Downtown Vitalization Specific Plan

Initial Study – Mitigated Negative Declaration

prepared by

City of Marina
Community Development Department
209 Cypress Avenue
Marina, California 93933
Contact: Fred Aegerter, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.
437 Figueroa Street, Suite 203
Monterey, California 93940

May 2021

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Appendix TRAF-1 Marina Downtown Traffic Study
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Appendix ENG Energy Calculations

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Initial Study

1. Project Title

Downtown Vitalization Specific Plan

2. Lead Agency/Sponsor Name and Address

City of Marina
Community Development Department
211 Hillcrest Avenue
Marina, California 93933

3. Contact Person and Phone Number

Fred Aegerter
Community Development Director
Phone: 831-884-1281

4. Introduction

The *Marina Downtown Vitalization Specific Plan*, hereafter referred to as the Specific Plan, DVSP, or proposed project, focuses on the Downtown area of the City of Marina, establishing a development framework for land use, circulation, utilities and services, resource protection, design, and implementation through:

- A cogent vision for the future;
- Clearly articulated land uses and development regulations; and
- Appropriate design standards and guidelines.

The Specific Plan builds on the goals and objectives from the City of Marina General Plan, as well as the standards and regulations from the City of Marina Municipal Code. However, amendments to the General Plan land use designations would be required to ensure consistency with those introduced within the Downtown Vitalization Specific Plan. It is required that all subsequent projects including commercial developments and redevelopments, subdivisions, public works projects, and zoning regulations be consistent with the Specific Plan.

The proposed project also incorporates recommendations from the City's *Downtown Vision Plan*, *Downtown Design Guidelines*, and *Pedestrian and Bicycle Master Plan.*

5. Project Location

The City of Marina is located in Monterey County, adjacent to Monterey Bay and along State Route 1, approximately nine miles north of the City of Monterey and 18 miles south of the City of Watsonville. Incorporated as a charter city in 1975, Marina has grown in population from 8,343 to

an estimated 22,535 people (US Census Bureau 2019). The city encompasses approximately 9.8 square miles and extends for five miles along the Pacific Ocean, from former Fort Ord land and the California State University Monterey Bay (CSUMB) campus on the south, to the Salinas River on the north, and inland for four miles to the Marina Municipal Airport. The regional site location is shown on Figure 1. The former Fort Ord Army Base, which was closed in 1994, is located in the southern portion of the city. The Plan Area does not include any former Fort Ord lands.

The Plan Area encompasses approximately 322 acres near the center of the City of Marina, and, as shown on Figure 2, entails an irregular shape. The Plan Area is generally bounded:

- On the northeast by parcels along the north side of Reservation Road
- On the south by Reindollar Avenue and various residential north-south secondary roads, such as Sunset Avenue, Carmel Avenue, and Crescent Avenue
- On the east by Salinas Avenue
- On the northwest by Del Monte Boulevard, approximately 0.5 mile east of State Route (SR) 1

6. Setting and Surrounding Land Uses

General Site Characteristics

The Plan Area has a pattern of mixed-density housing and low-density retail center commercial development that signifies a community that is highway-oriented. Land uses are characterized by a mixture of single-story commercial and office buildings, single family homes, and one- to two-story multifamily residential units. Buildings date primarily from the postwar era, with several large shopping centers dating from the late 1950s with buildings set back from the road and large parking lots on the street frontage. The Del Monte Boulevard/Reservation Road intersection is the central activity node in Marina. The area is developed with land uses that are considered suburban in scale and intensity.

Surrounding Land Uses

The Plan Area is surrounded by single-family residential uses to the north, west, and south, open space adjacent to the Marina Municipal Airport to the northeast, and Locke-Paddon Wetland Community Park to the northwest. Other adjacent uses include multifamily residential and commercial uses. The Marina Municipal Airport is located directly east of the Downtown area along Reservation Road. Photographs of surrounding uses and the existing Specific Plan Area are shown in Figure 4.

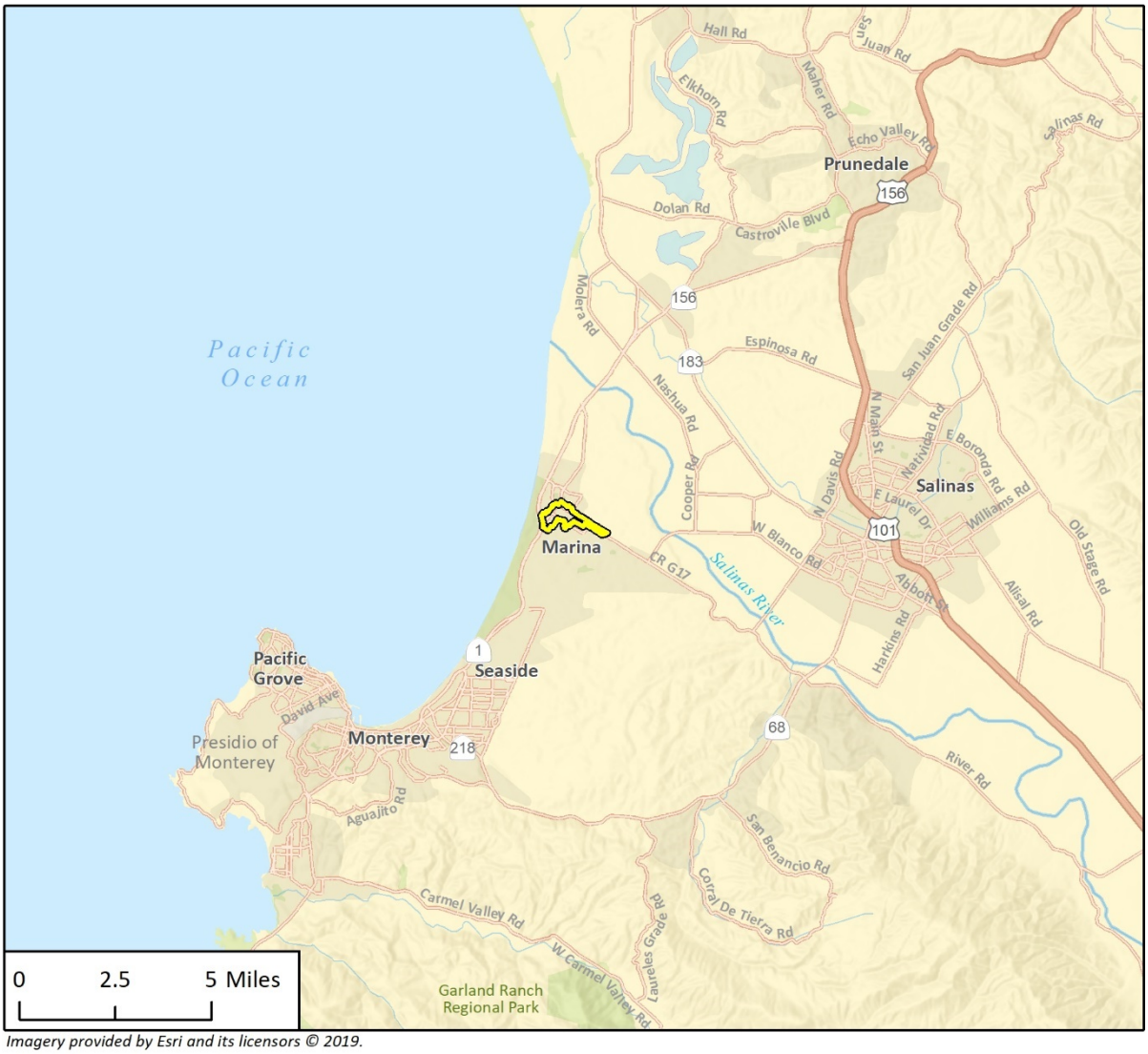
Existing Land Use

Land Use

Existing General Plan land use designations within the Specific Plan Area are shown in Figure 3 and include:

- Commercial – Multiple Use
- Commercial – Office Research
- Commercial – Retail\Service
- Commercial – Visitor-Serving

Figure 1 Regional Location



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Specific Plan Area

N

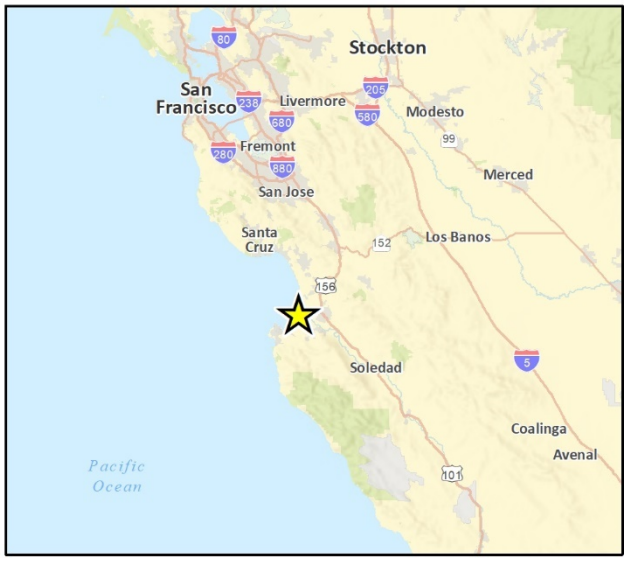
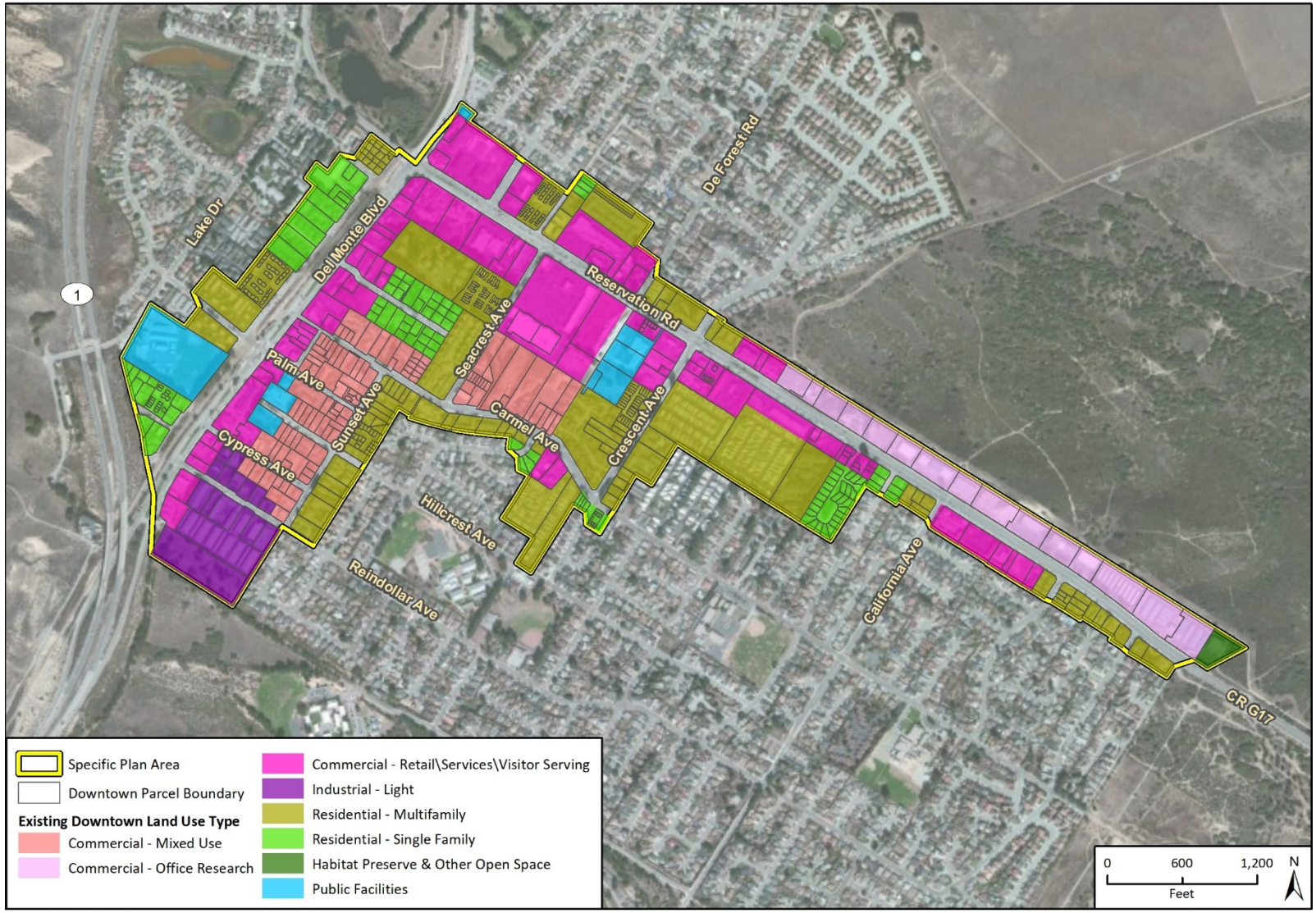


Figure 2 Downtown Vitalization Specific Plan Area

Fig 2 Project Location

Figure 3 Existing General Plan Land Use Designations



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Additional data provided by City of Marina 2010.

Fig 3 Existing Downtown Land Uses

Figure 4 Site Photographs

Photograph 1. Commercial uses on Del Monte Boulevard

Photograph 2. Intersection of Del Monte Boulevard and Reservation Road

Photograph 3. Monterey-Salinas Transit Station on De Forest Road

Photograph 4. View of Locke-Paddon Wetland Community Park from Reservation Road

- Industrial – Light
- Residential – Multi-family
- Residential – Single Family
- Habitat Preserve & Open Space
- Public Facilities

The Specific Plan Area is approximately 322 acres comprised of 38.6 percent (124.2 acres) residential uses, 24.2 percent (77.9 acres) retail/services and office/other commercial uses, 29.4 percent (94.7 acres) public uses, 5.0 percent (16.1 acres) mixed use, 2.0 percent (6.4 acres) vacant lots, and less than 1 percent (3.2 acres) light industrial.

Existing development in the Specific Plan Area includes approximately 1,005,000 square feet of commercial uses and 2,301 dwelling units.

Commercial uses are located along Reservation Road and Del Monte Boulevard. Retail/service uses are located along both sides of Reservation Road and on the southeast side of Del Monte Boulevard. Multifamily uses are intermixed along these main corridors and lower density residential uses generally are setback from the commercial areas. Industrial uses are concentrated at the southeastern portion of the Plan Area, and public facilities are interspersed throughout the Specific Plan Area.

Zoning

The Specific Plan Area includes the following existing zoning categories, consistent with the existing General Plan land use designations:

- C-R, Commercial/Multiple-Family Residential District
- C-1, Retail Business District
- C-2, General Commercial District
- PC, Planned Commercial District
- PF, Public Facility District
- R-1, Single-Family Residential District
- R-1/A, Single-Family Residential/Limited Agricultural Uses Combining District
- R-4, Multiple-Family Residential District
- SP, Specific Plan District
- SP/MST, Specific Plan/Industrial/Special Treatment District
- ST, Special Treatment District

7. Project Characteristics

Specific Plan Legal Authority/Requirements

A Specific Plan is a regulatory tool that local governments use to implement a General Plan and to guide development in a localized area. While a General Plan is the primary guide for growth and development citywide, a Specific Plan focuses on the unique characteristics of a special area by customizing the planning process and land use regulations to that area. A Specific Plan is enacted pursuant to Section 65450 et seq. of the California Government Code.

The Specific Plan includes the goals, policies, development standards and implementation measures that would guide future development of the Downtown area, in accordance with state law. Background documents incorporated into the Plan as well as the Specific Plan's relationship to the City of Marina General Plan, Housing Element, and Pedestrian and Bicycle Master Plan are discussed below.

Specific Plan Background

From the late 1970s through the 1990s, numerous surveys, workshops, and studies were conducted with the intent of revitalizing the City's existing commercial areas, particularly after the closure of the Fort Ord military base in 1994. In 2001, the Marina City Council identified vitalization of Marina's commercial core as a critical strategic issue.

In August 2005, the City Council adopted the Marina Downtown Vision and Downtown Design Guidelines for developing a vital downtown core; however, it was determined that in order to fulfill the City's Downtown Vision Plan and Downtown Design Guidelines, future development within the Downtown should be guided by a Specific Plan.

The next iteration of the Plan, the *Downtown Vitalization Specific Plan,* was initiated in 2006. An early draft of the Plan was completed in April 2010. The Draft Environmental Impact Report (EIR) associated with the Plan was completed in March 2011 but was not released for public review nor was it certified. The project then stalled for several years until 2017 when another ad hoc committee was formed to address new issues in the Downtown and complete the long-anticipated *Downtown Vitalization Specific Plan*.

Downtown Vision

The vision of the Specific Plan is to establish Downtown Marina as:

> A place with a unique, small coastal town character where people can work, live, and shop in an environment that creates a feeling of cohesiveness, compactness, and individual community identity; a place with a vibrant economy that accommodates a variety of businesses, residences, and civic uses; and, a place that is architecturally pleasing and sustainable, achieved through attractive storefronts, eco-friendly design, and plentiful landscaping and pedestrian amenities to encourage people to walk along tree-lined streets and socialize in civic and public spaces.

8. Project Description

Intent

The Specific Plan seeks to establish a direct connection between the City of Marina's General Plan and opportunities for vitalization and enhancement within Downtown Marina. The planning horizon for the Specific Plan is the 20-year period starting with the plan's adoption date. An overall goal is the orderly development of Downtown Marina in a method consistent with the City's General Plan and, more specifically, with the community's vision as developed through the community outreach process. This is accomplished through:

- Designation of land uses
- Designation of required access and circulation elements
- Location and sizing of infrastructure
- Financing methods for public improvements
- Standards of development

Specific Plan Organization

The Specific Plan provides:

Part I

- **Executive Summary.** An overview of the Specific Plan.
- **Chapter 1 (Introduction).** Project background and description of existing conditions, and the Specific Plan's vision and guiding principles.
- **Chapter 2 (Community Identity).** Establishes the desired identity of Downtown Marina, considers opportunities and includes goals and policies associated with the identity of downtown.
- **Chapter 3 (Land Use and Development).** Land use goals, policies, and implementation measures for future development downtown using "core" and "transitional" sections with core being urban and transitional being more suburban.
- **Chapter 4 (Economics).** Technical studies, incorporating goals and policies, to provide a framework for economic development downtown.
- **Chapter 5 (Mobility).** Circulation and parking goals, policies, and development standards to help implement multimodal circulation including pedestrian, vehicular and bicycle traffic for downtown.
- **Chapter 6 (Public Facilities and Infrastructure).** Policies for planned distribution, location, extent, and intensity of water, sewer, and storm drainage infrastructure and solid waste facilities in the Specific Plan Area.
- **Chapter 7 (Environment and Sustainability).** Provides a summary of the sustainable planning and "green" design methods that are included in the Specific Plan to reduce potential impacts from development of the downtown.

Part II

- **Section A (Design Standards and Guidelines).** Standards and guidelines for promotion of high quality, well designed development throughout downtown.
- **Section B (Implementation).** Framework to successfully implement the Specific Plan and ensure the objectives are integrated with the goals of existing documents, including the City's General Plan and Municipal Code.

Buildout Potential and Phasing

Based on existing land use designations and underlying zoning requirements, described under General Plan land use designations above, potential buildout of the Specific Plan could include approximately an additional 1,386,000 square feet of new retail and office space and 2,904 new housing units. When added to existing development, the Plan Area could include a total of up to 2,391,758 square feet of commercial and retail space and up to 5,205 housing units. However, the pace of future development would largely be determined by market forces, and thus it is difficult to determine at what date buildout would occur. Table 1 shows the existing and maximum buildout projections.

Table 1 Existing and Maximum Land Use Buildout Projections

Zone/Land Use	Existing	Specific Plan Area Proposed	Total (Existing + Proposed)
Residential	2,301 units	2,904 units	5,205 units
Retail	691,705 sf	874,669 sf	1,566,374 sf
Office	314,053 sf[1]	510, 528 sf	824,581 sf

sf= square feet

[1] Including office and light manufacturing uses.

Preliminary Land Use Concept

Implementation of the Specific Plan would modify the existing General Plan land use pattern in the Plan Area. The primary goals of the Specific Plan are to establish Downtown Marina as a vital destination center that accommodates a mix of commercial, retail, dining, entertainment, and residential uses served by an improved transportation network, and to maximize the City's ability to capture future economic opportunities that otherwise might be lost to neighboring jurisdictions. The Specific Plan promotes these goals by encouraging a mix of new uses within a half-mile radius of transit centers. Greater densities and building heights would be allowed to distinguish Downtown Marina from its surroundings. Changes to land use designations would occur through the establishment of the following designations: core, mixed-use node, multifamily residential, and transition. These are described below under *Development Zones*.

Community Identity Characteristics

The Specific Plan is intended to complement the natural setting of Marina by providing opportunities for an attractive and functional built environment that accommodates and reflects the diversity of the community where people gather for social, cultural, educational, and recreational experiences. Community identity characteristics of the Specific Plan include:

- **Gateways.** Make Downtown readily identifiable to residents and visitors by establishing gateways at key locations.
- **Urban Forest.** Create a comfortable pedestrian environment through the installation and maintenance of street trees comprising the urban forest.
- **Block Standards.** Develop a street grid that improves connectivity and promotes pedestrian activity.
- **Pedestrian Environment.** Ensure street conditions are comfortable and safe for pedestrians.
- **Signage**. Use signs to help create rather than detract from a sense of place in Downtown Marina.
- **Public Art**. Use public art to create opportunities for people to connect with others.

Development Zones

The goal of the Specific Plan is to establish Marina as a destination that accommodates a mix of commercial, retail, and residential uses served by an improved transportation network. During the planning process, development zones were established to allow for increased densities throughout the Downtown area. Zones included the Core, which allowed for residential densities of up to 70 units per acre; the Transition Zone and Mixed-Use Node, which allowed for up to 50 units per acre; and the Multifamily Residential Zone which allowed for up to 37 units per acre. Of the 2,301 existing residential units in the Downtown area, 1,638 (approximately 71 percent) are located in areas that

would be zoned Multifamily Residential, 377 (approximately 16 percent) are located in areas that would be zoned Transition or Mixed-Use, and 286 (approximately 13 percent) are located in areas that would be zoned Core.

Proposed commercial and light industrial uses in the Downtown encompass roughly 860,000 square feet on 88 acres. The Downtown Core includes 407,000 square feet of commercial uses on 36 acres. Another 416,000 square feet of commercial uses can be found on 46 acres in the Transition zone. Area-wide, calculations also assume additional land would be devoted to the public right-of-way in the future.

The development zones to implement the Specific Plan are described in further detail below.

Core

The Core zone is located to the north and south of Reservation Road, between Del Monte Boulevard and Crescent Avenue, and along the eastern side of Del Monte Boulevard between Reservation Road and Carmel Avenue. It currently provides for 411,864 square feet (sf) (56.42 acres) of office and retail land uses, as well as 286 residential units. This area is projected to grow by 1,372 residential units and 901,500 sf of retail and office space under buildout of the Specific Plan. The Core allows for higher densities in commercial and mixed-use developments. Buildings would be constructed at the lot line facing public street, with parking located behind buildings, and shared parking agreements (including providing parking in structures) are encouraged. Transit oriented development, particularly around the Monterey Salinas Transit Center, would be a feature of this zone.

Transition

The Transition zone is located along Reservation Road, between Crescent Avenue and Salinas Avenue, and east of Del Monte Boulevard between Reindollar Avenue and Carmel Avenue. It currently provides for 593,894 sf (104 acres) of office/light manufacturing and retail land uses and 377 residential units. This area is projected to grow by 1,378 residential units and 484,000 sf of retail and office space under buildout of the Specific Plan. The Transition zone allows for commercial, multifamily residential, and mixed-use developments. The Transition zone serves as a connection between the Core and lower-density, single-use zones in other parts of the City, especially zones dominated by single-family homes. Because the Transition zone encompasses two prominent gateways into the City (at east Reservation Road and the confluence of SR 1 and Del Monte Boulevard), land use densities should be lower than the Core zone and scaled to provide pedestrian accessibility to adjacent single-family residences.

Multifamily Residential

The Multifamily Residential zone of the Specific Plan currently provides for 1,638 residential units (106.7 acres). This area is projected to grow by 154 residential units under buildout of the Specific Plan. The Multifamily Residential zone allows for residential developments of up to three stories in height with up to 35 units per acre. Multifamily residential uses near the Core are critical for providing an affordable housing supply and population to support businesses Downtown.

Mixed-use Node

The Specific Plan calls for the creation of a mixed-use node at the intersection of Reservation Road and California Avenue. This node, surrounded by lower-intensity Transition zones, would feature multistory mixed-use buildings with retail and commercial space on the ground floor and additional commercial space or residential uses on the floors above. The mixed-use node would contribute to a vibrant, urban atmosphere.

The locations of the downtown development zones are shown in Figure 5.

Public Services

Future development projects in the Specific Plan Area would be required to provide public improvements deemed necessary during the design process. The public right-of-way in the Specific Plan Area encompasses 67 acres, or 21 percent of the total land area. This percentage is low in relation to the average of 30-35 percent in most downtowns. The Specific Plan calls for creating a street grid that includes smaller, more walkable blocks with mid-block crossings to increase access.

Wastewater

The City of Marina receives wastewater treatment from Monterey One Water (M1W), formerly the Monterey Water Pollution Control Agency, while maintenance of the wastewater collection system is overseen by the Marina Coast Water District (MCWD). Future development in the Specific Plan Area would be serviced by the M1W Regional Wastewater Treatment Plant. The M1W Regional Treatment Plant, which is located two miles north of the City of Marina, has been designed to serve over 250,000 people (M1W 2019).

Water

Water to future development in the Specific Plan Area would be provided by MCWD, which currently provides potable water to the City of Marina. The primary water sources for MCWD are wells tapping the deep aquifer of the Salinas Valley Groundwater Basin (MCWD 2019).

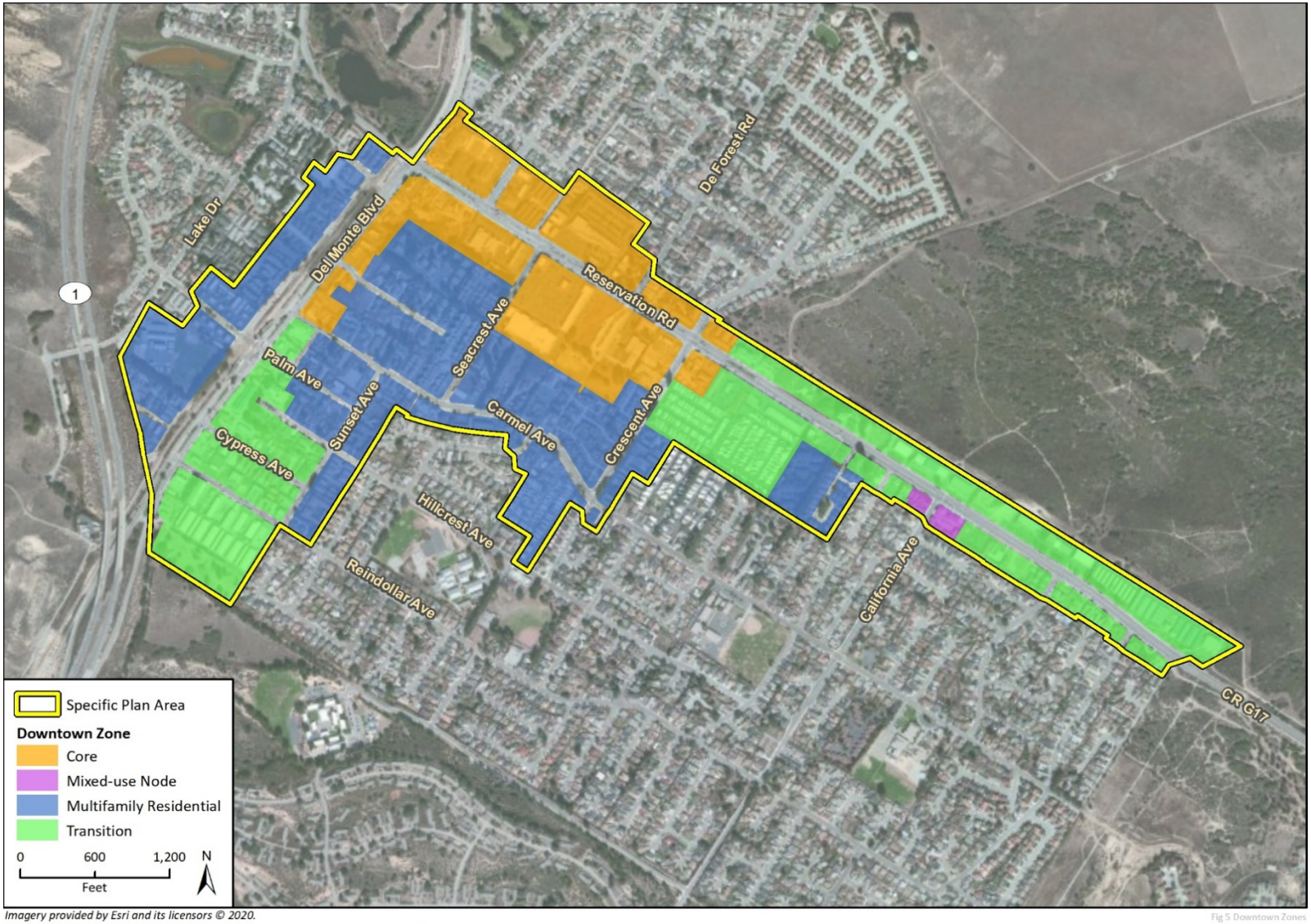
Storm Drainage

The City of Marina currently requires all non-residential development to retain storm water runoff on-site and infiltrate into the ground via open percolation ponds or subsurface infiltration facilities. All storm water runoff shall continue to be retained on-site and accommodated by localized retention basins unless the creation of such facilities would pose risks to the public. On-site storm facilities must include Best Management Practices (BMPs) in accordance with Regional Water Quality Control Board (RWQCB) recommendations. Residential development may utilize storm drain systems that terminate in an infiltration facility. Said facilities are not owned or maintained by the City, except in older existing residential neighborhoods (McMinn 2019).

Gas/Electricity

Pacific Gas and Electric Company would provide natural gas serve and electricity transmission, while Monterey Bay Community Power would supply electricity to the development in the Specific Plan Area.

Figure 5 Downtown Development Zones



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Additional data provided by City of Marina Downtown Vitalization Specific Plan 2019.

Fig 5 Downtown Zones

9. Other Public Agencies Whose Approval is Required

During the decision-making process, the City of Marina would utilize the information contained in the Initial Study for potential approval of the proposed Specific Plan. Although no permits would be required from other agencies to facilitate Specific Plan adoption, subsequent approvals and permits may be needed from local, regional, state, and federal agencies to allow future development under the Specific Plan, as identified below.

Specific Plan Approvals Required

Approval of the Specific Plan would require the following discretionary and ministerial approvals from the City of Marina:

- Marina Downtown Vitalization Specific Plan Approval
- General Plan Map and Text Amendment

Approvals from other agencies:

- MCWD Water Supply Verification Report

Project -Level Approvals Required

Projects developed pursuant to the Specific Plan would require project-specific approvals from the City of Marina, including but not limited to:

- Review and approve all required permits, including grading and building permits

The following project-specific approvals from other agencies may be required:

- **RWQCB.** Issuance of RWQCB, Central Coast Region, National Pollutant Discharge Elimination System (NPDES) general permit under Section 402 of the Clean Water Act (CWA) for storm water drainage during construction activities for project sites exceeding one acre; and Section 401 Water Quality Certification if a project would impact the pond or riparian habitat.
- **California Department of Fish and Wildlife (CDFW).** Section 1600 Lake and Streambed Alteration Agreement if a project would impact the pond or riparian habitat.
- **US Army Corps of Engineers.** Section 404 Nationwide Permit if a project would impact the pond or riparian habitat.

Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	■	Air Quality
■	Biological Resources	■	Cultural Resources	☐	Energy
■	Geology/Soils	☐	Greenhouse Gas Emissions	■	Hazards and Hazardous Materials
■	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
■	Noise	☐	Population/Housing	☐	Public Services
■	Recreation	■	Transportation	■	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	■	Mandatory Findings of Significance

Determination

Based on this initial evaluation:

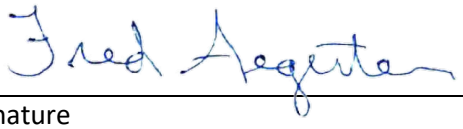
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

■ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

May 19, 2021

Date

Fred Aegerter

Printed Name

Community Development Director

Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	■	☐
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	■	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

Senate Bill (SB) 743 was signed into law in 2013 to streamline CEQA analysis for infill development in places determined to be transit priority areas (TPA), sectors within 0.5 mile of an existing major transit stop or one planned for in the Metropolitan Transportation Plan (MTP) (Association of Monterey Bay Area Governments [AMBAG] 2018). For infill development in TPAs, aesthetic resources impacts are considered not to be significant effects under SB 743. AMBAG designates the Specific Plan Area as Opportunity Area MA-1, defined as an area "within 0.5 mile of an existing planned 'high-quality transit corridor' (per definition in California Public Resources Code Section 21064.3) that has the potential for transit-oriented development, including mixed-use. High-quality transit is service with headways of 15 minutes or less during peak period or rail service" (AMBAG 2018, 4-10; AMBAG 2018, Appendix I Figure 14).

Monterey-Salinas Transit (MST) provides bus service on Reservation Road and Del Monte Boulevard. The Marina Transit Exchange, at De Forest Road and Reservation Road, is centrally located in the Specific Plan Area and forms a terminus for MST lines 16, 20, and 27, among others (MST 2019). Del Monte Boulevard is an arterial roadway that creates an eastern boundary for the Specific Plan Area and is planned for high-quality bus rapid transit (BRT) service in the Marina 2019 Regional Transit

Network (Adamson 2019). Although current headways fall short of 15 minutes at peak periods, it is reasonable to assume that with development, increased ridership will result in more frequent headways. Therefore, the Specific Plan Area qualifies as a TPA under Public Resources Code Section 21099 and is exempt from findings greater than "less than significant" under CEQA. Even with this qualification, however, aesthetics impacts are analyzed herein for the sake of full disclosure.

a. Would the project have a substantial adverse effect on a scenic vista?

A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the public benefit. The Pacific Ocean is less than one mile from the western edge of the Specific Plan Area, but is not visible due from within the Plan Area due to intervening structures and vegetation. State Route (SR) 1 runs north-south approximately 0.3 mile west of the Plan Area, lined by sand dunes on the western side. The dunes are minimally visible from within the Plan Area but do not provide scenic vistas.

The segment of SR 1 west of the Plan Area is an officially designated state scenic highway (California Department of Transportation [Caltrans] 2019). SR 1 is slightly elevated as it passes by Marina, making the Specific Plan Area visible from the highway. The route begins to curve west at this point, however, and viewers traveling north face away from the plan area, toward the ocean. Locke-Paddon Wetland Community Park is situated at the northwest corner of Reservation Road and Del Monte Boulevard, adjacent to the City of Marina Public Library. A public view from the street toward the park occurs from the southeast corner of the intersection, where mature trees and the ocean-influenced horizon are visible (Figure 6). Intervening transportation infrastructure interferes with the quality of the view from some places, particularly at the intersection of major roadways. Views within the Plan Area are typical of small city downtown area. Due to the area's flat topography and presence of structures and vegetation, expansive views that would be considered scenic vistas are not present within the Plan Area.

Implementation of the Specific Plan would alter views within the Plan Area by intensifying development, resulting in a more urbanized viewshed. However, the project would not result in substantial adverse effects to a scenic vista, as no scenic vistas are available or would be blocked or substantially modified as a result of Specific Plan buildout. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As described above, SR 1 is a designated state scenic highway that runs north-south between the city and the ocean, offering views of the dunes and the sea at various points looking west. The Specific Plan Area is east of SR 1 and at a lower elevation than the highway, such that the rooftops of the single-story structures and planted trees in the distance do not silhouette into the sky. In the far distance, the ridgelines of the mountains are visible.

Specific Plan implementation would allow for redevelopment of an existing urban and suburban area with multi-storied, mixed-use infill that could be visible from SR 1. However, this would not affect any scenic resources, such as trees, rock outcroppings, historic buildings, dunes, or other scenic resources. Valued views from SR 1 are generally the coastal views to the west. Buildout of the

Figure 6 View of Locke-Paddon Wetland Community Park from Del Monte Boulevard

DVSP would intensify development to the east, but development would be limited to an area that is already developed as Marina's downtown. The overall scenic quality of views from SR 1 would not be substantially or negatively altered by the project. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The Plan Area is an urbanized area with an aesthetic typical of a small city downtown, with a mixture of one-and two-story, single-family homes, mobile home parks, one- and two-story multi-family uses, one- to two-story commercial uses (including office and retail), and hotels and motels (See Figure 7 through Figure 8 for examples). Primary access to and through the project area is provided by two major arterials, Reservation Road and Del Monte Boulevard. Reservation Road is a four-lane roadway running east-west. It has a median landscape strip, signalized intersections, sidewalks, and bus transit stops. Commercial, retail, and medium-density residential uses are located along both sides of Reservation Road. Commercial uses are set back from the roadway by large surface parking lots and vegetated landscape strips, as shown in Photographs 4 and 5 in Figure 8. Del Monte Boulevard is a four-lane arterial with two lanes running north and south, a planted median landscape strip separating the roadway, wide shoulders, and bus transit stops. Commercial uses are located along the eastern frontage of Del Monte Boulevard with driveway access. An inactive railway right-of-way is located along the western boundary of Del Monte Boulevard, setback by approximately 25 feet from the roadway.

Public views from roadways in the Plan Area are of adjacent structures, parking lots, and minimal landscaping. Existing development represents a variety of modern architectural styles. Roadways are oriented on a grid system with roadway signage and on-street lighting. Mature street trees are located throughout the area and power lines are located aboveground throughout the project area. Secondary roadways within the area have stop-sign controlled intersections with curbs, gutters, and sidewalks.

Design Guidelines Applicable to Specific Plan Implementation

Development in the downtown area is subject to the Marina Municipal Code, City of Marina Downtown Vision, Downtown Design Guidelines, and the Pedestrian and Bicycle Master Plan (City of Marina 2005a, 2005b, 2010). The Downtown Vision establishes a direction for the physical design of the Specific Plan Area that ensures new development meets or exceeds the City's policies, standards, and expectations for high-quality architectural, landscape, and streetscape design. The Downtown Design Guidelines provide detail concerning implementation of the Vision and encourage the kind of development described in the proposed Specific Plan. The guidelines detail hardscaping, outdoor furnishings, bicycle racks, and trash receptacles, among other features. They make recommendations as to plant choices and landscape design. Finally, they include specifications for architecture that includes varied massing, frontages, and signage that contribute to a vital regional corridor that encourages pedestrian and bicycle circulation. Finally, the Pedestrian and Bicycle Master Plan provides design guidelines specific to pedestrian and bicycle facilities throughout the city that includes "enhancing the comfort and appeal of the pedestrian environment" (City of Marina 2010, 5-6).

Figure 7 Site Photographs

Photograph 1. Single-family use on Carmel Avenue

Photograph 2. Multi-family use on Crescent Avenue

Photograph 3. Mobile home park on Crescent Avenue

Figure 8 Site Photographs

Photograph 4. Commercial use on Del Monte Boulevard at Mortimer Lane

Photograph 5. Commercial use with parking near Reservation Road

Photograph 6. Hotel/motel use on Del Monte Boulevard

The design guidelines found in the Specific Plan support establishing a character for the Plan Area in keeping with Chapter 17.50 of the Marina Municipal Code Site and Architectural Design Review process, to which all projects in the Plan Area would undergo review by the Design Review Board and the Planning Commission for project approval. This includes improvements that are consistent with the design standards and guidelines within the Specific Plan, providing continuity with surrounding development, improving visual character, and contributing to the general welfare and safety of the community.

