain any ESHAs; however, potential riparian, emergent wetland, and estuarine ESHAs are present to the north, south, and east of the project site (refer to Figure 2-2, Potentially Environmentally Sensitive Habitat Area [ESHA] within the Coastal Zone, of the City's Local Coastal Program LUP). As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, it was determined that with implementation of Measures 4.3.1, 4.3.2, 4.3.3, and 4.3.4, the proposed project will result in less than significant impacts on neighboring sensitive habitats, including potential ESHAs. In addition, six site-specific field surveys were conducted as part of the Biological Resources Report prepared for the 2011 Certified EIR to determine existing plant and animal species present on and adjacent to the project site. The Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site that are incorporated into the 2011 Certified EIR as Measures 4.3.1 through 4.3.4. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR. Furthermore, according to the City's CIP, developments are required to be set back a minimum of 50 feet from Laguna Grande Lake (a designated marine resource area). However, smaller setbacks may be allowed if public recreational trails are provided within the buffer zone. The proposed project will construct the trail extension within the 50-foot buffer zone; however, the restaurant facility will be set back a minimum of 50 feet from Laguna Grande Lake.

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circumstances shall the buffer be reduced to less than 25-feet. If the buffer/setback is adjusted downward, additional mitigation measures developed in consultation with the Department of Fish & Game shall be implemented. • No permanent structures shall be permitted within the required buffer/setback area except for structures of a minor nature that do not lead to significant degradation of the resource such as fences or at grade improvements for public access and/or recreation purposes (i.e. paths, trails, platforms, parking). d. Identification of all biological impacts of proposed development. e. Alternatives and/or mitigation for avoiding and/or reducing any identified impacts to a less than a significant level. f. Mitigation/Restoration and Monitoring Program for any mitigation required, including identification of appropriate acre replacement/ restoration ratios for any unavoidable impacts.	
Policy LUD-CZ 3.1.B – Considerations for Natural Habitat Areas – Wetland Vegetation Management i. For proposed development within the coastal zone, a <i>Vegetation Management Report</i> prepared by a qualified biologist shall be required. The report shall consist, at a minimum, of the following: a. A site-specific survey of the vegetation and habitat types at the time of proposed development. b. A map identifying existing vegetation and habitat types relative to the identified project area, and identification of all potential impacts associated with the proposed development. c. Identification of appropriate native plant species for use in restoration activities. d. Identification of appropriate buffers, or setbacks, necessary to protect identified vegetation. e. Alternatives and/or mitigation for avoiding and/or minimizing identified impacts. Mitigation shall include	Consistent. As part of the 2011 Certified EIR, a Biological Resources Report was prepared for the proposed project. The Biological Resources Report included six site-specific field surveys to determine existing plant species and vegetation types present on and adjacent to the project site. All existing vegetation and habitat species were identified in this report, as were impacts and prescribed mitigation measures.

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procedures and planting/maintenance plans that will encourage, enhance, or reestablish desirable plant communities. ii. The <i>Vegetation Management Report</i> shall be consistent with the most current version of the Wetland Management/Enhancement and Restoration Program (refer to Policy NCR-CZ 1.5.D).	
Policy LUD-CZ 3.1.C – Considerations for Natural Habitat Areas – Wetlands and Marine Resources i. Applicants for new development within the coastal zone located within, adjacent to, or that has watershed connection to a marine resource shall be required to submit a site-specific Wetland Management / Enhancement and Restoration Program (refer to Policy NCR-CZ 1.5.D) including, at a minimum, the following elements: a. A wetland delineation prepared by a qualified biologist with expertise in identifying wetlands and wetland indicators (i.e. soils, hydrology or vegetation). b. Identification of the current conditions of the site including flooding potential, water quality, and natural systems. c. Identification of all habitat types and known water quality concerns within the project area. d. Guidelines for water quality management and/or improvement that is consistent with maintenance, reestablishment, and enhancement of existing wetland habitats and water quality. e. An identification of appropriate methods of native enhancement and restoration that will sustain the biological productivity of existing wetland habitats. f. An identification of structural and nonstructural best management practices that will: • Maintain, and as feasible enhance, habitat and support natural systems of Laguna Grande, Roberts Lake and Monterey Bay, • Maintain, and as feasible improve, water quality, • Control erosion and sedimentation deposit, and • Provide flood protection. g. Guidelines, after consultation with the appropriate state	Consistent. A Jurisdictional Delineation (JD) was prepared to identify jurisdictional waters, including wetlands on and adjacent to the project site. Section 4.3, Biological Resources, of the 2011 Certified EIR describes existing natural systems and habitat types on the project site that are consistent with the findings in the Biological Resources Report and the JD prepared for the proposed project. Section 4.3, Biological Resources, of the 2011 Certified EIR includes mitigation measures aimed at minimizing, and if at all possible avoiding, impacts to existing native habitats and species on the project site. Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR describes existing conditions related to the flooding potential on the project site. As discussed above under Policy NCR-CZ 5.1.A, Designation of Natural Hazard Areas, the majority of the project site lies within the boundary of FEMA Zone AE, where the 100-year flood event will result in inundation to elevations between 16 feet and 17 feet. The current project grading plan proposes to import slightly more than 1,000 cubic yards (net) of fill. This volume of fill will raise the elevations of developed portions of the project site above 15 feet, and will raise the elevation of the first floor of the restaurant building to 18 feet, which is more than 1 foot above the Base Flood Elevation. In addition, as discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, implementation of Measures 4.7.1 and 4.7.2 will incorporate BMPs to reduce pollutants of concern in storm water runoff during project construction and operation.

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and federal resource agencies, for the preservation and/or reestablishment of equivalent (size and biological value) areas of riparian and marsh vegetation (if appropriate) including implementation and maintenance. h. Identification of technical, planning, and design mechanisms for plan implementation and maintenance.	
Policy LUD-CZ 3.1.D – Considerations for Natural Habitat Areas - Watershed/Water Quality Design and manage proposed development (new development or redevelopment) to eliminate or minimize dry-weather flows to Roberts Lake, Laguna Grande, and Monterey Bay in order to protect and enhance the biological productivity and diversity of fresh, intertidal, and marine organisms. i. All proposed development shall prepare Storm Water Pollution Prevention Plan (SWPPP) that includes, construction, and maintenance of erosion control, and water quality BMPs to be implemented during construction to prevent any construction related runoff and/or sediment from discharging to coastal waters including Roberts Lake, Laguna Grande, and the Beach Subareas as applicable. ii. All proposed development shall include a post-construction drainage plan that identifies the appropriate types of BMPs to be used at the site, implementation and maintenance scheduling, monitoring requirements, and responsibilities. iii. All proposed development shall include, to the extent feasible and as applicable to the type of development proposed, Site Design and Planning, Pollution Prevention, Source Control, and Treatment Control strategies that: • Minimize impervious surface, reduce the volume of runoff, and maximize infiltration of runoff. • Incorporate Pollution Prevention and Source Control BMPs / techniques that eliminate or minimize sources of pollution generated on the site. • Incorporate Low Impact Development (LID) design techniques (also known as Integrated Management Practices (IMPs)) that minimize and disconnect impervious surfaces and are integrated into the landscape design and distributed throughout the site.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at ensuring the sustainability of biological productivity in the areas surrounding the project site. In addition, as required by Measure 4.7.1 outlined in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the proposed project will be required to prepare an ESCP as well as a SWPPP to minimize potentially significant impacts to water quality during construction. In addition, as required by Measure 4.7.2, the proposed project will be required to implement appropriate Source Control and Treatment BMPs to minimize impacts to water quality during project operation. Furthermore, on July 12, 2013, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032). The Post-Construction Requirements mandate that development projects use Low Impact Development (LID), which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. These Post Construction Requirements are referenced in Section 2.7.G.5 of the City's CIP. Therefore, the project is required to comply with the Post-Construction Requirements to implement LIDs and infiltrate storm water runoff on-site.

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• Incorporate Source Control and Treatment Control BMPs that capture and treat polluted runoff prior to entering the municipal storm drainage system or receiving waters. Treatment Control BMPs shall be consistent with Seaside Municipal Code Chapter 18.46, Urban Storm Water Quality Management and Discharge Control, the Monterey Regional Storm Water Management Plan (SWMP), the Central Coast Regional Water Quality Control Board post-construction requirements and the regional NPDES Permit requirements. • All development shall include in construction documents operational and maintenance provisions to ensure ongoing effectiveness of BMPs. • All development shall be conditioned to require ongoing maintenance that is necessary for effective operation of all required water quality structural and non-structural BMPs for the life of the project. • Consolidate and/or eliminate storm drain outfall where feasible. Emphasis shall be placed on eliminating / redirecting dry weather and storm water flows away from the Bay Street and former Fort Ord storm water outfalls.	
Policy LUD-CZ 3.2.A – Considerations for Visual Resources - Proposals for new development shall include a map and visual analysis prepared by a qualified professional identifying the development's visual impacts, including potential impacts on scenic views and viewsheds including, but not limited to, those identified on Figure 2-4. - Development shall be sited and designed to protect, and where feasible enhance, public views to Roberts Lake, Laguna Grande, Monterey Bay, and the Pacific Ocean, including from Highway 1, which may be accomplished by minimizing the alteration of the natural land forms and by designing development to be visually compatible with the character of the surrounding areas. • Where feasible, development shall restore and enhance visual quality in visually degraded areas. - Landscaping shall be sited and installed to screen parking and utility areas from public view (including views from the	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, as part of the visual analysis prepared for the proposed project, three key views consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP were identified and analyzed to see if the project would have an impact on key views. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect on a scenic vista. In addition, the proposed project will be consistent with Section 2.6, Site Development Standards, of the City's CIP. Additionally, the proposed project must be reviewed and approved by the BAR to ensure that the character of the project site is compatible with the surrounding area. The proposed project will include landscaping along all boundaries of the project site. Furthermore, on-site lighting will be designed to be directed downward, will

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water and other recreation areas), provided such landscaping itself also protects and does not degrade views. iv. Outdoor lighting and signs shall be designed to protect sensitive habitats, public recreation areas, public views, and night sky from intrusion, including by prohibiting signs with moving parts or flashing lights, minimizing glare, and shielding and directing lighting within the development areas.	include directional lumens, and will be located in those areas requiring nighttime lighting, thereby reducing impacts on nighttime views as required by Measure 4.1.1, Lighting Plan, in Section 4.1, Aesthetics, of the 2011 Certified EIR. No lighting as part of the proposed project will include moving or flashing parts.
Policy LUD-CZ 3.3.A – Considerations for Water Resources/Utilities i. Installation of new water utility infrastructure shall be provided in a manner which allows development at densities and locations consistent with the land use designations defined in Policy LUD-CZ 1.1.A and taking into account the natural resource protection policies of this plan. ii. Prior to the approval of any development within the coastal zone, adequate water capacity shall be demonstrated consistent with the provisions and requirements of the Monterey Peninsula Water Management District. iii. Capacity for additional water service shall be reserved according to the following ranking of priorities: (a) essential public services; (b) new and existing recreational or open space uses within the coastal zone; and (c) visitor-serving commercial uses. iv. Applications for development shall demonstrate an adequate, sustainable, public (i.e., publicly owned and/or managed) water supply to support the proposed development. Private water supplies are prohibited to serve existing and new development.	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project would have an adequate and sustainable supply of water.
Policy LUD-CZ 3.3.B – Considerations for Water Resources-Water Supply/Conservation i. All new development, changes of ownership, and changes or expansions of use within the Coastal Zone receiving a water permit on or after January 1, 2010 shall meet or exceed the following Water Efficiency Standards (Policy NCR-CZ 3.1.B): • Ultra-Low Flush Toilets shall be installed; • Urinals installed in residential uses shall be designed to flush with one (1) gallon of water. Urinals installed in non-residential uses shall be pint urinals or zero water	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include a variety of design features aimed at reducing water and energy usage. The water efficiency standards outlined under Policy LUD-CZ 3.3.B shall be included in the General Contractor's construction specifications. Therefore, the proposed project would meet or exceed the Water Efficiency Standards.

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consumption urinals and shall be clearly specified on the final construction drawings. Zero water consumption urinals shall be encouraged in settings where there is a regular maintenance staff; • Showerheads, Rain Bars, or Body Spray Nozzles shall be installed that were designed to emit a maximum of 2.0 gallons per minute of water. All shower fixtures should be equipped with scald protection valves rated for 2.0 gallons per minute showerheads. Installation of multiple Showerheads in one stall shall require timers for each Showerhead, Rain Bar, or Body Spray Nozzle. No timer shall operate with greater than a three (3) minute operating increment; • Residential lavatory sink faucets shall emit a maximum of 2.2 gallons of water per minute at 60 psi and residential kitchen sink faucets shall emit a maximum of 2.2 gallons of water per minute at 60 psi; 8. Public lavatory faucets shall emit a maximum of 0.5 gallon of water per minute at 60 psi and public lavatory sinks equipped with automatic shut off devices or sensor faucets shall operate with a maximum flow of 0.25 gallons per cycle; • High efficiency clothes washers shall be installed when a clothes washer is installed in a new structure; • High efficiency dishwashers or high efficiency commercial dishwashers shall be installed and maintained on the site when a dishwasher is installed in a new structure permitted by a Water Permit; • Instant-access hot water system(s) shall be installed for hot water access points to ensure that hot water is available within ten (10) seconds • All hot water pipes shall be insulated; • Sodium chloride (salt) water softeners shall be discouraged in New Construction. Alternate technologies such as potassium chloride shall be recommended. When a sodium chloride water softener is to be installed, the unit shall use demand-initiated regeneration which senses when the resin must be recharged, either electronically or with a meter that measures and	
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calculates usage. This requirement shall be specified on the Construction Drawings; • Water Efficient Pre-Rinse Spray Valves shall be utilized when a pre-rinse spray valve is installed; • There shall be no single-pass water use systems in ice machines, hydraulic equipment, refrigeration condensers, X-ray processing equipment, air compressors, vacuum pumps, etc. Air-cooled or better technology shall be installed; • Water cooled refrigeration equipment shall be prohibited when there is alternative cooling technology available; • Cooling Towers shall be equipped with conductivity controllers that are used to increase the number of cycles that can be achieved; • Boilerless steamers or connectionless steamers shall be installed in place of boiler-based steamers when a steamer is installed in new construction; • All landscape shall comply and identify on the landscape plan the following requirements: - o Group planting by hydrozones (water requirements). - o Irrigation systems shall include the installation, use and maintenance of Weather-Based Irrigation System Controllers (e.g. Smart Controllers). Weather-Based Irrigation System Controllers shall include functioning Soil Moisture Sensors and a Rain Sensor as components of the system. - o Drip Irrigation shall be utilized for watering all non-turf irrigated plantings. - o Rotating Sprinkler Nozzles shall be utilized for turf irrigation. - o Overhead spray irrigation shall not be used to water non-turf landscaping, including trees and shrubs. - o Irrigation systems shall operate with at least 70 percent efficiency. ii. Rainwater and graywater collection/irrigation systems are encouraged to supplement irrigation for new landscaping. New structures shall be encouraged to include one or more rainwater cisterns and a system to provide at least 75 percent of exterior irrigation during normal rainfall years.	
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Systems must be compliant with local catchment system standards, including Monterey County Department of Environmental Health. All sites utilizing a graywater reuse system shall install and maintain a backflow prevention device as required by the water distribution system operator that supplies water to the site.	
Policy LUD-CZ 3.4.A – Considerations for Water Quality/Wastewater i. Prior to the approval of any new development within the coastal zone, adequate sewage treatment facility capacity shall be demonstrated consistent with the provisions and requirements of the California Regional Water Quality Control Board. ii. Capacity for additional wastewater collection, conveyance and treatment shall be verified. iii. Alternatives for demonstrating additional wastewater treatment capacity for permitted development may be considered, including but not limited to, (a) construction of a package treatment plant at the Seaside treatment facility to handle all projected sewage for the City's LUP land use designations; or (b) the construction of a new sewer line to the Monterey treatment facility to handle the same sewage capacities.	Consistent. As discussed in Section 4.12, Utilities and Service Systems, of the 2011 Certified EIR, on November 10, 1992, an Agreement to Allow Connection to Sanitary Sewer Systems (Agreement) was entered into by the City of Monterey and the Seaside County Sanitation District (SCSD). Through this agreement, the City of Monterey will allow the SCSD to utilize the City of Monterey's sanitary sewer collection system for sewer services for the parcel of land (1350 Del Monte Boulevard) on which the proposed project will be developed. The proposed project is projected to experience average daily wastewater flows of approximately 3,850 gallons per day (gpd) and peak flows of approximately 5,775 gpd. The wastewater treatment needs of the proposed project, therefore, will not exceed the average and peak flow limits of 4,000 gpd and 8,000 gpd, respectively, set forth in the Agreement between the SCSD and the City of Monterey. Furthermore, the Monterey Regional Water Pollution Control Agency (MRWPCA) estimates that sufficient flow capacity will be available at the facility to meet all needs through the service area for the next 20 years. Therefore, the wastewater treatment needs of the proposed project will not exceed the permitted capacity of the MRWPCA facility.
Policy LUD-CZ 3.5.A – Considerations for Natural Hazards i. Applications for new development shall include an analysis of all potential hazards, site constraints, alternatives, and appropriate mitigation. The analysis shall also include a determination that the site is suitable for the proposed development and that it will be safe from hazards over the lifetime of the development without reliance on seawalls, deep piers, or similar engineering measures. ii. Proposed development shall be consistent with applicable goals and policies of the LCP. iii. All required geologic engineering reports shall be prepared by a qualified geotechnical engineer. Reports shall address site stability under static and pseudo-static conditions. iv. Geologic reports submitted to the City shall be in conformance with guidelines established for such reports by	Consistent. An analysis of all potential hazards, site constraints, alternatives, potential impacts, and corresponding mitigation measures were outlined in applicable topical sections of the 2011 Certified EIR for the proposed project. As discussed throughout this LCP-LUP Consistency Analysis, the proposed project will be consistent with applicable policies included in the City's LUP. As required by Standard Condition 4.5.2, a site-specific geotechnical report for the proposed project will be prepared by a qualified engineer. The project site is located within 5 meters of a tsunami evacuation zone (refer to Figure 2-7, Tsunami Evacuation Areas, in the City's Local Coastal Program LUP). As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the project site is located at an elevation about 10

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the California Division of Mines and Geology and the Uniform Building Code, including the following: • Geologic reports shall include information on the regional and local geologic setting, topography, significant landforms, soil types and thickness of soil or depth to bedrock, geologic hazards, soil/rock types, geologic structures, groundwater conditions, and other relevant properties, such as erosion potential and mineral economic resources. • The geologic report shall contain the following ten major sections: - o Summary - o Description of Project Alternatives - o Impacts - o Geology of the Project Area - o Geologic and Seismic Impacts - o Mitigation of Impacts - o Coordination with Other Agencies, Groups, or Consultants - o Conclusions and Recommendations - o Report Preparer's Qualifications - o References v. All development proposed within an area that is subject to ocean wave, tsunami, or flooding shall prepare an analysis of wave up-rush / shoreline erosion, and be adequately set back from the area of hazard to be safe for the life of the development or a 100-year period, whichever is greater, without reliance on seawalls, deep piers, or similar engineering measures. vi. Require all coastal development permit applications for all development on a beach or sand dune property subject to wave action to assess the potential for flooding or damage from waves, storm surge, or seiches, through a wave uprush and impact report prepared by a licensed civil engineer with expertise in coastal processes. The conditions that shall be considered in a wave uprush study are: a seasonally eroded beach combined with long-term (75 years) erosion; high tide conditions, combined with long-term (75 years) projects for sea level rise; storm waves from a 100-year storm event or a	to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the project site in the event of a tsunami. Mitigation measures are also outlined in this section of the 2011 Certified EIR in order to further ensure that impacts related to flooding and other events causing inundation on the project site will be less than significant. A sea level rise quantitative analysis was prepared to examine site development relative to projected 75-year and 100-year sea level rise scenarios. The sea level rise quantitative analysis incorporated wave up-rush and beach/shoreline erosion as part of the analysis.
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storm that compares to the 1982/83 El Niño event.	
Policy LUD-CZ 3.5.B – Considerations for Sea Level Rise i. Geotechnical reports prepared for proposed development shall include a comprehensive evaluation of potential sea level rise impacts. This evaluation shall include the following: • A Vulnerability Assessment that identifies and analyzes areas within the city that are most at risk to the impacts of sea level rise. The Vulnerability Assessment shall establish how far and how high coastal storms and ocean levels would inundate the city, including consideration of erosion, inland flooding, and sedimentation factors. • Identification of any site-dependent infrastructure that is at risk from sea level rise. • Identify and prioritize mitigation and adaptation measures that can be implemented as well as an analysis of the potential impacts of the adaptation measures. Mitigation and adaptation measures shall be scaled to the local and regional hydrologic events projected. These measures may include, but are not limited to, riparian habitat restoration, living shoreline projects, management of invasive species, regional sediment management, and innovative designs. • If the City's Local Hazard Mitigation Plan update (required by Policy NCR-CZ 5.2.C) has been prepared at the time the site-specific comprehensive evaluation of sea level rise impacts are being evaluated, then the evaluations shall be consistent with the intent of that plan update.	Consistent. As required by Standard Condition 4.5.2, a site-specific geotechnical report for the proposed project will be prepared by a qualified engineer. This report will be prepared in compliance with all State and City requirements.
Policy LUD-CZ 3.6.A – Considerations for Public Access and Recreation i. Development shall not interfere with the public's right of access to the shore and significant coastal recreation features. ii. New development shall plan for and provide public access to coastal features.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will provide increased connectivity to the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. Therefore, the proposed project will increase public access to coastal features.

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Policy LUD-CZ 3.7.A –Considerations for Cultural Resources i. Identify and protect archaeological resources within Seaside. ii. Require a Phase I Archaeological Study performed by a Registered Professional Archaeologist to determine whether significant archeological resources may be present when excavation activities are proposed. iii. Mitigations are to be required as a condition of development where it would adversely impact any archaeological or paleontological resources, including, but not limited to, those qualified individuals as identified by the State Historic Preservation Officer.	Consistent. As part of the 2011 Certified EIR, a Cultural Resources Report was prepared outlining the proposed project's impacts to cultural resources. As discussed in Section 4.4, Cultural and Paleontological Resources, of the 2011 Certified EIR, no significant archaeological resources were identified. Nevertheless, Mitigation Measure 4.4.1, Historic and Archaeological Resources, has been included to address unknown archaeological resources that may be encountered during construction activities.
Policy LUD-CZ 3.8.A – Considerations for Transportation and Circulation i. Development shall be approved only where adequate circulation and parking have been provided. ii. Retain the former Southern Pacific Railroad right-of-way as a transportation corridor. Prohibit development that would interfere with future uses of the corridor identified in Policy LUD-CZ 1.1.A. iii. Encourage non-motorized and other alternative forms of transportation in all new development. iv. Maintenance of the existing highway, landscaping, and drainage facilities within the Highway 1 corridor may be permitted with a coastal development permit. Activities that involve an expansion of capacity or widening or realigning of the highway pavement or route shall require an amendment to the LCP.	Consistent. Parking has been provided consistent with all the LCP requirements. A Traffic Impact Analysis was prepared (November 2014) and concluded that both on-site and off-site circulation was sufficient. In addition, non-motorized and other alternative forms of transportation will be encouraged through the maintenance of the existing pedestrian and bicycle trail around Laguna Grande Lake and the provision of the extension of the existing pedestrian and bicycle trail over the foot bridge to the north to connect to the existing sidewalk along Del Monte Boulevard.
Proposed Implementation Actions	
Support efforts to prepare the <i>Canyon del Rey Watershed Master Drainage Plan Update</i> (Policy NCR-CZ 1.5.B)	Not Applicable.
Implement erosion control and sedimentation mitigation measures (Policy NCR-CZ 1.5.C.i)	Consistent. The proposed project will be required to prepare an ESCP and a SWPPP as required by Measure 4.7.1 in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR. Both plans will include components for erosion control and prescribe treatment measures to trap sediment once it has been mobilized at a scale and density appropriate to the size and slope of the catchment basin. For the project site, these measures might include inlet protection, straw bale barriers, straw mulching, straw wattles, and silt fencing. Therefore, mitigation measures have been identified in the

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	2011 Certified EIR to reduce the potential for erosion, thereby reducing sediment levels in storm water runoff.
Implement, monitor, comply and update (as needed) the <i>Monterey Regional Storm Water Management Plan</i> (SWMP) as a participating entity (Policy NCR-CZ 1.5.C.ii).	Not Applicable.
Implement, monitor, and comply with the Regional Water Quality Control Board's Post-Construction stormwater requirements for new and redevelopment for the Central Coast Region; and update appropriate policies, programs and documents, including Municipal Code Chapter 18.46, as needed.	Consistent. As discussed in Section 4.7, Hydrology and Water Quality, the proposed project would have a significant water quality impact if direct releases of pollutants or storm water discharges to Laguna Grande Lake during construction exceeded narrative or numerical water quality standards established by the Central Coast Regional Board, or violated the conditions set forth in the City Municipal Code. Implementation of Measures 4.7.1 and 4.7.2 will reduce potential short-term, construction-phase impacts and long-term operational impacts to water quality to below the level of significance. Additionally, as required by the Resolution No. R3-2013-0032, the proposed project will be required to comply with the Low Impact Development Standards (LID) and infiltrate storm water on-site.
Update the <i>Wetland Management/Enhancement and Restoration Program</i> (1983) based on the Canyon del Rey Watershed Master Drainage Plan Update (Policy NCR-CZ 1.5.D.i).	Not Applicable.
Implement and promote management/enhancement and restoration measures that meet the objectives of the current of <i>Wetland Management/Enhancement and Restoration Program</i> (Policy NCR-CZ 1.5.D.ii).	Not Applicable.
Explore and implement humane methods of controlling goose population (Policy NCR-CZ 1.6.A)	Not Applicable.
Participate in local and regional efforts to secure a safe and adequate/sustainable supply of water (Policy NCR-CZ 3.1.A.i).	Not Applicable.
Require new development, changes of ownership, and changes or expansions of use to meet or exceed Monterey Peninsula Water Management District's water efficiency standards (Policy NCR-CZ 3.1.B.i).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will install water-efficient fixtures and appliances, native drought-tolerant plants, and water-efficient irrigation systems and devices, and will include restricted watering methods (i.e., prohibiting systems that apply water). These water efficiency standards will be included in the General Contractor's construction specifications. Therefore, the proposed project will meet the Monterey Peninsula Water Management District's water efficiency standards.
Monitor water use within the City (Policy NCR-CZ 3.1.C).	Not Applicable.
Support regional efforts to develop an alternative water supply (Policy NCR-CZ 3.2.A).	Not Applicable.

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Actively pursue methods of improving water quality of lakes, streams, and other waterways throughout the coastal zone (Policy NCR-CZ 4.1.A.i).	Not Applicable.
Collaborate with local jurisdictions and identify properties and stakeholders most likely affected by rising sea levels (Policy NCR-CZ 5.2.A).	Not Applicable.
Organize educational workshops to inform public of the concerns and potential impacts of sea level rise (Policy NCR-CZ 5.2.B.ii).	Not Applicable.
Update Local Hazard Mitigation Plan to address potential impacts of sea level rise (Policy NCR-CZ 5.2.C).	Not Applicable.
Develop and implement a coastal access/directional sign program (Policy PAR-CZ 1.1.C.i).	Not Applicable.
Maximize opportunities for environmental education within the coastal zone (Policy PAR-CZ 1.1.C.ii).	Not Applicable.
Explore development of a Visitors Center (Policy PAR-CZ 1.1.C.iii).	Not Applicable.
Provide free unrestricted parking at all public access and public parking areas (Policy PAR-CZ 1.2.A.i).	Consistent. As discussed above under Policy PAR-CZ 2.1.A, Designation of Parking for Public Access and Recreational Opportunities, the project site is designated as a shared off-street parking area (refer to Figure 2-9, Public Parking Area, of the City's Local Coastal Program LUP). Although the proposed project will develop this property with a restaurant use, thereby eliminating this property as an off-street public parking area, the proposed project will provide sufficient parking to serve visitors to the project site and surrounding areas. In addition, there are two public parking lots located on the north side of Laguna Grande Park that be accessed from Canyon Del Rey Boulevard that would remain available for public use. The project site is accessible from these public parking lots by an existing pedestrian pathway that circles around Laguna Grande Park.
Explore expanding public access parking at the existing Embassy Suites Hotel parking lot (Policy PAR-CZ 1.2.A.ii).	Not Applicable.
Establish and maintain a system of trails that provides future connectivity to various California Coastal Trail and recreational alignments (Policy PAR-CZ 1.3.A).	Not Applicable.
Participate in the regional planning efforts to restore light rail service along the Monterey Peninsula and through Seaside.	Not Applicable.

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Laguna Grande Subarea	
Natural Coastal Resources	
Natural Habitat Areas	
Policy NCR-LG 1.1.A – Vegetation Management The City of Seaside shall work cooperatively with the City of Monterey, State Parks, and Regional Parks to stabilize area adjacent to Laguna Grande utilizing methods identified in the Vegetation Management Plan for the Seaside Coastal Zone (identified in Policy NCR-CZ 1.5.D.i), or if the plan is not complete, utilizing best available methods such as exotic and invasive plant removal, and planting and maintaining native vegetation.	Not Applicable.
Visual Resources	
Policy NCR-LG 2.1.A – Protection of Visual Resources Development within the Laguna Grande Subarea shall limit building height and bulk in order to minimize adverse impact on public views of the lake and park. Maintain a 50 foot buffer around Laguna Grande Lake and the channel connecting Laguna Grande Lake and Roberts Lake as shown in Figure 2-4 .	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key views (i.e., from southbound SR-1 north of Roberts Lake, from Laguna Grande Regional Park on the south shore of Laguna Grande Lake, and from the residential area 1.5 miles east of the project site), consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect on public views in the area. According to the City's CIP, developments are required to be set back a minimum of 50 feet from Laguna Grande Lake (a designated marine resource area). However, smaller setbacks may be allowed if public recreational trails are provided within the buffer zone. The proposed project will construct the trail extension within the 50-foot buffer zone; however, the restaurant facility will be set back a minimum of 50 feet from Laguna Grande Lake.
Policy NCR-LG 2.1.B – Management of Visual Resources i. Coordinate with the Regional Park District to provide viewshed improvements to areas identified on Figure 2-4 as a component of Coastal Visitor-Serving Commercial land use development and park improvements proposed for Laguna Grande. ii. The City shall develop Gateway Guidelines for the Fremont Corridor adjacent to Laguna Grande Park.	Not Applicable.

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Water Resources	
Policy NCR-LG 3.1.A – Protection of Potable Water Supply The City shall protect potable water supply within the Laguna Grande Subarea by utilizing methods identified in Policy NCR-CZ 3.1.B , as well as by using non-potable water supplies (e.g., from Laguna Grande) for non-potable uses such as park landscaping or as recharge if such use would not have a significant adverse effect on the lake or associated habitat.	Not Applicable.
Water Quality	
Policy NCR-LG 4.1.A – Management of Water Quality Improve the water quality of Laguna Grande, thus improving the recreational opportunities and preserving and enhancing the habitat value of Laguna Grande by carrying out the recommendations of the updated <i>Wetland Management/Enhancement and Restoration Program</i> (identified as Policy NCR-CZ 1.5.D.i), enforcing the Urban Storm Water Quality Management and Discharge Ordinance (Policy NCR-CA 1.5.C.i; Chapter 18.46), continued implementation of the <i>Monterey Regional Storm Water Management Plan</i> (Policy NCR-CZ 1.5.C.ii), and following the recommendations from the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i> (Policy NCR-CZ 1.5.B).	Not Applicable.
Policy NCR-LG 4.2.A – Water Quality Enhancement Investigate opportunities for habitat enhancement, impervious site coverage reduction, and restoration of previously disturbed areas.	Not Applicable.
Natural Hazards	
Policy NCR-LG 5.1.A – Management of Sea Level Rise Hazards The City shall protect and maintain the functionality of Laguna Grande and the adjacent park lands from impacts associated with sea level rise.	Not Applicable.
Policy NCR-LG 5.2.A – Management of Flooding Hazards i. In order to maintain stormwater flows and prevent flooding that could otherwise result in hazardous conditions and property damage, the City shall maintain the outfall at Laguna Grande under Fremont Street. A coastal development permit shall be required for maintenance activities including periodic cleaning and removal of sand	Not Applicable.

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and debris to facilitate stormwater flows. ii. The City shall accommodate for flooding impacts by increasing buffer areas around Laguna Grande and investigating opportunities for increasing lake capacity via sediment and fill removal.	
Public Access & Recreation	
Policy PAR-LG 1.1.A – Protection of Public Access and Recreational Opportunities The City shall maintain, and enhance, pedestrian and bicycle connectivity within the Laguna Grande Subarea, and to Roberts Lake, and the beach to maximize public access and recreation opportunities to these coastal resources.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will connect to the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will increase public access to coastal features.
Policy PAR-LG 1.1.B – Management of Public Access and Recreational Opportunities i. The City shall develop interpretive signage along access trails around Laguna Grande as part of ongoing park improvements and maintenance efforts. ii. The City shall maintain the portion of Laguna Grande Park and facilities that are within the city, including restrooms, for the recreation purposes of its citizens and visitors. iii. The City shall maintain and seek to enhance the developed pedestrian walkway/bikeway, including potential additions to it. The walkway/bikeway shall be maintained at a minimum width of 10 feet and so as to have a minimum impact on the wetland.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect the proposed project to the greater Laguna Grande Regional Park Trail. The trail width will be maintained at a minimum width of 10 feet. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean.
Policy PAR-LG 1.1.C – Provisions for Public Access and Recreational Opportunities i. Develop pedestrian access along lands adjoining Laguna Grande. Where passing through or near the wildlife habitat area in Laguna Grande, this access is to be designed so as to protect wetland areas (e.g., a required setback from the inland extent of emergent wetland vegetation, overpass, etc.). ii. New development shall be required to provide public access easements and access improvements, consistent with habitat protection, from public rights-of-way to the access	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect the proposed project to the greater Laguna Grande Regional Park Trail. The trail will be designed to protect the wetland areas by adhering to the required setback from Laguna Grande Lake.

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trail. iii. Upon the significant improvement in water quality of Laguna Grande (consistent with objectives presented in Policy NCR-LG 4.1.A), the City shall coordinate with the Monterey Peninsula Regional Park District to explore additional recreational water uses within Laguna Grande such as a fishing/fly-casting pier or paddle boat concession. iv. The City shall coordinate with the Monterey Peninsula Regional Park District to provide additional active and passive recreational opportunities in and around Laguna Grande (such as a fishing pier, par course, disk golf or similar). v. The City shall coordinate with the Monterey Peninsula Regional Park District for provision of additional programs and/or facilities for use by senior citizens and community groups (such as community garden, outdoor class area, horseshoe pit, bocce ball area, wildlife viewing station).	
Land Use & Development	
Land Use Designations & Definitions	
Policy LUD-LG 1.1.A – Land Use Designations Within the Laguna Grande Subarea The land use designation establishes the type, density, and intensity of land uses allowed. The Development Standards and Design Guidelines provided in the Coastal Implementation Plan portion of the LCP provide further guidance regarding the density and intensity of development allowed within each land use designation. Land within the Laguna Grande Subarea is designated as Coastal Parks and Open Space (CPOS) and Coastal Visitor-Serving Commercial (CVSC), which are defined as follows: • Coastal Parks and Open Space (CPOS): This designation is appropriate in areas where the City wants to protect and preserve natural resources and habitat, views, and other visual amenities and protect people and property from natural and man-made hazards. This designation also identifies existing or planned parkland. Public use areas include the sandy beach, access ways, parks, trails, walkways, and other recreational amenities that are publicly	Consistent. As discussed above under Policy LUD-CZ 1.1.A, Land Use Designations within the Coastal Zone, the northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). The proposed project will include the development of a restaurant facility, consistent with conditionally permitted uses in the CVSC land use designation as outlined in the City's Local Coastal Program LUP and CIP. Furthermore, the proposed project will develop the property at a FAR of 0.04, which will be well below the maximum FAR of 1.0:1 permitted by the City's CIP.

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owned or over which easements are required as a condition of development (IV.A.3.e). The maximum floor area ratio (FAR) within this designation is 0.01:1. • Coastal Visitor-Serving Commercial (CVSC): Principal permitted visitor-serving commercial uses include hotels/motels, food service, retail establishments, visitor/traveler support services (such as visitor information centers), and recreational-related commercial uses. The maximum floor area ratio (FAR) is 1.0:1, except that hotels are allowed a maximum FAR of 1.5:1.	
Development & Land Use Requirements	
Policy LUD-LG 2.1.A – Designation of Land Uses Within the Laguna Grande Subarea Land use designations in the Laguna Grande Subarea are shown earlier in Figure 2-10a of this plan. Gen	Consistent. As discussed above under Policy LUD-CZ 1.1.A, Land Use Designations within the Coastal Zone, the northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). The proposed project will include the development of a restaurant facility consistent with conditionally permitted uses in the CVSC land use designation as outlined in the City's CIP.
Policy LUD-LG 3.1.A – Considerations for Visual Resources • Permitted development shall be sited and designed to protect public views to Laguna Grande and be compatible with the regional park. Consideration of public views of the lake and park must be carefully considered as a component of the visual analysis required by Policy LUD-CZ 3.2.A. • To protect views of Laguna Grande, proposed development should avoid placing structures in close proximity to the channel. Preferred development within 50-feet of the channel would consist of low-profile, and non-structural development including parking lots and recreational amenities (such as formalized viewing areas, off-street parking, and improved bike paths and trailways).	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key views consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect to public views of Laguna Grande Lake. Furthermore, the proposed project will not be developed within such close proximity to the Channel that it will subsequently result in obstruction of public views of the Laguna Grande Lake.
Policy LUD-LG 3.2.A – Considerations for Public Access • All relevant access improvements outlined in the Public Access section of this chapter are to be carried out as a condition of development. • Proposed development in the Laguna Grande Subarea shall be required to provide public access easements and access improvements, consistent with habitat protection, to the access trail from the public right-of-way to the access trail.	Consistent. The proposed project will be consistent with all relevant public access and recreation policies outlined in the City's Local Coastal Program LUP. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect to the greater Laguna Grande Regional Park Trail. The trail is 10 feet wide, will be designed to protect the wetland areas by adhering to the required setback from Laguna Grande Lake, and will include signage to require people to

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- Proposed development will maintain and seek to enhance the developed pedestrian walkway/bikeway, including potential additions to it, as applicable. The walkway/bikeway shall be maintained at a minimum width of 10 feet and so as to have a minimum impact on the wetland. - Proposed development within the Laguna Grande Subarea will be required to provide additional/enhanced public access through means such as directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard.	stay on the designated trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will add to the City's and region's existing pedestrian and bicycle trail system.
Proposed Implementation Actions	
Stabilize the areas adjacent to Laguna Grande utilizing methods identified in the Vegetation Management Plan for the Seaside Coastal Zone or, if the plan is not complete, utilizing best available methods (Policy NCR-LG 1.1.A).	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to adhere to a variety of mitigation measures that will minimize project-related impacts to on-site and surrounding sensitive species and habitats. Implementation of these mitigation measures will further ensure the long-term stabilization of those habitats surrounding the Laguna Grande Lake area.
Coordinate with the Regional Park District to provide viewshed improvements as a component of park improvements proposed for Laguna Grande (Policy NCR-LG 3.1.A).	Not Applicable.
Develop Gateway Guidelines for the Fremont Corridor (Policy NCR-LG 2.1.B.ii). Improve water quality of Laguna Grande through implementation of the current water quality policies and programs, and the current Wetland Management / Enhancement and Restoration Program (Policy NCR-LG 4.1.A).	Not Applicable.
Improve water quality and the recreational experience of southern Monterey Bay area beaches, including by properly maintaining the outfall at Laguna Grande under Fremont Street and by pursuing opportunities to consolidate and/or eliminate reliance on storm water outfalls which convey storm water directly to the beach. Such storm water shall be filtered and treated prior to discharge (Policy NCR-LG 5.2.A).	Not Applicable.
Maintain, and where necessary improve, pedestrian and bicycle connectivity within the Laguna Grande Subarea (Policy PAR-LG 1.1.A).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian/ and bicycle trail to connect with the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides

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	direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will increase connectivity within the Laguna Grande Subarea.
Develop interpretive signage along access trails around Laguna Grande (Policy PAR-LG 1.1.B.i).	Not Applicable.
Maintain the portion of Laguna Grande Park and facilities that are within the city (Policy PAR-LG 1.1.B.ii).	Not Applicable.
Maintain the developed pedestrian walkway/bikeway (Policy PAR-LG 1.1.B.iii). Expand recreational water uses within Laguna Grande (Policy PAR-LG 1.1.C.iii).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail to connect with the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will enhance recreational access to the coastal area. The Applicant will be responsible for ensuring the trail extension is maintained.
Coordinate with the Monterey Peninsula Regional Park District to provide additional active recreational opportunities around Laguna Grande (Policy PAR-LG 1.1.C.iv).	Not Applicable.
The City shall coordinate with the Monterey Peninsula Regional Park District for provision of additional programs and/or facilities for the use by senior citizens and community groups (Policy PAR-LG 1.1.C.v).	Not Applicable.

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Coastal Implementation Plan – Consistency Determination

Coastal Implementation Plan	
Chapter 2 Coastal Zone Districts, Uses, Regulations and Requirements	
2.3 Establishment and Designation of Coastal Zoning Districts	The portion of the project area that is within the Coastal Zone is designated Coastal Visitor-Serving Commercial (CVSC), as identified in Figure 1a (Coastal Zoning Map) in the City of Seaside's (City) Coastal Implementation Plan (CIP). As stated in Table 1 (Coastal Zoning Districts) in the City's CIP, the purpose of the CVSC land designation is to establish areas to service the needs of visitors to the City and the surrounding area.
2.4 Development Requiring Coastal Development Permit	All development in the Coastal Zone requires either a Coastal Development Permit (CDP) or a Coastal Administrative Permit (CAP). Development, as defined by the City's General Plan, includes "...the construction... of any structure ...or land disturbance." Therefore, the proposed project is considered a development per the City's General Plan. Projects with certain characteristics may not be approved via a CAP and would require a CDP. The proposed project will require a CDP because it is: (1) a development that is deemed to have the potential to cause a significant environmental impact pursuant to the California Environmental Quality Act (CEQA); (2) a development within a visual resource area as identified on Figure 2-4 (Views and Viewsheds to Visual Resources); and (3) a development within 100 feet of mapped or field-identified wetlands or Environmentally Sensitive Habitat Areas (ESHA).
2.5 Allowed Land Uses and Permit Requirements for Coastal Zoning Districts	Consistent. The land use "restaurant, café-fast food" is conditionally permitted in areas zoned CVSC (refer to Table 2 of the City's CIP). Therefore, the proposed project is consistent with the allowable uses in the Coastal Zone subject to the issuance of a CDP.
2.6 Site Development Standards	Consistent. Table 3 (Site Development Standards) in the City's CIP establishes the development standards for property in the Coastal Zone. In specific subareas, additional standards apply. The project area is within the Laguna Grande Subarea (Section 2.7[I.2]), which has specific standards for visual resources, public access and recreation, and dune management in addition to the Site Development Standards provided in Table 3. The following Special Site Development Standards for the Laguna Grande Subarea apply to the proposed project: a. Consistent. Height: Development within 100 feet of Laguna Grande Lake will be limited to one-story and not exceed a maximum height of 20 feet, except for design/architectural features, which can be up to 30 feet in height. The maximum height of the proposed project will be 19 feet 10 inches to the top of the parapet and 28 feet to the top of the corner tower (which is considered a design/architectural feature). b. Consistent. Views: Development will not be placed within close proximity to the channel between Roberts Lake and Laguna Grande Lake (Channel) except for such improvements as parking lots and recreational amenities. The buildings that are part of the proposed project will be set back approximately 63 feet from the Channel.

City of Seaside
Coastal Implementation Plan – Consistency Determination

	c. Consistent. <i>Public Access:</i> All public paths will be designed at a minimum width of 10 feet. The public path included as part of the proposed project has a minimum width of 10 feet. d. Consistent. <i>Public Access:</i> All walkways/bikeways will be maintained at a minimum width of 10 feet. The extension of the pedestrian and bicycle trail included as part of the proposed project will have a minimum width of 10 feet. e. Consistent. <i>Public Access:</i> Public access will be expanded and/or enhanced through directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard. The existing pedestrian and bicycle trail that ends at the wood bridge across the canal will be extended to Del Monte Boulevard as part of the proposed project. f. Consistent. <i>Views:</i> Development between 100 feet and 500 feet of Laguna Grande, including the Channel area, will be limited to a maximum of five stories and 60 feet in height, and will be oriented parallel to the Channel. In addition, upper floors will be set back from lower floors, and building facades will include articulation. The maximum height of the proposed project will be 19 feet 10 inches at the top of the parapet and 28 feet at the top of the corner tower. Additionally, the building facades will include articulation that would blend into the surroundings. The following Site Development Standards (Table 3) apply to the proposed project: • Consistent. <i>Maximum Building Site Coverage:</i> The maximum building site coverage is 90%. The total site area covered by the proposed building will be approximately 42%. • Consistent. <i>Minimum Lot Area:</i> The minimum lot area is 1 acre. The project site will be approximately 2.28 acres. • Not Applicable. <i>Minimum Lot Width:</i> The project site is a legal lot of record and these standards do not apply. • Not Applicable. <i>Minimum Lot Depth:</i> The project site is a legal lot of record and these standards do not apply. • Consistent. <i>Floor Area Ratio (FAR):</i> The FAR standard is 1.0:1. The proposed project's FAR is 0.04.
2.6A. Parking Requirements	Consistent. As indicated in Table 4 (Parking Requirements by Land Use), the restaurant land use type is required to have 1 space for every 3 seats. The proposed project will include development of indoor and outdoor patio dining totaling 159 seats. The proposed project will include 53 parking spaces, which equals 1 space for every 3 seats.
2.6A(2)(e) Recreational Vehicle (RV) Parking Spaces	Consistent. RV parking spaces are to be provided at a minimum ratio of 1 RV space for each 40 off-street vehicle parking spaces. The proposed project will include 53 parking spaces and 1 RV parking space.

City of Seaside
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2.6A(3)(a) Disabled Parking Requirements	Consistent. In accordance with the Americans with Disabilities Act (ADA) standards, 1 disabled parking space is required to be provided for every 25 parking spaces and any fraction thereof for non-residential developments. The parking spaces required for the disabled would count toward the minimum number of off-street parking spaces as discussed in Section 2.6A, Parking Requirements. The disabled parking spaces will have a minimum width of 14 feet. In addition, the disabled parking spaces will be located so that: (1) there is easy access from the closest parking area to the major entrances; (2) the disabled individual would not have to wheel or walk behind parked cars other than his or her own; and (3) a pedestrian way accessible to physically disabled persons will be provided from each parking space to the related facilities, including curb cuts and/or ramps. The proposed project will include 53 parking spaces, and 3 of these spaces will be designated as disabled parking spaces. The disabled parking spaces will have a minimum width of 14 feet, will be located adjacent to the northern and western entrances of the restaurant facility, and will comply with all of the above requirements.
2.6A(3)(b) Bicycle Parking Requirements	Consistent. Nonresidential developments are required to provide bicycle parking that equals a minimum of 5% of the required vehicle parking spaces. The proposed project will include 53 parking spaces requiring the project to include at least 3 bicycle parking spaces. The proposed project will also include 3 bicycle parking facilities which can typically accommodate two bicycles. The provision of 3 bicycle parking facilities, (parking for 6 bicycles) is more than 5% of the total required bicycle parking spaces.
2.6A(3)(c) Motorcycle Parking Requirements	Consistent. A parking lot with 50 or more vehicle parking spaces is required to provide motorcycle parking spaces near the main entrance of the structures. A minimum of 1 motorcycle parking space is required for each 50 vehicle spaces or fraction thereof. The proposed project will include 2 motorcycle parking stalls near the northern entrance of the restaurant.
2.6A(3)(d) Public Access Parking	Consistent. The project will include five parking stalls at the southeast corner of the project site that will serve as public parking for lake visitors, in addition to parking for the restaurant.
2.6A(4)(h) Water Quality Requirement	Consistent. The project will incorporate post-construction Best Management Practices (BMPs) and water quality measures, including Low Impact Development (LID) techniques established by the RWQCB to minimize impacts from storm water runoff and dry weather flows.
2.6B Landscaping Requirements	
2.6B(1) General Landscaping Requirements	Consistent. The project site will be landscaped on all four sides of the parcel with a variety of drought-tolerant plant species. In addition, where feasible and practical, landscaping will be designed to address post-construction water quality site design and Low Impact Design (LID) requirements.

City of Seaside
Coastal Implementation Plan – Consistency Determination

2.6B(2) Landscaping of Parking Lots	Consistent. Landscaping is required within each outdoor parking area at a minimum ratio of ten percent of the gross area of the parking lot for commercial uses. The project will include 35% of landscaping around the immediate area of the parking lot and will provide at least one shade tree for every five parking spaces. Landscaping will be a combination of groundcover, shrubs, and trees and will be concentrated along the perimeter of the project site, including at the primary entrances to help screen the restaurant from the street and adjoining properties. Shade trees will be provided at the minimum required rate of one for every twenty-five linear feet of landscaped areas and the proposed landscaping will also be properly oriented to provide pedestrian access to the restaurant without requiring them to cross unpaved landscaped areas.
2.6C Lighting Requirements	
2.6C(1)(a) Lighting General Requirements- Maximum Height	Consistent. The lights installed as part of the proposed project will not exceed the height of 14 feet or the height of the nearest structure.
2.6C(1)(b) Energy-Efficiency	Consistent. The outdoor lighting included as part of the proposed project will be consistent with Title 24, Building Energy Efficiency Standards. In addition, the outdoor lighting plan will be reviewed and approved by the City's Board of Architectural Review (BAR), which will ensure that energy-efficient lighting technology is used.
2.6C(1)(c) Position of Light Fixtures	Consistent. All lighting fixtures included as part of the proposed project will be consistent with Section 2.6C, Lighting Requirements of the City's CIP. In addition, all lighting fixtures will be reviewed and approved by the City's BAR. The City will ensure that the light fixtures are directed downward to prevent light spill and glare onto adjacent properties, will ensure that the light source is not visible off site, and will confine glare and reflections within the boundaries of the project site to the maximum extent feasible.
2.6C(1)(d) Maximum Illumination	Consistent. The lighting plan included as part of the proposed project will be consistent with Section 2.6C, Lighting Requirements, of the City's CIP. In addition, the lighting plan will be reviewed and approved by the City's BAR in order to ensure that the maximum illumination is not exceeded.
2.6D Sign Requirements	Consistent. The signs included as part of the proposed project will be consistent with Section 2.6D, Sign Requirements, of the City's CIP. In addition, the City's BAR will review and approve the signage plans as part of the application for the proposed project. The proposed project will include the construction of red and yellow external illuminated wall signs on the west and south side of the building. In addition, the proposed restaurant will include six internally illuminated signs, four of which would be mounted on the building walls.
2.7 Special Development Standards	
2.7B Environmentally Sensitive Habitat Area (ESHA)	
2.7B(1) Biological Report Requirements	Consistent. A Biological Resources Report was prepared for the 2011 Certified Environmental Impact Report (EIR). As part of the Biological Resources Report, six site-specific field surveys were conducted in an effort to determine existing plant and animal

City of Seaside
Coastal Implementation Plan – Consistency Determination

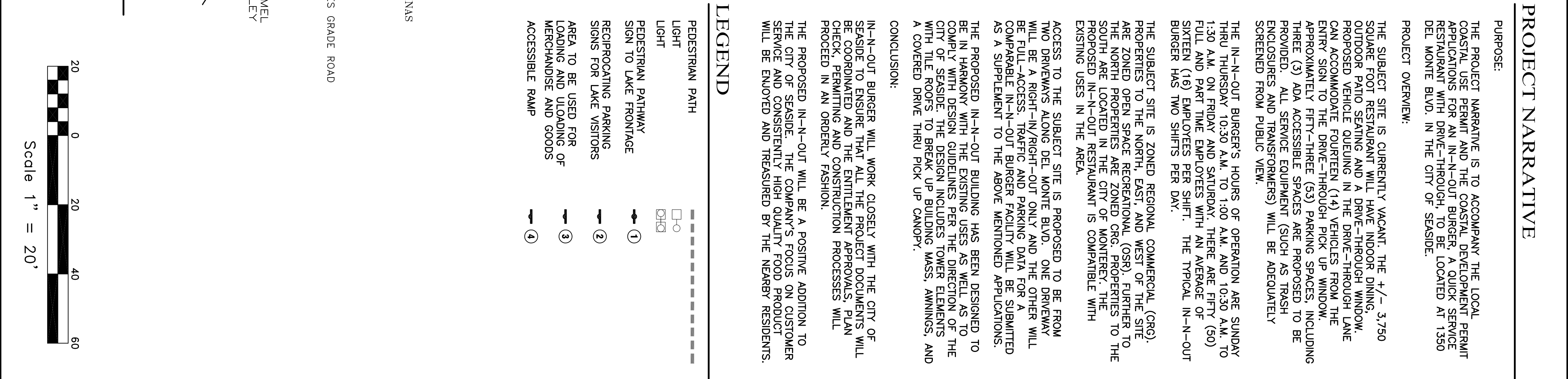
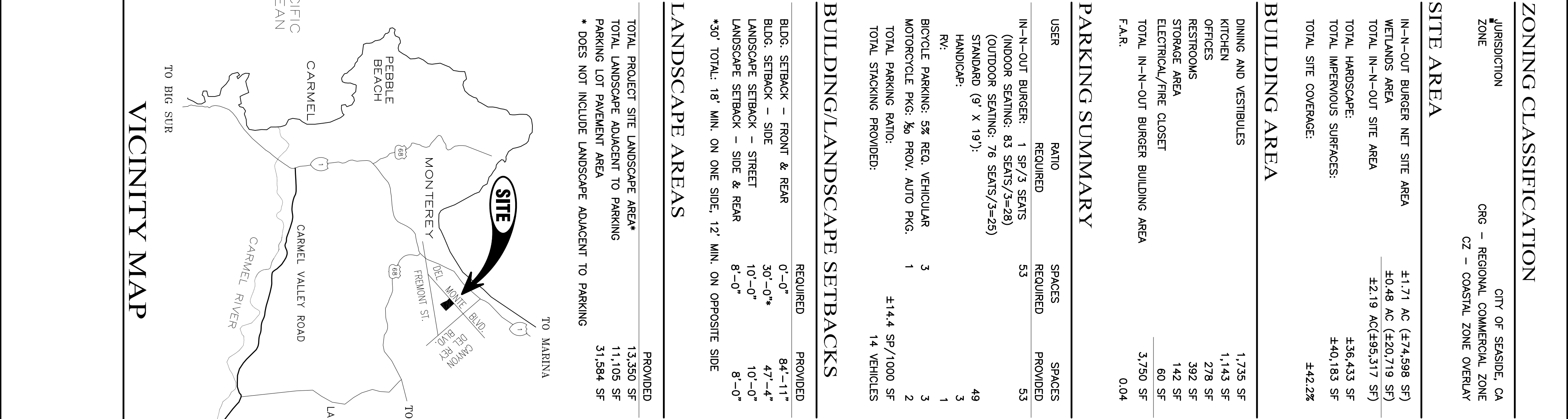
	species present on and adjacent to the project site. In addition, the Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7B(2) Development Within or Adjacent to an ESHA	Consistent. A small portion of the southern boundary of the project area is adjacent to a riparian ESHA (refer to Figure 2-2 in the City's Land Use Plan [LUP]). The proposed project has been designed to avoid impacts to the riparian area. Furthermore, the structures associated with the proposed project will be set back greater than 50 feet from the riparian area.
2.7C Marine Resource Area	
2.7C(1) Designation of Marine Resource Area	The project area is adjacent to Laguna Grande Lake, which is identified in the City's LUP as a marine resource area.
2.7C(2) Biological Study	Consistent. A qualified biologist prepared a Biological Resources Report for the 2011 Certified EIR. The Biological Resources Report included the criteria set forth above in 2.7B(1). None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7C(3) Buffer	Consistent. The proposed project is adjacent to Laguna Grande Lake. Development of the proposed project will be set back at a minimum of 50 feet from Laguna Grande Lake in order to ensure the biological integrity of the wetland and estuarine habitat. The 50-foot buffer can be reduced to 25-feet if public recreational facilities are provided. Consistent with Section 2.7C(3), the bicycle and pedestrian trail will be provided within that minimum 50-foot buffer zone between the edge of Laguna Grande Lake and the project site.
2.7C(4) Wetland Management and Enhancement Study for Development Within or Adjacent to a Marine Resource	Consistent. A Jurisdictional Delineation (JD) and Water Quality Assessment Report (WQAR) were prepared as part of the 2011 Certified EIR. These reports identified the current flooding potential and water quality in the project area, best management practices (BMPs), and jurisdictional features. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7C(4) Diking, Filling, Dredging of Marine Resource Areas	Not Applicable.
2.7D Visually Sensitive Areas	
2.7D(1) Identification of Visual Resources	Consistent. The project area is located within a visually sensitive area (refer to Figure 2-4 in the City's LUP). The proposed project will be one-story in height and will provide view corridors on the north and south sides of the project site providing views of the dunes surrounding Roberts Lake.
2.7D(2) Consideration of Visual Resources	Consistent. The project area is located within a visually sensitive area. The 2011 Certified EIR found and concluded that the proposed project did not result in any significant impacts to visual resources.
2.7E Natural Hazard Areas	

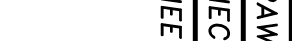
City of Seaside
Coastal Implementation Plan – Consistency Determination

2.7E(1) Designation of Natural Hazard Areas	The project site is located within an existing 100-year floodplain, is within 2,400 meters (m) of a moderate fire threat and directly west of the Chupines Fault, and is within 0 to 5 m of a tsunami evacuation zone (refer to Figure 2-5, Flood Hazard Areas; Figure 2-6, Faults and Wildland Fire Threat Categories; and Figure 2-7, Tsunami Evacuation Areas in the City's LUP, respectively).
2.7E(2) Protection from Natural Hazards	Consistent. The 2011 Certified EIR found and concluded that the proposed project would not result in any significant impacts from natural hazards with implementation of prescribed Mitigation Measures. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7F Vegetation Management Report	Consistent. A Biological Resources Report was prepared as part of the 2011 Certified EIR. The Biological Resource Report included six site-specific field surveys to determine existing plant species and habitat types present on and adjacent to the project site. In addition, the Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7G Water Quality	Consistent. The proposed project will comply with the City's Phase II National Pollutant Discharge Elimination System (NPDES) permit requirements and with the Post-Construction Requirements of Resolution No. R3-2013-0032 of the California Regional Water Quality Control Board (RWQCB), Central Coast Region. As required by the Resolution No. R3-2013-0032, the proposed project will comply with the Low Impact Development Standards (LID) to infiltrate stormwater on-site. Additionally, as discussed in Section 4.7 (Hydrology and Water Quality) of the 2011 Certified EIR, implementation of Mitigation Measure 4.7.1 will require the preparation of an Erosion and Sediment Control Plan (ESCP) and a Storm Water Pollution Prevention Plan (SWPPP) to reduce pollutants of concern during construction. Implementation of Mitigation Measure 4.7.2 will require the implementation of post-construction BMPs to reduce pollutants of concern during operation.
2.7H Public Access & Recreation	Consistent. An existing bicycle and pedestrian trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge that extends over the canal connecting Roberts Lake with Laguna Grande Lake. The proposed project will extend the pedestrian and bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension will increase connectivity between the project site and the Laguna Grande Park and Laguna Grande Lake, the adjacent hotel property, Del Monte Boulevard, and the Laguna Grande Regional Park Trail and Monterey Bay Coastal Bike Trail, thereby maximizing public recreational access opportunities. Seven benches with trash receptacles will be placed along the segment of the bicycle and pedestrian trail that is on the project site. In addition, five parking stalls will be provided at the southeast corner that will serve as public parking for lake visitors.
2.7I Additional Standards for Laguna Grande	Consistent. Refer to response 2.6, Site Development Standards.