Conditions under Specific Plan Buildout

Existing residential uses are located primarily to the west of Del Monte Boulevard, and north and south of the commercial development that fronts Reservation Road. The Specific Plan calls for nearly doubling the density of residential units in the Specific Plan Area, adding up to 2,904 new units to the existing 2,301 units. The Specific Plan also calls for the addition of up to 1,385,197 square feet of retail and office space. With just under 1 million square feet of existing retail and office space, Specific Plan implementation would more than double the density of these uses. Overall densities in the downtown area would intensify and redevelopment would allow for improvements to community identity through consistent streetscape design. Higher densities would distinguish the Specific Plan Area from other areas within the City. The character of the area would be defined by three zones: core, multifamily residential, and transition. The core zone would be located at the intersection of Del Monte Blvd. and Reservation Road and would provide higher densities of commercial, retail and office development. The multifamily residential zone is located to the west of Del Monte Boulevard, and along Carmel Avenue, Seacrest Avenue, Crescent Avenue, and Sunset Avenue to the east of Del Monte, as well as adjacent to Ocean Terrace south of Reservation Road. The transition zone would be located east of Del Monte Boulevard to the south of Carmel Avenue, and north and south of Reservation Road east of Crescent Avenue. The mixed-use node zone is located south of Reservation Road, to the east and west of the California Avenue. The proposed increase in density, gateways, improved pedestrian access, public art, and consistent signage would provide an identifiable development adjacent to lower density development with a suburban character. These proposed changes would alter the character of the area from urban/suburban to more urban in nature.

Implementation of the proposed Specific Plan could include buildings up to 60 feet high or five stories, whichever is less, in the core zone. Buildings currently in the Downtown area are one to two stories, so this change would increase the building height in the core zone by up to 45 feet. Intensified development means that vacant lots, expansive parking lots, and some existing structures would be replaced with a more urbanized, denser development. Pedestrian improvements included in individual projects would make the area more conducive to pedestrian and non-automobile travel. Street-facing buildings in the core zone would be required to provide commercial uses on the ground level with residential or office uses above, with pedestrian access, landscaping, and street trees with minimal setback from the roadway. This would allow for medium to high density mixed-use development and less surface parking. Public gathering places would be encouraged, including paseos with outdoor amenities like benches and public art, such as murals and sculptures.

The Specific Plan design guidelines indicate massing and scale that accentuates the human scale of buildings and avoids large, box-like, uniform buildings. This would be accomplished by means of façade design, architectural details, and other features that break up uniform building styles. Walls that face walkways would be designed to enhance the pedestrian experience and encourage foot

traffic. Projects would be encouraged to feature architectural elements that reflect the rich cultural history of Marina in all its diversity. This conforms to the spirit of the Municipal Code and individual projects would be subject to the Architectural and Site Design Review Board evaluation, ensuring that individual project proposals comply with the Specific Plan guidelines, the more general Downtown Guidelines, and the Municipal Code. The full buildout of the Specific Plan would improve existing conditions in alignment with the Downtown Vision that envisions "an attractive, pedestrian-friendly and visitor-serving commercial district [as] key to Marina's evolving identity and image" (City of Marina 2005a, 1). The more human-scale buildings, attractive streetscape design, and varied, high-quality architecture would improve the visual character of the Downtown and make it an attractive focal point of the city.

Gateways

The Specific Plan includes provisions for monumental signage at gateways, particularly at the intersection of Reservation Road and Del Monte Boulevard. An opportunity is identified for updating the welcome sign style and composition to reflect the overall "branding" of the community as a desirable place to visit, live, shop, and work. Other gateways have been identified at the eastern part of Reservation Road where it intersects California Avenue, and at the area of Del Monte Boulevard where is closest to SR 1. The City of Marina Municipal Code requires a comprehensive signage program that specifies height and lighting restrictions, and for the Specific Plan, gateway signage would be required to adhere to these guidelines.

Landscaping

At this time, the Specific Plan Area features some landscaping and trees in the medians with few trees planted along the pedestrian right-of-way area (i.e., near the sidewalks). The trees in the medians are typically non-native species of varying health, located intermittently. The few trees planted in the sidewalk area are unmaintained and contribute to root upheaval along sidewalks. The Specific Plan would allow plantings in public rights-of-way throughout the Plan Area, thus increasing Marina's urban forest and creating landscape improvements to the pedestrian environment. Nevertheless, any tree removal or relocation in the city is subject to the provisions of the City's Zoning Ordinance, Section 17.51 et seq., including the tree removal permit process specified in Section 17.51.060.

Conclusion

The Plan Area is already urbanized. As such, this analysis focuses on whether the project would conflict with applicable zoning and other regulations governing scenic quality. As discussed above, implementation of the Specific Plan would change the character of the project area substantially, but these changes would be in keeping with applicable plans for revitalizing the Downtown area and creating a sense of place for visitors and residents, in connection with multiple modes of transportation. All development would be subject to the Marina Zoning Code and all other applicable City regulations governing scenic quality. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

The Plan Area currently consists mostly of developed parcels, and thus, numerous sources of daytime glare and nighttime light exist. Glare sources include the reflection of the sun on different surfaces:

- Building windows
- Parked car windows
- Walls with light-colored paint or other pale or reflective architectural coatings
- Glass and other shiny reflective surfaces on signs, amenities, and public artworks

Nighttime illumination and associated glare come from stationary and mobile sources. Stationary sources include buildings and structure lighting, parking lot illumination, lighted signs, and streetlights in commercial corridors and mixed-use developments. Mobile nighttime light comes from the headlights of motor vehicles, for the most part. Temporary lighting sources could come from outdoor light shows, spotlights, and other event-related lighting.

Guidelines Applicable to Lighting and Glare for Specific Plan Implementation

The City of Marina Design Guidelines and Standards offers design criteria for lighting standards that include: stipulations to use a subdued, uniform pattern of lights, install diffusers on pole-mounted fixtures, and use energy-efficient, warm color spectrum lights. It also encourages that exterior lights be considered as part of the landscape design to integrate well with the overall character of the site. Finally, the criteria indicate plantings and fencing should mediate between commercial sites and sensitive, residential and open space uses (City of Marina 2002, 16-17). The Planning Commission must approve a lighting design plan for specific project implementation. Lighting design plans must include a site plan with detailed proposals and descriptions of the type of light source for each fixture. The City may require a photometric study if there are concerns about the impacts to surrounding neighborhoods or open space areas.

City of Marina Zoning Ordinance Section 17.59.130 governs illuminated signs in the Specific Plan Area. The regulation does not allow unshielded or high-intensity lights that may spill onto adjacent properties or interfere with traffic circulation. The City and its representative review boards and commissions can appeal approvals to reduce the intensity of signage that creates undue glare, annoyance, or hazards after installation.

Conditions under Specific Plan Buildout

Development that would result from implementation of the Specific Plan would create a greater density than what is currently in the downtown area. New sources of nighttime light and daytime glare would be introduced and could intensify the effects of illumination and glare over existing levels. Potential sources of new and increased nighttime illumination would include indoor and outdoor lighting at residential and commercial development, street and parking lot lighting, and security-related lighting for non-residential uses. Potential new and increased sources of glare would include increased vehicular traffic and new and increased reflective building surfaces. New residential and commercial development would also result in a corresponding increase in vehicular traffic. Augmented public transportation capacity and active transportation facilities would partially alleviate transportation lighting, but some increase in light and glare from motor vehicles would occur. However, because the Plan Area already makes up a developed downtown area, conditions

would not be substantially altered from existing conditions. New development facilitated by the Specific Plan would be subject to the lighting regulations described above. Therefore, effects on daytime or nighttime views due to new sources of light and glare would be less than significant.

LESS THAN SIGNIFICANT IMPACT

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

a. Would the project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

e. Would the project 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 Plan Area is a fully developed urban area that makes up the downtown of the City of Marina. According to the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program, there is no existing important farmland within the Plan Area. The vast majority of the City is designated as "Urban and Built-Up Land." In addition, no parcels within the Plan Area are designated for agriculture, used for agricultural production, or under Williamson Act contract (DOC 2016 and Monterey County 2010). As a result, future development pursuant to the Specific Plan would not convert farmland, conflict with agricultural zoning or have the potential to result in the loss or conversion of farmland to non-agricultural use. There would be no impact.

NO IMPACT

c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

e. *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?*

The Plan Area is a developed and urbanized area and there is no forest land on or adjacent to the site. No parcels in the Plan Area are designated or zoned for forest preservation or timber harvesting. Therefore, future development pursuant to the Specific Plan would not conflict with zoning or cause rezoning of forest land or result in conversion of forest land. There would be no impact.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. 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?	☐	■	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

Air Quality Standards and Attainment

The Plan Area lies within the North Central Coast Air Basin (NCCAB), which is comprised of Monterey, Santa Cruz, and San Benito counties and is under the jurisdiction of the Monterey Bay Air Resources District (MBARD).[1] As the local air quality management agency, MBARD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the NCCAB is classified as being in "attainment" or "nonattainment." The NCCAB is designated as nonattainment for the state PM_{10} (particulate matter measuring 10 microns in diameter or less) standard and nonattainment-transitional for the state one-hour and eight-hour ozone standards (California Air Resources Board [CARB] 2017).[2] The NCCAB is in attainment or unclassified for all other federal and state standards.

Air Quality Management

Because the NCCAB is designated as nonattainment for the state ozone and PM_{10} standards, MBARD is required to implement strategies to reduce pollutant levels to recognized acceptable standards. In March 2017, MBARD adopted the *2012-2015 Air Quality Management Plan* (2015 AQMP) as an update to the 2012 AQMP. The 2015 AQMP is based on growth forecasts provided by the Association of Monterey Bay Area Governments (AMBAG) and assesses and updates elements of the 2012 AQMP, including the air quality trends analysis, emissions inventory, and mobile source

[1] MBARD was formerly called the Monterey Bay Unified Air Pollution District (MBUAPCD); accordingly, documents authored by the MBUAPCD are cited as authored by MBARD in this document.
[2] The nonattainment-transitional area designation for ozone is defined by California Health and Safety Code Section 40925.5 as a nonattainment area in which air quality data show three or fewer exceedances of the state standard at each monitoring site in the area during the most recent calendar year.

programs. The 2015 AQMP only addresses attainment of the state eight-hour ozone standard because in 2012, the United States Environmental Protection Agency (U.S. EPA) designated the NCCAB as in attainment for the current national eight-hour ozone standard of 0.075 parts per million (ppm). In October 2015, the national standard was reduced to 0.070 ppm. However, the NCCAB continues to be in attainment with the federal ozone standard (MBARD 2017).

The following MBARD rules would limit emissions of air pollutants during project construction:

- **Rule 400 (Visible Emissions).** Discharge of visible air pollutant emissions into the atmosphere from any emission source for a period or periods aggregating more than three minutes in any one hour, as observed using an appropriate test method, is prohibited.
- **Rule 402 (Nuisances).** No person shall discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 425 (Use of Cutback Asphalt).** The use of cutback asphalt (asphalt cement that has been blended with petroleum solvents) and emulsified asphalt (an emulsion of asphalt cement and water with a small amount of emulsifying agent) is restricted in order to limit volatile organic compound (VOC) emissions. Rule 425 prohibits the use of rapid cure asphalt, restricts the use of medium cure asphalt to November through March, and limits the content of total distillate in slow cure asphalt and petroleum solvents in emulsified asphalt.
- **Rule 426 (Architectural Coatings).** This rule limits the emissions of volatile organic compounds (VOC) from the use of architectural coatings and sets VOC content limits for a variety of coating categories, including flat, nonflat, nonflat – high gloss, and specialty coatings. Specifically, Rule 426 limits the VOC content of flat coatings to 50 grams per liter and nonflat coatings to 100 grams per liter. Persons are prohibited from manufacturing, blending, repackaging for use, supplying, selling, soliciting, or applying architectural coatings that exceed these limits.
- **Rule 439 (Building Removals).** This rule limits particulate emissions from the removal of buildings by prohibiting all visible emissions from building removal. To achieve compliance with this standard, Rule 439 requires work practice standards, including wetting the structure prior to removal, demolishing the structure inward toward the building pad, and prohibiting the commencement of removal activities when peak wind speeds exceed 15 miles per hour.
- **Rule 1000 (Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants)**: This rule regulates toxic air contaminants (TACs) from new or modified stationary sources that have the potential to emit carcinogenic or noncarcinogenic TACs. Rule 1000 requires sources of carcinogenic TACs to install best control technology and reduce cancer risk to less than one incident per 100,000 persons. Sources of noncarcinogenic TACs must apply reasonable control technology (MBARD 2008).

Methodology

The analysis of air quality impacts conforms to the methodologies recommended in MBARD's *CEQA Air Quality Guidelines* (2008). Construction and operational emissions associated with buildout of the DVSP were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 and EMFAC2017. CalEEMod was developed for use throughout the state in estimating construction and operational emissions from land use development, and EMFAC2017 was developed to estimate mobile source emissions in California.

Construction activities associated with buildout of the DVSP would include demolition of existing structures, site preparation and grading, building construction, installation of wet and dry utilities as needed, construction of roadway improvements, and architectural coating. These activities would generate diesel emissions and dust. Construction equipment that would generate criteria pollutants would include, but would not be limited to, excavators, graders, haul trucks, and loaders. It is assumed that all construction equipment used would be diesel-powered. Construction equipment and duration of each phase were based on CalEEMod defaults, which are shown in Section 3, *Construction Detail*, of the modeling outputs in Appendix AIR. The default start dates for each construction phase were adjusted so that all phases (i.e., demolition, site preparation, grading, building construction, paving, and architectural coating) would occur simultaneously in order to estimate conservative, worst-case impacts. Given that buildout of the DVSP would primarily result in redevelopment activities and would not include subterranean parking structures, it is assumed that soil material import and export would be minimal. Therefore, construction emissions modeling does not account for haul truck trips for soil material import and export. The quantity of building square footage that would be demolished as part of buildout of the DVSP is unknown at this time. Therefore, it was conservatively assumed that approximately half of the existing residential units (i.e., 1,151 units, assuming each unit is 1,000 square feet based on CalEEMod defaults) and approximately half of the existing retail and office space (i.e., 502,879 square feet) would be demolished to accommodate redevelopment. This analysis assumes that the DVSP would be required to comply with all applicable regulatory standards, including the operative CALGreen Code, MBARD Rule 426 (Architectural Coatings), and all other applicable MBARD rules. The requirements of Rule 426 were added as "mitigation"[3] in CalEEMod by including the use of low-VOC flat paint (50 grams per liter [g/L]).

Operational emissions were estimated for the net increase in development under the DVSP, which is summarized in Table 1. For the purpose of this analysis, it is assumed that the proposed Specific Plan has a planning horizon of 2040. Therefore, buildout of the Specific Plan would occur intermittently over the planning period with full buildout estimated to occur in 2040. As a result, this analysis reasonably assumes that most or all of development facilitated by the DVSP would be operational by 2040 and therefore uses a buildout year of 2040 for the purposes of calculating operational emissions. Operational emissions would be comprised of mobile source emissions, energy emissions, and area source emissions. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating. Emissions attributed to energy use include natural gas consumption for space and water heating. Mobile source emissions are generated by motor vehicle trips to and from the Plan Area associated with operation of on-site development. Mobile source emissions were calculated in EMFAC2017 using the forecast net new Vehicle Miles Traveled (VMT) estimates for residential and office land uses provided in the SB 743 Analysis prepared by Kimley Horn (Appendix TRAF). As shown in Table 2, based on the SB 743 analysis, the proposed project would result in approximately 9,261 net new daily VMT, or 3,380,211 net new annual VMT, associated with the residential and office land uses. Based on the SB 743 Analysis, the retail uses associated with the proposed project would generate no net new VMT; therefore, mobile source emissions were not estimated for the retail land uses because no net new emissions would be generated as compared to existing conditions in the NCCAB.

[3] CalEEMod is a model for the entire state, and not all air basins or municipalities have the same mandatory regulatory requirements. For the purposes of CalEEMod, "mitigation" is a term of art for the modeling input and is not equivalent to mitigation measures that may apply to the CEQA analysis. While CalEEMod labels compliance with existing regulations as mitigation measures in this context, these are not truly mitigation measures as the term is used in CEQA.

Table 2 Residential and Office VMT Estimates[1]

Metric	Existing Conditions	Existing plus Project Conditions	Net Change
Residential VMT			
Dwelling Units[1]	4,707	7,611	+2,904
Number of Residents[2]	12,897	20,854	+7,957
Daily VMT per Capita[1]	13.8	12.8	-1.0
Total Daily VMT[3]	177,981	266,933	+88,952
Office VMT			
Employment[1]	2,884	2,897	+1,533
Daily VMT per Employee[1]	8.8	7.2	-1.6
Total Daily VMT[4]	12,003	20,858	+8,855
Summary			
Total Daily VMT (Residential + Office)	**189,984**	**287,791**	**+97,807**

VMT = vehicle miles traveled

[1] Daily VMT is calculated using the per capita and per employee VMT estimates for the 2040 Plus Project scenario because emissions are estimated at the DVSP's buildout year.

Source: SB 743 Analysis (Appendix TRAF)

[2] Assumes an average of 2.74 persons per household in Marina (U.S. Census Bureau 2019)

[3] Calculated by multiplying the number of residents by daily VMT per capita

[4] Calculated by multiplying employment by daily VMT per employee

Significance Thresholds

Criteria for determining consistency with MBARD's AQMP are defined in Section 5.5 of the MBARD's *CEQA Air Quality Guidelines* (MBARD Guidelines; 2008). The DVSP would be inconsistent with the MBARD AQMP, and would therefore have a cumulatively considerable (significant) contribution to significant cumulative air quality impacts, if it would result in either of the following (MBARD 2008, Duymich 2018):

- Population growth generated by the DVSP would cause the population of Monterey County to exceed the population forecast for the appropriate five-year increment utilized in the 2015 AQMP; or[4]
- Construction and operational emissions of ozone precursors would exceed the significance thresholds established by MBARD, which are intended to set the allowable limit that a project can emit without impeding or conflicting with the AQMP's goal of attainment ambient air quality standards.

MBARD has issued criteria for determining the level of significance for project-specific impacts within its jurisdiction. Based on criteria set forth in MBARD Guidelines (2008), the DVSP's impacts on criteria air pollution would be significant if the DVSP would result in air pollutant emissions during construction or operation that exceed the thresholds in Table 3.

[4] In Monterey County, consistency with population forecasts is based on comparing a project's population with countywide forecasts to avoid confusion related to declining population forecasts for cities on the Monterey Peninsula (MBARD 2008).

Table 3 Air Quality Thresholds of Significance

Pollutant	Source	Threshold of Significance
Construction Impacts		
PM_{10}	Direct	82 lbs./day[1]
Operational Impacts		
VOC	Direct and Indirect	137 lbs./day
NO_X	Direct and Indirect	137 lbs./day
PM_{10}	On-site	82 lbs./day[2]
CO	N/A	LOS at intersection/road segment degrades from D or better to E or F or V/C ratio at intersection/road segment at LOS E or F increases by 0.05 or more or delay at intersection at LOS E or F increases by 10 seconds or more or reserve capacity at unsignalized intersection at LOS E or F decreases by 50 or more.
	Direct	550 lbs./day[3]
SO_X, as SO_2	Direct	150 lbs./day

Notes: lbs./day = pounds per day; PM_{10} = particulate matter with a diameter of 10 micrometers or less; VOC = volatile organic compounds (also referred to as ROG, or reactive organic gases); NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; SO_2 = sulfur dioxide

[1] This threshold only applies if construction is located nearby or upwind of sensitive receptors. In addition, a significant air quality impact related to PM_{10} emissions may occur if a project uses equipment that is not "typical construction equipment" as specified in Section 5.3 of the MBARD CEQA Guidelines.

[2] The District's operational PM_{10} threshold of significance applies only to on-site emissions, such as project-related exceedances along unpaved roads. These impacts are generally less than significant. For large development projects, almost all travel is on paved roads, and entrained road dust from vehicular travel can exceed the significance threshold.

[3] Modeling should be undertaken to determine if the DVSP would cause or substantially contribute (550 lbs./day) to exceedance of CO ambient air quality standards (AAQS). If not, the DVSP would not have a significant impact.

Source: MBARD 2008

The carbon monoxide (CO) thresholds provided by MBARD are designed to screen out projects from further analysis that would have a less than significant impact to CO; however, projects that exceed these screening thresholds would not necessarily result in a hotspot. Localized CO concentrations are primarily the result of the volume of cars along a road and the level of emissions generated by vehicles; restricted vehicular traffic flows can contribute to higher volumes of vehicles on a given roadway in a period of time, but are not the cause of high CO concentrations. Stringent vehicle emission standards in California have reduced the level of CO emissions generated by vehicles over time such that CO hotspots are rarely a concern, except for roadways with very high traffic volumes. Because MBARD only provides screening thresholds for CO hotspot impacts but does not have a standard for assessing whether a project's CO hotspot impacts would be significant, the CO threshold from the Bay Area Air Quality Management District (BAAQMD), which is the air district immediately adjacent to MBARD to the north, is utilized in this analysis. The BAAQMD has established a volume of 44,000 vehicles per hour as the level above which traffic volumes may contribute to a violation of CO standards (BAAQMD 2017). The NCCAB and the San Francisco Bay Area Air Basin (the jurisdiction of the BAAQMD, which is the air district immediately adjacent to MBARD to the north) are both in attainment for the California Ambient Air Quality Standard (CAAQS) and National Ambient Air Quality Standard (NAAQS) for CO and have not reported exceedances of the CO standard at local monitoring stations for the last two decades (CARB 2020, United States Environmental Protection Agency [USEPA] 2020a, BAAQMD 2017). Therefore, given the similar ambient air quality conditions for CO in both air basins, it is appropriate to use the BAAQMD threshold in this analysis. The BAAQMD threshold is applied in the following impact

analysis if the proposed project exceeds the MBARD screening thresholds presented above to determine whether the proposed project would result in an exceedance of CO standards.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The most recently adopted air quality plan in the MBARD region is the 2015 AQMP. The 2015 AQMP only addresses attainment of the state eight-hour ozone standard because in 2012, the USEPA designated the NCCAB as in attainment for the current federal eight-hour ozone standard of 0.075 ppm. The control measures outlined in the 2015 AQMP focus on MBARD continuing to use grant funding to reduce both volatile organic compounds (VOC) and oxides of nitrogen (NO_X) emissions, primarily from mobile sources. According to MBARD, mobile source emission reductions have been the most effective in achieving progress toward attainment of the state one-hour and eight-hour ozone standards (MBARD 2017). Furthermore, the 2015 AQMP provides *Emission Reduction Strategies* in Section 9.1, which includes land use "planning efforts such as the 'Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375)…which supports coordinated transportation and land use planning with the goal of developing more sustainable communities'" (MBARD 2017).

The DVSP includes several elements that would reduce VMT and the associated mobile source emissions through integrated transportation and land use planning. The DVSP would allow for higher densities in commercial and mixed-use developments in the Core zone with transit-oriented development, particularly around the MST Marina Transit Exchange. In addition, the DVSP would encourage the development of residential and commercial uses in close proximity in the Transition zone. The DVSP also includes two mixed-use nodes in the Plan Area with multi-story mixed-use buildings containing residential and commercial/retail uses. The DVSP also includes objectives to create a safe and efficient pedestrian and bicycle pathway network in the Plan Area; improve pedestrian access to transit facilities; and promote compact, mixed-use development that encourages use of transit, walking, and bicycling. These objectives and their corresponding strategies would be consistent with the 2015 AQMP because they would encourage the use of alternative forms of transportation and reduce reliance on automobiles, thereby reducing project emissions of ozone precursors.

A significant impact to air quality would occur if buildout of the DVSP would conflict with or obstruct implementation of the 2015 AQMP. Although any development project would represent an incremental negative impact on air quality in the NCCAB due to increased air pollutant emissions, the primary concern is whether project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. MBARD uses growth forecasts provided by the AMBAG to project population-related emissions for the AQMP. When population growth exceeds these forecasts, emission inventories could be surpassed, affecting attainment status.

As discussed in Section 14, *Population and Housing*, the DVSP would accommodate approximately 7,957 new residents. The current population of Monterey County is estimated at 441,143 (California Department of Finance [CDOF] 2020a). In addition, the DVSP has the potential to indirectly increase the population of Monterey County by permitting up to approximately 874,669 square feet of additional community retail space and approximately 510,528 square feet of additional office space, thereby providing employment opportunities for which people may relocate to Monterey County. According to the SB 743 Analysis (Appendix TRAF), the DVSP would provide approximately 3,283 additional employment opportunities. Although these future employees likely already live in Monterey County, this analysis conservatively assumes that all employees would be new to the

region. Therefore, the DVSP would increase the population of Monterey County to 452,383 persons (441,143 + 7,957 + 3,283).

The population growth projections used in the 2015 AQMP forecast that the population of Monterey County will reach 495,086 residents by 2035 (MBARD 2017).[5] Therefore, buildout of the DVSP would not exceed the 2015 AQMP population growth forecast for Monterey County and is within the applicable assumptions of the air pollutant emissions forecast contained in the 2015 AQMP. Furthermore, as discussed under item (b) below, operational emissions generated by buildout of the DVSP would not exceed MBARD thresholds for VOC or NO_X, which are ozone precursors. Therefore, the DVSP would not generate air pollutant emissions that would impede or conflict with the 2015 AQMP's goal of achieving attainment of the state ozone standard. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project 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?

As discussed under *Air Quality Standards and Attainment*, the NCCAB is designated as nonattainment for the state PM_{10} standard and nonattainment-transitional for the state one-hour and eight-hour ozone standards, but is in attainment/unclassified for all other federal and state standards (CARB 2017).[6] Therefore, this analysis focuses on air quality impacts related to those criteria pollutants for which the Plan Area region is nonattainment, which are ozone and PM_{10}.

Construction Emissions

As discussed in the Project Description, the DVSP has a planning horizon of 2040. Therefore, buildout of the DVSP would occur intermittently over approximately 20 years with full buildout estimated to occur in 2040. Construction activity and associated emissions of ozone precursors (VOC and NO_X) and dust (PM_{10}) would occur periodically during construction over the planning period. The DVSP would allow for the development of 2,904 new residential units, 1,386,000 square feet of retail and office space, and associated transportation and utility infrastructure improvements.

The MBARD Guidelines (2008) do not provide plan-level significance thresholds for construction air pollutant emissions; however, the guidelines include project-level thresholds for construction emissions that are utilized for this analysis. If a project's construction emissions fall below the project-level thresholds, the project's impacts to regional air quality are considered individually and cumulatively less than significant. According to MBARD guidelines, temporary ozone precursor emissions (i.e., VOC and NO_X) from demolition and construction projects using typical equipment are accommodated in the emission inventories of state- and federally-required air plans and would not have a significant impact on the attainment and maintenance of state or federal ozone ambient air quality standards (AAQS). Demolition and construction activities facilitated by the DVSP are anticipated to use typical construction equipment; therefore, ozone precursor emissions from demolition and construction activities under the DVSP were accounted for the emission inventories

[5] Although the DVSP has a planning horizon of 2040, the AQMP population forecast for 2035 was utilized because the planning horizon of the AQMP is 2035; therefore, AQMP population forecasts for 2040 are not available for comparison.
[6] The nonattainment-transitional area designation for ozone is defined by California Health and Safety Code Section 40925.5 as a nonattainment area in which air quality data show three or fewer exceedances of the state standard at each monitoring site in the area during the most recent calendar year.

and would not have a significant impact on the attainment and maintenance of state or federal ozone AAQS (MBARD 2008).

As further outlined in the MBARD Guidelines (2008), PM_{10} is the greatest pollutant of concern during construction; therefore, MBARD has established a significance threshold of 82 pounds of PM_{10} emissions per day for construction activities. The exact timing and intensity of construction activities facilitated by the DVSP is unknown at this time given that the pace of future development would largely be determined by market forces. Therefore, construction emissions were calculated using CalEEMod defaults to estimate a reasonable, worst-case scenario.[7] Table 4 summarizes estimated maximum daily construction emissions. As shown therein, maximum daily construction emissions of PM_{10} would not exceed the MBARD threshold of 82 pounds per day.

As discussed under *Methodology*, the construction emission modeling assumes that there would be no soil material import or export. However, there is the potential that construction activities facilitated by the DVSP may require substantial grading and excavation that would generate PM_{10} emissions. The MBARD Guidelines state that construction projects with minimal earthmoving that disturb less than 8.1 acres per day and construction projects with substantial earthmoving that disturb less than 2.2 acres per day would not exceed the threshold of 82 pounds of PM_{10} emissions per day. Therefore, if construction activities facilitated by the DVSP exceed these parameters, then there would be the potential to generate high levels of PM_{10} emissions that may exceed MBARD's threshold of 82 pounds per day. Because the exact timing and intensity of construction activities facilitated by the DVSP is unknown at this time and could include minimal earthmoving that disturbs less than 8.1 acres per day or construction projects with substantial earthmoving that disturb less than 2.2 acres per day, construction-related air quality impacts could be potentially significant. Implementation of Mitigation Measure AQ-1 would be required to reduce impacts to a less than significant level.

Operational Emissions

Table 5 summarizes estimated emissions associated with operation of projects constructed pursuant to the DVSP. The air emissions modelling only accounts for new development beyond that existing within the Plan Area and therefore only considers air pollutant emissions beyond those currently occurring in the NCCAB. Table 5 provides a conservative estimate of operational emissions because energy source emissions would be reduced by DVSP objectives and strategies that encourage the construction of net zero buildings and the use of renewable energy systems beyond code requirements. Due to a lack of project-specific details, these features were not included in the air emissions modelling. However, implementation of these objectives and strategies would reduce air pollutant emissions from energy sources within the Plan Area by reducing natural gas consumption.

As shown in Table 5, project operational emissions would not exceed MBARD thresholds for VOC and NO_X (ozone precursors), CO, SO_2, or PM_{10}. Therefore, project operation would not result in a cumulatively considerable net increase of ozone and PM_{10}, which are pollutants for which the project region is nonattainment under state ambient air quality standards. Impacts would be less than significant.

[7] As mentioned under *Methodology*, the default start dates for each construction phase were adjusted so that all phases (i.e., demolition, site preparation, grading, building construction, paving, and architectural coating) would occur simultaneously in order to estimate conservative, worst-case impacts.

Table 4 Estimated Maximum Daily Construction Emissions

	Emissions (pounds per day)					
Year	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2021	180	230	229	< 1	70	30
2022	173	167	193	< 1	51	17
2023	164	73	115	< 1	30	9
2024	12	67	92	< 1	25	7
2025	11	64	86	< 1	25	7
2026	11	63	81	< 1	25	7
2027	10	62	77	< 1	25	7
2028	10	61	73	< 1	25	7
2029	9	60	69	< 1	25	7
2030	9	54	66	< 1	25	7
2031	8	53	62	< 1	25	7
2032	8	53	60	< 1	25	7
2033	7	52	57	< 1	25	7
2034	7	52	55	< 1	25	7
2035	6	51	53	< 1	25	7
2036	6	51	53	< 1	25	7
2037	6	51	53	< 1	25	7
2038	6	51	53	< 1	25	7
2039	6	51	53	< 1	25	7
Maximum Daily Emissions (pounds per day)[1]	**180**	**230**	**229**	**< 1**	**70**	**30**
MBARD Thresholds	n/a	n/a	n/a	n/a	82[1]	n/a
Threshold Exceeded?	n/a	n/a	n/a	n/a	No	n/a

n/a = not applicable

Notes: All numbers have been rounded to the nearest tenth. Emissions presented are the highest of the winter and summer modeled emissions.

[1] This threshold only applies if construction is located nearby or upwind of sensitive receptors. In addition, a significant air quality impact related to PM_{10} emissions may occur if a project uses equipment that is not "typical construction equipment" as specified in Section 5.3 of the MBARD CEQA Guidelines.

Source: See Appendix AIR for CalEEMod calculations and assumptions

Table 5 Estimated Maximum Operational Emissions

	Emissions (pounds per day)					
Source	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area Emissions	112	3	239	< 1	1	1
Energy Emissions	1	10	6	< 1	1	1
Mobile Emissions	20	37	184	1	11	5
Project Emissions	**133**	**50**	**429**	**1**	**14**	**7**
MBARD Threshold	137	137	550	150	82	N/A
Threshold Exceeded?	No	No	No	No	No	N/A[1]

N/A = not applicable
Notes: All numbers have been rounded to the nearest tenth. Emissions presented are the highest of the winter and summer modeled emissions. Numbers may not add up due to rounding.
[1] The MBARD does not have a significance threshold for operational $PM_{2.5}$ emissions.
Source: See Appendix AIR for CalEEMod calculations and assumptions.

Mitigation Measures

AQ-1 Construction Dust Control Measures

The following policy language, or its equivalent, shall be added to the DVSP:

Construction/demolition activities within the Specific Plan Area shall be limited to 8.1 acres per day with minimal earthmoving, or 2.2 acres per day with demolition or grading/excavation, consistent with the screening-level thresholds in the MBARD's 2008 *CEQA Air Quality Guidelines*, or consistent with any updated air quality guidelines approved by the MBARD. Any individual construction project that would require grading, excavation, and/or soil material import or export within the Plan Area shall implement the following construction dust control measures:

- Water all active construction areas at least twice daily.
- Prohibit all grading activities during periods of high wind (over 15 miles per hour).
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area.
- Haul trucks shall maintain at least 2 feet of freeboard.
- Cover all trucks hauling dirt, sand, or loose materials.
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all exiting trucks.
- Pave all roads on construction sites.
- Sweep streets if visible soil material is carried out from the construction site.

- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District shall be visible to ensure compliance with Rule 402 (Nuisance).
- Limit the area under construction at any one time.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. The sensitive receptors closest to the Plan Area are existing residential neighborhoods and the Marina Child Development Center located within the Plan Area as well as residential neighborhoods located immediately adjacent to the Plan Area to the north, west, and south. There are also several schools located within 0.5 mile of the Plan Area, including Los Arboles Middle School, Marina Vista Elementary School, Marina La Via Continuation High School, Crumpton Elementary School, Pegasus Montessori School, Marina High School, George Patton Senior Elementary School, and Ione Olson Elementary School.

Carbon Monoxide Hotspots

Buildout of the DVSP would result in new development or redevelopment that would generate additional vehicle trips on area roadways. Areas with high vehicle density, such as congested intersections, have the potential to create concentrations of CO ("CO hotspots") and could potentially expose sensitive receptors to harmful levels of pollution. The NAAQS for CO is 35.0 ppm and the CAAQS for CO is 20.0 ppm.

As discussed above under *Significance Thresholds*, localized CO concentrations are the result of the volume of cars along a road and the level of emissions generated by vehicles, rather than the flow of traffic, and vehicle CO emissions have declined over time due to stringent state standards for vehicle emissions and would continue to decline as more stringent standards are put in place. As discussed under *Methodology*, the CO threshold from BAAQMD is utilized in this analysis because MBARD only provides screening thresholds for CO hotspot impacts. BAAQMD has determined that a volume of 44,000 vehicles per hour is the level above which traffic volumes may contribute to a violation of CO standards (BAAQMD 2017). As discussed under *Significance Thresholds*, the NCCAB and the San Francisco Bay Area Air Basin (the jurisdiction of the BAAQMD, which is the air district immediately adjacent to MBARD to the north) are both in attainment for the CAAQS and NAAQS for CO and have not reported exceedances of the CO standard at local monitoring stations for the last two decades (CARB 2020, USEPA 2020, BAAQMD 2017). Therefore, given the similar ambient air quality conditions for CO in both air basins, it is appropriate to use the BAAQMD threshold in this analysis.

As shown in Marina Downtown Traffic Study (2019), all of the studied roadway segments would have daily traffic volumes below 44,000 vehicles under buildout of the DVSP; see Appendix TRAF-1 for roadway volumes. Therefore, the DVSP would not result in volumes of traffic that would create, or substantially contribute to, the exceedance of state and federal AAQS for CO. As a result, the DVSP would not expose sensitive receptors to substantial concentrations of CO. Therefore, impacts related to CO hotspots would be less than significant.

Toxic Air Contaminants

The greatest potential for TAC emissions during demolition and construction activities facilitated by the DVSP would be from diesel particulate emissions associated with heavy equipment operations. According to CARB methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk, which is expressed as an estimate of the increased changes of developing cancer due to facility emissions over a 70-year lifetime. Given the short-term construction schedule, the DVSP would not result in a long-term (i.e., 70-year) source of TAC emissions. In addition, there would be no residual emissions or corresponding individual cancer risk after buildout is complete. Therefore, it is not necessary to evaluate long-term cancer impacts from construction activities that occur over a relatively short duration. As such, demolition and construction activities facilitated by the DVSP, including generation of TACs, would not expose sensitive receptors to substantial pollutant concentrations.

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emission. Typical sources of acutely and chronically hazardous TACs identified by CARB include distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities. MBARD also identifies additional common sources of TACs including diesel-fueled internal combustion engines and parking areas for diesel-fueled heavy-duty trucks and buses. CARB recommends siting distances both for the development of sensitive land uses in proximity to TAC sources and for the addition of new TAC sources in proximity to existing sensitive land uses.

The DVSP would not include the development of land uses that generate substantial TAC emissions based on review of the air toxic sources listed in MBARD's and CARB's guidelines. It is expected that quantities of hazardous TACs generated on-site by future residents and tenants (e.g., cleaning solvents, paints, landscape pesticides) for the types of proposed land uses would be below thresholds warranting further study under the California Accidental Release Program, which regulates stationary sources of hazardous substances used annually in quantities ranging from 500 to 20,000 pounds. Therefore, the DVSP would not result in the exposure of sensitive receptors to significant amounts of carcinogenic or toxic air contaminants. Impacts related to TAC emissions would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During construction activities, temporary odors from vehicle exhaust and construction equipment engines would occur. Construction-related odors would be short-term and would cease upon completion. Land uses typically producing objectionable odors include landfills, rendering plants, chemical plants, agricultural uses, wastewater treatment plants, and refineries (MBARD 2008). The DVSP would not permit any of these uses within the Plan Area. In addition, MBARD Rule 402 prohibits the discharge of air contaminants or other materials which would cause a nuisance or detriment to a considerable number of persons or to the public, with the exception of odors from agricultural activities. Therefore, given the nature of land uses under the DVSP and required compliance with MBARD Rule 402, the DVSP would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people during construction and operation. Impacts related to odor would be less than significant.

LESS THAN SIGNIFICANT IMPACT

4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	■	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	■	☐	☐
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?	☐	☐	☐	■
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	■	☐
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?	☐	☐	☐	■

Rincon Biologist Samantha Kehr conducted a field reconnaissance survey of the Specific Plan Area on June 17, 2019. The purpose of the survey was to document the existing biological conditions within the Specific Plan Area, including plant and wildlife species, vegetation communities, the potential for occurrence of sensitive species and/or habitats, and jurisdictional waters. A Biological Resources Assessment (BRA) was completed by Rincon Consultants, Inc. in July 2019, and is included as Appendix BIO. The results of the survey subsequent biological resources assessment are presented in the BRA report and summarized below. The following analysis is based on the findings of the BRA.

The Specific Plan Area covers 322 acres comprised primarily of existing development. A small component of the Specific Plan Area is comprised of vacant lots and small patches of open space, primarily within or surrounded by existing developed areas. As the Specific Plan Area is largely developed, it contains very little natural habitat. What natural or semi-natural habitat is present is limited to the eastern edge of the Plan Area along reservation Road and south of development at Reindollar Avenue between SR 1 and George Patton Senior Elementary School.

Vegetation Communities and Land Cover Types

The Specific Plan Area is predominantly developed, with small, isolated areas of vegetation. Vegetation composition and structure within the Specific Plan Area is generally limited to landscape and ruderal vegetation types, with minor areas of natural vegetation and water features (Figure 9). Four land cover types are mapped within the Specific Plan Area: 1) Developed; 2) bare ground; 3) demonstration garden; and 4) ruderal. Four vegetation communities were identified in the Plan Area: 1) ice plant mat; 2) annual grassland; 3) sandmat manzanita; and 4) willow riparian.

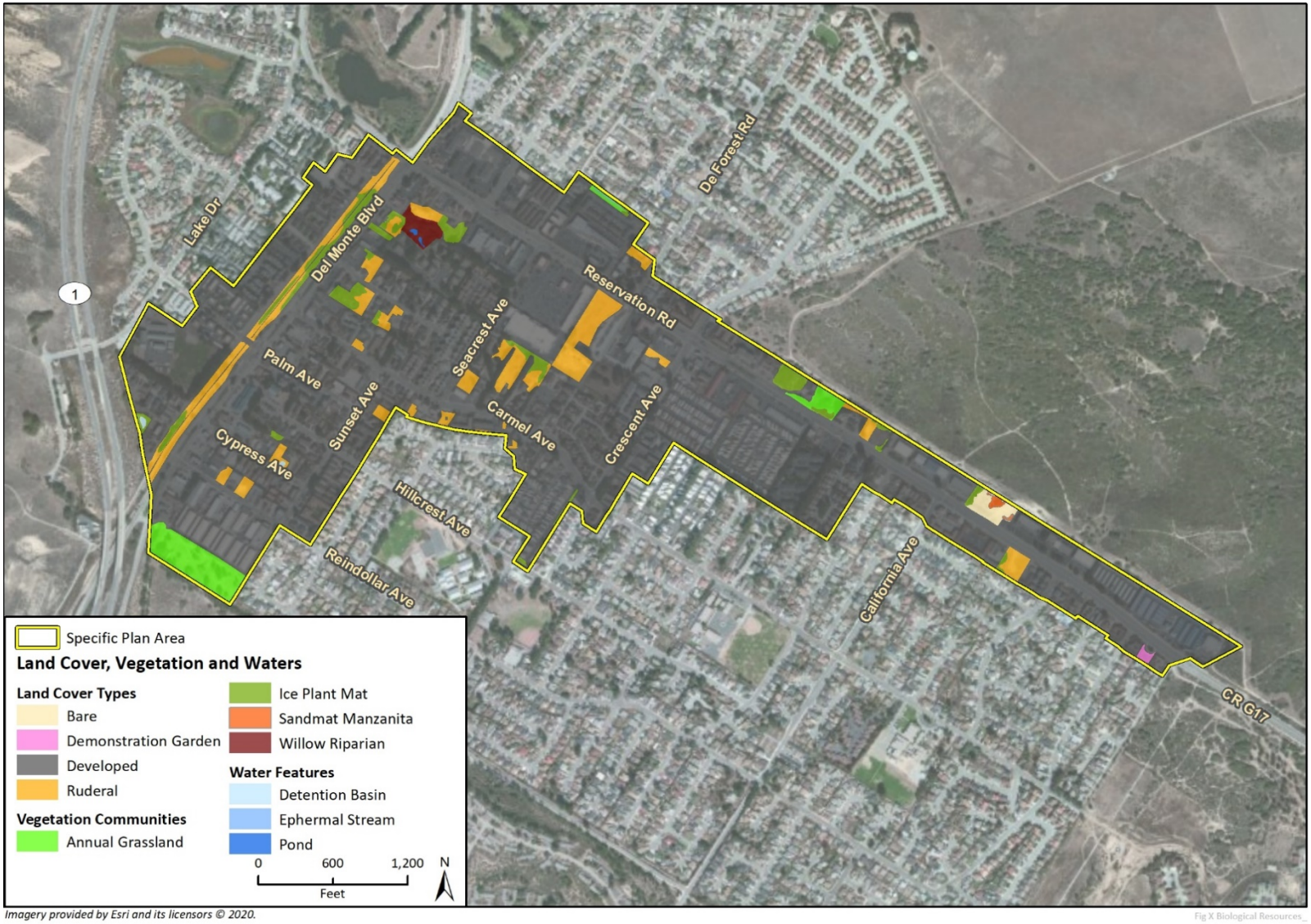
The majority of the Plan Area is developed, including paved roads, sidewalks, parking lots, buildings, and basketball courts. Vegetation in this land cover type consists of primarily non-native ornamental plantings in lawns, park strips, parking lots, commercial parks, baseball fields, etc. Tree species found in this community are highly variable and typically non-native or not occurring as part of a natural woodland. The remainder of open space is generally comprised of ruderal weedy vegetation communities and annual grasslands containing non-native grasses and forbs. A large component of invasive ice plant mat also occurs within the Plan Area. Small patches of natural habitat occur containing sandmat manzanita (*Arctostaphylos pumila*) and riparian arroyo willow (*Salix lasiolepis*), but these occur only as a minor component of the Specific Plan Area.

Potentially Jurisdictional Features

Two small maintained stormwater retention basins located north of Cypress Avenue and southwest of San Pablo Court are not likely to be United States Army Corps of Engineers (USACE) or CDFW jurisdictional, but would potentially be considered a RWQCB jurisdictional stormwater feature under the Porter-Cologne Water Quality Control Act, which regulates discharge to waters of the State, including discharge of stormwater.

A “pond” observed on aerial imagery on private property may be USACE, RWQCB, or CDFW jurisdictional. Additionally, a stormwater drainage runs above ground for approximately 325 feet south of Viking Lane, this feature is potentially USACE, RWQCB, and CDFW jurisdictional.

Figure 9 Vegetation Communities and Land Cover Types



Special Status Species

Special Status Plants

Three special status plants were observed within the Specific Plan Area during the reconnaissance survey. Sandmat manzanita (*Arctostaphylos pumila*) – California Rare Plant Rank (CRPR) 1B.2, was observed in the Specific Plan Area and is considered present. Monterey cypress (*Hesperocyparis macrocarpa*) 1B.2, and Monterey Pine (*Pinus radiata*) 1B.1 were also observed in landscaping; however, both the Monterey cypress and Monterey pine have special status only when they occur as part of a natural stand or woodland. The trees are protected by the City of Marina's municipal code, however, which requires a permit for the removal of any tree with a diameter at breast height (DBH) of ten inches or more. No Federal or State listed plants were observed within the Specific Plan Area.

The BRA identified an additional eleven (11) special status plant species that are known to occur, or have at least a moderate potential to occur within the vicinity of the Specific Plan Area, including:

- Monterey spineflower (*Chorizanthe pungens* var. *pungens*) – Federally Threatened
- Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*) – Federally Endangered, State Threatened
- Robust spineflower (*Chorizanthe robusta* var. *robusta*) – Federally Endangered
- Seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*) – State Endangered
- Yadon's rein orchid (*Piperia yadonii*) – Federally Endangered
- Fort Ord spineflower (*Chorizanthe minutiflora*) – 1B.2
- Eastwood's goldenbush (*Ericameria fasciculata*) – 1B. 1
- Sand-loving wallflower (*Erysimum ammophilum*) – 1B.2
- Kellogg's horkelia (*Horkelia cuneata* var. *sericea*) – 1B.1
- Point Reyes horkelia (*Horkelia marinensis*) – 1B.2
- Northern curly-leaved monardella (*Monardella sinuata* ssp. *Nigrescens*) – 1B.2

Special Status Animals

The BRA identified seven (7) special status species with potential to occur within the Specific Plan Area, including:

- Smith's blue butterfly (*Euphilotes enoptes smithi*) – Federally Endangered
- Tricolored blackbird (*Agelaius tricolor*) – State Threatened
- Northern California legless lizard (*Anniella pulchra*) – SSC
- Coast horned lizard (*Phrynosoma blainvillii*) – SSC
- Burrowing owl (*Athene cunicularia*) – SSC
- White-tailed kite (*Elanus leucurus*) – FP
- Monterey shrew (*Sorex ornatus salarius*) – SSC

Sensitive Communities and Critical Habitat

Sandmat manzanita (G1 S1) is considered a sensitive natural community by CDFW; however, the sandmat manzanita observed in the Specific Plan Area is largely isolated from adjacent higher quality habitats and is highly disturbed. There are no critical habitats within the Specific Plan Area.

Regulatory Setting

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies with the land use control and planning authority of local jurisdictions. The CDFW is a trustee agency for biological resources throughout the state under CEQA and also has direct jurisdiction under the Fish and Game Code of California. Under the State and Federal Endangered Species Acts, the CDFW and the U.S. Fish and Wildlife Service (USFWS) also have direct regulatory authority over species formally listed as Threatened or Endangered. The U.S. Department of Army Corps of Engineers (Corps) has regulatory authority over specific biological resources, namely wetlands and waters of the United States, under Section 404 of the Federal Clean Water Act.

Plants or animals may be considered "special-status" due to declining populations, vulnerability to habitat change, or restricted distributions. Special-status species are classified in a variety of ways, both formally (e.g., State or Federally Threatened and Endangered Species) and informally ("Special Animals"). Species may be formally listed and protected as Threatened or Endangered by the CDFW or USFWS or as California Fully Protected (CFP). Informal listings by agencies include California Species of Special Concern (CSC) a broad database category applied to species, roost sites, or nests, or as USFWS Candidate taxa. CDFW and local governmental agencies may also recognize special listings developed by focal groups (i.e., Audubon Society Blue List, California Native Plant Society (CNPS) Rare and Endangered Plants, U.S. Forest Service regional lists). Section 3503.5 of the Fish and Game Code of California specifically protects birds of prey, and their nests and eggs against take, possession, or destruction. Section 3503 of the Fish and Game Code also incorporates restrictions imposed by the federal Migratory Bird Treaty Act (MBTA) with respect to migratory birds (which consists of most native bird species).

Impact Analysis

a. Would the project 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 Wildlife or U.S. Fish and Wildlife Service?

Special status plant species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the United States Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA) (7 U.S.C. § 136, 16 U.S.C. § 1531 *et seq*.); those listed or proposed for listing, or candidates for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); and/or species on the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2018). This latter document includes the *California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California* (CNPS 2019) as updated online. Those plants contained on the CNPS CRPR Lists 1, 2, 3, and 4 are considered special status species, in accordance with the CNPS code definitions:

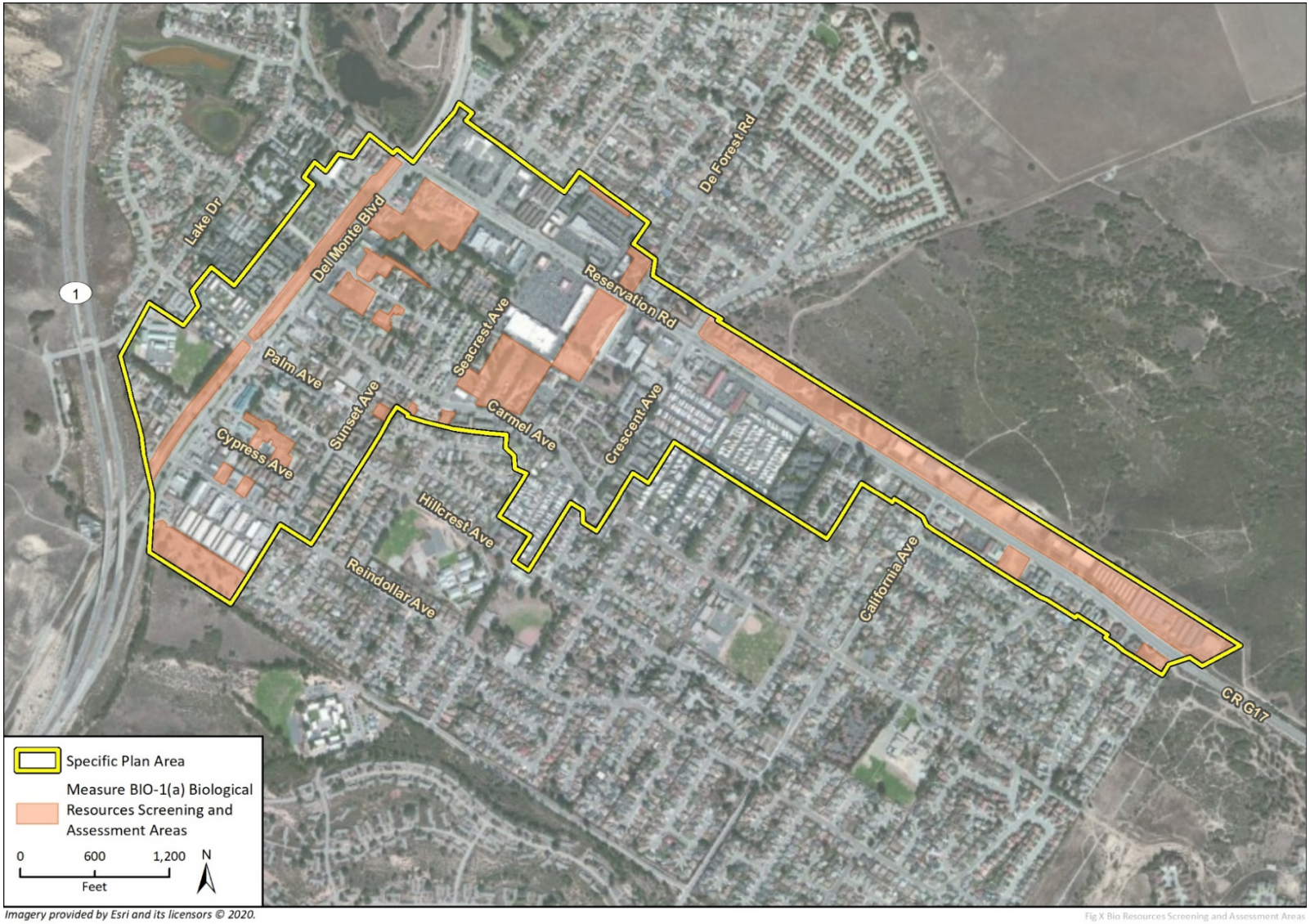
- List 1A = Plants presumed extinct in California;
- List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);
- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);
- List 2 = Rare, threatened or endangered in California, but more common elsewhere;
- List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);
- List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and
- List 4.4= Plants of limited distribution (watch list), not very endangered in California (<20% occurrences threatened or no current threats known).

State and/or federally listed plant species with the potential to occur in areas of species-specific, suitable natural habitat within the Specific Plan Area include seaside bird's-beak, Monterey gilia, robust spineflower, Yadon's rein orchid, and Monterey spineflower. Additionally, non-listed special status plants, have the potential to occur in areas of natural habitat and ruderal areas of the Specific Plan Area. Special status species are most likely to occur in undeveloped or ruderal areas, however Monterey spineflower and Monterey gilia may occur in sandy openings within landscaped areas.

Construction activity associated with individual projects developed under the Specific Plan could include demolition, grading, vegetation removal, equipment and vehicle staging, parking. Most of the Specific Plan Area is comprised of developed or other modified land cover types that do not provide suitable habitat for rare plants; however, at the individual project level the above described activities have the potential to directly impact special status plant species for any projects situated in areas of suitable natural habitat as displayed in Figure 10. Impacts may also occur if the quality of habitat were degraded by development in adjacent areas through the introduction of invasive weeds, human disturbance, and altered hydrology. Impacts to CRPR 1B and 2B plants are generally considered significant under CEQA if the loss of individuals represented a population-level impact that resulted in a loss of, or risk to an entire local or regional population. The impacts to the sensitive biological resources listed above and resulting from projects developed under the Specific Plan would potentially be significant under CEQA without mitigation.

State and/or federally listed animal species with the potential to occur in areas of species-specific, suitable natural habitat within the Specific Plan Area include tricolored blackbird and Smith's blue butterfly. Non-listed special status species that may also occur in the Specific Plan Area include; 1) northern California legless lizard; 2) coast horned lizard; 3) burrowing owl; 4) white-tailed kite; 5) Monterey shrew; and 6) birds protected by CFGC. In addition to the construction activities described above, construction noise and human presence may also cause impacts to special status species if present. Implementation of Mitigation Measures BIO-1(a) through BIO-1(h) would reduce these impacts to less than significant level.

Figure 10 Biological Screening and Assessment Areas



Mitigation Measures

BIO-1(a) Biological Resources Screening and Assessment

For projects proposed for development within undeveloped or partially developed areas containing natural or ruderal areas (as depicted on Figure 15) the City shall engage a qualified biologist to perform a preliminary biological resource screening. The purpose of the screening and assessment is to determine whether the project has any potential to impact special status biological resources, inclusive of special status plants and animals, sensitive vegetation communities, jurisdictional waters (including creeks, drainages, streams, ponds, vernal pools, riparian areas and other wetlands), or biological resources protected under local or regional ordinances. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a project-specific biological analysis to document the existing biological resources within a project footprint plus a minimum buffer of 100 feet around the project footprint, as is feasible, and to determine the potential impacts to those resources. If the project would have the potential to impact biological resources, the following mitigation measures [BIO-1(b) through BIO-1(h)] shall be incorporated, as determined to be applicable by the qualified biologist, to reduce impacts to a less than significant. Pending the results of the project-specific biological analysis, design alterations, further technical studies (e.g., protocol surveys) and consultations with the USFWS, NMFS, CDFW, and/or other local, state, and federal agencies may be required. Note that specific surveys described in the mitigation measures below may be completed as part of the project-specific biological analysis where suitable habitat is present. All projects developed under the Specific Plan, regardless of site conditions, are required to implement measures BIO-1(g) and BIO-1(h)

BIO-1(b) Special Status Plant Pre-Construction Survey

Projects identified as having potential to impact special status plant species during the biological screening and assessment under Mitigation Measure BIO-1(a) shall implement the Mitigation Measure BIO-1(b). Surveys for special status plants shall be completed by the project proponent prior to any vegetation removal, grubbing, or other construction activity (including staging and mobilization). The surveys shall be floristic in nature, that is, every plant observed shall be identified to species subspecies, or variety, sufficient to identify listed plants. The surveys shall be seasonally timed to coincide with the target Federal and State listed species and rare plants identified above. All plant surveys shall be conducted by a City-approved biologist during the appropriate blooming period during the year prior to initial ground disturbance. All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph or topographic map with the use of Global Positioning System (GPS) unit. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency. If impacts to federal or state-listed species are identified for an individual project, consultation with CDFW and/or USFWS, as appropriate, may be required.

BIO-1(c) Special Status Plant Species Avoidance, Minimization, and Mitigation

If Federal and/or State listed species are found during special status plant pre-construction surveys [required under Mitigation Measure BIO-1(b)], avoidance of, or mitigation for impacts to, occupied habitat shall be required. If populations of CRPR List 1B or 2 species are found during special status plant pre-construction surveys, the City-approved biologist shall evaluate whether the loss of

occupied areas would result in a local or regional population-level impact (i.e., jeopardize the continued existence of a local or regional population). Mitigation for regional population level impacts to rare plants shall be required by the City. If feasible, individual development projects shall be re-designed to avoid development in locations of Federal and/or State listed or CRPR List 1B or 2 species. Federal and/or State listed or CRPR List 1B or 2 species occurrences that are not within the immediate disturbance footprint and would be avoided, but which are located within 50 feet of disturbance limits, shall have bright orange protective fencing installed at an appropriate distance (as determined by a qualified biologist) to ensure they are protected during construction activities.

If development cannot avoid Federally or State listed plants species, then mitigation shall involve either salvage and conservation for any relocated individual plants, or compensation (minimum compensation ratio of 1:1 for individuals and impact areas, with a conservation area of a similar density of individuals) for the loss of these individuals or their habitat either in an on-site or off-site preserve, through payments to an appropriate mitigation bank, or as otherwise may be determined in coordination with USFWS and CDFW permitting. Impacts to, and salvage of, individual plants would be considered "take" under the ESA and/or CESA. "Take" of listed species is illegal under the ESA and CESA without formal authorization from USFWS and/or CDFW. Impacts to Federal and/or State listed or CRPR List 1B or 2 species would require adherence to Mitigation Measure BIO-1(c).

BIO-1(d) Restoration and Monitoring

If development cannot avoid Federal or State listed plant species, all impacts shall be mitigated by the project applicant at a minimum ratio of 1:1 for areas occupied by the species. Ratios may be higher pending consultation with CDFW and/or USFWS for listed species. Restoration areas shall be of a similar density of individuals as areas impacted project activities. A restoration plan shall be prepared by the project applicant and submitted to the City for review and approval. Documentation demonstrating consultation with CDFW and USFWS regarding impacts to federal or state listed species shall be submitted to the City. Population level impacts to CRPR List 1B or 2 species shall also be mitigated at a 1:1 ratio for occupied areas, and shall also require a restoration plan in coordination with the City. The restoration plan(s) shall include, at a minimum, the following components:

- Description of the project/affected species location(s) (i.e., location, responsible parties, areas to be impacted by habitat type)
- Compensatory mitigation [type(s) and area(s) species to be established, restored, enhanced, and/or preserved; specific functions and values of species type(s) to be established, restored, enhanced, and/or preserved]
- Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values)
- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan)
- Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule)
- Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports)
- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type

- An adaptive management program and remedial measures to address any shortcomings in meeting success criteria
- Notification of completion of compensatory mitigation and agency confirmation
- Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism)

BIO-1(e) Special Status Wildlife Pre-Construction Surveys

Projects that identify potential impacts to special status wildlife species during the biological screening and assessment under Mitigation Measure BIO-1(a) shall implement Mitigation Measure BIO-1(e).

GENERAL WILDLIFE SURVEYS

Pre-construction clearance surveys for northern California legless lizard and coast horned lizard shall be conducted within 14 days prior to the start of construction (including staging and mobilization) in areas of suitable habitat. The surveys shall cover the entire disturbance footprint plus a minimum 200-foot buffer within suitable habitat, where permissible, and shall identify all special status animal species that may occur on-site. California legless lizard and coast horned lizard shall be relocated from the site to a safe location within suitable habitat as near to the project area as possible by a qualified biologist.

BURROWING OWL SURVEYS

A qualified biologist shall conduct pre-construction clearance surveys prior to ground disturbance activities within suitable natural habitats and ruderal areas to confirm the presence/absence of burrowing owls. The surveys shall be consistent with the recommended survey methodology provided by CDFW (2012). Clearance surveys shall be conducted within 14 days prior to construction and ground disturbance activities. If no burrowing owls are observed, no further actions are required. If burrowing owls are detected during the pre-construction clearance surveys, the following measures shall apply:

- Avoidance buffers during the breeding and non-breeding season shall be implemented in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993) minimization mitigation measures.
- If avoidance of burrowing owls is not feasible, then additional measures such as passive relocation during the nonbreeding season and construction buffers of 200 feet during the breeding season shall be implemented, in consultation with CDFW. In addition, a Burrowing Owl Exclusion Plan and Mitigation and Monitoring Plan shall be developed by a qualified biologist in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993).

SMITH'S BLUE BUTTERFLY HOST PLANT SURVEYS

Prior to grading and construction in undeveloped areas, an approved biologist shall conduct surveys for seacliff buckwheat (*Eriogonum parvifolium*) and seaside buckwheat (*Eriogonum latifolium*), host plants of Smith's blue butterfly in areas of suitable habitat.

If Smith's blue butterfly host plants are not located, no further action is required. If host plants are located within proposed disturbance areas, they shall be avoided if feasible. If avoidance is not feasible, focused surveys shall be conducted to determine presence or absence of the butterfly species. This may include surveys during the adult flight period (mid-June through early September),

and/or inspection of host plants for all life forms (egg, larva, pupa, and adult). Impacts to individuals of any life stage would be considered "take" under the ESA. Relocation of smith's blue butterfly and occupied host plants can only be legally authorized by the USFWS, and only a USFWS permitted biologist is legally allowed to relocate host plants and individuals.

REPORTING

A report of all pre-construction and pre-demolition survey results shall be submitted to the City for its review prior to the start of demolition. The report shall include a description of the survey methodology for each species, the environmental conditions at the time of the survey(s), the results of the survey, any requirements for addressing special status species identified during surveys, and the biological qualifications of the surveyors. The report shall be accompanied by maps and figures showing the location of any special status species occurrences and associated avoidance buffers.

BIO-1(f) Biological Resources Avoidance and Minimization

Projects that identify potential impacts to special status species during the biological screening and assessment under Mitigation Measure BIO-1(a) shall implement Mitigation Measure BIO-1(f). The following measures shall be applied to avoid impacts to sensitive species and biological resources. The project applicant shall be responsible for implementing selected measures.

- Ground disturbance shall be limited to the minimum necessary to complete the project. The limits of disturbance for each construction phase shall be flagged. Areas of special biological concern within or adjacent to the limits of disturbance shall have highly visible orange construction fencing installed between said area and the limits of disturbance.
- All construction occurring within or adjacent to natural habitats that may support Federally and/or State listed endangered/threatened species, State fully protected species, and/or special status species shall have a qualified biological monitor present during all initial ground disturbing/vegetation clearing activities.
- No endangered/threatened species shall be captured and relocated without express permission from the CDFW and/or USFWS.
- If at any time during construction an endangered, threatened, or fully protected species enters the construction site or otherwise may be impacted, all construction activities shall cease. A CDFW/USFWS-approved biologist shall document the occurrence and consult with the CDFW and USFWS, as appropriate, to determine whether it was safe for project activities to resume.
- At the end of each workday, excavations shall be secured with cover or a ramp provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.
- If night work is required, all construction lighting shall be pointed down and directed only on the work area.
- The City shall approve one or more qualified biologists to oversee and monitor biological compliance for the project. At least one qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities.

BIO-1(g) Pre-Construction Nesting Birds Surveys

All projects developed under the Specific Plan shall implement Mitigation Measure BIO-1(g). Project activity shall restrict ground disturbance, building demolition, and vegetation removal activities to the non-breeding season (September 16 to January 31) when feasible. For ground disturbance, building demolition, and vegetation removal activities that must be conducted during the bird nesting season (February 1 to September 15), general pre-construction nesting bird surveys shall be conducted by a qualified biologist, including for, but not limited to, the tricolored blackbird and White-tailed kite, not more than 14 days prior to construction activities involving ground clearing, vegetation removal/trimming, or building demolition. The surveys shall include the disturbance area plus a 200-foot buffer around the site if feasible, and a 500-foot buffer for tricolored blackbird and White-tailed kite. If active nests are located, an appropriate avoidance buffer shall be established within which no work activity shall be allowed which would impact these nests. The avoidance buffer would be established by the qualified biologist on a case-by-case basis based on the species and site conditions. In no cases shall the buffer be smaller than 50 feet for non-raptor bird species, 200 feet for raptor species, or a 500-foot buffer for White-tailed kite. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. If fully protected White-tailed kites are documented nesting within 500 feet of construction activities, CDFW shall be consulted on appropriate avoidance and minimization methods. The buffer area(s) shall be closed to all construction personnel and equipment until juveniles have fledged and the nest is inactive. City-approved Biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer.

BIO-1(h) Worker Environmental Awareness Program (WEAP)

All projects developed under the Specific Plan shall implement Mitigation Measure BIO-1(h). Prior to initiation of construction activities (including staging and mobilization), the project proponent shall arrange for all personnel associated with project construction for the applicable phase to attend WEAP training, conducted by a City-approved biologist, to aid workers in recognizing special status resources that may occur in the construction area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees shall sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. The form shall be submitted to the City to document compliance.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

A small patch of sandmat manzanita occurs in the eastern portion of the Specific Plan Area adjacent to open space as shown on Figure 15. This patch of manzanita is isolated and highly degraded by the surrounding development and incursion of ice plant. This vegetation community has a limited distribution, largely restricted to coastal areas of Monterey County. It is locally common in the vicinity of the Specific Plan Area; however, given the higher quality chaparral habitat to the north of Reservation Road and within the Fort Ord National Monument, removal of a small patch of sandmat

manzanita would not represent a significant impact to this vegetation community. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The Specific Plan Area is located within the Salinas River watershed, which covers approximately 4,600 square miles from San Luis Obispo to Monterey County. No CDFW or USACE jurisdictional wetlands or waters are present in the Specific Plan Area. Two small isolated stormwater retention basins were observed north of Cypress Avenue and southwest of San Pablo Court, which appear to be properly maintained (Figure 15). These stormwater features drain water from the street and surrounding development, no "bed," "Bank," "channel," or riparian vegetation was observed at either basin. They are therefore not likely to be USACE or CDFW jurisdictional but would potentially be considered a RWQCB jurisdictional stormwater feature under the Porter-Cologne Water Quality Control Act, which regulates discharge to waters of the State, including discharge of stormwater.

A "pond" in the central part of the Plan Area (Figure 15) may be USACE, RWQCB, or CDFW jurisdictional. Historical topographic maps of the area depict a wetland in this area prior to the surrounding development (USGS 2019). Additionally, a stormwater drainage runs above ground for approximately 325 feet south of Viking Lane.

Alteration of the two stormwater basins and the drainage would require authorization from the City of Marina and evaluation under the City's NPDES permit. The Specific Plan would include storm drainage improvements, which would likely be implemented under the City's NPDES permit. Impacts to these features that resulted from development under the Specific Plan would therefore be less than significant. If alteration of the "pond" is proposed, a jurisdictional delineation would be required to fully assess the extent of impacts to waters of the state and/or Waters of the U.S. Impacts to waters of the state or waters of the U.S. would potentially require regulatory permitting. Impacts to this feature may be significant but would be reduced to less than significant with mitigation.

Mitigation Measures

BIO-2 Jurisdictional Delineation

If a proposed project under the Specific Plan would impact any of the ephemeral drainages and/or the ponds (as shown (Figure 15),a qualified biologist shall complete a jurisdictional delineation. The jurisdictional delineation will determine the extent of the jurisdiction for CDFW, USACE, and/or RWQCB, and shall be conducted in accordance with the requirement set forth by each agency. The result will be a preliminary jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, and CDFW, as appropriate, for review and approval. Jurisdictional areas should be avoided to the maximum extent possible. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements (WDRs) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 et seq. of the CFGC would also be required prior to construction within the areas of CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the CWA would likely be required. Furthermore, a compensatory

mitigation program should be implemented, and the measures set forth by the regulatory agencies during the permitting process. Compensatory mitigations for all permanent impacts to waters of the U.S. and waters of the state shall be completed at a ratio as required in applicable permits, but should not be less than a minimum ratio of 1:1. All temporary impacts to waters of the U.S. and waters of the state should be fully restored to natural condition.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project 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?

The Specific Plan Area is effectively a fully developed area, containing no significant wildlife movement corridors. As such, the Specific Plan Area does not provide for locally or regionally important wildlife movement or genetic flow. There would be no impacts to wildlife movement from development under the Specific Plan.

NO IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Specific Plan includes an objective about urban forestry, which outlines the need for preservation of the City's trees while improving accessibility and aesthetics due to root upheaval and improper planting/pruning. The Specific Plan also includes a discussion of the City's Tree Committee and links to the City's recommended street tree species list. The strategies outlined for this objective include developing a street tree plan to ensure suitable species are incorporated into right of way improvements and properly maintained. This strategy also includes encouraging developers to preserve trees onsite. Accordingly, the Specific Plan is consistent with the Marina Municipal Code regarding tree removal and tree protection. Tree removal associated with proposed projects under the Specific Plan would be required to obtain approval from the City of Marina, pursuant to compliance with Chapter 17.51 (Tree Removal, Preservation and Protection) of the Marina Municipal Code. As a result of the Specific Plan's urban forestry objective, street tree planning, and required permitting under Marina Municipal Code, individual projects within the Specific Plan Area would not conflict with the local tree policy. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no habitat conservation plans or natural community conservation plans that have been adopted in the Specific Plan Area. Therefore, development facilitated by the Specific Plan would not conflict with any such plans and no impact would occur.

NO IMPACT

5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	■	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

CEQA requires a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1) and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b]).

PRC, Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Background Research

Rincon conducted a records search of the California Historical Resources Information System at the Northwest Information Center (NWIC), located at Sonoma State University, on April 8, 2019. The search was performed to identify previously recorded cultural resources (archaeological and historic-era resources), as well as previously conducted cultural resources studies within the Plan Area and a 1.6-kilometer (0.5-mile) radius surrounding it. The CHRIS search included a review of available records at the NWIC, as well as the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the Office of Historic Preservation Historic Properties Directory, the California Inventory of Historic Resources, the Archaeological Determinations of Eligibility list, and historic maps.

The NWIC CHRIS search identified 28 cultural resources studies conducted within a 0.5-mile radius of the Plan Area (Table 6). Of these 28 reports, 16 included all or portions of the Plan Area; of these, four consist of general overviews of the region or large inter-regional projects and do not identify specific cultural resources on or adjacent to the Plan Area (S-022657, S-032596, S-045010, and S-048927). Eight of the studies consist of negative survey reports (S-040329, S-047264, S-033677, S-003418, S-049322, S-035072, S-049762, and S-028506).

The remaining four reports were positive for cultural resources. Report S-003345 consisted of a survey of the Monterey Wastewater Treatment System Expansion Project which included improvements to existing treatment systems throughout the Monterey Peninsula. The study identified a single cultural resource approximately five miles southwest of the current Plan Area. Report S-028253 consisted of a Historic Property Survey Report that identified seven properties of historic age; all these properties are within the current Plan Area and were determined to be ineligible for the NRHP. Report S-045823 consisted of a survey report conducted for the Monterey Peninsula Groundwater Replenishment Project and identified several cultural resources; however, all of these resources are greater than five miles from the current Plan Area. Report S-037725 consisted of a survey report for the Monterey Peninsula Light Rail Transit Project and identified two resources; both these resources are greater than four miles from the current Plan Area.

Table 6 Previous Cultural Resource Studies within 0.5-Miles of the Plan Area

Report Number	Author	Year	Title	Relationship to Plan Area
S-003345	T. Weber and A. Peak	1976	*Monterey Peninsula Regional Wastewater Treatment System Expansion Project*	**Within**
S-003345a	A. Peak	1976	*Appendix I: Cultural Resource Assessment of the Interceptor Line -- East of Blanco Road and West of Davis Road (Augmentation of Monterey Peninsula Regional Wastewater Treatment System)*	**Within**
S-003345b	A. Peak and M. Peak	1978	Cultural Resource Assessment of the Selected Alternative of the Monterey Regional Wastewater Treatment System, Monterey County, California	Outside
S-003345c	M. Peak	1980	*Test drilling for cultural resources, Monterey Regional Wastewater Treatment Project: Interceptor line from the Salinas Sewage Treatment Plant to the Blanco Road crossing of the Salinas River*	Outside
S-003418	Unknown	1978	*Cultural Resource Assessment of the Proposed Effluent Disposal System, Fort Ord, Monterey County, California*	**Within**
S-014001	A. Runnings and G. Breschini	1992	*Preliminary Cultural Resources Reconnaissance for the MPWMD Desalinization Pipeline, Monterey County, California*	**Within**
S-022657	I. Sawyer, L. Pfeiffer, K. Rasmussen, and J. Berryman	2000	*Phase 1 Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project*	**Within**
S-028253	A. Kirk	2004	*Crescent Avenue Widening Project, City of Marina, Monterey County, California*	**Within**
S-028506	M. Doane	2004	*Negative Archaeological Survey Report for the Crescent Avenue Widening Project Between Reservation Road and Carmel Avenue in Marina, Monterey County, California*	**Within**
S-032596	R. Milliken, J. King, and P. Mikkelsen	2006	*The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways*	**Within**
S-033677	M. Doane and T. Haversat	1999	*Preliminary Archaeological Reconnaissance of the Marina Coast Water District Recycled Water Pipeline Project, Monterey County, California*	Outside

Report Number	Author	Year	Title	Relationship to Plan Area
S-033677a	M. Doane and T. Haversat	2006	*Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, Northern Segment, In Marina and Seaside, Monterey County, California*	Outside
S-033677b	M. Doane and G. Breshini	2007	*Phase I Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside and Monterey, Monterey County, California (Revised May 22, 2007)*	Outside
S-033677c	M. Doane and G. Breshini	2006	*Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside and Monterey, Monterey County, California*	**Within**
S-033677d	M. Doane and G. Breshini	2007	*Phase 1 Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, In Marina, Monterey County, California*	Outside
S-033677e	M. Doane and G. Breshini	2007	*Preliminary Archaeological Reconnaissance for the Marina Coast Water District Well 34 Project, In Marina, Monterey County, California*	Outside
S-035072	M. Doane and G. Breshini	2008	*Preliminary Archaeological Reconnaissance for APN 032-201-004, Marina, Monterey County, California*	**Within**
S-037725	A. Ruby	2010	*Archaeological Survey Report for the Monterey Light Rail Transit Project*	**Within**
S-040329	H. Haas, K. Hunt, and R. Ramirez	2012	*Phase I Cultural Resources Survey for the Reservation Road Bikeways and Pathways Reconstruction Project Marina, Monterey County, California*	Outside
S-045010	A. Pilling	1949	*Tulare Indians at Monterey: Ethnographic notes collected by A.R. Pilling*	**Within**
S-045823	M. Doane and G. Breshini	2014	*Phase I Archaeology Survey for the Proposed Monterey Peninsula Groundwater Replenishment Project, Northern Monterey County, California*	**Within**
S-047264	Michael A. Way	2011	*Cultural Resources Analysis, Marina Post Office Property, Crescent Avenue, Marina, Monterey County, California 93933, EBI Project No. 61114596*	Outside

Report Number	Author	Year	Title	Relationship to Plan Area
S-047264a	C. Roland-Nawi	2015	*OHP PRN HUD 2015_0403_001: Multifamily Housing Project Located at 3098 De Forest Road, Marina; OHP PRN HUD 2015_0403_001:HUD-Funded HOME Project; Section 106 Consultation Junsay Oaks Apartments 3098 De Forest Road, Monterey County, California*	**Within**
S-047264b	T. Szymanis	2015	*RE: HUD-Funded HOME Project; Section 106 Consultation*	Outside
S-048927	D. Crull	1997	*The Economy and Archaeology of Europeanmade Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California and Washington*	**Within**
S-049322	H. Koenig	2017	*Cultural Resources Survey Report, Monterey Peninsula Water Supply Project, Monterey County, California*	Outside
S-049322a	P. Michel and J. Polanco	2017	*NOAA_2017_0403_001, Section 106 Consultation for the Monterey Peninsula Water Supply Project, Monterey County, California*	Outside
S-049762	G. Breshini	2017	*Preliminary Archaeological Assessment of Assessor's Parcel 032-171-018, Marina, Monterey County, California*	**Within**

Source: NWIC 2019

The NWIC records search conducted for this effort identified eight previously recorded cultural resources within a 0.5-mile radius of the Plan Area; these are listed in Table 7. One prehistoric archaeological site (P-27-000385/CA-MNT-280) has been documented within the records search area but is outside the Specific Plan Area. Very little information is provided in the site record as it was recorded based on anecdotal information obtained ten years after the site was identified. CA-MNT-280 is described in the site record as a prehistoric occupation site located somewhere on the Fort Ord base that was destroyed by bulldozer in the early 1940s.

Additionally, seven buildings of historic age were recorded within the current Plan Area, all of which were recommended ineligible for the NRHP and CRHR. The previously recorded buildings include a one-story, Contemporary-style single-family residence constructed in 1955 (P-27-003088); a one-story, Ranch-style single-family residence constructed in 195 (P-27-003089); a vernacular, one-story single-family residence constructed in 1940 (P-27-003090); a vernacular, one-story single-family residence constructed in 1937 (P-27-003091); a utilitarian storage shed built ca. the 1930s (P-27-003092); a one-story, Ranch-style single-family residence completed in 1953 (P-27-003093); and vernacular, one-story commercial building constructed in phases between 1953 and 1979 (P-27-003094).