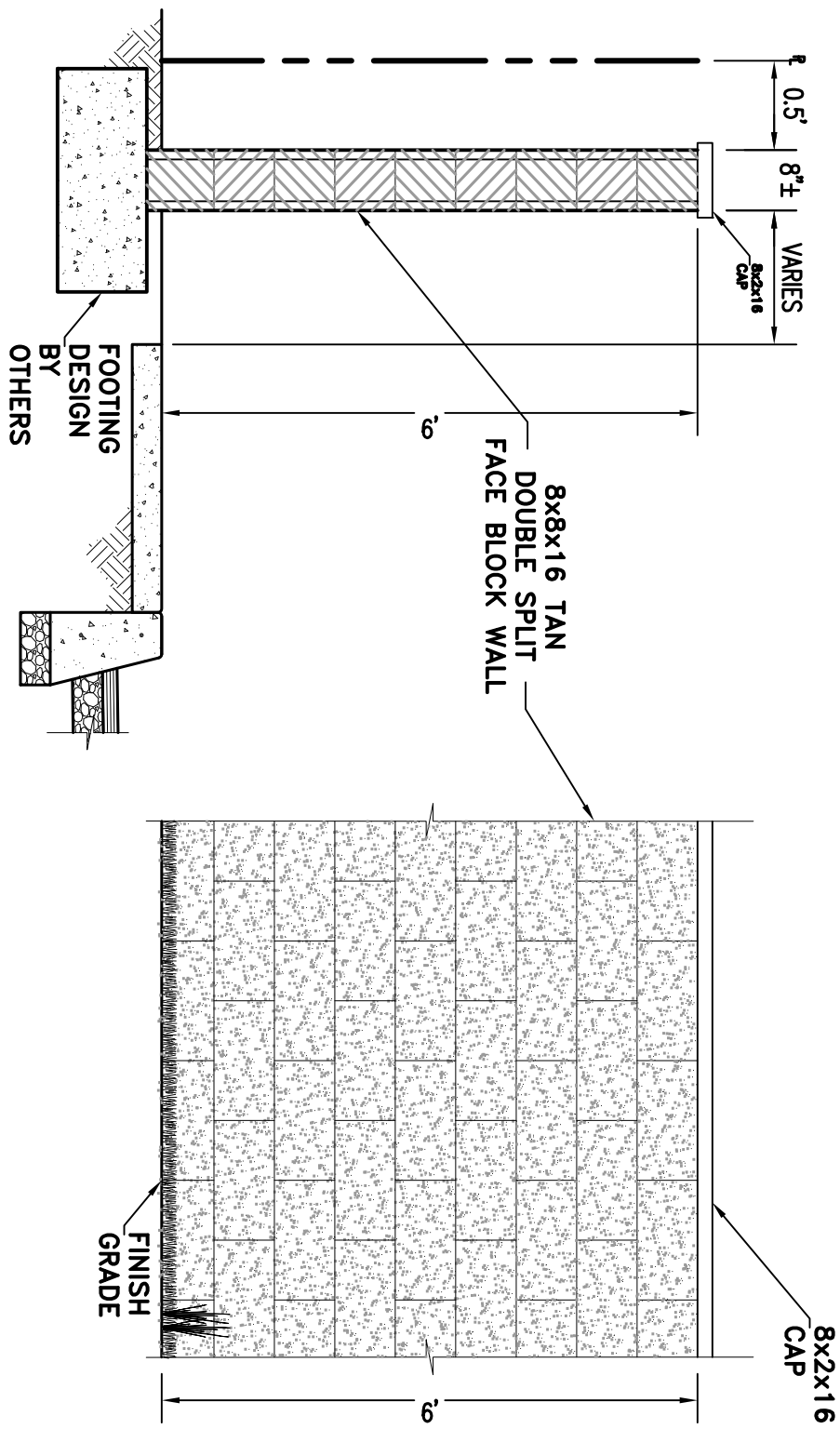
City of Seaside
Coastal Implementation Plan – Consistency Determination

Subarea	
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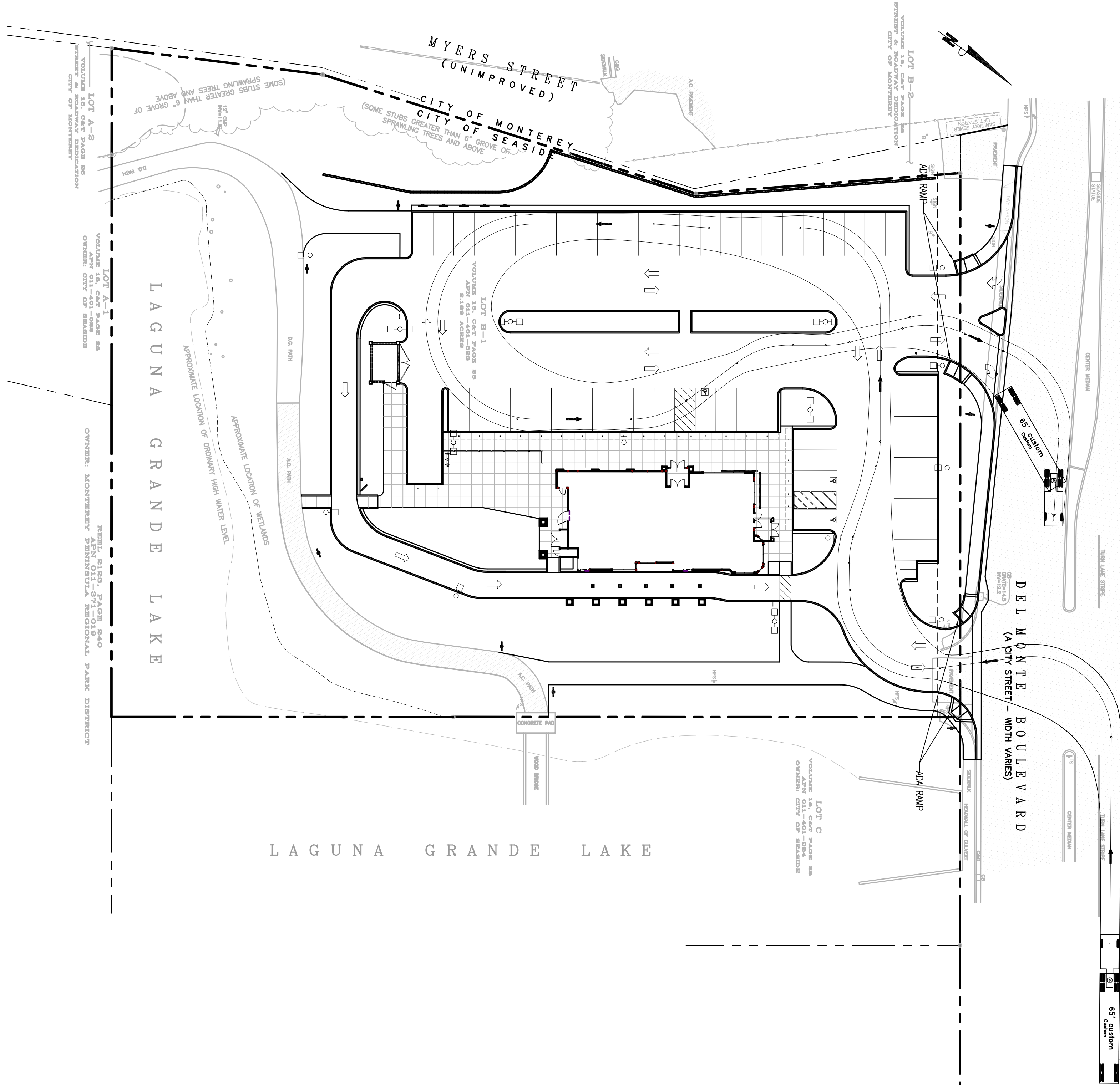


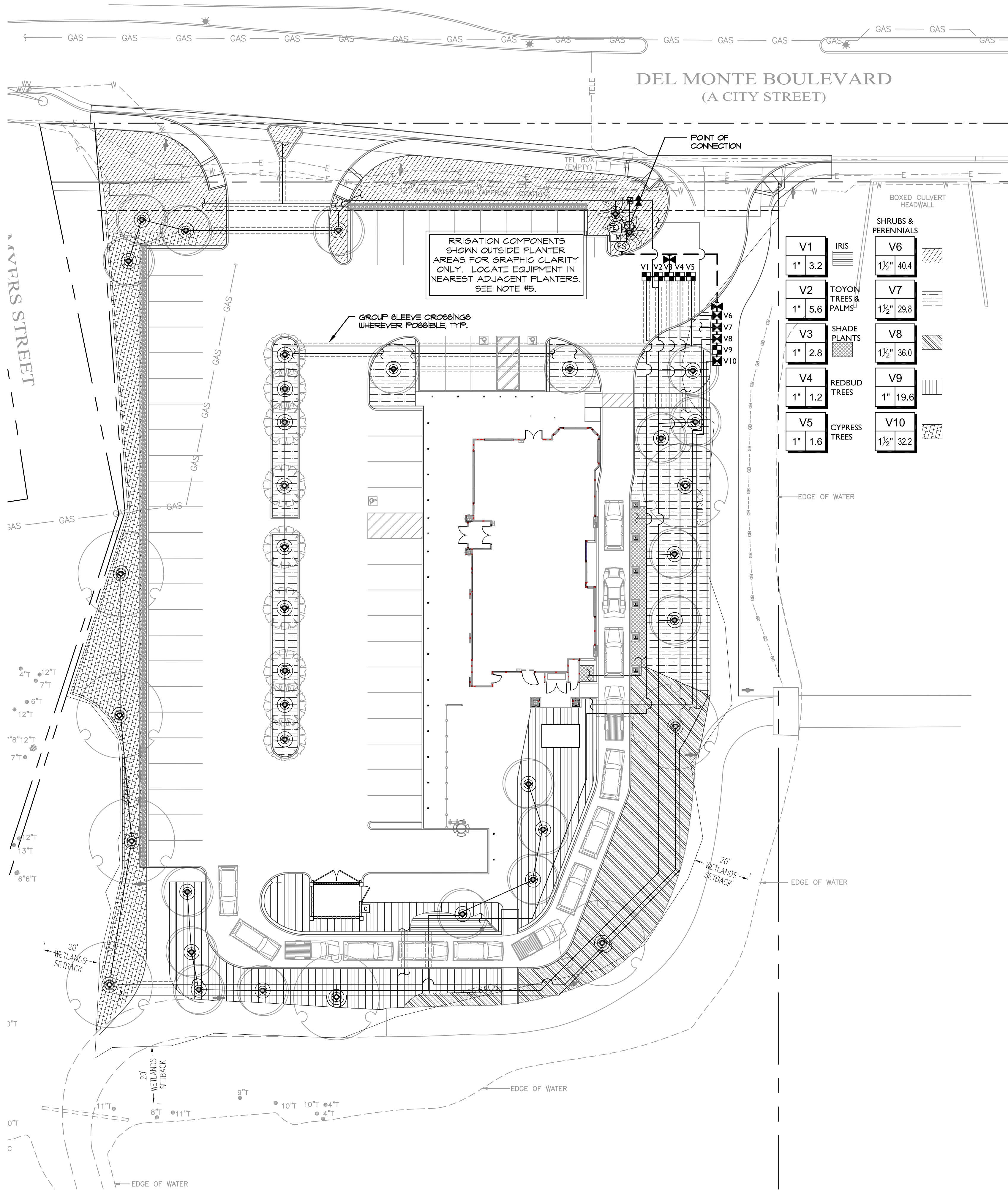
OF 2 SHEETS PROJECT# 114147		SCALE: AS NOTED DATE: 10-09-2014 DESIGN BY: FJC DRAWN BY: ECH CHECKED BY: FJC SHEET NUMBER:	SITE PLAN IN-N-OUT BURGER APN# 011-401-023-000 Project Location: 1350 DEL MONTE BLVD. SEASIDE, CA PREPARED FOR: GREENBERGFARROW 1920 MAIN ST., SUITE 1150 IRVINE, CA		 Civil Engineering Land Development Drafting 126 Bonifacio Place, Suite C, Monterey, CA 93940 Phone: (831) 647-1192 Fax (831) 647-1194 mail@C3Engineering.net	
						REV. DATE DESCRIPTION BY

1
C2
SOUND WALL & ELEVATION
MIS



CIRCULATION PLAN
1"=30'





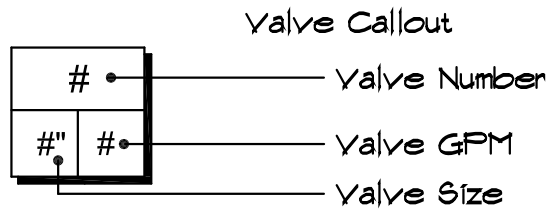
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY.
■	RAIN BIRD XCZ-100-B-COM DRIP CONTROL KIT, 1" FESB VALVE, 1" NETAFIM DISC FILTER AND 40PSI PRESSURE REGULATOR, 1" BALL VALVE.	6
⊠	RAIN BIRD XCZ-150-COM HIGH FLOW CONTROL ZONE KIT WITH 1-1/2" FESB VALVE, TWO 1" NETAFIM DISC FILTERS AND TWO 40PSI PRESSURE REGULATORS, 1-1/2" BALL VALVE.	4
⊙	TREE EMITTERS RAINBIRD RW8-B-C-1402 DEEP ROOT WATERING SYSTEM W/ 0.5 GPM BUBBLER INSTALL (2) PER SYMBOL	PER PLAN
▨	AREA TO RECEIVE DRIP EMITTERS NETAFIM TLCV6-1210 PSI COMP. DRIPLINE W/ CHECK VALVE SET PRS-D AT 45 PSI. TECHLINE SHALL BE SPACED APPROX. 3' OFF PERIMETER AND 18" O.C. AS SHOWN PER PLAN. FOOTERS AND HEADERS SHALL BE 3/4" PVC PIPE U.O.N.	PER PLAN
⌵	KBI BTU-E PVC BLOCKED TRUE UNION BALL VALVE S.O.V., 1/2" TO 2", SAME SIZE AS PIPE	1
M	1/2" HYDROMETER - COMBINATION MASTER VALVE FLOW SENSOR. INSTALL IN PLANTER AREA TYP.	1
BF	FEBCO 8251A 2" REDUCED PRESSURE BACKFLOW PREVENTER WITH HOTBOX ENCLOSURE AND CONCRETE PAD - SIZED TO FIT	1
C	ETWATER SMART CONTROLLER 200 (949) 584-7311 ENCLOSURE: STRONGBOX SB-1666 TOP ENTRY	1
FS	1/2" HYDROMETER - COMBINATION MASTER VALVE FLOW SENSOR. INSTALL IN PLANTER AREA TYP.	1
FE	EZ FLO MODEL NO. EZ 003-CX FERTILIZER INJECTOR INSTALL AFTER BACKFLOW	1

IRRIGATION LATERAL LINE: PVC CLASS 200
ONLY LATERAL TRANSITION PIPE SIZES 1" AND ABOVE
ARE INDICATED ON THE PLAN, WITH ALL OTHERS BEING
3/4" IN SIZE.

IRRIGATION MAINLINE: PVC SCHEDULE 40

PIPE SLEEVE: PVC CLASS 200
TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE
SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING
AND THEIR RELATED COUPLINGS TO EASILY SLIDE
THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18
INCHES BEYOND EDGES OF PAVING OR
CONSTRUCTION.

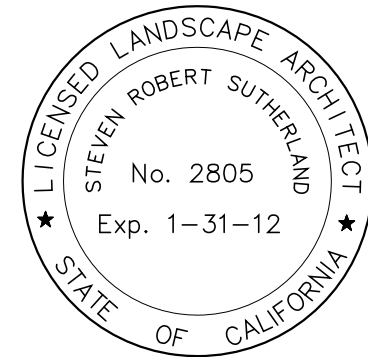


LATERAL PIPE SIZING CHART
CLASS 200 PVC

GPM MIN./MAX.:	PIPE DESCRIPTION:
1-10 GPM:	3/4" CLASS 200 PVC
11-16 GPM:	1" CLASS 200 PVC
17-26 GPM:	1 1/4" CLASS 200 PVC
27-35 GPM:	1 1/2" CLASS 200 PVC
36-55 GPM:	2" CLASS 200 PVC
56-80 GPM:	2 1/2" CLASS 200 PVC

IRRIGATION NOTES

- IRRIGATION SYSTEM COMPLIES WITH THE CA WATER ORDINANCE IN THE FOLLOWING WAYS:
 - NATIVE OR DRAUGHT-TOLERANT, LOW WATER USE PLANTS PROPOSED (SEE SHEET L-2 & L-3)
 - NO INVASIVE PLANT MATERIAL PROPOSED (SEE SHEET L-2 & L-3)
 - 3" MULCH LAYER PROPOSED OVER ALL PLANTED AREAS (SEE SHEET L-2 & L-3)
 - IRRIGATION CONTROLLER WITH ET SYSTEM AND RAIN SENSOR PROPOSED
 - MASTER VALVE AND FLOW SENSOR PROPOSED AFTER BACKFLOW DEVICE
 - GATE VALVES PROPOSED BEFORE ALL VALVE GROUPINGS
 - LOW-FLOW ROTARY NOZZLES AND/OR DRIP EMITTERS USED THROUGHOUT
 - CHECK VALVES AND PRESSURE REGULATOR PROPOSED IN ALL SPRAY HEADS
 - IRRIGATION MATERIAL GROUPED PER PLANT TYPE/ZONE
 - ALL SPRAY HEADS ARE GROUPED FOR MATCHED PRECIPITATION RATES
- LANDSCAPE CONTRACTOR IS TO COORDINATE WITH THE GENERAL CONTRACTOR IN LOCATING THE POINT OF CONNECTION, INSTALLED SLEEVING, AND ELECTRICAL SOURCE FOR CONTROLLER. GENERAL CONTRACTOR SHALL COORDINATE WITH OWNER IN OBTAINING POWER SOURCE, AND SHALL PROVIDE ALL NECESSARY SLEEVING FOR OTHER TRADES. REQUIRED SLEEVING IS NOT LIMITED TO THAT WHICH IS SHOWN. SLEEVE MATERIAL SHALL BE OF TYPE INDICATED.
- CONTRACTOR TO INSTALL ONE (1) 'EXTRA' WIRE FOR EVERY FOUR (4) VALVES. CONTRACTOR SHALL INSTALL ONE (1) EXTRA 4" PVC SLEEVE BETWEEN ALL PLANTER ISLANDS.
- IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTER AREAS FOR GRAPHIC CLARITY. LOCATE EQUIPMENT IN NEAREST ADJACENT PLANTERS AS FEASIBLE AND INDICATE EXACT LOCATION ON RECORD DRAWINGS. ALL VALVES SHOULD BE KEPT AT LEAST 18" AWAY FROM FACE OF CURB.
- ALL LATERAL PIPING IS TO BE SIZED PER THE PIPE SIZING CHART ON THIS SHEET. REFER TO THE IRRIGATION LEGEND FOR INFORMATION ON GPM'S.
- REFER TO IN-N-OUT'S STANDARD IRRIGATION DETAILS FOR INSTALLATION PROCEDURES.
- INSTALL TREE VALVES IN 6" ROUND BOX AND LOCATE 3' FROM TRUNK OF TREE.



IRRIGATION PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE CA

AGENCY APPROVAL

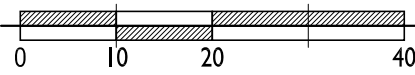
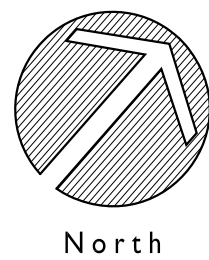
REVISIONS	NO.	DATE	PURPOSE
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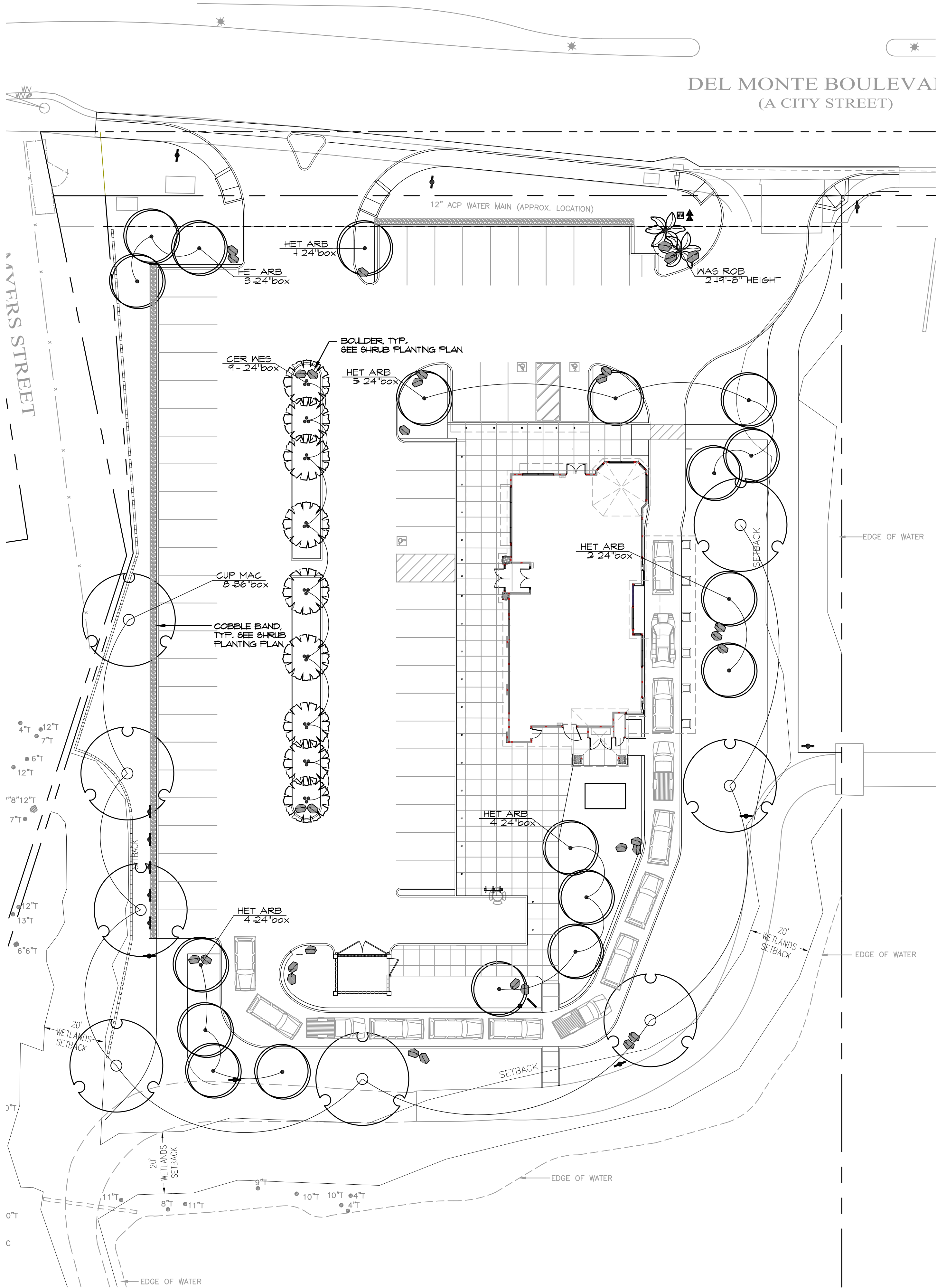
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IRRIGATION
PLAN

SHEET

L-1



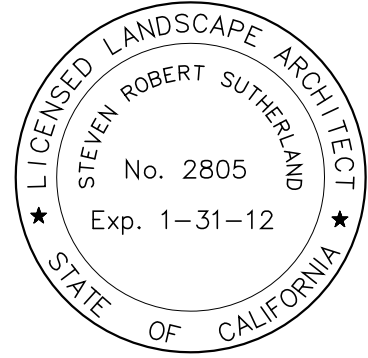


TREE SCHEDULE

CODE	BOTANICAL NAME / COMMON NAME	SIZE	QTY
CER WES	CERCIS OCCIDENTALIS / WESTERN REDBUD MULTI-TRUNK	24"BOX	9
CUP MAC	CUPRESSUS MACROCARPA / MONTEREY CYPRESS	36"BOX	8
HET ARB	HETEROMELES ARBUTIFOLIA / TOYON	24"BOX	19
WAS ROB	WASHINGTONIA ROBUSTA / MEXICAN FAN PALM	19-8" HEIGHT	2

TREE PLANTING NOTES

- ALL LANDSCAPE AREAS TO BE TOP DRESSED WITH 3" THICK BARK MULCH. CONTRACTOR SHALL PROVIDE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL. MULCH TOP DRESS SHALL BE SHREDDED CEDAR BARK, 0-7" AS PRODUCED BY THE HYFONEX CORPORATION, P.O. # 479, LINDEN, CA 95236, TEL. (800) 621-8887 OR ACCEPTABLE EQUAL. ALL NEW AND EXISTING TREES TO RECEIVE 3' DIAMETER CIRCLE OF MULCH AROUND BASE. DO NOT COVER TREE CROWN WITH MULCH.
- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.



TREE PLANTING PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE, CA

AGENCY APPROVAL

REVISIONS
NO. DATE PURPOSE

DRAWN BY * MB

CHECKED * RSR

SCALE * 1" = 20' - 0"

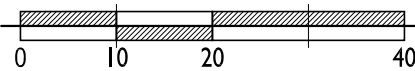
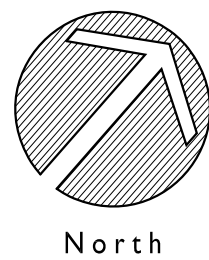
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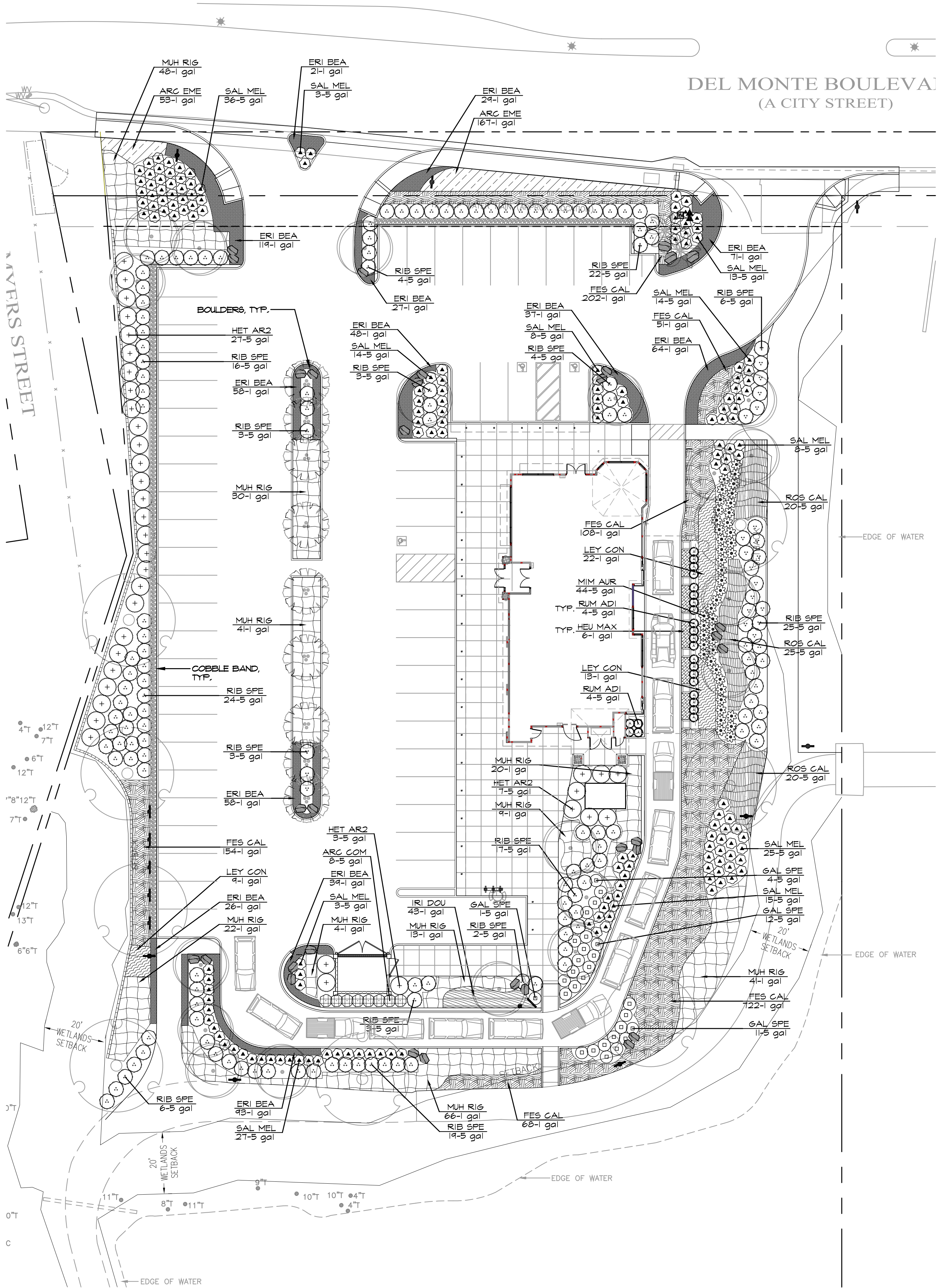
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TREE PLANTING
PLAN

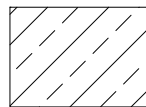
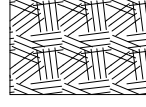
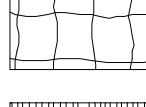
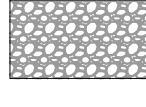
SHEET

L-2



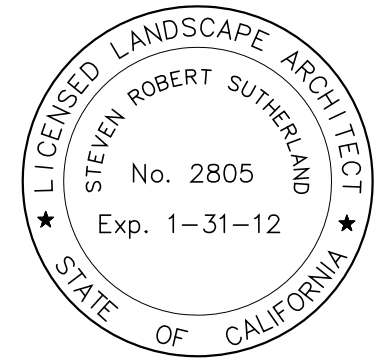


PLANTING SCHEDULE

SHRUB	CODE	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QTY
	ARC COM	ARCTOSTAPHYLOS X. 'SUNSET' / SUNSET MANZANITA	5 GAL	4' OC	8
	GAL SPE	GALVEZIA SPECIOSA / ISLAND BUSH SNAPDRAGON	5 GAL	4' OC	28
	HET AR2	HETEROMELES ARBUTIFOLIA / TOYON	5 GAL	6' OC	37
	MIM AUR	MIMULUS AURANTIACUS / STICKY MONKEY FLOWER	5 GAL	42" OC	44
	RIB SPE	RIBES SPECIOSUM / RUCHSIA FLOWERING GOOSEBERRY	5 GAL	5' OC	157
	SAL MEL	SALVIA MELLIFERA / BLACK SAGE	5 GAL	42" OC	166
FERN	CODE	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QTY
	RUM ADI	RUMOHRA ADIANTIFORMIS / LEATHERLEAF FERN	5 GAL	36" OC	24
GROUNDCOVER	CODE	BOTANICAL NAME / COMMON NAME	SIZE	QTY	
	ARC EME	ARCTOSTAPHYLOS UVA-URS! EMERALD CARPET / EMERALD CARPET MANZANITA	1 GAL @ 18" OC	220	
PERENNIAL	CODE	BOTANICAL NAME / COMMON NAME	SIZE	QTY	
	ERI BEA	ERIGERON GLAUCUS SEA BREEZE / BEACH DAISY	1 GAL @ 18" OC	690	
	FES CAL	FESTUCA CALIFORNICA / CALIFORNIA FESCUE	1 GAL @ 18" OC	1305	
	HEU MAX	HEUCHERA MAXIMA / ISLAND ALUM ROOT	1 GAL @ 24" OC	30	
	IRI DOU	IRIS DOUGLASIANA PCH / DOUGLAS IRIS PACIFIC COAST HYBRID	1 GAL @ 24" OC	43	
	LEY CON	LEYMUS CONDENSATUS CANYON PRINCE / BLUE WILD RYE	1 GAL @ 36" OC	44	
	MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS TRIANGULAR SPACING	1 GAL @ 42" OC	289	
	ROS CAL	ROSA CALIFORNICA / CALIFORNIA WILD ROSE	5 GAL @ 42" OC	65	
ROCK	NAME	SIZE	QTY		
	24" WIDE COBBLE BAND TO BE LOCAL RIVER STONE	+/- 6"	603 SF		
	ROUNDED BOULDER	24" MIN/ 48" MAX	34		

PLANTING PLAN NOTES

- ALL LANDSCAPE AREAS TO BE TOP DRESSED WITH 3" THICK BARK MULCH. CONTRACTOR SHALL PROVIDE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL. MULCH TOP DRESS SHALL BE SHREDDED CEDAR BARK, 0-7" AS PRODUCED BY THE HYPONEX CORPORATION, P.O. # 479, LINDEN, CA 95236, TEL. (800) 621-8557 OR ACCEPTABLE EQUAL. ALL NEW AND EXISTING TREES TO RECEIVE 3' DIAMETER CIRCLE OF MULCH AROUND BASE. DO NOT COVER TREE CROWN WITH MULCH.
- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.



SHRUB PLANTING PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE CA

AGENCY APPROVAL

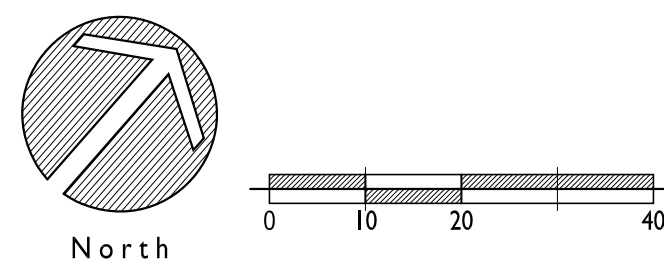
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NO. DATE PURPOSE

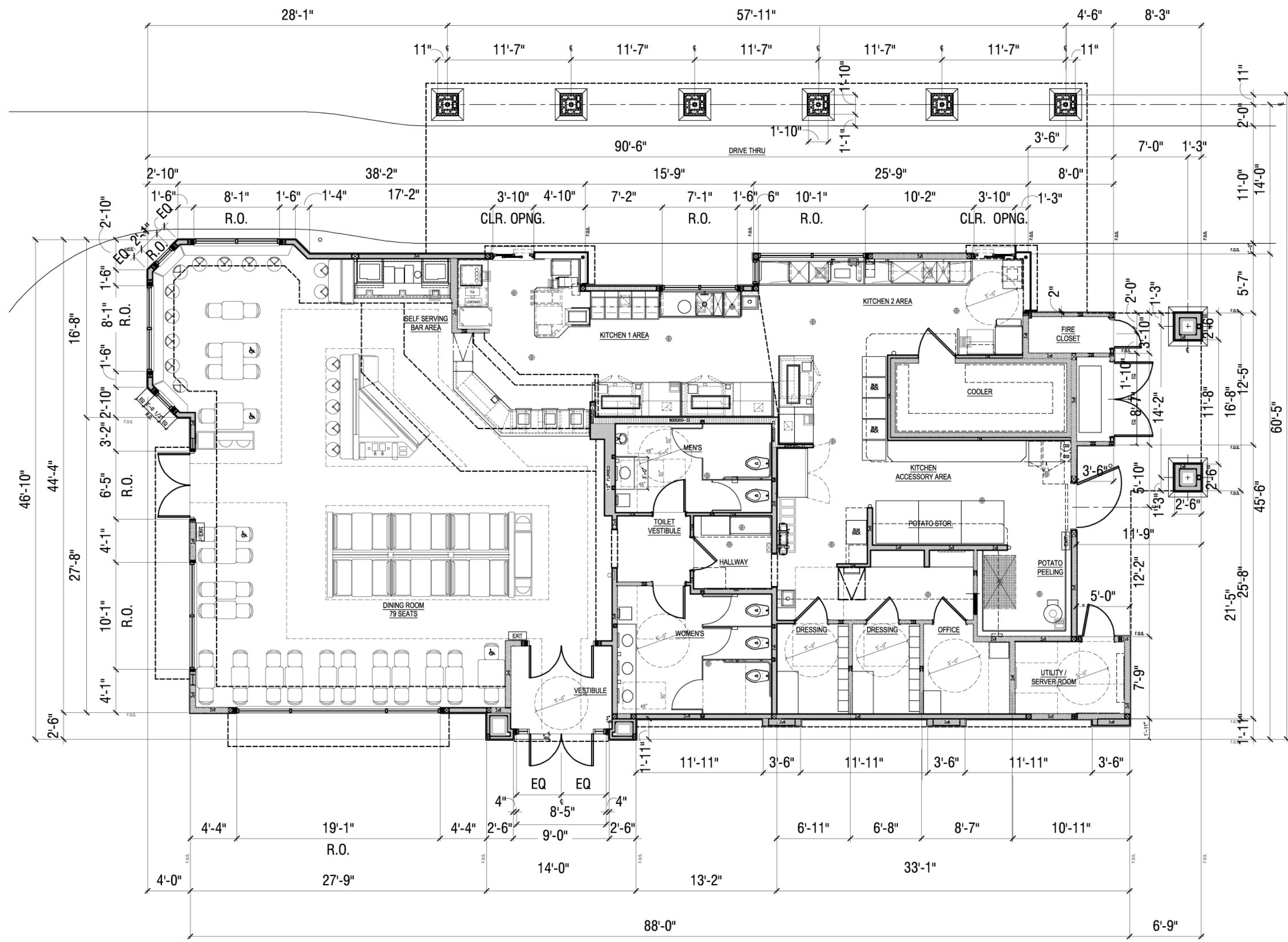
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CHECKED * RSR
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DATE * 03.17.15
JOB * 090004.00

SHRUB PLANTING PLAN

SHEET

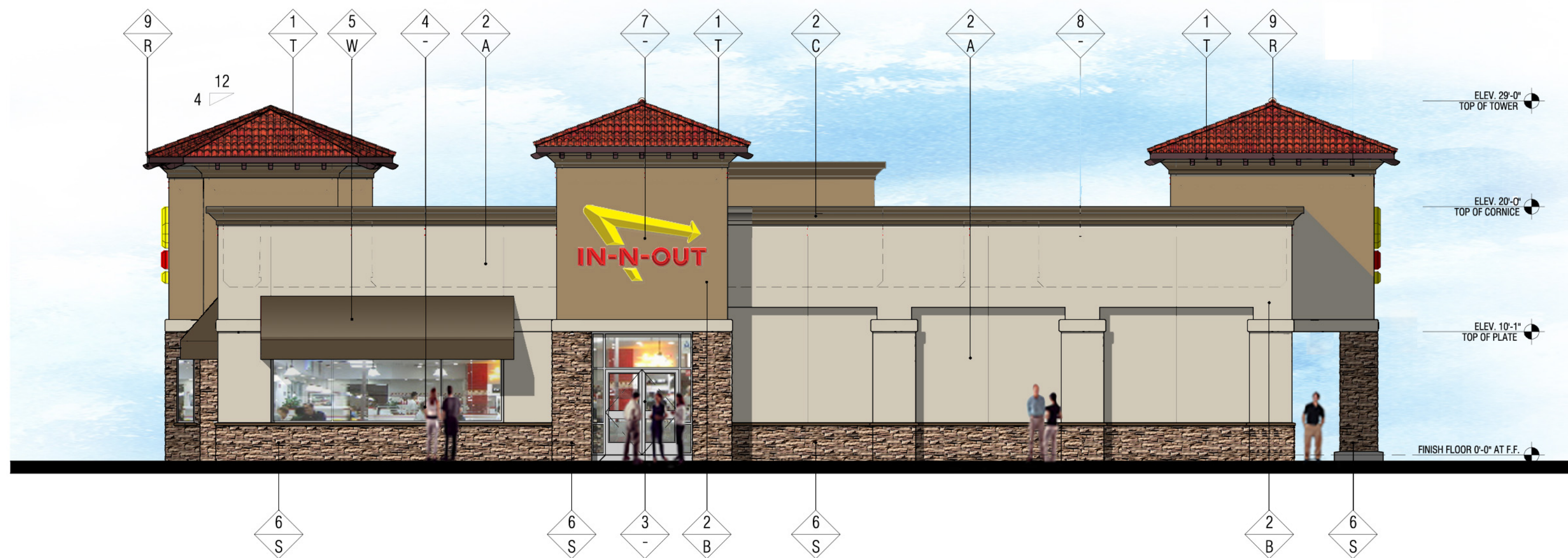
L-3





FLOOR PLAN

SCALE: 1/8"=1'-0"



NORTH ELEVATION

SCALE: 1/8"=1'-0"



EAST ELEVATION

SCALE: 1/8"=1'-0"



WEST ELEVATION

SCALE: 1/8"=1'-0"



SOUTH ELEVATION

SCALE: 1/8"=1'-0"

FINISH SCHEDULE

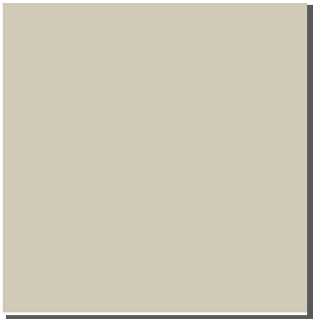
FINISH MATERIAL
1 TILE ROOF
2 STUCCO WITH SAND FLOAT TEXTURE FINISH
3 CLEAR ANODIZED ALUMINUM STOREFRONT DOORS
4 CLEAR ANODIZED ALUMINUM WINDOWS
5 PVC COATED WICK AWNINGS
6 STONE VENEER
7 ILLUMINATED LOGO SIGN UNDER SEPARATE PERMIT
8 NOT USED
9 WOOD BEAM RAFTER TAIL STAINED
FINISH COLOR
A SHERWIN WILLIAMS - SW7036 - ACCESSIBLE BEIGE
B SHERWIN WILLIAMS - SW6109 - HOPSACK
C SHERWIN WILLIAMS - SW7041 - VAN DYKE BROWN
R DUNN EDWARDS STAIN TO MATCH DE6042 BEAR IN MIND
S CORONADO STONE - CARMEL MOUNTAIN EASTERN LEDGESTONE
T EAGLE ROOFING PRODUCTS CAPISTRANO STYLE 3602 CONCORD BLEND
W IN-N-OUT CUSTOM COLORS - SW7041 - VAN DYKE BROWN

Note:
Colors shown on these elevations are for illustration
purposes only. For actual colors, refer to manufacturers
samples.

SCALE: 1/8"=1'-0"



COLOR AND MATERIAL BOARD



Color A
Shermin Willams SW7036 - Beige



Color B
Shermin Willams SW6109 - Hopsack



Color/Material C & W
Shermin Williams SW7041 -
Van Dyke Brown - Awnings with
PVC wick resistant erandicable polyester and color Van Dyke Brown



Color R
Dunn Edwards DE6042 -
Bear In Mind



Material S
Coronado Stone -
Carmel Mountain &
Eastern LedgeStone



Material T
Eagle Roofing Products
Capistrano Style -
3602 Concord Blend



1350 hamburger ln.
Baldwin Park, CA 91706

IN-N-OUT BURGER
1350 DEL MONTE
SEASIDE, CA

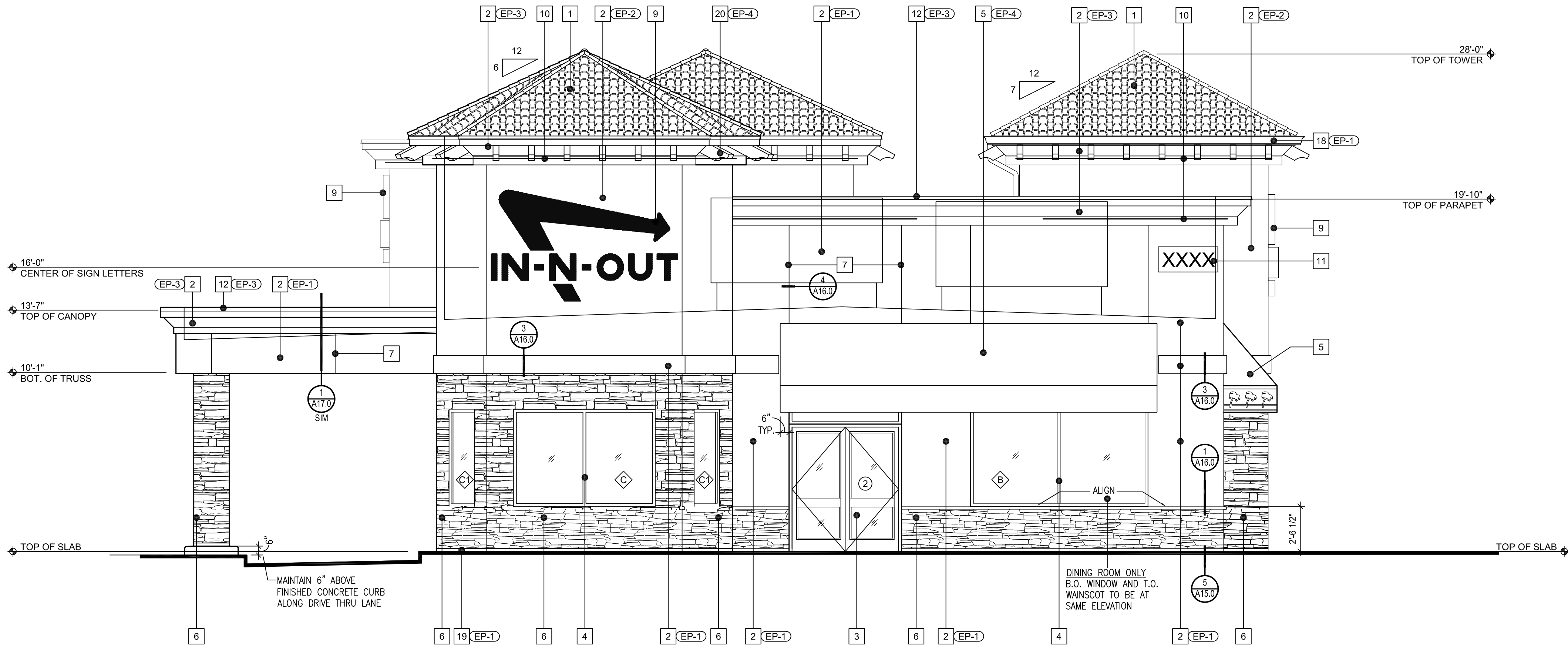
**COLOR AND
MATERIAL BOARD**
05-13-11

KEY NOTES

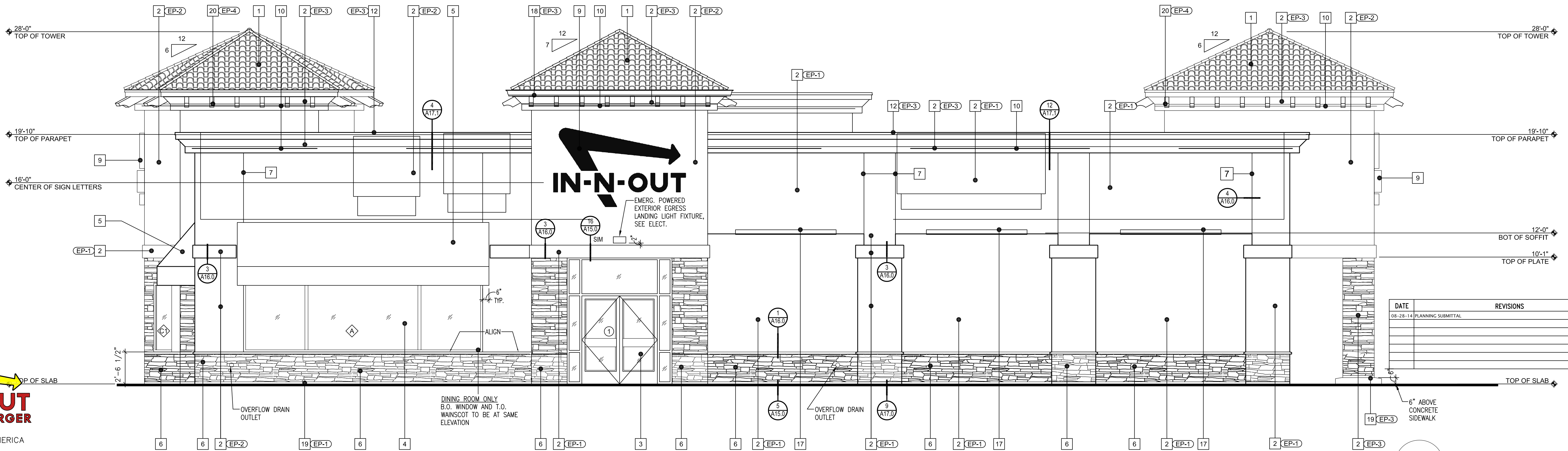
1	TILE ROOF: EAGLE ROOFING PRODUCTS, CAPISTRANO STYLE 3602 CONCORD BLEND. PROVIDE BIRD STOP AND PAINT TO MATCH TILE.
2	STUCCO: MEDIUM SAND FLOAT TEXTURE FINISH.
3	ALUMINUM STOREFRONT DOORS: CLEAR ANODIZED ALUMINUM.
4	ALUMINUM WINDOWS: CLEAR ANODIZED ALUMINUM.
5	AWNINGS: PVC COATED WICK-RESISTANT ERADICABLE POLYESTER AWNINGS. COLOR:SHERWIN WILLIAMS SW7041 9EP-3) PROVIDE FLUORESCENT BACKLIGHTING. SEE: 5/A16.0 & 6/A16.0.
6	STONE VENEER - CARMEL MOUNTAIN EASTERN LEDGE BY CORONADO STONE WITH MATCHING CORONADO STONE WAINSCOT SILL. APPLY PER MFR RECOMMENDATIONS. DRY STACK.
7	1/4" WIDE METAL PENN SCREED: SEE DETAIL 4/A16.0. ALIGN CONTROL JOINTS ON DRIVE-THRU CANOPY FASCIA WITH CONTROL JOINTS ON BOTTOM OF SOFFIT.
8	SLOPED ALUMINUM WINDOWS: U.S. ALUMINUM S-010. GLASS JOINTS TO HAVE POLISHED EDGES WITH SILICONE JOINTS. PAINT WOOD FRAME "EP-4".
9	IN-N-OUT BURGER ILLUMINATED LOGO SIGN: UNDER SEPARATE PERMIT.
10	L.E.D. COVE LIGHTING: UNDER SEPARATE PERMIT.
11	BUILDING ADDRESS NUMBERS TO BE 12" HIGH, 4" MIN. W/ MIN. STROKE WIDTH OF 0.5 INCH PER FIRE DEPARTMENT AND CITY JURISDICTION ADDRESS REQUIREMENTS. 1. ADDRESS SHALL BE DISPLAYED & VISIBLE FROM BOTH STREET DIRECTIONS OF APPROACHING VEHICLES. 2. PERMANENT NUMBERS AND LETTERS SHALL BE MADE OF DURABLE AND CLEARLY VISIBLE MATERIAL SUCH AS WOOD, METAL, CERAMIC, PLASTIC AND VINYL. (PAINTED OR GLUED ON NUMBERS ARE NOT ACCEPTABLE MATERIALS). 3. NUMBERS SHALL BE OF COLORS CONTRASTING WITH BACKGROUND TO WHICH THEY ARE ATTACHED. 4. NUMBERS SHALL BE A MINIMUM PROPORTION RATIO OF 6:1 (HEIGHT TO WIDTH). 5. NUMBERS CANNOT BE SPELLED.
12	METAL CAP: COLOR TO MATCH STUCCO.
13	HOLLOW METAL DOOR: SEE SHEET A11.0 (PAINT WITH SHERWIN WILLIAMS - WATERBASE ACROLON 100 URETHANE PART A B65-720 / PART-B B65V720 - TINT TO MATCH PAINT COLOR NOTED).
14	5'-0" HIGH STUB OUT FOR Co2 LINE
15	4" MIN. HIGH WHITE LETTERING "RISER ROOM" ON RED BACKGROUND SIGN. MOUNT ON RISER ROOM DOOR
16	RECESSED KNOX BOX AT 5'-0" HIGH TO THE RIGHT OF FIRE RISER ROOM. SEE DETAIL 10/A17.0
17	RECESSED 8" FLUORESCENT LIGHT FIXTURE IN SOFFIT. SEE DETAIL 9/A17.1
18	GUTTER AND DOWNSPOUT. REFER TO DETAIL 8/A17.2
19	TEXTURE EXPOSED FOUNDATION WALL BELOW STUCCO WEEP SCREED AND PAINT TO MATCH WALL.
20	EXPOSED RAFTER TAIL

EXTERIOR PAINT SCHEDULE

NO.	MFR.	MODEL	COLOR #	COLOR NAME	FINISH	REMARKS
EP-1	SHERWIN WILLIAMS	XXX	SW7036	ACCESSIBLE BEIGE	HIGH GLOSS	PRIME W/ D.E. EFF-STOP PREMIUM PRIMER
EP-2	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW6109	HOPSACK	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-3	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW7041	VAN DYKE BROWN	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-4	DUNN EDWARDS	SYN-LUSTRO WATER BASE	DE6042	BEAR IN MIND		AWNING



2 EAST ELEVATION
SCALE: 1/4" = 1'-0"



1 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

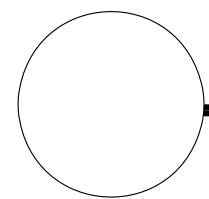
ELEVATION-1

SHEET OF 1

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SEASIDE, CA

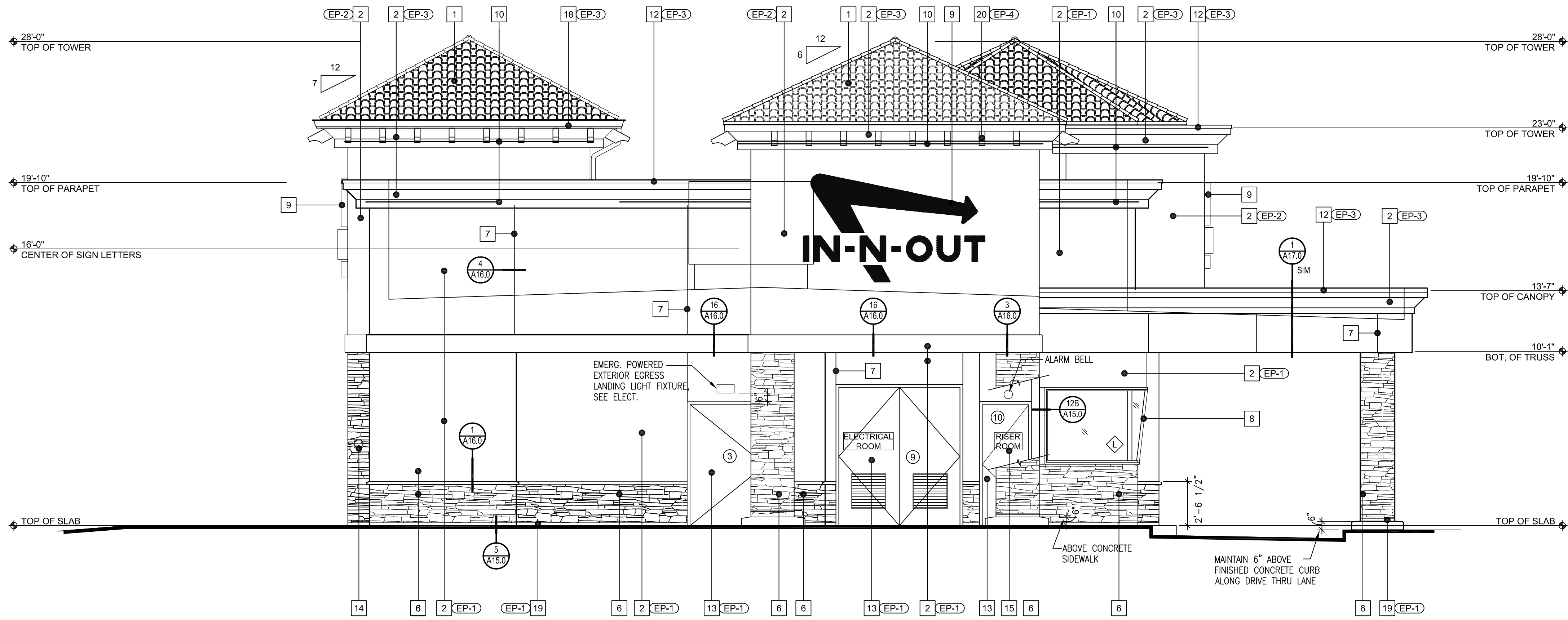
1350 DEL MONTE BOULEVARD



INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





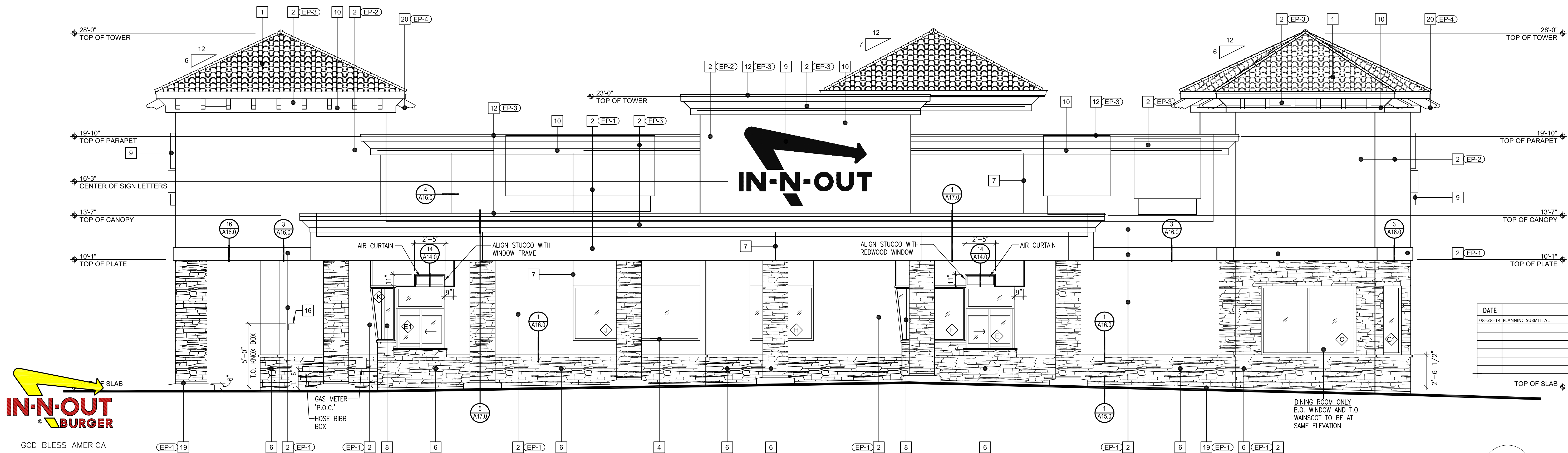
2 WEST ELEVATION
A9.0 SCALE: 1/4" = 1'-0"

KEY NOTES

1	TILE ROOF: EAGLE ROOFING PRODUCTS, CAPISTRANO STYLE 3602 CONCORD BLEND. PROVIDE BIRD STOP AND PAINT TO MATCH TILE.
2	STUCCO: MEDIUM SAND FLOAT TEXTURE FINISH.
3	ALUMINUM STOREFRONT DOORS: CLEAR ANODIZED ALUMINUM.
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6	STONE VENEER - CARMEL MOUNTAIN EASTERN LEDGE BY CORONADO STONE WITH MATCHING CORONADO STONE WAINSCOT SILL. APPLY PER MFR RECOMMENDATIONS. DRY STACK.
7	1/4" WIDE METAL PENN SCREED: SEE DETAIL 4/A16.0. ALIGN CONTROL JOINTS ON DRIVE-THRU CANOPY FASCIA WITH CONTROL JOINTS ON BOTTOM OF SOFFIT.
8	SLOPED ALUMINUM WINDOWS: U.S. ALUMINUM S-010. GLASS JOINTS TO HAVE POLISHED EDGES WITH SILICONE JOINTS. PAINT WOOD FRAME "EP-4".
9	IN-N-OUT BURGER ILLUMINATED LOGO SIGN: UNDER SEPARATE PERMIT.
10	L.E.D. COVE LIGHTING: UNDER SEPARATE PERMIT.
11	BUILDING ADDRESS NUMBERS TO BE 12" HIGH, 4" MIN. W/ MIN. STROKE WIDTH OF 0.5 INCH PER FIRE DEPARTMENT AND CITY JURISDICTION ADDRESS DISPLAY REQUIREMENTS: 1. ADDRESS SHALL BE DISPLAYED & VISIBLE FROM BOTH STREET DIRECTIONS OF APPROACHING VEHICLES. 2. PERMANENT NUMBERS AND LETTERS SHALL BE MADE OF DURABLE AND CLEARLY VISIBLE MATERIAL SUCH AS WOOD, METAL, CERAMIC, PLASTIC AND VINYL. (PAINTED OR GLUED ON NUMBERS ARE NOT ACCEPTABLE MATERIALS). 3. NUMBERS SHALL BE OF COLORS CONTRASTING WITH BACKGROUND TO WHICH THEY ARE ATTACHED. 4. NUMBERS SHALL BE A MINIMUM PROPORTION RATIO OF 6:1 (HEIGHT TO WIDTH). 5. NUMBERS CANNOT BE SPELLED.
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17	RECESSED 8' FLUORESCENT LIGHT FIXTURE IN SOFFIT. SEE DETAIL 9/A17.1
18	GUTTER AND DOWNSPOUT. REFER TO DETAIL 8/A17.2
19	TEXTURE EXPOSED FOUNDATION WALL BELOW STUCCO WEEP SCREED AND PAINT TO MATCH WALL.
20	EXPOSED RAFTER TAIL

EXTERIOR PAINT SCHEDULE

NO.	MFR.	MODEL	COLOR #	COLOR NAME	FINISH	REMARKS
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EP-2	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW6109	HOPSACK	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
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EP-4	DUNN EDWARDS	SYN-LUSTRO WATER BASE	DE6042	BEAR IN MIND		AWNING



1 SOUTH ELEVATION
A9.0 SCALE: 1/4" = 1'-0"

DATE	REVISIONS
08-28-14	PLANNING SUBMITTAL



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ELEVATION-2

SHEET OF 1

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SEASIDE, CA

1350 DEL MONTE BOULEVARD

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA



02-08-1



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

FLOOR PLAN

SHEET OF 1

THE INFORMATION, DRAWINGS AND SPECIFICATIONS SHOWN ARE AND SHALL REMAIN THE PROPERTY OF IN-N-OUT BURGER.
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SEASIDE, CA

1350 DEL MONTE BOULEVARD

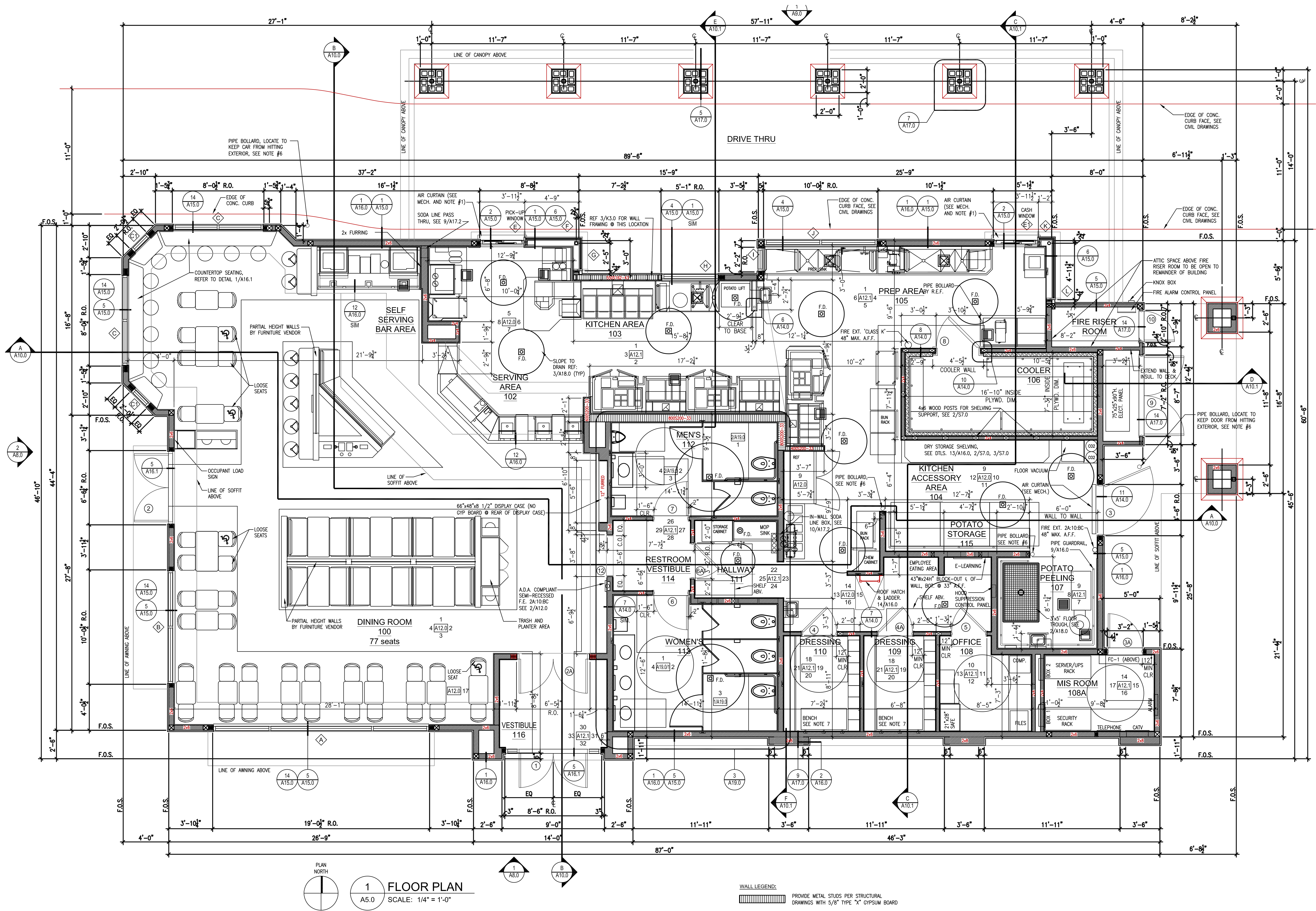
DATE	REVISIONS

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SCALE: 1/4"=1'-0"

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

08-26-14

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ROOF PLAN

SHEET OF 1

THE INFORMATION, DRAWINGS AND SPECIFICATIONS SHOWN ARE AND SHALL REMAIN THE PROPERTY OF IN-N-OUT BURGER.
THESE DOCUMENTS MAY NOT BE USED WITHOUT THE EXPRESSED WRITTEN CONSENT OF IN-N-OUT BURGER.