Table 7 Previously Recorded Resources within 0.5-Miles of the Plan Area

Primary Number	Trinomial	Resource Type	Description	Year(s) and Recorder(s)	NRHP/ CRHR Status	Relationship to Plan Area
P-27-000385	CA-MNT-280	Prehistoric Site	Prehistoric Occupation Site	1950 (A.R. Pilling, UCAS)	Unknown	Outside
P-27-003088	–	Historic Building	3100 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003089	–	Historic Building	3109 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for National Register	**Within**
P-27-003090	–	Historic Building	3115 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003091	–	Historic Building	3117 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003092	–	Historic Building	3128 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003093	–	Historic Building	3137 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003094	–	Historic Building	3146 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**

Source: NWIC 2019

On June 6, 2019, Rincon contacted the Native American Heritage Commission (NAHC) and requested a search of the Sacred Lands File (SLF). The NAHC emailed a response on June 11, 2019 stating that the SLF search was negative.

USGS geologic maps indicate that the Plan Area is underlain by stabilized dunes and drift sands that date between the terminal Pleistocene and early Holocene (Dibblee and Minch 2007). Humans were known to be present in California as early as the Terminal Pleistocene, thus buried archaeological sites are possible in this area. Soils dating to as far back as the terminal Pleistocene have the potential to contain subsurface archaeological resources, especially in near coastal environments; however, sites dating to this period are generally rare and ephemeral.

Developmental History of the Specific Plan Area

United States Geological Survey maps indicate the Specific Plan Area remained largely undeveloped until around the early 1940s (USGS 1913-1941). An aerial photograph taken in 1941 depicts the area as sparsely developed and generally characterized by moderate-sized residential and/or agricultural properties. However, east of Del Monte Boulevard, a cluster of single-family residential properties was developed along Carmel Avenue and in the vicinity of what is now Palm Avenue. This augmented a handful of what are presumed to have been commercial properties along the east side of Del Monte Boulevard. By 1956, a few properties west of Marina Drive were subdivided for residential use (UCSB Map & Imagery Lab 1941, 1956).

Between the late 1950s and 1971, extensive residential and commercial development took place in Marina. Within the Specific Plan Area, new construction was limited, but included several residential properties on the south side of Carmel Avenue (west of Busby Lane) and a pair of mobile home parks on the south side of Reservation Road. Sparse commercial development also occurred along Reservation Road (Netronline 1968; UCSB Map & Imagery Lab 1971). In the 1970s and 1980s the Specific Plan Area was built-out approximately to its current extent. New construction in these years included a substantial expansion of commercial properties along Reservation Road and additional commercial construction southeast of the intersection of Del Monte Boulevard and Reindollar Avenue. In addition, new single- and multi-family residential properties appeared west of Del Monte Boulevard and along Cypress Avenue (UCSB Map & Imagery Lab 1989). Since the late 1980s, there has been scattered construction in the Specific Plan Area. However, new construction did not substantially change the area's established pattern of development (UCSB Map & Imagery Lab 1989; Netronline 1998, 2005, 2014).

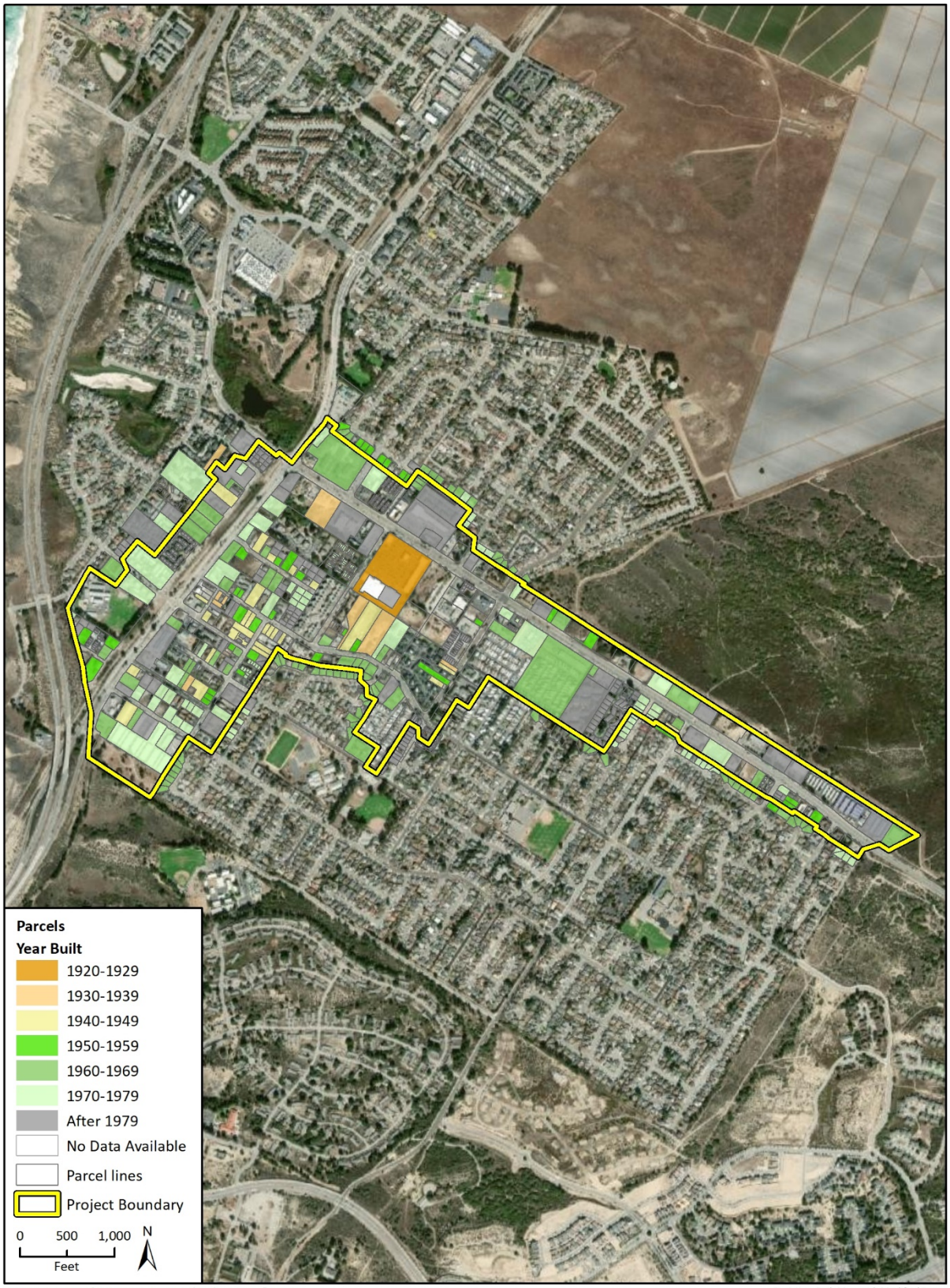
This overall development history is reflected in the project area dates of construction. As shown in Figure 11, according to assessor parcel data, at least 39 percent of the parcels within the project area were constructed between 1977 and the present day (313 out of 805). Another 30 percent of parcels were constructed from the early twentieth century through 1976 (239 out of 804). Year built data was not available for another 250 parcels; these figures are approximate and intended as a general characterization of the historic resources setting for the project area.

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Future development activities that could be facilitated by adoption of the Specific Plan would have a significant impact on historical resources if such activities would cause a substantial adverse change in the significance of a historical resource. Historical resources include properties eligible for listing on the NRHP,CRHR, or for a local register. In addition, as explained in Section 15064.5, "[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

Although there are no specific development projects associated with the proposed Specific Plan, implementation of the plan would guide development in the Specific Plan Area through the year 2040. Areas planned for future development under the Specific Plan potentially contain historical resources. According to the NWIC results, previous survey efforts in the Specific Plan Area have been limited and only resulted in the previous evaluation of seven properties. As much of the Specific Plan Area has not been subject to historical resources surveys, it may contain resources which have not yet been identified. Historic maps and aerial photographs indicate there are numerous properties which are of historic age and have the potential to be qualifying historical

Figure 11 Overview of Dates of Construction, by Decade



Source: County of Monterey, ESRI and its licensors © 2020.

resources as defined by CEQA. Further, the Specific Plan Area contain properties which will pass the age threshold (45 years of age) generally signaling the need for evaluation over the life of the Specific Plan.

Areas that may contain concentrations of buildings dating from before 1941 include the west side of Del Monte Boulevard throughout the Specific Plan Area and areas on both sides of Carmel and Palm Avenues roughly between Del Monte Boulevard and Sunset Avenue. Residential properties dating from the 1940s through the mid-1950s may be located west of Marina Drive, on either side of Paddon Place. Residential properties constructed between 1956 and 1971 are potentially located in the southeastern section of the Specific Plan Area, including the south side of Carmel Avenue, between Crescent and Seacrest Avenue. Areas likely to contain concentrations of properties constructed in the 1970s and 1980s include Reservation Road throughout the Specific Plan Area and the part of the Specific Plan Area lying south of Hillcrest Avenue.

Development under the proposed Specific Plan could impact presently unknown historical resources through construction activities associated with buildout. Pursuant to §15064.5, impacts to historical resources would be significant if a future project demolished or physically altered in a negative manner the physical characteristics that justify a resource's eligibility in the CRHR. Under §15064.5(b)(3) however, a project which is found to comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Weeks and Grimmer 1995), is generally considered to be mitigated to a level of less than significant. Application of the mitigation measures provided below would ensure impacts to historical resources are less than significant by identifying historical resources during the project planning process and avoiding or minimizing potential impacts as needed.

Mitigation Measures

CR-1 Preparation of Reconnaissance-Level Historic Resources Survey and Inventory

The City shall add a policy to the Specific Plan to commission a reconnaissance-level historic resources survey of the Plan Area to identify qualifying historical resources to inform future project planning and review pursuant to the Specific Plan. The historic resources survey shall:

- Be carried out by a preservation professional meeting the Secretary of the Interior's Professional Qualifications Standards for architectural history or history as defined by the National Park Service and codified in 36 Code of Federal Regulations 61;
- Follow the reconnaissance-level survey methodology as defined by the State Office of Historic Preservation and include all properties that are 45 years of age and older at the time of the survey;
- Include a thematic historic context statement to guide evaluations;
- Include an opportunities and constraints of historic resources for project planning that clearly identifies historical resources and allows project applicants to proactively avoid impacts to historical resources; and
- Be updated as needed over the course of Specific Plan buildout in accordance with State Office of Historic Preservation guidelines.

The results of the survey and opportunities and constraints map shall be placed on the City's Website and made available to City staff, decision-makers, and members of the public following

finalization of the survey results. Those properties found ineligible through the reconnaissance-level survey for the CRHR or NRHP shall be considered non-historical resources for the purposes of CEQA and shall not require additional review or mitigation. For those properties identified as historical through the reconnaissance-level survey, Mitigation Measure CR-3 shall apply.

CR-2 Site-Specific Historic Resources Assessment Report

Until completion of the reconnaissance-level historic resources survey required under Mitigation Measure CR-1, any project involving partial or full demolition of a property 45 years of age and older that has not been subject to a previous evaluation or survey at the time of project review shall require preparation of a Site-Specific Historic Resources Assessment. The Site-Specific Historic Resources Assessment Reports shall:

- Follow the practices established by the California Office of Historic Preservation for intensive-level evaluation and be carried out by a preservation professional meeting the Secretary of the Interior's Professional Qualifications Standards for Architectural History or History as defined by the National Park Service and codified in 36 Code of Federal Regulations 61;
- Include a construction chronology of each property and brief discussion of any known design professionals/architects associated with the property's design and construction;
- Consider all applicable aspects of architectural, historic, and sociocultural history, through a thematic historic context section, and apply federal, state, and local criteria of significance to ascertain and confirm historical resource status; and
- Identify and document character-defining features, including of the site and setting, for those properties qualifying as historical resources pursuant to CEQA (i.e., designated or eligible federal, state, or local landmarks or districts).

If the property is found ineligible for the CRHR or NRHP it shall be considered non-historical for the purposes of CEQA and no additional review or mitigation is required. If the property is identified as historical, Mitigation Measure CR-3 shall apply.

CR-3 Historic Preservation Design Input and Impacts Screening Memorandum

For properties identified as historical resources through implementation of Mitigation Measure CR-1 or CR-2, the project applicant shall retain a qualified preservation professional meeting the Secretary of the Interior's Professional Qualifications Standards in Architectural History, History, or Historic Architecture as defined by the National Park Service and codified in 36 Code of Federal Regulations 61. The qualified preservation professional shall provide design input to facilitate compliance with the *Secretary's Standards* to lessen, avoid, or mitigate direct or indirect impacts to historical resources. The qualified preservation professional shall review design plans to identify whether the project complies with the *Secretary's Standards.* The results of this review and impacts screening shall be memorialized in a *Secretary's Standards* compliance memorandum and approved by the City prior to the schematic phase. If the project is found to comply with the *Secretary's Standards,* no further mitigation is required. If the project is found not to comply, Mitigation Measure CR-4 shall be implemented.

CR-4 Relocation Study and Preservation Plan

If an historical resource identified under Mitigation Measure CR-1 or CR-2 is found inconsistent with the *Secretary's Standards* following implementation of Mitigation Measure CR-3, the City shall require the completion of a Relocation Study and Preservation Plan for the historical resource. The

Study shall consider partial retention of the resource as well as relocation; the Plan shall identify at least two potential nearby receiver sites, with similar settings and characteristics, for the relocation. The Relocation Study and Preservation Plan shall be completed by a preservation professional meeting the Secretary of the Interior's Professional Qualifications Standards for architectural history, history, or historic architecture and approved by the City prior to issuance of building permits.

If the Relocation Study and Preservation Plan determines that partial retention or relocation is feasible, the recommendations of the study shall be implemented. If the Relocation Study and Preservation Plan determines that such measures are infeasible, the project shall not be implemented, or the City may require project-level CEQA review, such as a EIR prior to project approval.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The cultural resources records search and Native American scoping did not result in the identification of known archaeological resources on the Plan Area. However, the Plan Area has not been fully surveyed for archaeological resources and their presence cannot be ruled out. The Plan Area is underlain by soils that date to periods of potential human occupation, thus archaeological sites have the potential to be present both on the surface and subsurface of the Plan Area. In addition, previous work has noted buried cultural resources within the region.

Effects on archaeological resources can only be determined once a specific project has been proposed because the effects are highly dependent on both the individual project site conditions and the characteristics of the proposed ground-disturbing activity. Ground-disturbing activities associated with development facilitated by the Specific Plan, particularly in areas that have not previously been developed with urban uses, have not been studied through a cultural resources investigation, or when excavation depths exceed those previously attained, have the potential to damage or destroy previously-unknown historic or prehistoric archaeological resources that may be present on or below the ground surface. Consequently, damage to or destruction of previously-unknown sub-surface cultural resources could occur as a result of development under the proposed Specific Plan. No goals or policies currently exist in the Specific Plan to protect archaeological resources, thus impacts to archaeological are potentially significant. The following mitigation measures are required to bring potential impacts to less than significant levels.

Mitigation Measures

CR-5 Archaeological Resources Investigation

At the time of application for discretionary land use permits that involve grading, trenching, or other ground disturbance in native soil with the potential for encountering unknown archaeological resources, the project applicant shall retain a qualified archaeologist meeting the Secretary of the Interior standards in archaeology to complete a Phase 1 cultural resources assessment of the development site. A Phase 1 cultural resources assessment shall include an archaeological pedestrian survey of the development site, if possible, and sufficient background archival research and field sampling to determine whether subsurface prehistoric or historic remains may be present. Archival research shall include a current (no more than one-year old) records search from the

Northwest Information Center (NWIC) and a Sacred Lands File (SLF) search conducted with the Native American Heritage Commission (NAHC).

Identified prehistoric or historic archaeological remains shall be avoided and preserved in place where feasible. Where preservation is not feasible, the significance of each resource shall be evaluated for significance and eligibility for listing in the CRHR through a Phase 2 evaluation. A Phase 2 evaluation shall include any necessary archival research to identify significant historical associations as well as mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of a sample of the cultural deposit to characterize the nature of the sites, define the artifact and feature contents, determine horizontal boundaries and depth below surface, and retrieve representative samples of artifacts and other remains.

Cultural materials collected from the sites shall be processed and analyzed in the laboratory according to standard archaeological procedures. The age of the materials shall be determined using radiocarbon dating and/or other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards. The significance of the sites shall be evaluated according to the criteria of the CRHR. The results of the investigations shall be presented in a technical report following the standards of the California Office of Historic Preservation publication "Archaeological Resource Management Reports: Recommended Content and Format (1990 or latest edition)" (http://ohp.parks.ca.gov/pages/1054/files/armr.pdf). Upon completion of the work, all artifacts, other cultural remains, records, photographs, and other documentation shall be curated an appropriate curation facility. All fieldwork, analysis, report production, and curation shall be fully funded by the applicant.

If the resources meet CRHR significance standards, the City shall ensure that all feasible recommendations for mitigation of archaeological impacts are incorporated into the final design and permits issued for development. If necessary, Phase 3 data recovery excavation, conducted to exhaust the data potential of significant archaeological sites, shall be carried out by a qualified archaeologist meeting the SOI standards for archaeology according to a research design reviewed and approved by the City prepared in advance of fieldwork and using appropriate archaeological field and laboratory methods consistent with the California Office of Historic Preservation Planning Bulletin 5 (1991), Guidelines for Archaeological Research Design, or the latest edition thereof.

As applicable, the final Phase 1 Inventory, Phase 2 Testing and Evaluation, and/or Phase 3 Data Recovery reports shall be submitted to the City prior to issuance of construction permit. Recommendations contained therein shall be implemented throughout all ground disturbance activities.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, existing regulations outlined in the State of California Health and Safety Code Section 7050.5 state no further disturbance may occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD

must complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner. With adherence to existing regulations, impacts to human remains would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

California is one of the lowest per capita energy users in the United States, ranked 46th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2020). California consumed 284,436 gigawatt-hours (GWh) of electricity and 1,135,592 million cubic feet of natural gas in 2018 (California Energy Commission [CEC] 2020). In addition, Californians consume approximately 18.8 billion gallons of motor vehicle fuels per year (Federal Highway Administration 2019). The single largest end-use sector for energy consumption in California is transportation (40.3 percent), followed by industry (23.1 percent), commercial (18.7 percent), and residential (17.9 percent) (EIA 2020).

Most of California's electricity is generated in-state with approximately 30 percent imported from the Northwest and Southwest in 2017. In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass (CEC 2018). Adopted on September 10, 2018, Senate Bill (SB) 100 accelerates the state's Renewables Portfolio Standards (RPS) Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from in-state refineries. Gasoline is used by light-duty cars, pickup trucks, and sport utility vehicles, making it the most used transportation fuel in California with 15.3 billion gallons sold in 2019. Diesel is the second most-used fuel in California with 3.0 billion gallons sold in 2019 (California Department of Tax and Fee Administration 2020a and 2020b). Diesel is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (CEC 2016). Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions, including CO_2 and N_2O. The transportation sector is the single largest source of GHG emissions in California, accounting for 41 percent of all inventoried emissions in 2016 (CARB 2019).

The City of Marina has not adopted a local plan for renewable energy or energy efficiency nor a climate action plan. However, the Marina General Plan (2010) contains several measures that address energy resources, which are outlined under item (b) below.

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Demolition and Construction

Demolition and construction activities facilitated by the DVSP would require energy resources primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators. Temporary power may also be provided to construction trailers or electric construction equipment. Future construction would also use building materials that would require energy use during the manufacturing and/or procurement of those materials; however, as Section 15126.2(b) of the *CEQA Guidelines* states, "This [energy] analysis is subject to the rule of reason and shall focus on energy use that is caused by the project." In addition, it is reasonable to assume that manufacturers of building materials such as concrete, steel, lumber, or other building materials would employ energy conservation practices in the interest of minimizing the cost of doing business. Therefore, the consumption of energy required for the manufacturing and/or procurement of building and construction materials is not within the scope of this analysis.

Table 8 summarizes the anticipated energy consumption from construction equipment and vehicles, including construction worker trips to and from the Plan Area. As shown therein, construction of the project would require approximately 5,387,580 gallons of gasoline and 3,379,058 gallons of diesel fuel, or 1,022,177 million British thermal units (MMBtu). Energy use during demolition and construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, construction contractors would be required to comply with applicable CARB regulations, as well as the provisions of 13 California Code of Regulations Sections 2449 and 2485, which restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Construction equipment would also be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would minimize inefficient fuel consumption. Electrical power consumed during demolition and construction activities would be supplied from existing electrical infrastructure in the area.

Table 8 Construction Energy Usage

	Fuel Consumption (Gallons)	
Source	**Gasoline**	**Diesel**
Construction Equipment & Hauling Trips	–	3,379,058
Construction Worker Vehicle Trips	5,387,580	–

Source: Appendix ENG

Overall, demolition and construction activities would not be expected to have any adverse impact on available electricity supplies or infrastructure. Demolition and construction activities would utilize fuel-efficient equipment consistent with state and federal regulations and would comply with state measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. In addition, per applicable regulatory requirements such as 2019 CALGreen, construction contractors would be required to comply with construction waste management practices to divert a minimum of 65 percent of construction and demolition debris. These practices would result in efficient use of energy necessary to construct development facilitated by the DVSP. Furthermore, in the interest of cost efficiency, construction contractors would not be anticipated to utilize fuel in a manner that is wasteful or unnecessary. Therefore, demolition and construction activities associated with the DVSP would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

Operation

Energy demand from operation of development facilitated by the DVSP would include fuel consumed by passenger vehicles; natural gas consumed for heating and cooking in residential and non-residential buildings; and electricity consumed by residential and non-residential buildings including, but not limited to lighting, water conveyance, and air conditioning.

Net new VMT related to the DVSP would require approximately 1,541,706 gallons of gasoline and 419,258 gallons of diesel fuel, which equates to 222,697 MMBtu annually (see Appendix ENG for energy calculation sheets). The DVSP includes several objectives and strategies intended to reduce the use of automobiles and increase the use of travel by transit, walking, and bicycling through land use and transportation planning. Objective 3 of the Environment & Sustainability Chapter of the DVSP aims to "promote compact, mixed-use development that makes efficient use of space." Related strategies include creating high-density and high-intensity multiple use areas, allowing compact form and multiple use patterns of development, and encouraging pedestrian and bicycle linkages to provide better connectivity and more opportunities for active transportation. Furthermore, the overarching goal of the Mobility Chapter is to "create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike, or use public transportation." Related strategies include developing a pedestrian and bicycle network throughout the Plan Area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. In addition, the vision for the Core zone of the DVSP is to create transit oriented development, particularly around the MST Marina Transit Exchange, which houses stops for six bus routes. Therefore, the mixed-use, multi-modal nature of the DVSP and its proximity to transit would reduce residents', employees', patrons', and visitors' reliance on automobiles, thereby minimizing the potential for wasteful or unnecessary consumption of vehicle fuels. Furthermore, vehicles driven by future residents, employees, visitors, and patrons of the Plan Area would be subject to increasingly stringent federal and state fuel efficiency standards, further minimizing the potential for the inefficient consumption of vehicle fuels. As a result, vehicle fuel consumption resulting from buildout of the DVSP would not be wasteful, inefficient, or unnecessary.

In addition to transportation energy use, development facilitated by the DVSP would require permanent grid connections for electricity and natural gas. Buildout of the DVSP would consume approximately 29,421,590 kWh, or 100,386 MMBtu of electricity per year for lighting and large appliances, and approximately 40,047,810 thousand British thermal units, or 40,048 MMBtu of

natural gas per year for heating and cooking (see Appendix AIR for CalEEMod results). Construction of the proposed residential and non-residential buildings would comply with the 2019 California Building Energy Efficiency Standards for Residential and Non-residential Buildings and CALGreen (California Code of Regulations Title 24, Parts 6 and 11), or later versions as they are published. These standards require the provision of electric vehicle supply equipment, water-efficient plumbing fixtures and fittings, recycling services, solar panels on low-rise residential development, solar-readiness on commercial development, and other energy-efficient measures that would reduce the potential for the inefficient use of energy. Furthermore, the overarching goal of the Environment & Sustainability Chapter of the DVSP is to support development in downtown Marina that employs green building technology and net zero building principles and is designed to create more comfortable indoor and outdoor environments. This goal is supported by objectives and strategies that require the use of low-water landscaping and high-efficiency irrigation systems and encourage the use of energy- and water-efficient building design and renewable energy. These objectives and strategies would help minimize the occurrence of inefficient, wasteful, and unnecessary energy consumption during operation. Furthermore, Monterey Bay Community Power (MBCP), which would be the default electricity provider for the Plan Area, provides carbon-free electricity to all of its customers. As a result, operation of development under the DVSP would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Table 9 summarizes the DVSP's consistency with the goals and policies of the Marina General Plan related to energy consumption. As discussed therein, the DVSP would be consistent with the applicable goals and policies related to renewable energy and energy efficiency and would not conflict with or obstruct state or local plans for renewable energy and energy efficiency. Therefore, no impact would occur.

Table 9 Consistency with Marina General Plan Energy-Related Goals and Policies

Marina General Plan Goal/Policy	Discussion
Community Goal 1.18: During the preparation of this General Plan the following goals, phrased in the form of planning principles, provided the basis for developing appropriate land use, infrastructure, and community design proposals for specific areas of the city, and for judging among several citywide General Plan alternatives and providing direction for selecting the preferred alternative. As incorporated into the General Plan, these framework goals provide the overall direction necessary to ensure that, as it grows, the city will be well functioning and attractive; that it will balance the needs of residents and business; and that appropriate use will be made of its natural, human and economic resources: 6. A balanced land use/transportation system which minimizes traffic congestion, noise, excessive energy consumption, and air pollution.	**Consistent** Objective 3 included in the Environment & Sustainability Chapter of the DVSP aims to "promote compact, mixed-use development that makes efficient use of space." Related strategies include creating high-density and high-intensity multiple use areas, allowing compact form and multiple use patterns of development, and encouraging pedestrian and bicycle linkages to provide better connectivity and more opportunities for active transportation. Furthermore, the overarching goal of the Mobility Chapter is to "create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike, or use public transportation." Related strategies include developing a pedestrian and bicycle network throughout the Plan Area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. In addition, the vision for the Core zone of the DVSP is to create transit oriented development, particularly around the Monterey Salinas Transit Center, which houses stops for six bus routes. Therefore, the DVSP would create a balanced land use/transportation system that would minimize excessive energy consumption.
Housing Policy 2.31: It is the City of Marina's intent to promote construction of new housing that is environmentally and socially responsible and that adheres to the following policies: 10. New housing shall be built to development and construction standards that conserve water and energy.	**Consistent** The overarching goal of the Environment & Sustainability Chapter of the DVSP is to support development in downtown Marina that employs Green Building technology and Net Zero Building principles and is designed to create more comfortable indoor and outdoor environments. This goal is supported by objectives and strategies that require the use of low-water landscaping and high-efficiency irrigation systems and encourage the use of energy- and water-efficient building design and renewable energy. Furthermore, construction of the proposed buildings would comply with the applicable 2019 California Building Energy Efficiency Standards and CALGreen (California Code of Regulations Title 24, Parts 6 and 11), or later versions as they are published. Therefore, construction of new housing facilitated by the DVSP would be environmentally responsible and built to development and construction standards that conserve water and energy.

Source: City of Marina 2010

NO IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	■
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	☐	☐	■	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
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?	☐	☐	■	☐
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

Topography and Geologic Conditions

Marina encompasses a roughly triangular-shaped area of land along the southeastern shore of a broad, crescent-shaped embayment in the California shoreline that forms Monterey Bay. Topography in the City consists of coastal dunes and low, rolling hills that step up gradually from the coastline to maximum elevations of about 250 feet. A 60 to 120-foot high bluff that forms the southern border of the Salinas River flood plain marks the eastern boundary of the City. To the north, the city extends to the mouth of the Salinas River and incorporates a broad, low-lying flood plain along the southwestern bank of the river. The Specific Plan Area is located roughly in the center of Marina, where topography is gently sloped. One soil type occurs in the Specific Plan Area: baywood sand at 2 to 15 percent slopes (Figure 12).

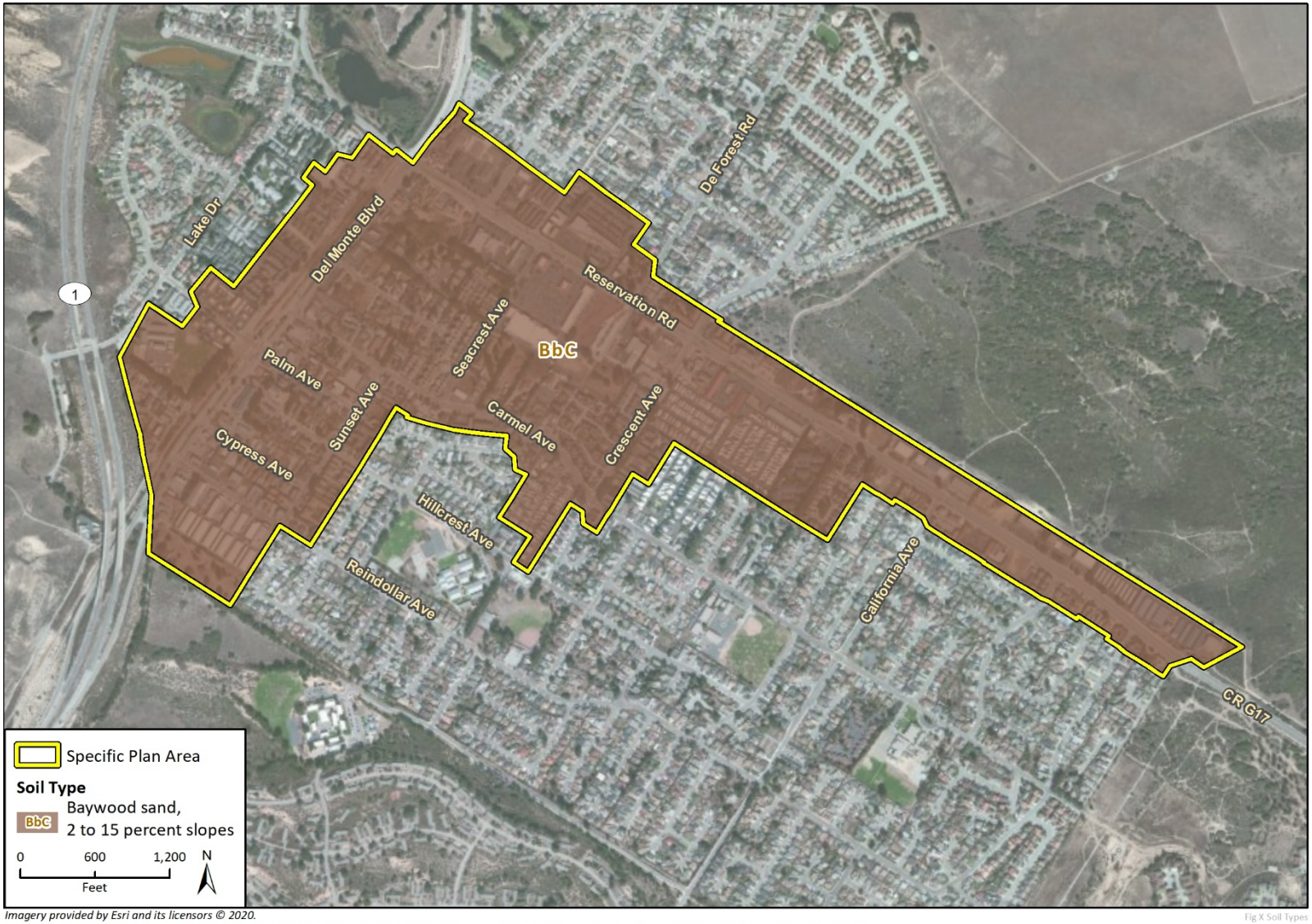
Marina is situated in the central portion of the California Coast Ranges. A large, northwest trending, fault-bounded elongate of prism of granitic and metamorphic basement rocks underlie the City and are known collectively as the Salinian Block. Overlying the granitic and metamorphic basement rocks is a sequence of dominantly marine sediments of Cretaceous to Pliocene age and non-marine sediments of Pliocene to Pleistocene age. All but the youngest of these rocks show evidence of deformation, a result of the active tectonic environment of coastal California.

The Salinian Block is itself cut internally by many smaller faults that divide it into several sub-blocks. Some of the sub-blocks, such as the Santa Lucia Mountains, south of the City, have been uplifted and form young, rugged mountain ranges. Other portions of the Salinian Block are down-dropped and form sedimentary basins. The Specific Plan Area rests in the down-dropped basement block that that forms the Monterey embayment. Granitic and metamorphic basement rocks that crop out at elevations of more than 2,000 feet above sea level some ten miles south of the city occur at depths of a few thousand feet or more beneath the planning area. Overlying the granitic basement are Miocene- to Pleistocene-age sedimentary rocks a few thousand feet thick, including the following in ascending order:

- Monterey Foundation (a sequence of marine shale of Miocene age resting on granitic basement)
- Purisima Formation (consisting of Pliocene-age sandstone and siltstone of marine origin)
- Plio-Pleistocene Paso Robles Formation (a sequence of alluvial fan and river deposits)
- Pleistocene-age Aromas Sands (made up of eolian [wind-blown] sand and river deposits)
- Late Pleistocene to Modern fluvial sediment deposited by the Salinas River
- Sand dunes that formed in approximately the last 100,000 years that form the primary, surficial geology in Marina

The U.S. Geological Survey (USGS) defines active faults as those that have had surface displacement within Holocene time (about the last 11,000 years). Surface displacement can be recognized by the existence of cliffs in alluvium, terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts. Potentially active faults are those that have had surface displacement during the last 1.6 million years. Inactive faults have not had surface displacement within the last 1.6 million years. Faults in the immediate vicinity of the City and of the Specific Plan Area include the Reliz fault, the Chupines fault, and the Monterey Bay-Tularcitos fault (Figure 13). The Reliz fault and the Ord Terrace segment of the Seaside-Chupines fault abut or cross through the Specific Plan Area. The potential for surface rupture from either of these faults is therefore present. Fault rupture from seismic shaking could be harmful as it could cause failure and collapse of poorly built structures or cause non-structural building elements to fall.

Figure 12 Soil Types in the Specific Plan Area



Imagery provided by Esri and its licensors © 2020.
Soils data provided by Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database 2019.

Fig X Soil Types

Figure 13 Faults in the Specific Plan Area

Imagery provided by Esri and its licensors © 2020.
Fault data provided by Bryant, W. A. (compiler), 2005, Digital Database of Quaternary and Younger Faults from the Fault Activity Map of California, version 2.0: CGS.

Fig X Fault Zones

For example, utility lines (electrical and natural gas) could break and present a hazard to occupants of buildings, vehicles, and pedestrians.

Regulatory Setting

Local

CITY OF MARINA GENERAL PLAN

The Community Land Use element of the Marina General Plan prohibits development on land where a significant potential threat to life or property from very high seismic shaking or seismically induced ground failure, flooding, or landslides (City of Marina 2010). The policies of that element incorporate provisions and policies of the City's certified Local Coastal Program (1982), which is being updated (City of Marina 2019). The Public Health and Safety section of the General Plan further indicates that "new development shall be permitted in areas of high seismic risk only when adequate engineering and design measures can be implemented in accordance with a geotechnical investigation and report" (City of Marina 2010). Finally, the General Plan mandates specific safeguards to address design and engineering to mitigate geologic and seismic hazards in specific locations that include zones in or adjacent to the Specific Plan Area.

MARINA MUNICIPAL CODE

Chapter 15 of the Marina Municipal Code adopts the California Building Code (CBC) by reference to cover requirements for seismic safety. As part of the project approval process, the project proponent must prepare a tentative project map that includes, among other items, a soils report prepared by a registered geotechnical engineer that includes test borings upon which the report is based and recommended corrective actions, where necessary. Finally, erosion control and improvements to be constructed are also part of the construction permit application process.

Impact Analysis

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Faults generally produce damage in two ways: ground shaking and surface rupture. Fault displacement generates seismic ground shaking, the greatest cause of widespread damage during an earthquake. Surface rupture affects a narrow area above an active fault, and ground shaking covers a wide area and is influenced, to a large extent, by the distance of the site to the seismic source, soil conditions, and depth to groundwater. Ground shaking is discussed below under threshold a.2. As shown in Figure 13, the Plan Area is near, but not overlapping, the Reliz Fault Zone. Because there are no active faults within the Plan Area, there is no potential for risk of loss injury, or death involving rupture of a known earthquake fault. There would be no impact.

NO IMPACT

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The Specific Plan Area is located in seismically active central Monterey County, but is not located in an Alquist-Priolo Earthquake Fault Zone (California Geologic Survey 2019b). As shown in Figure 13, the Plan Area is located approximately 400 feet south and west of the Reliz Fault Zone. Other major active faults capable of producing large magnitude events with a high seismic activity rate in the region include the San Andreas Fault, the Palo Colorado-San Gregorio Fault, and the Monterey Bay Offshore Fault Zone. The Reliz, Chupines, and the Monterey Bay-Tularcitos faults are in Marina's immediate vicinity.

Despite the potential for ground shaking, individual projects implemented under the Specific Plan would be required meet the current CBC seismic-resistance standards that ensure new structures are engineered to withstand the expected ground acceleration at a given location. The City of Marina also has policies and standards in place that regulate construction in areas subject to ground shaking. In accordance with General Plan, new development may be approved only if it can be demonstrated that the project site is physically suitable and the development would neither create nor significantly contribute to geologic instability or geologic hazards in accordance with a geotechnical investigation and report (City of Marina 2010). Compliance with all applicable provisions of state and local construction and designs standards, and implementation of the recommendations of the preliminary geotechnical investigation prepared for the a given project would ensure that potential impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The Specific Plan Area is located in a seismically active area and strong seismic shaking is expected to occur within the implementation horizon of the project. Seismic shaking can result in geologic hazards, including liquefaction. Non-saturated dry sands may settle and densify when subjected to earthquake shaking. Liquefaction is a phenomenon in which the strength and stiffness of saturated soil is rapidly reduced, either by seismic shaking or other sudden loading. Severe shaking of the soil can increase the water pressure in the soil, allowing the soil particles to move independently of one another. The soil consequently behaves more like a fluid than a solid, which could result in damage to building foundations and structures. According to the Relative Liquefaction Potential map in the Monterey County General Plan EIR, the entire city of Marina is characterized as having a low relative liquefaction susceptibility (Monterey County 2008). The 2019 CBC includes specific requirements to address liquefaction hazards. New development in accordance with the proposed Specific Plan would conform to the CBC (as amended at the time of permit approval) as required by law. Compliance with the CBC, combined with the low relative liquefaction susceptibility, would result in less than significant impacts related to seismic-related ground failure and liquefaction.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Topography in the Specific Plan Area is relatively flat. Based on the topography and according to the Marina General Plan EIR, landslide risk is low in the Specific Plan Area. The 2016 CBC includes specific requirements to address landslide hazards. New development implemented in accordance

with the Specific Plan would conform to the CBC, as amended at the time of permit approval and as required by law. Compliance with the CBC combined with the area's low relative landslide susceptibility would result in less than significant impacts related to landslide.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

The coastal areas of Marina are subject to severe erosion problems from highly erosive, windblown sand (County of Monterey 2008a). The coastline is low relief and much of the erosion is due to movement of unstable, wind-blown sand, especially where vegetation is not in place. This erosion can affect beachfront property, particularly during winter storms when high surf and wave action are concentrated and redistribute the sand via littoral drift with no new sand to reform the beach.

The Specific Plan Area is nearly 0.5 mile from the coastline. Projects implemented under the Specific Plan would not substantially contribute to coastal soil erosion. Individual projects could have localized soil erosion effects, but such projects would be permitted individually and subject to all applicable erosion control regulations of the Marina Municipal Code. These include Section 8.46.080, which requires erosion prevention and construction site management practices. Therefore, compliance with applicable regulations would reduce soil erosion and topsoil loss impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

c. Would the project 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?

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils shrink and swell based on moisture level in the clay minerals that make these soils expand and contract. Soils with moderate or high expansion potential are susceptible to shrinking and swelling due to fluctuations in moisture content and are a common cause of foundation deterioration, pavement damage, cracking of concrete slabs, and shifting of underground utilities. According to the CBC, soils with an expansion index exceeding 91 are considered highly expansive; such soils would typically have a liquid limit of 40 or more and a plasticity index exceeding 15. These soils are undesirable for use as engineered fill or subgrade directly underneath foundations or pavement, and must be replaced with non-expansive engineered fill or require treatment to mitigate their expansion potential. Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and become fluid, similar to quicksand. Lateral spreading can occur when a liquefied soil moves toward a free slope face during the cyclic earthquake loading. Liquefaction-induced lateral spreading can also occur on mild slopes (flatter than 5 percent) underlain by loose sands and a shallow water table. If liquefaction occurs, the unsaturated overburden soil can slide as intact blocks over the lower, liquefied deposit, creating fissures and scarps.

Implementation of the Specific Plan would result in more dense development, thereby exposing more persons and structures to geological hazards. Landslides resulting in earth and debris flow could result in structural damage or complete loss of structures, as well as injuries or death to persons. The Specific Plan Area is relatively flat, however, and development would be located in areas where there is little or no risk of slope instability.

The expansion potential (shrink-swell potential), liquefaction, and lateral spreading risk for the Specific Plan Area is low. The only soil type in the Specific Plan Area is Baywood Series, with 2 to 15 percent slopes (Figure 12). This soil has a slight to moderate water erosion hazard and when vegetation or other ground cover is removed, is subject to soil blowing and water erosion (National Cooperative Soil Survey 2014; U.S. Department of Agriculture 1978).

The CBC includes requirements to address soil stability-related hazards. Typical measures involve removing, replacing soil with the proper fill selection, and compacting the soil. For individual projects involving substantial ground disturbance, geotechnical engineering reports would be required to ensure conformance with City standards. Therefore, compliance with existing regulations would reduce impacts to a less than significant level with regard to landslide, lateral spreading, subsidence, liquefaction, or collapse.

LESS THAN SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Development pursuant to the Specific Plan would not use on-site septic systems for wastewater treatment. Section 19, *Utilities and Service Systems*, discusses the conveyance and treatment of wastewater in the Specific Plan Area. There would be no impact regarding the use of septic tanks or alternative wastewater disposal systems.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The paleontological sensitivity of the geologic units that underlie the Plan Area was evaluated using the results of the paleontological locality search and review of existing information in the scientific literature concerning known fossils within those geologic units. Rincon examined fossil collections records from the University of California Museum of Paleontology (UCMP) online database, which contains known fossil localities in Monterey County.

Following the literature review and museum record search, a paleontological sensitivity classification was assigned to the geologic units within the Plan Area. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units. The Society of Vertebrate Paleontology (SVP) (2010) has developed a system for assessing paleontological sensitivity and describes sedimentary rock units as having high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present.

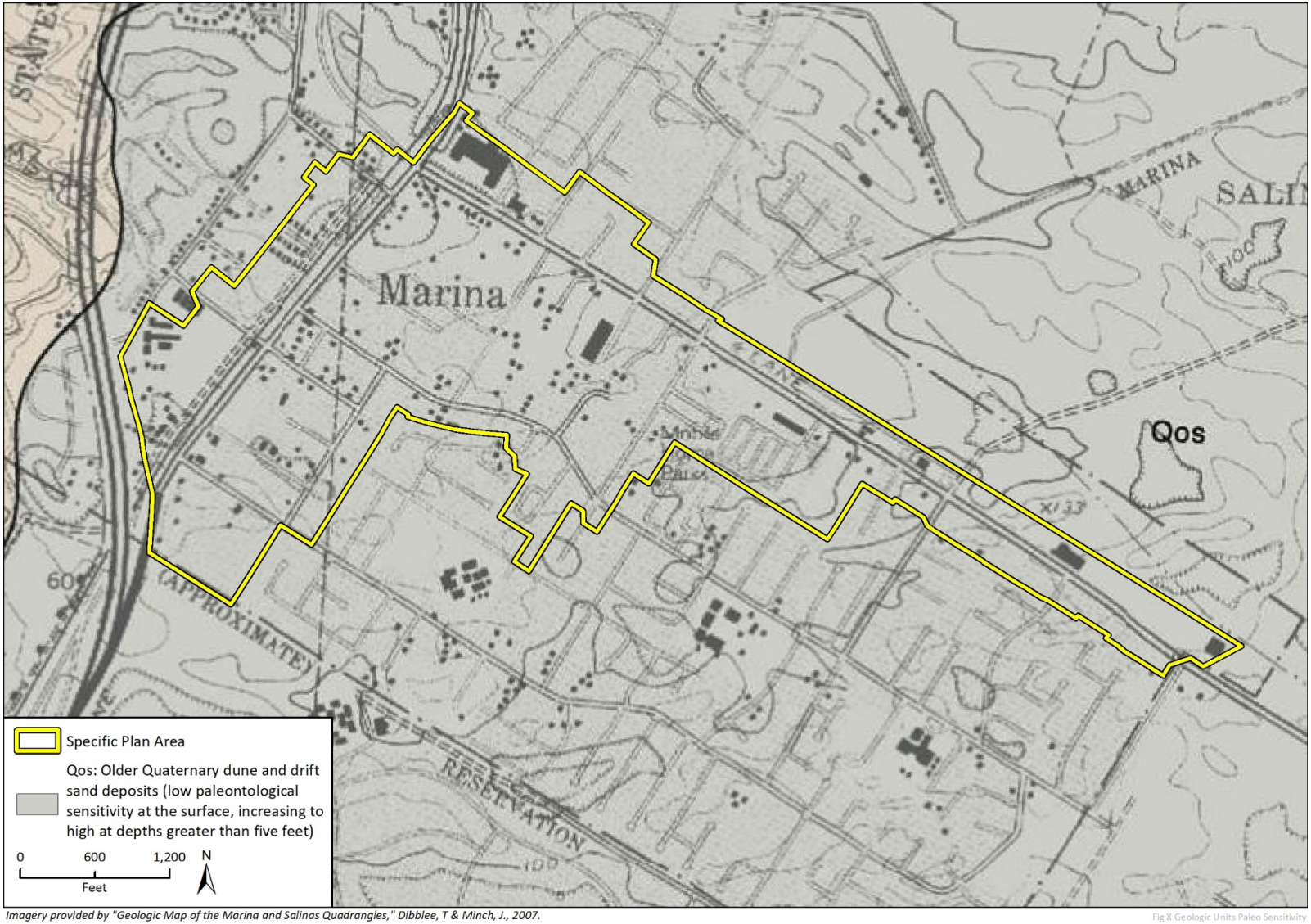
The Plan Area is situated in the Coast Ranges Geomorphic Province, one of eleven major provinces in the California (California Geological Survey 2002). A geomorphic province is a region of unique topography and geology that is distinguished from other regions based on its landforms and geologic history. The Coast Ranges province is bounded to the east by the Great Valley, to the northeast by the Klamath Mountains, to the south by the Transverse Ranges, and to the west by the Pacific Ocean. According to geologic mapping by Dibblee and Minch (2007), the Plan Area is entirely underlain by older Quaternary dune and drift sand deposits (Qos). Characterized by poorly or

medially-developed soils, older stabilized dune sands comprise the majority of the surficial geology of the City of Marina. These sediments date to the late Holocene or early Pleistocene, and consist of weakly-consolidated, well-sorted sand that has been stabilized through erosional action and soil formation (Dupre and Tinsley 1980).

Older Quaternary sedimentary deposits have a well-documented record of abundant and diverse vertebrate fauna throughout California, including Monterey County. A search of the paleontological locality records at the UCMP resulted in no previously recorded fossil localities in the Plan Area; however, several vertebrate localities have been recorded nearby in similar deposits. The UCMP has records of seventeen fossil specimens from Pleistocene-aged sediments in Monterey County. The closest of these include a camel (*Camelops*) recovered from Moss Landing and oysters (*Osteria*) from Elkhorn Slough, just north of Marina (UCMP 2019). Other Pleistocene-aged fossils recovered from Monterey County are horses (*Equus*), ground sloth (*Glossotherium*), and bison (*Bison*), among others (Hoppe et al. 2003; UCMP 2019). Depth of recovery is unreported for any of these localities. Older Quaternary dune and drift sand deposits (Qos) have the potential to contain buried intact paleontological resources at moderate depths because the unit has proven to yield significant vertebrate fossils near the Plan Area (UCMP 2019). The depths at which these units become conducive for fossil preservation is highly variable, but generally does not occur at depths of less than five feet. Consequently, aeolian sediments within the project site (Qos) are assigned a low paleontological sensitivity at the surface, increasing to a high paleontological sensitivity at depths greater than five feet (SVP 2010). Figure 14 depicts the surficial geologic unit within the Plan Area and its immediate vicinity, as well as the paleontological sensitivity within the bounds of the Plan Area. As shown therein, the entire Plan Area is underlain by Qos.

Ground disturbance to intact geologic units within project areas mapped as Older Quaternary sedimentary deposits (Qos) have the potential to impact paleontological resources at depths greater than five feet. Because the entire Plan Area is underlain by Qos, construction activities associated with any future project pursuant to the Specific Plan may result in the destruction, damage, or loss of undiscovered scientifically-important paleontological resources. The implementation of Mitigation Measure GEO-1 would reduce impacts to paleontological resources to a less than significant level by including an implementation program requiring paleontological resource studies for projects that would require excavation greater than five feet and implementation of further requirements to avoid or reduce impacts to such resources on a project-by-project basis.

Figure 14 Geologic Unit and Paleontological Sensitivity of the Plan Area



Imagery provided by "Geologic Map of the Marina and Salinas Quadrangles," Dibblee, T & Minch, J., 2007.

Fig X Geologic Units Paleo Sensitivity

Mitigation Measures

GEO-1 Paleontological Resources Monitoring and Mitigation

The City of Marina shall require the following specific requirements for individual projects in the DVSP that would require excavation exceeding five feet:

1. Prior to excavations exceeding five feet, a qualified professional paleontologist shall be retained to direct all mitigation measures related to paleontological resources. A qualified professional paleontologist is defined by the SVP standards as an individual preferably with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as a paleontological mitigation project supervisor for a least two years (SVP 2010).
2. The qualified professional paleontologist shall design a Paleontological Resources Mitigation and Monitoring Program (PRMMP) for the project, which outlines the procedures and protocol for conducting paleontological monitoring and mitigation. Monitoring shall be conducted by a qualified paleontological monitor who meets the minimum qualifications per standards set forth by the SVP. The PRMMP shall address the following procedures and protocols:
   - Timing and duration of monitoring
   - Procedures for work stoppage and fossil collection
   - The type and extent of data that should be collected with any recovered fossils
   - Identify an appropriate curatorial institution
   - Identify the minimum qualifications for qualified paleontologists and paleontological monitors
   - Identify the conditions under which modifications to the monitoring schedule can be implemented
   - Details to be included in the final monitoring report.
3. Prior to the start of construction, the qualified paleontologist or his or her designee shall conduct a paleontological Worker Environmental Awareness Program (WEAP) training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff.
4. Full-time paleontological monitoring shall be conducted during ground disturbing construction activities (i.e., grading, trenching, foundation work) exceeding five feet, pursuant to the PRMMP. Paleontological monitoring is not required for any construction activities that do not exceed depths of less than five feet. If the qualified paleontologist determines that full-time monitoring is no longer warranted, based on the specific geologic conditions at the surface or at depth, he/she may recommend that monitoring be reduced to periodic spot-checking or cease entirely.
5. In the event of a fossil discovery by the paleontological monitor or construction personnel, all work in the immediate vicinity of the find shall cease. The qualified paleontologist shall evaluate the find before restarting construction activity in the area. If it is determined that the fossil(s) is (are) scientifically significant, the qualified paleontologist shall complete the following conditions to mitigate impacts to significant fossil resources:
   a. The paleontological monitor shall evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the qualified paleontologist shall recover them following standard field

procedures for collecting paleontological as outlined in the PRMMP. If fossils are discovered, the qualified paleontologist shall recover them as specified in the project's PRMMP.

b. Once salvaged, significant fossils shall be prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection.

c. Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist should prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall be submitted to the City of Marina.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	■	☐

Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change, the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century (Intergovernmental Panel on Climate Change 2007).

GHGs are gases that absorb and re-emit infrared radiation in the atmosphere. The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), fluorinated gases such as hydrofluorocarbons and perfluorocarbons, and sulfur hexafluoride. Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Anthropogenic GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (USEPA 2020).

The accumulation of GHGs in the atmosphere regulates Earth's temperature. Without the natural heat-trapping effect of GHGs, Earth's surface would be about 34 degrees Celsius cooler (California Environmental Protection Agency 2006). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of GHGs in the atmosphere beyond the level of naturally occurring concentrations. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Some of the potential impacts of climate change in California may include loss of snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (State of California 2018). While these potential impacts identify the possible effects of climate change at a statewide level, in general, scientific modeling tools are currently unable to predict what impacts would occur locally.

Methodology

Construction and operational GHG emissions associated with development facilitated by the DVSP were calculated using CalEEMod version 2016.3.2. Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume and are the GHG emissions that the DVSP would emit in the largest quantities (Intergovernmental Panel on Climate Change 2007). Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, because the DVSP would facilitate development of residential and retail/office uses, the quantity of fluorinated gases would not be substantial since fluorinated gases are primarily associated with heavy industrial processes. Emissions of all GHGs are converted into their equivalent global warming potential (GWP) in terms of CO_2 (i.e., CO_2e). Minimal amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would be emitted; however, these other GHG emissions would not substantially add to the total calculated CO_2e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (CAPCOA 2008).

Construction Emissions

Construction facilitated by the DVSP would generate temporary GHG emissions primarily as a result of operation of construction equipment on-site as well as from vehicles transporting construction workers to and from the Plan Area and heavy trucks to export earth materials off-site. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. Assumptions used in the modeling of GHG emissions from DVSP construction are discussed in detail in Section 3, *Air Quality*.

Air districts such as SLOAPCD (San Luis Obispo Air Pollution Control District; the air district immediately adjacent to the MBARD) have recommended amortizing construction-related emissions over the life of the project in conjunction with a project's operational emissions. Amortization periods are not based on conditions specific to individual air districts but rather are based on the estimated lifetime of a given development project, which is primarily a function of the type of project (e.g., residential, commercial, industrial), not its location. Land use projects in Monterey County have used the methodologies established by SLOAPCD to assess GHG impacts (County of Monterey 2015). The SLOAPCD recommends amortizing GHG emissions from construction activities over a 50-year period for residential projects and a 25-year period for commercial projects (SLOAPCD 2012). Therefore, given the nature of amortization periods and the recommendations of MBARD, it is appropriate to use the SLOAPCD amortization periods in this analysis. Because the

DVSP envisions mixed-use development, this analysis amortizes construction GHG emissions over a 25-year period to provide a conservative estimate of GHG emissions.

Operational Emissions

As discussed in the *Project Description*, the DVSP has a 20-year planning horizon. This analysis estimates operational emissions at year 2030 (i.e., the next State milestone target year) for comparison to the locally-applicable, project-specific 2030 efficiency threshold (discussed further under *Significance Thresholds*) and at year 2040 (i.e., the project's buildout year) for informational purposes.

Building energy use is typically divided into energy consumed by the built environment and energy consumed by uses that are independent of the building, such as plug-in appliances. Non-building energy use, or "plug-in energy use," can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.). In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. Energy usage from non-residential energy usage was reduced by 30 percent to account for the requirements of 2019 Title 24 standards (California Energy Commission 2019). This analysis also accounts for the fact that the project would include solar photovoltaic systems on all low-rise residential buildings (i.e., single- and multi-family residential buildings that are three stories or less) with annual electrical output equal to or greater than the dwellings' annual electrical usage in compliance with Section 150.1(c)14 of the 2019 Building Energy Efficiency Standards. Accordingly, it was assumed that all electricity demand for the project's residential units would be generated through solar photovoltaic systems and would not produce GHG emissions. The California Long-Term Energy Efficiency Strategic Plan establishes goals for zero net energy (ZNE) new commercial construction by 2030 to be implemented through increasingly stringent iterations of the Title 24 standards (California Public Utilities Commission [CPUC] 2011).[8] Although it is anticipated that these goals would be implemented prior to buildout of the DVSP, these ZNE goals are conservatively not included in the GHG emissions modeling because the timing of implementation is uncertain at this time.

MBCP, which provides carbon-free electricity, is the default energy provider in the Plan Area. However, future residents and tenants of the project could opt out of MBCP and connect to Pacific Gas and Electric (PG&E), which does not provide carbon-free electricity to all customers. According to MBCP, approximately 97 percent of accounts in their service area maintain their enrollment in MBCP; the remaining 3 percent of accounts opt out and connect to PG&E (Monterey Bay Community Power 2019). Because MBCP procures a greater percentage of its electricity from renewable sources, electricity generated by MBCP produces fewer GHG emissions than electricity generated by PG&E. Therefore, to account for the possibility of dual electricity providers with the Plan area, this analysis assumes that 97 percent of electricity demand generated by the Proposed Project would be supplied by MBCP and the remaining 3 percent of electricity demand would be supplied by PG&E. Because CalEEMod cannot account for dual electricity providers, CalEEMod was utilized to estimate the amount of electricity demand from the Proposed Project, and the resultant GHG emissions were calculated separately in a standalone document included in Appendix AIR based on the emission calculation methodology used in CalEEMod (CAPCOA 2017, Appendix A).

MBCP's energy intensity factor for CO_2 (i.e., the amount of CO_2 per megawatt-hour [MWh]) is approximately 2 pounds per MWh (Monterey Bay Community Power 2018). Due to a lack of available data, it was conservatively assumed that the energy intensity factors for CH_4 and N_2O

[8] A zero net energy building is defined as an energy-efficient building where, on a source energy basis, the actual annual consumed energy is less than or equal to the on-site renewable generated energy (CPUC 2019).

would be the same as those for PG&E in 2040, which are further detailed below and in Table 10.[9] Because MBCP has already achieved carbon-free electricity, it has already met its mandated RPS targets; therefore, it is reasonable to assume that its current energy intensity factors will remain the same through 2040. PG&E's estimated energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per MWh) for 2040 are based on the CalEEMod default factors and the regulatory requirements of the RPS. The default energy intensity factors included in CalEEMod are based on data from 2008 at which time PG&E had only achieved a n approximately 12 percent procurement of renewable energy. However, per SB 100, the statewide Renewable Portfolio Standard (RPS) Program requires electricity providers to increase procurement from eligible renewable energy sources to 60 percent by 2030 and 100 percent by 2045. Therefore, because buildout of the DVSP would occur in 2040, the estimated renewables portfolio and corresponding energy intensity factors for PG&E in 2040 were reduced using linear interpolation between the mandated RPS targets for 2030 and 2045.[10] PG&E energy intensity factors that include this reduction are shown in Table 10.

Table 10 Pacific Gas & Electric Energy Intensity Factors

	2008 (lbs./MWh)[1]	2030 (lbs./MWh)[2]	2040 (lbs./MWh)[3]	2045 (lbs./MWh)[2]
Percent procurement	12.8%	60%	86.67%	100%
Carbon dioxide (CO_2)	641.35	292.85	97.62	0
Methane (CH_4)	0.029	0.015	0.005	0
Nitrous oxide (N_2O)	0.006	0.003	0.001	0

[1] Source: CEC 2010

[2] RPS goals established by SB 100

[3] Linear interpolation of RPS goals for 2030 and 2045

The amount of water used and the amount of wastewater generated by a project generate indirect GHG emissions. These emissions are a result of the energy used to supply, convey, and treat water and wastewater. In addition to the indirect GHG emissions associated with energy use, the wastewater treatment process itself can directly emit both CH_4 and N_2O. Development facilitated by the DVSP would be subject to 2019 CALGreen (or the most current code at the time of development), which requires a 20 percent increase in indoor water use efficiency. Thus, in order to account for compliance with CALGreen, a 20 percent reduction in indoor water use was included in the water consumption calculations. In addition to water reductions associated with building code compliance, the GHG emissions from the energy used to transport the water account for compliance with the RPS. The default wastewater assumptions for both the DVSP and the existing use were adjusted to account for the fact that the wastewater generated at the project site is treated by the Monterey One Water treatment facility, which only utilizes anaerobic digestor processes with no facultative lagoons or septic tanks (Monterey One Water 2020). Emissions modelling does not account for the provisions of Assembly Bill 1668, which sets daily indoor residential water use standards of 55 gallons per capita through 2024, 52.5 gallons per capita through 2029, and 50 gallons per capita from 2030 on. The provisions of Assembly Bill 1668 were

[9] This assumption is conservative because MBCP currently has a greater percentage of renewables procurement than is assumed for PG&E in 2034; therefore, its energy intensity factors for CH_4 and N_2O are likely lower.

[10] Linear interpolation estimates an interim value between two known values by assuming a steady rate of growth between the two known values. In this instance, it was assumed that PG&E's renewable energy percent procurement would increase by approximately 2.67 percent each year from 2030 to 2045 in order to increase its renewable energy percent procurement from 60 percent in 2030 to 100 percent in 2045.

not included in the GHG emissions modeling because the timing and mechanisms of implementation are uncertain at this time.

For mobile sources, CO_2 and CH_4 emissions were quantified in CalEEMod using the net new vehicle trips and VMT estimates for residential and office land uses provided in the traffic study and SB 743 Analysis prepared by Kimley Horn (Appendix TRAF-1 and TRAF-2, respectively, as well as Table 2 in Section 3, *Air Quality*). As detailed in Section 3, *Air Quality*, based on the SB 743 Analysis, the retail uses associated with the proposed project would generate no net new VMT; therefore, mobile source emissions were not estimated for the retail land uses because no net new emissions would be generated as compared to existing conditions in the NCCAB. Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions for the DVSP were quantified using guidance from the CARB and the EMFAC2017 Emissions Inventory for the MBARD region for the years 2030 and 2040 using the EMFAC2011 categories (CARB 2018 and 2020).

Significance Thresholds

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, project emissions can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. Thus, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA Guidelines*, Section 15064[h][1]).

Efficiency thresholds are quantitative thresholds based on a measurement of GHG efficiency for a given project, regardless of the amount of mass emissions. These thresholds identify the emission level below which new development would not interfere with attainment of statewide GHG reduction targets and would not significantly impact the environment. A project that attains such an efficiency target, with or without mitigation, would result in less than significant GHG emissions. This analysis evaluates GHG emissions generated by the DVSP against a locally appropriate, project-specific efficiency threshold derived from CARB's recommendations in the 2017 Climate Change Scoping Plan Update. This provides a quantitative assessment of the project's GHG emissions compared to a project-specific threshold. The locally appropriate, project-specific efficiency threshold used in this analysis was created to comply with the CEQA Guidelines and interpretative GHG case law. This approach is appropriate for the proposed DVSP because it measures the project's emissions on a local per capita basis to determine its overall GHG emissions efficiency relative to the State GHG emission reduction goals.

Although the proposed project has a buildout horizon of year 2040, the City has determined that it is appropriate to evaluate the significance of the project's emissions based on a threshold that is consistent with the State's 2030 target, which is consistent with the decision of *Cleveland National Forest Foundation v. San Diego Association of Governments* (2017). The State's 2030 target is a legislatively adopted target with an adopted implementation plan (i.e., the 2017 Scoping Plan) that provides guidance on how the State's 2030 target translate into a local target for land use planning. In contrast, the State's 2045 carbon neutrality goal (Executive Order [EO] B-55-18) is not an adopted target or threshold of significance consistent with CEQA Guidelines 15064.4(b)(2) and 15064.7. Furthermore, neither EO B-55-18 nor EO S-3-05 specify a plan or implementation measures to achieve these goals, and there is no regulatory guidance on how the State's 2045 and 2050 goals

should be implemented. Therefore, the consistency of the DVSP with the State's long-term GHG reduction goals is discussed qualitatively for informational purposes only.

With the release of the 2017 Climate Change Scoping Plan Update, CARB recognized the need to balance population growth with emissions reductions and in doing so, provided a new local plan level methodology for target setting that provides consistency with state GHG reduction goals using per capita efficiency thresholds. A project-specific efficiency threshold can be calculated by dividing statewide GHG emissions by the sum of statewide jobs and residents. However, not all statewide emission sources are present near the Plan Area (e.g., agriculture and industrial). Accordingly, consistent with the concerns raised in the Golden Door (2018) and Newhall Ranch (2015) court decisions regarding the correlation between state and local conditions, the 2030 statewide inventory target was modified with substantial evidence provided to establish a locally-appropriate, evidence-based, mixed-use project-specific threshold consistent with California's SB 32 and EO B-55-18 targets.

To develop this threshold, the local planning area was first evaluated to determine emissions sectors that are present and would be directly affected by potential land-use changes. A description of major sources of emissions that are included in the State Scoping Plan emissions sectors and representative sources in Marina can be found in Table 11.

According to Figure 2.2 (Land Use Plan) in the Marina General Plan (2010), there are agricultural land uses within the City. However, these land uses are located outside the Urban Growth Boundary, and buildout of the DVSP would not alter these land uses. Therefore, the Agricultural Emissions Sector was considered inapplicable to the DVSP and was removed from the State 2030 emissions forecast. Furthermore, no Industrial Sector source emissions (i.e., oil, gas, and hydrogen production; refineries; general fuel use; and mining operations) are present in the City of Marina; therefore, the Industrial Emissions Sector was removed from the State 2030 emissions forecast to retain a more conservative locally-appropriate target.[11] Additionally, Cap and Trade emissions reductions occur independent of any local jurisdictional land use decisions and were also excluded from the locally-appropriate target.

After removing Agricultural, Industrial, and Cap and Trade emissions, the remaining emissions sectors with sources within the Marina planning area were then summed to create a locally-appropriate 2030 emissions total for a mixed-use project in Marina. To determine a per service population threshold, the 2030 emissions total was divided by the projected statewide 2030 service population, as shown in Table 12. Therefore, the locally-appropriately, project-level 2030 threshold is 3.2 MT of CO_2e per service population, which is consistent with SB 32 target and demonstrates substantial progress toward achieving the State's long-term goals.

The service population attributed to the DVSP is based on data specific to Marina. Not all mixed-use projects in California produce the same service population. As discussed in Section 14, *Population and Housing*, based on an average household size of 2.74 persons in the City of Marina, the DVSP would accommodate approximately 7,957 new residents. As discussed in the SB 743 analysis (Appendix TRAF), the DVSP would also provide employment opportunities for approximately 3,283 persons. Therefore, the DVSP service population would be approximately 11,240 persons.

[11] Light industrial and warehousing land uses are present in Marina; however, these land uses are considered part of the Commercial sector rather than the Industrial sector for the purposes of the 2017 Scoping Plan.

Table 11 SB 32 Scoping Plan Emissions Sector Targets

GHG Emissions Sector[1]	2030 State Emissions Target[1]	Locally Appropriate[2]	Project Specific	Major Sources in Marina[3]
Residential and Commercial	38	Yes	Yes	Natural gas end uses, including space and water heating of buildings
Electric Power	53	Yes	Yes	Electricity uses, including lighting, appliances, machinery and heating
High GWP	11	Yes	Yes	SF_6 from power stations, HFCs from refrigerants and air conditioning[4]
Recycling and Waste	8	Yes	Yes	Waste generated by residential, commercial, and other facilities
Transportation	103	Yes	Yes	Passenger, heavy duty, and other vehicle emissions
Industrial	83	No	No	Oil, gas, and hydrogen production, refineries, general fuel use, and mining operations do not occur substantially within the City and are not a part of the DVSP[5]
Agriculture	24	No	No	Enteric fermentation, crop residue burning, manure management occur outside the City's Urban Growth Boundary and are not included in the DVSP[7]
Cap and Trade Reductions	-60	No	No	Reductions from facilities emitting more than 10,000 MT CO_2e per year[6].
Scoping Plan Target (All Sectors)	260	No	No	All emissions sectors
Locally Inapplicable Sector (Industrial)	-83	No	No	Oil, gas, and hydrogen production, refineries, general fuel use[5]
Locally Inapplicable Sector (Agriculture)	-24	No	No	Enteric fermentation, crop residue burning, manure management[7]
Locally Inapplicable Sector (Cap and Trade)	60	No	No	Reductions from facilities emitting more than 10,000 MT CO_2e per year[6]
2030 Locally Applicable Emissions Sectors	213	Yes	Yes	Emissions applicable to the local planning area

[1] All State targets in MMT CO2e, see CARB 2017 Climate Change Scoping Plan, Page 31 for sector details (CARB 2017)

[2] Locally appropriate is defined as having significant emissions in Scoping Plan Categorization categories within the planning area.

[3] CARB 2017

[4] SF_6 is used primarily as an insulator in electrical substations while HFCs can be found in many residential and commercial refrigeration and air conditioning units. HFCs are in the process of being phased out through 2036 in most developed countries.

[5] The majority of this sector is not applicable to the local planning area and any potential applicable subsectors cannot be disaggregated due to CARB accounting methods. Therefore, the entire sector has been removed to ensure a more conservative target.

[6] Cap and Trade is excluded as reductions will occur independent of local project land use decisions and are therefore not locally appropriate.

[7] According to the Marina General Plan, there are no existing agricultural land uses within the City's UGB, and the DVSP would not alter the agricultural land uses located outside in the UGB.

Table 12 SB 32 Locally-Appropriate Project-Specific Threshold

Source		Metric
Service Population	California 2030 Population[1]	42,263,654
	California 2030 Employment Projection[2]	23,459,500
	Service Population	**65,723,154**
Locally-Appropriate 2040 Project Threshold	2030 Locally-Appropriate Emissions Sectors (MT of CO_2e)	213,000,000
	2030 Service Population	**65,723,654**
	2030 Service Person Target (MT of CO_2e per Service Population)	**3.2**

[1] CDOF 2020

[2] Average of 2030 employment range projections under implementation scenario in the Table 15 of the 2017 Climate Change Scoping Plan Update (CARB 2017).

At this time, the State Legislature has codified a target of reducing emissions to 40 percent below 1990 emissions levels by 2030 (SB 32) and has developed the 2017 Scoping Plan to demonstrate how the State will achieve the 2030 target and make substantial progress toward the 2050 goal of an 80 percent reduction in 1990 GHG emission levels set by EO S-3-05. In EO B-55-18, which identifies a new goal of carbon neutrality by 2045, the California Air Resources Board has been tasked with including a pathway toward the EO B-55-18 carbon neutrality goal in the next Scoping Plan update.

While state and regional regulators of energy and transportation systems, along with the State's Cap-and-Trade program, are designed to be set at limits to achieve most of the reductions needed to attain the State's long-term targets, local governments can do their fair share toward meeting the State's targets by siting and approving projects that accommodate planned population growth and projects that are GHG-efficient. At this time, CARB has not adopted a plan that establishes a pathway to achieving the State's long-term targets; therefore, these targets are not used as thresholds of significance in this analysis. Instead, the Association of Environmental Professionals (AEP) Climate Change Committee recommends that CEQA GHG analyses evaluate project emissions in light of the trajectory of state climate change legislation and assess their "substantial progress" toward achieving long-term reduction targets identified in available plans, legislation, or EOs (AEP 2016). Consistent with AEP Climate Change Committee recommendations, GHG impacts of the DVSP are analyzed using a threshold based on the State's 2030 target, which evaluates whether the project would impede "substantial progress" toward meeting the reduction goals identified in SB 32, EO S-3-05, and EO B-55-18. Because SB 32 is considered an interim target toward meeting the 2045 and 2050 State goals, consistency with SB 32 is considered to be contributing substantial progress toward meeting the State's long-term 2045 and 2050 goals. Avoiding interference with, and making substantial progress toward, these long-term State targets is important because these targets have been set at levels that achieve California's share of international emissions reduction targets that will stabilize global climate change effects and avoid the adverse environmental consequences of climate change (EO B-55-18). Furthermore, it is infeasible to meet the State's long-term targets at this time because achieving these targets will depend on substantial technological innovation in GHG emission reduction measures and changes in legislation and regulations that will need to occur over the next 25 to 30 years as have occurred over the past 14 years to meet the 2020 target set by AB 32. As discussed above, consistency with the locally-applicable, project-specific SB 32 efficiency threshold represents substantial progress toward climate-stabilizing targets set forth by EOs S-3-05 and B-55-18.

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

As shown In Table 13, project construction would generate an estimated 73,741 MT of CO_2e. Amortized over a 25-year period, project construction would generate an estimated 2,950 MT of CO_2e per year.

Table 13 Estimated Construction Emissions of Greenhouse Gases

Year	Annual Emissions (MT of CO_2e/year)
2021	5,364
2022	5,953
2023	4,344
2024	4,270
2025	4,156
2026	4,064
2027	3,988
2028	3,906
2029	3,862
2030	3,849
2031	3,804
2032	3,780
2033	3,719
2034	3,691
2035	3,681
2036	3,695
2037	3,681
2038	3,681
2039	254
Total Construction Emissions	**73,741**
Amortized over 25 years	**2,950**

MT of CO_2e = metric tons of carbon dioxide equivalent
See Appendix AIR for CalEEMod results.

Combined Annual GHG Emissions

Table 14 summarizes the long-term GHG emissions generated by Specific Plan buildout from area sources, energy use, solid waste, water use, and mobile sources and combines construction and operational GHG emissions. As shown therein, the Specific Plan would generate approximately 23,509 MT of CO_2e per year, or 2.1 MT of CO_2e per service person per year in 2030, which would not exceed the locally-applicable, project-specific 2030 threshold of 3.2 MT of CO_2e per service person per year. As discussed under *Methodology*, the estimate of GHG emissions from the DVSP is conservative given that modeling does not include the anticipated implementation of long-term statewide policies, such as ZNE residential and commercial buildings under California's Long-Term Energy Efficiency Strategic Plan, a 75 percent reduction in solid waste sent to landfills under Assembly Bill 341, and daily indoor residential water use standards established by Assembly Bill 1668, all of which would serve to reduce the DVSP's operational GHG emissions (CPUC 2011; CalRecycle 2015). Nevertheless, impacts would be less than significant.

Table 14 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual 2030 Project Emissions (MT of CO_2e)	Annual 2040 Project Emissions (MT of CO_2e)[1]
Construction	2,950	2,950
Operational		
Area	50	50
Energy	4,390	2,150
Solid Waste	1,372	1,372
Water	468	269
Mobile		
CO_2 and CH_4	14,094	13,069
N_2O	185	169
Total Project Emissions	**23,509**	**20,029**
Service Population[2]	11,240	11,240
Emissions per Service Person	**2.1**	**1.8**
2030 Locally-Applicable, Project-Specific Threshold	3.2	n/a
Threshold Exceeded?	No	n/a

See Appendix AIR for CalEEMod results and N_2O mobile emissions data sheets.
[1] Provided for informational purposes only.
[2] Service Population = 7,957 residents + 3,283 employees (see Section 3, *Air Quality*)

The following discussion of the consistency of the project's GHG emissions with the State's long-term 2045 and 2050 goals is provided for informational purposes only, consistent with the decision of *Cleveland National Forest Foundation v. San Diego Association of Governments* (2017). Consistency with the 2045 and 2050 goals is not used a threshold of significance to evaluate the project's GHG emissions in this IS-MND for the reasons stated earlier under *Significance Thresholds*. Table 14 summarizes the net increase in emissions generated by the DVSP in year 2040 (i.e., the planning horizon). As shown therein, the project's net new GHG emissions would decrease from year 2030 to approximately 20,029 MT of CO_2e per year by year 2040 (an approximately 14 percent reduction) due to increasing usage of renewable energy for electricity and improving vehicle emissions standards. As a result, per capita GHG emissions would decrease to approximately 1.8 MT of CO_2e per service person per year (an approximately 14 percent reduction in per service person emissions). In addition, technological innovations and policies adopted in furtherance of EO B-55-18, S-3-05, and N-79-20 would result in fewer operational GHG emissions in 2045 and 2050. The exact magnitude of the decrease would depend on the nature of the innovations and policies adopted and their relevance to development facilitated by the DVSP. Nevertheless, the DVSP would emit up to approximately 20,029 MT of CO_2e in 2040, which would be potentially inconsistent with the State's goals of carbon neutrality by 2045 (EO B-55-18) and an 80 percent reduction in GHG emission levels by 2050 (EO S-3-05). However, it is not possible to definitively determine whether the project would be consistent because substantial technological innovation in GHG emission reduction measures and changes in legislation and regulations are likely to occur over the next 25 to 30 years as have occurred over the past 14 years to meet the target set by AB 32. Furthermore, the State has not yet comprehensively quantified its carbon sinks; therefore, it is unknown at this time what magnitude of emissions reductions are needed to achieve the carbon neutrality goal set in EO B-55-18. As previously stated, this discussion of the project's consistency with the State's long-term goals is provided for informational purposes only and is not used to determine the significance of the project's GHG emissions. As shown in Table 14, the project's emissions would not exceed the 2030 locally-applicable, project-specific threshold; therefore, no mitigation is required.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The project's consistency with the 2017 Scoping Plan, AMBAG 2040 MTP-SCS, and Marina General Plan are discussed in the subsections below.

2017 Scoping Plan and Executive Order B-55-18

The 2017 Scoping Plan outlines a pathway to achieve the reduction targets set under Senate Bill (SB) 32, which is considered an interim target toward meeting the state's long-term 2045 goal established by Executive Order (EO) B-55-18. As discussed under *Methodology*, the DVSP would impede "substantial progress" toward meeting the SB 32 and EO B-55-18 targets if per service population GHG emissions exceeded the locally-appropriate, DVSP-specific 2040 efficiency threshold of 1.0 MT of CO_2e per service population per year. As discussed under Impact GHG-1, the DVSP would result in approximately 2.1 MT of CO_2e per service population per year, which would not exceed the threshold of 3.2 MT of CO_2e per service population per year threshold. As a result, the DVSP would be consistent with the 2017 Scoping Plan and EO B-55-18 because consistency with the locally-applicable, project-specific SB 32 efficiency threshold represents substantial progress toward climate-stabilizing targets set forth by EOs S-3-05 and B-55-18, as discussed earlier under *Significance Thresholds*.

AMBAG MTP/SCS and Marina General Plan

In June 2018, AMBAG adopted the 2040 Metropolitan Transportation Plan/Sustainable Community Strategy (MTP/SCS). The key goal of the MTP/SCS is to achieve GHG emission reduction targets through integrated land use and transportation strategies. The DVSP includes several elements that would reduce VMT and the associated mobile source GHG emissions through integrated transportation and land use planning. The DVSP would allow for higher densities in commercial and mixed-use developments in the Core zone with transit oriented development, particularly around the Monterey Salinas Transit Center. In addition, the DVSP would encourage the development of residential and commercial uses in close proximity in the Transition zone. The DVSP would also include two mixed-use nodes in the Plan Area with multi-story mixed-use buildings containing residential and commercial/retail uses. Additionally, the DVSP includes objectives to create a safe and efficient pedestrian and bicycle pathway network in the Plan Area; improve pedestrian access to transit facilities; and promote compact, mixed-use development that encourages use of transit, walking, and bicycling. Further detail on the DVSP's consistency with goals contained in the AMBAG MTP/SCS is shown in Table 15, while consistency with goals contained in the Marina General Plan are shown in Table 16. As shown in the tables, the DVSP would be consistent with goals and policies of the AMBAG RTP/SCS and Marina General Plan that are relevant to reducing GHG emissions. Therefore, the project would be consistent applicable plans and policies related to reducing GHG emissions; this impact would be less than significant.