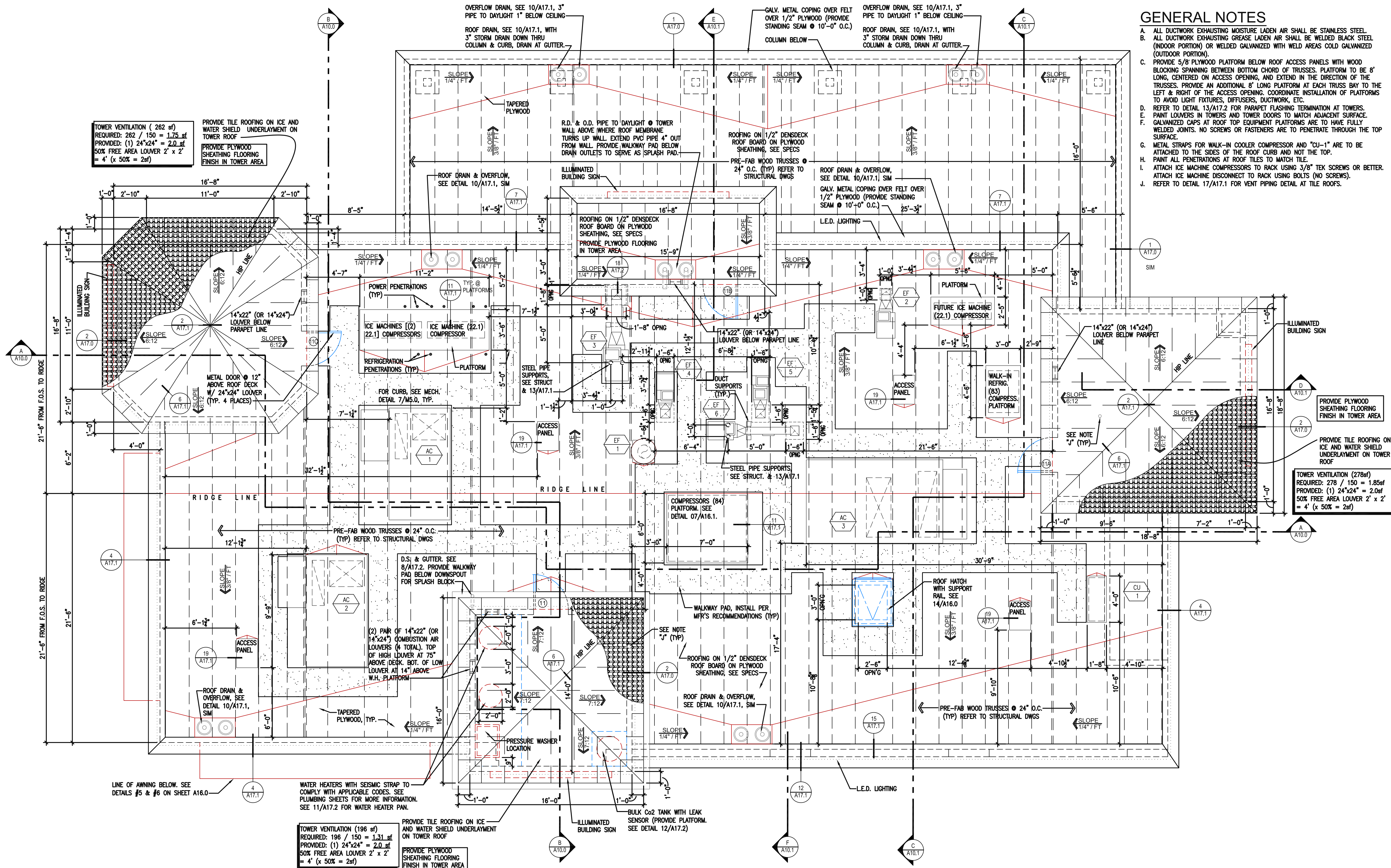
1 ROOF PLAN
A6.0 SCALE: 1/4" = 1'-0"

SEASIDE, CA

1350 DEL MONTE BOULEVARD

GENERAL NOTES

- ALL DUCTWORK EXHAUSTING MOISTURE LADEN AIR SHALL BE STAINLESS STEEL.
- ALL DUCTWORK EXHAUSTING GREASE LADEN AIR SHALL BE WELDED BLACK STEEL (INDOOR PORTION) OR WELDED GALVANIZED WITH WELD AREAS COLD GALVANIZED (OUTDOOR PORTION).
- PROVIDE 5/8" PLYWOOD PLATFORM BELOW ROOF ACCESS PANELS WITH WOOD BLOCKING SPANNING BETWEEN BOTTOM CHORD OF TRUSSES. PLATFORM TO BE 8' LONG, CENTERED ON ACCESS OPENING, AND EXTEND IN THE DIRECTION OF THE TRUSSES. PROVIDE AN ADDITIONAL 8' LONG PLATFORM AT EACH TRUSS BAY TO THE LEFT & RIGHT OF THE ACCESS OPENING. COORDINATE INSTALLATION OF PLATFORMS TO AVOID LIGHT FIXTURES, DIFFUSERS, DUCTWORK, ETC.
- REFER TO DETAIL 13/A17.2 FOR PARAPET FLASHING TERMINATION AT TOWERS.
- PAINT LOUVERS IN TOWERS AND TOWER DOORS TO MATCH ADJACENT SURFACE.
- GALVANIZED CAPS AT ROOF TOP EQUIPMENT PLATFORMS ARE TO HAVE FULLY WELDED JOINTS. NO SCREWS OR FASTENERS ARE TO PENETRATE THROUGH THE TOP SURFACE.
- METAL STRAPS FOR WALK-IN COOLER COMPRESSOR AND "CU-1" ARE TO BE ATTACHED TO THE SIDES OF THE ROOF CURB AND NOT THE TOP.
- PAINT ALL PENETRATIONS AT ROOF TILES TO MATCH TILE.
- ATTACH ICE MACHINE COMPRESSORS TO RACK USING 3/8" TEK SCREWS OR BETTER. ATTACH ICE MACHINE DISCONNECT TO RACK USING BOLTS (NO SCREWS).
- REFER TO DETAIL 17/A17.1 FOR VENT PIPING DETAIL AT TILE ROOFS.



DATE	REVISIONS
08-28-14	PLANNING SUBMITTAL

0' 5' 10'
SCALE: 1/4" = 1'-0"

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

ISSUE RECORD

DATE DESCRIPTION
2014 CLASSIC PROTOTYPE 14C
10.15.14 SITE PHOTOMETRIC ISSUE FOR REVIEW

REVISION RECORD

PROFESSIONAL SEAL

J:\141013
LIPPE AND ASSOCIATES
CONSULTING ENGINEERS
15950 MIDWAY ROAD
ADRIAN, TEXAS 75001 (972) 387-3500
FAX (972) 387-3849

PROTOTYPE VERSION
14C

PROJECT NAME

IN-N-OUT
BURGER

Seaside
California

1350 Del Monte Blvd.
Seaside, CA. 92XXX

IN-N-OUT
BURGER®

GOD BLESS AMERICA

PROJECT NUMBER

XXXXXX

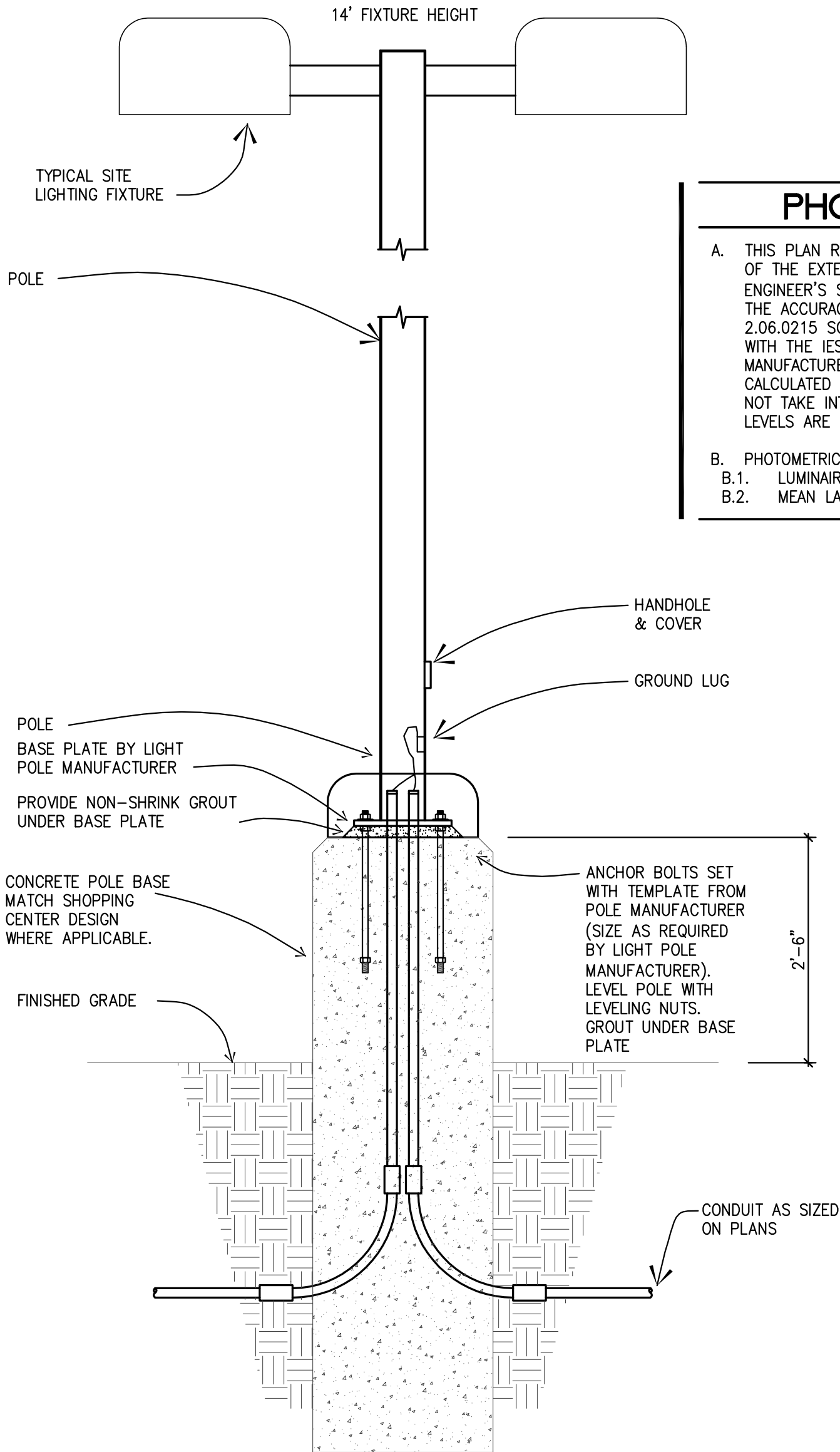
SHEET TITLE

SITE LIGHTING
PHOTOMETRIC PLAN

SHEET NUMBER

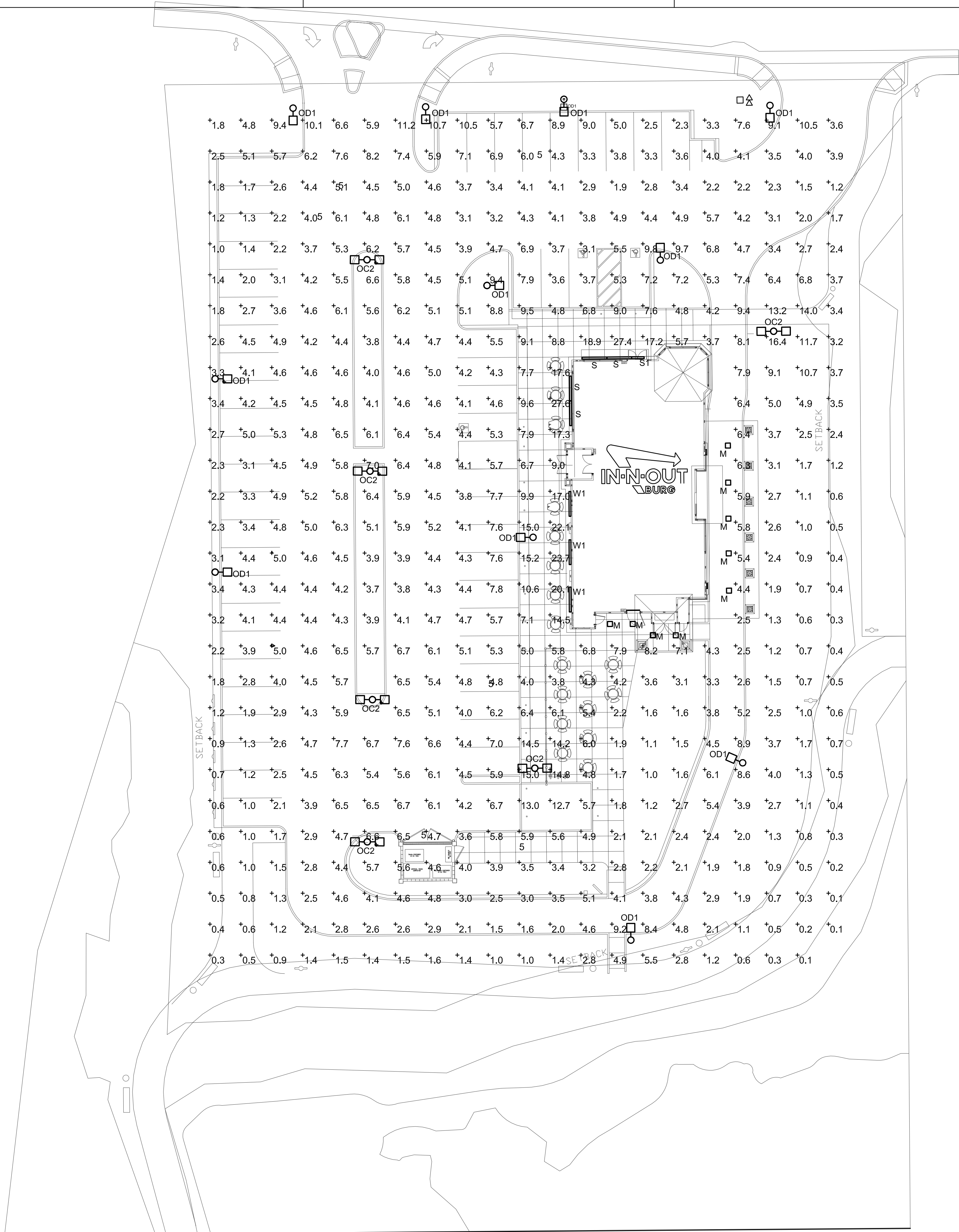
E11.0

SITE LIGHTING FIXTURE SCHEDULE				
TYPE	MANUFACTURER	VOLTAGE	LAMPS	DESCRIPTION
OC2	LITHONIA LIGHTING #KSF2 150M R4W, 208 SP12 SCWA WITH (2) TYPE IV WIDE OPTICS, POLE #SSS 11.5 5G DM28 DDB	208	(2) 150W MH (378 VA TOTAL LOAD)	208V TWIN HEAD, 150W METAL HALIDE, 14' AFG, TOTAL FIXTURE HEIGHT (11'-6" POLE + 2'-6" BASE).
OD1	LITHONIA LIGHTING #KSF2 150M R4W, 208 SP12 SCWA WITH (2) TYPE IV WIDE OPTICS, POLE #SSS 11.5 5G DM28 DDB	208	(1) 150W MH (189 VA TOTAL LOAD)	208V SINGLE HEAD, 150W METAL HALIDE, 14' AFG, TOTAL FIXTURE HEIGHT (11'-6" POLE + 2'-6" BASE).
M	GOHAM LIGHTING #LAH-70MH-12FW-FFL-120	120	(1) 70W MH (90 VA TOTAL LOAD)	120V RECESSED MOUNTED WITH ZERO DEGREE BALLAST, 70W METAL HALIDE, PROVIDE VANDAL RESISTANT COVER.
S	LITHONIA #TDM-232-120-GEBS	120	(4) FO32T8/41K (112 VA TOTAL LOAD)	8' EXTERIOR WALL MOUNTED BACK LIGHTING WITH ZERO DEGREE BALLAST, WALL MOUNTED UNDER AWNING AT 9'-6" AFG.
S1	LITHONIA #DM-232-120-GEBS10RS	120	(2) FO32T8/41K (56 VA TOTAL LOAD)	4' EXTERIOR WALL MOUNTED BACK LIGHTING WITH ZERO DEGREE BALLAST, WALL MOUNTED UNDER AWNING AT 9'-6" AFG.
W1	VOIGT LIGHTING #TIMO-400-1T8-32W-120-OP-TRW-8-WH	120	(4) FO32T8/41K (141 VA TOTAL LOAD)	8' EXTERIOR RECESSED FIXTURE. LOCATE IN EXTERIOR NICHE (DAMP LOCATION) WITH ZERO DEGREE BALLAST.



PHOTOMETRIC NOTES

- A. THIS PLAN REPRESENTS A SOFTWARE SIMULATED PHOTOMETRIC STUDY OF THE EXTERIOR SITE LIGHTING. IT WAS CREATED UNDER THE ENGINEER'S SUPERVISION; HOWEVER THE ENGINEER DOES NOT WARRANT THE ACCURACY OF THE SOFTWARE OR LIGHT FIXTURE DATA. VISUAL 2.06.0215 SOFTWARE WAS USED TO GENERATE THIS DOCUMENT ALONG WITH THE IES DATA FILES PROVIDED BY THE LIGHT FIXTURE MANUFACTURER. THIS PLAN INDICATES THE SIMULATED LIGHT INTENSITY CALCULATED IN FOOT CANDLES AT GRAD LEVEL. THE SIMULATION DOES NOT TAKE INTO EFFECT A CHANGE IN GRADE ELEVATION. THE LIGHT LEVELS ARE CALCULATED ON A HORIZONTAL PLANE 0 FT AFG.
- B. PHOTOMETRIC CALCULATION DATA:
B.1. LUMINAIRE LIGHT LOSS FACTOR EQUALS 0.75.
B.2. MEAN LAMP LUMENS WERE USED FOR IES CALCULATIONS



01 SITE PHOTOMETRIC PLAN

SCALE: 1"=20'-0"

02 SITE LIGHTING STANDARD

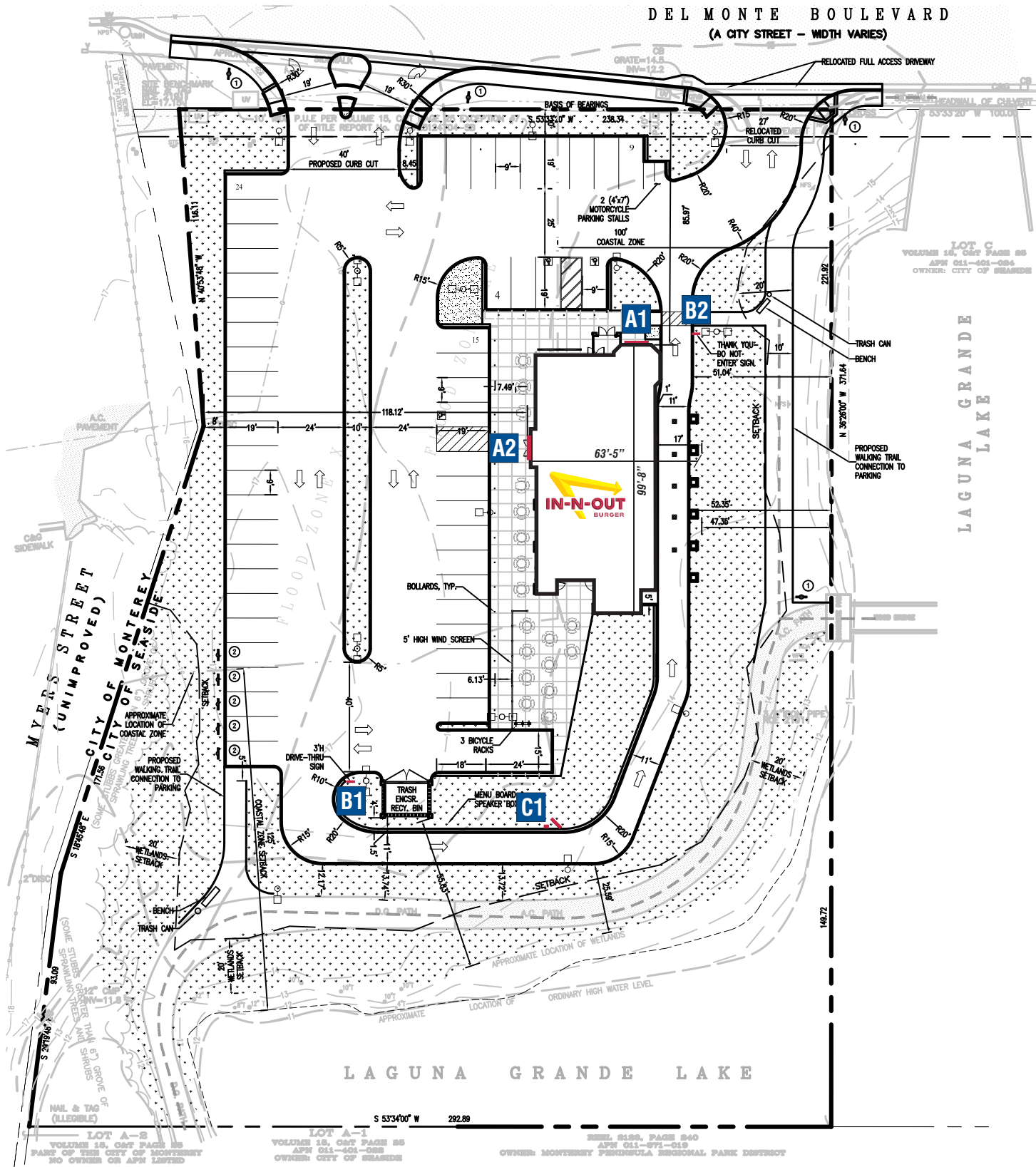
SCALE: NOT TO SCALE

GENERAL NOTE:
REFER TO STRUCTURAL PLANS FOR POLE BASE STRUCTURAL DETAIL 08/SD01.





SITE PLAN
SCALE: 1"=50'-0"



KEY

- A1** S/F 6'-5 1/8" X 10'-6 1/8" INTERNALLY ILLUMINATED WALL SIGN (49.5 SQ. FT.)
- A2** S/F 6'-5 1/8" X 10'-6 1/8" INTERNALLY ILLUMINATED WALL SIGN (49.5 SQ. FT.)
- B1** D/F INTERNALLY ILLUMINATED DIRECTIONAL DISPLAY ("DRIVE THRU")
- B2** D/F INTERNALLY ILLUMINATED DIRECTIONAL DISPLAY ("THANK YOU/DO NOT ENTER")
- C1** S/F INTERNALLY ILLUMINATED MENU BOARD

CLIENT



PROJECT
IN-N-OUT #XXXX

LOCATION
1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE
SITE PLAN AND SIGN KEY

ACCT. REP:
DANIEL GONZALEZ
DESIGNER
JARED McCARTER

DATE
07/30/09
SCALE
NOTED

CUSTOMER APPROVAL

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DWG#	09-599	PROJECT #	307940
REVISION NO.	7	WO#	000000

REVISIONS					
1	07/31/09	AW	7	03/13/15	JR
2	08/05/09	AW	8		
3	08/10/09	AW	9		
4	03/25/10	JM	10		
5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.



WEST/FRONT ELEVATION

SCALE: 1/8" = 1'-0"



SOUTH/RIGHT ELEVATION

SCALE: 1/8" = 1'-0"

CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

ELEVATIONS

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

NOTED

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5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.

A1 A2

3 of 10



EAST/REAR ELEVATION

SCALE: 1/8" = 1'-0"



NORTH/LEFT ELEVATION

SCALE: 1/8" = 1'-0"



SIGNS & GRAPHICS

4530 Mission Gorge Place
San Diego, CA 92120
Tel: 619.283.2191
Fax: 619.283.9503
Web: www.cnpsigns.com

CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

ELEVATIONS

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

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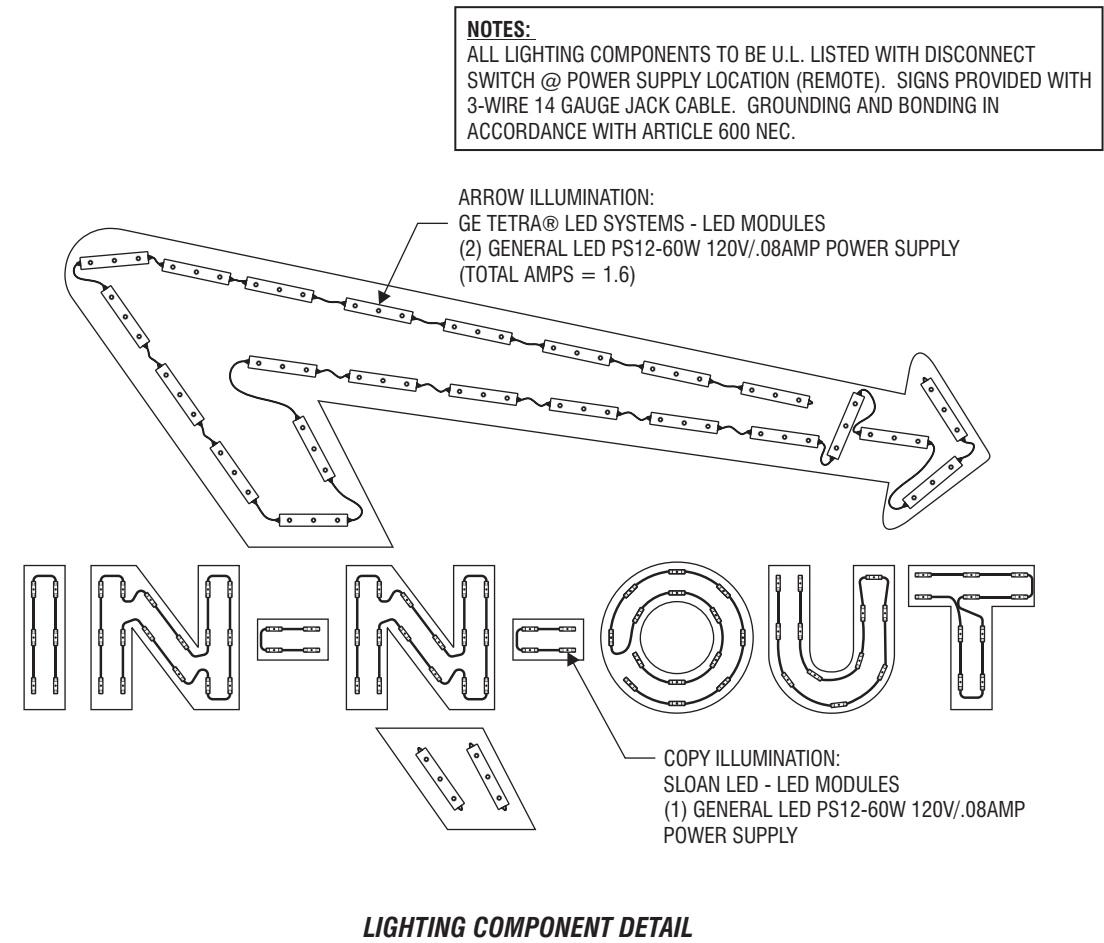
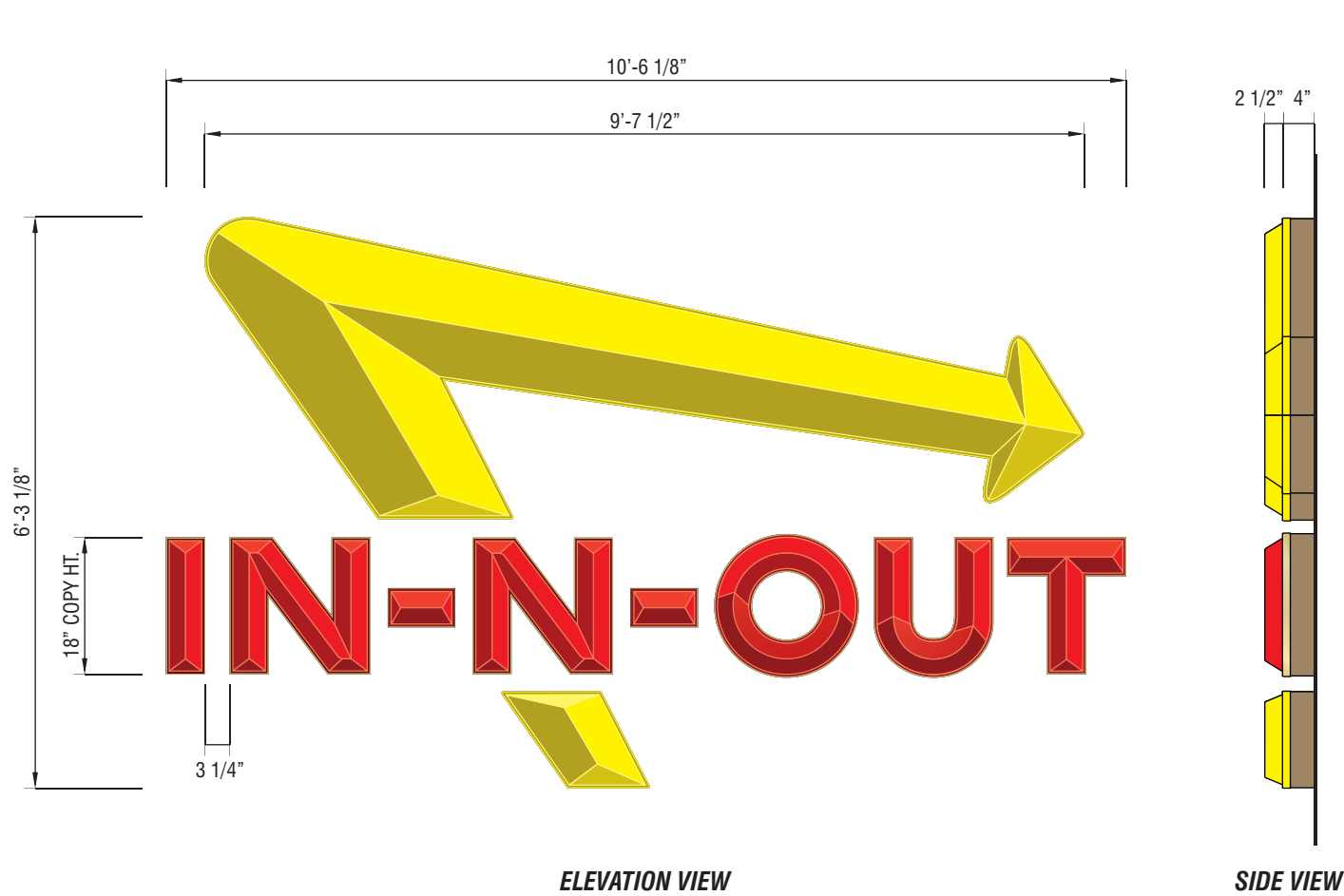
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5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.



S/F 6' X 10' ILLUMINATED WALL SIGN

SCALE: 1/2" = 1'-0"

SIGN SPECIFICATIONS:

S/F INTERNALLY ILLUMINATED ALUMINUM CHANNEL LETTER SIGN DISPLAY WITH FORMED COPY & ARROW. COLORS/ MATERIAL PER BELOW:

ARROW:
FABRICATED CHANNEL WITH RETURNS PAINTED TO MATCH BUILDING W/ SATIN FINISH. FORMED YELLOW #2037 ACRYLIC FACES. LED ILLUMINATION (SEE ABOVE).

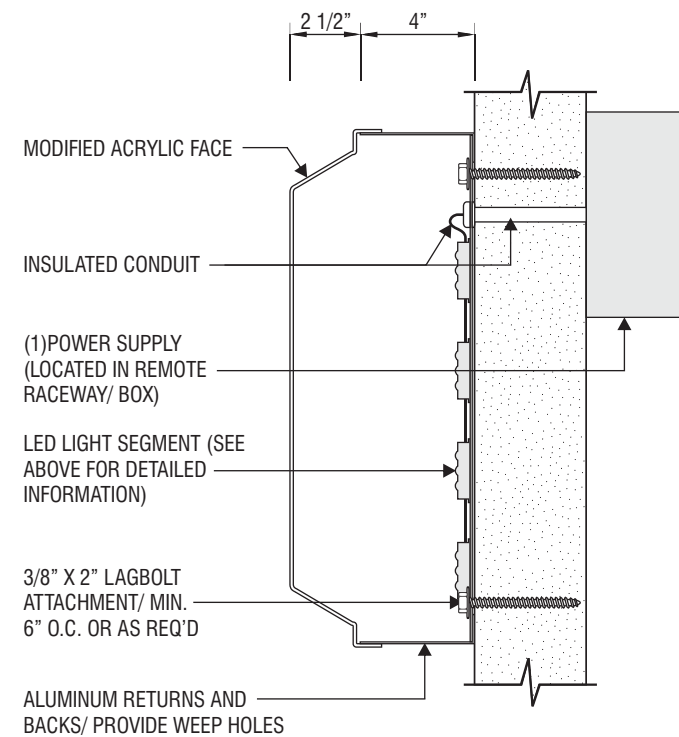
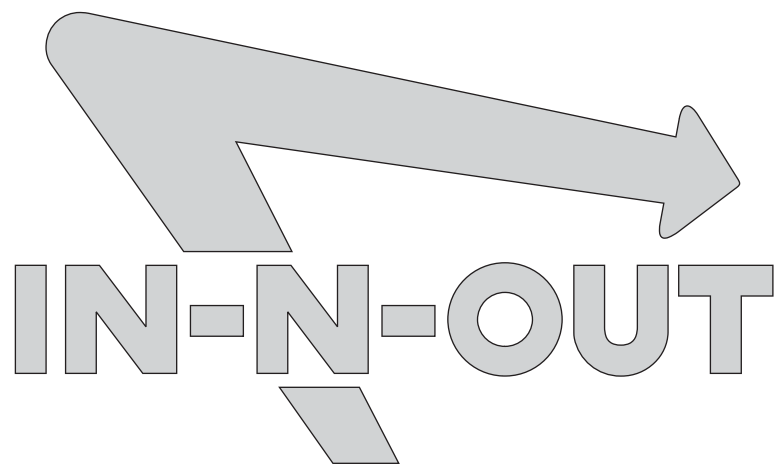
COPY:
FABRICATED CHANNEL WITH RETURNS PAINTED TO MATCH BUILDING W/ SATIN FINISH. FORMED RED #211-1 ACRYLIC FACES WITH 1" GOLD TRIMCAP. RED LED ILLUMINATION (SEE ABOVE).

CHANNEL LETTERS TO BE 4" DEEP/ ALL SIGNS TO BE INSTALLED ONTO BUILDING AS REQUIRED.

SQUARE FOOTAGE CALCULATIONS:

UPPER ARROW:	15.6 S.F.
COPY:	11.0 S.F.
LOWER ARROW:	1.3 S.F.
TOTAL SIGN AREA:	27.9 S.F.

NOTE: GRAY INDICATES CALCULATED AREA



SECTION DETAIL (NOT TO SCALE)

CLIENT



PROJECT
IN-N-OUT #XXXX

LOCATION
1350 DEL MONTE, SEASIDE, CA

SHEET TITLE
WALL SIGNS

ACCT. REP:
DANIEL GONZALEZ
DESIGNER
JARED McCARTER

DATE
07/30/09
SCALE
NOTED

CUSTOMER APPROVAL

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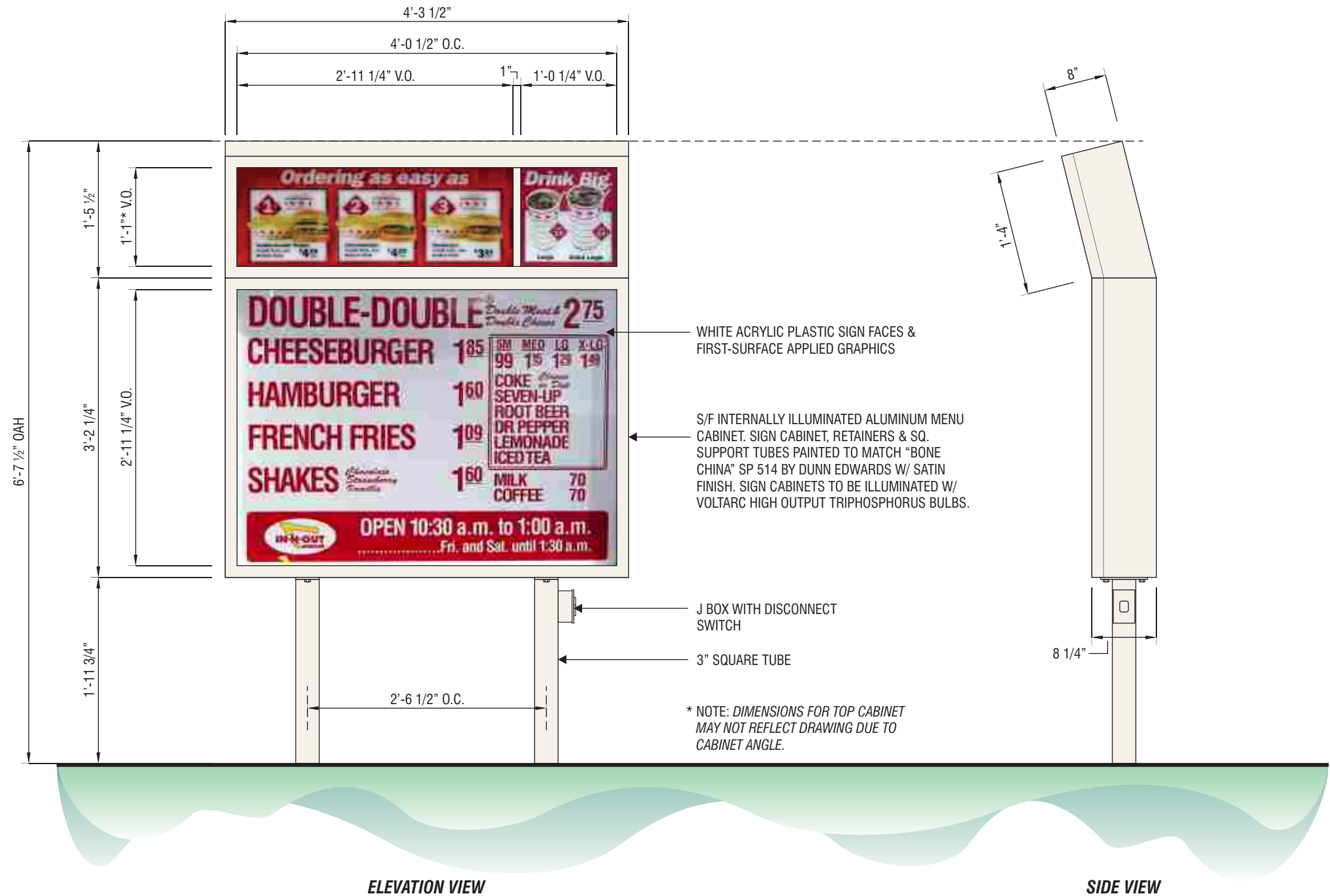
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REVISION NO.	7	WO#	000000

REVISIONS					
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6	03/10/15	GMc	12		

KEY NO.

A1 A2



S/F INTERNALLY ILLUMINATED MENU BOARD @ 6'-7 1/2" OAH (19.9 SQ. FT.)

SCALE: 3/4" = 1'-0"



SIGNS & GRAPHICS

4530 Mission Gorge Place
San Diego, CA 92120
Tel: 619.283.2191
Fax: 619.283.9503
Web: www.cnpsigns.com

CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

MENU BOARD

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

NOTED

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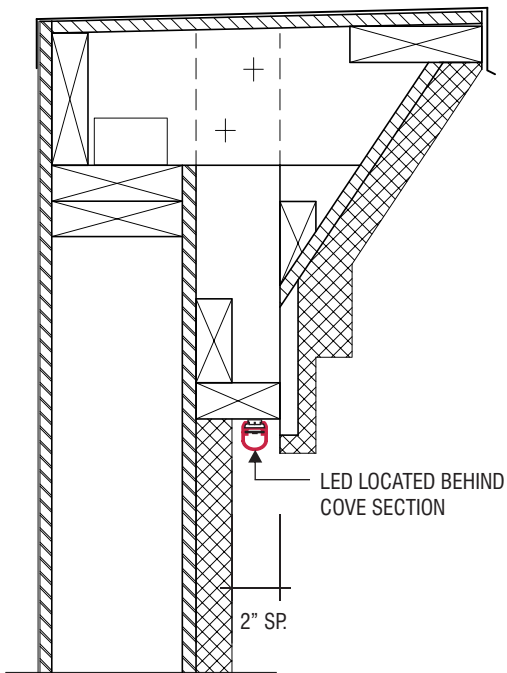
DWG#	09-599	PROJECT #	307940
REVISION NO.	7	WO#	000000

REVISIONS

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2	08/05/09	AW	8		
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5	03/26/10	JM	11		
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KEY NO.

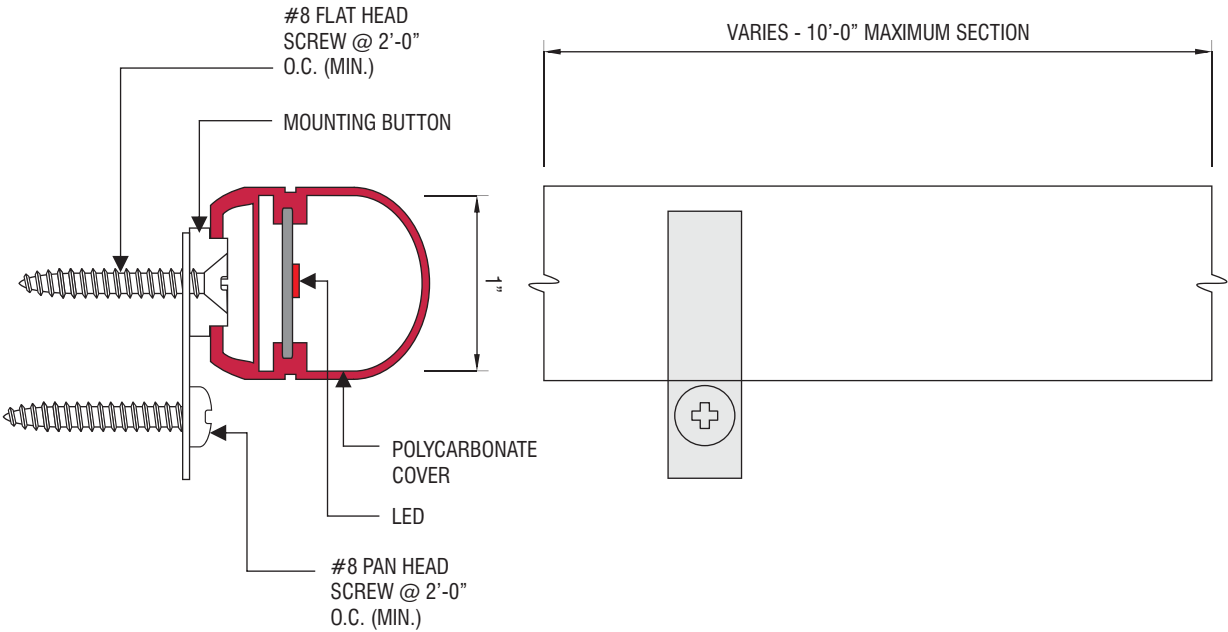




NOTE: EXAMPLE ONLY.
ACTUAL PARAPET DESIGN
AND DIMENSIONS MAY VARY.

PARAPET SECTION DETAIL

SCALE: 1 1/2" = 1'-0"



STANDARD SPECIFICATIONS

'SLOAN' LED RED LIGHTING SYSTEM. ALL ELECTRICAL COMPONENTS
TO BE UL LISTED. ATTACH TO WALL AS REQUIRED.

LED BORDER DETAIL

FULL SIZE



SIGNS & GRAPHICS

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CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

LED STRIPS

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

NOTED

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KEY NO.



COLOR SPECIFICATIONS

C1  RED ACRYLIC #211-1

NON-ILLUMINATED 12” ADDRESS NUMERALS

SCALE: 3" = 1'-0"

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6	03/10/15	GMc	12		

KEY NO.



INTERIOR NEON SIGN

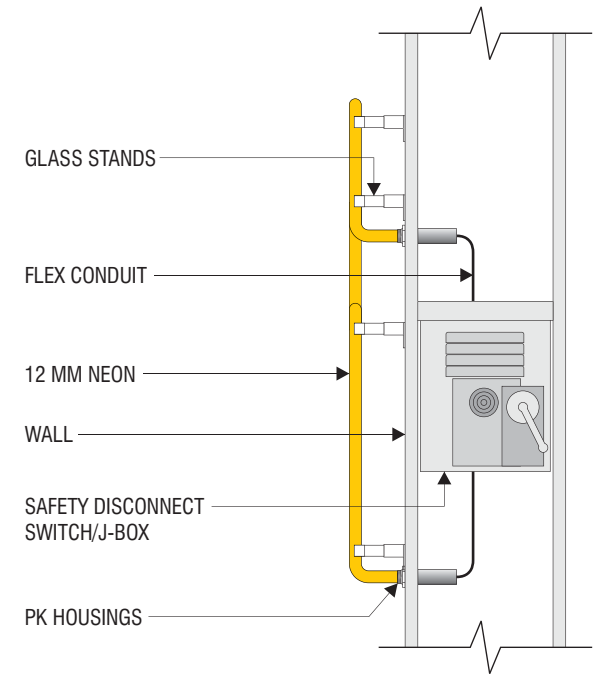
SCALE: 1 1/2" = 1'-0"



NOTE: DISPLAY TO BE CENTERED TOP TO BOTTOM & LEFT TO RIGHT

INSTALLED NEON DISPLAY (TYP.)

NOTE: NEON SIGN IS ORIENTED FOR INTERIOR VISIBILITY ONLY



NEON DETAIL
SCALE: NTS

CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

INTERIOR NEON DISPLAY

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

NOTED

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5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.



Model TIMO Slotlighter LED

The new Timo LED Slotline fixture by Voigt is a new LED slimline fixture featuring LED light engines. The fixture is ideal for interior and Exterior applications that are designed with a more modern approach to their lighting needs. Enabling designers to show a clean uncluttered fixture look.

The Architecturally pleasing extruded aluminum luminaire is excellent for use in Offices, Hospitals, Schools, Retail spaces, and more. The unit is designed for recess drywall applications for ceiling, Pendant or wall mount applications and is offered in lengths from 2' and up as well as custom. The Timo is also available in widths of 2-1/2", 4" and now in Direct and indirect options.

The Timo Slotline offers great energy savings for today's energy conscious green environment consumer.

- Standard Features and optional Features;
- Extruded Aluminum Housing • Clean Site line • Prismatic lens
- Opal lens • Universal LED driver compatible with Dimming Ballast, Dali, DMX, Triac and 0-to 10v • Emergency Ballast

Project

Notes

Configure product using standard options.
For other custom options contact Voigt.

Example:

Timo

Slotline LED

750LM-

4100K

DI

OP

REC

4'

WH

120

BAT-1

fixture Series	LED	optics	lens	mounting	length	finish	voltage	options
Timo Slotline LED	750lm-4100k	DI	HPFR	REC	4'	WH	120	BAT-1
T-307-SL-LED	450LM-lumens per foot-4w per foot	DI Direct	HPFR-High Performance Frost	REC-Specify Ceiling Type	Specify length desired for fixture	WH-White	UNIV-120V/277V	BAT-1-remote battery backup
	750LM-Lumens per foot-8w per foot		Pr-Prismatic lens	FL-Flange		DB-Dark Bronze		BAT-2-Integral battery backup (available in 4' width fixture only)
T-3074-4"-Wide	1200LM-lumens per foot-12w per foot		OP-Opal	FLL-Flange Less		SIL-Silver		SPPL-Special Chicago Plenum
T-3084 Direct/Indirect	1500LM-lumens per foot-13w per foot		LV-Parabolic Louver	SM-Surface Mount		For Custom Colors Contact Voigt		WL- Wet Label
Tested To: LM-79 LM-80 L-70	Color Temps: 3000,3500, 4100k-Indicate after designated lumen package.		Specify DF-Door Frame Lens SNIL-Snap in lens	PM-Pendant Mount (specify length in inches for stem)				Recess Wall Surface
				AC-Air Craft Cable (specify length in inches)				DIMM- 0-10V Compatible
								DALI- Dali Converter
								CRL-Continuous Run Length (specify length)
								ASYM- Asymmetric Reflector

TIMO Slotlighter LED

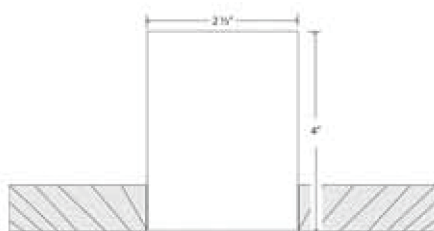
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- Emergency Ballast

Fixture Diagram In Hard Ceiling



(Lens or optional louver)

TIMO Air Craft Cable / Stem Mount



TIMO Surface Mount / Wall Mount



TIMO Direct / Indirect



TIMO Recess For wall or ceiling



FEATURES & SPECIFICATIONS

INTENDED USE — An attractive and energy-efficient surface-mounted or suspended LED luminaire, suitable for wet, damp and/or cold locations. For challenging situations where relatively low fixture mounting heights and wide fixture spacings are common — such as industrial facilities, parking garages, retail malls, multi-purpose rooms, garden centers, and airports. **Certain airborne contaminants can diminish integrity of acrylic. [Click here for Acrylic Environmental Compatibility table, for suitable uses.](#)**

CONSTRUCTION — One-piece SVA fiberglass housing with integral perimeter channel utilizing continuous poured-in-place closed cell gasket. Approved as a wireway and through wiring. Tool-less driver and wiring access. Stainless steel latches are standard. Polycarbonate latches also available (See Options).

Power connection is easily accommodated through pre-drilled holes at each end, with wet location fittings provided for maximum flexibility. Easily mounted to ceilings and structure, or suspended with chain, cable or rod, using stainless steel mounting brackets (included).

OPTICS — 100% impact modified frosted acrylic lens with lineal ribs. Also available is an optically clear or frosted deep acrylic lens.

ELECTRICAL — Utilizes high-efficiency LED's on metal core circuit boards. 4100 Kelvin temperature standard with additional color temperatures also available. High efficiency driver operates 120V through 277V, 50-60HZ. Integral surge protection tested in accordance with IEEE/ANSI C62.41.2 to Category C Low. Includes a temperature-sensing component that will limit the temperature of the LEDs in case of excessive ambient temperatures or misapplication. 0-10V dimming driver standard.

Expected service life of 60,000 hours at 80% lumen maintenance (L80); predicted life of more than 100,000 hours.

INSTALLATION — Fixture can be ceiling or suspended mounted. Stainless steel mounting brackets included (two per luminaire), pre-punched for easy field-attachment of bolts, screws and other mounting hardware. Covered ceiling is not required to maintain wet location listing or IP rating.

LISTINGS — CSA certified to UL and C-UL standards. Listed for wet locations in ambient temps ranging from -30°C to 25°C when fixture is surface mounted or up to 40°C when fixture is suspended at least 6" from ceiling (driver would have 3 year warranty). IP65, IP66 and IP67 rated. NSF splash-zone certified and meets FDA/USDA guidelines. See "FEM LED Specification Matrix" for ambient temperature listing.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Actual performance may differ as a result of end-user environment and application.

Note: Specifications subject to change without notice.

Catalog Number
Notes
Type

Low-Profile Enclosed and Gasketed Industrial

FEM LED

CEILING/ SUSPENDED MOUNT



ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: FEM4 LED 4L/57 IMAFL

Series	/ Lumens/Color temperature ¹				Diffuser	Distribution		Voltage	
FEM4 LED 4'	Nominal Lumens		Color temperature		IMAFL Acrylic, lineal ribbed frosted lens	(blank)	General distribution	(blank)	MVOLT
FEM8 LED 8'	3L	3000 lumens	(blank)	4100K (CRI 65)	IMACD Acrylic, clear deep lens	SD	Spread distribution	120	120V
	4L	4000 lumens	27	2700K (CRI 80)	IMAFD Acrylic, clear deep frosted lens			277	277V
	6L	6000 lumens	35	3500K (CRI 80)					
	9L	9000 lumens	57	5700K (CRI 70)					
			AMB	Amber LED					

Options									
CS89	Cord set - NEMA type STW 16/3, 6', 600V, white, no plug, wet location				L/SP	Less surge protector		WLF	Wet location fitting (pre-installed on top of housing) ⁵
CS89L12	Cord set - NEMA type STW 16/3, 12', 600V, white, no plug, wet location				DIM	Pre-wired for 0-10V low-voltage dimming (100-10%)		WLFEND	Wet location fitting (one end)
CS88	Cord set - Brad Harrison 3P male straight 600V molded plug, 6' type ST00W yellow PVC cord, 16/3				DIM2	Line-voltage power control (100%-50%) ³		PLCL	Polycarbonate latches
CS88L12	Cord set - Brad Harrison 3P male straight 600V molded plug, 12' type ST00W yellow PVC cord, 16/3				MSI ____	Wet location 360° motion sensor pre-wired for ON/OFF operation ^{2,4}		DPMB	Dual pendant mounting bracket
					TRS	Tamper resistant Torx® T10 Screws			

Accessories: Order as separate catalog number.	
HC36	Hook and 36" chain (ships as pair)
MHHK120	10' single leg air craft cable
MHHK120SS	10' single leg air craft cable, stainless steel
RK1 T10DRV	Torx® T10 screwdriver for TRS option
FEMDPMB	Dual pendant mounting bracket (ships as a pair)

Notes

- The CCT value provided is of lamp source and actual CCT will vary upon levels.
- Must specify voltage.
- Available with 8' only.
- For mounting up to 8', specify MSI8; for mounting up to 20', specify MSI20; for mounting up to 40', specify MSI40.
- WLF option does not meet NEMA 4X.

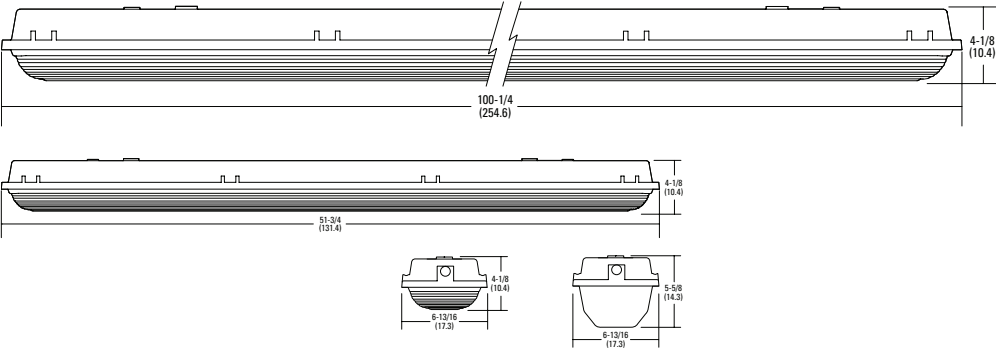
FEM LED Low-Profile Enclosed and Gasketed Specular

DIMENSIONS

Specifications subject to change without notice.
All dimensions are inches (centimeters) unless otherwise indicated.

FEM LED Specification Matrix*										
Fixture	System watts	Actual lumens	mA	Max. ambient temp. (°C)		Width	IMAFL depth	IMACD or IMAFD depth	Length	Comparable fluorescent/HID
				Suspended**	Surface mounted					
FEM4 3L	39	3418	350	40	25	7 (17.8)	4 3/4 (12.1)	6 1/8 (15.5)	52 (132.1)	1-lamp 32W T8, 1-lamp 54W T5HO, 70W MH
FEM4 4L	61	4728	525	35	25	7 (17.8)	4 3/4 (12.1)	6 1/8 (15.5)	52 (132.1)	2-lamp 32W T8, 70W HPS
FEM8 6L	78	6836	350	40	25	7 (17.8)	4 3/4 (12.1)	6 1/8 (15.5)	100 1/4 (254.6)	3-lamp 32W T8, 2-lamp 54W T5HO, 100W HPS, 100W MH
FEM8 9L	122	9456	525	25	25	7 (17.8)	4 3/4 (12.1)	6 1/8 (15.5)	100 1/4 (254.6)	4-lamp 32W T8, 150W MH

*Values based on 4100K LEDs and deep clear acrylic lens. Calculations are estimated results for general informational purposes only. Results may vary depending on the application.
** Fixture must be suspended at least 6" below ceiling.