Table 15 AMBAG 2040 MTP/SCS Consistency for GHG Emissions

Policy	Consistency
Access and Mobility.	**Consistent**
Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region	Objective 3 of the Environment & Sustainability Chapter of the DVSP aims to "promote compact, mixed-use development that makes efficient use of space." Related strategies include creating high-density and high-intensity multiple use areas, allowing compact form and multiple use patterns of development, and encouraging pedestrian and bicycle linkages to provide better connectivity and more opportunities for active transportation, which would result in more convenient, accessible, and reliable travel options. Furthermore, the overarching goal of the Mobility Chapter is to "create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike, or use public transportation." Related strategies include developing a pedestrian and bicycle network throughout the Plan Area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. In addition, the vision for the Core zone of the DVSP is to create transit oriented development, particularly around the Monterey Salinas Transit Center, which houses stops for six bus routes. These project features would facilitate a variety of travel options. Therefore, the DVSP would create a balanced land use/transportation system that would provide convenient, accessible, and reliable travel options, which would be consistent with the Access and Mobility policy.

Policy	Consistency
Environment. Promote environmental sustainability and protect the natural environment.	**Consistent** The overarching goal of the Environment & Sustainability Chapter of the DVSP is to support development in Downtown Marina that employs Green Building technology and Net Zero Building principles and is designed to create more comfortable indoor and outdoor environments. This goal is supported by objectives and strategies that require the use of low-water landscaping and high-efficiency irrigation systems and encourage the use of energy- and water-efficient building design and renewable energy. Furthermore, construction of the proposed residential and non-residential buildings would comply with the 2019 California Building Energy Efficiency Standards for Residential and Non-residential Buildings and CALGreen (California Code of Regulations Title 24, Parts 6 and 11), or later versions as they are published. Therefore, the DVSP would promote environmental sustainability and protect the natural environment and would be consistent with the Environment policy.
Healthy Communities. Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.	**Consistent** The DVSP includes several provisions that promote active lifestyles, including a policy to implement bicycle and pedestrian networks throughout the Plan Area. The overarching goal of the Mobility Chapter includes creating a downtown that "safely, efficiently, and effectively encourages people to gather, walk, bike, or use public transportation." Related strategies include developing a pedestrian and bicycle network throughout the Plan Area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, and improving pedestrian access to transit facilities. Furthermore, the mixed-use nature of the DVSP would encourage residents and employees to actively commute between destinations due to the close proximity of different uses. By developing a land use plan that encourages the use of active transportation, the DVSP would reduce residents' and employees' reliance on automobiles, thereby minimizing the associated mobile source criteria air pollutant and GHG emissions as well as health impacts. As a result, the DVSP would be consistent with the Healthy Communities policy.
System Preservation and Safety. Preserve and ensure a sustainable and safe regional transportation system.	**Consistent** The overarching goal of the Mobility Chapter of the DVSP is to "create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike, or use public transportation." Related strategies include developing a pedestrian and bicycle network throughout the Plan Area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. The Mobility Chapter also involves implementation of the City's Pedestrian and Bicycle Master Plan, which includes continuous sidewalks on both sides of the street on all downtown streets and bikeways on key thoroughfares. Therefore, the DVSP would promote a sustainable and safe transportation system in the Plan Area. As a result, the DVSP would be consistent with the System Preservation and Safety policy.

Source: AMBAG 2018a

Table 16 Marina General Plan Policy Consistency for GHG Emissions

Marina General Plan Policy	Discussion
Community Goal 1.18: During the preparation of this General Plan the following goals, phrased in the form of planning principles, provided the basis for developing appropriate land use, infrastructure, and community design proposals for specific areas of the city, and for judging among several citywide General Plan alternatives and providing direction for selecting the preferred alternative. As incorporated into the General Plan, these framework goals provide the overall direction necessary to ensure that, as it grows, the city will be well functioning and attractive; that it will balance the needs of residents and business; and that appropriate use will be made of its natural, human and economic resources: 6. A balanced land use/transportation system which minimizes traffic congestion, noise, excessive energy consumption, and air pollution.	**Consistent** Objective 3 included in the Environment & Sustainability Chapter of the DVSP aims to "promote compact, mixed-use development that makes efficient use of space." Related strategies include creating high-density and high-intensity multiple use areas, allowing compact form and multiple use patterns of development, and encouraging pedestrian and bicycle linkages to provide better connectivity and more opportunities for active transportation. Furthermore, the overarching goal of the Mobility Chapter is to "create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike, or use public transportation." Related strategies include developing a pedestrian and bicycle network throughout the Plan Area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. In addition, the vision for the Core zone of the DVSP is to create transit oriented development, particularly around the Monterey Salinas Transit Center, which houses stops for six bus routes. Therefore, the DVSP would create a balanced land use/transportation system that would minimize excessive energy consumption and associated criteria air pollutant and GHG emissions.
Community Land Use Policy 2.4(2): The City shall prevent under-utilization of land within its Urban Growth Boundary (UGB) that is appropriate for community development, in order to ensure that development proceeds in an orderly and consistent manner and to minimize the dispersal of future growth in Monterey County to outlying areas with potentially higher natural resource value. With respect to phasing and timing, whenever feasible, the City shall encourage new development to locate within the existing developed portion of Marina and Marina's former Fort Ord in preference to the development of currently vacant, undeveloped lands located within the City's UGB.	**Consistent** The DVSP would facilitate new development and redevelopment within the UGB, thereby avoiding the dispersal of future growth to outlying areas that could result in high VMT per person. Therefore, the DVSP would be consistent with Community Land Use Policy 2.4(2).
Housing Policy 2.31: It is the City of Marina's intent to promote construction of new housing that is environmentally and socially responsible and that adheres to the following policies: 10. New housing shall be built to development and construction standards that conserve water and energy.	**Consistent** The overarching goal of the Environment & Sustainability Chapter of the DVSP is to support development in Downtown Marina that employs Green Building technology and Net Zero Building principles and is designed to create more comfortable indoor and outdoor environments. This goal is supported by objectives and strategies that require the use of low-water landscaping and high-efficiency irrigation systems and encourage the use of energy- and water-efficient building design and renewable energy. Furthermore, construction of the proposed buildings would comply with the applicable 2019 California Building Energy Efficiency Standards and CALGreen (California Code of Regulations Title 24, Parts 6 and 11), or later versions as they are published. Therefore, construction of new housing facilitated by the DVSP would be environmentally responsible and built to development and construction standards that conserve water and energy.

Marina General Plan Policy	Discussion
Community Infrastructure 3.3.1: Develop future areas of the City, and redevelop existing developed areas, in patterns and to densities that make the provision of frequent regional and local transit economically feasible. **Transportation Policy 3.23 (Design for Transit)**: All future development and redevelopment shall be designed to promote cost-effective local and regional transit service and minimize dependency on the private automobile for work, shopping, recreation, and other trip purposes by requiring bus stops and/or bays in appropriate locations where there are direct transit access routes for pedestrians and bicyclists.	**Consistent** Objective 3 of the Environment & Sustainability Chapter of the DVSP aims to "promote compact, mixed-use development that makes efficient use of space." Related strategies include creating high-density and high-intensity multiple use areas and allowing compact form and multiple use patterns of development. In addition, the vision for the Core zone of the DVSP is to create transit oriented development, particularly around the Monterey Salinas Transit Center, which houses stops for six bus routes. Furthermore, strategies in the Mobility include developing a pedestrian and bicycle network throughout the Plan Area, installing bicycle parking at all public facilities and in the right-of-way, improving pedestrian access to transit facilities, and expanding bus routes within Marina. Therefore, the DVSP would redevelop existing developed areas in patterns and to densities that would facilitate the provision of frequent, cost-effective regional and local transit.
Transportation Policy 3.32: To ensure the feasibility of future transit service, 80 percent or more of the City's residential growth shall be located within the transit-served corridors designated in Figure 3.2. Furthermore, all future residential development within 1,500 feet (approximately 1/4 mile) of designated transit routes shall be governed by minimum density requirements. For new development within already-developed portions this minimum density shall be 6.5 units per net acre (i.e., the area of platted lots, exclusive of all streets and public facilities). The minimum density for newly developing or redeveloping areas of the City shall be 7 units per gross acre (i.e., total development area excluding major roads, public facilities and open space, but including local streets and local open space features and amenities). See the Community Land Use and Development Element (Chapter 2) for other related policies and guidelines.	**Consistent** The Plan Area is focused on two transit-served corridors along Reservation Road and Del Monte Boulevard. The DVSP allows residential densities of up to 70 units per acre in the Core zone, up to 50 units per acre in the Transition zone, and up to 37 units per acre in the Multifamily Residential zone. Therefore, the DVSP would be consistent with the requirements of Transportation Policy 3.32 and would ensure the feasibility of future transit service.
Community Infrastructure 3.3.2: Reduce the length and travel time of work trips generated by local residents by maximizing opportunities for residents to work within the community. **Community Infrastructure Policy 3.3.4**: Reduce the number and length of vehicular trips and limit overall traffic congestion by promoting land use patterns which allow for multipurpose trips and trip deferral during peak travel times. **Transportation Policy 3.34.6 (New Development and Redevelopment)**: New development and redevelopment within the City of Marina should be designed with a network of streets to disperse traffic loads evenly and provide route options and direct travel for pedestrians and bicyclists.	**Consistent** Objective 3 of the Environment & Sustainability Chapter of the DVSP is to "promote compact, mixed-use development that makes efficient use of space." Related strategies include creating high-density and high-intensity multiple use areas and allowing compact form and multiple use patterns of development. By co-locating residential and commercial development, the DVSP would reduce the length of work trips and allow for multipurpose trips by providing commercial space and employment opportunities in close proximity to residences. The Mobility Chapter also involves implementation of the City's Pedestrian and Bicycle Master Plan, which includes continuous sidewalks on both sides of the street on all downtown streets and bikeways on key thoroughfares. Therefore, the DVSP would provide route options and direct travel for pedestrians and bicyclists.

Marina General Plan Policy	Discussion
Community Infrastructure Policy 3.3.5: The City of Marina shall ensure that walking and bicycling routes are integral parts of street design and form a safe and preferred transportation network. **Community Infrastructure Policy 3.3.8**: Link existing and future areas of the City with an integrated system of roads, transit, footpaths and bikeways that connects neighborhoods, commercial areas, schools, parks, and other major community-serving destinations. **Community Infrastructure Policy 3.3.16**: The City of Marina shall consider incorporating facilities, such as bikeways, sidewalks and recreational trails for non-vehicular users, when constructing or improving transportation facilities and when reviewing new development and redevelopment proposals. **Transportation Policy 3.34.1 (Pedestrian Network Map)**:The City of Marina shall implement the Pedestrian Network Map shown in Figure 3-3. **Transportation Policy 3.34.2 (Bicycle Network Map)**: The City of Marina shall implement the Bicycle Network Map shown in Figure 3-4. **Transportation Policy 3.38.2 (Pedestrian Connections)**: The City of Marina shall encourage maximum linkages for pedestrian connections, especially to provide access to parks, schools and employment centers. Enhanced pedestrian connections and crossings shall also be provided at appropriate locations within one-half mile radius of future rapid transit hubs. **Transportation Policy 3.38.3 (Pedestrian Amenities)**: Pedestrian amenities should be provided in pedestrian activity areas. These include but are not limited to seating, news racks, water fountains, way finding aids and public art. The City shall ensure that where provided these facilities are placed and organized to minimize interruptions to the flow of people walking. **Transportation Policy 3.38**: Whenever existing roadways are improved or when new roadways are approved or constructed, sidewalks should be included. **Transportation Policy 3.38.4 (Pedestrian Entrances)**: New non-residential development and redevelopment shall be designed such that direct pedestrian access to easily identifiable building entrances is provided from the street-side.	**Consistent** The overarching goal of the Mobility Chapter of the DVSP is to "create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike, or use public transportation." Related strategies include developing a pedestrian and bicycle network throughout the Plan Area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. The Mobility Chapter also involves implementation of the City's Pedestrian and Bicycle Master Plan, which includes continuous sidewalks on both sides of the street on all downtown streets and bikeways on key thoroughfares. In addition, strategies in the Environment & Sustainability Chapter include encouraging pedestrian and bike linkages to provide better connectivity. The Design Standards and Guidelines include guidelines to design primary pedestrian entries that are accessible directly from public streets and sidewalks, strategically locate wayfinding signs throughout the Plan Area, place pedestrian amenities in the Furnishings Zone or Frontage Zone to avoid interference with the Throughway Zone of sidewalks, and install pedestrian amenities (e.g., benches, trash receptacles) at regular intervals along major corridors and at key locations. Therefore, the DVSP would integrate walking and bicycling routes into street design to form a safe and preferred land use plan and transportation network that would encourage the use of walking and bicycling as alternatives to automobiles, thereby reducing GHG emissions from mobile sources.

Marina General Plan Policy	Discussion
Community Infrastructure Policy 3.3.12: Minimize the consumption of water for urban purposes and make maximum possible use of recycled water. **Water Supply and Management Policy 3.53**: The City of Marina, in conjunction with MCWD, shall continue to promote and require water-saving devices. Specifically, the following measures shall be required: 1. All new multi-family units shall be required to install water meters for each unit. 2. A study shall be undertaken to determine the feasibility of requiring separate metering of spaces within new commercial and industrial buildings and existing duplexes, triplexes, and other multifamily structures. Metering shall be required if found to be physically and economically feasible. 3. All new construction shall use low-flow water fixtures and ultralow-flush toilets. The MCWD and the City should continue to require that all existing residential units and commercial properties be retrofitted with low-flow fixtures upon resale. 4. The City shall support MCWD rebate programs to replace older, more water-consumptive fixtures.	**Consistent** The overarching goal of the Environment & Sustainability Chapter of the DVSP is to support development in downtown Marina that employs Green Building technology and Net Zero Building principles and is designed to create more comfortable indoor and outdoor environments. This goal is supported by objectives and strategies that require the use of low-water landscaping and high-efficiency irrigation systems and encourage the use of reclaimed water and graywater as well as water-efficient fixtures. Furthermore, construction of the proposed buildings would comply with the applicable 2019 CALGreen (California Code of Regulations Title 24, Part 11), or later versions as they are published. Therefore, the DVSP would minimize the consumption of water for urban purposes and make maximum possible use of recycled water.
Community Infrastructure Policy 3.3.15: Promote reductions in the generation of non-recyclable solid waste.	**Consistent** Strategies in the Environment & Sustainability Chapter of the DVSP include working with the private solid waste collection company to increase recycling opportunities downtown, encouraging restaurants to participate in food compost waste programs, and providing trash enclosures that accommodate all recyclable needs. Therefore, the DVSP would promote reductions in the generation of non-recyclable solid waste.

Source: City of Marina 2010

LESS THAN SIGNIFICANT IMPACT

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9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
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?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	■	☐	☐
d. Be located on a site that is included on a list of hazardous material 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?	☐	■	☐	☐
e. For a project located in 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 or excessive noise for people residing or working in the project area?	☐	☐	■	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	■	☐

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Would the project 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?

The Specific Plan would facilitate the construction of new residential and commercial land uses that could involve the use, storage, disposal, or transportation of hazardous materials. Use of hazardous materials would generally consist of solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies. Use of such materials would be similar to existing conditions in the Plan Area, which is currently developed.

Projects facilitated by the Specific Plan would be subject to applicable local, State, and Federal hazardous material regulations that minimize impacts related to hazardous materials. Hazardous materials would be required to be transported under Department of Transportation regulations. Specific Plan buildout would be subject to regulatory programs such as those overseen by the County of Monterey Health Department, RWQCB, and the Department of Toxic Substances Control (DTSC). These agencies require applicants for development of potentially contaminated properties to perform investigation and cleanup under their oversight if the properties are found to be contaminated with hazardous substances. Therefore, compliance with existing laws and regulations governing the transport, use, storage, disposal, or release of hazardous materials and wastes would reduce impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

d. Would the project be located on a site that is included on a list of hazardous material 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?

J.C. Crumpton Elementary, Marina Vista Elementary, Los Arboles Middle, Marina High, George Patton Senior Elementary, and Pegasus Montessori are within 0.25-mile of the Specific Plan Area and the Marina Children's Center Preschool is located within the Specific Plan Area.

The following databases compiled pursuant to Government Code Section 65962.5 were checked for known hazardous materials contamination in the Plan Area:

- EnviroStor Database, DTSC
- GeoTracker Database, California State Water Resources Control Board (SWRCB)
- USEPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Superfund Site database (2019)

The EnviroStor database indicated two open DTSC cleanup sites within 0.25-mile of the Plan Area: Central Coast High School Expansion Site at 2995 Rendova Road (case 60000346) and Reservation Road High School located at the southwest corner of the intersection of Reservation Road and Salinas Avenue (case 60000344):

- Central Coast High School Expansion site is listed as inactive and in need of evaluation associated with subsurface anomalies encountered during a geophysical survey to identify potential munitions and explosives of concern from historical military use of the property.

- Reservation Road High School site is located adjacent to the east of the Specific Plan Area and is listed as inactive and in need of evaluation. The site is located on the former Fort Ord and may have been utilized as a firing range. The site is undeveloped but was being considered for development as a public high school. DTSC identifies explosives, metals, pesticides, and polychlorinated biphenyls in soil and soil vapor as potential contaminants of concern. The site was inactivated by DTSC when the school district was no longer considering the site for development as a school.

According to the GeoTracker database there are multiple hazardous materials cleanup sites in the Specific Plan Area that have been addressed. Resolved leaking underground storage tank cleanup (LUST) sites in the Specific Plan Area include the Shell Service Station at 3030 Del Monte Boulevard (case T0605300245), Tommy's Gas & Foodmart at 3044 Del Monte Boulevard (case T0605300218), Beacon Station No. 730 at 3144 Del Monte Boulevard (case T0605300330), Arco Station #2141 at 3184 Del Monte Boulevard (case T0605300366), 7-Eleven #17488 at 320 Reservation Road (case T10000005318), and Monterey Peninsula Garbage & Refuse at 3114 Crescent Avenue (case T0605300322). There is one completed military underground storage tank cleanup site at 4493 8th Avenue, Fort Ord Building 4493-4 (case T0605300108), and one completed groundwater cleanup site at 215 C Reservation Road of Don's One Hour Dry Cleaners (case SLT3S2061339). Although the sites are classified as closed, residual soil, groundwater, and/or soil vapor contamination may remain on site that may be encountered during redevelopment activities. In addition, the closure of the site may be based upon a condition of the site use at the time of closure and/or deed restrictions may have been placed that limit the type of future development without addition assessment or cleanup activities.

The USEPA CERCLIS database did not identify a superfund site in the Specific Plan Area; however, the former Fort Ord, located adjacent to the Specific Plan Area, is listed as a National Priorities List (NPL) site. The SWRCB GeoTracker databases depicts two open military cleanup sites associated with the former Fort Ord that are adjacent to the Specific Plan Area: Fort Ord OU1 (Fritzche Army Airfield Fire Drill Area, On-Site Plume DOD100220500) and Ford Ord – OUCTP (DOD100196800):

- The Fort Ord OU1 site is associated with flammable solvents that leached into soil and groundwater from a former fire drill area. The soil and groundwater cleanups were completed, the remedial objectives were achieved, and the site was closed.
- The Ford Ord – OUCTP is associated with carbon tetrachloride contamination in groundwater from a surface release. The carbon tetrachloride groundwater plume extends from within the dormer Ford Ord site boundary to within the Specific Plan Area north of Reservation Road west to approximately Eucalyptus Street (Ahtna Environmental 2019). In addition, the groundwater plume is present adjacent to the east of the Specific Plan Areas south of Reservation Road and east of Salinas Avenue and the groundwater flow direction is to the northwest, toward the Specific Plan Area.

Redevelopment of portions of the Specific Plan Area with known or potential contamination of soil, groundwater, and/or soil vapor (subsurface contamination) may result in the disturbance of hazardous materials, presenting a risk of human exposure. New development could also present potential risk of exposure to contamination associated with commercial and/or industrial land use. Hence, development and redevelopment pursuant to the Specific Plan would increase the potential for exposure to subsurface contamination hazards. To reduce health risks to a less than significant level, mitigation measure HAZ-1 is required to reduce impacts to a less than significant level.

HAZ-1 Project-Level Hazardous Materials Assessment

Prior to the obtaining grading permits or starting other ground disturbing work for individual projects, the City shall hire a qualified environmental professional to conduct a Phase I environmental assessment (ESA), consistent with the American Society for Testing Materials standards (ASTM E1527). The Phase I ESA shall evaluate the likelihood that hazardous chemicals are present and whether soil sampling is necessary. If the Phase I ESA indicates that contamination is unlikely, no further mitigation is necessary other than any recommendations identified in the Phase I ESA (such as stopping work if stained soil is encountered).

If the Phase I ESA indicates that additional soil sampling or other further evaluation is necessary, the City shall hire a qualified environmental professional to conduct a Phase II ESA to determine the presence and extent of contamination. If the results indicate that contamination exists at levels above regulatory action standards, then the site shall be remediated in accordance with recommendations made by applicable regulatory agencies, including RWQCB and DTSC. The agencies involved shall depend on the type and extent of contamination. If remediation is necessary, the City shall hire a qualified environmental professional prior to obtaining grading permits or ground disturbance to prepare a work plan that identifies necessary remediation activities, including excavation and removal of on-site contaminated soils, appropriate dust control measures, and redistribution of clean fill material on the project site. The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil removed from the site. The plan shall also identify when and where soil disturbing construction activities may safely commence.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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 or excessive noise for people residing or working in the project area?

The Marina Municipal Airport is located just outside the northeast border of the Specific Plan Area. The Marina Municipal Airport Land Use Compatibility Plan (ALUCP) contains standards and policies including allowable land uses and development within the airport and in designated approach and traffic pattern zones. The 2019 ACLUP (Monterey County Airport Land Use Commission 2019) indicates that the Specific Plan Area is located within safety zone seven, Airport Influence Area (AIA), but is outside all other safety zones. The AIA zone (zone 7) includes all other portions of regular aircraft traffic patterns based upon the Section 14 of the Code of Federal Regulations Part 77 conical surface from the 2018 airport layout plan. The aircraft accident risk level is considered to be low within the AIA zone.

Implementation of the Specific Plan would intensify development near the Marina Municipal Airport, but the land use types and proximity of development to the airport would be similar to existing conditions. The Plan Area is currently developed as the City's Downtown area. Buildout of the Specific Plan would not introduce prohibited uses for the AIA zone, such as hazards to flight or outdoor stadiums (Monterey County Airport Land Use Commission 2019). Other development conditions would be reviewed and disclosed as part of certain real estate transactions, as required by state law. Given the type of development facilitated by the DVSP and pursuant to compliance with existing requirements, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed project would intensify development within the City's Downtown area, which could result in an increase in traffic that could interfere with emergency response. However, as described in Section 14, *Population and Housing*, the project would not result in unplanned population growth. The DVSP includes strategies to improve circulation within the Plan Area and reduce congestion, but would not alter circulation routes or connectivity. The City would require public improvements as part of the permitting process for individual projects in order to prevent compromise of emergency response access. Therefore, the project would result in a less than significant impact regarding emergency response and evacuation.

LESS THAN SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

A wildfire is an uncontrolled fire in an area of combustible vegetation. Wildfires differ from other fires in that they take place outdoors in grassland, woodlands, brushland, scrubland, peatland, and other wooded areas that act as a source of fuel, or combustible material. Topography, slope, vegetation type and condition, and weather and atmospheric conditions are the primary factors in determining an area's susceptibility to wildfire.

As discussed in Section 20, *Wildfire*, the Plan Area is not within an area associated with a high degree of wildfire hazards. The facilitation of development projects within the existing downtown area would not exacerbate the existing degree of wildfire hazards in the Plan Area. Nor would the project add new development in areas that are highly susceptible to wildfires. The Plan Area is limited to a currently developed area. Therefore, impacts associated with exposure of people or structures to wildfires would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	■	☐	☐	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	■	☐
(iii) 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; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	■	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	■	☐	☐	☐

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The Plan Area is currently developed. Implementation of the Specific Plan would facilitate redevelopment but would not substantially alter the amount of impervious surface area. Stormwater runoff would continue to connect to the City's stormwater drainage system at similar volumes to existing conditions.

Individual projects would be required to comply with Chapter 8.46, Urban Storm Water Quality Management and Discharge Control. Chapter 8.46 requires elimination of illegal discharges, protection of watercourses, and includes BMP guidance for construction sites and permitted activities (City of Marina 2020). Therefore, compliance with existing regulations would reduce impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The proposed project would result in an increase in water demand in the Plan Area, which could result in a potentially significant impact related to groundwater supplies and sustainable groundwater management. Therefore, thresholds b and e will be analyzed in detail in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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?

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

As described above, the Plan Area is developed and consists mostly of impervious surface area. Redevelopment of parcels pursuant to the Specific Plan would not substantially alter the amount of impervious surface area, and thus would not substantially alter the area's drainage patterns. Redeveloped parcels would connect to the City's stormwater drainage system similar to existing conditions. Furthermore, the Specific Plan includes design guidelines to increase percolation and

prevent water pollution, including requirements for the use of permeable materials (Design Guideline No. 25) and requirements for street trees and planted park strips (Design Standard No. 22). Implementation of the Specific Plan would not alter the course of a stream or river or otherwise result in substantial effects related to water quality or stormwater drainage. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The Plan Area is approximately 0.5 mile from the Pacific Ocean. Dunes on the west site of SR 1 buffer the City of Marina from the ocean. According to tsunami inundation mapping by the California Geologic Survey, the Plan Area is not within a tsunami inundation zone (California Geologic Survey 2009). No other large body of water exists in the proximity of the Plan Area that could result in a seiche. The majority of the Plan Area is classified by the Federal Emergency Management Agency (FEMA) as Zone X, Area of Minimal Flood Hazard. Portions of the Plan Area west of Del Monte Boulevard are classified as Zone A and Zone AE, Special Flood Hazard Areas (FEMA 2017).

Implementation of the Specific Plan would intensify development within the Plan Area, thus adding structures and other materials that could increase the amount of pollutants released in the event of flood inundation. However, the overall impact of pollutant release due to a flood event would be similar to existing conditions, as the Plan Area is currently entirely developed as Downtown Marina. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	■
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	■	☐

a. Would the project physically divide an established community?

Specific Plan implementation would facilitate development in the City's downtown area to revitalize and enhance it by increasing commercial and residential mixed uses in key areas. Increased density and mixed-use development would integrate with the adjacent land uses and be accessible from them by established roadways and bicycle routes; furthermore, all uses would be increasingly accessible by pedestrian traffic with Specific Plan implementation. Thus, buildout under the Specific Plan would not physically divide an established community; rather there would be increased integration of the downtown area and adjacent uses. There would be no impact relating to division of an established community.

NO IMPACT

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Existing development in the Specific Plan Area consists of mostly residential and commercial uses, with some light industrial and visitor-serving uses along Del Monte Boulevard and Reservation Road. Commercial areas are generally located along Reservation Road and Del Monte Boulevard, where land use designations include Retail/Service on the southeast side of Del Monte Boulevard and Retail/Service along both sides of Reservation Road, intermixed with Multi-Family Residential. Commercial development in these corridors consists of single-story strip-mall format shopping centers, some of which are fronted by large parking areas. Residential uses generally occur outward from these commercial areas, including southeast and northeast of Del Monte Boulevard and Reservation Road. In brief, a mix of uses characterizes the downtown area as it appears on the existing land use map, from the intersection of Del Monte Boulevard and Reservation Road, from extending roughly south and east along each roadway respectively. The rest of the area is designated for single-family and public facilities uses to the boundaries of the downtown region.

The boundaries of the Specific Plan Area are shown in Figure 2 under Project Location. Situated as it is in a central part of the city, the Specific Plan Area includes and is surrounded by a mix of uses as diverse single- and multi-family residential, commercial, open space, research, and visitor-serving.

More specifically, the Plan Area is bordered by single-family residential uses to the north, west, and south; open space adjacent to the Marina Municipal Airport to the northeast, and Locke-Paddon Park to the northwest. Other adjacent uses include multi-family residential and commercial. The Marina Municipal Airport is directly east of the downtown area, along Reservation Road.

Implementation of the Specific Plan would revitalize the downtown area of the city in an orderly manner, integrating urban-style, mixed-use development in a core area and transitional, more suburban sections at the edges. The primary goal of the Specific Plan is to establish the downtown area of Marina as a vital destination with a mix of residential, commercial, retail, dining, and entertainment uses, served by an improved transportation network. Over the 20-year planning horizon, Specific Plan implementation would contribute to the city's ability to capture economic opportunities that otherwise might be filled by neighboring jurisdictions. To achieve this goal, the Specific Plan encourages a mix of new uses within 0.5 mile of transit centers that would further encourage pedestrian and other non-automobile travel within the area. The Specific Plan would nearly double the number of residential units in the downtown area, compared to existing densities. It would also more than double the retail and office space square footage. Both would be accomplished through greater densities and building heights, condensing land uses and making streetscapes an attractive component of the overall design. Table 17 shows the existing and proposed densities under the Specific Plan, with their percentage increase.

Table 17 Specific Plan Land Use Densities

Existing Densities by Use	Proposed Densities by Use	Total Densities by Use	% Increase*
Residential			
2,301 units	2,904 units	5,205 units	126%
Commercial			
691,705 sf	874,669 sf	1,566,374 sf	126%
Office & Light Manufacturing			
314,053 sf	510,528 sf	824,581 sf	263%

* numbers rounded to the nearest percentage point

Consistency Analysis

The following provides a consistency analysis for the land use plans, policies, and regulations applicable to the Specific Plan Area and its implementation.

General Plan Consistency

The City of Marina approved a resolution to amend its General Plan in 2008, including changing Policy 5.11 "to require preparation of a Specific Plan for Downtown Vitalization Area" and including an overlay to the Central Marina Sub Area (City of Marina 2010a). The resolution also removed Policy 2.41.6 that required development in the proposed "Core Retail Area" to prepare a separate specific plan, and added Policy 2.63.51 defining the Downtown Vitalization Area.

The proposed Specific Plan is designed to build on the goals and objectives of the City of Marina General Plan, the recommendations of the City's Downtown Vision Plan, Downtown Design Guidelines, and the policies of the Pedestrian and Bike Master Plan.

When implemented fully, the Specific Plan would create a unique downtown core with pedestrian-oriented development to serve residents and visitors to the city. The City has determined that the downtown area "never fully developed as a traditional downtown," and the Specific Plan would address this shortcoming. Table 18 below lists General Plan policies in place to avoid or mitigate environmental effects and discusses Specific Plan consistency with these policies.

As shown above, the Specific Plan advances the goals and policies of the General Plan in regard to avoidance and mitigation of environmental effects. By concentrating growth within Downtown Marina and progressing towards more dense, walkable, development, implementation of the Specific Plan would not conflict with the City's sustainability and conservation goals.

Metropolitan Transportation Plan/Sustainable Communities Strategy

AMBAG developed the Moving Forward Monterey Bay 2040 MTP/SCS as a blueprint for sustainable growth in the Monterey Bay area. It is built on a set of integrated policies designed to maintain and improve the transportation system throughout the region, through 2040. The MTP/SCS advocates for overall land use patterns that "provide a diverse mixture of goods and services in combination with residential uses" as this approach has been shown to reduce vehicles miles traveled and thereby reduce greenhouse gas emissions (AMBAG 2018a). Increased density combined with access to transit has been demonstrated to result in a higher likelihood that people would choose to use transit instead of drive. Furthermore, streets that are friendly for pedestrians and bicycles, along with cars and buses, in what are called "complete streets," are encouraged in local planning processes throughout the region.

The MTP/SCS identifies what it calls "Opportunity Areas," zones within 0.5 mile of an existing or planned high-quality transit corridor, as defined by the California Public Resources Code Section 21155(a), with the potential for transit-oriented development, including mixed-use. AMBAG designates the Specific Plan Area as Opportunity Area MA-1 (AMBAG 2018a, 4-10; AMBAG 2018a, Appendix I Figure 14). MST services the area currently, with bus service on Reservation Road and Del Monte Boulevard. The Marina Transit Exchange, at De Forest Road and Reservation Road, is centrally located in the Specific Plan Area, and forms a terminus for MST lines 16, 20, and 27, among others (MST 2019). Del Monte Boulevard is an arterial roadway that creates an eastern boundary for the Specific Plan Area and is planned for high-quality BRT service in the Marina 2019 Regional Transit Network (Adamson 2019).

The development planned throughout the Specific Plan Area is in proximity to the transit corridors indicated above, and would be designed and implemented specifically to encourage the kind of transit use described in the MTP/SCS. Thus, the Specific Plan supports the goals and objectives set forth by AMBAG in the MTP/SCS.

City of Marina Pedestrian and Bicycle Master Plan

The City of Marina Pedestrian and Bicycle Master Plan has three primary purposes: providing guidelines for pedestrian and bicycle facilities improvements, positioning the City for grants to finance improvements, and playing a role in the City's work to reduce greenhouse gas emissions (City of Marina 2010b). The Plan provides a published set of pedestrian and bicycle facility design guidelines that are applicable to typical situations, including guidelines for sidewalks, crosswalks, pedestrian orientation, pedestrian amenities, bikeways, end-of-trip bicycle facilities, bicycling promotion and funding, street design, parking, roundabouts, and safety. The Plan provides a list of prioritized projects and a summary of future funding sources for pedestrian and bicycle facilities.

Table 18 Goals and Policies Comparison

Marina General Plan	Specific Plan	Comparison	Consistency
Primary Policies (GP)	**Primary Goals**		
2.4.1 The City shall provide a land supply within its Urban Growth Boundary sufficient in size and appropriately located to accommodate a fair share of the future population and employment growth within Monterey County.	The Specific Plan Area encompasses 322 acres in central Marina. This is about 5% of the total acreage of the city (6086 acres).	The Specific Plan Area encompasses a developed area of the city center where mixed-use, multi- and single-family residences, and commercial/retail/office uses are adjacent to single-family neighborhoods. Vitalization of the area can contribute to fulfillment of the City's vision statement to "grow and mature from a small town bedroom community to a [diversified and vibrant] small city" (City of Marina 2019).	Consistent
Community and Land Use Policies (GP)	**Land Use Goals**		
2.26 The General Plan's commercial and industrial land use policies are intended to attract a substantial number of jobs for future City residents. The land area set aside in the General Plan for commercial and industrial uses is capable of accommodating an estimated 28,600 additional jobs, substantially in excess of the likely 2020 local work force, estimated at 17,700. **2.27** Unless a major imbalance of jobs and housing is avoided, regional traffic congestion can be expected to worsen due to the generation of increasingly longer commute trips between housing (outside Marina environs) and new jobs in the city. A major imbalance between jobs and housing would also help accelerate the pressure to convert prime agricultural lands in the county for housing development. Conversely, construction of new housing commensurate with new jobs in the city limits will provide ample opportunity for Marina residents to live and work in their community and avoid or substantially reduce the adverse environmental and social effects associated with an imbalance.	*Land Use and Development Goal:* Land use that emphasizes community, creates a safe, walkable and vibrant downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails. **Objective 1, Housing Choice:** Create a variety of safe housing options for people who live downtown. Strategies: ▪ Encourage mixed-use development ▪ Ensure a mix of levels of affordable housing ▪ Generate site and building design standards that require common open space, encourage interaction of residents, and maintain pedestrian orientation. ▪ Provide opportunities for additional multi-family residential units in the downtown	Implementation of the Specific Plan would provide space for job growth and increase residential capacity through the establishment of urban-style, mixed-use development adjacent to existing single-family residential neighborhoods. Transit-oriented development, infill and mixed-use with multi-family residential uses would encourage pedestrian and bicycle or other non-automobile modes of travel and thus alleviate the increase in commuter trips, along with traffic congestion and associated effects to the environment.	Consistent

Marina General Plan	Specific Plan	Comparison	Consistency
2.31 Housing Policies Promote construction of new housing that is environmentally and socially responsible (detailed further in individual sub-policies 2.31.1 through 2.31.11	*Environment and Sustainability Goal:* Support development in Downtown Marina that employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments. **Objective 1, Sustainable Design:** Implement sustainable design elements that complement the natural setting of Marina. <u>Strategies:</u> ▪ Use landscaping materials and methods of construction that are of high quality and appropriate for coastal Monterey County. Consider fog, wind, drought, salt air, and sandy soils in all landscaping decisions. ▪ Minimize impervious surfaces on all streetscapes. ▪ Arrange a grid of local streets to increase connectivity and pedestrian activity and reduce reliance on the car.	The Specific Plan meets or exceeds the detailed policies in the General Plan including mandates for integration into the fabric of the city, conservation standards, and the development of walkable, attractive neighborhoods.	Consistent
Throughout the General Plan Land Use Element, alternative forms of transportation are encouraged, including pedestrian and transit.	*Land Use and Development Goal:* Land use that emphasizes community, creates a safe, walkable and vibrant downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails. **Objective 3, Pedestrian Scale:** Promote the intended pedestrian scale of downtown through appropriate design standards, parking standards, and land uses. <u>Strategies:</u> ▪ Ensure development consistent with pedestrian-oriented scale and character	The strategies in the Specific Plan meet and exceed the General Plan's encouragement for pedestrian and transit-oriented development.	Consistent

Marina General Plan	Specific Plan	Comparison	Consistency
	▪ Locate parking behind or under buildings and in parking structures ▪ Monitor parking and reduce requirements where feasible ▪ Prohibit drive-thru facilities in Core ▪ Encourage lot consolidation ▪ Establish design standards to create intimate atmosphere and enhance unique character ▪ Create pedestrian- and transit-oriented public spaces in downtown ▪ Encourage design elements that reflect cultural diversity		

Sources: Marina General Plan (2010) and Marina Downtown Vitalization Specific Plan (2019) (Notes: listed goals and policies are summarized. For full text refer to the Marina General Plan and the Specific Plan.

The Specific Plan goal to create visually pleasing downtown pedestrian and vehicle circulation that encourages people to walk and bike is consistent with the City's Pedestrian and Bicycle Master Plan. Specifically, Objective 2 of the Mobility goal to create a visually pleasing downtown pedestrian circulation system seeks to "balance the demands of local and regional traffic while seeking to minimize congestion and address the needs of people who walk, bike, and take transit." Due to its overall focus on dense development and improvement of Downtown Marina's alternative transportation system, the Specific Plan would be consistent with the City of Marina Pedestrian and Bicycle Master Plan.

City of Marina Zoning Code

The Specific Plan states that the requirements in the Land Use chapter "replace the requirements of the Marina Municipal Code, Title 17, Zoning for Downtown Marina." When the Specific Plan is adopted, the land uses and development standards tailored for downtown would be in effect and would supersede the existing zoning code within the Plan Area. The Specific Plan would not conflict with existing zoning code regulations in effect to avoid or mitigate environmental effects, but would reflect the City's goals and policies for development within the Plan Area.

Implementation of the Specific Plan would modify the City's development standards within the Plan Area, but would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	■
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?	☐	☐	☐	■

a. Would the project 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?

b. Would the project 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?

The Marina General Plan discusses the presence of mineral resources at two locations within the City: west of SR 1, where sand mining operations have previously occurred; and east of SR 1 within the Armstrong Ranch portion of the City's sphere of influence (Marina 2010). Neither of these areas is within the Specific Plan Area. No mineral extraction occurs within the Plan Area and no land in the area is zoned or designated for such a use. Implementation of the Specific Plan would not affect the availability of known mineral resources. There would be no impact.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	■	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c. For a project located within the vicinity of a private airstrip or 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?	☐	☐	■	☐

Environmental Setting

Fundamentals of Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007). It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (10.5x the sound energy) (Crocker 2007).

Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013a). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as

buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight would provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2018). Structures can substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007). Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{DN}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.); it is also measured using Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013a). Noise levels described by L_{DN} and CNEL usually differ by about 1 dBA. The relationship between the peak-hour L_{eq} value and the L_{DN}/CNEL depends on the distribution of traffic during the day, evening, and night.

Some land uses are more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. For example, residences, motels, hotels, schools, libraries, churches, nursing homes, auditoriums, museums, cultural facilities, parks, and outdoor recreation areas are more sensitive to noise than commercial and industrial land uses.

VIBRATION

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas sound is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases.

Existing Noise Environment

ROADWAYS

The major source of noise in the Plan Area is vehicle traffic. The main roadways that would generate noise include Reservation Road and Del Monte Boulevard, as well as SR 1, which would generate noise to the western portion of the Plan Area. Carmel Avenue, Palm Avenue, Reindollar Avenue, Seacrest Avenue, Crescent Avenue, Cypress Avenue, Hillcrest Avenue, Bayer Street, Salinas Avenue, Vista Del Camino Circle, Sunset Avenue, Mortimer Lane, and California Avenue would also contain noise-generating vehicle traffic; however, the lower speed limits and traffic volumes on these roadways would lead to relatively low levels of noise generated compared to the main roadways.

MARINA MUNICIPAL AIRPORT

Future noise contours for the Marina Municipal Airport are in the ALUCP Update for the airport (Monterey County Airport Land Use Commission 2019). As shown on the 20-Year Forecast Noise Contours in the ALUCP, the 60 CNEL noise contour is well outside of the Plan Area (approximately 3,000 feet at the closest point).

SENSITIVE NOISE RECEIVERS

Sensitive noise receivers are areas of human habitation or substantial use where the intrusion of noise has the potential to adversely impact the occupancy, use, or enjoyment of the environment. These can include residences, schools, hospitals, parks, and places of business requiring low levels of noise. Sensitive noise receptors in Marina include single- and multi-family residences, schools, churches, and parks.

Sound Level Measurements

To characterize ambient sound levels at and near the Plan Area, seven 15-minute sound level measurements were conducted in the DVSP area on June 18, 2019. In addition, a follow up site visit took a 24-hour sound level measurement and two 15-minute sound level measurement (Noise Measurement [NM] 2 was repeated) on June 20 through June 21, 2019. Figure 15 shows the noise measurement locations, Table 19 summarizes the results of the noise measurements. Detailed sound level measurement data are included in Appendix NOI.

Figure 15 Noise Measurement Locations

Table 19 Project Vicinity Sound Level Monitoring Results

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	Leq (dBA)	Lmin (dBA)	Lmax (dBA)
1	San Pablo Court	June 20, 12:58 – 1:13 p.m.	200 feet from Highway 1	58.0	53.4	62.9
2a	Adjacent to Lake Drive, near Highway 1	June 18, 10:30 – 10:45 a.m.	50 feet to Lake Drive centerline	59.5	45.7	69.0
2b	Adjacent to Lake Drive, near Highway 1	June 20, 1:22 – 1:37 p.m.	50 feet to Lake Drive centerline	61.9	55.9	67.5
3	Del Monte Boulevard and Palm Drive	June 18, 10:56 – 11:11 a.m.	50 feet to roadway centerline	68.8	50.8	83.6
4	Reservation Road and Mortimer Lane	June 18, 11:20 – 11:35 a.m.	50 feet from centerline of Reservation Road	68.7	47.6	79.6
5	Reservation Road and De Forest Road	June 18, 11:59 a.m. – 12:14 p.m.	150 feet from Reservation Road centerline	59.9	49.7	74.8
6	Reservation Road and Bayer Street	June 18, 12:30 – 12:45 p.m.	100 feet from Reservation Road centerline	71.8	48.1	82.4
7	Seacrest Avenue	June 18, 1:04 – 1:19 p.m.	50 feet from roadway centerline	61.5	49.0	75.9
8	Carmel Avenue	June 18, 1:32 – 1:47 p.m.	50 feet from roadway centerline	60.8	47.3	74.8
9	End of San Pablo Court, near Highway 1	June 20, 12:52 p.m. – June 21, 12:52 p.m.	200 feet from Highway 1	60.9	48.6	80.5

See Figure 14 for Noise Measurement Locations.

Detailed sound level measurement data are included in Appendix NOI.

During the site measures, the types of vehicles were also counted (automobiles, medium trucks, and heavy trucks), as can be seen in Appendix NOI. The percentage of medium trucks and heavy trucks ranged from zero percent to three percent in the measurements, which one measurement showing four percent heavy trucks. The truck counts on the smaller collector streets were generally lower.

Regulatory Setting

The following discussion summarizes federal, State and local regulatory authorities pertaining to noise.

City of Marina Municipal Code

Chapter 9.24 of the Marina Municipal Code contains regulations pertaining to noise, prohibiting excessive, unnecessary or unusually loud noises and vibrations in the community. This applies to any noise whose volume, level, or duration disturbs, injures or endangers the comfort, repose, health,

peace or safety of Marina residents. Section 9.24.040 lists specific nuisances. Included in this list are many hand-powered, fuel-powered, and electric-powered tools that could be used during construction projects. Section 9.24.040 limits the operation of the listed equipment to after 7:00 a.m. and before 7:00 p.m. on a daily basis except for Sundays and holidays when their use is prohibited before 10:00 a.m. and after 7:00 p.m. During daylight savings, this equipment may be operated until 8:00 p.m.

Chapter 15.04 of the Marina Municipal Code establishes that noise levels from construction are restricted to no more than 60 dB for twenty-five percent of an hour at any receiving property line. In addition, when construction is performed adjacent to residential uses, construction may only occur between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays and between ten a.m. and seven p.m. on Sundays and holidays.

The Marina Municipal Code does not specify quantitative operational noise standards (these standards are included in the City of Marina General Plan, as shown in Table 21).

City of Marina General Plan

The City of Marina General Plan's noise element ensures that noise control is incorporated into the planning process. The noise element contains various policies to help Marina achieve and maintain consistent noise levels for existing and proposed land uses; relevant policies to the project are included below.

Policy 4.106: The land use policies contained in the Community Land Use Element are designed to avoid conflicts between noise-sensitive uses (in particular, residences and schools) and major noise sources. Accordingly, land designated for such noise-sensitive purposes has been limited to locations which are unlikely to be exposed to excessive noise. At such time that future development of residences, schools and parks is proposed, more site-specific noise analysis shall be conducted for parcels that are in close proximity to major roadways or that lie in areas affected by aircraft-generated noise. If specific uses are found to be affected by noise levels greater than the standards set forth in Table 4.1 of the General Plan [Table 20 herein], or the mitigation measures identified in the following sections shall be required.

Policy 4.107: The maximum allowable exterior noise exposure, as measured in L_{dn} (dBA) shall not exceed the "acceptable use" standards shown in Table 4.1 of the General Plan [Table 20 herein]. Where existing or projected exterior noise levels exceed the acceptable limit, construction shall be conditionally permitted only when appropriate mitigation measures are employed.

Policy 4.108: These measures must reduce interior noise to the maximum allowable limits shown in Table 4.1 of the General Plan [Table 20 herein]. In such instances, the developer of a new building shall provide the City with proof from a professional acoustical consultant that exterior noise levels have been mitigated such that building occupants will not be subject to interior noise levels greater than those in Table 4.1. If the City finds the project to be in the public interest, the City may approve a project where the exterior noise level exceeds the conditionally acceptable level. Such approval shall be contingent upon a detailed analysis by a qualified acoustical engineer showing that specific measures included in the project will reduce interior noise to the maximum interior levels shown in Table 4.1.

Policy 4.111: New and modified stationary noise sources adjoining or in close proximity to residential and other noise-sensitive uses shall adhere to the standards in Table 4.2 of the General Plan *(*Table 20 herein).

Table 20 City of Marina Allowable Noise Standards Measured in Ldn (dBA)

Land Use	Maximum Acceptable Exterior	Maximum Conditionally Acceptable Exterior	Maximum Acceptable Interior[1]
Residential	60	70	45
Live/Work	65	75	50
Hotel/Motel	65	75	50
Office	67	77	55
Other Commercial	70	80	60
Industrial/Agriculture	70	80	60
Schools, Libraries, Theaters, Churches, Nursing Homes	60	70	45
Parks and Playfields	65	70	NA
Golf Courses, Riding Stables, Cemeteries	70	75	NA

[1] It is preferred that the interior noise standard be attained with open windows. However, where the interior noise standard is attainable only with closed windows and doors, mechanical ventilation shall be required.

Source: City of Marina 2000

Table 21 City of Marina Noise Standards for Stationary Sources

	Maximum Allowable Noise (dBA))	
Duration	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L_{eq}	50	45
L_{max}	70	65
L_{max}, impulsive	65	60

[1] As determined at the property line of the receiver. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property-line noise mitigation measures.

Source: City of Marina 2000

Methodology

Construction

The primary source of temporary noise associated with implementation of the project would be construction activities. Construction for each project in the DVSP would typically involve several stages including grading, foundation construction, and finish construction. Noise generated by construction equipment can vary in intensity and duration during each phase of construction. The potential noise levels associated with typical construction equipment that may be used during construction of the proposed project are identified in Table 22. As shown in the table, construction noise levels at 50 feet from individual equipment would range from approximately 73 to 83 dBA L_{eq}, depending on the type of construction equipment.

Table 22 Typical Construction Equipment Noise Levels

Equipment	Usage Per Day (Percentage)	Maximum Noise Level at 50 Feet (dBA L_{eq})
Backhoe	40	74
Compactor	20	76
Concrete Saw	20	83
Dozer	40	78
Dump Truck	40	73
Excavator	40	77
Generator	50	78
Loader	40	75
Paver	40	80

Source: FHWA 2008

Reasonable conservative construction scenarios would be from the simultaneous operation of an excavator, loader, and dump truck during grading, which is the construction activity that typically generates the highest noise levels. These pieces of equipment would be used during grading to remove or modify soil, with the loaders and dump trucks removing the debris. These three pieces of equipment would generate a noise level of 79.9 dBA L_{eq} at 50 feet, with a 60 dBA L_{eq} noise contour located at 500 feet (see Appendix NOI for calculation details).

Vibration

Marina does not have defined thresholds for vibration. Vibration impacts are analyzed using the thresholds from Caltrans' Transportation and Construction Vibration Guidance Manual and the FTA's Transit Noise and Vibration Impact Assessment Manual (Caltrans 2013b; FTA 2018). From these documents, the applicable thresholds for the vibration analysis are 0.4 peak particle velocity (PPV) inches per second at residential structures and the human "distinctly perceptible" threshold of 0.24 PPV inches per second.

Traffic Noise

Existing traffic noise levels from major roadways within the DVSP area were calculated using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model, RD-77-108. The FHWA Model is an analytical method utilized for traffic noise prediction. The FHWA Model assumes a clear view of traffic with no shielding (e.g., from buildings or topography) at the receiver location; In reality, varied topography, in combination with the presence of buildings and other barriers, would reduce the distance from the noise source to the dB contours in many instances. Therefore, the traffic noise levels presented in this analysis should therefore be considered conservative estimates of future roadway noise levels.

Volumes used for modeling traffic noise from the project were estimated using peak hour intersection data from the project's traffic study (Kimley-Horn and Associates 2019). The PM peak hour trip rates were used due to generally higher traffic volumes in that timeframe. Table 23 shows the peak hour traffic volumes under existing and future conditions, and the roadway miles per hour (mph) entered into the model. Per site measurement observations, vehicle composition was assumed as 96 percent automobiles, 2 percent medium trucks, and 2 percent heavy trucks on Reservation Road and Del Monte Boulevard, and 98.5 percent automobiles, 1 percent medium

trucks, and 0.5 percent heavy trucks on the rest of the streets. The defaults of 84 percent traffic during the day and 16 percent during the night were also used.

Table 23 Existing and Future Traffic Volumes

		Traffic Counts (Peak Hour PM Trips)		
Roadway	**Segment**	**MPH**	**Existing[1,2]**	**Future (included DVSP buildout)**
Del Monte Blvd	SR 1 to Reindollar Ave	35	2,135	2,493
	Reindollar Ave to Palm Ave	35	1,663	1,959
	Palm Ave to Reservation Rd	35	1,510	1,714
Reservation Rd	Del Monte Blvd to Vista Del Camino Cir	35	1,763	2,139
	Vista Del Camino Cir to Seacrest Ave	35	1,759	2,018
	Seacrest Ave to De Forest Rd	35	1,696	1,995
	De Forest Rd to Crescent Ave	35	1,720	1,993
	Crescent Ave to California Ave	40	1,669	1,917
	California Ave to Salinas Ave	40	1,515	1,840
	Salinas Ave to out of DVSP	40	1,518	1,880
Reindollar Ave	Del Monte Blvd to east	25	678	945
Cypress Ave[1]	Del Monte Blvd to east	25	177	248
Palm Ave	Del Monte Blvd to east	25	177	248
Carmel Ave[1]	Del Monte Blvd to east	25	678	945
Mortimer Ln[1]	Del Monte Blvd to east	25	177	248
Vista Del Camino Cir	Reservation Road to north	25	584	757
Seacrest Ave	Reservation Road to south	25	550	774
De Forest Rd	Reservation Road to north	25	225	322
Crescent	Reservation Road to north	25	203	246
	Reservation Road to south	25	422	584
California Ave	Reservation Road to south	35	378	547
Lynscott Dr[1]	Reservation Road to south	25	378	547
Bayer St[1]	Reservation Road to south	25	378	547
Salinas Ave	Reservation Road to south	25	34	136
Sunset Avenue[1]	Reindollar Ave to Carmel Ave	25	177	248
Hillcrest Ave[1]	End of street towards Zanetta Dr	25	177	248

[1] Traffic volumes for these roadways were not provided in the traffic study; volumes on these roadways were assumed to be similar to the nearest, similar-sized collector street.

Source: Kimley-Horn and Associates 2019

Stationary Noise

The project buildings would likely use commercial-sized heating, ventilation, and air conditioning (HVAC) units. For the purposes of this analysis, the specifications for Carrier 48PG 14-ton HVAC units, which have a sound power level (SWL) of 83.3 dBA, are used to analyze the noise impact from the proposed project buildings. The manufacturer's noise data for the HVAC units is provided below in Table 24; more detailed data can be found in Appendix NOI. Modeling for these HVAC units was performed in Trane Acoustics Program (TAP).

Table 24 HVAC Noise Data

Product	Nominal Tons	Noise Levels in Decibels[1] (dB) Measured at Octave Frequencies							Overall Noise Level in dBA[1]
		125 Hz	250 Hz	500 Hz	1 KHz	2 KHz	4 KHz	8 KHz	
Carrier 48PG	14	85.9	85.3	81.8	78.2	72.2	67.9	59.9	83.3

[1] Sound Power Levels (S_{WL})
KHz = kilohertz; Hz = hertz
Source: Appendix NOI

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

If construction occurs next to an existing property line, over the course of a typical construction day, construction equipment could at times be located as close as 10 feet to the nearest structures, but would typically be located at an average distance further away due to the nature of construction where equipment is mobile throughout the day. Therefore, it is conservatively assumed that equipment would operate at an average distance of 50 feet from neighboring property lines.

As described under Methodology, at a distance of 50 feet, an excavator, loader, and dump truck would generate a noise level of 79.9 dBA L_{eq}. The 60 dBA L_{eq} noise contour for these pieces of equipment is located at a distance of 500 feet; therefore, construction occurring within 500 feet of nearby property lines may exceed Marina's 60 dBA L_{eq} threshold. Section 9.24.040 of the Marina Municipal Code limits the operation of construction equipment to after 7:00 a.m. and before 7:00 p.m. on a daily basis except for Sundays and holidays when their use is prohibited before 10:00 a.m. and after 7:00 p.m. During daylight savings, this equipment may be operated until 8:00 p.m. These limitations would reduce the impact of construction noise in the evenings. However, due to exceeding the construction noise threshold during daylight hours, impacts would be potentially significant.

Operation

ON-SITE TRAFFIC NOISE

Exterior

The traffic noise contours under full DVSP buildout (future condition) are shown in Table 25. The roadway centerline to the beginning of the property lines bordering the streets is approximately 60 feet on Del Monte Boulevard and Reservation Road, and 30 feet on the rest of the streets. Therefore, if the noise level contours that extend out from Del Monte Boulevard and Reservation

Road at a distance of 60 feet or greater exceed 60 dBA L_{dn} at future residential land uses, 67 dBA L_{dn} at future office uses, or 70 dBA L_{dn} at future commercial uses (retail), impacts to exterior areas of the future projects would be significant. Similarly, if the noise level contours that extend out from the rest of the streets at a distance of 30 feet or greater exceed 60 dBA L_{dn} at future residential land uses, 67 dBA L_{dn} at future office uses, or 70 dBA L_{dn} at future commercial uses (retail), impacts to exterior areas of the future projects would be potentially significant.

As shown in Table 25, noise level contours on Reservation Road and Del Monte Boulevard would exceed the specified distances for residential (60 dBA L_{dn}) and office (67 dBA L_{dn}) exterior areas. Noise level contours on Reindollar Avenue, Carmel Avenue, Crescent Avenue to the south of Reservation Road, Lynscott Drive, and Bayer Street would exceed the specified distance for residential areas. Noise level contours would not exceed any of the specified distances for Cypress Avenue, Palm Avenue, Mortimer Lane, Crescent Avenue north of Reservation Road, Salinas Avenue, Sunset Avenue, or Hillcrest Avenue. Therefore, as exterior areas for planned residential and office development in the DVSP may exceed Marina noise thresholds, impacts would be potentially significant.

Interior

Building facades for future buildings may be located as close as 60 feet to the centerlines of Del Monte Boulevard and Reservation Road, and 30 feet to the centerlines of the rest of the analyzed streets. Assuming a 20 dBA exterior-to-interior noise reduction (the most conservative value from FHWA guidelines for modern building construction exterior-to-interior noise reductions, as described above under *Fundamentals of Noise*), if the noise level contours that extend out from Del Monte Boulevard and Reservation Road at a distance of 60 feet or greater exceed 65 dBA L_{dn} at future residential land uses, 75 dBA L_{dn} at future office uses, or 80 dBA L_{dn} at future commercial uses (retail), impacts to interior areas of the future projects would be significant. Similarly, if the noise level contours that extend out from the rest of the streets at a distance of 30 feet or greater exceed 65 dBA L_{dn} at future residential land uses, 75 dBA L_{dn} at future office uses, or 80 dBA L_{dn} at future commercial uses (retail), impacts to interior areas of the future projects would be potentially significant.

As shown in Table 25, no noise level contours would exceed the distances necessary for a noise level of 75 dba L_{dn} or 80 dBA L_{dn} at future office or retail uses. However, the noise level contours would exceed the distances necessary for 65 dBA L_{dn} at future residential uses on Del Monte Boulevard, Reservation Road, Reindollar Avenue, Carmel Avenue, and California Avenue. Therefore, impacts to residential interior noise would be potentially significant.

Traffic Noise Impacts to Existing Uses

A significant impact would occur from DVSP buildout traffic noise if it results in noise increases that exceed the Maximum Acceptable Exterior limits specified by the Marina General Plan as shown in Table 20. If existing conditions are already above those limits, a significant increase would occur if the project generates a perceptible change (3 dBA) over existing conditions.

Table 26 shows the traffic noise increase from the existing to the future scenario. As shown in the table, there are several segments where traffic noise is increased by 1 or 2 dBA that would cause noise levels to exceed the Maximum Acceptable Exterior limits for certain land uses (e.g., residential uses on Carmel Avenue). However, none of these segments would have the project generate a 3 dBA or greater increase. One roadway, Salinas Avenue, would have an increase of 3 dBA or greater; however, even with the increase, the roadway would be well below the Maximum Acceptable

Table 25 Future Traffic Noise Contours (Buildout)

Roadway	Segment	Noise Level at 50 Feet (dBA L_{dn})	Noise Contours (feet)			
			75 dBA L_{dn}	70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}
Del Monte Blvd	HW1 to Reindollar Ave	71	26	57	122	262
	Reindollar Ave to Palm Ave	70	22	48	103	222
	Palm Ave to Reservation Rd	69	21	44	95	205
Reservation Rd	Del Monte Blvd to Vista Del Camino Cir	70	24	51	109	236
	Vista Del Camino Cir to Seacrest Ave	70	23	49	106	229
	Seacrest Ave to De Forest Rd	70	23	48	104	225
	De Forest Rd to Crescent Ave	70	23	48	104	225
	Crescent Ave to California Ave	71	27	57	124	266
	California Ave to Salinas Ave	71	26	56	120	258
	Salinas Ave to out of DVSP	71	26	57	122	262
Reindollar Ave	Del Monte Blvd to east	62	7	14	31	66
Cypress Ave[1]	Del Monte Blvd to east	56	3	6	13	27
Palm Ave	Del Monte Blvd to east	56	3	6	13	27
Carmel Ave[1]	Del Monte Blvd to east	62	7	14	31	66
Mortimer Ln[1]	Del Monte Blvd to east	56	3	6	13	27
Vista Del Camino Cir	Reservation Rd to north	61	6	12	27	57
Seacrest Ave	Reservation Rd to south	61	6	12	27	57
De Forest Rd	Reservation Rd to north	57	3	7	15	32
Crescent Ave	Reservation Rd to north	56	3	6	13	27
	Reservation Rd to south	60	5	10	22	48
California Ave	Reservation Rd to south	63	7	16	35	75
Lynscott Dr[1]	Reservation Rd to south	59	5	10	21	46
Bayer St[1]	Reservation Rd to south	59	5	10	21	46
Salinas Ave	Reservation Rd to south	53	2	4	8	18
Sunset Ave[1]	Reindollar Ave to Carmel Ave	56	3	6	13	27
Hillcrest Ave[1]	End of street towards Zanetta Dr	56	3	6	13	27

See Appendix NOI for model printout

[1] Noise contours are from the roadway centerline.

Exterior limit for residential uses. Therefore, the DVSP's increase to traffic noise levels would be less than significant.

STATIONARY NOISE

Operational noise generated by the proposed project may affect off-site sensitive receivers. Potential noise-generating land uses of the project include the HVAC units for the multi-family residential, retail, and office uses, and potential loading docks associated with retail uses.

HVAC UNITS

Mechanical HVAC units located on the ground or on rooftops of new multi-family apartment, retail, or office buildings would have the potential to generate noise levels that run continuously during the day and night. For modeling, the units were conservatively assumed not to include noise attenuation provided by a parapet wall. Specific planning information is not available for the HVAC units at this time; modeling assumed the use of Carrier 16-ton packaged HVAC units (50PG03-16) with a manufacturer's Sound Power Rating of 91.4 dBA SWL as these units are representative of typical HVAC units. A cluster of eight HVAC units operating at a distance of 50 feet would generate a noise level of 61 dBA.

Depending on where they are located, HVAC units could exceed Marina's stationary noise limit for 55 dBA L_{eq} from 7:00 a.m. to 10:00 p.m. and 45 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. at nearby property lines. For a point source such as a piece of mechanical equipment, the sound level normally decreases by about 6 dBA for each doubling of distance from the source. Therefore, it is assumed that HVAC equipment would generate noise levels that exceed 45 dBA within 320 feet of the equipment and 50 dBA within approximately 180 feet of the equipment. Consequently, noise levels to residences or other sensitive receivers located in close proximity to a building that requires an HVAC system could result in a significant impact.

LOADING DOCKS

Retail (commercial) land uses also have the potential to generate noise from truck deliveries, such as engines idling and beeping from backing warning signals at commercial loading docks. State law currently prohibits heavy-duty diesel delivery trucks from idling more than five minutes; therefore, noise from idling would be limited to five minutes during truck deliveries (CCR Title 13, Section 2485). Truck trips would be periodic throughout the DVSP area and would not be concentrated in one location. Given the intermittent and short duration of noise from truck deliveries in a given location, truck deliveries would not be a source of excessive ambient noise. Therefore, impacts related to truck deliveries would be less than significant.

Summary

As described above, construction noise would exceed established thresholds at a distance of 500 feet. Therefore, mitigation is required to reduce the impact to a less than significant level. Operational impacts, including traffic-related exterior and interior noise impacts to DVSP uses and stationary noise from HVAC units, would also be potentially significant and require mitigation.

Specific Plan-generated traffic noise impacts to existing land uses would be less than significant, as would operational impacts related to truck deliveries. Mitigation would not be required for these specific impacts.

Table 26 Traffic Noise Increases

Roadway	Segment	Noise Level at 50 Feet (dBA L_{dn})[1]		Increase from Existing to Future
		Existing	Future	
Del Monte Blvd	HW1 to Reindollar Ave	70	71	1
	Reindollar Ave to Palm Ave	69	70	1
	Palm Ave to Reservation Rd	69	69	0
Reservation Rd	Del Monte Blvd to Vista Del Camino Cir	69	70	1
	Vista Del Camino Cir to Seacrest Ave	69	70	1
	Seacrest Ave to De Forest Rd	69	70	1
	De Forest Rd to Crescent Ave	69	70	1
	Crescent Ave to California Ave	70	71	1
	California Ave to Salinas Ave	70	71	1
	Salinas Ave to out of DVSP	70	71	1
Reindollar Ave	Del Monte Blvd to east	60	62	2
Cypress Ave[1]	Del Monte Blvd to east	55	56	1
Palm Ave	Del Monte Blvd to east	55	56	1
Carmel Ave[1]	Del Monte Blvd to east	60	62	2
Mortimer Ln[1]	Del Monte Blvd to east	55	56	1
Vista Del Camino Cir	Reservation Road to north	60	61	1
Seacrest Ave	Reservation Road to south	60	61	1
De Forest Rd	Reservation Road to north	56	57	1
Crescent	Reservation Road to north	55	56	1
	Reservation Road to south	58	60	2
California Ave	Reservation Road to south	61	63	2
Lynscott Dr[1]	Reservation Road to south	58	59	1
Bayer St[1]	Reservation Road to south	58	59	1
Salinas Ave	Reservation Road to south	47	53	6
Sunset Ave[1]	Reindollar Ave to Carmel Ave	55	56	1
Hillcrest Ave[1]	End of street towards Zanetta Dr	55	56	1

[1] Noise contours are from the roadway centerline.

See Appendix NOI for model printout

Mitigation Measures

NOI-1 Construction Noise Reduction Measures

The following measures shall be implemented if construction is to occur within 500 feet of a residential property line:

- The City shall ensure that notes for grading plans and/or site improvement plans clearly state the noise limitation requirements of Municipal Code Section 15.04.055.
- Construction activities shall occur as to not exceed the 60 dBA L_{EQ} noise limit at a receiving property line. Measures to reduce noise levels below the 60 dBA L_{EQ} noise limit include, but are not limited to, the following:
  - **Mufflers.** During project site excavation and grading, construction equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards.
  - **Stationary Equipment.** Stationary construction equipment shall be located and oriented so that emitted noise is directed away from the nearest noise sensitive receivers.
  - **Equipment Staging Areas.** Equipment staging shall be located in areas that will create the greatest distance feasible between construction-related noise sources and noise sensitive receivers.
  - **Electrically-Powered Tools and Facilities.** Where available, electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities.
  - **Sound barriers.** Temporary noise barriers shall be implemented between the construction equipment and the receiving property lines. The noise barriers shall be constructed of material with a minimum weight of two pounds per square foot with no gaps or perforations. Noise barriers may be constructed of, but not limited to, 5/8-inch plywood, 5/8-inch oriented strand board, and hay bales. Noise barriers may consist of sound blankets affixed to construction fencing along the construction site boundary facing potentially sensitive receivers
  - **Idling.** Construction vehicles shall be prohibited from idling in excess of five minutes.

NOI-2 Site-Specific Acoustic Analysis – Multi-Family Residences

This mitigation measure applies to future multi-family residential development on Reservation Road, Del Monte Boulevard, Reindollar Avenue, Reindollar Avenue, Carmel Avenue, California Avenue, Crescent Avenue to the south of Reservation Road, Lynscott Drive, and Bayer Street. Prior to the approval of multi-family residential building permits in these locations, the City shall require an acoustical analysis 1) demonstrating to the satisfaction of the Community Development Director (or their designee) that the proposed building plans ensure that interior noise levels due to exterior noise sources will be at or below Marina's interior noise standard of 45 dBA L_{dn} for residential uses in any habitable room, and 2) required exterior areas are not exposed to noise levels in excess of the City's maximum acceptable exterior noise level of 60 dBA L_{dn}. Design-level architectural plans shall be available during design review and will permit the accurate calculation of transmission loss for habitable rooms. If necessary, the analysis shall identify measures to reduce noise levels to within City standards, which may include, but would not be limited to:

- Design of the project to include exterior areas shielded from the roadways by the project buildings;

- Sound walls to reduce noise to exterior areas; and/or
- Windows with increased Sound Transmission Class [STC] ratings for interior areas, etc.).

It is preferred that the interior noise standard be attained with open windows. However, where the interior noise standard is attainable only with closed windows and doors, mechanical ventilation shall be required.

NOI-3 Site-Specific Acoustic Analysis – Office Uses

Concurrent with Design Review and prior to the approval of building permits for office uses on Reservation Road and Del Monte Boulevard, the City shall require an acoustical analysis 1) demonstrating to the satisfaction of the Development Services Director (or their designee) that the required exterior areas are not exposed to noise levels in excess of the City's maximum acceptable exterior noise level of 67 dBA L_{dn} for office uses. If necessary, the analysis shall identify measures to reduce noise levels to within City standards, which may include, but would not be limited to:

- Design of the project to include exterior areas shielded from the roadways by the project buildings;
- Sound walls to reduce noise to exterior areas; or

NOI-4 HVAC Mechanical Equipment Shielding

Concurrent with Design Review and prior to the approval of building permits, the City shall require a design plan demonstrating to the satisfaction of the Development Services Director (or their designee) that the noise level from operation of mechanical equipment shall not cumulatively exceed the following noise level limits for a designated receiving land use category as specified in Table 4.2 in the Marina General Plan:

- From 7 a.m. to 10 p.m.:
  - 50 dBA L_{eq}
  - 70 dBA L_{max}
  - 65 dBA L_{max}, impulsive
- From 10 p.m. to 7 a.m.:
  - 45 dBA L_{eq}
  - 65 dBA L_{max}
  - 60 dBA L_{max}, impulsive

Noise control measures may include, but are not limited to, the selection of quiet equipment, equipment setbacks, parapet walls, silencers, and/or acoustical louvers. Marina shall require noise attenuation features that would reduce sound levels to allowable noise levels.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be anticipated to be used for typical residential, retail, and office building uses established pursuant to the Specific Plan. The greatest anticipated source of vibration during general construction activities in the DVSP would be from a vibratory roller, which may be used during paving activities and may be used within 25 feet of the nearest off-site structures. A vibratory roller would create approximately 0.210 in./sec. PPV at a distance of 25 feet (Caltrans 2013b). This would be lower than what is considered a distinctly perceptible impact for humans of 0.24 in./sec. PPV, and the structural damage impact to residential structures of 0.4 in./sec. PPV. Therefore, although a vibratory roller may be perceptible to nearby human receivers, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

The proposed uses in the DVSP do not include any substantial vibration sources associated with operation. Therefore, operational vibration impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The DVSP area is located approximately 3,000 feet south of the outer edge of the 60 CNEL contour for the Marina Municipal Airport (Monterey County Airport Land Use Commission 2019). Therefore, the Plan Area would not be expected to be exposed to excessive noise from the airport, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	■	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	■	☐

a. Would the project induce substantial unplanned 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)?

The Specific Plan calls for a maximum of up to 2,904 new residential units in Downtown Marina. According to the U.S. Census Bureau (2019), there is an average of 2.74 persons per household in Marina. Therefore, full buildout of the Specific Plan would result in an estimated 7,957 new residents in the Plan Area.

Population growth estimates for the City of Marina by AMBAG (2018b) are shown below in Table 27. The planning horizon for the Specific Plan is 20 years, beginning in 2020. The AMBAG population estimate for the City in 2040 is 30,510. AMBAG periodically updates population forecasts, having done so most recently in 2014 and 2018. A draft of the Downtown Vitalization Specific Plan was completed in 2010. AMBAG's most recent population estimates, prepared in 2018, incorporated discussions with each member jurisdiction, including Marina, regarding population growth estimates. Therefore, the Specific Plan is accounted for in regional growth projections, although the current Specific Plan indicates a slightly higher maximum number of added residents than AMBAG projected in 2018. Specific Plan buildout would be accounted for in future updated AMBAG projections.

Table 27 Marina Population Projections

2015	2020	2025	2030	2035	2040
20,496	23,470	26,188	28,515	29,554	30,510

Source: AMBAG 2018b

While additional new residential development may occur outside of the Plan Area during Specific Plan buildout, the Specific Plan represents an intention to focus growth within the downtown area. Furthermore, the DVSP has been in progress for many years, having been initiated in 2006 (see Project Description under *Specific Plan Background*), and the projected growth within the Plan Area is accounted for in AMBAG projections, as described above. Therefore, the proposed project would not result in substantial unplanned population growth. Impacts would be less than significant.

LESS THAN SIGNIFICANT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Implementation of the Specific Plan would involve demolition of some existing housing in order develop new units. However, any displacement of people or housing would be temporary, and new housing added to the Plan Area would support a greater number of residents than existing housing. Therefore, the project would not result in the need for new housing elsewhere, as the Specific Plan would result in a concentration of the City's housing stock within higher density development within Downtown Marina. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
	1 Fire protection?	☐	☐	■	☐
	2 Police protection?	☐	☐	■	☐
	3 Schools?	☐	☐	■	☐
	4 Parks?	☐	☐	■	☐
	5 Other public facilities?	☐	☐	■	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Marina Fire Department (MFD) provides fire protection, medical emergency response, natural disaster preparedness, and hazardous materials mitigation services to the Plan Area. The Marina Fire Station is located within the Plan Area at 211 Hillcrest Avenue.

The MFD maintains three Type 1 engines and thirteen uniformed staff members, which include two firefighters, six engineers, three captains, one division chief, and one fire chief. In addition, there are ten reserves. MFD assigns a minimum of three fighters an engine and one duty chief per shift (Fire Chief Doug McCoun 2020). MFD's service area boundaries are limited to the Marina city limits. In 2016, the most recent year with reported data, MFD received 2,136 calls for service. Under existing conditions MFD requires three additional uniformed staff members and a fire marshal.

According to MFD staff, providing service for the City upon full buildout of the DVSP would require another fire station, ladder truck and engine company. Neither the current station on Palm Avenue nor the planned station at the Marina Municipal Airport would meet the needs of a full buildout of the DVSP (McCoun 2020). Although the MFD has existing deficiencies in service, the City participates

in a mutual aid agreement with all fire departments in Monterey County to enhance fire protection services and reduce response times (City of Marina 2000).

Additionally, should the MFD propose to expand or construct new facilities in the future, such facilities would be subject to subsequent environmental review under CEQA in which potential environmental impacts would be addressed accordingly. It should be noted that the allocation of funding for MFD staffing is the responsibility of the City of Marina and would be addressed as specific projects are proposed in the future. In addition, future projects under the DVSP would be required to pay impact mitigation fees pursuant to the City of Marina's developer fee schedule. Payment of impact mitigation fees would constitute funding equivalent to the provision of fire protection services to offset potential impacts associated with development facilitated by the proposed DVSP.

As described in Section 14, *Population and Housing*, buildout of the DVSP would not cause substantial unplanned population growth. Rather, the project would facilitate the City's planned population growth within the existing downtown area. Furthermore, buildout of the Specific Plan would occur incrementally over an estimated 20-year period. As discussed throughout this Initial Study, the Plan Area is currently developed, and construction or expansion of fire facilities within the Plan Area would be infill development and would not be expected to result in significant impacts. Impacts associated with land use changes and construction activity, including construction or expansion of fire facilities, are addressed throughout this Initial Study. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Plan Area receives police protection services from the Marina Police Department (MPD). The Marina Police Station is located within the Specific Plan Area at 211 Hillcrest Avenue. MPD provides preventative patrol, traffic control, crime prevention, investigations, drug enforcement, abuse prevention, and civil order services. The MPD staffs 29 sworn officers and eight non-sworn personnel. Based on the 2020 population estimate for the City of 23,470 (see Section 14, *Population and Housing*), the ratio of residents to police personnel is approximately 634 to 1. The project could result in an estimated maximum of 7,957 new residents, which would require the hire of approximately 13 new police personnel, and potentially a need for new facilities. However, according to MPD staff, service ratios and response times would be reassessed and adjusted as the population grows in an ongoing process over the course of the DVSP buildout (Police Chief Tina Nieto 2020). Additionally, as described above, DVSP buildout would occur over approximately 20 years and would not represent substantial unplanned population growth, and impacts associated with land use changes and construction are addressed throughout this Initial Study. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The Monterey Peninsula Unified School District (MPUSD) provides public education in the City of Marina. MPUSD operates five public schools in Marina: J.C. Crumpton Elementary School (grades K-5), Marina Vista Elementary School (grades K-5), Ione Olson Elementary School (grades K-5), Los Arboles Middle School (grades 6-8), and Marina High School (grades 9-12). All five of these schools serve the Plan Area. Table 28 displays 2018-2019 student enrollment and existing capacity levels for these schools.

Table 28 Marina School Enrollment and Capacity

School Name	Public/Private	Grades	Classrooms	2018-2019 Enrollment	Capacity
J.C. Crumpton Elementary	Public	K-5	23	474	481
Marina Vista Elementary	Public	K-5	23	443	495
Ione Olson Elementary	Public	K-5	20	348	441
Los Arboles Middle	Public	6-8	27	571	668
Marina High	Public	9-12	32	550	800
Total		**K-12**	**145**	**2.386**	**2,885**

Source: Diffenbaugh 2019

According to MPUSD superintendent PK Diffenbaugh, there is currently construction underway on some schools to increase capacities. It is possible that during the buildout period for the DVSP new or expanded schools would be required in Marina. However, as described above, DVSP buildout would occur over approximately 20 years and would not represent substantial unplanned population growth. Furthermore, a school impact fee is collected for each residential unit that is constructed. As stated in California Government Code Section 65996, payment of school impact fees is deemed to constitute full and complete mitigation for potential impacts to schools caused by development. Therefore, impacts related to the need for new school facilities as a result of implementing the Specific Plan would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

As described in Section 16, *Recreation*, the City of Marina General Plan establishes a standard of 5.3 acres of City park and recreation land for every 1,000 residents. The DVSP does not specify new park sites within the Plan Area, which is served by various nearby parks within the City. Although new parks could be added within the Plan Area, buildout of the Specific Plan would not result in the direct or immediate need for new or altered parks. As discussed in Section 16, *Recreation*, implementation of the Specific Plan would not result in a significant impact related to parkland ratios due to the presence of nearby parks and other planned parkland throughout the City. Impacts

related to parks would be less than significant; refer to Section 16, *Recreation*, for further discussion.

LESS THAN SIGNIFICANT IMPACT

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Marina Library provides library services to the Specific Plan Area. The Marina Library is located at 188 Seaside Circle, less than one mile from the Plan Area, and is run by the City of Marina and the Monterey County Free Libraries (MCFL) system. The Marina Library was moved to its present location in 2007 to accommodate the City's growth (Marina 2010). According to library staff, the facility is large enough to accommodate population growth facilitated by the Specific Plan (Mejia 2019).

The proposed DVSP would not result in the need for new or altered libraries or other public facilities. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	■	☐
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?	☐	■	☐	☐

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?

The City of Marina General Plan establishes a standard of 5.3 acres of City park and recreation land for every 1,000 residents (Marina 2010). The City's Parks and Recreation Master Plan identifies a more ambitious goal of 10 acres of park and recreation land per 1,000 residents. The present ratio of parkland to residents is 5.3 acres per 1,000 residents (Marina 2010), consistent with the standard established in the General Plan. This excludes undeveloped open space areas within the former Fort Ord. Additionally, Marina's recreational assets are augmented by over 650 acres of nearby state and regional coastal parkland. According to the General Plan, the City's parkland ratio is expected to grow to over 10 acres per 1,000 residents at full General Plan buildout after the improvement of former Fort Ord lands.