PHOTOMETRICS

See www.lithonia.com for photometry reports.

KSF

Spec-Form®



Intended Use

For car lots, street lighting or parking areas.

Construction

Housing: Rugged, heavy-gauge, aluminum rectilinear housing. All seams continuously welded for weathertight integrity.

Doorframe: Natural anodized, extruded aluminum frame with mitered corners, retained with two hinge pins and secured with one quarter-turn, quick-release fastener. Integrally designed, extruded silicone gasket provides weatherproof seal between housing and frame.

Finish: Dark bronze polyester powder finish standard. Additional architectural colors available; see www.lithonia.com/archcolors.

Optics

Optics: Anodized segmented reflectors provide superior uniformity and control. KSF1/KSF2 reflectors are rotatable and interchangeable. KSF3 Type IV is rotatable. Five cut-off distributions available: R2 (roadway), R3 (asymmetric), R4SC (forward throw, sharp cutoff), R4W (wide, forward throw), R5S (square).

Lens: .125" thick, impact-resistant tempered glass with thermally applied, silk-screened power door shield.

Electrical

Electrical components mounted to heavy-gauge plate to maximize heat dissipation and structural integrity. Ballast: All ballasts are 100% factory tested. High reactance, high power factor for 150W and below. Constant wattage autotransformer 175W and above. MH: 150W and below are standard with pulse-start ignitor technology. Super CWA Pulse Start ballasts, 88% efficient and EISA legislation compliant, are required for 151-400W (must order SCWA option) for U.S. shipments only. CSA, NOM or INTL required for probe start shipments outside the U.S.

Socket: Horizontally oriented, mogul-base porcelain socket for 175W and above, medium base for 150W and below, with copper alloy, nickel-plated screw shell and center contact. UL Listed 1500W-600V, 4KV pulse rated.

Installation

Mounting: Extruded aluminum arm for square pole mounting shipped in fixture carton as standard. Optional mountings available.

Listings

UL Listed (standard). CSA Certified or NOM Certified (see Options). UL Listed for 25°C ambient and wet locations. IP65 rated.



ORDERING INFORMATION

For shortest lead times, configure products using **bolded options**.

Example: KSF1 250S R3 TB SP09 LPI

Series	Lamp type ¹			Distribution		Voltage	Ballast		Mounting				▶▶▶	
KSF1	<u>High pressure sodium</u> ²	<u>Metal halide</u>	1000M ⁶	R2	Type II roadway ⁸	120	(blank)	Magnetic ballast	<u>Arm mounting</u>		WB09	9" arm for wall	<u>Optional mounting, ships separately</u> ^{15, 16}	
KSF2		<u>Metal halide</u>	R3	Type III asymmetric	208 ¹¹	CWI		Constant wattage isolated ¹³	SP04	4" arm for square pole ¹⁴	WW09	9" arm for wood pole or wall		
KSF3		100M ²	<u>ceramic</u> ⁷	R4	Type IV, FT ^{9, 10}		240 ¹¹	Super CWA ballast	RP04	4" arm for round pole ¹⁴		KMA	External mast arm adaptor	
		70S	150M	R4SC	Type IV, FT, sharp cutoff ⁸	277	SCWA		WB04	4" arm for wall	SP12	12" arm for square pole	DA12P	12" degree arm for pole
		100S	175M ³	R4W	Type IV, FT, wide ^{8, 9}	347			WW04	4" arm for wood pole or wall	RP12	12" arm for round pole	DA12WB	12" degree arm for wall
		150S	200M ⁴	R5S	Type V symmetric square ⁹	480 ¹¹			SP09	9" arm for square pole ¹⁴	WB12	12" arm for wall	KTMB	Twin mounting bar
		250S	250M			TB ¹²			RP09	9" arm for round pole ¹⁴	WW12	12" arm for wood pole or wall		
		400S	320M ^{4, 5}			23050HZ ¹³								
	1000S	350M ^{4, 5}												
		400M ⁵												

Options

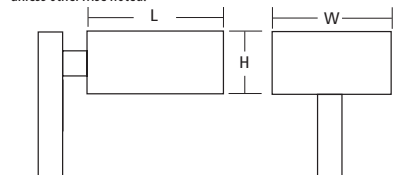
Options	Finish	Lamped
Ships installed	(blank) Dark bronze (std.)	LPI Lamp included
SF Single fuse, 120V, 277V, 347V	DBL Black	L/LP Less lamp
DF Double fuse, 208V, 240V, 480V	DGC Charcoal gray	
EC Emergency circuit ¹⁷	DMB Medium bronze	
QRS Quartz restrike system ¹⁷	DNA Natural aluminum	
PER NEMA twist-lock receptacle only ¹⁸	DWH White	
KW1 Kilowatch 120V control ¹⁹	CR Enhanced corrosion resistance	
KW4 Kilowatch 277V control ¹⁹	CRT Non-stick protective coating (black)	
CSA Meets Canadian standards		
NOM Meets Mexican standards (consult factory)		
INTL Available for MH probe start shipping outside the U.S.		
Ships separately ¹⁵		
PE1 NEMA twist-lock PE (120V-240V)		
PE3 NEMA twist-lock PE (347V)		
PE4 NEMA twist-lock PE (480V)		
PE7 NEMA twist-lock PE (277V)		
SC Shorting cap for PER option		
HS House-side shield ²⁰		
VG Vandal guard ²⁰		

ADDITIONAL INFORMATION

For additional product information, visit www.lithonia.com.

CONFIGURATIONS		
SERIES	LAMP TYPE	DISTRIBUTION
KSF1	70S, 100S, 100M, 100MHC, 150S, 150M, 150MHC, 175M, 200M, 250M	R2, R3, R4SC
KSF2	250S, 320M, 350M, 400S, 400M	R2, R3, R4SC, R4W, R5S
KSF3	1000S, 1000M	R3, R4, R5S

Drawings are for dimensional detail only and may not represent actual mechanical configuration. Dimensions are shown in inches (centimeters) unless otherwise noted.



KSF1	KSF2	KSF3
EPA: 1.5 ft ² (0.14 m ²)	2.0 ft ² (0.19 m ²)	3.0 ft ² (0.28 m ²)
Length: 21-1/4 (54.0)	24-5/8 (62.5)	29-5/8 (75.2)
Width: 15-1/2 (39.3)	17-3/4 (45.1)	23-5/8 (59.9)
Height: 7-1/4 (18.4)	8-3/8 (21.1)	10-1/2 (26.7)
Max. weight: 35 lbs (15.9 kg)	52 lbs (23.6 kg)	80 lbs (36.3 kg)

Notes

- Specify lamp type and distribution. See Configurations table.
- Not available with SCWA.
- Universal, mogul base lamp allows KSF to be available with SCWA.
- Must be ordered with SCWA.
- Must use ED28 lamp.
- Must use BT37 lamp with R5S.
- Not applicable with L/LP.
- Not available KSF3.
- Not available KSF1.
- Not available KSF2.
- Must specify CWI for use in Canada.
- Optional multi-tap ballast (120V, 208V, 240V, 277V). In Canada 120V, 277V, 347V; ships as 120V/347V.
- Consult factory for available wattages.
- KSF1, KSF2 must use 9" arm, KSF3 must use 12" arm when mounting two luminaires at 90°.
- May be ordered as accessory.
- Must specify finish.
- Maximum allowable wattage lamp included.
- Photocell not included.
- Available with 150S, 250S and 400S only.
- Prefix with fixture name and size. VG: KSF1VG, KSF2VG. HS: KSF1HS, KSF2HS (for use with R2 or R3); KSF3HS (for use with R3 or R4).

In-N-Out Restaurant

Outside Seating and Umbrella Design and Trash Receptacle Design



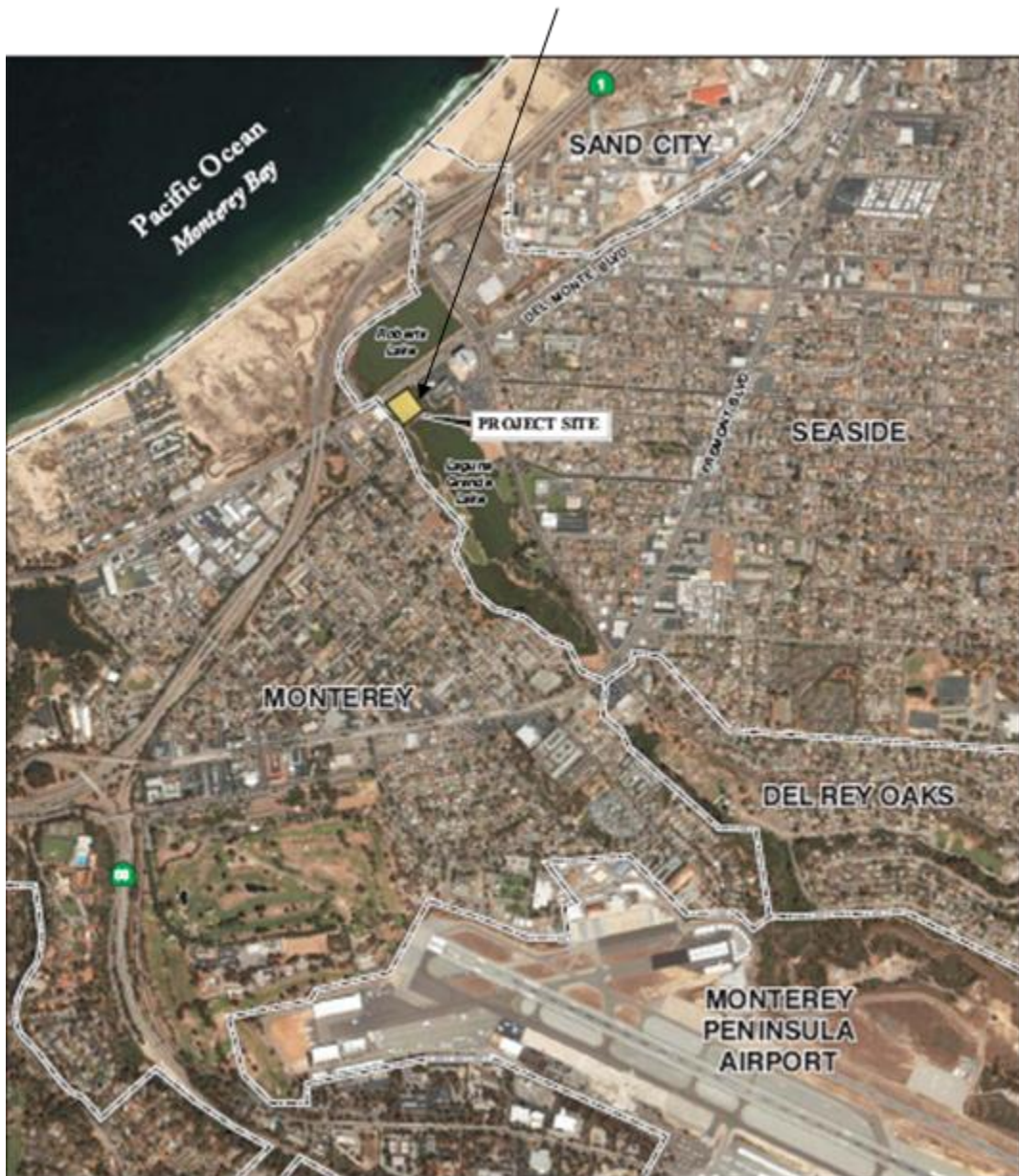
Reinforced Concrete Table and Bench

Red and White Fiberglass Umbrella

Concrete Trash receptacle with aggregate pebble finish

Location Map

Project Site: 1350 Del Monte Boulevard (APN: 011-401-023)



Coastal Zone Boundary Figure

Project Site: 1350 Del Monte Boulevard (APN: 011-401-023)



LEGEND	
 Wetland Boundary	 City Boundaries
 Coastal Zone Boundary	 Pedestrian/Bicycle Trail
 20 Foot Setback	
 50 Foot Setback	



View of Del Monte Boulevard Frontage looking east toward Laguna Grande Lake and Park



View of Del Monte Boulevard Frontage looking south



View of project site looking north



View of project site from walking bridge looking south



View from the pedestrian trail/bike path connection at walking bridge on north side looking southeast.



View from walking bridge connection with the pedestrian trail/bike path on north side looking southwest

December 19, 2013

Ms. Daphne Hodgson, Deputy City Manager-Administrative Services
City of Seaside
440 Harcourt Avenue
Seaside, CA 93955

Dear Ms. Hodgson:

Subject: Approval of Oversight Board Action

The City of Seaside Successor Agency (Agency) notified the California Department of Finance (Finance) of its October 28, 2013 Oversight Board (OB) resolution on November 7, 2013. Pursuant to Health and Safety Code (HSC) section 34179 (h), Finance has completed its review of the OB action.

Based on our review and application of the law, the Agency's OB Resolution No. 2013-13, approving an Exclusive Negotiating Agreement (ENA) by and between the Agency and In-N-Out Burgers (INO) for development of a restaurant at 1350 Del Monte Boulevard, is approved.

The Agency proposes to enter into an ENA in order to establish the terms and conditions of a purchase and sale agreement that will lead to the disposition of this property at no financial cost to the Agency. It is our understanding INO will bear all costs associated with the ENA and will deposit funds with Agency in advance of incurring costs.

The Agency has not received a Finding of Completion. Pursuant to HSC section 34191.3, the provisions for the disposition of real property assets shall be suspended, except as those provisions apply to transfers for governmental use, until Finance has approved a Long-Range Property Management Plan (LRPMP), at which point the plan shall govern, and supersede all other provisions relating to the disposition and use of the real property assets of the former redevelopment agency. Therefore, upon receipt of a Finding of Completion from Finance, the property identified in the ENA must be included in the Agency's LRPMP for submission to Finance for review and approval before final disposition.

Please direct inquiries to, Nichelle Thomas, Supervisor, or Michael Barr, Lead Analyst at (916) 445-1546.

Sincerely,



JUSTYN HOWARD
Assistant Program Budget Manager

Ms. Daphne Hodgson
December 19, 2013
Page 2

cc: Ms. Lisa Brinton, Redevelopment Project Manager, City of Seaside
Ms. Julie Aguero, Auditor Controller Analyst II, Monterey County
California State Controller's Office
Mr. Steven Mar, Bureau Chief, Local Government Audit Bureau, California State
Controller's Office



**CITY OF SEASIDE
STAFF REPORT**

Item No.: 4.B.

TO: Board of Architectural Review

BY: Lisa Brinton, Community and Economic Development Services Manager
Diana Ingersoll, Deputy City Manager Resource Management Services
Rick Medina, Senior Planner

DATE: March 25, 2015

SUBJECT: **Board of Architectural Review Application No. BAR 15-06.** City of Seaside Successor Agency, property owner, and In-N-Out Burger Restaurant (Mark Nowak), applicant, are requesting Design Review and Sign Permit approval for the construction of a new 3,750 square-foot In-N-Out Burger Restaurant with a Drive-Through Aisle located at 1350 Del Monte Boulevard in the Coastal Visitor Serving Commercial (CVSC) Zoning District (APN: 011-401-023).

PURPOSE:

In accordance with section 17.62.030.b.1 of the seaside municipal code (smc), the applicant is requesting design review and sign permit approval for the construction of a new one story, 3,750 square foot in-n-out burger restaurant with associated site improvements (e.g. Drive thru window/aisle, landscaping, and signs).

RECOMMENDATION

Staff recommends approval of the architectural plans subject to the conditions of approval provided as Attachment 1 and the project plans provided as Attachment 1 -Exhibit A.

BACKGROUND

The project under consideration is for the development of a drive-through In-N-Out Burger restaurant on land owned by the Successor Agency to the Redevelopment Agency of the City of Seaside. Additionally, a portion of the project site is located within the City's Local Coastal Zone boundaries and would be subject to receiving the approval of a Coastal Development Permit (CDP). On July 21, 2011, the City of Seaside City Council certified a Final Environmental Impact Report (FFEIR) for a similar In-N-Out Burger Drive-Through Restaurant in accordance with the California Environmental Quality Act Guidelines. However, the proposed land use entitlements for the In-N-Out Burger Drive-Through Restaurant Project were not approved by the City Council due to the expiration and non-renewal of an Exclusive Negotiating Agreement

(ENA) for the proposed project. Subsequent to certification of the FEIR, a new ENA was entered into in October 2013 and a Purchase and Sales Agreement was entered into by In-N-Out Burger and the Successor Agency to the Seaside Redevelopment Agency of the City of Seaside on July 17, 2014. The previous project, as described and analyzed in the certified FEIR, has been modified by the Applicant and a new application has been submitted to the City for the consideration of a CDP, design review approval, and sign permit approval. In accordance with the CEQA guidelines, an Addendum to the FEIR was prepared to consider the impacts associated with the modifications to the In-N-Out Burger Drive Through Restaurant Project.

The Addendum to the FEIR has been prepared by the City of Seaside pursuant to the CEQA Guidelines Section 15164. The Addendum to the FEIR is intended to augment the certified FEIR and assess whether the new project design or the existing setting has changed which would result in impacts not previously assessed by the certified FEIR. The Addendum found that the revised project would remain consistent with the size and scope of the previous project design and no additional mitigation measures would be required. It was also determined that there have been no changes to the characteristics and setting of the project site and surrounding setting that would create new impacts not previously identified in the FEIR.

Subsequent to the certification of the FFEIR, the City's Local Coastal Program was certified by the California Coastal Commission in June 2013. In the revised project design has been designed in compliance with the applicable policies of the Land Use Plan (LUP) and the site standards and development standards of the City's Coastal Implementation Plan (CIP) of the LCP.

Prior to Board of Architectural Review taking action of the new architectural design, a public meeting is being held to provide the Planning Commission with an opportunity to receive information on the modified project design and to consider acceptance of the Addendum to the certified FEIR and the approval of a Coastal Development Permit for the project.

ENVIRONMENTAL REVIEW

In accordance with the Guidelines for Implementation of the California Environmental Quality Act (CEQA) (Article 11, Section 15164), an Addendum to the FEIR was prepared to describe minor technical modifications to the In-N-Out Burger Drive Through Restaurant Project for which an FEIR was previously certified on July 21, 2011 by the Seaside City Council. The Addendum includes the following Appendices:

1. Previously Certified Final Environmental Impact Report Figures
2. Revised Site Plan Figures
3. Local Coastal Plan: Land Use Plan, Coastal Implementation Plan Consistency Analysis, and Sea Level Rise Report
4. Letters from the Central Coast Regional Water Quality Control Board and Monterey County Department of Health
5. Traffic Impact Analysis

The Addendum to the Certified FEIR and the FEIR can be accessed at the following web

link: <http://www.ci.seaside.ca.us/index.aspx?page=226>.

SITE LOCATION AND DESCRIPTION

The project site is approximately 2.28 acres (ac) including an approximately 2.19 ac (95,317 square feet) parcel (Assessor's Parcel Number 011-401-023) and an approximately 0.094 ac City right-of-way easement that will be used for additional landscaping, curb, driveway, and sidewalk features. The project site is located on the southeast side of Del Monte Boulevard facing Roberts Lake to the north-northwest, and bordered by Laguna Grande Regional Park and Lake to the southeast. The channel connecting Roberts Lake with Laguna Grande Lake runs along the east-northeast boundary of the project site. The west-southwest boundary of the project site lies on the Seaside-Monterey city limit line (refer to Figure 3 in the Addendum to the FEIR, Conceptual Site Plan).

The northwest boundary of the project site is located along the border of the City of Seaside and the City of Monterey. Land uses within the vicinity of the project site include hotel, commercial, retail, and recreational facilities. Adjacent land uses consist of a 4-story, 143-room Holiday Inn Express to the north, a 2-story La Quinta Inn motel and Roberts Lake Open Space across from the project site on Del Monte Boulevard to the west, a lumber and hardware store and single family residential properties to the south, and Laguna Grande Regional Park Recreation Trail and Lake to the east (See Figure 1).

Figure 1: Project Site Adjacent Land Uses

NW	N			NE
	Roberts Lake	Holiday Inn Express	Laguna Grande Park and Lake	
W	Roberts Lake	Project Site	Laguna Grande Park and Lake	E
	Wallgreens Drug Store	M&S Hardware and Lumber	Single Family Dwellings	
SW		S		SE

The project site is visible from Cabrillo Highway (SR-1) and is located within 0.5 mi of the on and off ramps at Canyon Del Rey Boulevard (State Route 218). Additional regional access to the project site is provided by the Monterey-Salinas Highway (State Route 68). These highways connect the project site to the cities of the Monterey Peninsula, Salinas, San Jose, and San Francisco Bay area. Location Map is provided as Attachment 2. Site photographs are provided as Attachment 3.

PROJECT DESCRIPTION

Building Design

The project would develop an approximately 3,750 sf Drive-Through Restaurant and associated facilities, including indoor and outdoor patio dining totaling 159 seats, and a drive-through aisle/window and vehicle queue in the drive-through aisle that would accommodate stacking for

14 vehicles on a vacant 2.19 ac. parcel. The proposed restaurant would provide 53 parking spaces including three Americans with Disabilities Act (ADA) accessible spaces, one RV parking space, three bicycle racks, and two motorcycle parking stalls (refer to Figure 3 in the Addendum to the FEIR, Conceptual Site Plan).

The proposed style of the building primarily consists of the corporation's architectural prototype, to include the tower elements and roofing material, but with the addition of a stone veneer treatment along the lower elevations and use of brown exterior colors versus a more traditional white exterior body color with red trim that has been used predominantly at other In-N-Out locations.

The exterior walls are proposed to have a stucco (sand float texture) finish with vertical score lines with the main wall area to be painted Sherwin Williams Beige (SW7036) and Sherwin Williams Hopsack (SW6109) which consists of a deeper beige color. The lower four feet of the building walls are proposed to display a Coronado stone veneer wainscot treatment, consisting of Carmel Mountain and Eastern Ledge stone, around the entirety of the building with a taller stone veneer treatment exhibited on all column features.

Two PVC-wick coated fabric awnings with a Sherwin Williams Van Dyke (SW7041) dark brown finish would be located on the west and south building elevations. Each awning would be four-feet in height. The west elevation awning is proposed to be 22-feet long while the south elevation awning is proposed to be 20-feet long. Each awning would project three-feet from the face of the building's exterior wall and include a 1.5 –foot tall fascia. The bottom of the awning would be elevated 7-feet 10-inches from grade level.

The building would have three tower elements at 29 feet high, with a majority of the building proposed at 20 feet high at the top of the parapet. An elongated 14-foot high flat-roofed canopy, with six support columns, is proposed over the drive-up window area along the north elevation. Tower elements (only) are to be roofed with Eagle (Concord Blend) Capistrano style concrete tiles. The applicant is proposing a 12/4 roof pitch on the towers. The roof mounted mechanical equipment would be entirely screened by a 5.5-foot high parapet roof. The parapet roof would exhibit a finish, treatment, materials to match the exterior walls. As a result, the roof mounted equipment would be screened on all four sides and would not be visible.

Exterior Lighting

The outdoor lighting plan would include the following components: Four Lithonia lampposts with single-head lights flanking the two driveways on Del Monte Boulevard; five Lithonia lampposts with double-head lights within the median of the parking lot and two near the trash and recycling enclosure and outdoor seating area; two Lithonia lampposts with single-head lights on the southern boundary of the parking lot; two Lithonia lampposts with single-head lights along the drive-through service area; two single-head Lithonia lampposts flanking each side of the building entrance; five Lithonia down-lights under the building awnings; three Voigt Lighting recessed fixtures along the building facing the outdoor patio area; and five Gotham Lighting recessed fixtures under the drive-through canopy. A single strand Red LED band is proposed under the alcove of the towers and cornice of the building. The LED lighting is illustrated on the

sign plan elevations. The proposed restaurant would include two internally illuminated signs, which would be mounted on the west and south sides of the building walls, one drive-through menu board, and two directional signs at the entrance and exit locations of the drive-through. A photometric lighting plan is included as part of the project plans which demonstrates that the proposed lighting will be directed onto the project site would to prevent light bleed onto adjacent properties and that no lighting will from the project site will result in an illumination of greater than one-foot candle onto the adjacent residential properties to the south.

Outdoor Seating

The outdoor seating area proposes 18 tables and 76 permanent seats on the south and east sides of the restaurant building. Tables would include four seats with two disabled accessible tables including three seats and an open area for a wheel chair. The tables would consist of reinforced concrete. Each table would accommodate a flat red and white fiberglass umbrella six feet in height with a six-foot diameter. Umbrellas are not proposed to include logos or signage. Outdoor trash receptacles constructed of reinforced concrete shell with an exposed pebble aggregate will located within the outdoor dining area and parking lot. Additionally, five benches and five trash receptacles will be provided along the recreation path on the east side of the site. A walkway will be provided in front of the freestanding menu board sign to provide pedestrian access to the recreation trail and outdoor seating along the trail. Photographs of the tables and umbrellas are included as part of the project plans.

Landscaping

The project site will be landscaped on all four sides of the parcel with a variety of drought-tolerant plant species. In addition, where feasible and practical, landscaping will be designed to address post-construction water quality site design and Low Impact Design (LID) requirements.

Landscaping is required within each outdoor parking area at a minimum ratio of ten percent of the gross area of the parking lot for commercial uses. The project will include 35% of landscaping around the immediate area of the parking lot and will provide at least one shade tree for every five parking spaces. A total of 38 trees consisting of the following species are proposed:

1. Nine 24-inch box Western Rebud
2. Eight 36-inch box Monterey Cypress
3. Nineteen 24-inch box Toyon
4. Two Mexican Fan Palm, 19'-8" height

Landscaping will be a combination of groundcover, shrubs, and trees and will be concentrated along the perimeter of the project site, including at the primary entrances to help screen the restaurant from the street and adjoining properties. Shade trees will be provided at the minimum required rate of one for every twenty-five linear feet of landscaped areas and the proposed landscaping will also be properly oriented to provide pedestrian access to the restaurant without requiring them to cross unpaved landscaped areas. Additionally, trees will be grouped along the drive-through aisle and the northeast corner of the outdoor seating area to provide screening from

the recreational trail.

Trash Enclosure

A 20-foot long by 17-foot deep by 11-foot nine-inch tall roofed trash enclosure, with metal 18-inch gauge metal deck frame gate painted Accessible Beige (SW7036), and concrete access apron, is proposed to be located in the rear portion of the area, close to entrance to the drive-through aisle.. The approximately 340 square-foot enclosure would have CMU block walls finished with stucco and painted to match the building body and accent colors. The enclosure would have a cornice matching the architectural design of the restaurant building. The roof would consist of materials, finished treatment and a color to match the restaurant building.

Sound Wall

In accordance with Mitigation Measure 4.9.2 of the FFEIR, the construction of a six-foot barrier made out concrete or heavy solid material that runs the length of the entire southwest project boundary is required to attenuate noise for the residential and commercial properties to the south. The applicant is proposing to construct a six-foot wall consisting of 8"x-8"x16"double split tan CMU blocks as shown on the site plan on Sheet C2. An 8"x2"x16" concrete cap is proposed.

Exterior Signs

Wall signs: Two wall signs reading "In-N-Out" with corporate arrow logo, are proposed as follows: One wall sign each on the west (Front Entrance) and South (Side Entrance) elevations. Each wall sign would consist of a yellow arrow logo that is 6.25 feet tall by 6.5 inches deep by 10-feet 6 inches long. The red sign copy reading "IN-N-OUT" is proposed to be 18-inches high by 6.5 inches deep by 10.5-feet long. Each sign would have a sign area (when 'framing' the logo sign and IN-N-OUT text separately to calculate sign area) of 32.7 square feet. A total sign area of 65.4 square feet is proposed. Per the Sign standards in the LCP, a primary frontage (west elevation) is allowed one sign type with a maximum sign area of one square-foot per lineal foot of primary building frontage not to exceed 100 square feet; a secondary frontage is allowed one sign type with a maximum of sign area of .5 square feet per lineal foot of secondary frontage not to exceed 50 square feet. Based on the primary frontage of 46 lineal feet, the wall sign on the west elevation is in compliance with the maximum sign area allotment of 46 square feet that is permitted on the primary frontage. Based on secondary frontage of 94 lineal feet, the wall sign on the south elevation is in compliance with the maximum sign area allotment of 47 square feet that is permitted on the secondary frontage.

Directional signs: Two double-faced directional signs are proposed to accommodate patrons to-and-from the drive through facility; all directional signs are three-feet in height with a 3.0 square-foot face area, and are therefore considered to be "exempt signs" per Section 17.40.040.B.3 of the Seaside Municipal Code as a directional sign for traffic control.

Drive-Through Menu Board Sign. One freestanding menu board is proposed to be installed along the drive-through lane at the northeast corner of the site. The freestanding menu board sign would consist of one preview-menu board measuring 6.5-inches high by 4-feet 3.5 inches long

and would be internally-illuminated. It is proposed to be primarily red and white in color. The sign cabinet would consist of a metal frame and sign copy would consist of acrylic letters. The two metal support posts would be painted white (Bone China). The speaker box would be constructed as part of the sign face.

The project architectural plans are provided as Exhibit “A” to Attachment 1.

STAFF ANALYSIS

Site Development Standards

Table 3 (Site Development Standards) in the City’s Coastal Implementation Plan (CIP) establishes the development standards for property in the Coastal Zone. In specific subareas, additional standards apply. The project area is within the Laguna Grande Subarea (Section 2.7), which has specific standards for visual resources, public access and recreation, and dune management in addition to the Site Development Standards provided in Table 3. The following Special Site Development Standards for the Laguna Grande Subarea apply to the proposed project:

Building Design/Height: The proposed architectural style of the building would differentiate from a typical In-N-Out Burger restaurant with the inclusion of the tower elements, stone veneer treatment along the lower elevations, and the use of brown exterior colors versus a traditional white exterior body color with red accent color. The proposed design will be compatible with the materials on the adjoining hotel (Holiday Inn Express) to the north and will blend with wetland and open space area of Laguna Grande Park and Lake to the east.

In accordance with Section 2.7.I.2.a of the CIP, development within 100 feet of Laguna Grande Lake will be limited to one-story and not exceed a maximum height of 20 feet, except for design/architectural features (e.g. Domes, Cupolas, Towers), which can be up to 30 feet in height. The building would have three tower elements at a height of 29 feet (at the pitch of the hip roof), with the remainder of the building maintaining a height of 20 feet to the top of the parapet roof.

The maximum height of the proposed project will be 20’-0 to the top of the parapet and 29’-0 feet to the top pitch of the three architectural towers (considered a design/architectural feature). The project is consistent with maximum height requirements of the building and architectural tower elements standards.

b. Views:

The proposed project site is a highly disturbed vacant lot dominated by bare ground and weedy vegetation. The proposed project is bordered, in part, by residential and commercial development (e.g. Holiday Inn Express and a hardware store) and fronts Del Monte Boulevard, which provide an urban context to the views of the proposed project site. However, the project site borders Laguna Grande Lake which is a visually sensitive

resource. Figure 2-4 of the Land Use Plan identifies the views looking toward the lake from the recreational trail as a primary viewshed.

In accordance with Section 2.7.I.2.b of the CIP, to protect view and environmental function of the Laguna Grande channel area, proposed development should avoid placing structures in close proximity to the channel. The proposed building will be placed near the middle of the site and will be setback 47'-4" from the channel between Roberts Lake and Laguna Grande Lake (Channel) on the north side and 120 feet from the adjoining City Limit line with City of Monterey to the south. The side setbacks will provide visual corridors to provide both pedestrians and vehicular traffic to continue to enjoy views of the surrounding open space areas of Roberts Lake and Laguna Grande Lake. The project would be consistent with the preservation of views adjacent to the Laguna Grande Lake Channel.

The viewshed was also assessed in the FFEIR with a visual simulation taken from the following three public vantage points:

1. The existing and proposed views of the project site from the southbound State Route 1;
2. The existing and proposed views of the proposed project site from the southeast end of Laguna Grande Regional Park and Lake;
1. The existing and proposed views of the project site from densely developed residential neighborhoods approximately 1.5 mi. east of and at a higher elevation than the proposed project site.

The visual simulation figures from the FEIR are provided as Attachment 4.

Based on the visual analysis prepared for the proposed project, when fully developed and landscaped, the proposed project would not significantly alter views of Laguna Grande Regional Park and Lake when viewed from key public viewing areas, or Roberts Lake and Monterey Bay when looking north from Laguna Grande Regional Park and Lake. The project is consistent with this development standard.

In accordance with Section 2.7.I.2.f of the CIP, development between 100 feet and 500 feet of Laguna Grande, shall be limited to a height of less than five stories and shall be oriented parallel to the channel in a manner designed to maximize through Highway One views. As demonstrated by the visual simulation figures in the FFEIR, the overall height and placement of the structure will allow for through views of Laguna Grande Lake from Highway One. Project is consistent with this development standard.

Public Access: In accordance with Section 2.7.I.2.c of the CIP, public access and access improvements to and from the project site shall be designed at a minimum of width of 10 feet. All public paths will be designed at a minimum width of 10 feet. All walkways/bikeways will be

maintained at a minimum width of 10 feet. The extension of the pedestrian and bicycle trail included as part of the proposed project at the southeast boundary will have a minimum width of 10 feet.

In accordance with Section 2.7.I.2.e of the CIP, development projects shall expand/enhance public access to the coastal areas through means such as direction/interpretative signage, public parking, and additional access points. Public access will be expanded and/or enhanced through directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard. The existing pedestrian and bicycle trail that ends at the wood bridge across the canal will be extended to Del Monte Boulevard as part of the proposed project. The trail extension would provide pedestrian and bicycle access to the restaurant from Laguna Grande Regional Park and Lake, the adjacent hotel property to the northeast, and Del Monte Boulevard. The trail extension would also provide pedestrian and bicycle access from the restaurant to the trail around Laguna Grande Lake, as well as to the Monterey Bay Coastal Bike Trail, which is located along Del Monte Boulevard and which connects, via Canyon Del Rey Boulevard, to the coastal trail fronting the beach on the north side of SR-1.

An existing decomposed granite and partial asphalt pedestrian/bicycle trail borders Laguna Grande Regional Park and Lake and the southeastern project site boundary. The existing trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The proposed project would extend the pedestrian/bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension would be made of decomposed granite. Portions of the existing pedestrian/bicycle trail within the project boundaries that are asphalt would be replaced with decomposed granite so that the pedestrian/bicycle trail would be cohesive throughout the project site. The project design will also provide for access to and from the recreation trail/bike path surrounding Laguna Grande Lake from the project parking lot at the southeast parking lot and a walkway extending from the outdoor seating area across the drive-through aisle at the northeast corner of the site.

Five parking spaces which will be located adjacent to the pedestrian access point with Laguna Grande Lake and Park recreational/bike trail at the rear southeast corner of the project site will be designated and have signs installed for use a reciprocating parking for lake visitors.

Seven benches with trash receptacles would be placed along the pedestrian/bicycle trail-one at the northern edge of the project site where the pedestrian/bicycle trail tees and connects to the restaurant approximately half-way between the wooden pedestrian bridge and Del Monte Boulevard, two on the southeastern edge of the property adjacent to Laguna Grande Lake, three at the southwestern edge of the project site where the pedestrian/bicycle trail bends towards the south and along the western shore of Laguna Grande Lake, and one on the east side of the property south of the wood bridge (refer to

Figure 3 in the Addendum to the FEIR).

The proposed project will be consistent with the provision of public access and enhancement of public access trails/bike paths.

- c. Maximum Building Site Coverage: In accordance with Section 2.6, Table 3 of the CIP, the maximum building site coverage is 90%. The total site area covered by the proposed building will be approximately 42%.
- d. In accordance with Section 2.6, Table 3 of the CIP, the Floor Area Ratio (FAR): The FAR standard is 1.0:1. The proposed project's FAR is 0.04.
- e. Outdoor Seating: The outdoor seating area will be located at the south and east sides of the site. The edges of the outdoor seating area and drive-through aisle will be landscaped to provide adequate screening between the project site and recreational trail that extends on the east side of the site. A pedestrian walkway will also be provided at the northeast corner of the site to allow for coastal access between the project site and Laguna Grande Park and Lake.

Parking Requirements

Parking Design: As indicated in Table 4 (Parking Requirements by Land Use), the restaurant land use type is required to have 1 space for every 3 seats. The proposed project will include development of indoor and outdoor patio dining totaling 159 seats. The proposed project will include 53 parking spaces, including three disabled parking spaces, two motorcycle spaces and one recreational vehicle parking space. To comply with public access to and from the adjoining Laguna Grande Lake and Park recreation/bike trail, five reciprocating parking stalls will be located and designated with signs identifying these parking spaces reciprocating parking stalls for lake visitors.

Driveways and Site Access: Access to the project site would be from two driveways along Del Monte Boulevard. The westernmost driveway (next to the City of Monterey boundary) would be a right-in/right-out only and the other would be a full-access driveway. The proposed service area is designed to provide a one-way counterclockwise traffic movement around the project site. The location of the driveways would comply with the minimum width of 26 feet and maximum width of 35 feet and the minimum spacing of 50 feet between the driveways.

Landscaping Standards

The project site will be landscaped on all four sides of the parcel with a variety of drought-tolerant plant species and total of 38 trees. In addition, where feasible and practical, landscaping will be designed to address post-construction water quality site design and Low Impact Design (LID) requirements within bio-swales located next to wetland areas at the southeast corner of the site. The proposed landscaping plan will be consistent with the following standards:

All parts of the site not devoted to structures and parking lot improvements will be landscaped.

Where feasible and practical, the landscaping plan will be designed to address post-construction water quality site design and Low Impact Design.

38 new trees are proposed throughout the site consisting of the following:

- Nine 24-inch box Western Redbud Mult-trunk
- Eight 36-inch box Monterey Cypress
- 19 24-inch box Toyon
- Two Mexican Fan Palms at a height of 19'-8"

Site coverage is proposed to be 42.2% based on a 2.19 ac site. A minimum of 10% of landscaping is required to where 13% is being proposed. The applicant would screen the drive-thru and outdoor seating area with the grouping of Toyon and Monterey Cypress at the menu board and drive thru window which would assist in buffering the seating area from noise and pollutant emissions from vehicles in the drive-thru aisle. In addition, the vertical vegetation will provide an enhanced aesthetic improvement for the patrons within the outdoor seating and pedestrians using the recreational trail over that of queued vehicles. Lastly, the new trees within the interior of the parking lot would provide canopy/shade coverage in the summer months and would soften the street frontages.

Outdoor Lighting

- a. The lights installed as part of the proposed project will not exceed the height of 14 feet or the height of the nearest structure.
- b. The outdoor lighting included as part of the proposed project will be consistent with Title 24, Building Energy Efficiency Standards. In addition, the outdoor lighting plan will be reviewed and approved by the City's Board of Architectural Review (BAR), which will ensure that energy-efficient lighting technology is used.
- c. All lighting fixtures included as part of the proposed project will be consistent with Section 2.6.C, Lighting Requirements of the City's CIP. In addition, all lighting fixtures will be reviewed and approved by the City's BAR. The City will ensure that the light fixtures are directed downward to prevent light spill and glare onto adjacent properties, will ensure that the light source is not visible off site, and will confine glare and reflections within the boundaries of the project site to the maximum extent feasible.
- d. The lighting plan included as part of the proposed project will be consistent with Section 2.6.C, Lighting Requirements, of the City's CIP. In addition, the lighting plan will be reviewed and approved by the City's BAR in order to ensure that the maximum

illumination is not exceeded.

Zoning Code Section 17.30.070.B: Energy Efficiency requires outdoor lighting utilize energy-efficient fixtures and lamps. All proposed outdoor light fixtures would feature lamps and fixture designs, such as full-cutoff hoods, that would contribute to energy-efficiency.

Zoning Code Section 17.30.070.C: Fixture Position requires all lighting fixtures be directed downward to reduce light bleed onto adjacent properties or public rights-of-way. The proposed light fixtures would feature cut-off designs and would be positioned and directed to illuminate the subject site, reducing light bleed and glare onto adjacent properties. Project plans include a photometric lighting plan.

1. The proposed lighting complies with Zoning Code Section 17.30.070.E: Lighting Effects, which prohibits lights from blinking, flashing or having high intensity or brightness. The lighting would provide constant illumination and would not be programmed to change brightness, color, or intensity.

Signs

Sign Quantity, Copy, and Area

A. THE SIGNS INCLUDED AS PART OF THE PROPOSED PROJECT WILL BE CONSISTENT WITH SECTION 2.6.D, SIGN REQUIREMENTS, OF THE CITY'S CIP. THE PROPOSED PROJECT WILL INCLUDE THE CONSTRUCTION OF RED AND YELLOW EXTERNAL ILLUMINATED WALL SIGNS ON THE WEST AND SOUTH SIDE OF THE BUILDING. IN ADDITION, THE PROPOSED RESTAURANT WILL INCLUDE THREE INTERNALLY ILLUMINATED SIGNS, TWO OF WHICH WOULD BE MOUNTED ON THE BUILDING WALLS.

FINDINGS

General Plan and Zoning Ordinance

1. The proposed project is consistent with the objectives of the General Plan and complies with applicable zoning regulations.

Evidence: The proposed project has been reviewed in accordance with the General Plan, Zoning Code, Land Use Plan of the Local Coastal Program (LCP), and the development standards Chapter 18.10 (Coastal Implementation Plan (CIP)) of the Seaside Municipal Code, and it is concluded that the proposed upgrades will be consistent with the surrounding neighborhood and provides an attractive addition to the Laguna Grande Park and Lake. Provided as Attachment 5, is a consistency analysis Table demonstrating the project's consistency with the Land Use Plan of the LCP. Provided as Attachment 6, is a consistency analysis Table demonstrating the project's

consistency with the CIP of the LCP.

2. The proposed building design, colors, and signage are suitable for the purposes of the building and will enhance the character of the City and neighboring properties.

Evidence: The proposed design, colors, and signage will be compatible with the form and colors of the buildings throughout the site and with adjoining and nearby properties.

CONCLUSION

The project would represent a substantial improvement to the appearance of a major gateway for the City of Seaside. The architecture of the proposed building can generally be found to be consistent with applicable Coastal Implementation standards of the City's Local Coastal Program. Staff recommends approval of the architectural plans subject to the conditions of approval provided as Attachment 1 and the project plans provided as Attachment 1 -Exhibit A.

FISCAL IMPACT

There is no fiscal impact associated with this item.

ATTACHMENTS

1. Attachment 1 - Conditions of Approval
 2. Attachment 1 - Exhibit A Project Plans
 3. Attachment 1 - Exhibit A Outside Seating and Umbrella Plan
 4. Attachment 1 - Exhibit A Sign Plans
 5. Attachment 1 - Exhibit A Linthonia Light Fixture Type OC1 and OD2
 6. Attachment 1 - Exhibit A Linthonia Light Fixture Type S and S1
 7. Attachment 1 - Exhibit A Voigt Light Fixture Type W1
 8. Attachment 1 - Exhibit A Gotham Light Fixture Type M
 9. Attachment 2 - Location Map
 10. Attachment 3 - Site Photographs
 11. Attachment 4 - Visual Simulation Part 1
 12. Attachment 4 - Visual Simulation Part 2
 13. Attachment 4 - Visual Simulation Part 3
 14. Attachment 4 - Visual Simulation Part 4
 15. Attachment 5 - LUP Consistency Table
 16. Attachment 6 - CIP Consistency Table
-

Conditions of Approval
File No. BAR-15-06 and SP-15-07
March 25, 2015

Project Specific:

Planning:

1. Except as modified by required conditions of approval, plans submitted for a building permit shall substantially conform to the architectural plans, landscape plans, and sign plans identified as “Seaside In-N-Out Burger Restaurant” stamped as “Received March 9, 2015” and as “approved on March 25, 2014”.
2. The proposed reconstruction of the In-Out Burger Restaurant shall be constructed in compliance with the terms and conditions adopted for Coastal Development Permit Application No. CDP-14-01 and the Mitigation and Monitoring and Reporting Program for the Seaside In-N-Out Burger Restaurant Final Environmental Impact Report.

Standard:

1. Board of Architectural Review approval shall not be valid until the applicant has signed and accepted these conditions of approval. Failure to sign the conditions and return them to the Planning Division within will result in the Board of Architectural Review approval becoming null and void.
2. Board of Architectural Review approval shall be valid for a period of one (1) year from the date of approval of this project in accordance with S.M.C.S. 17.54.080. Project approval will become null and void if a building permit is not exercised within one (1) year from date of approval.
3. Proposed changes to the approved application(s) must receive approval from the Board of Architectural Review, unless approved by the Director as outlined in Seaside Zoning Code Section 17.54.090.C.
4. The applicant agrees as a condition and in consideration of the approval of this discretionary permit that it will defend, indemnify and hold harmless the City of Seaside or its agents, officers and employees from any claim, action or proceeding against the City or its agents, officers or employees to attack, set aside, void or annul this approval. The applicant will reimburse the City for any court costs and attorney’s fees, which the City may be required by a court to pay as a result of such action. City may, at its sole discretion, participate in the defense of such action; but such participation shall not relieve applicant of his obligations under this condition. The City shall promptly notify the applicant of any such claim, action, or proceeding, and the City shall cooperate fully in the defense thereof.
5. Any proposed future development shall comply with the requirements of the Fire, Health, Planning, Code Enforcement, Building and Public Works Departments.

6. The project shall be responsible for all applicable local and/or regional development and/or impact fees including, but not limited to, sewer, water, and traffic fees, which shall be paid prior to building permit issuance.
7. Any work within the public right-of-way must conform to current engineering standards and shall require an encroachment permit from the Public Works Department.
8. All storm water runoff shall be contained and disposed of on site and the storm water retention system shall be reviewed and approved by the Public Works Department.
9. The proposed project shall comply with the applicable requirements of the Marina Coast Water District for the installation of new water fixtures and landscape irrigation equipment.
10. The issuance of building permits involving the installation of new water shall be subject to the availability of an adequate supply of water and sewer capacity to serve the project.
11. Water conservation fixtures shall be provided in the proposed project.

**BOARD OF ARCHITECTURAL REVIEW APPLICATION NO. BAR-15-06
and SIGN PERMIT SP-15-07**

This permit is hereby accepted upon the express terms and conditions hereof, and shall have no force or effect unless and until agreed to, in writing, by the applicant and property owner(s).

The undersigned hereby acknowledge the approved terms and conditions and agree to fully conform to, and comply with, said terms and conditions within the time frames approved by the City of Seaside Board of Architectural Review.

Applicant's Signature

Date

Property Owner's Signature

Date

[illegible]

DEL MONTE BOULEVARD
(A CITY STREET WIDTH VARIES)

JURISDICTION CITY OF SEASIDE, CA
ZONE CRG – REGIONAL COMMERCIAL ZONE
CZ – COASTAL ZONE OVERLAY

IN-N-OUT BURGER NET SITE AREA	±1.71 AC (±74,598 SF)
WETLANDS AREA	±0.48 AC (±20,719 SF)
TOTAL IN-N-OUT SITE AREA	±2.19 AC(±95,317 SF)
TOTAL HANDSCAPE:	±36.43 SF
TOTAL IMPERVIOUS SURFACES:	±0.183 SF
TOTAL SITE COVERAGE:	±42.22%

DINING AND VESTIBLES	1,335 SF
KITCHEN	1,143 SF
OFFICES	278 SF
RESTROOMS	392 SF
STORAGE AREA	142 SF
ELECTRICAL/FIRE CLOSET	60 SF
TOTAL IN-N-OUT BURGER BUILDING AREA	3,750 SF
F.A.R.	0.04

USER	RATIO	SPACES REQUIRED	SPACES PROVIDED
IN-N-OUT BURGER: (INDOOR SEATING: 83 SEATS/3=28) (OUTDOOR SEATING: 76 SEATS/3=25) STANDARD (9' X 19'):	1 SP/3 SEATS	53	53
HANDICAP:			49
RV:			1
BICYCLE PARKING: 5% REQ. VEHICULAR		3	3
MOTORCYCLE PKG. 500 PROV. AUTO PKG.		1	2
TOTAL PARKING RATIO:			±14.4 SP/1000 SF
TOTAL STACKING PROVIDED:			14 VEHICLES

BLDG. SETBACK - FRONT & REAR	0'-0"	84'-11"
BLDG. SETBACK - SIDE	30'-0"*	47'-4"
LANDSCAPE SETBACK - STREET	10'-0"	10'-0"
LANDSCAPE SETBACK - SIDE & REAR	8'-0"	8'-0"

*30' TOTAL: 18' MIN. ON ONE SIDE, 12' MIN. ON OPPOSITE SIDE

	PROVIDED
TOTAL PROJECT SITE LANDSCAPE AREA*	13,350 SF
TOTAL LANDSCAPE ADJACENT TO PARKING	11,105 SF
PARKING LOT PAVEMENT AREA	31,684 SF
* DOES NOT INCLUDE LANDSCAPE ADJACENT TO PARKING	

PEDESTRIAN PATH
LIGHT
PEDESTRIAN PATHWAY
SIGN TO LAKE FRONTAGE
RECIPROCATING PARKING
SIGNS FOR LAKE VISITORS
AREA TO BE USED FOR
LOADING AND UNLOADING OF
MERCHANDISE AND GOODS
ACCESSIBLE RAMP

①
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□ ○
☒ ☒

PURPOSE: THE PROJECT NARRATIVE IS TO ACCOMPANY THE LOCAL COASTAL USE PERMIT AND THE COASTAL DEVELOPMENT PERMIT APPLICATIONS FOR AN IN-N-OUT BURGER, A QUICK SERVICE RESTAURANT WITH DRIVE-THROUGH, TO BE LOCATED AT 1350 DEL MONTE BLVD. IN THE CITY OF SEASIDE.

THE SUBJECT SITE IS CURRENTLY VACANT, THE 4.4-, 3.750 SQUARE-FOOT RESTAURANT WILL HAVE INDOOR DINING, OUTDOOR PATIO SEATING AND A DRIVE-THROUGH WINDOW. PROPOSED VEHICLE QUEUING IN THE DRIVE-THROUGH LANE CAN ACCOMMODATE FOURTEEN (14) VEHICLES FROM THE ENTRY SIGN TO THE DRIVE-THROUGH PICK UP WINDOW. ALTERNATIVELY, THE PROPOSED (12) PARKING SPACES, INCLUDING 6 (6) ACCESSIBLE SPACES, COULD BE PROVIDED. ALL SERVICE EQUIPMENT (SUCH AS TRASH ENCLOSURES AND TRANSFORMERS) WILL BE ADEQUATELY SCREENED FROM PUBLIC VIEW.

THE IN-N-OUT BURGER'S HOURS OF OPERATION ARE SUNDAY THRU THURSDAY 10:30 A.M. TO 1:00 A.M. AND 10:30 A.M. TO 1:30 A.M. ON FRIDAY AND SATURDAY. THERE ARE FIFTY (50) FULL AND PART TIME EMPLOYEES WITH AN AVERAGE OF SIXTEEN (16) EMPLOYEES PER SHIFT. THE TYPICAL IN-N-OUT BURGER HAS TWO SHIFTS PER DAY.

BURGER HAS TWO SHIFTS PER DAY.

THE SUBJECT SITE IS ZONED REGIONAL COMMERCIAL (CRG), PROPERTIES TO THE NORTH, EAST, AND WEST OF THE SITE ARE ZONED OPEN SPACE RECREATIONAL (OSR). FURTHER TO THE NORTH PROPERTIES ARE ZONED CRG. PROPERTIES TO THE SOUTH ARE LOCATED IN THE CITY OF MONTEREY. THE PROPOSED IN-N-OUT RESTAURANT IS COMPATIBLE WITH EXISTING USES IN THE AREA.

ACCESS. THE SUBJECT SITE IS PROPOSED TO BE FROM TWO DRIVEWAYS ALONG DEL MONTE BLVD. ONE DRIVEWAY WILL BE A RIGHT-IN/RIGHT-OUT ONLY AND THE OTHER WILL BE FULL-ACCESS. TRAFFIC AND PARKING DATA FOR A COMPARABLE IN-N-OUT BURGER FACILITY WILL BE SUBMITTED AS A SUPPLEMENT TO THE ABOVE MENTIONED APPLICATIONS.

THE PROPOSED IN-N-OUT BUILDING HAS BEEN DESIGNED TO BE IN HARMONY WITH THE EXISTING USES AS WELL AS TO COMPLY WITH DESIGN GUIDELINES PER THE DIRECTION OF THE CITY OF SEASIDE. THE DESIGN INCLUDES TOWER ELEMENTS WITH TILE ROOFS TO BREAK UP BUILDING MASS, AWNINGS, AND A COVERED DRIVE THRU PICK UP CANOPY.

CONCLUSION:

IN-N-OU BURGER WILL WORK CLOSELY WITH THE CITY OF SEASIDE TO ENSURE THAT ALL THE PROJECT DOCUMENTS WILL BE COORDINATED AND THE ENTITLEMENT APPROVALS, PLAN CHECK, PERMITTING AND CONSTRUCTION PROCESSES WILL PROCEED IN AN ORDERLY FASHION.

THE PROPOSED IN-N-OUT WILL BE A POSITIVE ADDITION TO THE CITY OF SEASIDE. THE COMPANY'S FOCUS ON CUSTOMER SERVICE AND CONSISTENTLY HIGH QUALITY FOOD PRODUCT WILL BE ENJOYED AND TREASURED BY THE NEARBY RESIDENTS.

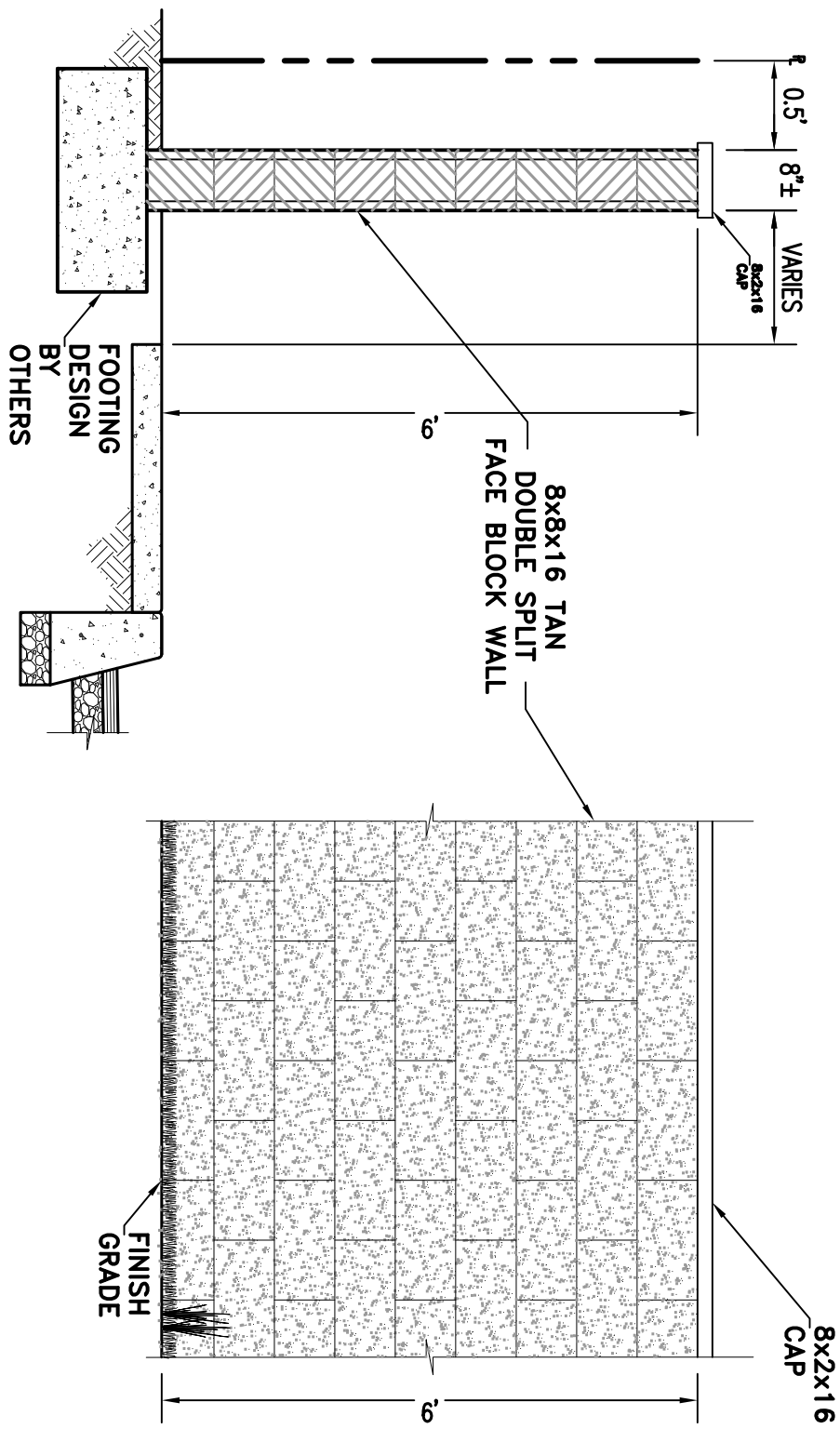
IN-N-OUT BURGER
APN# 011-401-023-000

Project Location: 1350 DEL MONTE BLVD. SEASIDE, CA
PREPARED FOR: GREENBERGFARROW 1920 MAIN ST., SUITE 1150 IRVINE, CA

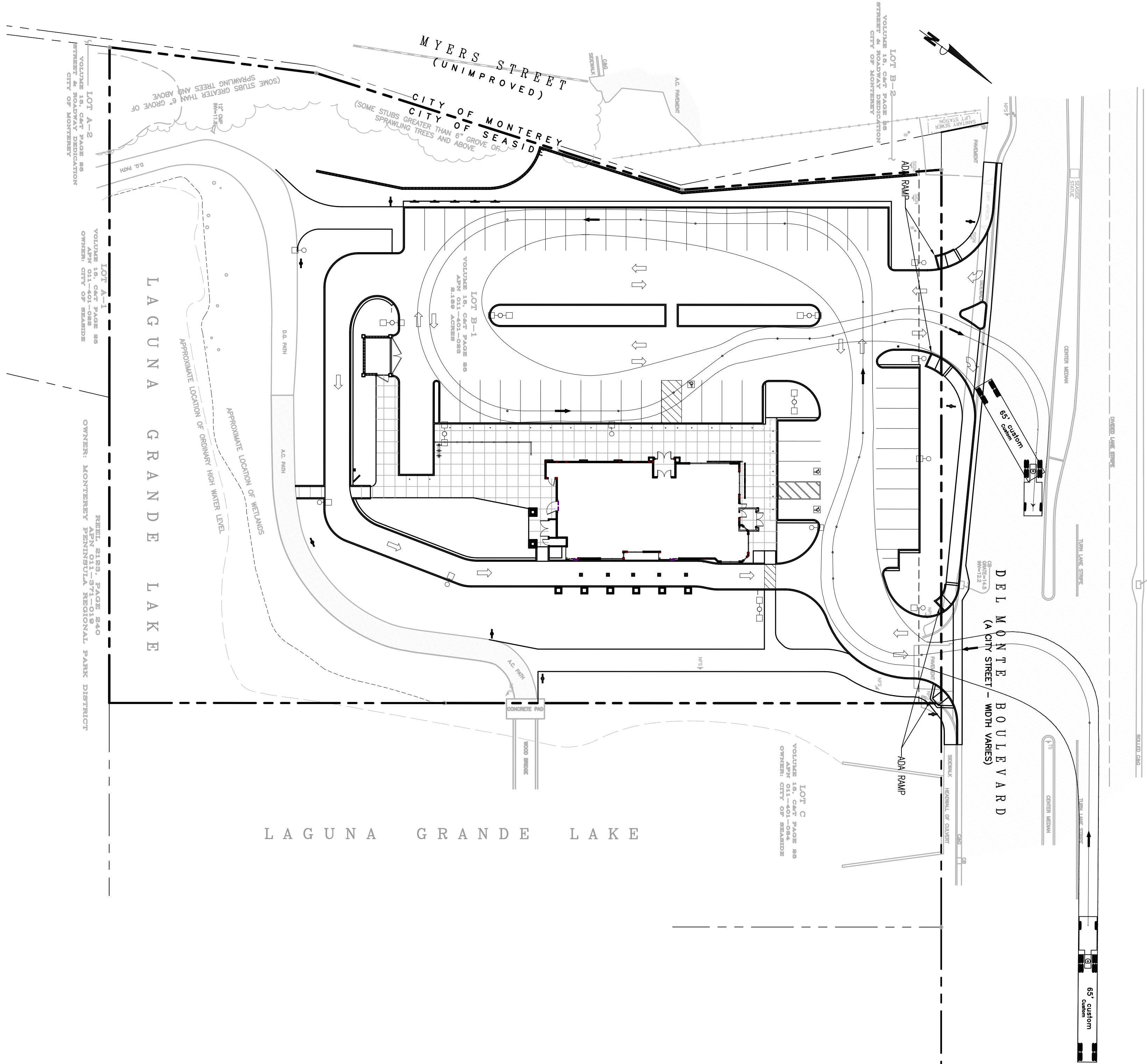


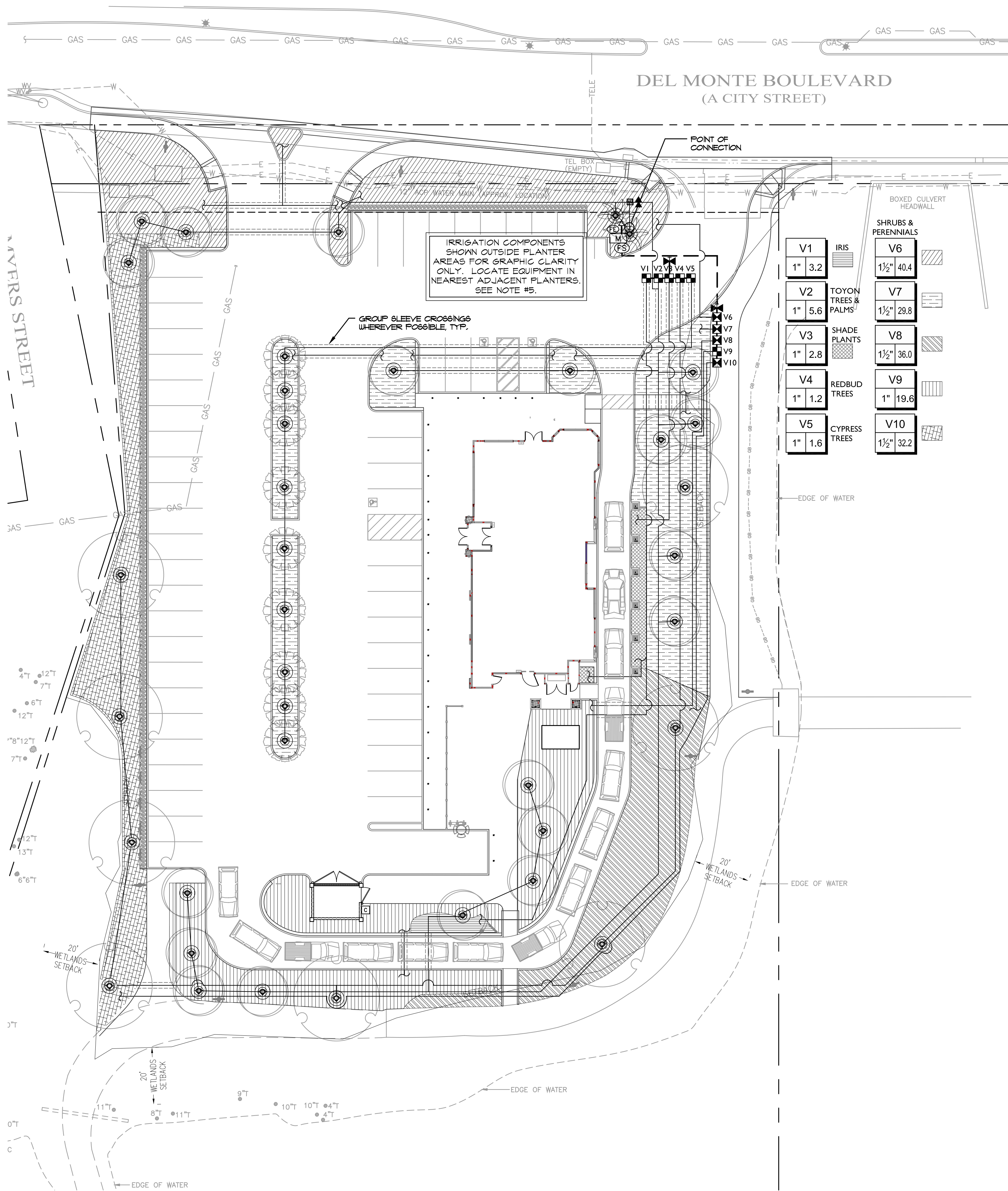
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REV	DATE	DESCRIPTION	BY

1
C2
SOUND WALL & ELEVATION
MIS



CIRCULATION PLAN
1"=30'





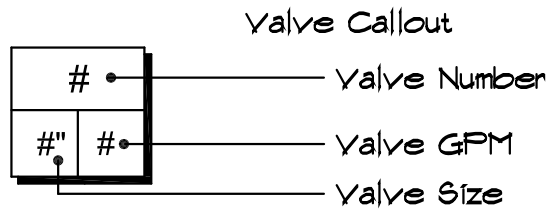
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY.
■	RAIN BIRD XCZ-100-B-COM DRIP CONTROL KIT, 1" FESB VALVE, 1" NETAFIM DISC FILTER AND 40PSI PRESSURE REGULATOR, 1" BALL VALVE.	6
⊠	RAIN BIRD XCZ-150-COM HIGH FLOW CONTROL ZONE KIT WITH 1-1/2" FESB VALVE, TWO 1" NETAFIM DISC FILTERS AND TWO 40PSI PRESSURE REGULATORS, 1-1/2" BALL VALVE.	4
⊙	TREE EMITTERS RAINBIRD RW8-B-C-1402 DEEP ROOT WATERING SYSTEM W/ 0.5 GPM BUBBLER INSTALL (2) PER SYMBOL	PER PLAN
▨	AREA TO RECEIVE DRIP EMITTERS NETAFIM TLCV6-1210 PSI COMP. DRIPLINE W/ CHECK VALVE SET PRS-D AT 45 PSI. TECHLINE SHALL BE SPACED APPROX. 3' OFF PERIMETER AND 18" O.C. AS SHOWN PER PLAN. FOOTERS AND HEADERS SHALL BE 3/4" PVC PIPE U.O.N.	PER PLAN
⌵	KBI BTU-E PVC BLOCKED TRUE UNION BALL VALVE S.O.V., 1/2" TO 2", SAME SIZE AS PIPE	1
M	1/2" HYDROMETER - COMBINATION MASTER VALVE FLOW SENSOR. INSTALL IN PLANTER AREA TYP.	1
BF	FEBCO 8251A 2" REDUCED PRESSURE BACKFLOW PREVENTER WITH HOTBOX ENCLOSURE AND CONCRETE PAD - SIZED TO FIT	1
C	ETWATER SMART CONTROLLER 200 (949) 584-7311 ENCLOSURE: STRONGBOX SB-1666 TOP ENTRY	1
FS	1-1/2" HYDROMETER - COMBINATION MASTER VALVE FLOW SENSOR. INSTALL IN PLANTER AREA TYP.	1
FE	EZ FLO MODEL NO. EZ 003-CX FERTILIZER INJECTOR INSTALL AFTER BACKFLOW	1

IRRIGATION LATERAL LINE: PVC CLASS 200
ONLY LATERAL TRANSITION PIPE SIZES 1" AND ABOVE
ARE INDICATED ON THE PLAN, WITH ALL OTHERS BEING
3/4" IN SIZE.

IRRIGATION MAINLINE: PVC SCHEDULE 40

PIPE SLEEVE: PVC CLASS 200
TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE
SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING
AND THEIR RELATED COUPLINGS TO EASILY SLIDE
THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18
INCHES BEYOND EDGES OF PAVING OR
CONSTRUCTION.

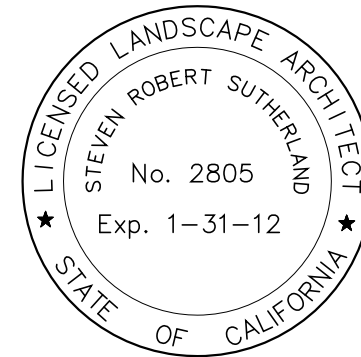


LATERAL PIPE SIZING CHART
CLASS 200 PVC

GPM MIN./MAX.:	PIPE DESCRIPTION:
1-10 GPM:	3/4" CLASS 200 PVC
11-16 GPM:	1" CLASS 200 PVC
17-26 GPM:	1 1/4" CLASS 200 PVC
27-35 GPM:	1 1/2" CLASS 200 PVC
36-55 GPM:	2" CLASS 200 PVC
56-80 GPM:	2 1/2" CLASS 200 PVC

IRRIGATION NOTES

- IRRIGATION SYSTEM COMPLIES WITH THE CA WATER ORDINANCE IN THE FOLLOWING WAYS:
 - NATIVE OR DRAUGHT-TOLERANT, LOW WATER USE PLANTS PROPOSED (SEE SHEET L-2 & L-3)
 - NO INVASIVE PLANT MATERIAL PROPOSED (SEE SHEET L-2 & L-3)
 - 3" MULCH LAYER PROPOSED OVER ALL PLANTED AREAS (SEE SHEET L-2 & L-3)
 - IRRIGATION CONTROLLER WITH ET SYSTEM AND RAIN SENSOR PROPOSED
 - MASTER VALVE AND FLOW SENSOR PROPOSED AFTER BACKFLOW DEVICE
 - GATE VALVES PROPOSED BEFORE ALL VALVE GROUPINGS
 - LOW-FLOW ROTARY NOZZLES AND/OR DRIP EMITTERS USED THROUGHOUT
 - CHECK VALVES AND PRESSURE REGULATOR PROPOSED IN ALL SPRAY HEADS
 - IRRIGATION MATERIAL GROUPED PER PLANT TYPE/ZONE
 - ALL SPRAY HEADS ARE GROUPED FOR MATCHED PRECIPITATION RATES
- LANDSCAPE CONTRACTOR IS TO COORDINATE WITH THE GENERAL CONTRACTOR IN LOCATING THE POINT OF CONNECTION, INSTALLED SLEEVING, AND ELECTRICAL SOURCE FOR CONTROLLER. GENERAL CONTRACTOR SHALL COORDINATE WITH OWNER IN OBTAINING POWER SOURCE, AND SHALL PROVIDE ALL NECESSARY SLEEVING FOR OTHER TRADES. REQUIRED SLEEVING IS NOT LIMITED TO THAT WHICH IS SHOWN. SLEEVE MATERIAL SHALL BE OF TYPE INDICATED.
- CONTRACTOR TO INSTALL ONE (1) 'EXTRA' WIRE FOR EVERY FOUR (4) VALVES. CONTRACTOR SHALL INSTALL ONE (1) EXTRA 4" PVC SLEEVE BETWEEN ALL PLANTER ISLANDS.
- IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTER AREAS FOR GRAPHIC CLARITY. LOCATE EQUIPMENT IN NEAREST ADJACENT PLANTERS AS FEASIBLE AND INDICATE EXACT LOCATION ON RECORD DRAWINGS. ALL VALVES SHOULD BE KEPT AT LEAST 18" AWAY FROM FACE OF CURB.
- ALL LATERAL PIPING IS TO BE SIZED PER THE PIPE SIZING CHART ON THIS SHEET. REFER TO THE IRRIGATION LEGEND FOR INFORMATION ON GPM'S.
- REFER TO IN-N-OUT'S STANDARD IRRIGATION DETAILS FOR INSTALLATION PROCEDURES.
- INSTALL TREE VALVES IN 6" ROUND BOX AND LOCATE 3' FROM TRUNK OF TREE.



IRRIGATION PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE CA

AGENCY APPROVAL

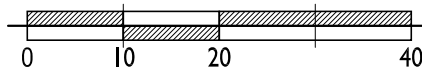
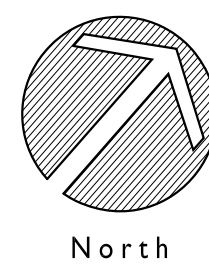
REVISIONS	NO.	DATE	PURPOSE
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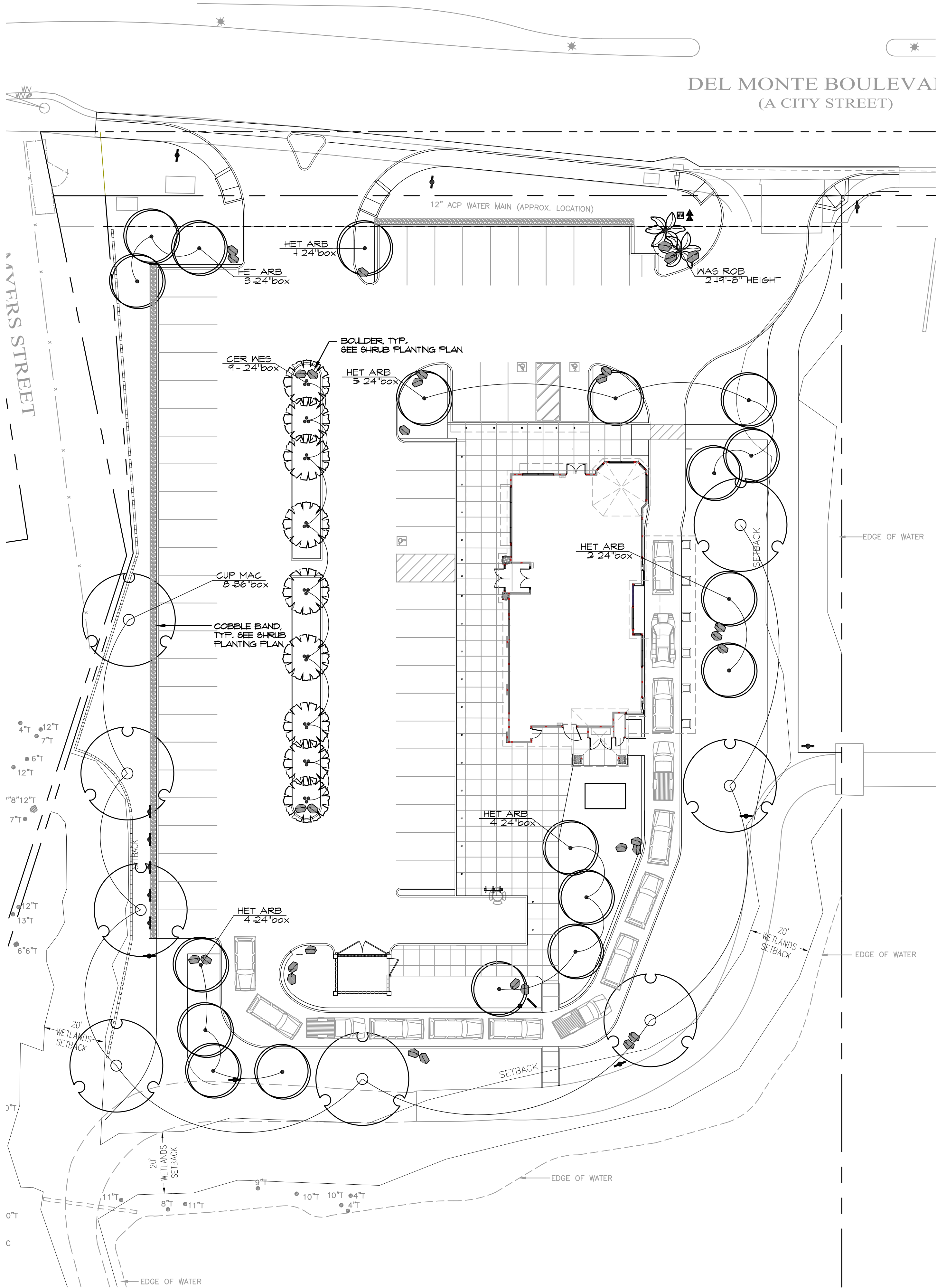
DRAWN BY	+	MB
CHECKED	+	RSR
SCALE	+	1" = 20' - 0"
DATE	+	03.17.15
JOB	+	090004.00

IRRIGATION
PLAN

SHEET

L-1





TREE SCHEDULE

CODE	BOTANICAL NAME / COMMON NAME	SIZE	QTY
CER WES	CERCIS OCCIDENTALIS / WESTERN REDBUD MULTI-TRUNK	24"BOX	9
CUP MAC	CUPRESSUS MACROCARPA / MONTEREY CYPRESS	36"BOX	8
HET ARB	HETEROMELES ARBUTIFOLIA / TOYON	24"BOX	19
WAS ROB	WASHINGTONIA ROBUSTA / MEXICAN FAN PALM	19-8" HEIGHT	2

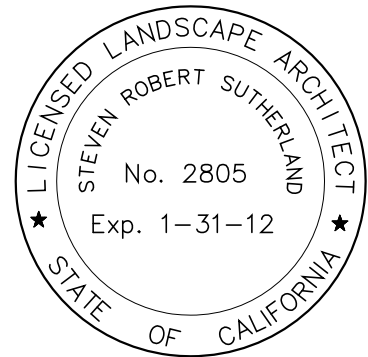
TREE PLANTING NOTES

- ALL LANDSCAPE AREAS TO BE TOP DRESSED WITH 3" THICK BARK MULCH. CONTRACTOR SHALL PROVIDE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL. MULCH TOP DRESS SHALL BE SHREDDED CEDAR BARK, 0-7" AS PRODUCED BY THE HYPONEX CORPORATION, P.O. # 479, LINDEN, CA 95236, TEL. (800) 621-8887 OR ACCEPTABLE EQUAL. ALL NEW AND EXISTING TREES TO RECEIVE 3' DIAMETER CIRCLE OF MULCH AROUND BASE. DO NOT COVER TREE CROWN WITH MULCH.
- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.

SSA

LANDSCAPE ARCHITECTS INCORPORATED

303 Potrero St Ste 40-C
Santa Cruz, CA 95060-2778
PH: (831) 459-0455
FX: (831) 459-0484
www.ssaia.com
C R L A # 2 8 0 5



TREE PLANTING PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE, CA

AGENCY APPROVAL

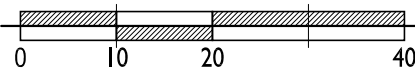
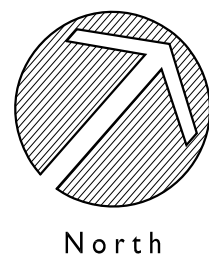
REVISIONS	NO.	DATE	PURPOSE

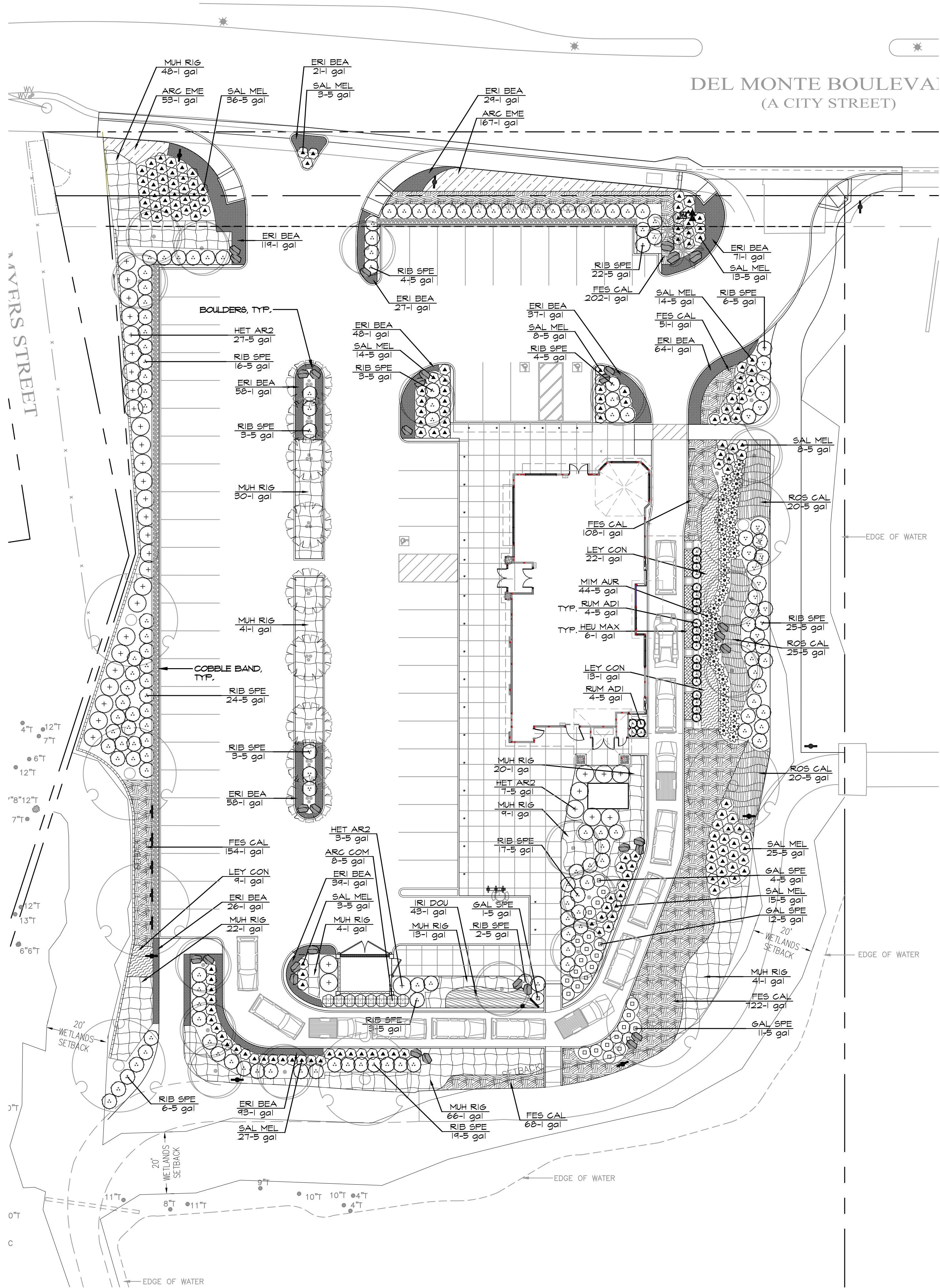
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CHECKED	•	RSR
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DATE	•	03.17.15
JOB	•	090004.00

TREE PLANTING PLAN

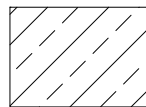
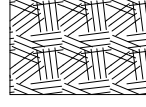
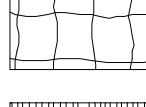
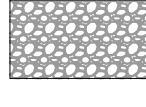
SHEET

L-2





PLANTING SCHEDULE

SHRUB	CODE	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QTY
	ARC COM	ARCTOSTAPHYLOS X. 'SUNSET' / SUNSET MANZANITA	5 GAL	4' OC	8
	GAL SPE	GALVEZIA SPECIOSA / ISLAND BUSH SNAPDRAGON	5 GAL	4' OC	28
	HET AR2	HETEROMELES ARBUTIFOLIA / TOYON	5 GAL	6' OC	37
	MIM AUR	MIMULUS AURANTIACUS / STICKY MONKEY FLOWER	5 GAL	42" OC	44
	RIB SPE	RIBES SPECIOSUM / RUCHSIA FLOWERING GOOSEBERRY	5 GAL	5' OC	157
	SAL MEL	SALVIA MELLIFERA / BLACK SAGE	5 GAL	42" OC	166
FERN	CODE	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QTY
	RUM ADI	RUMOHRA ADIANTIFORMIS / LEATHERLEAF FERN	5 GAL	36" OC	24
GROUNDCOVER	CODE	BOTANICAL NAME / COMMON NAME	SIZE		QTY
	ARC EME	ARCTOSTAPHYLOS UVA-URS! EMERALD CARPET / EMERALD CARPET MANZANITA	1 GAL @ 18" OC		220
PERENNIAL	CODE	BOTANICAL NAME / COMMON NAME	SIZE		QTY
	ERI BEA	ERIGERON GLAUCUS SEA BREEZE / BEACH DAISY	1 GAL @ 18" OC		690
	FES CAL	FESTUCA CALIFORNICA / CALIFORNIA FESCUE	1 GAL @ 18" OC		1305
	HEU MAX	HEUCHERA MAXIMA / ISLAND ALUM ROOT	1 GAL @ 24" OC		30
	IRI DOU	IRIS DOUGLASIANA PCH / DOUGLAS IRIS PACIFIC COAST HYBRID	1 GAL @ 24" OC		43
	LEY CON	LEYMUS CONDENSATUS CANYON PRINCE / BLUE WILD RYE	1 GAL @ 36" OC		44
	MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS TRIANGULAR SPACING	1 GAL @ 42" OC		289
	ROS CAL	ROSA CALIFORNICA / CALIFORNIA WILD ROSE	5 GAL @ 42" OC		65
ROCK		NAME	SIZE		QTY
		24" WIDE COBBLE BAND TO BE LOCAL RIVER STONE	+/- 6"		603 SF
		ROUNDED BOULDER	24" MIN/ 48" MAX		34

PLANTING PLAN NOTES

- ALL LANDSCAPE AREAS TO BE TOP DRESSED WITH 3" THICK BARK MULCH. CONTRACTOR SHALL PROVIDE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL. MULCH TOP DRESS SHALL BE SHREDDED CEDAR BARK, 0-7" AS PRODUCED BY THE HYPONEX CORPORATION, P.O. # 479, LINDEN, CA 95236, TEL (800) 621-8557 OR ACCEPTABLE EQUAL. ALL NEW AND EXISTING TREES TO RECEIVE 3' DIAMETER CIRCLE OF MULCH AROUND BASE. DO NOT COVER TREE CROWN WITH MULCH.
- CONTRACTOR TO TEST EXISTING SITE SOIL PER SPECIFICATIONS.

SHRUB PLANTING PLAN

IN-N-OUT BURGER
DEL MONTE BLVD.
SEASIDE CA

AGENCY APPROVAL

REVISIONS
NO. DATE PURPOSE

DRAWN BY * MB

CHECKED * RSR

SCALE * 1" = 20' - 0"

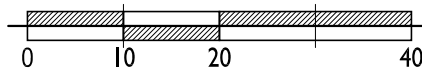
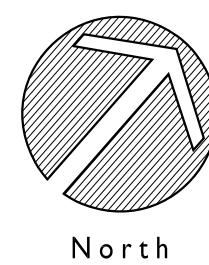
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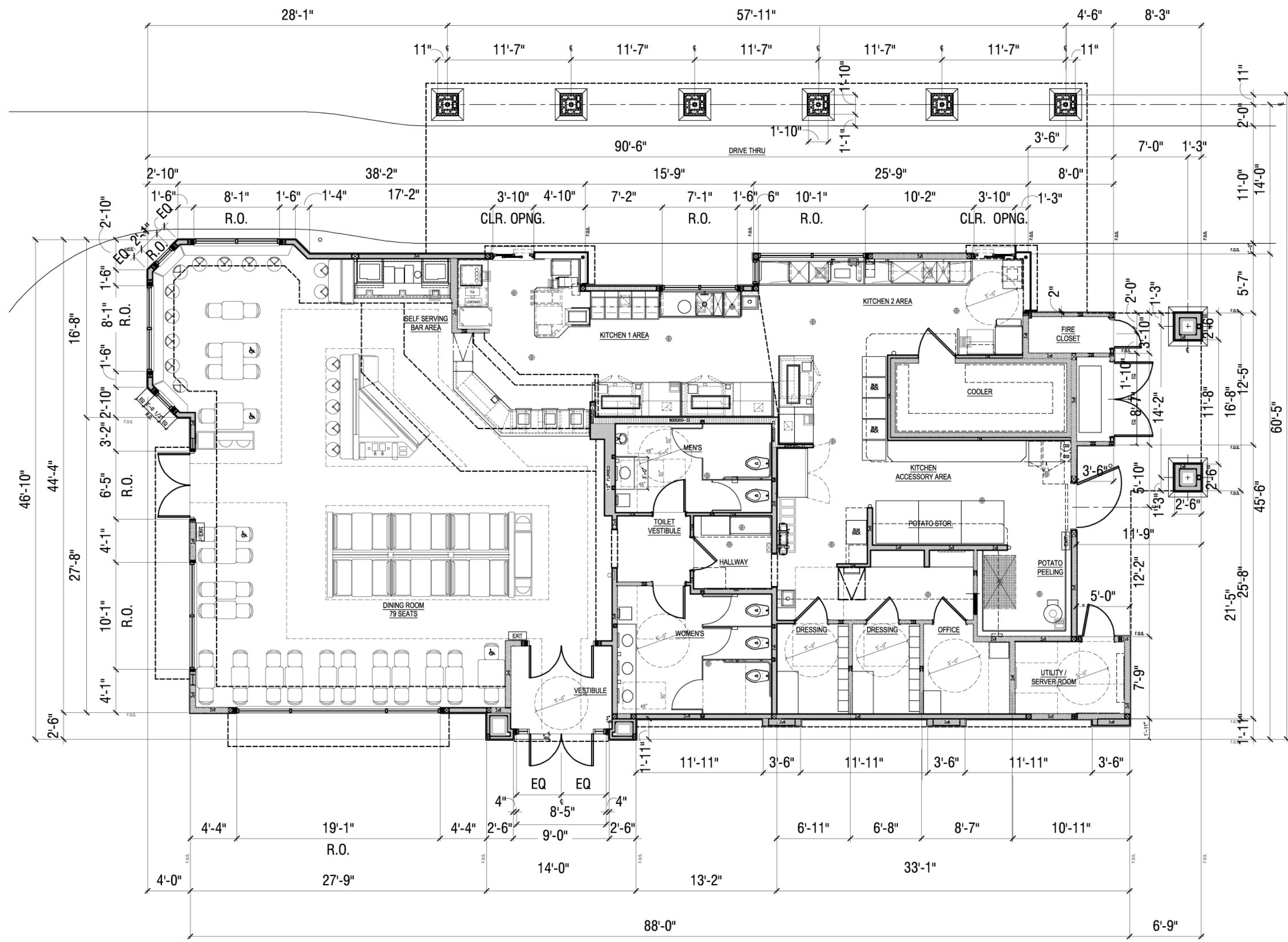
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SHRUB PLANTING
PLAN

SHEET

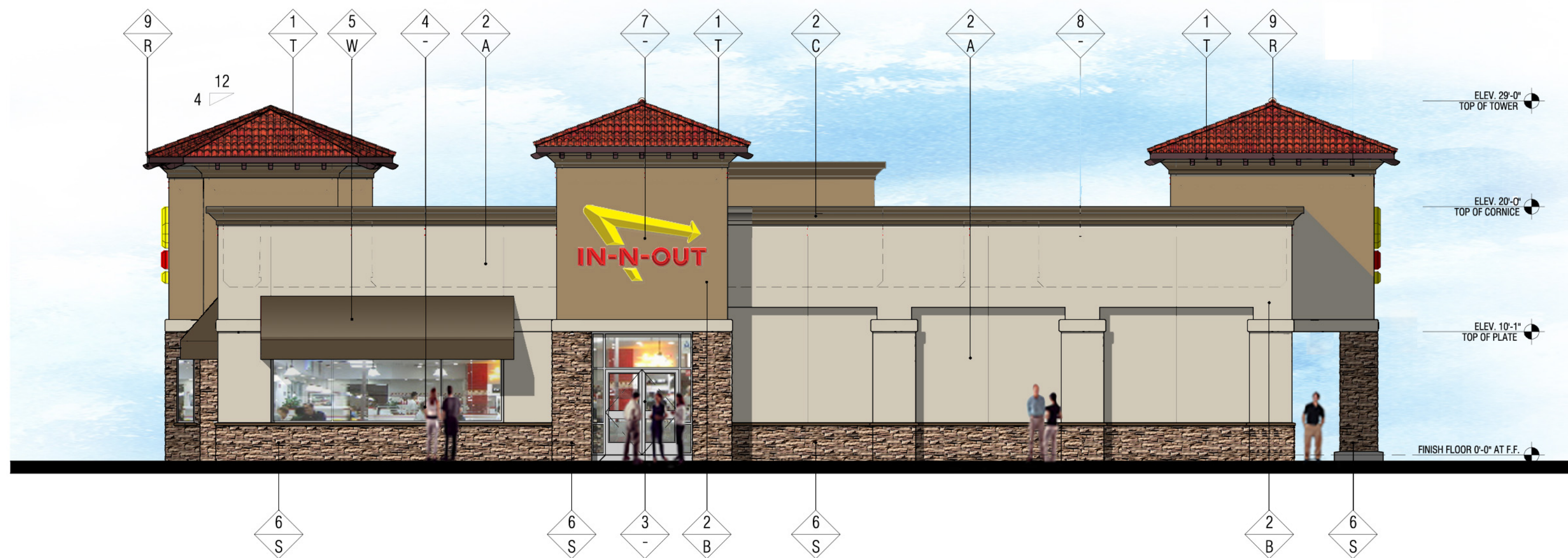
L-3





FLOOR PLAN

SCALE: 1/8"=1'-0"



NORTH ELEVATION

SCALE: 1/8"=1'-0"



EAST ELEVATION

SCALE: 1/8"=1'-0"



WEST ELEVATION

SCALE: 1/8"=1'-0"



SOUTH ELEVATION

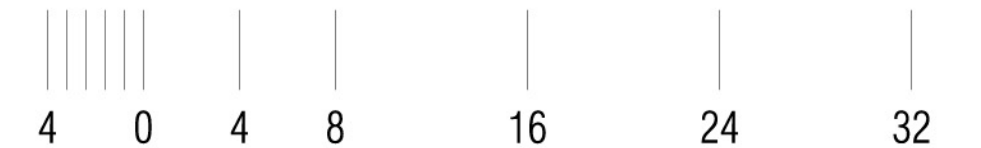
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FINISH SCHEDULE

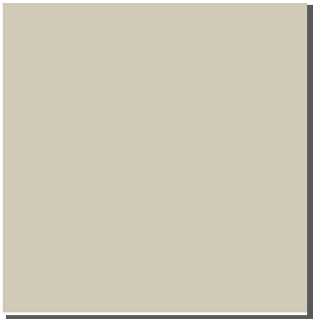
FINISH MATERIAL
1 TILE ROOF
2 STUCCO WITH SAND FLOAT TEXTURE FINISH
3 CLEAR ANODIZED ALUMINUM STOREFRONT DOORS
4 CLEAR ANODIZED ALUMINUM WINDOWS
5 PVC COATED WICK AWNINGS
6 STONE VENEER
7 ILLUMINATED LOGO SIGN UNDER SEPARATE PERMIT
8 NOT USED
9 WOOD BEAM RAFTER TAIL STAINED
FINISH COLOR
A SHERWIN WILLIAMS - SW7036 - ACCESSIBLE BEIGE
B SHERWIN WILLIAMS - SW6109 - HOPSACK
C SHERWIN WILLIAMS - SW7041 - VAN DYKE BROWN
R DUNN EDWARDS STAIN TO MATCH DE6042 BEAR IN MIND
S CORONADO STONE - CARMEL MOUNTAIN EASTERN LEDGESTONE
T EAGLE ROOFING PRODUCTS CAPISTRANO STYLE 3602 CONCORD BLEND
W IN-N-OUT CUSTOM COLORS - SW7041 - VAN DYKE BROWN

Note:
Colors shown on these elevations are for illustration
purposes only. For actual colors, refer to manufacturers
samples.

SCALE: 1/8"=1'-0"



COLOR AND MATERIAL BOARD



Color A
Shermin Willams SW7036 - Beige



Color B
Shermin Williams SW6109 - Hopsack



Color/Material C & W
Shermin Williams SW7041 -
Van Dyke Brown - Awnings with
PVC wick resistant erandicable polyester and color Van Dyke Brown



Color R
Dunn Edwards DE6042 -
Bear In Mind



Material S
Coronado Stone -
Carmel Mountain &
Eastern LedgeStone



Material T
Eagle Roofing Products
Capistrano Style -
3602 Concord Blend



1350 hamburger ln.
Baldwin Park, CA 91706

IN-N-OUT BURGER
1350 DEL MONTE
SEASIDE, CA

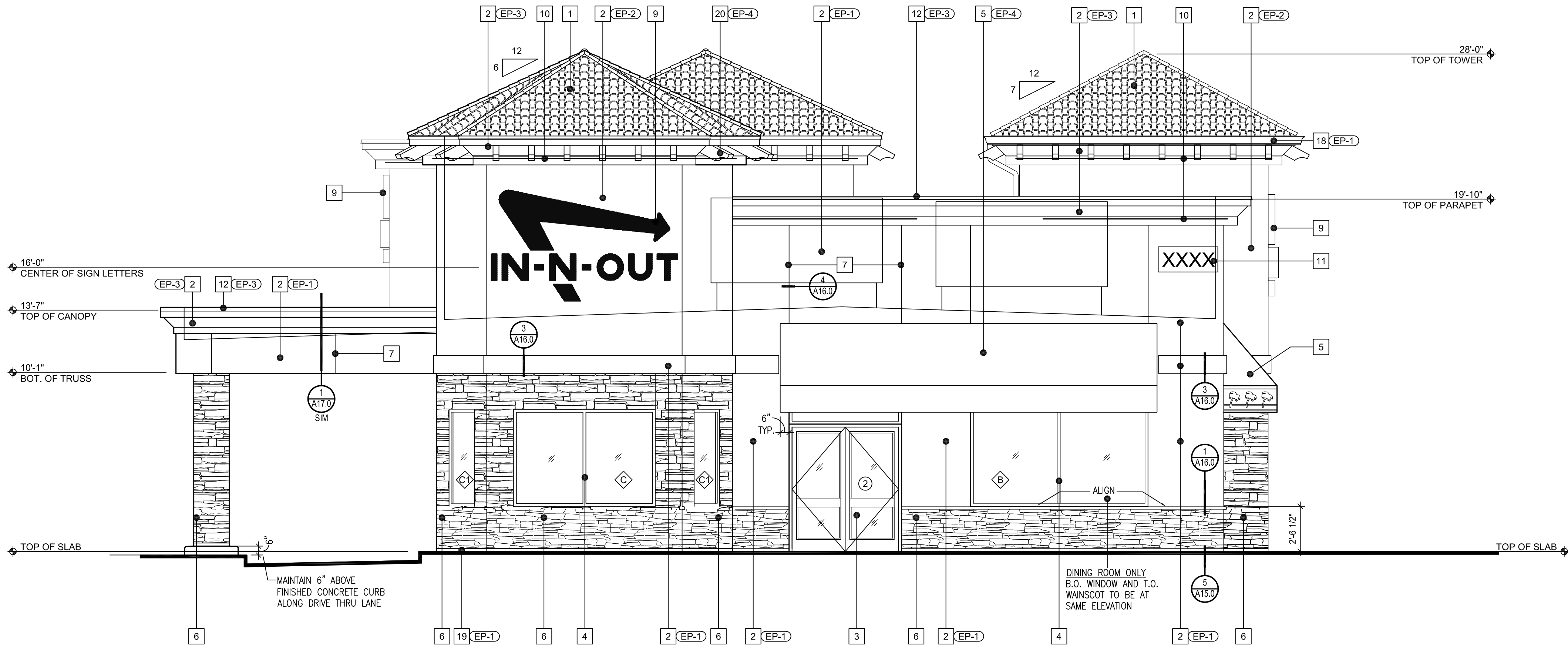
**COLOR AND
MATERIAL BOARD**
05-13-11

KEY NOTES

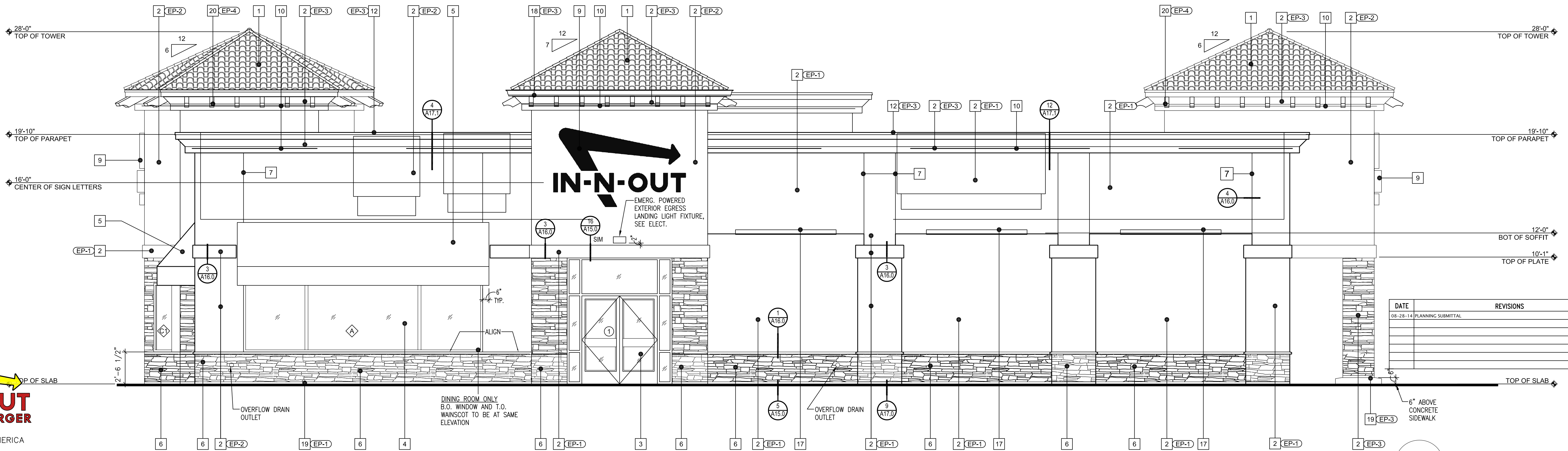
1	TILE ROOF: EAGLE ROOFING PRODUCTS, CAPISTRANO STYLE 3602 CONCORD BLEND. PROVIDE BIRD STOP AND PAINT TO MATCH TILE.
2	STUCCO: MEDIUM SAND FLOAT TEXTURE FINISH.
3	ALUMINUM STOREFRONT DOORS: CLEAR ANODIZED ALUMINUM.
4	ALUMINUM WINDOWS: CLEAR ANODIZED ALUMINUM.
5	AWNINGS: PVC COATED WICK-RESISTANT ERADICABLE POLYESTER AWNINGS. COLOR:SHERWIN WILLIAMS SW7041 9EP-3) PROVIDE FLUORESCENT BACKLIGHTING. SEE: 5/A16.0 & 6/A16.0.
6	STONE VENEER - CARMEL MOUNTAIN EASTERN LEDGE BY CORONADO STONE WITH MATCHING CORONADO STONE WAINSCOT SILL. APPLY PER MFR RECOMMENDATIONS. DRY STACK.
7	1/4" WIDE METAL PENN SCREED: SEE DETAIL 4/A16.0. ALIGN CONTROL JOINTS ON DRIVE-THRU CANOPY FASCIA WITH CONTROL JOINTS ON BOTTOM OF SOFFIT.
8	SLOPED ALUMINUM WINDOWS: U.S. ALUMINUM S-010. GLASS JOINTS TO HAVE POLISHED EDGES WITH SILICONE JOINTS. PAINT WOOD FRAME "EP-4".
9	IN-N-OUT BURGER ILLUMINATED LOGO SIGN: UNDER SEPARATE PERMIT.
10	L.E.D. COVE LIGHTING: UNDER SEPARATE PERMIT.
11	BUILDING ADDRESS NUMBERS TO BE 12" HIGH, 4" MIN. W/ MIN. STROKE WIDTH OF 0.5 INCH PER FIRE DEPARTMENT AND CITY JURISDICTION ADDRESS REQUIREMENTS: 1. ADDRESS SHALL BE DISPLAYED & VISIBLE FROM BOTH STREET DIRECTIONS OF APPROACHING VEHICLES. 2. PERMANENT NUMBERS AND LETTERS SHALL BE MADE OF DURABLE AND CLEARLY VISIBLE MATERIAL SUCH AS WOOD, METAL, CERAMIC, PLASTIC AND VINYL. (PAINTED OR GLUED ON NUMBERS ARE NOT ACCEPTABLE MATERIALS). 3. NUMBERS SHALL BE OF COLORS CONTRASTING WITH BACKGROUND TO WHICH THEY ARE ATTACHED. 4. NUMBERS SHALL BE A MINIMUM PROPORTION RATIO OF 6:1 (HEIGHT TO WIDTH). 5. NUMBERS CANNOT BE SPELLED.
12	METAL CAP: COLOR TO MATCH STUCCO.
13	HOLLOW METAL DOOR: SEE SHEET A11.0 (PAINT WITH SHERWIN WILLIAMS - WATERBASE ACRYLON 100 URETHANE PART A B65-720 / PART-B B65V720 - TINT TO MATCH PAINT COLOR NOTED).
14	5'-0" HIGH STUB OUT FOR Co2 LINE
15	4" MIN. HIGH WHITE LETTERING "RISER ROOM" ON RED BACKGROUND SIGN. MOUNT ON RISER ROOM DOOR
16	RECESSED KNOX BOX AT 5'-0" HIGH TO THE RIGHT OF FIRE RISER ROOM. SEE DETAIL 10/A17.0
17	RECESSED 8" FLUORESCENT LIGHT FIXTURE IN SOFFIT. SEE DETAIL 9/A17.1
18	GUTTER AND DOWNSPOUT. REFER TO DETAIL 8/A17.2
19	TEXTURE EXPOSED FOUNDATION WALL BELOW STUCCO WEEP SCREED AND PAINT TO MATCH WALL.
20	EXPOSED RAFTER TAIL

EXTERIOR PAINT SCHEDULE

NO.	MFR.	MODEL	COLOR #	COLOR NAME	FINISH	REMARKS
EP-1	SHERWIN WILLIAMS	XXX	SW7036	ACCESSIBLE BEIGE	HIGH GLOSS	PRIME W/ D.E. EFF-STOP PREMIUM PRIMER
EP-2	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW6109	HOPSACK	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-3	SHERWIN WILLIAMS	SUPER PAINT LATEX	SW7041	VAN DYKE BROWN	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-4	DUNN EDWARDS	SYN-LUSTRO WATER BASE	DE6042	BEAR IN MIND		AWNING



2 EAST ELEVATION
SCALE: 1/4" = 1'-0"



1 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

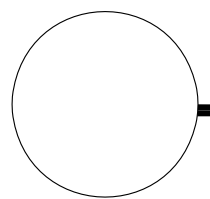
ELEVATION-1

SHEET OF 1

THE INFORMATION, DRAWINGS AND SPECIFICATIONS SHOWN ARE AND SHALL REMAIN THE PROPERTY OF IN-N-OUT BURGER.
THESE DOCUMENTS MAY NOT BE USED WITHOUT THE EXPRESSED WRITTEN CONSENT OF IN-N-OUT BURGERS.

SEASIDE, CA

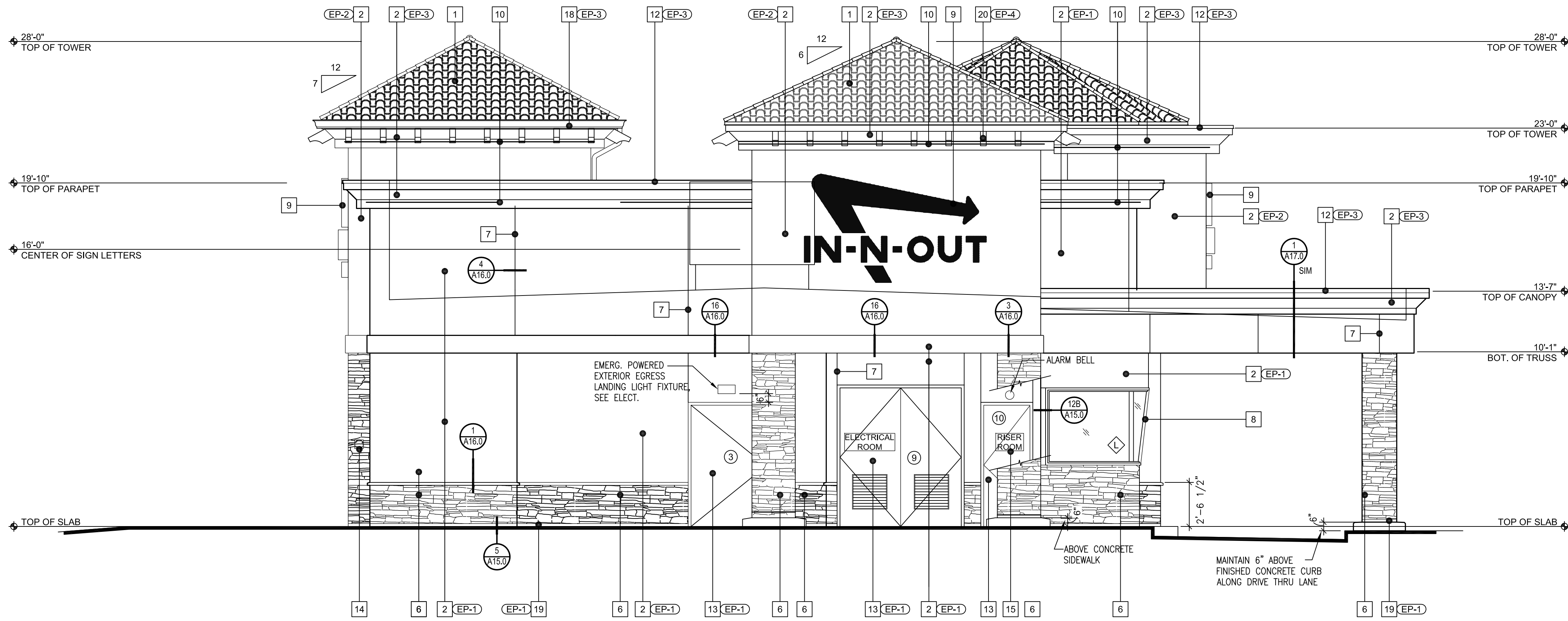
1350 DEL MONTE BOULEVARD



INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





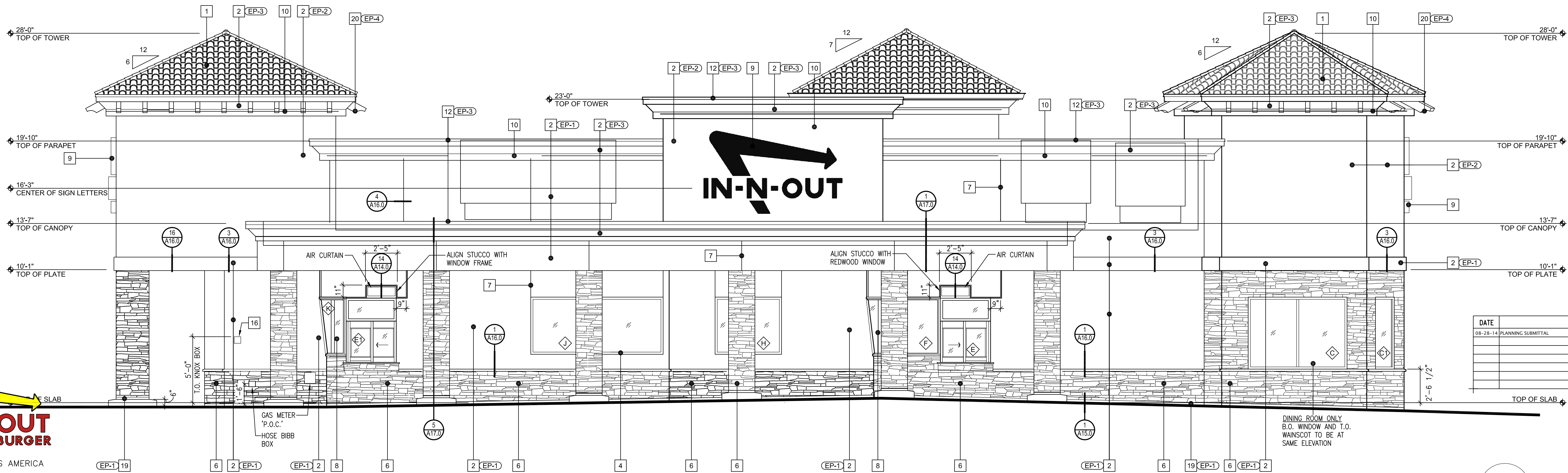
2 WEST ELEVATION
A9.0 SCALE: 1/4" = 1'-0"

KEY NOTES

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EP-4	DUNN EDWARDS	SYN-LUSTRO WATER BASE	DE6042	BEAR IN MIND		AWNING



1 SOUTH ELEVATION
A9.0 SCALE: 1/4" = 1'-0"

DATE	REVISIONS
08-28-14	PLANNING SUBMITTAL



GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ELEVATION-2

SHEET OF 1

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SEASIDE, CA

1350 DEL MONTE BOULEVARD

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA





GOD BLESS AMERICA
13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

FLOOR PLAN

SHEET OF 1

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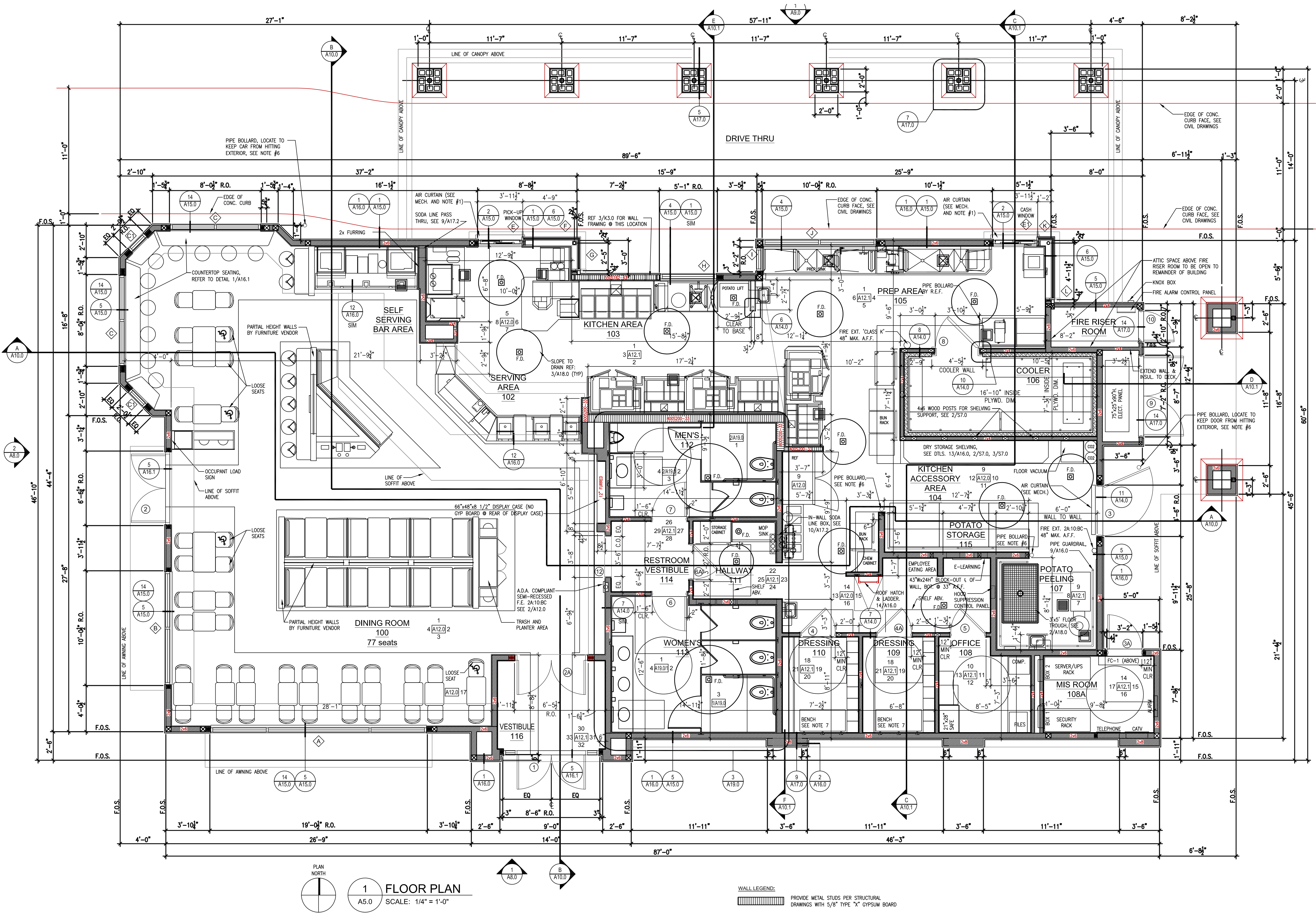
SEASIDE, CA

1350 DEL MONTE BOULEVARD

PRELIMINARY SITE PLAN LAYOUT
(1350 DEL MONTE BOULEVARD) SEASIDE, CA

08-26-14

Packet Page 809



WALL LEGEND:

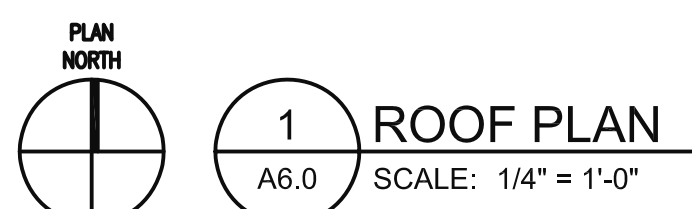
PROVIDE METAL STUDS PER STRUCTURAL
DRAWINGS WITH 5/8" TYPE "X" GYPSUM BOARD

DATE	REVISIONS

0' 5' 10'
SCALE: 1/4"=1'-0"

INO-CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

- A. ALL DUCTWORK EXHAUSTING MOISTURE LADEN AIR SHALL BE STAINLESS STEEL.
- B. ALL DUCTWORK EXHAUSTING GREASE LADEN AIR SHALL BE WELDED BLACK STEEL (INDOOR PORTION) OR WELDED GALVANIZED WITH WELD AREAS COAT GALVANIZED (OUTDOOR PORTION).
- C. PROVIDE 5/8" PLYWOOD PLATFORM BELOW ROOF ACCESS PANELS WITH WOOD BLOCKING SPANNING BETWEEN BOTTOM CHORD OF TRUSSES. PLATFORM TO BE 8" LONG, CENTERED ON ACCESS OPENING, AND EXTEND IN THE DIRECTION OF THE TRUSSES. PROVIDE AN ADDITIONAL 8" LONG PLATFORM AT EACH TRUSS BAY TO THE LEFT & RIGHT OF THE ACCESS OPENING. COORDINATE INSTALLATION OF PLATFORMS TO AVOID LIGHT FIXTURES, DIFFUSERS, DUCTWORK, ETC.
- D. REFER TO DETAIL 13/17/2 FOR PARAPET FLASHING TERMINATION AT TOWERS.
- E. PAINT LOUVERS IN TOWERS AND TOWER DOORS TO MATCH ADJACENT SURFACE.
- F. QUOTE CAPS AT ROOF CURB EQUIPMENT PLATFORMS ARE TO HAVE FULLY WELDED JOINTS. NO SCREWS OR FASTENERS ARE TO PENETRATE THROUGH THE TOP SURFACE.
- G. METAL STRAPS FOR WALK-IN COOLER COMPRESSOR AND "CU-1" ARE TO BE ATTACHED TO THE SIDES OF THE ROOF CURB AND NOT THE TOP.
- H. PAINT ALL PENETRATIONS AT ROOF TILES TO MATCH TILE.
- I. ATTACH ICE MACHINE COMPRESSORS TO RACK USING 3/8" TEK SCREWS OR BETTER.
- J. ATTACH ICE MACHINE DISCONNECT TO RACK USING BOLTS (NO SCREWS).
- K. REFER TO DETAIL 17/17/1 FOR VENT PIPING DETAIL AT TILE ROOFS.



1350 DEL MONTE BOULEVARD

[illegible]

0' 5'

SCALE: 1/4"=1'-0"

INO_CA-SEASIDE
(1350 DEL MONTE BLVD) - SP
(VACANT LAND)

08-26-14



13502 HAMBURGER LANE
BALDWIN PARK, CA 91706

ROOF PLAN

SHEET OF 1

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ISSUE RECORD

DATE DESCRIPTION
2014 CLASSIC PROTOTYPE 14C
10.15.14 SITE PHOTOMETRIC ISSUE FOR REVIEW

REVISION RECORD

PROFESSIONAL SEAL

J:\141013
LIPPE AND ASSOCIATES
CONSULTING ENGINEERS
15950 MIDWAY ROAD
ADRIAN, TEXAS 75001 (972) 387-3500
FAX (972) 387-3849

PROTOTYPE VERSION
14C

PROJECT NAME

IN-N-OUT
BURGER

Seaside
California

1350 Del Monte Blvd.
Seaside, CA. 92XXX

IN-N-OUT
BURGER®
GOD BLESS AMERICA

PROJECT NUMBER

XXXXXX

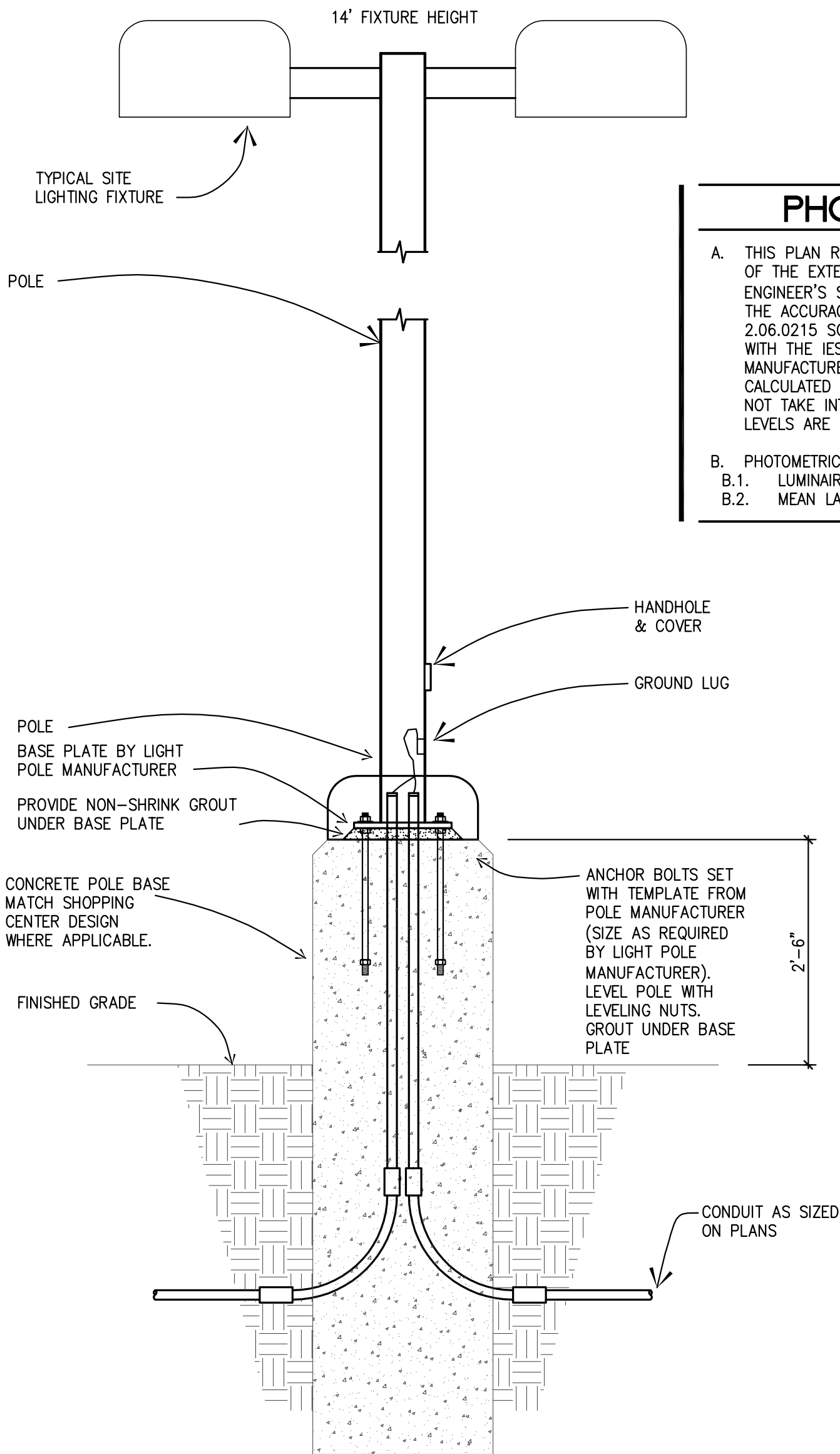
SHEET TITLE

SITE LIGHTING
PHOTOMETRIC PLAN

SHEET NUMBER

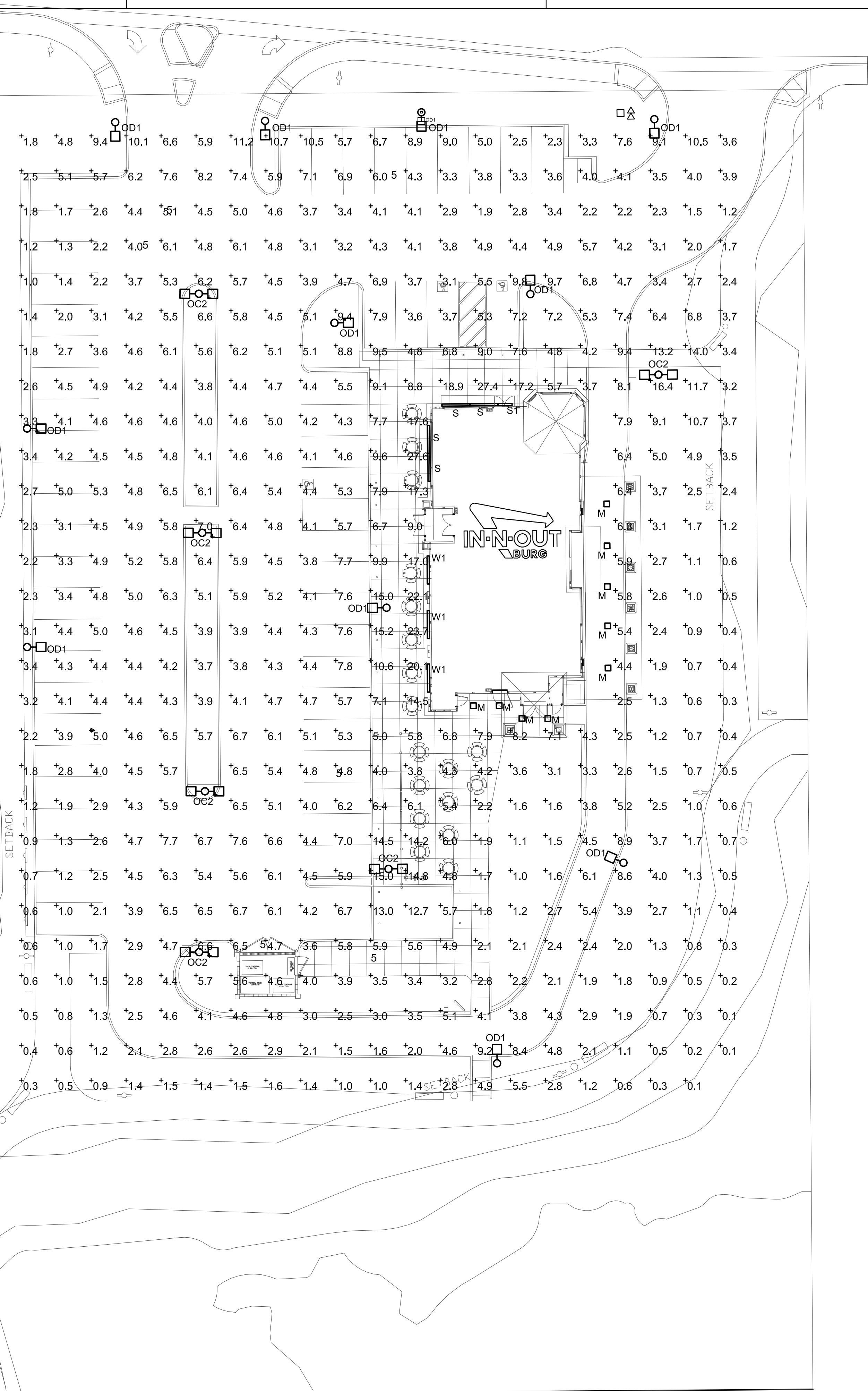
E11.0

SITE LIGHTING FIXTURE SCHEDULE				
TYPE	MANUFACTURER	VOLTAGE	LAMPS	DESCRIPTION
OC2	LITHONIA LIGHTING #KSF2 150M R4W, 208 SP12 SCWA WITH (2) TYPE IV WIDE OPTICS, POLE #SSS 11.5 5G DM28 DDB	208	(2) 150W MH (378 VA TOTAL LOAD)	208V TWIN HEAD, 150W METAL HALIDE, 14' AFG, TOTAL FIXTURE HEIGHT (11'-6" POLE + 2'-6" BASE).
OD1	LITHONIA LIGHTING #KSF2 150M R4W, 208 SP12 SCWA WITH (2) TYPE IV WIDE OPTICS, POLE #SSS 11.5 5G DM28 DDB	208	(1) 150W MH (189 VA TOTAL LOAD)	208V SINGLE HEAD, 150W METAL HALIDE, 14' AFG, TOTAL FIXTURE HEIGHT (11'-6" POLE + 2'-6" BASE).
M	GOHAM LIGHTING #LAH-70MH-12FW-FFL-120	120	(1) 70W MH (90 VA TOTAL LOAD)	120V RECESSED MOUNTED WITH ZERO DEGREE BALLAST, 70W METAL HALIDE, PROVIDE VANDAL RESISTANT COVER.
S	LITHONIA #TDM-232-120-GEBS	120	(4) FO32T8/41K (112 VA TOTAL LOAD)	8' EXTERIOR WALL MOUNTED BACK LIGHTING WITH ZERO DEGREE BALLAST, WALL MOUNTED UNDER AWNING AT 9'-6" AFG.
S1	LITHONIA #DM-232-120-GEBS10RS	120	(2) FO32T8/41K (56 VA TOTAL LOAD)	4' EXTERIOR WALL MOUNTED BACK LIGHTING WITH ZERO DEGREE BALLAST, WALL MOUNTED UNDER AWNING AT 9'-6" AFG.
W1	VOIGT LIGHTING #TIMO-400-1T8-32W-120-OP-TRW-8-WH	120	(4) FO32T8/41K (141 VA TOTAL LOAD)	8' EXTERIOR RECESSED FIXTURE. LOCATE IN EXTERIOR NICHE (DAMP LOCATION) WITH ZERO DEGREE BALLAST.



PHOTOMETRIC NOTES

- A. THIS PLAN REPRESENTS A SOFTWARE SIMULATED PHOTOMETRIC STUDY OF THE EXTERIOR SITE LIGHTING. IT WAS CREATED UNDER THE ENGINEER'S SUPERVISION; HOWEVER THE ENGINEER DOES NOT WARRANT THE ACCURACY OF THE SOFTWARE OR LIGHT FIXTURE DATA. VISUAL 2.06.0215 SOFTWARE WAS USED TO GENERATE THIS DOCUMENT ALONG WITH THE IES DATA FILES PROVIDED BY THE LIGHT FIXTURE MANUFACTURER. THIS PLAN INDICATES THE SIMULATED LIGHT INTENSITY CALCULATED IN FOOT CANDLES AT GRAD LEVEL. THE SIMULATION DOES NOT TAKE INTO EFFECT A CHANGE IN GRADE ELEVATION. THE LIGHT LEVELS ARE CALCULATED ON A HORIZONTAL PLANE 0 FT AFG.
- B. PHOTOMETRIC CALCULATION DATA:
B.1. LUMINAIRE LIGHT LOSS FACTOR EQUALS 0.75.
B.2. MEAN LAMP LUMENS WERE USED FOR IES CALCULATIONS



01 SITE PHOTOMETRIC PLAN

SCALE: 1"=20'-0"

02 SITE LIGHTING STANDARD

SCALE: NOT TO SCALE

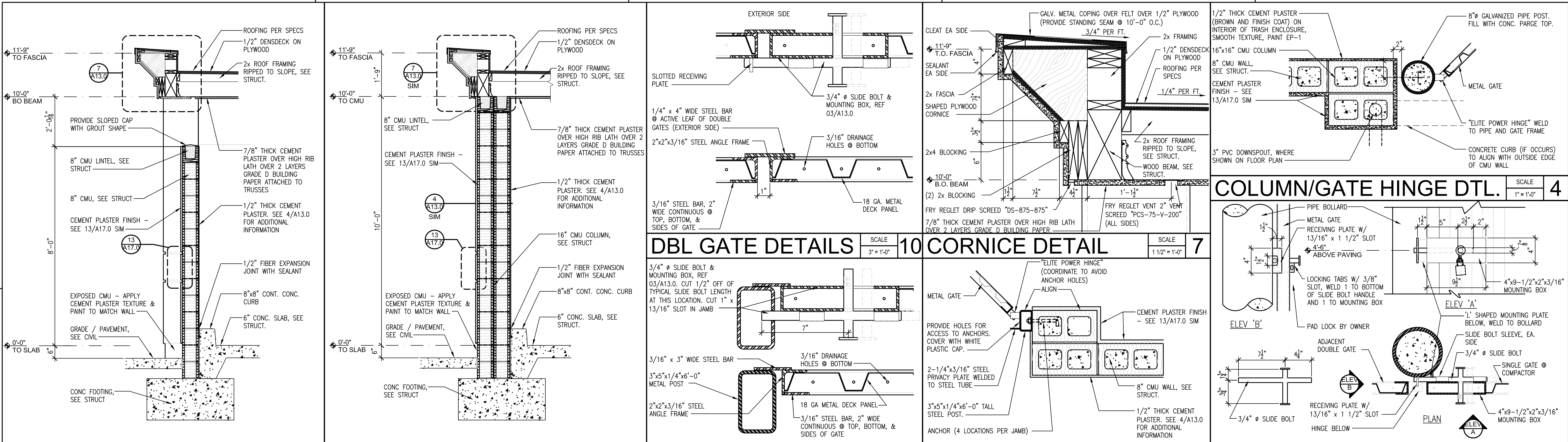
GENERAL NOTE:
REFER TO STRUCTURAL PLANS FOR POLE BASE STRUCTURAL DETAIL 08/SD01.



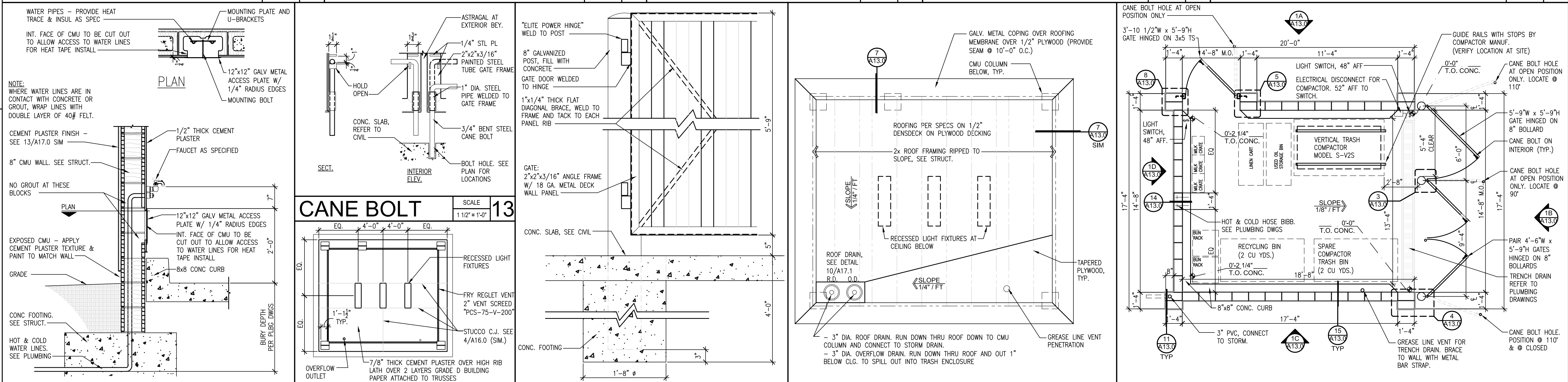
Call: Toll Free

811

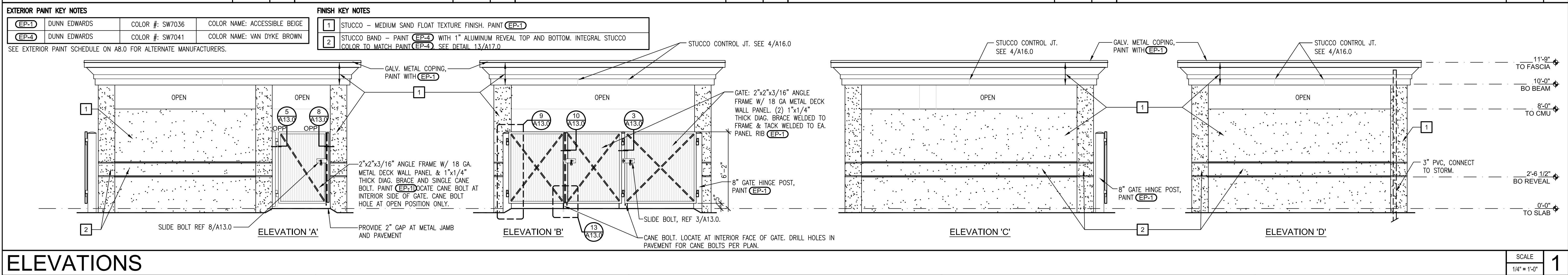
TWO WORKING DAYS
BEFORE YOU DIG



WALL SECTION SCALE 1/2" = 1'-0" **15 WALL SECTION** SCALE 1/2" = 1'-0" **11 MAN GATE DTLS** SCALE 3" = 1'-0" **8 MAN GATE - HINGE JAMB** SCALE 1" = 1'-0" **5 COMPACTOR GATE - LOCK** SCALE 1 1/2" = 1'-0" **3**



HOSE BIB DETAIL SCALE 3/4" = 1'-0" **14 R.C.P.** SCALE 1/8" = 1'-0" **12 GATE HINGE DETAIL** SCALE 1" = 1'-0" **9 ROOF PLAN** SCALE 1/4" = 1'-0" **6 FLOOR PLAN** SCALE 1/4" = 1'-0" **2**



In-N-Out Restaurant

Outside Seating and Umbrella Design and Trash Receptacle Design



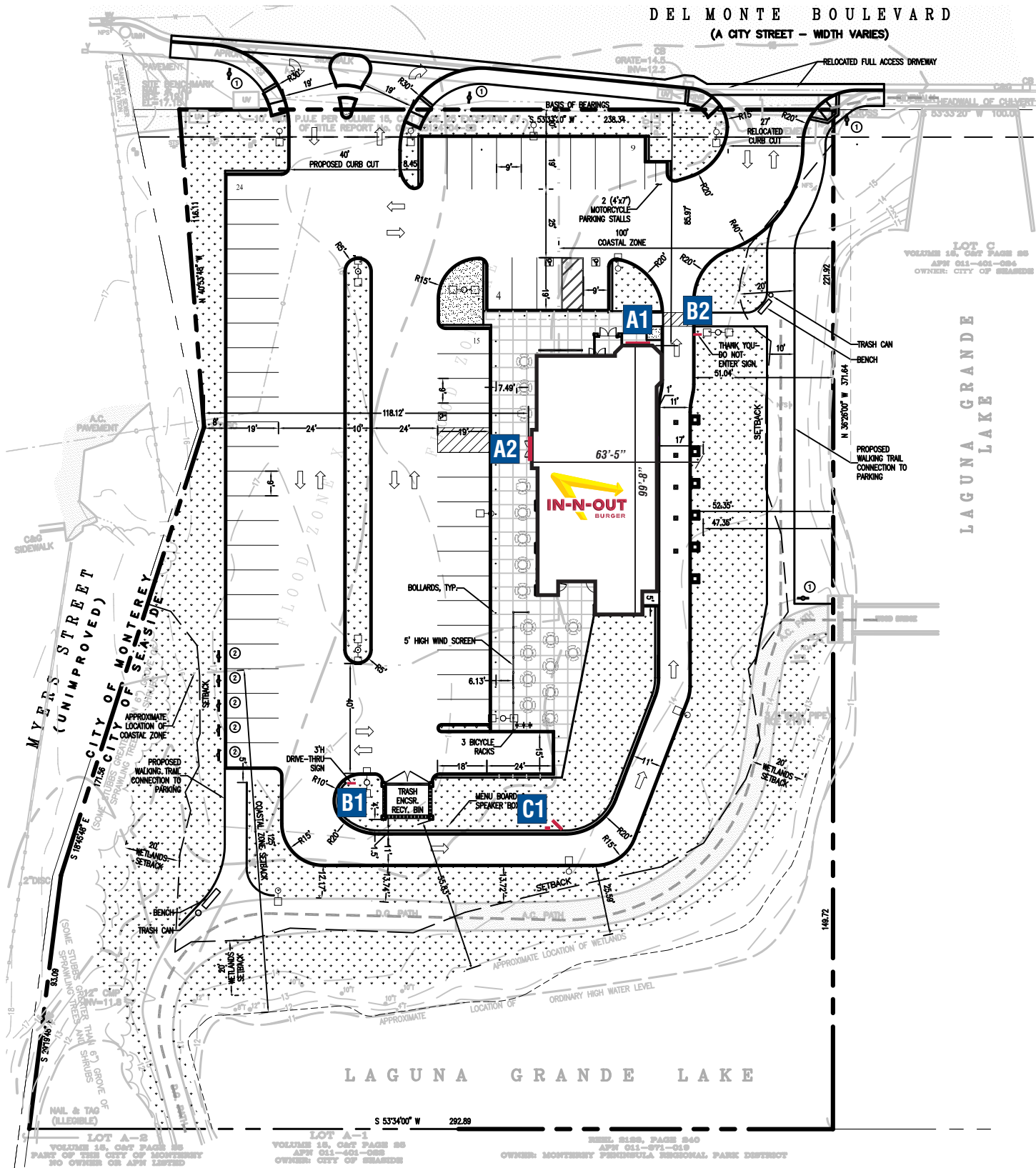
Reinforced Concrete Table and Bench

Red and White Fiberglass Umbrella

Concrete Trash receptacle with aggregate pebble finish



SITE PLAN
SCALE: 1"=50'-0"



KEY

- A1** S/F 6'-5 1/8" X 10'-6 1/8" INTERNALLY ILLUMINATED WALL SIGN (49.5 SQ. FT.)
- A2** S/F 6'-5 1/8" X 10'-6 1/8" INTERNALLY ILLUMINATED WALL SIGN (49.5 SQ. FT.)
- B1** D/F INTERNALLY ILLUMINATED DIRECTIONAL DISPLAY ("DRIVE THRU")
- B2** D/F INTERNALLY ILLUMINATED DIRECTIONAL DISPLAY ("THANK YOU/DO NOT ENTER")
- C1** S/F INTERNALLY ILLUMINATED MENU BOARD

CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE, CA

SHEET TITLE

SITE PLAN AND SIGN KEY

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

NOTED

CUSTOMER APPROVAL

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DWG#	09-599	PROJECT #	307940
REVISION NO.	7	WO#	000000

REVISIONS

1	07/31/09	AW	7	03/13/15	JR
2	08/05/09	AW	8		
3	08/10/09	AW	9		
4	03/25/10	JM	10		
5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.



WEST/FRONT ELEVATION

SCALE: 1/8" = 1'-0"



SOUTH/RIGHT ELEVATION

SCALE: 1/8" = 1'-0"

CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

ELEVATIONS

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

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5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.

A1 A2



EAST/REAR ELEVATION

SCALE: 1/8" = 1'-0"



NORTH/LEFT ELEVATION

SCALE: 1/8" = 1'-0"



SIGNS & GRAPHICS

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PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

ELEVATIONS

ACCT. REP.

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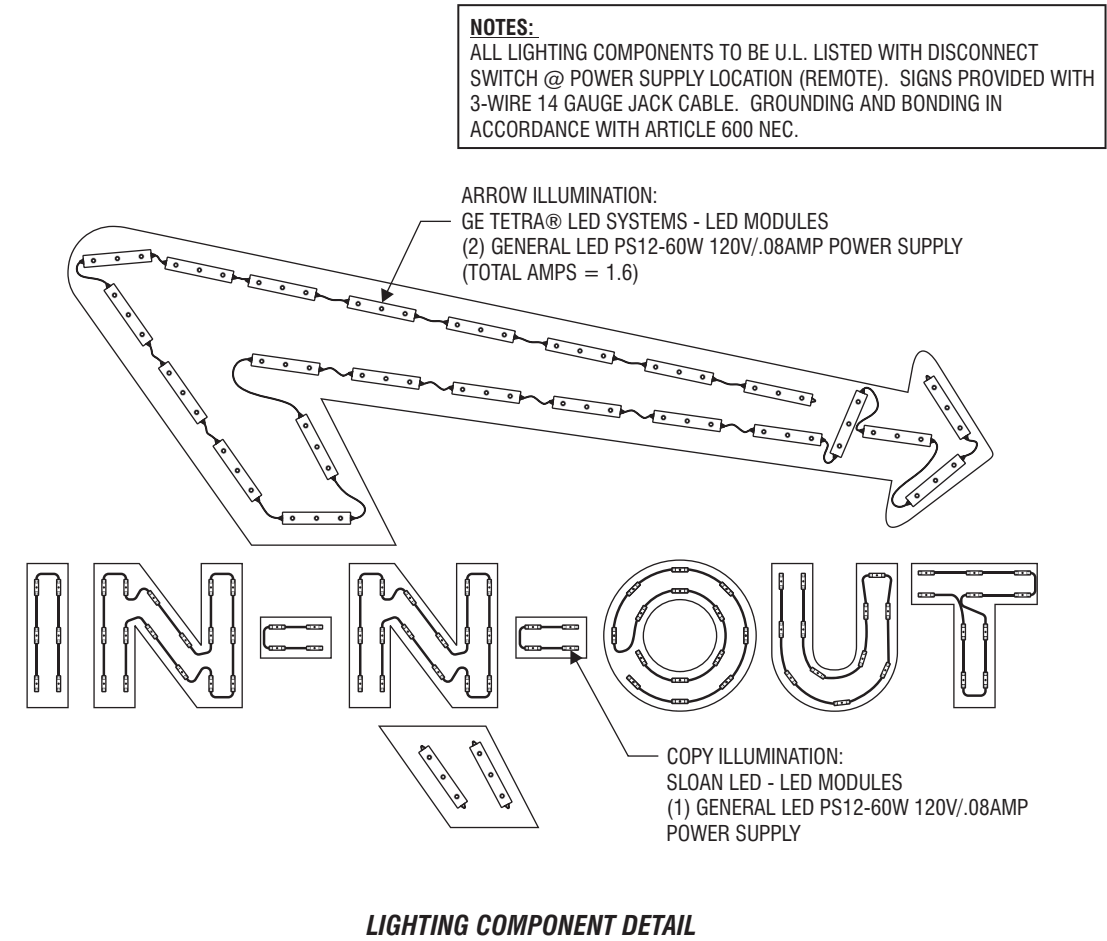
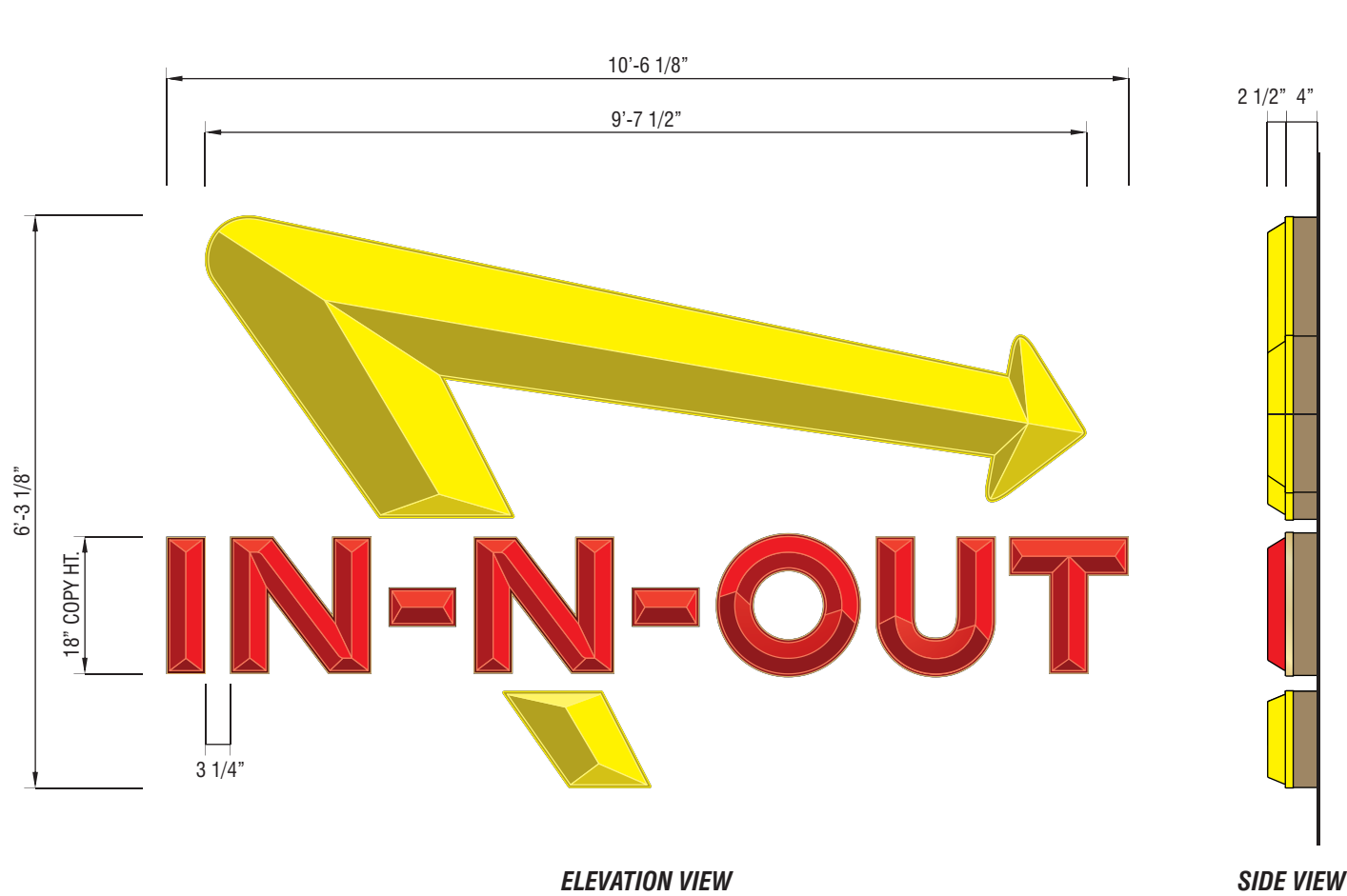
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REVISIONS

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5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.



S/F 6' X 10' ILLUMINATED WALL SIGN

SCALE: 1/2" = 1'-0"

SIGN SPECIFICATIONS:

S/F INTERNALLY ILLUMINATED ALUMINUM CHANNEL LETTER SIGN DISPLAY WITH FORMED COPY & ARROW. COLORS/ MATERIAL PER BELOW:

ARROW:

FABRICATED CHANNEL WITH RETURNS PAINTED TO MATCH BUILDING W/ SATIN FINISH. FORMED YELLOW #2037 ACRYLIC FACES. LED ILLUMINATION (SEE ABOVE).

COPY:

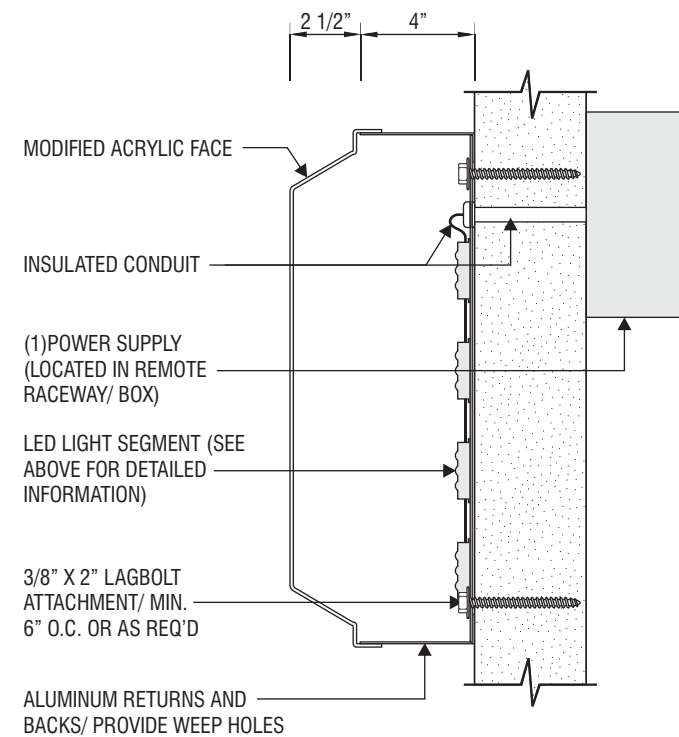
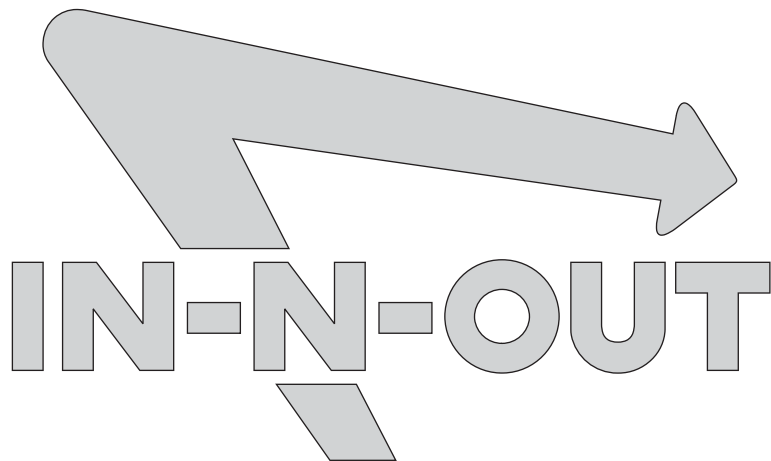
FABRICATED CHANNEL WITH RETURNS PAINTED TO MATCH BUILDING W/ SATIN FINISH. FORMED RED #211-1 ACRYLIC FACES WITH 1" GOLD TRIMCAP. RED LED ILLUMINATION (SEE ABOVE).

CHANNEL LETTERS TO BE 4" DEEP/ ALL SIGNS TO BE INSTALLED ONTO BUILDING AS REQUIRED.

SQUARE FOOTAGE CALCULATIONS:

UPPER ARROW:	15.6 S.F.
COPY:	11.0 S.F.
LOWER ARROW:	1.3 S.F.
TOTAL SIGN AREA:	27.9 S.F.

NOTE: GRAY INDICATES CALCULATED AREA



SECTION DETAIL (NOT TO SCALE)



SIGNS & GRAPHICS

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CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE, CA

SHEET TITLE

WALL SIGNS

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

NOTED

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DWG#	PROJECT #
09-599	307940
REVISION NO.	WO#
7	000000

REVISIONS

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3	08/10/09	AW	9		
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5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.

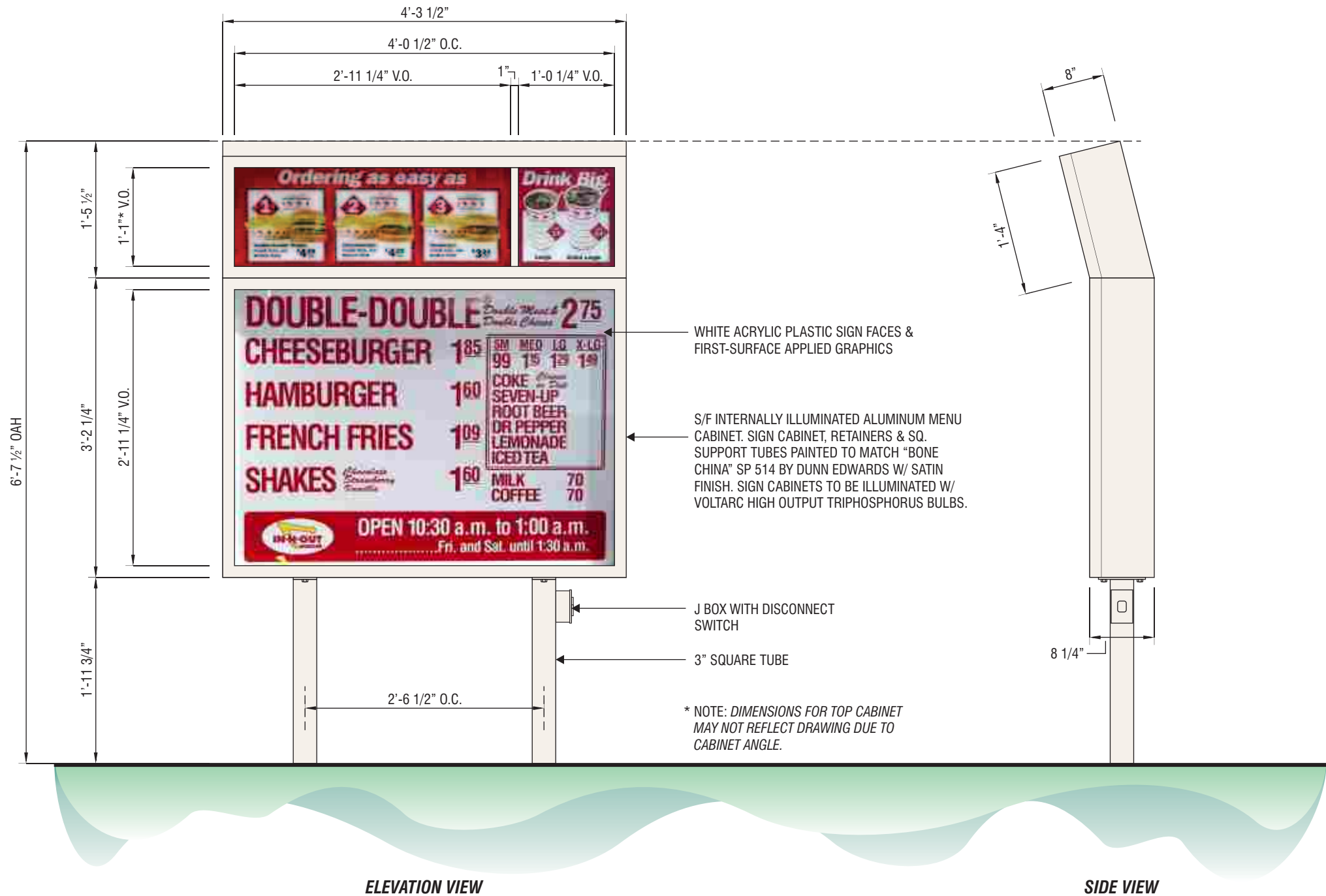
A1 A2

5 of 10



SCALE: 3" = 1'-0"

D/F INTERNALLY ILLUMINATED ALUMINUM DIRECTIONAL CABINET W/ FORMED FACES & ARROW. SIGN CABINET, RETAINERS PAINTED TO MATCH "BONE CHINA" SP 514 BY DUNN EDWARDS W/ SATIN FINISH. FORMED ACRYLIC PLASTIC FACES TO HAVE SECOND-SURFACE PAINTED GRAPHICS. BACKGROUND COLOR TO BE PAINTED INO 443 RED (25% CLEAR). LETTER COLOR TO BE PAINTED WHITE. ARROW TO BE PAINTED INO 413 YELLOW (25% CLEAR) - *AS APPLIES*. SIGN CABINETS TO BE ILLUMINATED W/ VOLTAC HIGH OUTPUT FLUORESCENT BULBS.



S/F INTERNALLY ILLUMINATED MENU BOARD @ 6'-7 1/2" OAH (19.9 SQ. FT.)

SCALE: 3/4" = 1'-0"



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PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

MENU BOARD

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

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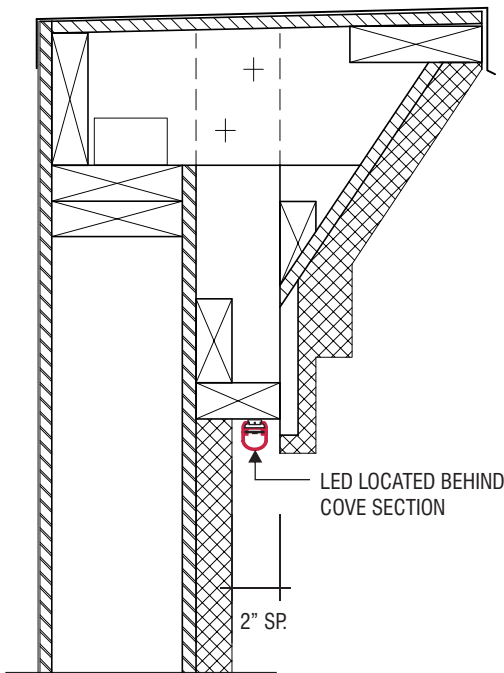
DWG#	09-599	PROJECT #	307940
REVISION NO.	7	WO#	000000

REVISIONS

1	07/31/09	AW	7	03/13/15	JR
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5	03/26/10	JM	11		
6	03/10/15	GMc	12		

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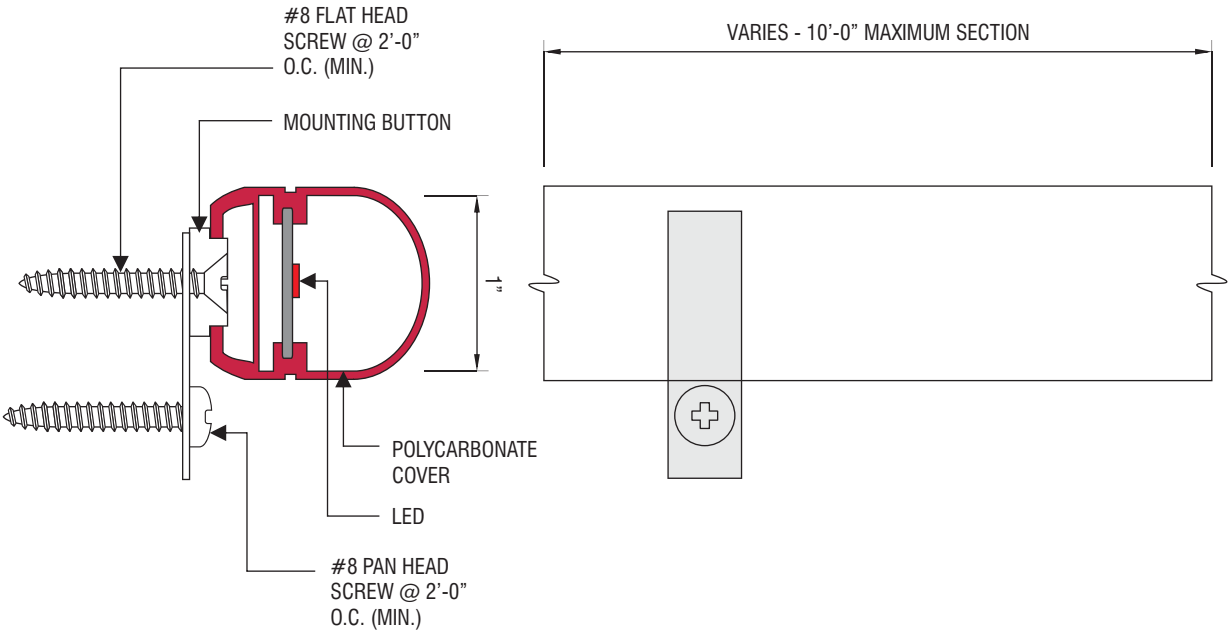




NOTE: EXAMPLE ONLY.
ACTUAL PARAPET DESIGN
AND DIMENSIONS MAY VARY.

PARAPET SECTION DETAIL

SCALE: 1 1/2" = 1'-0"



STANDARD SPECIFICATIONS

'SLOAN' LED RED LIGHTING SYSTEM. ALL ELECTRICAL COMPONENTS
TO BE UL LISTED. ATTACH TO WALL AS REQUIRED.

LED BORDER DETAIL

FULL SIZE

CLIENT



PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

LED STRIPS

ACCT. REP.

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

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REVISION NO.	7	WO#	000000

REVISIONS

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3	08/10/09	AW	9		
4	03/25/10	JM	10		
5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.



COLOR SPECIFICATIONS

C1  RED ACRYLIC #211-1

CNP
SIGNS & GRAPHICS
4530 Mission Gorge Place
San Diego, CA 92120
Tel: 619.283.2191
Fax: 619.283.9503
Web: www.cnpsigns.com



PROJECT
IN-N-OUT #XXXX

LOCATION
1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE
**NON-ILLUMINATED
ADDRESS NUMERALS**

ACCT. REP:
DANIEL GONZALEZ
DESIGNER
JARED McCARTER
DATE
07/30/09
SCALE
NOTED

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3	08/10/09	AW	9		
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5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.

NON-ILLUMINATED 12" ADDRESS NUMERALS
SCALE: 3" = 1'-0"



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PROJECT

IN-N-OUT #XXXX

LOCATION

1350 DEL MONTE, SEASIDE,
CA

SHEET TITLE

INTERIOR NEON DISPLAY

ACCT. REP:

DANIEL GONZALEZ

DESIGNER

JARED McCARTER

DATE

07/30/09

SCALE

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3	08/10/09	AW	9		
4	03/25/10	JM	10		
5	03/26/10	JM	11		
6	03/10/15	GMc	12		

KEY NO.

10 of 10



INTERIOR NEON SIGN

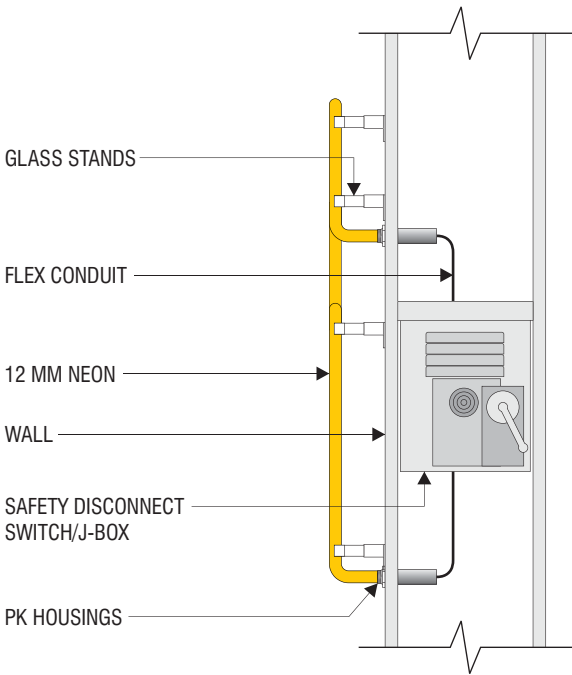
SCALE: 1 1/2" = 1'-0"

NOTE: DISPLAY TO BE CENTERED TOP TO BOTTOM & LEFT TO RIGHT



INSTALLED NEON DISPLAY (TYP.)

NOTE: NEON SIGN IS ORIENTED FOR INTERIOR VISIBILITY ONLY



NEON DETAIL

SCALE: NTS

PRODUCT INFORMATION

KSF

Spec-Form®



Intended Use

For car lots, street lighting or parking areas.

Construction

Housing: Rugged, heavy-gauge, aluminum rectilinear housing. All seams continuously welded for weathertight integrity.

Doorframe: Natural anodized, extruded aluminum frame with mitered corners, retained with two hinge pins and secured with one quarter-turn, quick-release fastener. Integrally designed, extruded silicone gasket provides weatherproof seal between housing and frame.

Finish: Dark bronze polyester powder finish standard. Additional architectural colors available; see www.lithonia.com/archcolors.

Optics

Optics: Anodized segmented reflectors provide superior uniformity and control. KSF1/KSF2 reflectors are rotatable and interchangeable. KSF3 Type IV is rotatable. Five cut-off distributions available: R2 (roadway), R3 (asymmetric), R4SC (forward throw, sharp cutoff), R4W (wide, forward throw), R5S (square).

Lens: .125" thick, impact-resistant tempered glass with thermally applied, silk-screened power door shield.

Electrical

Electrical components mounted to heavy-gauge plate to maximize heat dissipation and structural integrity. Ballast: All ballasts are 100% factory tested. High reactance, high power factor for 150W and below. Constant wattage autotransformer 175W and above. MH: 150W and below are standard with pulse-start ignitor technology. Super CWA Pulse Start ballasts, 88% efficient and EISA legislation compliant, are required for 151-400W (must order SCWA option) for U.S. shipments only. CSA, NOM or INTL required for probe start shipments outside the U.S.

Socket: Horizontally oriented, mogul-base porcelain socket for 175W and above, medium base for 150W and below, with copper alloy, nickel-plated screw shell and center contact. UL Listed 1500W-600V, 4KV pulse rated.

Installation

Mounting: Extruded aluminum arm for square pole mounting shipped in fixture carton as standard. Optional mountings available.

Listings

UL Listed (standard). CSA Certified or NOM Certified (see Options). UL Listed for 25°C ambient and wet locations. IP65 rated.



ORDERING INFORMATION

For shortest lead times, configure products using **bolded options**.

Example: KSF1 250S R3 TB SP09 LPI

Series	Lamp type ¹			Distribution		Voltage	Ballast	Mounting						
KSF1	High	Metal	1000M ⁶	R2	Type II roadway ⁸	120	(blank)	Magnetic ballast	Arm mounting		WB09	9" arm for wall	Optional mounting, ships	
KSF2	pressure	halide		R3	Type III asymmetric	208 ¹¹			SP04	4" arm for square pole ¹⁴	WW09	9" arm for wood	separately ^{15, 16}	
KSF3	sodium ²	100M ²	Metal	R4	Type IV, FT ^{9, 10}	240 ¹¹	CWI	Constant wattage isolated ¹³	RP04	4" arm for round pole ¹⁴		pole or wall	KMA	External mast arm adaptor
	70S	150M	halide ceramic ⁷	R4SC	Type IV, FT, sharp cutoff ⁸	277			WB04	4" arm for wall	SP12	12" arm for square pole	DA12P	12" degree arm for pole
	100S	175M ³	100MHC ²			347	SCWA	Super CWA ballast	WW04	4" arm for wood pole or wall	RP12	12" arm for round pole	DA12WB	12" degree arm for wall
	150S	200M ⁴	150MHC	R4W	Type IV, FT, wide ^{8, 9}	480 ¹¹								
	250S	250M		R5S	Type V symmetric square ⁹	TB ¹²			SP09	9" arm for square pole ¹⁴	WB12	12" arm for wall		
	400S	320M ^{4, 5}				23050HZ ¹³			RP09	9" arm for round pole ¹⁴	WW12	12" arm for wood pole or wall	KTMB	Twin mounting bar
	1000S	350M ^{4, 5}												
		400M ⁵												

Options

Ships installed

SF Single fuse, 120V, 277V, 347V
 DF Double fuse, 208V, 240V, 480V
 EC Emergency circuit¹⁷
 QRS Quartz restrike system¹⁷
 PER NEMA twist-lock receptacle only¹⁸
 KW1 Kilowatch 120V control¹⁹
 KW4 Kilowatch 277V control¹⁹
 CSA Meets Canadian standards

NOM Meets Mexican standards (consult factory)
 INTL Available for MH probe start shipping outside the U.S.
 Ships separately¹⁵
 PE1 NEMA twist-lock PE (120V-240V)
 PE3 NEMA twist-lock PE (347V)
 PE4 NEMA twist-lock PE (480V)
 PE7 NEMA twist-lock PE (277V)

SC Shorting cap for PER option
 HS House-side shield²⁰
 VG Vandal guard²⁰

Finish

(blank) Dark bronze (std.)
 DBL Black
 DGC Charcoal gray
 DMB Medium bronze
 DNA Natural aluminum
 DWH White
 CR Enhanced corrosion resistance
 CRT Non-stick protective coating (black)

Lamped

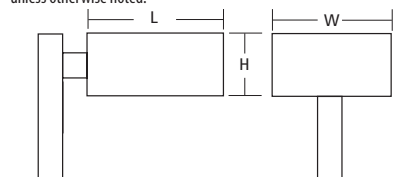
LPI Lamp included
 L/LP Less lamp

ADDITIONAL INFORMATION

For additional product information, visit www.lithonia.com.

CONFIGURATIONS		
SERIES	LAMP TYPE	DISTRIBUTION
KSF1	70S, 100S, 100M, 100MHC, 150S, 150M, 150MHC, 175M, 200M, 250M	R2, R3, R4SC
KSF2	250S, 320M, 350M, 400S, 400M	R2, R3, R4SC, R4W, R5S
KSF3	1000S, 1000M	R3, R4, R5S

Drawings are for dimensional detail only and may not represent actual mechanical configuration. Dimensions are shown in inches (centimeters) unless otherwise noted.



KSF1	KSF2	KSF3
EPA: 1.5 ft ² (0.14 m ²)	2.0 ft ² (0.19 m ²)	3.0 ft ² (0.28 m ²)
Length: 21-1/4 (54.0)	24-5/8 (62.5)	29-5/8 (75.2)
Width: 15-1/2 (39.3)	17-3/4 (45.1)	23-5/8 (59.9)
Height: 7-1/4 (18.4)	8-3/8 (21.1)	10-1/2 (26.7)
Max. weight: 35 lbs (15.9 kg)	52 lbs (23.6 kg)	80 lbs (36.3 kg)

Notes

- Specify lamp type and distribution. See Configurations table.
- Not available with SCWA.
- Universal, mogul base lamp allows KSF to be available with SCWA.
- Must be ordered with SCWA.
- Must use ED28 lamp.
- Must use BT37 lamp with R5S.
- Not applicable with L/LP.
- Not available KSF3.
- Not available KSF1.
- Not available KSF2.
- Must specify CWI for use in Canada.
- Optional multi-tap ballast (120V, 208V, 240V, 277V). In Canada 120V, 277V, 347V; ships as 120V/347V.
- Consult factory for available wattages.
- KSF1, KSF2 must use 9" arm, KSF3 must use 12" arm when mounting two luminaires at 90°.
- May be ordered as accessory.
- Must specify finish.
- Maximum allowable wattage lamp included.
- Photocell not included.
- Available with 150S, 250S and 400S only.
- Prefix with fixture name and size. VG: KSF1VG, KSF2VG. HS: KSF1HS, KSF2HS (for use with R2 or R3); KSF3HS (for use with R3 or R4).

FEATURES & SPECIFICATIONS

INTENDED USE — An attractive and energy-efficient surface-mounted or suspended LED luminaire, suitable for wet, damp and/or cold locations. For challenging situations where relatively low fixture mounting heights and wide fixture spacings are common — such as industrial facilities, parking garages, retail malls, multi-purpose rooms, garden centers, and airports. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic Environmental Compatibility table, for suitable uses.](#)

CONSTRUCTION — One-piece SVA fiberglass housing with integral perimeter channel utilizing continuous poured-in-place closed cell gasket. Approved as a wireway and through wiring. Tool-less driver and wiring access. Stainless steel latches are standard. Polycarbonate latches also available (See Options). Power connection is easily accommodated through pre-drilled holes at each end, with wet location fittings provided for maximum flexibility. Easily mounted to ceilings and structure, or suspended with chain, cable or rod, using stainless steel mounting brackets (included).

OPTICS — 100% impact modified frosted acrylic lens with lineal ribs. Also available is an optically clear or frosted deep acrylic lens.

ELECTRICAL — Utilizes high-efficiency LED's on metal core circuit boards. 4100 Kelvin temperature standard with additional color temperatures also available. High efficiency driver operates 120V through 277V, 50-60HZ. Integral surge protection tested in accordance with IEEE/ANSI C62.41.2 to Category C Low. Includes a temperature-sensing component that will limit the temperature of the LEDs in case of excessive ambient temperatures or misapplication. 0-10V dimming driver standard.

Expected service life of 60,000 hours at 80% lumen maintenance (L80); predicted life of more than 100,000 hours.

INSTALLATION — Fixture can be ceiling or suspended mounted. Stainless steel mounting brackets included (two per luminaire), pre-punched for easy field-attachment of bolts, screws and other mounting hardware. Covered ceiling is not required to maintain wet location listing or IP rating.

LISTINGS — CSA certified to UL and C-UL standards. Listed for wet locations in ambient temps ranging from -30°C to 25°C when fixture is surface mounted or up to 40°C when fixture is suspended at least 6" from ceiling (driver would have 3 year warranty). IP65, IP66 and IP67 rated. NSF splash-zone certified and meets FDA/USDA guidelines. See "FEM LED Specification Matrix" for ambient temperature listing.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Actual performance may differ as a result of end-user environment and application.

Note: Specifications subject to change without notice.

Catalog Number
Notes
Type

Low-Profile Enclosed and Gasketed Industrial

FEM LED

CEILING/ SUSPENDED MOUNT



ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: FEM4 LED 4L/57 IMAFL

Series	/ Lumens/Color temperature ¹				Diffuser	Distribution		Voltage	
FEM4 LED 4'	Nominal Lumens		Color temperature		IMAFL Acrylic, lineal ribbed frosted lens	(blank)	General distribution	(blank)	MVOLT
FEM8 LED 8'	3L	3000 lumens	(blank)	4100K (CRI 65)	IMACD Acrylic, clear deep lens	SD	Spread distribution	120	120V
	4L	4000 lumens	27	2700K (CRI 80)	IMAFD Acrylic, clear deep frosted lens			277	277V
	6L	6000 lumens	35	3500K (CRI 80)					
	9L	9000 lumens	57	5700K (CRI 70)					
			AMB	Amber LED					

Options					
CS89	Cord set - NEMA type STW 16/3, 6', 600V, white, no plug, wet location	L/SP	Less surge protector	WLF	Wet location fitting (pre-installed on top of housing) ⁵
CS89L12	Cord set - NEMA type STW 16/3, 12', 600V, white, no plug, wet location	DIM	Pre-wired for 0-10V low-voltage dimming (100-10%)	WLFEND	Wet location fitting (one end)
CS88	Cord set - Brad Harrison 3P male straight 600V molded plug, 6' type ST00W yellow PVC cord, 16/3	DIM2	Line-voltage power control (100%-50%) ³	PLCL	Polycarbonate latches
CS88L12	Cord set - Brad Harrison 3P male straight 600V molded plug, 12' type ST00W yellow PVC cord, 16/3	MSI ____	Wet location 360° motion sensor pre-wired for ON/OFF operation ^{2,4}	DPMB	Dual pendant mounting bracket
		TRS	Tamper resistant Torx® T10 Screws		

Accessories: Order as separate catalog number.	
HC36	Hook and 36" chain (ships as pair)
MHHK120	10' single leg air craft cable
MHHK120SS	10' single leg air craft cable, stainless steel
RK1 T10DRV	Torx® T10 screwdriver for TRS option
FEMDPMB	Dual pendant mounting bracket (ships as a pair)

Notes

- The CCT value provided is of lamp source and actual CCT will vary upon levels.
- Must specify voltage.
- Available with 8' only.
- For mounting up to 8', specify MSI8; for mounting up to 20', specify MSI20; for mounting up to 40', specify MSI40.
- WLF option does not meet NEMA 4X.

FEM LED Low-Profile Enclosed and Gasketed Specular

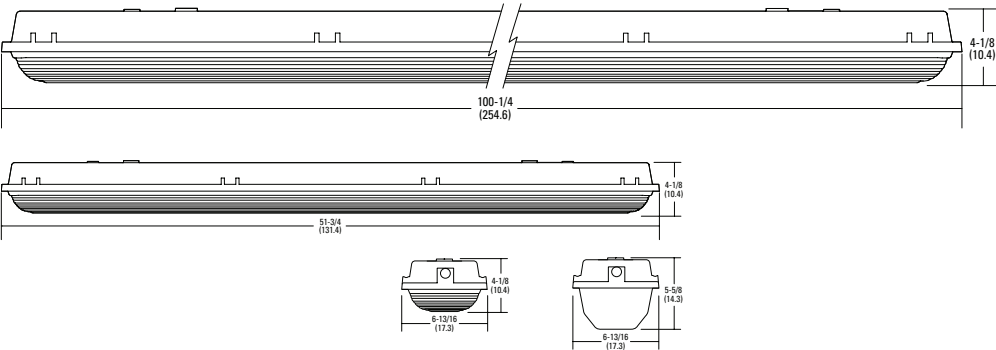
DIMENSIONS

Specifications subject to change without notice.
All dimensions are inches (centimeters) unless otherwise indicated.

FEM LED Specification Matrix*										
Fixture	System watts	Actual lumens	mA	Max. ambient temp. (°C)		Width	IMAFL depth	IMACD or IMAFD depth	Length	Comparable fluorescent/HID
				Suspended**	Surface mounted					
FEM4 3L	39	3418	350	40	25	7 (17.8)	4 3/4 (12.1)	6 1/8 (15.5)	52 (132.1)	1-lamp 32W T8, 1-lamp 54W T5HO, 70W MH
FEM4 4L	61	4728	525	35	25	7 (17.8)	4 3/4 (12.1)	6 1/8 (15.5)	52 (132.1)	2-lamp 32W T8, 70W HPS
FEM8 6L	78	6836	350	40	25	7 (17.8)	4 3/4 (12.1)	6 1/8 (15.5)	100 1/4 (254.6)	3-lamp 32W T8, 2-lamp 54W T5HO, 100W HPS, 100W MH
FEM8 9L	122	9456	525	25	25	7 (17.8)	4 3/4 (12.1)	6 1/8 (15.5)	100 1/4 (254.6)	4-lamp 32W T8, 150W MH

*Values based on 4100K LEDs and deep clear acrylic lens. Calculations are estimated results for general informational purposes only. Results may vary depending on the application.

** Fixture must be suspended at least 6" below ceiling.



PHOTOMETRICS

See www.lithonia.com for photometry reports.



Model TIMO Slotlighter LED

The new Timo LED Slotline fixture by Voigt is a new LED slimline fixture featuring LED light engines. The fixture is ideal for interior and Exterior applications that are designed with a more modern approach to their lighting needs. Enabling designers to show a clean uncluttered fixture look.

The Architecturally pleasing extruded aluminum luminaire is excellent for use in Offices, Hospitals, Schools, Retail spaces, and more. The unit is designed for recess drywall applications for ceiling, Pendant or wall mount applications and is offered in lengths from 2' and up as well as custom. The Timo is also available in widths of 2-1/2", 4" and now in Direct and indirect options.

The Timo Slotline offers great energy savings for today's energy conscious green environment consumer.

- Standard Features and optional Features;
- Extruded Aluminum Housing • Clean Site line • Prismatic lens
- Opal lens • Universal LED driver compatible with Dimming Ballast, Dali, DMX, Triac and 0-to 10v • Emergency Ballast

Project

Notes

Configure product using standard options.
For other custom options contact Voigt.

Example:

Timo

Slotline LED

750LM-

4100K

DI

OP

REC

4'

WH

120

BAT-1

fixture Series	LED	optics	lens	mounting	length	finish	voltage	options
Timo Slotline LED	750lm-4100k	DI	HPFR	REC	4'	WH	120	BAT-1
T-307-SL-LED	450LM-lumens per foot-4w per foot	DI Direct	HPFR-High Performance Frost	REC-Specify Ceiling Type	Specify length desired for fixture	WH-White BL-Black DB-Dark Bronze SIL-Silver For Custom Colors Contact Voigt	UNIV-120V/277V	BAT-1-remote battery backup
	750LM-Lumens per foot-8w per foot			FL-Flange				BAT-2-Integral battery backup (available in 4' width fixture only)
T-3074-4"-Wide	1200LM-lumens per foot-12w per foot			FLL-Flange Less				SPPL-Special Chicago Plenum
T-3084 Direct/Indirect	1500LM-lumens per foot-13w per foot			SM-Surface Mount				WL- Wet Label
		Specify DF-Door Frame Lens SNIL-Snap in lens	Specify DM-Door Mount Lens	PM-Pendant Mount (specify length in inches for stem)	AC-Air Craft Cable (specify length in inches)			Recess Wall Surface
Tested To:	Color Temps: 3000,3500, 4100k-Indicate after designated lumen package.							DIMM- 0-10V Compatible
LM-79								DALI- Dali Converter
LM-80								CRL-Continuous Run Length (specify length)
L-70								ASYM- Asymmetric Reflector

TIMO Slottlighter LED

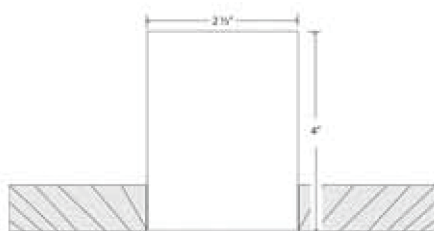
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- Emergency Ballast

Fixture Diagram In Hard Ceiling



(Lens or optional louver)

TIMO Air Craft Cable / Stem Mount



TIMO Surface Mount / Wall Mount



TIMO Direct / Indirect



TIMO Recess For wall or ceiling

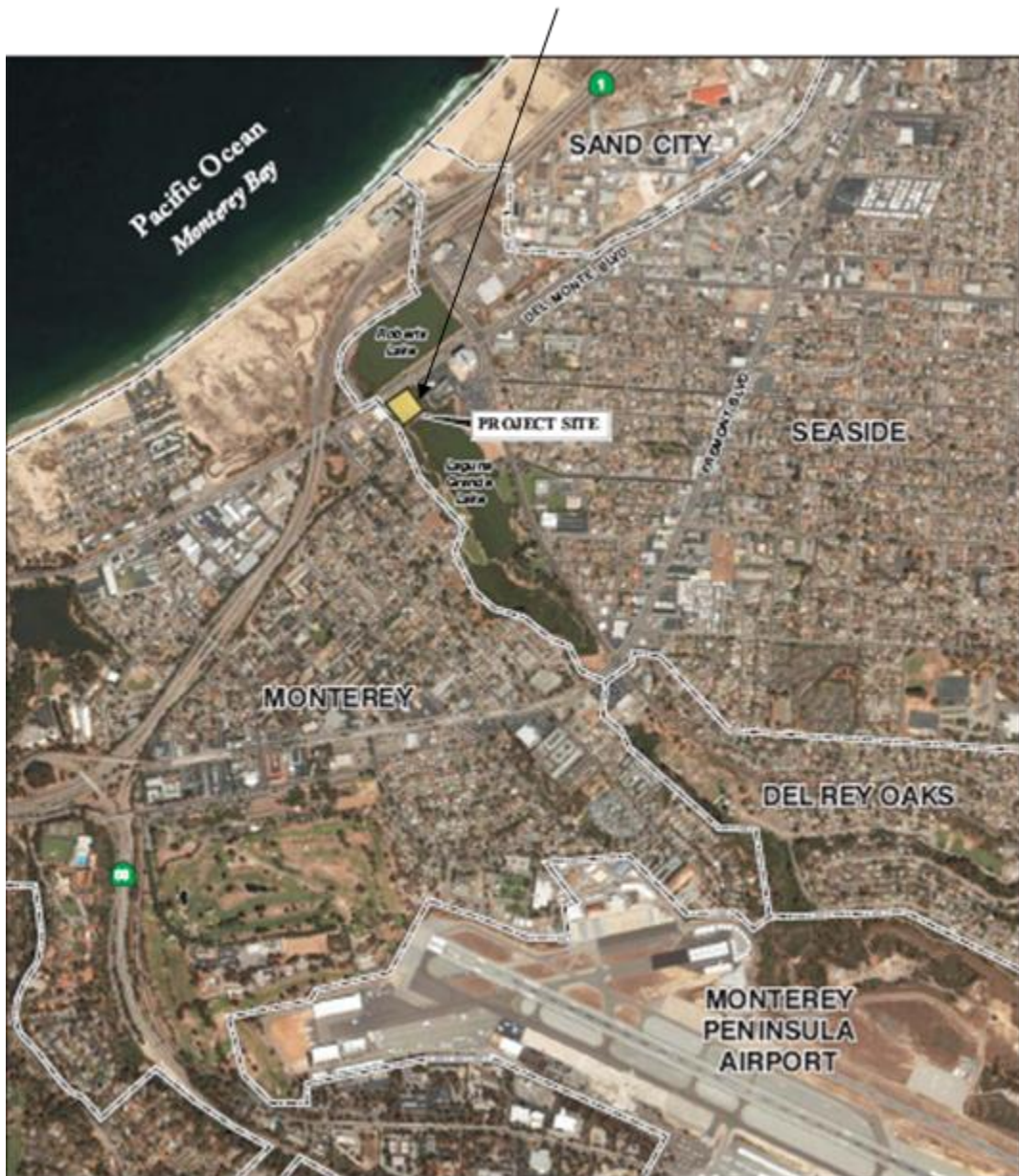


Gotham Lighting – 120 Volt
metal halide recessed light
under drive-through canopy –
Fixture Type M



Location Map

Project Site: 1350 Del Monte Boulevard (APN: 011-401-023)





View of Del Monte Boulevard Frontage looking east toward Laguna Grande Lake and Park



View of Del Monte Boulevard Frontage looking south



View of project site looking north



View of project site from walking bridge looking south



View from the pedestrian trail/bike path connection at walking bridge on north side looking southeast.



View from walking bridge connection with the pedestrian trail/bike path on north side looking southwest

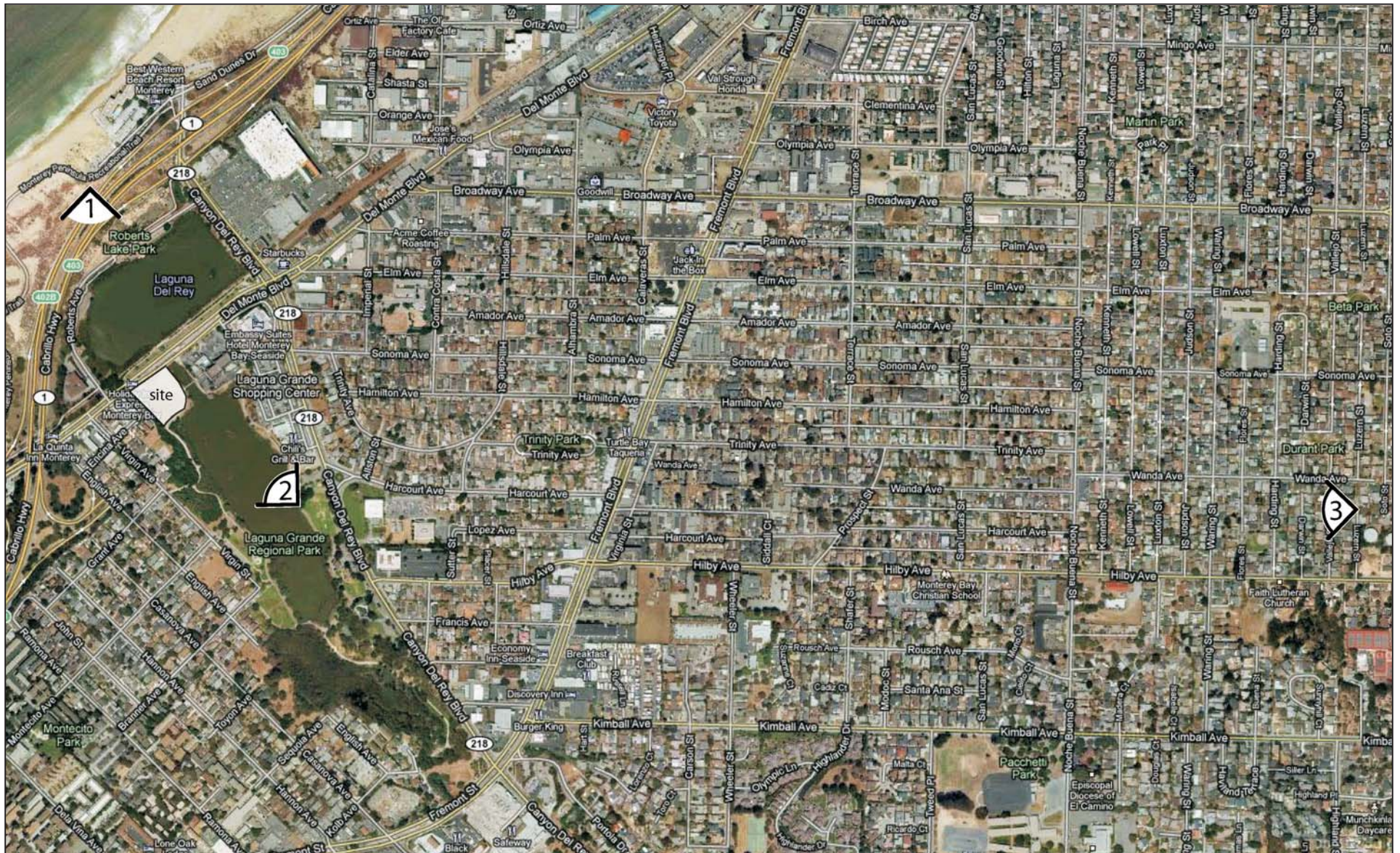


Key View 3 - Existing



Key View 3 - View Simulation

FIGURE 4.1-5



LSA



0 500 1000
FEET (APPROXIMATE)

SOURCE: Andrew McNichol

LEGEND



- Key View Location

FIGURE 4.1-2

In-N-Out Burger Drive-Through Restaurant EIR
Key Views Location Map



Key View 1 - Existing



Key View 1 - Visual Simulation

FIGURE 4.1-3



Key View 2 - Existing



Key View 2 - View Simulation

FIGURE 4.1-4

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

Natural Coastal Resources	
Natural Habitat Areas	
Policy NCR-CZ 1.1.A – Promote Sustainable Development New development shall promote environmental sustainability which is essential to reducing impacts to natural resources, habitat loss, and air and water resources.	Consistent. The proposed project will include a variety of design features aimed at environmental conservation and sustainability. Specifically, the proposed project will include native drought-tolerant vegetation, water-efficient irrigation systems and devices, Green Building Materials, water-efficient fixtures (i.e., low-flow faucets, dual-flush toilets, and waterless urinals), energy-efficient heating and cooling systems, and interior and exterior storage areas for recyclables and green waste. In addition, the proposed project will also comply with standard conditions and mitigation measures outlined throughout the 2011 Certified Environmental Impact Report (EIR) aimed at reducing impacts to natural resources and habitats and air and water resources.
Policy NCR-CZ 1.1.B – Promote Sustainability of Biological Productivity The City shall identify and pursue appropriate methods of native enhancement and restoration that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at the long-term sustainability of the surrounding coastal habitats and those species that are reliant on such habitats. As required by Measure 4.3.1, Biotic Habitat Protection, the Applicant will be required to retain a qualified biologist who will implement various actions during project construction in order to minimize construction impacts to sensitive biotic habitats adjacent to the project boundaries. Implementation of Measures 4.3.2 through 4.3.4, which outline measures to minimize project-related impacts to special-status species (including northern harriers, other nesting birds, California red-legged frog, and coast range newt) will also be required to ensure the long-term preservation of these species. The proposed project will be required to comply with Measure 4.3.5, Weed Management and Signage, which mandates the placement and ongoing maintenance of signs along the pedestrian trail instructing pedestrians to stay on the trail in order to preserve neighboring biotic habitats. Measure 4.3.5 will also require the eradication of noxious common reed within the project area. An existing pedestrian and bicycle trail that circles Laguna Grande Lake will connect the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge extending over the canal connecting Robert's Lake with Laguna Grande Lake. The proposed project will extend the pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will increase connectivity between the project

City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination

	site and the Laguna Grande Park and Lake, the adjacent hotel property, Del Monte Boulevard, the Laguna Grande Regional Park Trail, and the Monterey Bay Coastal Bike Trail, thereby increasing recreational opportunities in the area and promoting appreciation for the biological productivity of the coastal area.
Policy NCR-CZ 1.1.C – Minimize Adverse Effects to Natural Coastal Resources New development shall be located in areas where it will not have a significant adverse effect either individually or cumulatively on natural coastal resources and public access and recreation.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will disturb a very small amount of relatively low-quality habitat; however, the 2011 Certified EIR found and concluded that the proposed project would not have a significant individual or cumulative impact on natural coastal resources. As discussed above under Policy NCR-CZ 1.1B, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will connect the project site with the Laguna Grande Park and Lake, the adjacent hotel property, Del Monte Boulevard, the Laguna Grande Regional Park, and the Monterey Bay Coastal Bike Trail, thereby increasing access to coastal resources and recreational opportunities.
Policy NCR-CZ 1.2.A – Designation of ESHA Areas of particular habitat value and fragility consistent with Policy LUD-CZ 1.3.B are considered Environmentally Sensitive Habitat Areas (ESHA). Figure 2-2 represents a preliminary mapping of lands containing potential ESHA. Actual determination of ESHA boundaries shall be based on facts on the ground at the time development is considered. Policy NCR-CZ 1.2.B – Protection of ESHA i. ESHAs shall be protected against significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. ii. Development in areas adjacent to ESHAs shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat areas. iii. Site-specific surveys to confirm the presence and extent of identifiable plant and animal life or habitats shall be required for all new development in, and adjacent to, ESHA. iv. Site-specific surveys shall be prepared by a qualified biologist and shall include recommended mitigation	Consistent. The project site does not contain any ESHAs; however, potential riparian, emergent wetland, and estuarine ESHAs are present to the south, north, and east of the project site (refer to Figure 2-2, Potentially Environmentally Sensitive Habitat Area (ESHA) within the Coastal Zone, of the City's Local Coastal Program Land Use Plan (LUP). As part of the Biological Resources Report prepared for the 2011 Certified EIR, six site-specific field surveys were conducted to determine existing plant and animal species present on and adjacent to the project site. The Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site that are incorporated into the 2011 Certified EIR as Measures 4.3.1 through 4.3.4. The 2011 Certified EIR found and concluded that the proposed project would not result in significant impacts to neighboring sensitive habitats, including potential ESHAs with implementation of prescribed mitigation measures. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.

City of Seaside
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measures to avoid, and where avoidance is not possible, minimize sensitive habitat impacts.	
Policy NCR-CZ 1.3.A – Designation of Wetlands Areas periodically or permanently covered with water that meet the definition of wetland in Coastal Act Section 30121, are considered to be wetlands. The presence of either hydrology, soils, or vegetation must be evidenced for an area to qualify as a wetland. The wetlands identified on Figure 2-3 shall represent a preliminary mapping of lands containing potential wetlands. Actual determination of wetland boundaries shall be based on facts on the ground at the time development is considered.	Consistent. There are no National Wetlands Inventory (NWI) types located on the project site (refer to Figure 2-3, Potential Wetlands within the Coastal Zone Area, of the City's Local Coastal Program LUP). The Laguna Grande Lake and its associated Freshwater Pond Wetland are located directly east of the eastern boundary of the project site. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, approximately 0.5 acre of jurisdictional waters has been identified on the project site, of which approximately 0.32 acre is seasonal wetlands dominated by red willow and 0.16 acre consists of perennial waters in the form of aquatic palustrine habitat.
Policy NCR-CZ 1.3.B – Protection of Wetlands i. The biological health and productivity of wetland areas shall be maintained, and where feasible, restored. ii. Development that may have an adverse effect on a wetland shall not be allowed. iii. The biological productivity of coastal waters, streams, wetlands, estuaries, and lakes, shall be maintained and restored, where feasible, to maintain optimum populations of marine organisms and to protect human health where applicable. Maintenance and restoration efforts shall support biological productivity by minimizing adverse effects of wastewater discharges and entrainment; controlling runoff, preventing substantial interference with surface water flow, and minimizing alteration of natural streams; preventing depletion of groundwater supplies; encouraging wastewater reclamation; and maintaining natural vegetation buffer areas that protect riparian habitats.	Consistent. There are no NWI types located on the project site (refer to Figure 2-3, Potential Wetlands within the Coastal Zone Area, of the City's Local Coastal Program LUP). The Laguna Grande Lake and its associated Freshwater Pond Wetland are located directly east of the eastern boundary of the project site. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, approximately 0.5 acre of jurisdictional waters has been identified on the project site, of which approximately 0.32 are is seasonal wetlands dominated by red willow and 0.16 acre consists of perennial waters in the form of aquatic palustrine habitat. Temporary impacts to these jurisdictional waters could result during construction activities. As such, the proposed project will be required to comply with Measure 4.3.1 to minimize temporary impacts to on-site jurisdictional waters. No permanent impacts to on-site jurisdictional waters will occur as a result of project implementation and operation. Stormwater runoff for storm events up to the 95th percentile rainfall event will be treated, and retained and infiltrated on-site with a series of biofiltration planters which will capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots). No impacts to Laguna Grande Lake will occur. In addition, implementation of Measure 4.7.1 will require the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and an Erosion and Sediment Control Plan to minimize impacts related to runoff from the project site during construction. The 2011 Certified EIR found and concluded that the proposed project would not substantially deplete groundwater supplies. None of the proposed project changes would change the conclusions on this issue as discussed in

City of Seaside
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	the certified 2011 EIR.
Policy NCR-CZ 1.4.A – Designation of Marine Resources All significant bodies of water including the Monterey Bay, Laguna Grande Lake, and Roberts Lake are recognized as marine resources.	Consistent. As discussed in the consistency analysis for Policy NRC-CZ 1.3.B, Protection of Wetlands, the proposed project will not include any improvements to, or result in any significant impacts to, the adjacent Laguna Grande Lake. Furthermore, the proposed project will not result in any significant impacts to Roberts Lake.
Policy NCR-CZ 1.4.B – Protection of Marine Resources i. Marine resources shall be maintained, enhanced, and, to the extent feasible, restored. Uses of the marine environment shall be carried out in a manner that will improve habitat quality and will sustain the biological productivity of coastal waters. ii. In addition to Policies NCR-CZ 1.3.B and 1.5.C, methods for maintenance and enhancement of marine resources include, but are not limited to, trash removal, sediment removal, nonnative vegetation removal and native revegetation, and any other feasible methods to improve water quality (refer to Policies NCR-CZ 1.3.B, 1.5.C, 1.5.D, and 4.1.A). iii. The City shall seek opportunities to consolidate and/or eliminate reliance on storm water outfalls that daylight onto the beach and convey storm water into Monterey Bay. Such storm water shall be filtered and treated prior to discharge. iv. All development shall adequately collect, filter, and treat its associated runoff. Low impact development concepts (e.g., limiting impervious surfaces, use of vegetated areas for runoff treatment, etc.) shall be encouraged.	Consistent. Refer to the consistency analyses under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, and Policy NCR-CZ 1.2.B, Protection of ESHA. The proposed project will neither result in any significant impacts to marine resources, including sensitive species and habitat, nor will the proposed project interfere with the biological productivity of nearby coastal waters. The proposed project will be landscaped on all four sides of the parcel with a variety of native drought-tolerant trees, shrubs, annuals, and landscape materials. Additionally, the proposed project will include trash receptacles inside and outside the restaurant facility to minimize littering near the project site and its associated potential impacts on coastal wildlife and habitats. In-N-Out employees will be responsible for emptying the trash receptacles and for daily grounds maintenance. In addition, as discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will implement Measure 4.3.5, which will require the removal of the small patch of common reed, which is a noxious weed that is prevalent along the shores of Laguna Grande Lake. The proposed project will include Best Management Practices (BMPs) during project construction and operation to minimize project-related impacts to water quality. The proposed project will increase impervious surface area by approximately 1.0 acre. A series of biofiltration planters will capture stormwater runoff from the on-site impervious surfaces (i.e. roof and parking lots), remove pollutants from runoff, and retain and infiltrate the runoff. The 2011 Certified EIR found and concluded that the proposed project would not result in significant impacts related to water quality. None of the proposed project changes would change the conclusions on this issue as discussed in the Certified 2011 EIR.

**City of Seaside
Local Coastal Plan – Land Use Plan Consistency Determination**

Policy NCR-CZ 1.4.C – Diking, Filling, Dredging of Marine Resources Diking, filling, or dredging activities shall be permitted in accordance with the other applicable provisions of the LCP, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: • Placement of structural pilings for public recreational piers that provide public access and recreation; • Incidental public services (i.e., maintenance of existing outfalls); • Mineral extraction, including for restoring beaches, except in environmentally sensitive habitat areas; • Restoration purposes; • Nature study, aquaculture, or similar resource dependent activities Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems. In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary.	Not Applicable.
Policy NCR-CZ 1.5.A – Designation of the Canyon Del Rey Creek Watershed The Canyon Del Rey Watershed includes lands from multiple jurisdictions. Lands contained within these jurisdictions have been designated as follows: • 2010 General Plan of Monterey County: Rural Density/Permanent Grazing • 2004 General Plan of City of Seaside: Parks and Open Space • 2004 General Plan of the City of Monterey: Industrial/Park	Not Applicable.

City of Seaside
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and Open Space • 1997 Zoning Ordinance of Del Rey Oaks: Residential/Commercial/Park and Open Space	
Policy NCR-CZ 1.5.B – Evaluation of the Canyon Del Rey Creek Watershed Support ongoing efforts to prepare the <i>Canyon del Rey Watershed Master Drainage Plan Update</i> as part of the update to the Monterey Peninsula, Carmel Bay, and South Monterey Bay Integrated Regional Water Management Plan. Once adopted, the City shall incorporate the <i>Master Drainage Plan</i> results, goals, policies, and objectives into the codes and programs of the City's Municipal Code, and general Plan, where applicable.	Not Applicable.
Policy NCR-CZ 1.5.C – Protection of the Canyon Del Rey Creek Watershed i. The City shall continue to implement the following erosion control and sedimentation mitigation measures: • Continue enforcement of the Urban Storm Water Quality Management and Discharge Control ordinance, as amended (Chapter 18.46 of the Seaside Municipal Code), for all future construction in the watershed. • Design of street drainage to maximize retention and minimize impervious surface area and street flooding. • Regulate construction activities on unstable slopes that are susceptible to erosion. • Prevent additional gullyng of alluvial terraces by maintaining riparian vegetation. ii. The City shall continue to implement, monitor, comply with and update (as needed) the Monterey Regional Storm Water Management Plan (SWMP) as a participating entity in order to be in compliance with Final Phase II National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 adopted by the State Water Resources Control Board on April 30, 2003.	Consistent. The proposed project will be consistent with and will further the City's goal of protecting the Canyon Del Rey Creek Watershed by implementing and complying with relevant storm water permits and requirements. The proposed project will be required to obtain coverage under the NPDES Construction General Permit and prepare a SWPPP and comply with the City's Phase II NPDES permit requirements to include Low Impact Development Standards (LID) and retain storm water runoff on the project site. In addition, the proposed project will be required to comply with the City's Municipal Code and prepare a project Erosion and Sediment Control Plan (ESCP) outlining components for erosion control, such as phasing of grading, diversion of runoff or run-on away from disturbed areas, and the provision for revegetation or mulching as required by Measure 4.7.1 in the 2011 Certified EIR.

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Policy NCR-CZ 1.5.D – Management of the Canyon Del Rey Creek Watershed – Update of the Seaside Wetland Management /Enhancement and Restoration Program i. The functioning of the Canyon Del Rey Creek Watershed has potential implications for the entire Seaside coastal zone (potential flooding, erosion, water quality etc.). As such, the City of Seaside shall update the <i>Wetlands Management/ Enhancement and Restoration Program for the Laguna Grande/Roberts Lake LCP</i> (1983) (Appendix B) to incorporate the findings of the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i> upon completion (identified in Policy NCR-CZ 1.5.B). The updated <i>Wetlands Management/Enhancement and Restoration Program for the Laguna Grande/Roberts Lake LCP</i> shall be incorporated into the LCP through an LCP amendment and certification by the Coastal Commission. In addition to incorporating the findings of the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i>, the <i>Wetlands Management/Enhancement and Restoration Program</i> update shall include the following elements (at minimum): • A clear statement of the goals of the native restoration and enhancement of habitat types and water quality within the Canyon Del Rey Creek Watershed that will sustain biological productivity, including a description of the existing habitat types and quality to provide a benchmark for developing performance criteria. • Guidelines, programs, and funding sources for water quality improvements that are consistent with maintenance, reestablishment, and enhancement of existing wetland habitats and water quality improvement objectives. • Guidelines, in consultation with the appropriate state and federal resource agencies, for the preservation and/or reestablishment of equivalent (size and biological value) areas of riparian and marsh vegetation. • Guidelines which identify the appropriate method(s) of resource restoration and enhancement that will sustain the biological productivity of coastal waters (which may include dredging and filling if identified to be for the	Not Applicable.
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exclusive purpose of resource restoration or habitat enhancement only). • Guidelines for the maintenance and management of all resource areas in the watershed after restoration or enhancement. • Guidelines for design of recreational improvements and maintenance of all shoreline improvements in both Laguna Grande and Roberts Lake. • A timeline of near-, mid-, and long-term restoration opportunities. • An identification of technical, planning, and design assistance needed to foster plan development. • A Vegetation Management Plan that includes the following: • Identification of vegetation and habitat types within the Seaside coastal zone. • Guidelines for improvement, maintenance, and management of all identified resource areas including a Weed Eradication Plan, Planting Plan, Maintenance Plan, and Monitoring Plan, as appropriate. • Guidelines for stabilization of the dune areas including the area adjacent to Roberts Lake utilizing best available methods such as planting and maintaining native vegetation. • Identification of vegetative shoreline improvements that will encourage use by native, non-invasive, and non-nuisance wildlife. • Identification of areas appropriate for use as a community garden. • Identification of appropriate responsible parties for improvement, maintenance, and management of all resources. • A summary of relative cost and funding responsibilities. ii. Until the update to the <i>Wetlands Management/Enhancement and Restoration Program</i> for the Local Coastal Program Land Use Plan, including the Laguna Grande and Roberts subareas, is completed, the City shall continue to implement and promote management/enhancement and restoration measures that meet the following objectives:	
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• Stabilize the water surface area and depth of Laguna Grande and Roberts Lake by removing accumulated sediment and controlling the influx of new sediment. • Improve water quality to a degree sufficient to support a recreational fishery, provide enhanced aesthetic qualities and permit recreational boating; • Provide shoreline improvements that enhance public opportunities for observation and enjoyment of the natural habitat areas, that complement the natural character of the wetlands and riparian areas and are consistent with the protection of these areas, and that are compatible with existing recreational facilities and with the use of the adjoining private properties.	
Policy NCR-CZ 1.6.A – Control of Canada Goose Population The City, in coordination with the Monterey Peninsula Regional Park District, shall explore and implement humane methods of controlling goose populations.	Not Applicable.
Visual Resources	
Policy NCR-CZ 2.1.A – Designation of Visual Resources The scenic and visual qualities of lakes and coastal areas, including Roberts Lake, Laguna Grande, the coastal sand dunes, and Monterey Bay/Pacific Ocean, including from State Highway 1, shall be considered visual resources of public importance. Scenic resources identified on Figure 2-4 shall represent a preliminary mapping of visually sensitive areas. Other scenic resources may be identified to be present based on existing conditions at the time proposed development is considered.	Consistent. As discussed in Section 4.1, Aesthetics, of the 2011 Certified EIR, the proposed project's visual impacts were assessed from three key vantage points surrounding the project site (i.e., from southbound State Route 1 [SR-1] north of Roberts Lake, from Laguna Grande Regional Park on the south shore of Laguna Grande Lake, and from the residential area 1.5 miles east of the project site). These vantage points are consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in significant effects to visual resources.
Policy NCR-CZ 2.1.B – Protection of Visual Resources - Coastal visual resources shall be protected as a resource of public importance. - Visual resources and important view corridors shall be preserved. Figure 2-4 shall be used to assist the City in identifying significant public views of visual resources, view corridors, viewshed enhancement areas, and visually sensitive areas where height and bulk limits shall be required to preserve visibility. - Development determined to have a significant adverse effect on a visual resource or substantially limit visibility of visual	Consistent. As discussed above under Policy NCR-CZ 2.1A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key vantage points surrounding the project site. These vantage points are consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not limit the visibility of visual resources because the proposed project is barely visible from public views. In addition, the proposed project will be consistent with Section 2.6, Site Development Standards, of the City's Coastal Implementation Plan (CIP). Furthermore, building and landscaping design included as part of the proposed project

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resource shall not be allowed. iv. Public trails, recreation areas, and public viewing areas shall be developed adjacent and/or accessible to scenic view corridors, where feasible. v. New development shall be sited and designed to protect visual resources, minimize the alteration of natural land forms, preserve view corridors, be visually compatible with the character of surrounding areas, and, where feasible, restore and enhance visual quality in visually degraded areas. vi. Views of the Seaside coastal zone from State Highway 1 shall be protected and enhanced through regulation of siting, design, and landscaping of all new development. vii. New structures shall be sited and designed to harmonize with the natural setting and to not be visually intrusive. Structures, including fences, shall be subordinate to and blended into the environment, which may be accomplished through use of appropriate materials that will achieve that effect. Where necessary, modification shall be required for siting, structural design, shape, lighting, color, texture, building materials, access, and screening to protect public views. When structures cannot be sited outside of common public viewing areas, structures in scenic areas shall provide screening, which may be accomplished through the use of non-invasive native vegetation and topography to help provide visual compatibility.	will be approved by the Board of Architectural Resources (BAR), ensuring that the architectural design of the project will not degrade the existing visual character and quality of the project site and its surroundings. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will also include extending the existing pedestrian and bicycle trail to connect to the Laguna Grande Regional Park and Monterey Bay Coastal Bike Trail. Therefore, the proposed project will be consistent with the City's goal of developing public trails adjacent to scenic view corridors.
Water Resources Policy NCR-CZ 3.1.A – Provision for Potable Water Supply i. The City shall participate in local and regional efforts to secure a safe and adequate/sustainable supply of water. ii. New development shall be sited in areas with adequate public utility services (i.e., water treatment and delivery) and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. Where existing public utility services, including water, can accommodate only a limited amount of new development, priority uses including essential public services, public recreation, and visitor-serving commercial land uses shall have priority over other	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project would have an adequate and sustainable supply of water.

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development/uses.	
Policy NCR-CZ 3.1.B – Protection of Potable Water Supply – Water Conservation The City shall require that all new development, changes of ownership, and changes or expansions of use within the Coastal Zone meet or exceed Monterey Peninsula Water District's Water Efficiency Standards.	Consistent. The Monterey Peninsula Water District Water Efficiency Standards include nonresidential water efficiency standards for new structures. As discussed above under Policy NCR-CZ 1.1A, Promote Sustainable Development, the proposed project will minimize water usage and meet efficiency standards by installing water-efficient fixtures and appliances, native drought-tolerant plants, and water-efficient irrigation systems and devices, including restricted watering methods (i.e., prohibiting systems that apply water). Systems that use excessive and/or inefficient water systems will be prohibited. Therefore, the proposed project will meet the Monterey Peninsula Water District's Water Efficiency Standards.
Policy NCR-CZ 3.1.C – Management of Potable Water Supply Monitor water use in the City to ensure the availability of water to fulfill the goals of the LUP.	Not Applicable.
Policy NCR-CZ 3.1.D – Adequate Water Development may only be approved if it is demonstrated to have a safe, adequate, and sustainable water supply.	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project will have a safe, adequate, and sustainable supply of water.
Policy NCR-CZ 3.2.A – Water Reserves The City shall continue to support regional efforts to develop an alternative water supply for the City of Seaside.	Not Applicable.
Water Quality	
Policy NCR-CZ 4.1.A – Water Quality i. The City shall actively pursue methods of improving water quality of lakes, streams, and other waterways throughout the LCP area by improving the quality of dry-weather and stormwater runoff flows through the adoption of adequate stormwater pollution prevention and Low Impact Development strategies. ii. The biological productivity and quality of coastal waters, streams, wetlands, and lakes shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural	Consistent. As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the proposed project will include source control and treatment BMPs during project construction and operation. With the implementation of BMPs, the proposed project will result in improved water quality runoff when compared to the project site's existing conditions. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at sustaining biological productivity in the areas surrounding the project site and protecting water quality in bodies of water surrounding the project site. For example, as required by Measure 4.3.1, Biotic Habitat Protection, the Applicant will be required to retain a qualified biologist who will implement various actions during project construction in order to minimize construction impacts to sensitive biotic habitats adjacent

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streams.	to the project boundaries. In addition, Measures 4.3.2 through 4.3.4, which outline avoidance and minimization measures to minimize project-related impacts to special-status species (including northern harriers, other nesting birds, California red-legged frog, and Coast range newt) will be required to minimize impacts to sensitive species in the area. The proposed project will also be required to comply with Measure 4.3.5, Weed Management and Signage, mandating the placement and ongoing maintenance of signs along the pedestrian trail instructing pedestrians to stay on the trail in order to preserve neighboring biotic habitats and eradicate noxious common reed within the project area.
Natural Hazards	
Policy NCR-CZ 5.1.A – Designation of Natural Hazard Areas The hazard areas identified on Figures 2-5, 2-6, and 2-7 shall represent a preliminary mapping of potential hazards within the LCP area. Actual determination of hazard areas shall be based on facts on the ground at the time development is considered.	Consistent. The project site is located within an existing 100-year floodplain, is within 2,400 meters of a moderate fire threat and directly west of the Chupines Fault, and is within 0–5 meters of a tsunami evacuation zone (as respectively referred to on Figure 2-5 [Flood Hazard Areas], Figure 2-6 [Faults and Wildland Fire Threat Categories], and Figure 2-7 [Tsunami Evacuation Areas] in the City's Local Coastal Program LUP). As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, a majority of the project site is within the boundary of Federal Emergency Management Agency (FEMA) Zone AE, which is defined as areas inundated by the calculated 100-year flood event. Southwest portions of the project site lie within the boundary of a FEMA Zone X, which is potentially subject to flooding from the 500-year flood occurrence storm event. A small area in the southeast corner, adjacent to the channel and Roberts Lake, lies within a FEMA-designated floodway and must be kept free from encroachment; however, no project improvements are proposed at this location. The Base Flood Elevation at the project site is between 16 feet and 17 feet for the 100-year flood event. The proposed project will include the import of approximately 1,000 cubic yards of fill, which will raise elevations of the restaurant's first floor to 18 feet (i.e., 1 foot above the Base Flood Elevation). Therefore, the 2011 Certified EIR found and concluded that the proposed project would not be subject to on-site flooding. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR. As discussed in Section 4.6, Hazards and Hazardous Materials, of the 2011 Certified EIR, the project site is not located within a wildland area at risk of damage due to a wildfire. Therefore, the 2011 Certified EIR found and

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	concluded that the proposed project would not be at risk of a wildland fire. As discussed in Section 2.5, Geology and Soils, of the 2011 Certified EIR, the project site is located in a region characterized by moderate to high seismic activity, as is most of California. Due to this distance, the project site has the potential of experiencing strong ground shaking from earthquakes on regional and/or local causative faults. The closest active fault to the project site is the Chupines Fault, which lies 900 feet to the northeast of the project site (refer to Figure 2-6 of the Local Coastal Program LUP). Therefore, the project site is not subject to hazards associated with surface rupture; however, seismically induced ground shaking will be expected to occur as a result of seismic activity along the Chupines Fault. The proposed project will be required to comply with the California Building Code Compliance and Seismic Standards as required by Standard Condition 4.5.1 in the 2011 Certified EIR to reduce potential impacts associated with seismic ground shaking to less than significant levels. In addition, Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR found and concluded that the project site is located at an elevation of approximately 10 to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the proposed project in the event of a tsunami.
Policy NCR-CZ 5.1.B - Protection from Natural Hazards i. All new development in areas subject to natural hazards, including geologic, flood, tsunami, sea level rise, ocean storm and surge, and fire hazard, shall be sited, designed, and sized to minimize risk to life, property, and the environment from natural disaster as warranted based on assessed risk and conditions on the ground. ii. Applications for new development and redevelopment in natural hazard areas shall include an Adaptive Management Plan that identifies the expected lifetime of the proposed development and strategies to decommission the development once it has been determined that the development's lifetime has been reached due to hazards. Strategies identified in the Adaptive Management Plan may include, but are not limited to, removing the development and restoring the site to pre-development conditions;	Consistent. The project site is located within an existing 100-year flood zone, is within 2,400 meters of a Moderate Fire Threat and directly west of the Chupines Fault, and is within 5 meters of a tsunami evacuation zone (as respectively referred to on Figure 2-5 [Flood Hazard Areas], Figure 2-6 [Faults and Wildland Fire Threat Categories], and Figure 2-7 [Tsunami Evacuation Areas] of the City's Local Coastal Program LUP). The proposed project will be designed to minimize risk to life, property, and the environment from natural disaster as discussed below. In addition, as part of the proposed project, a quantitative analysis of sea level rise has been prepared that concluded the proposed project is above the sea level rise projections for the next 100 years. As discussed above under Policy NCR-CZ 5.1.A, Designation of Natural Hazard Areas, a majority of the project site is within the boundary of FEMA Zone AE, which is defined as areas inundated by the calculated 100-year flood event. The proposed project will raise elevations of the restaurant's

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managed retreat; and/or other hazard abatement strategies. New development shall only be approved if the approval includes an Adaptive Management Plan with enforceable provisions for both determining when a development's lifetime has been reached due to hazards, and for implementing the required abatement strategy at that time. iii. New development shall assure structural stability over the lifetime of the project as determined by the Adaptive Management Plan. iv. Proposed development shall be consistent with the following applicable goals and actions of the <i>City of Seaside Local Hazard Mitigation Plan</i> (LHMP), as modified to protect coastal resources: • Goal 1: Minimize loss of life and property from hazard events. • Goal 2: Improve safety for residents, business owners, and property in the City of Seaside. • Goal 3: Mitigate for disasters. • Action 3.09: Continue to actively implement existing state law that requires the City to maintain lists of addresses of unreinforced masonry buildings and inform property owners that they own this type of hazardous structure. • Action 3.10: Ensure that all new construction is completed using the latest earthquake-resistant design techniques that will limit damage caused by earthquakes. • Action 3.11: Identify mitigation measures for areas that flood annually. • Action 3.12: Ensure that all new construction that is now, or as modified by rising sea level will be, within the 100-year flood zone is sited to avoid flood hazards to the maximum extent possible and otherwise constructed using design techniques that will limit damage caused by floods consistent with policies NCR-CZ 5.2.A, and NCR-CZ 5.2.C and by using the latest edition of the California Building Code. • Action 3.15: Ensure that new development pays its fair share of improvements to the storm drainage system	first floor by approximately 1 foot above the Base Flood Elevation. Therefore there will be no significant impacts associated with on-site flooding to buildings proposed as part of the project. Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR also found and concluded that the project site is located at an elevation about 10 to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the proposed project in the event of a tsunami. Mitigation is also outlined in this section of the 2011 Certified EIR in order to further ensure that impacts related to flooding and other events causing inundation on the project site will be less than significant. As discussed in Section 4.6, Hazards and Hazardous Materials, of the 2011 Certified EIR, the project site is not located within a wildland area at risk of damage due to a wildfire (refer to Figure 2-7 of the City's Local Coastal Program LUP). Therefore, the 2011 Certified EIR found and concluded that the proposed project would not be at risk of a wildland fire. As discussed in Section 2.5, Geology and Soils, of the 2011 Certified EIR, the project site is located in a region characterized by moderate to high seismic activity, as is most of California. Therefore, the project site has the potential of experiencing strong ground shaking from earthquakes on regional and/or local causative faults. The closest active fault to the project site is the Chupines Fault, which lies 900 feet to the northeast (refer to Figure 2-6 of the City's Local Coastal Program LUP). Due to this distance, the project site is not subject to hazards associated with surface rupture; however, seismically induced ground shaking will be expected to occur as a result of seismic activity along the Chupines Fault. The proposed project will be required to comply with the California Building Code Compliance and Seismic Standards as required by Standard Condition 4.5.1 in the 2011 Certified EIR to reduce potential impacts associated with seismic ground shaking to less than significant levels. In addition, the proposed project will implement Standard Condition 4.5.2, which will require the review and approval of plans in order to ensure consistency with recommendations outlined in a geotechnical report prepared for the proposed project, to minimize impacts associated with seismic events. Therefore, due to the reasons discussed above, the proposed project will be consistent with the applicable goals and actions of the City of Seaside Local Hazard Mitigation Plan (LHMP).
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necessary to accommodate increased flows from the development. • Action 3.16: Ensure that new developments are designed to reduce or eliminate flood damage by requiring lots and rights-of-way are laid out for the provision of approved sewer and drainage facilities, providing on-site detention facilities whenever practical. • Action 3.17: Encourage homeowners in flood-prone areas to participate in home elevation programs and other methods to adapt to sea level rise. • Action 3.22: Ensure that all new construction in areas susceptible to fires is completed using fire-resistant design techniques that will limit damage caused by wildfires. For example, require Class A roofing materials for all homes in areas susceptible to fires. • Action 3.27: Adopt a City ordinance that requires the following measures to reduce fire ignition due to earthquakes: bracing of gas-fired appliances and equipment; flexible couplings on gas appliances and equipment; and the bolting of homes to their foundations and strengthening of cripple walls. • Action 3.33: Provide technical assistance to homeowners whose homes were damaged by natural hazards in order to site and design the residences to better avoid future hazards. Allow a streamlined permitting process for the rebuilding after a disaster. • Action 3.34: Encourage the retrofitting of unreinforced masonry structures that have not been retrofitted. • Action 3.37: Pass a City ordinance that will limit building in high-risk areas. • Goal 4: Increase public education and awareness of hazards so that City residents can better anticipate and prepare for them. • Action 4.15: Educate property owners on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event through appropriate City public education outlets. • Goal 6: Assure that continuity of local government operations will not be significantly disrupted by disasters.	As noted above, The proposed project will raise elevations of the restaurant's first floor by approximately 1 foot above the Base Flood Elevation. Additionally, the area is 10-15 feet above the mean tide level and is protected by City streets and a 40-foot dune. Finally, a quantitative analysis of sea level rise has been prepared that concluded the proposed project is above the sea level rise projections for the next 100 years. Therefore, based on known environmental hazards, the expected lifetime of the project is more than 100 years. In the event that specific geologic hazards and/or changes in Sea Level create conditions which warrant the demolition of the structure and on-site improvements, the property owner and applicant shall be responsible for obtaining the required Coastal Development Permits and City of Seaside demolition permits for the removal and disposal of the structure and on-site improvements. The demolition process shall adhere to all state requirements for the recycling of materials and disposal of hazardous wastes.
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• Action 6.10: Participate in the Office of Emergency Services Safety Assessment Program (SAP) which formalizes arrangements with engineers, building officials, and other qualified people to report to the City, assess damage, and determine if buildings can be reoccupied after a disaster. • Goal 7: Ensure the continuous function of utilities and critical transportation facilities. • Action 7.10: Encourage replacing aboveground utility lines with underground facilities. • Action 7.11: Assure that utility lines are installed underground for new development. • Action 7.22: Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage. • Goal 8: Assure that the economic vitality of the community will not be threatened by future hazards. • Action 8.01: Encourage business owners to participate in a program similar to San Francisco's Building Occupancy Resumption Program (BORP). This program permits owners of buildings to hire qualified structural engineers (California licensed structural engineers with relevant experience) to create facility-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City inspectors for these buildings in the event of a disaster. This program allows rapid reoccupancy of the buildings. • Action 8.02: Provide technical assistance to businesses damaged by natural hazards in order to site and design development to better avoid future hazards. Allow a streamlined permitting process for the rebuilding of businesses after a disaster.	
Policy NCR-CZ 5.2.A – Designation of Sea Level Rise Hazards The City shall collaborate with local jurisdictions and identify properties and stakeholders most likely affected by rising sea levels. Collaboration between these agencies would be beneficial to the citizens of the Monterey Bay area. Adaptation to the effects of sea level rise by the local jurisdictions and	Not Applicable.

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agencies is necessary to reduce the potential negative impacts sea level rise may have upon the economy and infrastructure of the Monterey Bay area.	
Policy NCR-CZ 5.2.B – Protection from Sea Level Rise Hazards i. Collaboration between jurisdictions and agencies could lead to the development and successful implementation of adaptation measures to the threat of sea level rise. Other jurisdictions that may be affected by sea level rise within the Monterey Bay area include: • California State Parks, • California Department of Transportation, • Cities of Monterey, Marina, Del Rey Oaks, Sand City, Pacific Grove, and Carmel-by-the-Sea, • Monterey County, • Monterey Regional Water Pollution Control District, • Association of Monterey Bay Area Governments, • Transportation Agency for Monterey County, • Monterey Peninsula Regional Park District, • Monterey Peninsula Waste Management District, and • California Coastal Commission. ii. Organize educational workshops for local citizens to inform them of the concerns and potential impacts of sea level rise in the Monterey Bay area. • Seek partnerships with educational and institutional organizations to assist with the facilitation of educational workshops. • Support ongoing efforts to develop and implement practical, science-based, long-term solutions and adaptation strategies for minimizing potential adverse impacts of sea level rise.	Not Applicable.
Policy NCR-CZ 5.2.C – Management of Sea Level Rise Hazards i. The City shall prepare periodic updates to the Local Hazard Mitigation Plan (2005) to address the potential impacts sea level rise will have on the City of Seaside. The plan update process shall include input of local citizens, businesses, educational institutions, and neighboring jurisdictions and the following components:	Not Applicable.

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| <p>a. A Vulnerability Assessment that identifies and analyzes areas within the city that are most at risk to the impacts of sea level rise. The Vulnerability Assessment will establish how far and how high coastal storms and ocean levels would inundate the city, including consideration of erosion and sedimentation factors.</p> <p>b. A Beachfront Area Plan that addresses the impacts sea level rise will have on the Beach Subarea. The Area Plan shall propose methods to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over a minimum of 100 years. The Area Plan shall also include a wave uprush and impact report and contain an analysis prepared by a licensed engineer with expertise in coastal engineering that addresses and demonstrates the effects of sea level rise in relation to the following:</p> <ul style="list-style-type: none">• Beach profile• Impacts to beach public access and recreation opportunities• Areas most affected by wave uprush• Evaluation of shoreline protection alternatives• Protection alternatives for freshwater table• Future projections of regional sea level rise• Location changes of potential mean high tide lines <p>c. An identification of resources (including, but not limited to, visual resources, lakes, wetlands, parks, wildlife, and habitat), infrastructure improvements, public beach access and public trails (i.e., California Coastal Trail and Monterey Bay Recreation Trail), and properties that are potentially at risk to inundation or damage, and guidance for their protection.</p> <p>d. Evaluation of potential salinity changes and water level rise impacts to wetlands, Laguna Grande, and Roberts Lake.</p> <p>e. An identification of City policies that must change and recommendations for necessary policy changes that will make future development and area conservation projects more responsive and adaptive to sea level rise, including LCP policies through a LCP amendment.</p> | |
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f. An assessment of impacts to the city's local economy and recommendations for maintaining the economic viability of vulnerable areas. g. Mitigation and adaptation measures that can be implemented, as well as an analysis of the potential impacts of the measures. h. A framework for future revisions to the plan and a proposed method for disseminating information to the public.	
Policy NCR-CZ 5.3.A – Protection from Tsunami Hazards All development located within the tsunami inundation zone shown on Figure 2-7 (and as updated by the most recent state or local California Emergency Management Agency maps), shall be designed and sited to minimize and mitigate flood hazards to the maximum extent possible including by designing all habitable space above the maximum flood elevation as defined by a qualified coastal geologist with experience in tsunami.	Consistent. As discussed in Section 4.5, Geology and Soils, of the 2011 Certified EIR, the project site is located approximately 2,000 feet from Monterey Bay at an elevation of approximately 10 to 15 feet above mean sea level. Historically, there is no record of any tsunamis more than 9 feet high occurring along the County coast. Furthermore, the project site is protected by 20- to 40-foot sand dunes between the project site and the ocean that will minimize impacts to the project site in the event of a tsunami. Therefore, the 2011 Certified EIR found and concluded that the potential for a tsunami to affect the project site would be low.
Policy NCR-CZ 5.3.B – Management of Tsunami Hazards The City of Seaside shall prepare a Tsunami Preparedness Plan for mitigating the hazards associated with tsunamis, which shall include the following elements: • Review local and distant tsunami inundation maps for Seaside and the southern Monterey Bay as they are developed to identify susceptible areas and plan evacuation routes. • Periodically review and update tsunami preparation and response policies/practices to reflect current inundation maps and design standards. • Participate in any regional effort to develop and implement workable response plans that the City's emergency services can adopt immediately for evacuation in the case of a tsunami warning. • Prepare and deploy a system of tsunami detection and early warning systems as warranted based on assessed risk. • Include tsunami evacuation route information as part of any overall evacuation route sign program implemented in the City. Evacuation routes that lead away from low-lying areas	Not Applicable.

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around Roberts Lake, Laguna Grande, and the beach should be clearly posted. An evacuation route traffic monitoring system that provides real-time information on the traffic flow at critical roadways should be considered. • Develop and implement a tsunami educational program for residents, visitors, and people who work in the susceptible areas. • Require overnight visitor-serving facilities in susceptible areas to provide tsunami information and evacuation plans. • Encourage the Monterey County Office of Education to include in their earthquake-preparedness curriculum information specifically related to the natural hazards that Seaside and Monterey citizens could face and what to do about them. • Support tsunami research in the Southern Monterey Bay areas.	
Public Access & Recreation	
Policy PAR-CZ 1.1.A – Designation of Public Access and Recreational Opportunities The public access areas identified on Figure 2-8 shall represent a preliminary generalized mapping of access points and passages to significant coastal features and recreational opportunities. Actual determination of public access areas shall be based on facts on the ground at the time development is considered.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will maintain all access points from the project site to the pedestrian and bicycle trail around Laguna Grande Lake. In addition, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail (refer to Figure 2-8, Public Access Points and Passages, of the City's Local Coastal Program LUP).
Policy PAR-CZ 1.1.B – Protection of Public Access and Recreational Opportunities Maximize and protect public access including pedestrian and bicycle connectivity and recreational opportunities in the coastal zone consistent with resource conservation principles, public safety, public rights, and the rights of private property owners.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail consistent with resource conservation principles, public safety, public rights, and the rights of private property owners.

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Policy PAR-CZ 1.1.C – Management of Public Access and Recreational Opportunities i. As development occurs, the City shall develop and implement a coastal access/directional sign program for all public access points, including those shown on Figure 2-8. The sign program shall include informational signs identifying the location of the Monterey Bay and California Coastal Trail alignments within Seaside. ii. The City shall maximize opportunities for environmental education opportunities within the coastal zone through methods such as interpretive signage, outreach programs, on-site programs, guided walks along access and park trails, nature walks, publications, newsletters, brochures, exhibits/displays, and websites. iii. The City shall explore development of a Peninsula Visitors Center at a location within, or at a compatible location adjacent to, the coastal zone, provided the site has ample access to the lakes, parks, and beach to serve visitors to Seaside and the Monterey Bay area. iv. Ensure the ability of the California Coastal Trail and Monterey Bay Recreation trail to adapt to changes in sea level rise.	Not Applicable.
Policy PAR-CZ 1.1.D – Provision of Recreational Facilities Lower cost visitor serving and public recreational facilities shall be protected, encouraged, and where feasible, provided.	Consistent. As discussed above under Policy NCR-CZ 1.1B, Promote Sustainability of Biological Productivity, the proposed project will extend the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail connection will increase connectivity between the project site and the Laguna Grande Regional Park and its associated pedestrian and bicycle trail, encouraging the use of recreational facilities in the Coastal Zone.
Policy PAR-CZ 1.2.A – Designation of Parking for Public Access and Recreational Opportunities i. The City shall provide free and unrestricted parking at all public access and public parking areas within the coastal zone during daylight hours (i.e., from one hour before sunrise to one hour after sunset) including those identified in Figures 2-8 and 2-9. ii. Explore expanding public access parking opportunities at the Embassy Suites Hotel parking lot.	Consistent. The project site is designated as a shared off-street parking area (refer to Figure 2-9, Public Parking Area, of the City's Local Coastal Program LUP). Although the proposed project will develop this property with a restaurant use, thereby eliminating this property as an off-street public parking area, the proposed project will provide sufficient parking to serve visitors to the project site and surrounding areas. Specifically, the proposed project will provide approximately 53 parking spaces, including three Americans with Disabilities Act (ADA) accessible spaces, three bicycle racks, two motorcycle parking stalls, and one recreational vehicle (RV)

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	parking space. In addition, there are two public parking lots located on the north side of Laguna Grande Park that can be accessed from Canyon Del Rey Boulevard that would remain available for public use. The project site is accessible from these public parking lots by an existing pedestrian pathway that circles around Laguna Grande Park.
Policy PAR-CZ 1.3.A – Designation of Trails The City shall establish, designate, and maintain a system of trails and an inter-connected trail / park network as components of the California Coastal Trail and Monterey Bay recreational trail alignments to the extent feasible.	Not Applicable.
Policy PAR-CZ 1.4.A – Public Access Improvements Improve water quality and the recreational experience of southern Monterey Bay area beaches, including by pursuing opportunities to consolidate and/or eliminate reliance on storm water outfalls that convey storm water directly to the beach (Policy NCR-CZ 1.4.B.iii). Such storm water shall be filtered and treated prior to discharge.	Not Applicable.
Land Use & Development	
Land Use Designations & Definitions	
Policy LUD-CZ 1.1.A – Land Use Designations Within the Coastal Zone The following land use designations establish the type, density, and intensity of land use within the coastal zone. The maximum densities allowed for each land use are defined in the Development Standards provided in the Coastal Implementation Plan portion of the LCP. The permitted development intensities shall be limited to those that adequately provide for public access and recreation needs and that address site constraints. Consistency with applicable policies of the LCP will ensure that site constraints are adequately addressed by requiring protection from natural hazards and the preservation and enhancement of natural coastal and scenic visual resources (including provisions for appropriate buffers). The types of land uses allowed within the Coastal Zone are described below: • Coastal Parks and Open Space (CPOS): This designation is appropriate in areas where the City wants to protect and preserve natural resources and habitat, views, and other visual amenities and protect people and property from	Consistent. The northeastern, eastern, and southern portions of the project site are designated Coastal Visitor-Serving Commercial (CVSC) (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). CVSC permitted uses include food service and recreation-related commercial uses; therefore, the development of a restaurant facility and extension of the existing pedestrian and bicycle trail as part of the proposed project will be consistent with permitted uses in the CVSC land use designation as outlined in the City's Local Coastal Program LUP. Furthermore, the proposed project will develop the property at a floor area ratio (FAR) of 0.04, which is well below the maximum FAR of 1.0:1 that is permitted by the land use designation.

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natural and man-made hazards. This designation also identifies existing or planned parkland. Public use areas include the sandy beach, access ways, parks, trails, walkways, and other recreational amenities that are publicly owned or over which easements or similar instruments are required as a condition of development. The maximum floor area ratio (FAR) within this designation is 0.01:1. • Coastal Visitor-Serving Commercial (CVSC): Principal permitted visitor-serving commercial uses include hotels/motels, food service, retail establishments, visitor/traveler support services (such as visitor information centers), and recreational-related commercial uses. The maximum FAR is 1.0:1, except that hotels are allowed a maximum FAR of 1.5:1. • Coastal Visitor-Serving Recreation (CVSR): Principal permitted visitor-serving recreation uses include recreational equipment rental centers (such as bicycle, boat, and other recreational equipment) and visitor-serving support services (such as visitor information centers). Commercial uses such as hotels/motels, restaurants, and retail establishments are not allowed. However, counter food service (such as a snack bar), which is ancillary to a primary permitted use, is permissible. The maximum FAR is 0.5:1. • Coastal Regional Commercial (CCRG): Regional commercial uses are defined as large scale commercial development with retail, entertainment, and/or service uses of a scale and function to serve a regional market. These uses are allowed where existing regional commercial uses are developed within the coastal zone. Permitted regional commercial uses include general, grocery, and outdoor retail; shopping center; health and fitness facilities; and restaurants with table service. The maximum FAR is 1.0:1. • Coastal Heavy Commercial (CCH): Heavy Commercial uses are intended for subregional commercial activities such as auto and truck repair, contractor yards, warehousing, and light manufacturing. These uses are permitted where existing heavy commercial uses are developed within the coastal zone (i.e. near railroad right-of-way adjacent to Sand City boundary). The maximum FAR is 0.5:1.	
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• Coastal Mixed Use/West Broadway Urban Village Specific Plan (CMX/WBUVSP): Seaside has developed a Mixed Use designation as a way to promote pedestrian- and transit-oriented activity centers that have a mixture of residential, commercial, office, and civic uses. This designation is appropriate in the Del Monte Subarea to be consistent and compatible with the West Broadway Urban Village Specific Plan. The applicable Development Standards and Design Guidelines have been included in Appendix C of the CIP. • Coastal Transportation Corridor (CTC): The City of Seaside shall maintain the State Highway One right-of-way and the former Southern Pacific Railroad right-of-way as essential public transportation corridors. Principal permitted uses of the corridors are for motorized and non-motorized forms of transportation. The former Southern Pacific Railroad right-of-way shall be reserved for possible light rail, bus rapid transit route, or other non-motorized forms of transportation including pedestrian and/or bicycle paths.	
Policy LUD-CZ 1.2.A – Definitions within the Coastal Zone The following definitions shall be specific to the LCP. These definitions are intended to provide clarification and guidance for use of terminology used throughout the LCP. i. An “adverse effect on a visual resource” shall be defined as development that impacts common public viewing areas to and along the ocean and scenic coastal areas, alters natural land forms, conflicts with the character of surrounding areas, and/or, does little to restore and enhance the visual quality within visually degraded areas. ii. “Canyon Del Rey Watershed” is the area beginning near the intersection of Quail Ridge Lane and State Route 68, continuing along State Route 68 toward the City of Monterey until the intersection of Canyon Del Rey Boulevard and State Route 68, and extending along Canyon Del Rey Boulevard until the terminus of Canyon Del Rey Creek at the southeastern end of Laguna Grande, has been determined to have exceptional value and public importance.	Not Applicable.

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iii. "Common public viewing area" is a public area such as a public street, road, designated vista point, or public park from which the general public ordinarily views the surrounding viewshed. iv. "Cumulatively" or "cumulative effect" means the incremental effects of an individual project shall be reviewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. v. "Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511). vi. "Environmentally Sensitive habitat area" (ESHA) means any area in which plant or animal life or their habitats are either rare, or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. vii. "Floor area ratio" (FAR) expresses the intensity of use on a lot. The FAR represents the ratio between the total gross floor area of all buildings on a lot and the total land area of	
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that lot. viii. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. ix. The "Fremont Corridor" is an area encompassing 19 acres of land located on the east side of Fremont Boulevard between La Salle Avenue and Olympia Avenue within the Laguna Grande Subarea. x. "Marine Resource" is a broad, encompassing term that incorporates all marine life and marine habitats, including the flora and fauna of the Monterey Bay Marine Sanctuary and all water bodies within the coastal zone that, due to their aesthetics, function, or contribution to the social and environmental ecosystem, are considered to have exceptional value and public importance. xi. A "Mitigation/Restoration and Monitoring Program," prepared pursuant to Section 15097 of the CEQA Guidelines, describes the processes for implementing identified mitigation measures and/or restoration measures and the persons responsible for implementing and/or overseeing those mitigations xii. "Natural Hazard" is defined as threat of an atmospheric, earth, or water-related occurrence that will have a negative effect on life, property, or the environment. Natural hazards within Seaside's coastal zone include the following: Seismic; Fire; Flood; Sea level rise; High wave event storms; surges; and tsunamis. xiii. "Public Access" is defined as the ability of residents and visitors to use and enjoy areas within the coastal zone for recreational uses such as hiking, bicycling, and picnicking. Public access includes the provision of open access way to coastal features and connectivity to other existing coastal features and inland trail networks such as walkways and bicycle paths. xiv. "Sea level rise" is defined as the anticipated sea level changes due to the greenhouse effect and associated global warming and climate changes. xv. "Sustainable development" is development that meets the	
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needs of the present without compromising the ability of future generations to meet their own needs. xvi. “Viewshed enhancement areas” are those areas that can be restored or enhanced to improve visual quality of degraded conditions. xvii. “Visually sensitive areas” are those areas that require height and bulk development restrictions to preserve the public’s ability to view visual resources. xviii. “Wetland” is any area which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.	
Development & Land Use Requirements	
Policy LUD-CZ 2.1.A – Designation of Land Uses Within the Coastal Zone Land use designations for the Local Coastal Plan area are shown on Figures 2-10a and 2-10b.	Consistent. The northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City’s Local Coastal Program LUP).
Policy LUD-CZ 2.1.B – Compliance with Land Use Plan Policies New development shall be required to demonstrate compliance with the Land Use Plan policies applicable to the particular project under consideration.	Consistent. This LCP-LUP Consistency Analysis provides the required information that demonstrates the proposed project is consistent with all applicable LUP policies.
Policy LUD-CZ 2.1.C – Land Use Densities Within the Coastal Zone The densities described in LUD-CZ 1.1.A represent a maximum. As required by the applicable policies of the LUP, permitted development intensities shall be limited to those which adequately address constraints including, but not limited to, public access and recreation needs, coastal hazards, natural habitats (i.e. sand dunes, wetlands, riparian, ESHA, and marine resources, etc.) and their appropriate buffers, natural landforms and scenic views.	Consistent. The northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City’s Local Coastal Program LUP). The proposed project will include the development of a restaurant facility, consistent with conditionally permitted uses in the CVSC land use designation (refer to the CIP Consistency Analysis). The proposed project adequately addresses all constraints as discussed in the LCP.
Policy LUD-CZ 2.1.D - Coastal Development Permit Required A Coastal Development Permit shall be required for all development within the Coastal Zone.	Consistent. The proposed project is located within the Coastal Zone and is seeking approval of a Coastal Development Permit (CDP).
Policy LUD-CZ 2.1.E – Minimize Adverse Effects New development shall be located in areas where it will not have significant adverse effect either individually or cumulatively on natural coastal resources and public access and recreation	Consistent. The 2011 Certified EIR found and concluded that the proposed project would result in neither project-specific nor cumulatively significant impacts to natural coastal resources or public access and recreation. None of the proposed project changes would change the conclusions on this

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(Policy NCR-CZ 1.1.C).	issue as discussed in the certified 2011 EIR.
General Permit Considerations	
Policy LUD-CZ 3.1.A – Considerations for Natural Habitat Areas - ESHA i. Proposed development in areas adjacent to an ESHA (as identified earlier by Policies NCR-CZ 1.2.A and 1.3.A), shall be required to demonstrate that it is sited and designed to be compatible with the protection of these resources. ii. Proposed development in areas adjacent to an ESHA (including wetlands) shall be required to provide a site-specific resource report prepared by a qualified biologist. The report shall include, at a minimum, the following: a. A site-specific survey evaluating existing known resources at the time of proposed development. b. A map identifying existing known resources within the project's identified area of potential impact at the time of proposed development. c. An evaluation of necessary buffers and/or setbacks required around any identified ESHA, wetland or riparian vegetation to ensure the long-term biological integrity of the resource. All identified necessary buffers and/or setbacks required to ensure the biological integrity of the resource shall be mapped. • Buffers or setbacks are required around Natural Habitat Areas including ESHA, riparian vegetation, and wetlands of a sufficient size to ensure the biological integrity of the resource, including under changing sea level conditions. • A minimum buffer of 50 feet as measured from the extent of identified habitat type shall be required, unless a biological assessment results in information indicating that expanded or reduced setback/buffer would ensure the biological integrity of the resource. Smaller setbacks or buffers may be allowed only if it can be demonstrated that: (1) the required minimum 50-foot buffer would render the site unusable for its designated use; and (2) the buffer has been adjusted downward only to a point where the designated use can be accommodated. Under no	Consistent. The project site does not contain any ESHAs; however, potential riparian, emergent wetland, and estuarine ESHAs are present to the north, south, and east of the project site (refer to Figure 2-2, Potentially Environmentally Sensitive Habitat Area [ESHA] within the Coastal Zone, of the City's Local Coastal Program LUP). As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, it was determined that with implementation of Measures 4.3.1, 4.3.2, 4.3.3, and 4.3.4, the proposed project will result in less than significant impacts on neighboring sensitive habitats, including potential ESHAs. In addition, six site-specific field surveys were conducted as part of the Biological Resources Report prepared for the 2011 Certified EIR to determine existing plant and animal species present on and adjacent to the project site. The Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site that are incorporated into the 2011 Certified EIR as Measures 4.3.1 through 4.3.4. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR. Furthermore, according to the City's CIP, developments are required to be set back a minimum of 50 feet from Laguna Grande Lake (a designated marine resource area). However, smaller setbacks may be allowed if public recreational trails are provided within the buffer zone. The proposed project will construct the trail extension within the 50-foot buffer zone; however, the restaurant facility will be set back a minimum of 50 feet from Laguna Grande Lake.

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circumstances shall the buffer be reduced to less than 25-feet. If the buffer/setback is adjusted downward, additional mitigation measures developed in consultation with the Department of Fish & Game shall be implemented. • No permanent structures shall be permitted within the required buffer/setback area except for structures of a minor nature that do not lead to significant degradation of the resource such as fences or at grade improvements for public access and/or recreation purposes (i.e. paths, trails, platforms, parking). d. Identification of all biological impacts of proposed development. e. Alternatives and/or mitigation for avoiding and/or reducing any identified impacts to a less than a significant level. f. Mitigation/Restoration and Monitoring Program for any mitigation required, including identification of appropriate acre replacement/ restoration ratios for any unavoidable impacts.	
Policy LUD-CZ 3.1.B – Considerations for Natural Habitat Areas – Wetland Vegetation Management i. For proposed development within the coastal zone, a <i>Vegetation Management Report</i> prepared by a qualified biologist shall be required. The report shall consist, at a minimum, of the following: a. A site-specific survey of the vegetation and habitat types at the time of proposed development. b. A map identifying existing vegetation and habitat types relative to the identified project area, and identification of all potential impacts associated with the proposed development. c. Identification of appropriate native plant species for use in restoration activities. d. Identification of appropriate buffers, or setbacks, necessary to protect identified vegetation. e. Alternatives and/or mitigation for avoiding and/or minimizing identified impacts. Mitigation shall include	Consistent. As part of the 2011 Certified EIR, a Biological Resources Report was prepared for the proposed project. The Biological Resources Report included six site-specific field surveys to determine existing plant species and vegetation types present on and adjacent to the project site. All existing vegetation and habitat species were identified in this report, as were impacts and prescribed mitigation measures.

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procedures and planting/maintenance plans that will encourage, enhance, or reestablish desirable plant communities. ii. The <i>Vegetation Management Report</i> shall be consistent with the most current version of the Wetland Management/Enhancement and Restoration Program (refer to Policy NCR-CZ 1.5.D).	
Policy LUD-CZ 3.1.C – Considerations for Natural Habitat Areas – Wetlands and Marine Resources i. Applicants for new development within the coastal zone located within, adjacent to, or that has watershed connection to a marine resource shall be required to submit a site-specific Wetland Management / Enhancement and Restoration Program (refer to Policy NCR-CZ 1.5.D) including, at a minimum, the following elements: a. A wetland delineation prepared by a qualified biologist with expertise in identifying wetlands and wetland indicators (i.e. soils, hydrology or vegetation). b. Identification of the current conditions of the site including flooding potential, water quality, and natural systems. c. Identification of all habitat types and known water quality concerns within the project area. d. Guidelines for water quality management and/or improvement that is consistent with maintenance, reestablishment, and enhancement of existing wetland habitats and water quality. e. An identification of appropriate methods of native enhancement and restoration that will sustain the biological productivity of existing wetland habitats. f. An identification of structural and nonstructural best management practices that will: • Maintain, and as feasible enhance, habitat and support natural systems of Laguna Grande, Roberts Lake and Monterey Bay, • Maintain, and as feasible improve, water quality, • Control erosion and sedimentation deposit, and • Provide flood protection. g. Guidelines, after consultation with the appropriate state	Consistent. A Jurisdictional Delineation (JD) was prepared to identify jurisdictional waters, including wetlands on and adjacent to the project site. Section 4.3, Biological Resources, of the 2011 Certified EIR describes existing natural systems and habitat types on the project site that are consistent with the findings in the Biological Resources Report and the JD prepared for the proposed project. Section 4.3, Biological Resources, of the 2011 Certified EIR includes mitigation measures aimed at minimizing, and if at all possible avoiding, impacts to existing native habitats and species on the project site. Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR describes existing conditions related to the flooding potential on the project site. As discussed above under Policy NCR-CZ 5.1.A, Designation of Natural Hazard Areas, the majority of the project site lies within the boundary of FEMA Zone AE, where the 100-year flood event will result in inundation to elevations between 16 feet and 17 feet. The current project grading plan proposes to import slightly more than 1,000 cubic yards (net) of fill. This volume of fill will raise the elevations of developed portions of the project site above 15 feet, and will raise the elevation of the first floor of the restaurant building to 18 feet, which is more than 1 foot above the Base Flood Elevation. In addition, as discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, implementation of Measures 4.7.1 and 4.7.2 will incorporate BMPs to reduce pollutants of concern in storm water runoff during project construction and operation.

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and federal resource agencies, for the preservation and/or reestablishment of equivalent (size and biological value) areas of riparian and marsh vegetation (if appropriate) including implementation and maintenance. h. Identification of technical, planning, and design mechanisms for plan implementation and maintenance.	
Policy LUD-CZ 3.1.D – Considerations for Natural Habitat Areas - Watershed/Water Quality Design and manage proposed development (new development or redevelopment) to eliminate or minimize dry-weather flows to Roberts Lake, Laguna Grande, and Monterey Bay in order to protect and enhance the biological productivity and diversity of fresh, intertidal, and marine organisms. i. All proposed development shall prepare Storm Water Pollution Prevention Plan (SWPPP) that includes, construction, and maintenance of erosion control, and water quality BMPs to be implemented during construction to prevent any construction related runoff and/or sediment from discharging to coastal waters including Roberts Lake, Laguna Grande, and the Beach Subareas as applicable. ii. All proposed development shall include a post-construction drainage plan that identifies the appropriate types of BMPs to be used at the site, implementation and maintenance scheduling, monitoring requirements, and responsibilities. iii. All proposed development shall include, to the extent feasible and as applicable to the type of development proposed, Site Design and Planning, Pollution Prevention, Source Control, and Treatment Control strategies that: • Minimize impervious surface, reduce the volume of runoff, and maximize infiltration of runoff. • Incorporate Pollution Prevention and Source Control BMPs / techniques that eliminate or minimize sources of pollution generated on the site. • Incorporate Low Impact Development (LID) design techniques (also known as Integrated Management Practices (IMPs)) that minimize and disconnect impervious surfaces and are integrated into the landscape design and distributed throughout the site.	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to implement several mitigation measures aimed at ensuring the sustainability of biological productivity in the areas surrounding the project site. In addition, as required by Measure 4.7.1 outlined in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the proposed project will be required to prepare an ESCP as well as a SWPPP to minimize potentially significant impacts to water quality during construction. In addition, as required by Measure 4.7.2, the proposed project will be required to implement appropriate Source Control and Treatment BMPs to minimize impacts to water quality during project operation. Furthermore, on July 12, 2013, the Central Coast RWQCB approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements) (Resolution R3-2013-0032). The Post-Construction Requirements mandate that development projects use Low Impact Development (LID), which incorporates and conserves on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes. These Post Construction Requirements are referenced in Section 2.7.G.5 of the City's CIP. Therefore, the project is required to comply with the Post-Construction Requirements to implement LIDs and infiltrate storm water runoff on-site.

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• Incorporate Source Control and Treatment Control BMPs that capture and treat polluted runoff prior to entering the municipal storm drainage system or receiving waters. Treatment Control BMPs shall be consistent with Seaside Municipal Code Chapter 18.46, Urban Storm Water Quality Management and Discharge Control, the Monterey Regional Storm Water Management Plan (SWMP), the Central Coast Regional Water Quality Control Board post-construction requirements and the regional NPDES Permit requirements. • All development shall include in construction documents operational and maintenance provisions to ensure ongoing effectiveness of BMPs. • All development shall be conditioned to require ongoing maintenance that is necessary for effective operation of all required water quality structural and non-structural BMPs for the life of the project. • Consolidate and/or eliminate storm drain outfall where feasible. Emphasis shall be placed on eliminating / redirecting dry weather and storm water flows away from the Bay Street and former Fort Ord storm water outfalls.	
Policy LUD-CZ 3.2.A – Considerations for Visual Resources - Proposals for new development shall include a map and visual analysis prepared by a qualified professional identifying the development's visual impacts, including potential impacts on scenic views and viewsheds including, but not limited to, those identified on Figure 2-4. - Development shall be sited and designed to protect, and where feasible enhance, public views to Roberts Lake, Laguna Grande, Monterey Bay, and the Pacific Ocean, including from Highway 1, which may be accomplished by minimizing the alteration of the natural land forms and by designing development to be visually compatible with the character of the surrounding areas. • Where feasible, development shall restore and enhance visual quality in visually degraded areas. - Landscaping shall be sited and installed to screen parking and utility areas from public view (including views from the	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, as part of the visual analysis prepared for the proposed project, three key views consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP were identified and analyzed to see if the project would have an impact on key views. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect on a scenic vista. In addition, the proposed project will be consistent with Section 2.6, Site Development Standards, of the City's CIP. Additionally, the proposed project must be reviewed and approved by the BAR to ensure that the character of the project site is compatible with the surrounding area. The proposed project will include landscaping along all boundaries of the project site. Furthermore, on-site lighting will be designed to be directed downward, will

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water and other recreation areas), provided such landscaping itself also protects and does not degrade views. iv. Outdoor lighting and signs shall be designed to protect sensitive habitats, public recreation areas, public views, and night sky from intrusion, including by prohibiting signs with moving parts or flashing lights, minimizing glare, and shielding and directing lighting within the development areas.	include directional lumens, and will be located in those areas requiring nighttime lighting, thereby reducing impacts on nighttime views as required by Measure 4.1.1, Lighting Plan, in Section 4.1, Aesthetics, of the 2011 Certified EIR. No lighting as part of the proposed project will include moving or flashing parts.
Policy LUD-CZ 3.3.A – Considerations for Water Resources/Utilities i. Installation of new water utility infrastructure shall be provided in a manner which allows development at densities and locations consistent with the land use designations defined in Policy LUD-CZ 1.1.A and taking into account the natural resource protection policies of this plan. ii. Prior to the approval of any development within the coastal zone, adequate water capacity shall be demonstrated consistent with the provisions and requirements of the Monterey Peninsula Water Management District. iii. Capacity for additional water service shall be reserved according to the following ranking of priorities: (a) essential public services; (b) new and existing recreational or open space uses within the coastal zone; and (c) visitor-serving commercial uses. iv. Applications for development shall demonstrate an adequate, sustainable, public (i.e., publicly owned and/or managed) water supply to support the proposed development. Private water supplies are prohibited to serve existing and new development.	Consistent. As discussed in Section 4.12, Utilities, of the 2011 Certified EIR, the proposed project's demand for water is approximately 4.756 acre-feet per year (afy). The project site will receive its water supply from the City's Peralta Well Allocation that is administered by the Monterey Peninsula Water Management District. An existing water meter issued by Cal-Am is on-site to service the proposed project. Therefore, the proposed project would have an adequate and sustainable supply of water.
Policy LUD-CZ 3.3.B – Considerations for Water Resources-Water Supply/Conservation i. All new development, changes of ownership, and changes or expansions of use within the Coastal Zone receiving a water permit on or after January 1, 2010 shall meet or exceed the following Water Efficiency Standards (Policy NCR-CZ 3.1.B): • Ultra-Low Flush Toilets shall be installed; • Urinals installed in residential uses shall be designed to flush with one (1) gallon of water. Urinals installed in non-residential uses shall be pint urinals or zero water	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include a variety of design features aimed at reducing water and energy usage. The water efficiency standards outlined under Policy LUD-CZ 3.3.B shall be included in the General Contractor's construction specifications. Therefore, the proposed project would meet or exceed the Water Efficiency Standards.

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consumption urinals and shall be clearly specified on the final construction drawings. Zero water consumption urinals shall be encouraged in settings where there is a regular maintenance staff; • Showerheads, Rain Bars, or Body Spray Nozzles shall be installed that were designed to emit a maximum of 2.0 gallons per minute of water. All shower fixtures should be equipped with scald protection valves rated for 2.0 gallons per minute showerheads. Installation of multiple Showerheads in one stall shall require timers for each Showerhead, Rain Bar, or Body Spray Nozzle. No timer shall operate with greater than a three (3) minute operating increment; • Residential lavatory sink faucets shall emit a maximum of 2.2 gallons of water per minute at 60 psi and residential kitchen sink faucets shall emit a maximum of 2.2 gallons of water per minute at 60 psi; 8. Public lavatory faucets shall emit a maximum of 0.5 gallon of water per minute at 60 psi and public lavatory sinks equipped with automatic shut off devices or sensor faucets shall operate with a maximum flow of 0.25 gallons per cycle; • High efficiency clothes washers shall be installed when a clothes washer is installed in a new structure; • High efficiency dishwashers or high efficiency commercial dishwashers shall be installed and maintained on the site when a dishwasher is installed in a new structure permitted by a Water Permit; • Instant-access hot water system(s) shall be installed for hot water access points to ensure that hot water is available within ten (10) seconds • All hot water pipes shall be insulated; • Sodium chloride (salt) water softeners shall be discouraged in New Construction. Alternate technologies such as potassium chloride shall be recommended. When a sodium chloride water softener is to be installed, the unit shall use demand-initiated regeneration which senses when the resin must be recharged, either electronically or with a meter that measures and	
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calculates usage. This requirement shall be specified on the Construction Drawings; • Water Efficient Pre-Rinse Spray Valves shall be utilized when a pre-rinse spray valve is installed; • There shall be no single-pass water use systems in ice machines, hydraulic equipment, refrigeration condensers, X-ray processing equipment, air compressors, vacuum pumps, etc. Air-cooled or better technology shall be installed; • Water cooled refrigeration equipment shall be prohibited when there is alternative cooling technology available; • Cooling Towers shall be equipped with conductivity controllers that are used to increase the number of cycles that can be achieved; • Boilerless steamers or connectionless steamers shall be installed in place of boiler-based steamers when a steamer is installed in new construction; • All landscape shall comply and identify on the landscape plan the following requirements: - o Group planting by hydrozones (water requirements). - o Irrigation systems shall include the installation, use and maintenance of Weather-Based Irrigation System Controllers (e.g. Smart Controllers). Weather-Based Irrigation System Controllers shall include functioning Soil Moisture Sensors and a Rain Sensor as components of the system. - o Drip Irrigation shall be utilized for watering all non-turf irrigated plantings. - o Rotating Sprinkler Nozzles shall be utilized for turf irrigation. - o Overhead spray irrigation shall not be used to water non-turf landscaping, including trees and shrubs. - o Irrigation systems shall operate with at least 70 percent efficiency. ii. Rainwater and graywater collection/irrigation systems are encouraged to supplement irrigation for new landscaping. New structures shall be encouraged to include one or more rainwater cisterns and a system to provide at least 75 percent of exterior irrigation during normal rainfall years.	
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Systems must be compliant with local catchment system standards, including Monterey County Department of Environmental Health. All sites utilizing a graywater reuse system shall install and maintain a backflow prevention device as required by the water distribution system operator that supplies water to the site.	
Policy LUD-CZ 3.4.A – Considerations for Water Quality/Wastewater i. Prior to the approval of any new development within the coastal zone, adequate sewage treatment facility capacity shall be demonstrated consistent with the provisions and requirements of the California Regional Water Quality Control Board. ii. Capacity for additional wastewater collection, conveyance and treatment shall be verified. iii. Alternatives for demonstrating additional wastewater treatment capacity for permitted development may be considered, including but not limited to, (a) construction of a package treatment plant at the Seaside treatment facility to handle all projected sewage for the City's LUP land use designations; or (b) the construction of a new sewer line to the Monterey treatment facility to handle the same sewage capacities.	Consistent. As discussed in Section 4.12, Utilities and Service Systems, of the 2011 Certified EIR, on November 10, 1992, an Agreement to Allow Connection to Sanitary Sewer Systems (Agreement) was entered into by the City of Monterey and the Seaside County Sanitation District (SCSD). Through this agreement, the City of Monterey will allow the SCSD to utilize the City of Monterey's sanitary sewer collection system for sewer services for the parcel of land (1350 Del Monte Boulevard) on which the proposed project will be developed. The proposed project is projected to experience average daily wastewater flows of approximately 3,850 gallons per day (gpd) and peak flows of approximately 5,775 gpd. The wastewater treatment needs of the proposed project, therefore, will not exceed the average and peak flow limits of 4,000 gpd and 8,000 gpd, respectively, set forth in the Agreement between the SCSD and the City of Monterey. Furthermore, the Monterey Regional Water Pollution Control Agency (MRWPCA) estimates that sufficient flow capacity will be available at the facility to meet all needs through the service area for the next 20 years. Therefore, the wastewater treatment needs of the proposed project will not exceed the permitted capacity of the MRWPCA facility.
Policy LUD-CZ 3.5.A – Considerations for Natural Hazards i. Applications for new development shall include an analysis of all potential hazards, site constraints, alternatives, and appropriate mitigation. The analysis shall also include a determination that the site is suitable for the proposed development and that it will be safe from hazards over the lifetime of the development without reliance on seawalls, deep piers, or similar engineering measures. ii. Proposed development shall be consistent with applicable goals and policies of the LCP. iii. All required geologic engineering reports shall be prepared by a qualified geotechnical engineer. Reports shall address site stability under static and pseudo-static conditions. iv. Geologic reports submitted to the City shall be in conformance with guidelines established for such reports by	Consistent. An analysis of all potential hazards, site constraints, alternatives, potential impacts, and corresponding mitigation measures were outlined in applicable topical sections of the 2011 Certified EIR for the proposed project. As discussed throughout this LCP-LUP Consistency Analysis, the proposed project will be consistent with applicable policies included in the City's LUP. As required by Standard Condition 4.5.2, a site-specific geotechnical report for the proposed project will be prepared by a qualified engineer. The project site is located within 5 meters of a tsunami evacuation zone (refer to Figure 2-7, Tsunami Evacuation Areas, in the City's Local Coastal Program LUP). As discussed in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR, the project site is located at an elevation about 10

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the California Division of Mines and Geology and the Uniform Building Code, including the following: • Geologic reports shall include information on the regional and local geologic setting, topography, significant landforms, soil types and thickness of soil or depth to bedrock, geologic hazards, soil/rock types, geologic structures, groundwater conditions, and other relevant properties, such as erosion potential and mineral economic resources. • The geologic report shall contain the following ten major sections: - o Summary - o Description of Project Alternatives - o Impacts - o Geology of the Project Area - o Geologic and Seismic Impacts - o Mitigation of Impacts - o Coordination with Other Agencies, Groups, or Consultants - o Conclusions and Recommendations - o Report Preparer's Qualifications - o References v. All development proposed within an area that is subject to ocean wave, tsunami, or flooding shall prepare an analysis of wave up-rush / shoreline erosion, and be adequately set back from the area of hazard to be safe for the life of the development or a 100-year period, whichever is greater, without reliance on seawalls, deep piers, or similar engineering measures. vi. Require all coastal development permit applications for all development on a beach or sand dune property subject to wave action to assess the potential for flooding or damage from waves, storm surge, or seiches, through a wave uprush and impact report prepared by a licensed civil engineer with expertise in coastal processes. The conditions that shall be considered in a wave uprush study are: a seasonally eroded beach combined with long-term (75 years) erosion; high tide conditions, combined with long-term (75 years) projects for sea level rise; storm waves from a 100-year storm event or a	to 15 feet above mean sea level and is protected by 20- to 40-foot sand dunes that will minimize impacts to the project site in the event of a tsunami. Mitigation measures are also outlined in this section of the 2011 Certified EIR in order to further ensure that impacts related to flooding and other events causing inundation on the project site will be less than significant. A sea level rise quantitative analysis was prepared to examine site development relative to projected 75-year and 100-year sea level rise scenarios. The sea level rise quantitative analysis incorporated wave up-rush and beach/shoreline erosion as part of the analysis.
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storm that compares to the 1982/83 El Niño event.	
Policy LUD-CZ 3.5.B – Considerations for Sea Level Rise i. Geotechnical reports prepared for proposed development shall include a comprehensive evaluation of potential sea level rise impacts. This evaluation shall include the following: • A Vulnerability Assessment that identifies and analyzes areas within the city that are most at risk to the impacts of sea level rise. The Vulnerability Assessment shall establish how far and how high coastal storms and ocean levels would inundate the city, including consideration of erosion, inland flooding, and sedimentation factors. • Identification of any site-dependent infrastructure that is at risk from sea level rise. • Identify and prioritize mitigation and adaptation measures that can be implemented as well as an analysis of the potential impacts of the adaptation measures. Mitigation and adaptation measures shall be scaled to the local and regional hydrologic events projected. These measures may include, but are not limited to, riparian habitat restoration, living shoreline projects, management of invasive species, regional sediment management, and innovative designs. • If the City's Local Hazard Mitigation Plan update (required by Policy NCR-CZ 5.2.C) has been prepared at the time the site-specific comprehensive evaluation of sea level rise impacts are being evaluated, then the evaluations shall be consistent with the intent of that plan update.	Consistent. As required by Standard Condition 4.5.2, a site-specific geotechnical report for the proposed project will be prepared by a qualified engineer. This report will be prepared in compliance with all State and City requirements.
Policy LUD-CZ 3.6.A – Considerations for Public Access and Recreation i. Development shall not interfere with the public's right of access to the shore and significant coastal recreation features. ii. New development shall plan for and provide public access to coastal features.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will provide increased connectivity to the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. Therefore, the proposed project will increase public access to coastal features.

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Policy LUD-CZ 3.7.A –Considerations for Cultural Resources i. Identify and protect archaeological resources within Seaside. ii. Require a Phase I Archaeological Study performed by a Registered Professional Archaeologist to determine whether significant archeological resources may be present when excavation activities are proposed. iii. Mitigations are to be required as a condition of development where it would adversely impact any archaeological or paleontological resources, including, but not limited to, those qualified individuals as identified by the State Historic Preservation Officer.	Consistent. As part of the 2011 Certified EIR, a Cultural Resources Report was prepared outlining the proposed project's impacts to cultural resources. As discussed in Section 4.4, Cultural and Paleontological Resources, of the 2011 Certified EIR, no significant archaeological resources were identified. Nevertheless, Mitigation Measure 4.4.1, Historic and Archaeological Resources, has been included to address unknown archaeological resources that may be encountered during construction activities.
Policy LUD-CZ 3.8.A – Considerations for Transportation and Circulation i. Development shall be approved only where adequate circulation and parking have been provided. ii. Retain the former Southern Pacific Railroad right-of-way as a transportation corridor. Prohibit development that would interfere with future uses of the corridor identified in Policy LUD-CZ 1.1.A. iii. Encourage non-motorized and other alternative forms of transportation in all new development. iv. Maintenance of the existing highway, landscaping, and drainage facilities within the Highway 1 corridor may be permitted with a coastal development permit. Activities that involve an expansion of capacity or widening or realigning of the highway pavement or route shall require an amendment to the LCP.	Consistent. Parking has been provided consistent with all the LCP requirements. A Traffic Impact Analysis was prepared (November 2014) and concluded that both on-site and off-site circulation was sufficient. In addition, non-motorized and other alternative forms of transportation will be encouraged through the maintenance of the existing pedestrian and bicycle trail around Laguna Grande Lake and the provision of the extension of the existing pedestrian and bicycle trail over the foot bridge to the north to connect to the existing sidewalk along Del Monte Boulevard.
Proposed Implementation Actions	
Support efforts to prepare the <i>Canyon del Rey Watershed Master Drainage Plan Update</i> (Policy NCR-CZ 1.5.B)	Not Applicable.
Implement erosion control and sedimentation mitigation measures (Policy NCR-CZ 1.5.C.i)	Consistent. The proposed project will be required to prepare an ESCP and a SWPPP as required by Measure 4.7.1 in Section 4.7, Hydrology and Water Quality, of the 2011 Certified EIR. Both plans will include components for erosion control and prescribe treatment measures to trap sediment once it has been mobilized at a scale and density appropriate to the size and slope of the catchment basin. For the project site, these measures might include inlet protection, straw bale barriers, straw mulching, straw wattles, and silt fencing. Therefore, mitigation measures have been identified in the

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	2011 Certified EIR to reduce the potential for erosion, thereby reducing sediment levels in storm water runoff.
Implement, monitor, comply and update (as needed) the <i>Monterey Regional Storm Water Management Plan</i> (SWMP) as a participating entity (Policy NCR-CZ 1.5.C.ii).	Not Applicable.
Implement, monitor, and comply with the Regional Water Quality Control Board's Post-Construction stormwater requirements for new and redevelopment for the Central Coast Region; and update appropriate policies, programs and documents, including Municipal Code Chapter 18.46, as needed.	Consistent. As discussed in Section 4.7, Hydrology and Water Quality, the proposed project would have a significant water quality impact if direct releases of pollutants or storm water discharges to Laguna Grande Lake during construction exceeded narrative or numerical water quality standards established by the Central Coast Regional Board, or violated the conditions set forth in the City Municipal Code. Implementation of Measures 4.7.1 and 4.7.2 will reduce potential short-term, construction-phase impacts and long-term operational impacts to water quality to below the level of significance. Additionally, as required by the Resolution No. R3-2013-0032, the proposed project will be required to comply with the Low Impact Development Standards (LID) and infiltrate storm water on-site.
Update the <i>Wetland Management/Enhancement and Restoration Program</i> (1983) based on the Canyon del Rey Watershed Master Drainage Plan Update (Policy NCR-CZ 1.5.D.i).	Not Applicable.
Implement and promote management/enhancement and restoration measures that meet the objectives of the current of <i>Wetland Management/Enhancement and Restoration Program</i> (Policy NCR-CZ 1.5.D.ii).	Not Applicable.
Explore and implement humane methods of controlling goose population (Policy NCR-CZ 1.6.A)	Not Applicable.
Participate in local and regional efforts to secure a safe and adequate/sustainable supply of water (Policy NCR-CZ 3.1.A.i).	Not Applicable.
Require new development, changes of ownership, and changes or expansions of use to meet or exceed Monterey Peninsula Water Management District's water efficiency standards (Policy NCR-CZ 3.1.B.i).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will install water-efficient fixtures and appliances, native drought-tolerant plants, and water-efficient irrigation systems and devices, and will include restricted watering methods (i.e., prohibiting systems that apply water). These water efficiency standards will be included in the General Contractor's construction specifications. Therefore, the proposed project will meet the Monterey Peninsula Water Management District's water efficiency standards.
Monitor water use within the City (Policy NCR-CZ 3.1.C).	Not Applicable.
Support regional efforts to develop an alternative water supply (Policy NCR-CZ 3.2.A).	Not Applicable.

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Actively pursue methods of improving water quality of lakes, streams, and other waterways throughout the coastal zone (Policy NCR-CZ 4.1.A.i).	Not Applicable.
Collaborate with local jurisdictions and identify properties and stakeholders most likely affected by rising sea levels (Policy NCR-CZ 5.2.A).	Not Applicable.
Organize educational workshops to inform public of the concerns and potential impacts of sea level rise (Policy NCR-CZ 5.2.B.ii).	Not Applicable.
Update Local Hazard Mitigation Plan to address potential impacts of sea level rise (Policy NCR-CZ 5.2.C).	Not Applicable.
Develop and implement a coastal access/directional sign program (Policy PAR-CZ 1.1.C.i).	Not Applicable.
Maximize opportunities for environmental education within the coastal zone (Policy PAR-CZ 1.1.C.ii).	Not Applicable.
Explore development of a Visitors Center (Policy PAR-CZ 1.1.C.iii).	Not Applicable.
Provide free unrestricted parking at all public access and public parking areas (Policy PAR-CZ 1.2.A.i).	Consistent. As discussed above under Policy PAR-CZ 2.1.A, Designation of Parking for Public Access and Recreational Opportunities, the project site is designated as a shared off-street parking area (refer to Figure 2-9, Public Parking Area, of the City's Local Coastal Program LUP). Although the proposed project will develop this property with a restaurant use, thereby eliminating this property as an off-street public parking area, the proposed project will provide sufficient parking to serve visitors to the project site and surrounding areas. In addition, there are two public parking lots located on the north side of Laguna Grande Park that be accessed from Canyon Del Rey Boulevard that would remain available for public use. The project site is accessible from these public parking lots by an existing pedestrian pathway that circles around Laguna Grande Park.
Explore expanding public access parking at the existing Embassy Suites Hotel parking lot (Policy PAR-CZ 1.2.A.ii).	Not Applicable.
Establish and maintain a system of trails that provides future connectivity to various California Coastal Trail and recreational alignments (Policy PAR-CZ 1.3.A).	Not Applicable.
Participate in the regional planning efforts to restore light rail service along the Monterey Peninsula and through Seaside.	Not Applicable.

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Laguna Grande Subarea	
Natural Coastal Resources	
Natural Habitat Areas	
Policy NCR-LG 1.1.A – Vegetation Management The City of Seaside shall work cooperatively with the City of Monterey, State Parks, and Regional Parks to stabilize area adjacent to Laguna Grande utilizing methods identified in the Vegetation Management Plan for the Seaside Coastal Zone (identified in Policy NCR-CZ 1.5.D.i), or if the plan is not complete, utilizing best available methods such as exotic and invasive plant removal, and planting and maintaining native vegetation.	Not Applicable.
Visual Resources	
Policy NCR-LG 2.1.A – Protection of Visual Resources Development within the Laguna Grande Subarea shall limit building height and bulk in order to minimize adverse impact on public views of the lake and park. Maintain a 50 foot buffer around Laguna Grande Lake and the channel connecting Laguna Grande Lake and Roberts Lake as shown in Figure 2-4 .	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key views (i.e., from southbound SR-1 north of Roberts Lake, from Laguna Grande Regional Park on the south shore of Laguna Grande Lake, and from the residential area 1.5 miles east of the project site), consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect on public views in the area. According to the City's CIP, developments are required to be set back a minimum of 50 feet from Laguna Grande Lake (a designated marine resource area). However, smaller setbacks may be allowed if public recreational trails are provided within the buffer zone. The proposed project will construct the trail extension within the 50-foot buffer zone; however, the restaurant facility will be set back a minimum of 50 feet from Laguna Grande Lake.
Policy NCR-LG 2.1.B – Management of Visual Resources i. Coordinate with the Regional Park District to provide viewshed improvements to areas identified on Figure 2-4 as a component of Coastal Visitor-Serving Commercial land use development and park improvements proposed for Laguna Grande. ii. The City shall develop Gateway Guidelines for the Fremont Corridor adjacent to Laguna Grande Park.	Not Applicable.

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Water Resources	
Policy NCR-LG 3.1.A – Protection of Potable Water Supply The City shall protect potable water supply within the Laguna Grande Subarea by utilizing methods identified in Policy NCR-CZ 3.1.B , as well as by using non-potable water supplies (e.g., from Laguna Grande) for non-potable uses such as park landscaping or as recharge if such use would not have a significant adverse effect on the lake or associated habitat.	Not Applicable.
Water Quality	
Policy NCR-LG 4.1.A – Management of Water Quality Improve the water quality of Laguna Grande, thus improving the recreational opportunities and preserving and enhancing the habitat value of Laguna Grande by carrying out the recommendations of the updated <i>Wetland Management/Enhancement and Restoration Program</i> (identified as Policy NCR-CZ 1.5.D.i), enforcing the Urban Storm Water Quality Management and Discharge Ordinance (Policy NCR-CA 1.5.C.i; Chapter 18.46), continued implementation of the <i>Monterey Regional Storm Water Management Plan</i> (Policy NCR-CZ 1.5.C.ii), and following the recommendations from the <i>Canyon Del Rey Creek Watershed Master Drainage Plan Update</i> (Policy NCR-CZ 1.5.B).	Not Applicable.
Policy NCR-LG 4.2.A – Water Quality Enhancement Investigate opportunities for habitat enhancement, impervious site coverage reduction, and restoration of previously disturbed areas.	Not Applicable.
Natural Hazards	
Policy NCR-LG 5.1.A – Management of Sea Level Rise Hazards The City shall protect and maintain the functionality of Laguna Grande and the adjacent park lands from impacts associated with sea level rise.	Not Applicable.
Policy NCR-LG 5.2.A – Management of Flooding Hazards i. In order to maintain stormwater flows and prevent flooding that could otherwise result in hazardous conditions and property damage, the City shall maintain the outfall at Laguna Grande under Fremont Street. A coastal development permit shall be required for maintenance activities including periodic cleaning and removal of sand	Not Applicable.

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and debris to facilitate stormwater flows. ii. The City shall accommodate for flooding impacts by increasing buffer areas around Laguna Grande and investigating opportunities for increasing lake capacity via sediment and fill removal.	
Public Access & Recreation	
Policy PAR-LG 1.1.A – Protection of Public Access and Recreational Opportunities The City shall maintain, and enhance, pedestrian and bicycle connectivity within the Laguna Grande Subarea, and to Roberts Lake, and the beach to maximize public access and recreation opportunities to these coastal resources.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail from the foot bridge between the project site and the Holiday Inn Express north to the existing sidewalk along Del Monte Boulevard. The trail extension will connect to the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will increase public access to coastal features.
Policy PAR-LG 1.1.B – Management of Public Access and Recreational Opportunities i. The City shall develop interpretive signage along access trails around Laguna Grande as part of ongoing park improvements and maintenance efforts. ii. The City shall maintain the portion of Laguna Grande Park and facilities that are within the city, including restrooms, for the recreation purposes of its citizens and visitors. iii. The City shall maintain and seek to enhance the developed pedestrian walkway/bikeway, including potential additions to it. The walkway/bikeway shall be maintained at a minimum width of 10 feet and so as to have a minimum impact on the wetland.	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect the proposed project to the greater Laguna Grande Regional Park Trail. The trail width will be maintained at a minimum width of 10 feet. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean.
Policy PAR-LG 1.1.C – Provisions for Public Access and Recreational Opportunities i. Develop pedestrian access along lands adjoining Laguna Grande. Where passing through or near the wildlife habitat area in Laguna Grande, this access is to be designed so as to protect wetland areas (e.g., a required setback from the inland extent of emergent wetland vegetation, overpass, etc.). ii. New development shall be required to provide public access easements and access improvements, consistent with habitat protection, from public rights-of-way to the access	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect the proposed project to the greater Laguna Grande Regional Park Trail. The trail will be designed to protect the wetland areas by adhering to the required setback from Laguna Grande Lake.

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trail. iii. Upon the significant improvement in water quality of Laguna Grande (consistent with objectives presented in Policy NCR-LG 4.1.A), the City shall coordinate with the Monterey Peninsula Regional Park District to explore additional recreational water uses within Laguna Grande such as a fishing/fly-casting pier or paddle boat concession. iv. The City shall coordinate with the Monterey Peninsula Regional Park District to provide additional active and passive recreational opportunities in and around Laguna Grande (such as a fishing pier, par course, disk golf or similar). v. The City shall coordinate with the Monterey Peninsula Regional Park District for provision of additional programs and/or facilities for use by senior citizens and community groups (such as community garden, outdoor class area, horseshoe pit, bocce ball area, wildlife viewing station).	
Land Use & Development	
Land Use Designations & Definitions	
Policy LUD-LG 1.1.A – Land Use Designations Within the Laguna Grande Subarea The land use designation establishes the type, density, and intensity of land uses allowed. The Development Standards and Design Guidelines provided in the Coastal Implementation Plan portion of the LCP provide further guidance regarding the density and intensity of development allowed within each land use designation. Land within the Laguna Grande Subarea is designated as Coastal Parks and Open Space (CPOS) and Coastal Visitor-Serving Commercial (CVSC), which are defined as follows: • Coastal Parks and Open Space (CPOS): This designation is appropriate in areas where the City wants to protect and preserve natural resources and habitat, views, and other visual amenities and protect people and property from natural and man-made hazards. This designation also identifies existing or planned parkland. Public use areas include the sandy beach, access ways, parks, trails, walkways, and other recreational amenities that are publicly	Consistent. As discussed above under Policy LUD-CZ 1.1.A, Land Use Designations within the Coastal Zone, the northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). The proposed project will include the development of a restaurant facility, consistent with conditionally permitted uses in the CVSC land use designation as outlined in the City's Local Coastal Program LUP and CIP. Furthermore, the proposed project will develop the property at a FAR of 0.04, which will be well below the maximum FAR of 1.0:1 permitted by the City's CIP.

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owned or over which easements are required as a condition of development (IV.A.3.e). The maximum floor area ratio (FAR) within this designation is 0.01:1. • Coastal Visitor-Serving Commercial (CVSC): Principal permitted visitor-serving commercial uses include hotels/motels, food service, retail establishments, visitor/traveler support services (such as visitor information centers), and recreational-related commercial uses. The maximum floor area ratio (FAR) is 1.0:1, except that hotels are allowed a maximum FAR of 1.5:1.	
Development & Land Use Requirements	
Policy LUD-LG 2.1.A – Designation of Land Uses Within the Laguna Grande Subarea Land use designations in the Laguna Grande Subarea are shown earlier in Figure 2-10a of this plan. Gen	Consistent. As discussed above under Policy LUD-CZ 1.1.A, Land Use Designations within the Coastal Zone, the northeastern, eastern, and southern portions of the project site are designated CVSC (refer to Figure 2.10a, Land Use Designations, of the City's Local Coastal Program LUP). The proposed project will include the development of a restaurant facility consistent with conditionally permitted uses in the CVSC land use designation as outlined in the City's CIP.
Policy LUD-LG 3.1.A – Considerations for Visual Resources • Permitted development shall be sited and designed to protect public views to Laguna Grande and be compatible with the regional park. Consideration of public views of the lake and park must be carefully considered as a component of the visual analysis required by Policy LUD-CZ 3.2.A. • To protect views of Laguna Grande, proposed development should avoid placing structures in close proximity to the channel. Preferred development within 50-feet of the channel would consist of low-profile, and non-structural development including parking lots and recreational amenities (such as formalized viewing areas, off-street parking, and improved bike paths and trailways).	Consistent. As discussed above under Policy NCR-CZ 2.1.A, Designation of Visual Resources, the proposed project's visual impacts were assessed from three key views consistent with those areas designated as visual resources on Figure 2-4, Views and Viewsheds to Visual Resources, in the City's Local Coastal Program LUP. Results of this visual analysis concluded that the proposed project will not result in a substantial adverse effect to public views of Laguna Grande Lake. Furthermore, the proposed project will not be developed within such close proximity to the Channel that it will subsequently result in obstruction of public views of the Laguna Grande Lake.
Policy LUD-LG 3.2.A – Considerations for Public Access • All relevant access improvements outlined in the Public Access section of this chapter are to be carried out as a condition of development. • Proposed development in the Laguna Grande Subarea shall be required to provide public access easements and access improvements, consistent with habitat protection, to the access trail from the public right-of-way to the access trail.	Consistent. The proposed project will be consistent with all relevant public access and recreation policies outlined in the City's Local Coastal Program LUP. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include the extension of the existing pedestrian and bicycle trail that will connect to the greater Laguna Grande Regional Park Trail. The trail is 10 feet wide, will be designed to protect the wetland areas by adhering to the required setback from Laguna Grande Lake, and will include signage to require people to

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- Proposed development will maintain and seek to enhance the developed pedestrian walkway/bikeway, including potential additions to it, as applicable. The walkway/bikeway shall be maintained at a minimum width of 10 feet and so as to have a minimum impact on the wetland. - Proposed development within the Laguna Grande Subarea will be required to provide additional/enhanced public access through means such as directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard.	stay on the designated trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will add to the City's and region's existing pedestrian and bicycle trail system.
Proposed Implementation Actions	
Stabilize the areas adjacent to Laguna Grande utilizing methods identified in the Vegetation Management Plan for the Seaside Coastal Zone or, if the plan is not complete, utilizing best available methods (Policy NCR-LG 1.1.A).	Consistent. As discussed in Section 4.3, Biological Resources, of the 2011 Certified EIR, the proposed project will be required to adhere to a variety of mitigation measures that will minimize project-related impacts to on-site and surrounding sensitive species and habitats. Implementation of these mitigation measures will further ensure the long-term stabilization of those habitats surrounding the Laguna Grande Lake area.
Coordinate with the Regional Park District to provide viewshed improvements as a component of park improvements proposed for Laguna Grande (Policy NCR-LG 3.1.A).	Not Applicable.
Develop Gateway Guidelines for the Fremont Corridor (Policy NCR-LG 2.1.B.ii). Improve water quality of Laguna Grande through implementation of the current water quality policies and programs, and the current Wetland Management / Enhancement and Restoration Program (Policy NCR-LG 4.1.A).	Not Applicable.
Improve water quality and the recreational experience of southern Monterey Bay area beaches, including by properly maintaining the outfall at Laguna Grande under Fremont Street and by pursuing opportunities to consolidate and/or eliminate reliance on storm water outfalls which convey storm water directly to the beach. Such storm water shall be filtered and treated prior to discharge (Policy NCR-LG 5.2.A).	Not Applicable.
Maintain, and where necessary improve, pedestrian and bicycle connectivity within the Laguna Grande Subarea (Policy PAR-LG 1.1.A).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian/ and bicycle trail to connect with the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides

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	direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will increase connectivity within the Laguna Grande Subarea.
Develop interpretive signage along access trails around Laguna Grande (Policy PAR-LG 1.1.B.i).	Not Applicable.
Maintain the portion of Laguna Grande Park and facilities that are within the city (Policy PAR-LG 1.1.B.ii).	Not Applicable.
Maintain the developed pedestrian walkway/bikeway (Policy PAR-LG 1.1.B.iii). Expand recreational water uses within Laguna Grande (Policy PAR-LG 1.1.C.iii).	Consistent. As discussed above under Policy NCR-CZ 1.1.B, Promote Sustainability of Biological Productivity, the proposed project will include extending the existing pedestrian and bicycle trail to connect with the greater Laguna Grande Regional Park Trail. This trail system ultimately connects to the Monterey Peninsula Recreational Trail, which provides direct access to Roberts Lake and the Pacific Ocean. As such, the proposed project will enhance recreational access to the coastal area. The Applicant will be responsible for ensuring the trail extension is maintained.
Coordinate with the Monterey Peninsula Regional Park District to provide additional active recreational opportunities around Laguna Grande (Policy PAR-LG 1.1.C.iv).	Not Applicable.
The City shall coordinate with the Monterey Peninsula Regional Park District for provision of additional programs and/or facilities for the use by senior citizens and community groups (Policy PAR-LG 1.1.C.v).	Not Applicable.

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Chapter 2 Coastal Zone Districts, Uses, Regulations and Requirements	
2.3 Establishment and Designation of Coastal Zoning Districts	The portion of the project area that is within the Coastal Zone is designated Coastal Visitor-Serving Commercial (CVSC), as identified in Figure 1a (Coastal Zoning Map) in the City of Seaside's (City) Coastal Implementation Plan (CIP). As stated in Table 1 (Coastal Zoning Districts) in the City's CIP, the purpose of the CVSC land designation is to establish areas to service the needs of visitors to the City and the surrounding area.
2.4 Development Requiring Coastal Development Permit	All development in the Coastal Zone requires either a Coastal Development Permit (CDP) or a Coastal Administrative Permit (CAP). Development, as defined by the City's General Plan, includes "...the construction... of any structure ...or land disturbance." Therefore, the proposed project is considered a development per the City's General Plan. Projects with certain characteristics may not be approved via a CAP and would require a CDP. The proposed project will require a CDP because it is: (1) a development that is deemed to have the potential to cause a significant environmental impact pursuant to the California Environmental Quality Act (CEQA); (2) a development within a visual resource area as identified on Figure 2-4 (Views and Viewsheds to Visual Resources); and (3) a development within 100 feet of mapped or field-identified wetlands or Environmentally Sensitive Habitat Areas (ESHA).
2.5 Allowed Land Uses and Permit Requirements for Coastal Zoning Districts	Consistent. The land use "restaurant, café-fast food" is conditionally permitted in areas zoned CVSC (refer to Table 2 of the City's CIP). Therefore, the proposed project is consistent with the allowable uses in the Coastal Zone subject to the issuance of a CDP.
2.6 Site Development Standards	Consistent. Table 3 (Site Development Standards) in the City's CIP establishes the development standards for property in the Coastal Zone. In specific subareas, additional standards apply. The project area is within the Laguna Grande Subarea (Section 2.7[I.2]), which has specific standards for visual resources, public access and recreation, and dune management in addition to the Site Development Standards provided in Table 3. The following Special Site Development Standards for the Laguna Grande Subarea apply to the proposed project: a. Consistent. Height: Development within 100 feet of Laguna Grande Lake will be limited to one-story and not exceed a maximum height of 20 feet, except for design/architectural features, which can be up to 30 feet in height. The maximum height of the proposed project will be 19 feet 10 inches to the top of the parapet and 28 feet to the top of the corner tower (which is considered a design/architectural feature). b. Consistent. Views: Development will not be placed within close proximity to the channel between Roberts Lake and Laguna Grande Lake (Channel) except for such improvements as parking lots and recreational amenities. The buildings that are part of the proposed project will be set back approximately 63 feet from the Channel.

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	c. Consistent. <i>Public Access:</i> All public paths will be designed at a minimum width of 10 feet. The public path included as part of the proposed project has a minimum width of 10 feet. d. Consistent. <i>Public Access:</i> All walkways/bikeways will be maintained at a minimum width of 10 feet. The extension of the pedestrian and bicycle trail included as part of the proposed project will have a minimum width of 10 feet. e. Consistent. <i>Public Access:</i> Public access will be expanded and/or enhanced through directional/interpretive signage, public parking, and additional access points to coastal resources from Del Monte Boulevard or Canyon Del Rey Boulevard. The existing pedestrian and bicycle trail that ends at the wood bridge across the canal will be extended to Del Monte Boulevard as part of the proposed project. f. Consistent. <i>Views:</i> Development between 100 feet and 500 feet of Laguna Grande, including the Channel area, will be limited to a maximum of five stories and 60 feet in height, and will be oriented parallel to the Channel. In addition, upper floors will be set back from lower floors, and building facades will include articulation. The maximum height of the proposed project will be 19 feet 10 inches at the top of the parapet and 28 feet at the top of the corner tower. Additionally, the building facades will include articulation that would blend into the surroundings. The following Site Development Standards (Table 3) apply to the proposed project: • Consistent. <i>Maximum Building Site Coverage:</i> The maximum building site coverage is 90%. The total site area covered by the proposed building will be approximately 42%. • Consistent. <i>Minimum Lot Area:</i> The minimum lot area is 1 acre. The project site will be approximately 2.28 acres. • Not Applicable. <i>Minimum Lot Width:</i> The project site is a legal lot of record and these standards do not apply. • Not Applicable. <i>Minimum Lot Depth:</i> The project site is a legal lot of record and these standards do not apply. • Consistent. <i>Floor Area Ratio (FAR):</i> The FAR standard is 1.0:1. The proposed project's FAR is 0.04.
2.6A. Parking Requirements	Consistent. As indicated in Table 4 (Parking Requirements by Land Use), the restaurant land use type is required to have 1 space for every 3 seats. The proposed project will include development of indoor and outdoor patio dining totaling 159 seats. The proposed project will include 53 parking spaces, which equals 1 space for every 3 seats.
2.6A(2)(e) Recreational Vehicle (RV) Parking Spaces	Consistent. RV parking spaces are to be provided at a minimum ratio of 1 RV space for each 40 off-street vehicle parking spaces. The proposed project will include 53 parking spaces and 1 RV parking space.

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2.6A(3)(a) Disabled Parking Requirements	Consistent. In accordance with the Americans with Disabilities Act (ADA) standards, 1 disabled parking space is required to be provided for every 25 parking spaces and any fraction thereof for non-residential developments. The parking spaces required for the disabled would count toward the minimum number of off-street parking spaces as discussed in Section 2.6A, Parking Requirements. The disabled parking spaces will have a minimum width of 14 feet. In addition, the disabled parking spaces will be located so that: (1) there is easy access from the closest parking area to the major entrances; (2) the disabled individual would not have to wheel or walk behind parked cars other than his or her own; and (3) a pedestrian way accessible to physically disabled persons will be provided from each parking space to the related facilities, including curb cuts and/or ramps. The proposed project will include 53 parking spaces, and 3 of these spaces will be designated as disabled parking spaces. The disabled parking spaces will have a minimum width of 14 feet, will be located adjacent to the northern and western entrances of the restaurant facility, and will comply with all of the above requirements.
2.6A(3)(b) Bicycle Parking Requirements	Consistent. Nonresidential developments are required to provide bicycle parking that equals a minimum of 5% of the required vehicle parking spaces. The proposed project will include 53 parking spaces requiring the project to include at least 3 bicycle parking spaces. The proposed project will also include 3 bicycle parking facilities which can typically accommodate two bicycles. The provision of 3 bicycle parking facilities, (parking for 6 bicycles) is more than 5% of the total required bicycle parking spaces.
2.6A(3)(c) Motorcycle Parking Requirements	Consistent. A parking lot with 50 or more vehicle parking spaces is required to provide motorcycle parking spaces near the main entrance of the structures. A minimum of 1 motorcycle parking space is required for each 50 vehicle spaces or fraction thereof. The proposed project will include 2 motorcycle parking stalls near the northern entrance of the restaurant.
2.6A(3)(d) Public Access Parking	Consistent. The project will include five parking stalls at the southeast corner of the project site that will serve as public parking for lake visitors, in addition to parking for the restaurant.
2.6A(4)(h) Water Quality Requirement	Consistent. The project will incorporate post-construction Best Management Practices (BMPs) and water quality measures, including Low Impact Development (LID) techniques established by the RWQCB to minimize impacts from storm water runoff and dry weather flows.
2.6B Landscaping Requirements	
2.6B(1) General Landscaping Requirements	Consistent. The project site will be landscaped on all four sides of the parcel with a variety of drought-tolerant plant species. In addition, where feasible and practical, landscaping will be designed to address post-construction water quality site design and Low Impact Design (LID) requirements.

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2.6B(2) Landscaping of Parking Lots	Consistent. Landscaping is required within each outdoor parking area at a minimum ratio of ten percent of the gross area of the parking lot for commercial uses. The project will include 35% of landscaping around the immediate area of the parking lot and will provide at least one shade tree for every five parking spaces. Landscaping will be a combination of groundcover, shrubs, and trees and will be concentrated along the perimeter of the project site, including at the primary entrances to help screen the restaurant from the street and adjoining properties. Shade trees will be provided at the minimum required rate of one for every twenty-five linear feet of landscaped areas and the proposed landscaping will also be properly oriented to provide pedestrian access to the restaurant without requiring them to cross unpaved landscaped areas.
2.6C Lighting Requirements	
2.6C(1)(a) Lighting General Requirements- Maximum Height	Consistent. The lights installed as part of the proposed project will not exceed the height of 14 feet or the height of the nearest structure.
2.6C(1)(b) Energy-Efficiency	Consistent. The outdoor lighting included as part of the proposed project will be consistent with Title 24, Building Energy Efficiency Standards. In addition, the outdoor lighting plan will be reviewed and approved by the City's Board of Architectural Review (BAR), which will ensure that energy-efficient lighting technology is used.
2.6C(1)(c) Position of Light Fixtures	Consistent. All lighting fixtures included as part of the proposed project will be consistent with Section 2.6C, Lighting Requirements of the City's CIP. In addition, all lighting fixtures will be reviewed and approved by the City's BAR. The City will ensure that the light fixtures are directed downward to prevent light spill and glare onto adjacent properties, will ensure that the light source is not visible off site, and will confine glare and reflections within the boundaries of the project site to the maximum extent feasible.
2.6C(1)(d) Maximum Illumination	Consistent. The lighting plan included as part of the proposed project will be consistent with Section 2.6C, Lighting Requirements, of the City's CIP. In addition, the lighting plan will be reviewed and approved by the City's BAR in order to ensure that the maximum illumination is not exceeded.
2.6D Sign Requirements	Consistent. The signs included as part of the proposed project will be consistent with Section 2.6D, Sign Requirements, of the City's CIP. In addition, the City's BAR will review and approve the signage plans as part of the application for the proposed project. The proposed project will include the construction of red and yellow external illuminated wall signs on the west and south side of the building. In addition, the proposed restaurant will include six internally illuminated signs, four of which would be mounted on the building walls.
2.7 Special Development Standards	
2.7B Environmentally Sensitive Habitat Area (ESHA)	
2.7B(1) Biological Report Requirements	Consistent. A Biological Resources Report was prepared for the 2011 Certified Environmental Impact Report (EIR). As part of the Biological Resources Report, six site-specific field surveys were conducted in an effort to determine existing plant and animal

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	species present on and adjacent to the project site. In addition, the Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7B(2) Development Within or Adjacent to an ESHA	Consistent. A small portion of the southern boundary of the project area is adjacent to a riparian ESHA (refer to Figure 2-2 in the City's Land Use Plan [LUP]). The proposed project has been designed to avoid impacts to the riparian area. Furthermore, the structures associated with the proposed project will be set back greater than 50 feet from the riparian area.
2.7C Marine Resource Area	
2.7C(1) Designation of Marine Resource Area	The project area is adjacent to Laguna Grande Lake, which is identified in the City's LUP as a marine resource area.
2.7C(2) Biological Study	Consistent. A qualified biologist prepared a Biological Resources Report for the 2011 Certified EIR. The Biological Resources Report included the criteria set forth above in 2.7B(1). None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7C(3) Buffer	Consistent. The proposed project is adjacent to Laguna Grande Lake. Development of the proposed project will be set back at a minimum of 50 feet from Laguna Grande Lake in order to ensure the biological integrity of the wetland and estuarine habitat. The 50-foot buffer can be reduced to 25-feet if public recreational facilities are provided. Consistent with Section 2.7C(3), the bicycle and pedestrian trail will be provided within that minimum 50-foot buffer zone between the edge of Laguna Grande Lake and the project site.
2.7C(4) Wetland Management and Enhancement Study for Development Within or Adjacent to a Marine Resource	Consistent. A Jurisdictional Delineation (JD) and Water Quality Assessment Report (WQAR) were prepared as part of the 2011 Certified EIR. These reports identified the current flooding potential and water quality in the project area, best management practices (BMPs), and jurisdictional features. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7C(4) Diking, Filling, Dredging of Marine Resource Areas	Not Applicable.
2.7D Visually Sensitive Areas	
2.7D(1) Identification of Visual Resources	Consistent. The project area is located within a visually sensitive area (refer to Figure 2-4 in the City's LUP). The proposed project will be one-story in height and will provide view corridors on the north and south sides of the project site providing views of the dunes surrounding Roberts Lake.
2.7D(2) Consideration of Visual Resources	Consistent. The project area is located within a visually sensitive area. The 2011 Certified EIR found and concluded that the proposed project did not result in any significant impacts to visual resources.
2.7E Natural Hazard Areas	

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2.7E(1) Designation of Natural Hazard Areas	The project site is located within an existing 100-year floodplain, is within 2,400 meters (m) of a moderate fire threat and directly west of the Chupines Fault, and is within 0 to 5 m of a tsunami evacuation zone (refer to Figure 2-5, Flood Hazard Areas; Figure 2-6, Faults and Wildland Fire Threat Categories; and Figure 2-7, Tsunami Evacuation Areas in the City's LUP, respectively).
2.7E(2) Protection from Natural Hazards	Consistent. The 2011 Certified EIR found and concluded that the proposed project would not result in any significant impacts from natural hazards with implementation of prescribed Mitigation Measures. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7F Vegetation Management Report	Consistent. A Biological Resources Report was prepared as part of the 2011 Certified EIR. The Biological Resource Report included six site-specific field surveys to determine existing plant species and habitat types present on and adjacent to the project site. In addition, the Biological Resources Report outlined recommended mitigation measures aimed at avoiding and minimizing impacts to sensitive species on and adjacent to the project site. None of the proposed project changes would change the conclusions on this issue as discussed in the certified 2011 EIR.
2.7G Water Quality	Consistent. The proposed project will comply with the City's Phase II National Pollutant Discharge Elimination System (NPDES) permit requirements and with the Post-Construction Requirements of Resolution No. R3-2013-0032 of the California Regional Water Quality Control Board (RWQCB), Central Coast Region. As required by the Resolution No. R3-2013-0032, the proposed project will comply with the Low Impact Development Standards (LID) to infiltrate stormwater on-site. Additionally, as discussed in Section 4.7 (Hydrology and Water Quality) of the 2011 Certified EIR, implementation of Mitigation Measure 4.7.1 will require the preparation of an Erosion and Sediment Control Plan (ESCP) and a Storm Water Pollution Prevention Plan (SWPPP) to reduce pollutants of concern during construction. Implementation of Mitigation Measure 4.7.2 will require the implementation of post-construction BMPs to reduce pollutants of concern during operation.
2.7H Public Access & Recreation	Consistent. An existing bicycle and pedestrian trail circles Laguna Grande Lake and connects the project site with the adjacent Holiday Inn Express property to the northeast via a foot bridge that extends over the canal connecting Roberts Lake with Laguna Grande Lake. The proposed project will extend the pedestrian and bicycle trail from the foot bridge north to the existing sidewalk along Del Monte Boulevard. The trail extension will increase connectivity between the project site and the Laguna Grande Park and Laguna Grande Lake, the adjacent hotel property, Del Monte Boulevard, and the Laguna Grande Regional Park Trail and Monterey Bay Coastal Bike Trail, thereby maximizing public recreational access opportunities. Seven benches with trash receptacles will be placed along the segment of the bicycle and pedestrian trail that is on the project site. In addition, five parking stalls will be provided at the southeast corner that will serve as public parking for lake visitors.
2.7I Additional Standards for Laguna Grande	Consistent. Refer to response 2.6, Site Development Standards.

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Subarea	
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