Currently, there are no public parks, open space areas, or land zoned or designated for park/recreation purposes within the Plan Area, excepting a parcel at the easternmost point of the Plan Area that is designated Habitat Preserve & Other Open Space. Parks nearby to the Plan Area include Locke-Paddon Park, adjacent to the intersection of Del Monte Boulevard and Reservation Road to the northwest, Vince DiMaggio Park, immediately adjacent to Locke-Paddon Park across Del Monte Boulevard, and Marina City Park, approximately 0.32 mile east of Del Monte Boulevard.

As described in Section 14, *Population and Housing*, the Specific Plan could result in an estimated increase of up to 7,957 residents in the Plan Area. The Specific Plan does not identify specific parcels to be converted to park use, but does discuss the possibility of either developing a main park or several smaller parks. The plan notes that currently vacant parcels could be converted to park use. While the plan does not specifically designate new parks, the City plans to develop new park space elsewhere, including on former Fort Ord lands (Marina 2010). Several new developments within the City, such as the University Village and Sea Haven residential developments, have been built to include public open space and public use parks. Additionally, the Fort Ord Regional Trail and

Greenway (FORTAG) is proposed as a 30-mile regional network of paved recreational trails and greenways connecting communities, including the City of Marina, to open space.

The Plan Area is served by multiple parks in close proximity, and the plan establishes active transportation goals to improve access to parks from within the Plan Area. New development in the Plan Area would be required to pay impact fees to contribute to park maintenance and development of new parkland to meet the City's parkland ratio standard. Because there are sufficient parks available near the Plan Area and because future development pursuant to the DVSP would be required to pay applicable impact fees for park maintenance and development, Specific Plan buildout would not 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. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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?

As described above, the DVSP does not specifically identify any new parks to be developed, although it is possible that implementation of the Specific Plan may include new parks. The potential environmental effects that could occur as a result of land use changes pursuant to implementation of the Specific Plan, including development of new parks, are discussed throughout this Initial Study. Therefore, impacts associated with the construction or expansion of recreational facilities are addressed and mitigated as needed, including in Section 4, *Biological Resources*, and Section 7, *Geology and Soils*. Therefore, impacts would be less than significant with mitigation.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	■	□	□	□
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	■	□	□	□
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	■	□	□	□
d. Result in inadequate emergency access?	■	□	□	□

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

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

d. Would the project result in inadequate emergency access?

Buildout in accordance with the proposed Specific Plan could result in an increase in vehicle trips and vehicle miles travelled in the Specific Plan Area, and therefore could result in potentially significant impacts related to transportation. This issue area will be analyzed in detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

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18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	■	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

PRC Section 21074 (a)(1)(A) and (B) define tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

Assembly Bill (AB) 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

Under AB 52 and Senate Bill 18 of 2004 (SB 18), the City sent letters to the following Native American groups on June 26, 2019: Esselen Tribe of Monterey County, Costanoan Rumsen Carmel Tribe, Ohlone Costanoan Esselen Nation, Amah Mutsun Tribal Band, Amah Mutsun Tribal Band of Mission San Juan Bautista, and the Indian Canyon Mutsun Band of Costanoan (Appendix TRIBAL). A representative from the Amah Mutsun Tribal Band responded to the letter to state that the City of Marina falls just south of the Tribal Boundary and the Tribe is therefore unable to respond to consultation letters relating to the proposed Specific Plan. A representative with the Ohlone/Costanoan-Esselen Nation request consultation with the City. Staff made several documented attempts to contact the Tribe via email, phone, and mail to arrange a time for consultation, however such attempts were unanswered. No other requests for tribal consultation were received, and consultation ended on December 20, 2019.

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?*

The City did not receive requests for tribal consultation under AB 52, thus the City assumes for the purposes of this analysis that no tribal cultural resources are located within the Plan Area. Although no known tribal cultural resources are present on the Plan Area, there is the possibility of encountering unknown tribal cultural resources or known cultural resources that may be identified as tribal cultural resources. Ground disturbance associated with projects facilitated by the Specific Plan has the potential to significantly impact tribal cultural resources. Mitigation is required to ensure that any unanticipated discoveries of tribal cultural resources are avoided or, where avoidance is infeasible, mitigated to a less than significant level.

Mitigation Measures

TCR-1 Suspension of Work around Tribal Cultural Resources

In the event that cultural resources of Native American origin are identified during construction, all earth-disturbing work in the vicinity of the find shall be temporarily suspended or redirected until an archaeologist has evaluated the nature and significance of the find as a cultural resource in accordance with Mitigation Measure CR-2 and an appropriate local Native American representative is consulted. If the City, in consultation with local Native Americans, determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with local Native American group(s). The plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for tribal cultural resources include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, or heritage recovery.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	■	□	□	□
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	■	□	□	□
c. 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?	□	■	□	□
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	□	■	□	□
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	□	■	□	□

a. Would the project require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

c. Would the project 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?

This checklist item, as it pertains to water supply, will be addressed in the EIR. Other components of this item are discussed below.

The City of Marina receives potable water service from the Marina Coast Water District; wastewater treatment from Monterey One Water (M1W); natural gas service and electricity transmission from Pacific Gas and Electric Company (PG&E); electricity supply from Monterey Bay Community Power; and telecommunication service from various providers.

The Plan Area consists of the downtown portion of the City, which is currently developed and connected to utilities. New connections to electric power, natural gas, and telecommunications facilities would increase demand of these utilities over the Specific Plan's 20-year planning horizon. However, as discussed in Section 6, *Energy*, the project would not result in wasteful or unnecessary energy use or conflict with a plan for renewable energy. Connecting new development to water, wastewater, stormwater, electric gas, and telecommunication infrastructure would require ground disturbance and Specific Plan buildout would also contribute to the need for new facilities that provide these utilities. Environmental effects associated with ground disturbance are discussed in Section 4, *Biological Resources*, Section 5, *Cultural Resources*, and Section 7, *Geology and Soils*. Ground disturbance associated with utility connections would be minor, as the Plan Area is developed and presently connected to utilities, and redevelopment would be compact, allowing for efficiency.

Sanitary sewage from the Plan Area is conveyed to the M1W Regional Treatment Plant (RTP) approximately two miles north of the City. The RTP serves a population of approximately 250,000 and treats 18.5 million gallons per day (mgd) (M1W 2020). The RTP is designed for an average dry weather flow of 29.6 mgd; thus, remaining daily capacity is approximately 11.1 mgd (Central Coast RWQCB 2014). As discussed in Section 14, *Population and Housing*, full buildout of the Specific Plan could result in up to 7,957 new residents in the Plan Area. Conservatively estimating water use of 100 gallons per day per person, and all water use being treated as wastewater, wastewater treatment demand for the project would be approximately 795,700 gallons per day. This represents approximately seven percent of available capacity at the RTP. Therefore, Specific Plan buildout would be served by a wastewater treatment provider with sufficient capacity. Furthermore, individual projects would be permitted individually and would occur intermittently over the DVSP's 20-year planning horizon. Therefore, the project would not require the relocation or construction of new or expanded utility facilities. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a. Would the project require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects?

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The project could result in potentially significant impacts related to water supply. Checklist item a, as it pertains to water supply, and checklist item b will be analyzed in detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The City receives solid waste collection service by GreenWaste Recovery and landfill service by the Monterey Regional Waste Management District (MRWMD). Solid waste is delivered to the Monterey Peninsula Landfill (MPL), approximately 2.5 miles north of the Plan Area. To comply with the California Integrated Waste Management Act of 1989 (AB 939), the MRWMD must divert at least 50 percent of its solid waste from landfills. In addition, Assembly Bill 341 (AB 341) sets a statewide 75 percent recycling goal by 2020. AB 341 also requires businesses generating more than four cubic yards of solid waste to recycle and requires owners of multi-family housing with five or more units to provide recycling for their tenants.

The MPL is owned and operated by MRWMD. The landfill is permitted to receive a maximum throughput of 3,500 tons per day (CalRecycle 2019). The landfill has remaining capacity of 49,700,000 cubic yards and is estimated to have capacity for 100 years of use at current disposal rates. The MPL receives approximately 200,000 tons of solid waste per year, or 548 tons per day (CalRecycle 2019 and MRWMD 2020). Therefore, remaining daily available capacity is approximately 2,952 tons per day.

Based on CalRecycle estimates, Californians generate approximately 4.7 pounds of solid waste per day (CalRecycle 2016). Buildout of the proposed Specific Plan would result in 7,957 new residents within the Plan Area. Therefore, solid waste generation by new residents would total an estimated 37,398 pounds per day, or 18.7 tons per day.

Additionally, Specific Plan buildout could result in an additional 1,386,000 square feet of commercial retail and office uses in the Plan Area. CalRecycle estimates a generation rate of .046 pounds of solid waste per square foot per day for commercial retail uses[12] (CalRecycle 2019), resulting in an additional 63,756 (1,386,000 x .046) pounds per day, or 31.9 tons per day, for these uses.

In total, the DVSP would result in estimated additional 100,878 pounds, or 50.4 tons, of solid waste per day delivered to the MPL. This represents approximately 1.7 percent of the available daily capacity at MPL. This landfill demand would be reduced by requiring diversion of 75 percent of solid waste for recycling. Furthermore, this estimate represents a full buildout scenario at the end of the Specific Plan's 20-year planning horizon. Therefore, the Specific Plan would not result in this much solid waste generation in the near-term. Because Specific Plan buildout would not generate solid waste in excess of local standards or landfill capacity, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

[12] CalRecycle provides various estimates for solid waste generation, based on different project-based analyses. The estimate provided herein is a selected mid-range estimate.

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	■	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	■	☐
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The California Department of Forestry and Fire Protection (CAL FIRE) does not designate any moderate, high, or very high fire hazard severity zones (VHFHSZs) within the City of Marina. The entirety of the City and all land bordering the City is within an area designated as a Local Responsibility Area (CAL FIRE 2007). The nearest land in a State Responsibility Area is in the Carmel Valley approximately seven miles south of the Plan Area.

The Plan Area is within an urbanized portion of the City, consisting primarily of lots developed with structures and pavement. The entire western boundary of the Plan Area is less than one mile from the Pacific Ocean. Open space areas with trees and other vegetation that could serve as wildfire fuel exist to the north and southeast of the Plan Area.

The proposed project would facilitate development within an urbanized area. By intensifying development, exposure of people and structures to wildfire hazards would increase. However, the overall exposure to wildfire hazards would be similar to existing conditions because the project would not add development to new areas or affect fuel amounts. Because the Plan Area is not within a state responsibility area, is not classified as a VHFHSZ, and would not exacerbate existing fire hazards, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially 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, substantially 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?	☐	■	☐	☐
b. 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)?	☐	■	☐	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

a. Does the project have the potential to substantially 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, substantially 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?

As discussed in Section 4, *Biological Resources*, development facilitated by the Specific Plan would have the potential to impact special status species and waters. However, these impacts would be less than significant with implementation of Mitigation Measures BIO-1(a) through BIO-1(h) and BIO-2, requiring, as needed, surveys, avoidance, and monitoring for biological resources and a jurisdictional delineation for a pond. As discussed in Section 5, *Cultural Resources*, implementation of the Specific Plan could impact historic buildings and archaeological resources. Mitigation Measure CR-1 through CR-4 would ensure impacts to historical resources are less than significant by

identifying historical resources during the project planning process and avoiding or minimizing potential impacts as needed and Mitigation Measure CR-5 would require an archaeological resources investigation, reducing impacts to a less than significant level. Therefore, as mitigated, the DVSP would not have the potential to substantially 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, substantially 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. Impacts would be less than significant with implementation of identified mitigation measures.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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)?

Cumulative impacts of several resource areas have been addressed in the individual resource sections above: Air Quality, GHG Emissions, and Noise. CalEEMod and EMFAC2017 were utilized to assess the air quality and GHG impacts resulting from the project, concluding that the cumulative impacts associated with these two issues would be less than significant with implementation of Mitigation Measure AQ-1, requiring construction dust control measures. Implementation of the Specific Plan could result in noise impacts due to construction activity and new development. Mitigation Measures NOI-1 through NOI-4 would require construction noise reduction measures and acoustical analysis to reduce impacts to a less than significant level. Other resource areas (agriculture and forestry resources and mineral resources) were determined to have no impact. Several resource areas (e.g., geology, hazards and hazardous materials) are by their nature project-specific and impacts at one location do not add to impacts at other locations or create additive impacts. As such, cumulative impacts to these issue areas would be less than significant.

Impacts related to transportation and water supply would be potentially significant and will be addressed in an EIR, including cumulative impacts.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in Section 1, *Air Quality*, and Section 13, *Noise,* the development facilitated by the Specific Plan would not result, either directly or indirectly, in significant air quality or noise impacts. Similarly, as discussed in Section 8, *Hazards and Hazardous Materials,* impacts from development of projects would not result in any adverse hazards related to hazardous materials. Compliance with applicable rules and regulations related to hazards and hazardous materials would reduce potential impacts on human beings to a less than significant level. Impacts to human beings would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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Appendix DVSP

City of Marina Downtown Vitalization Specific Plan

Downtown Vitalization Specific Plan

July 11, 2019 | Draft

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Executive Summary

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ES-1.1 Executive Summary

The City of Marina Downtown Vitalization Specific Plan is a community-initiated plan intended to guide the future development and ultimate transformation of the City's 320-acre downtown. The Specific Plan process involved countless hours of citizen participation and input guided by City staff.

ES-1.1.1 Intent

For years, residents of Marina have expressed a desire to make Downtown a destination with a distinct identity. They envision Downtown as the figurative heart of the community—a place where people gather for special events like farmers markets, street performances, and community events. Downtown will be home to parks and other recreational spaces, outdoor dining, public art, and attractive streetscapes. Residents envision wide sidewalks filled with people, activity, and a creative mixture of land uses.

This Specific Plan can be thought of as a road map to these desired destinations. In particular, the Specific Plan aims to reinvigorate the Downtown Marina economy and sense of place through:

- A cogent vision for the future;
- Clearly articulated land uses and development regulations; and,
- Appropriate design standards and guidelines.

This Specific Plan builds on the goals and objectives established in the City of Marina General Plan, as well as the relevant standards and regulations from the City's Municipal Code. It also implements elements of the City's Downtown Vision, Downtown Design Standards and Guidelines, and Pedestrian and Bicycle Master Plan.

ES-1.2 Specific Plan Contents

The Downtown Vitalization Specific Plan has been organized as follows:

Part I

Executive Summary provides a broad overview of the Plan.

Chapter 1 (Introduction) contains a project background and description of existing conditions in the Downtown. This chapter also includes the Plan's vision and guiding principles.

Chapter 2 (Community Identity) establishes the desired identity of Downtown Marina, considers opportunities and threats present in the Downtown, and includes goals and policies associated with the identity of Downtown Marina.

Chapter 3 (Land Use and Development) describes land use goals, policies, and implementation measures to guide future development within the Downtown. The mixed-use portions of the area are divided into "core" and "transitional" sections, with core being more urban in design and transitional moving towards suburban.

Chapter 4 (Economics) includes a framework for economic development in the Downtown. Technical studies are presented, and goals and policies related to economic development are established.

Chapter 5 (Mobility) describes the circulation and parking goals, policies, and development standards to help implement the vision for Downtown Marina. This chapter also establishes the basis for the plan's proposed

Dunes west of Marina.
Source: Monterey County Convention & Visitors Bureau

multimodal circulation system that integrates an interconnected network of vehicular, pedestrian, and bicycle traffic.

Chapter 6 (Public Facilities and Infrastructure) includes policies for the planned distribution, location, extent, and intensity of water, sewer, and storm drainage infrastructure and solid waste disposal facilities.

Chapter 7 (Environment and Sustainability) summarizes the importance of sustainable planning and "green" design methods and the measures that have been included in this Specific Plan to reduce the potential impact of development within the Downtown.

Part II

Section A (Design Standards and Guidelines) sets forth standards and guidelines for the consistent promotion of high quality, well designed development throughout the Downtown. These standards are composed of written statements and graphic illustrations that describe the design intent and community character for the Downtown Area.

Section B (Implementation) provides a framework to successfully implement the Plan and ensure its objectives are integrated effectively with the goals of existing documents, including the City's General Plan and Municipal Code.

1.6 Specific Plan Legal Requirements

The Downtown Vitalization Specific Plan has been developed to address future development and redevelopment patterns in the Downtown Area. Under California Government Code sections 65450—65457 and the direction provided by State General Plan guidelines, a specific plan may be used to implement a general plan and its policies, programs, and regulations. Specific plans must be consistent with the applicable elements of the jurisdiction's general plan.

California Government Code states that a specific plan, through text and diagrams, must identify the following:

> 1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
>
> 2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.
>
> 3) Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
>
> 4) A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

The specific plan must also establish a clear relationship to the General Plan.

This Downtown Vitalization Specific Plan has been prepared pursuant to State Law and complies with all legal requirements.

1.6.1 Legal Authority

The authority to prepare and adopt specific plans and the requirements for its contents are set forth in California Government Code, sections 65450—65457. The Downtown Vitalization Specific Plan is adopted by resolution. It is required that all subsequent projects including commercial developments and redevelopments, subdivisions, public works projects, and zoning regulations be consistent with the Specific Plan.

1.6.2 Severability

If any regulation, condition, program, or portion of this Specific Plan is held invalid or unconstitutional by any court of competent jurisdiction, that portion shall be deemed a separate, distinct, and independent provision and the invalidity of that provision shall not affect the validity of the remaining portions.

1.6.3 California Environmental Quality Act

The Downtown Vitalization Specific Plan has been prepared in conjunction with the an Environmental Impact Report (EIR). As such, policies and standards contained in this Specific Plan incorporate those mitigation measures deemed by the EIR as necessary to reduce environmental impacts resulting from this project to a less-than-significant level.

The adoption of the Downtown Vitalization Specific Plan does not automatically exempt subsequent individual projects within the Downtown from further environmental review. Any proposed project requiring discretionary approval from the City of Marina would be subject to the requirements of the California Environmental Quality Act (CEQA).

Section 15182 of the State CEQA Guidelines provides that:

> "Where a public agency has prepared an EIR on a specific plan…no EIR or negative declaration need be prepared for a residential project undertaken pursuant to and in conformity to that specific plan if the project meets the requirements of this section."

This exemption from the potential requirement to prepare EIRs on future residential developments in the Plan Area is applicable if there are no significant changes in the circumstances under which the future projects are undertaken or new information that would require important revisions in the EIR for the Specific Plan as described in CEQA Guidelines Section 15162. For nonresidential uses provided for by the Specific Plan, the City may determine, depending upon the findings of specific initial studies of the potential environmental effects of such projects, to either incorporate mitigation requirements included in the Specific Plan EIR or, if additional impacts not addressed in the EIR would occur, to prepare separate, subsequent environmental documents.

2. Community Identity

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2.1 Overview

A community's identity consists of three elements. These elements are the natural setting, the built environment, and human activity. Each of these elements affects the appearance and feel of a place. Each contribute to the experience we have when we visit a location. Whether it is walking up and down hills (natural setting), interesting architecture that attracts our attention and thought (built environment), or the morning routine of grabbing coffee and catching the bus (human activity), each of these contribute to how we view the places we live in and visit. Memorable places highlight interesting elements of the natural setting, create a walkable and aesthetically pleasing built environment, and promote a range of events that bring people together in formal and informal settings.

2.1.1 Natural Setting

Marina is located on a series of sand dunes. The lowest point in the Plan Area is the intersection of Del Monte Boulevard and Reservation Road. While the elevation dips slightly to the northwest in Locke-Paddon Park, the elevations rise quickly to the north and east and more gradually to the south along Del Monte. Entering from the east on Reservation Road creates an interesting vista as one enters the Downtown.

Natural setting.

Another significant natural element is the wind. Winds blowing primarily from the northwest are frequent, especially in the later parts of the day, and can affect the desirability of outdoor space. This is an important element in considering where outdoor space should be situated and shielded.

2.1.2 Built Environment

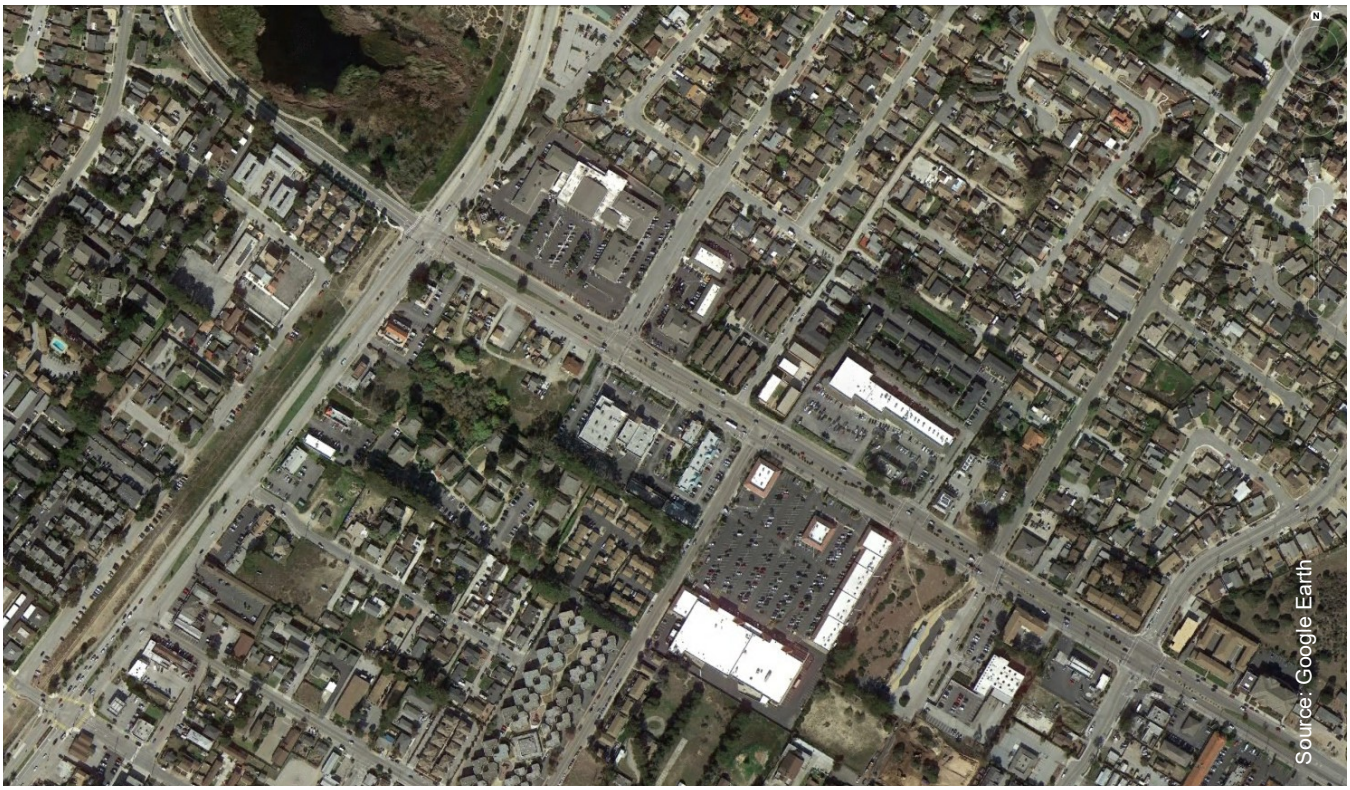
The built environment generally consists of properties held publicly (streets, parks, and civic buildings and spaces) and privately (businesses and homes). The value of private property is largely dependent on public space, especially in connection with rights-of-way for road networks. The commercial portion of the Downtown is focused on Reservation Road and Del Monte Boulevard. These roads form the backbone of the City's indeterminate Downtown. Marina's history as a services and support center for Fort Ord explains the suburban nature of this area. Given the absence of a platted city with established blocks and required block standards, development occurred along established roads, and regularly-spaced cross streets were never constructed. Dead-end driveways and lanes provided access to lots and limited vehicular and pedestrian connectivity throughout the Downtown area.

The design of buildings in a community typically reflects the popular architecture of the time and, over time, takes on historical significance and provides a context for new buildings. Because of the newness of construction in the Downtown, most of the architecture reflects suburban commercial design from the mid-20th Century to the present.

2.1.3 Human Activity

Within the context of the natural and built environment, human activities take place that help define the Downtown area. These can include annual events like the Labor Day Parade, or daily activities, such as morning coffee or lunch with friends. Weekly activities such as the Farmers Market are other examples of this type of activity. The interaction that takes place here is important in people's lives and in perceptions of the City.

Human activity.



Built environment.

2.2 Establishing an Identity

Exceptional downtowns integrate a city's natural setting and built environment to create opportunities for human interaction. These downtowns have a distinct identity. They are places people want to stop and visit rather than places to simply pass through. Much of the work in creating a memorable downtown involves adopting effective design standards for developments and civic space. In Central Marina, building on existing strengths, recognizing weaknesses and threats, and pursuing opportunities will help to achieve the vision for Downtown.

2.2.1 SWOT Analysis

Members of the Ad Hoc Committee identified strengths, weaknesses, opportunities, and threats associated with the Downtown (see **Figure 2-1**). Committee members felt that Downtown already attracts unique businesses and exhibits strong business retention. They said they enjoy the established farmers market and attractive street banners in the area. In addition, they felt that Downtown is

STRENGTHS	WEAKNESSES
Diverse/welcoming community	Poorly designed downtown
Centrally located in the Bay	Auto-oriented/not walkable
Downtown is safe, generally clean	Blight
Established farmers market	Large parking lots fronting streets
Attractive banners	No parks downtown
Strong business retention	No business district
Unique businesses	Lack of spaces to gather/meet
Budding tourist economy	Commuter traffic
Municipal airport	Poor imageability/sense of place
Higher education institutions	Lack of mixed uses
MST Transit Center	City seen as unfriendly to business
OPPORTUNITIES	**THREATS**
Gateways/medians on major roads	Lack of affordable housing
Wide ROWs on arterial roads	Limited connectivity via street grid
Key areas primed for redevelopment	Disjointedness of Central, South Marina
Regional trail system improvements	Online retail competition
Underutilized land for redevelopment	
Urban growth boundary	

Figure 2-1. Strengths, weaknesses, opportunities, and threats (SWOT) analysis of Downtown Marina based on feedback from members of the Ad Hoc Committee.

safe and generally clean. The broader City was praised for being a diverse and welcoming community, and Marina's central location in the Monterey Bay Area was seen as a strength.

In contrast, Marina's auto-oriented, poorly designed Downtown was identified by committee members as a major weakness. Blight has touched many buildings in the Downtown area. There are no parks, no established business district, and a scarcity of places to gather and meet. The large parking lots fronting Reservation Road and Del Monte Boulevard create a suburban environment incompatible with a traditional Downtown.

Threats to the development and sustainability of a diverse, inclusive Downtown include a regional lack of affordable housing, limited connectivity of local streets in the Downtown area, and the disjointedness of existing development Downtown (Central Marina) and new development at the Former Fort Ord (South Marina).

Even so, great opportunities are already built into the Downtown. With effort and time, these opportunities can contribute to the overall strength of the Downtown area. Opportunities include defined gateways and medians on major roads, wide rights-of-way on Del Monte Boulevard and Reservation Road, and key areas that are ripe for redevelopment.

2.2.2 Design Standards

The built environment is constantly evolving and greatly influences community appearance and identity. Within a community, design decisions can have an impact on neighboring properties, the Downtown, or the City as a whole. Because of the effects of these decisions, either real or perceived, City government has the role to balance the rights of individuals with those of the public good. Design standards are a reflection of a community's values relating to aesthetics. They generally tend to protect property values over the long run, but require some restriction on what can be done in the design of buildings or site work on a property. Most communities recognize the fine balance associated with these types of standards and there is typically an ongoing refining process.

The intent of design standards in the Downtown is to ensure that the heart of the community is attractive and functional, that property values are maintained, and that the area contributes to the well-being of the City in the long-term. Design standards typically look at the area surrounding the proposed site to take visual clues as to what fits.

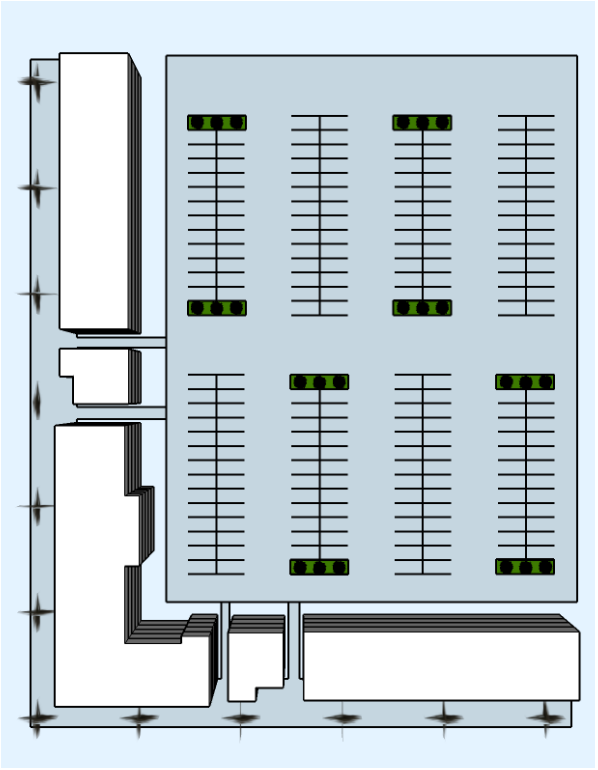


Figure 2-2. Traditional Downtown site layout with buildings brought to the edge of the sidewalk and parking in the rear.

In the case of Marina, the direction will be to create a more traditional Downtown rather than continuing with the suburban siting of current buildings (see **Figure 2-2**). This will involve creating city blocks with buildings built to the edge of the sidewalk to create a street wall accessed by a pleasant pedestrian space located in the right-of-way. This transition from suburban to urban presents unique challenges in that a context or template of design is not established. Ideas for the design template include utilization of design elements from the various cultures who have made Marina home over the past decades. Other considerations are new technologies which are environmentally friendly and green, resulting in a more sustainable future for the area (see **Figure 2-3**). Additionally, modern interpretations of traditional building elements are also a consideration for design standards.

Design standards typically address issues specific to buildings such as materials, roof lines, openings, doors and windows, and architectural features and style, along with site features such as pedestrian and vehicular access, landscaping and materials, fencing and screening, and ancillary uses. **Section A** in Part II of this Plan addresses the design standards that apply to private development and civic space within the Downtown.

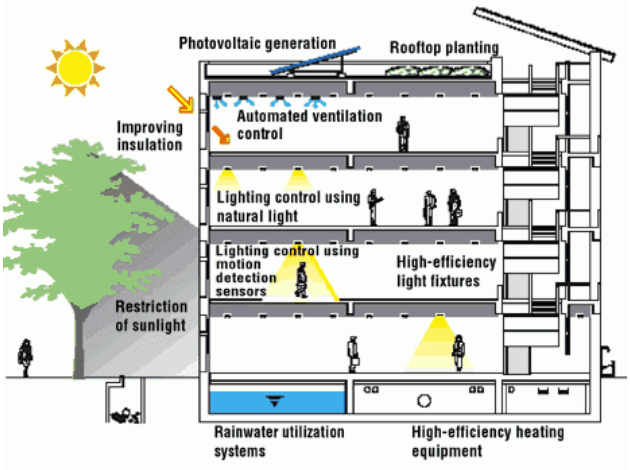


Figure 2-3. Common features of a green building.
Source: EcoMENA

2.3 Downtown Characteristics

A variety of factors contribute to the identity of Downtown. These include physical characteristics such as public art and trees as well as events like the farmers market. Physical characteristics contribute to the urban design of Downtown. Better urban design supports better human interaction, including formal events and informal gatherings.

2.3.1 Parks

In many communities, parks located within or near the downtown create opportunities for people to meet, recreate, and share ideas. There are currently no parks located in the Downtown Vitalization Specific Plan Area, but several parks are located nearby, including Locke-Paddon Park, Vince DiMaggio Park, and the Los Arboles Sports Complex.

There are competing ideas about how to create a more parks-oriented Downtown. One idea is improving connections between Downtown and existing parks, especially Locke -Paddon Park and Vince DiMaggio Park, thereby creating a sense of cohesiveness in Central Marina. Advantages to this approach include preserving land in the Downtown for residential and commercial uses and saving resources by rehabilitating existing parks. In order to serve as a true community park, portions of Locke-Paddon Park would probably need to be programmed with active uses, especially in the event that areas adjacent to the park are developed as a civic center (see **Figure 2-4**).

Figure 2-4. Locke-Paddon Park.

Another idea is developing a central park in Downtown Marina. This would entail identifying an appropriate site and setting aside funds for the improvement and possible purchase of land. A major advantage to this approach would be greater accessibility to the park, while a significant disadvantage would be the cost associated with developing a new park.

A third idea could be incorporated in tandem with either of the first two ideas mentioned above. This would be the development of small parks and plazas throughout the Downtown. Small parks, often called pocket parks, can serve individual neighborhoods and provide accessibility for a greater number of people. These parks are often relatively inexpensive to develop, particularly if the land is already held by the City or donated by a private landowner.

2.3.2 Gateways

A sense of arrival is an important part of identifying a district's borders or boundaries. Gateway or entryway enhancements can include a variety of elements such as signage, special landscape treatment, and information kiosks. The types of features included are largely determined by cost and land availability. Gateways create an important first impression for visitors and a sense of civic pride for residents of the community. It is important that these gateway enhancements be coordinated in some way as they serve the role of 'branding' the community.

Another important consideration is where to locate gateway improvements. While they may need to be adapted to their location, they should be appropriately planned and constructed. Three gateways have been

identified in Marina (see **Map 2-1**). They are the intersection of Reservation Road and Del Monte Blvd, the entry point from CA-1 heading northeast on Del Monte Blvd, and the point of entry heading northwest on Reservation Road. There are welcome signs near the CA-1/Del Monte entry point and at the entry point on Reservation Road. These signs are rather dated, although some maintenance improvements have been made (see **Figure 2-5**).

In July 2007, the City Council adopted *Citywide Public Sign and Identity Program Guidelines*. This document presents a uniform design theme for gateway and wayfinding signs in Marina. The document states that gateway signs "promote a stronger sense of place, articulate visual identity, and assist in wayfinding." A concept for a gateway sign (see **Figure 2-6**) is included alongside wayfinding signs on pages A-22 and A-23 of the **Design Standards and Guidelines**. Several more examples of current gateway signs from other communities are included in **Figure 2-7**.

Figure 2-5. Welcome to Marina signs on Reservation Road, east (top) and west (bottom).

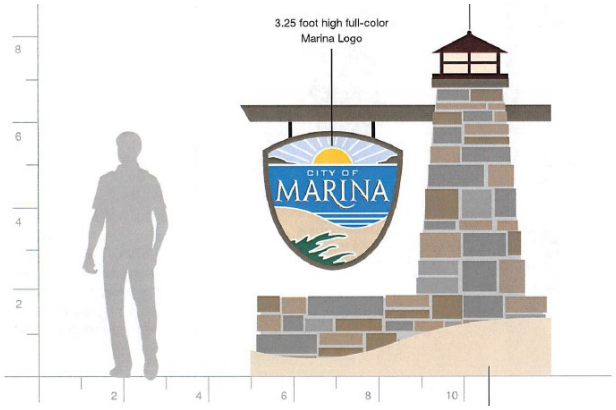
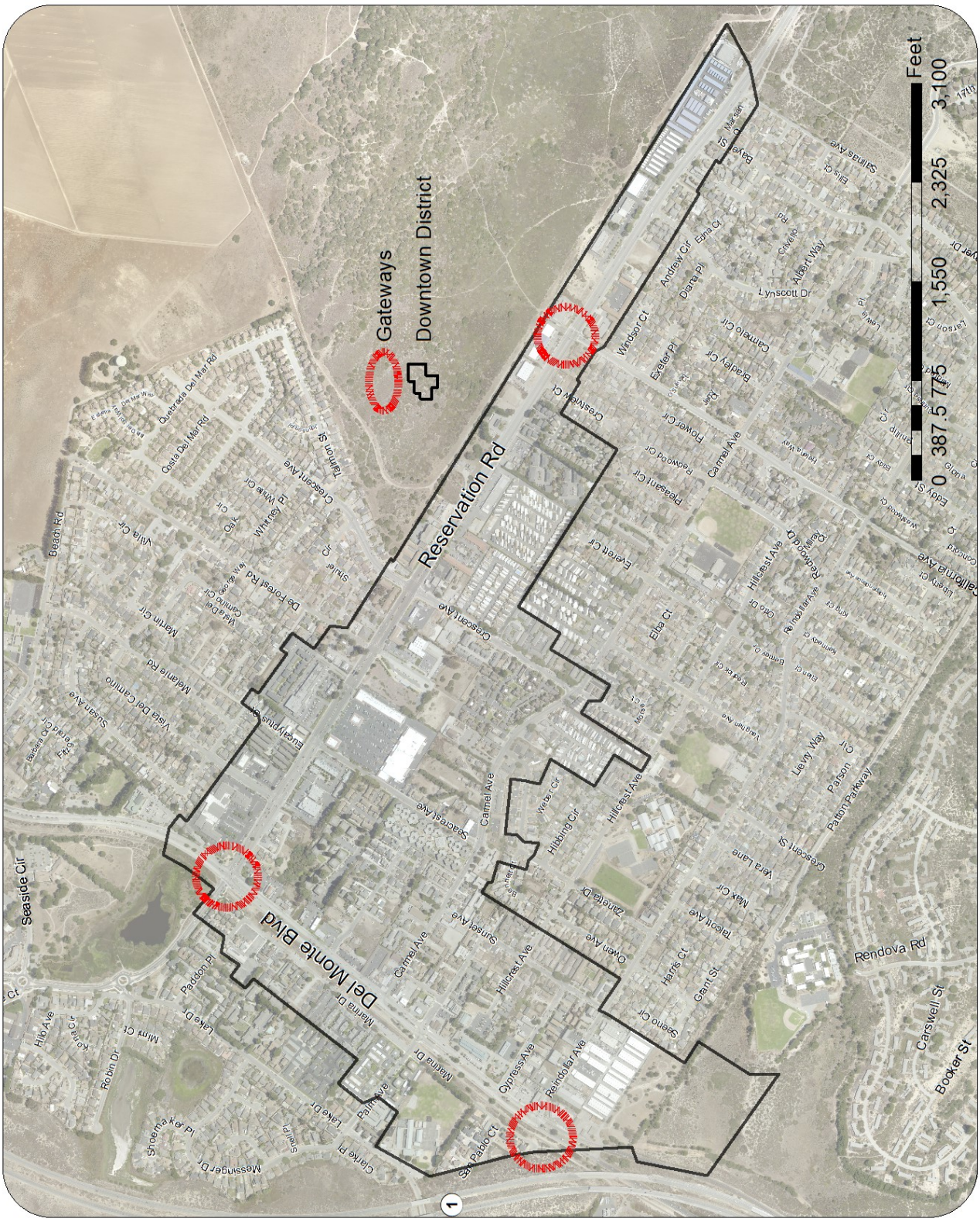


Figure 2-6. Example of gateway sign that could be used at key locations in Marina.

Figure 2-7. Gateway signs to downtowns in Benton, AR; Windsor, CO; and Littleton, CO.



Map 2-1. Gateways to Downtown Marina.

2.3.3 Urban Forest

Interest in Marina's urban forest has been ongoing in the community. There are many benefits associated with trees in a downtown environment, including:

- Street trees help create safer streets by reducing speeds and providing a buffer between motorists and pedestrians;
- Street trees help define the area identified as the Downtown, when planted in connection with a standard cross-section design;
- Trees strengthen the small town feel of Marina;
- Trees provide habitat for birds and insects, including aerial perches for the City's raptor population;
- Trees improve drainage by providing permeable space and requiring less infrastructure;
- Trees reduce air pollution and create a noise buffer;
- Street trees provide color, texture, line, and form to the landscape and soften hard lines created by the built environment;
- Trees invite people into an area, creating an aesthetically pleasing Downtown;
- Trees provide a visual and safety break between traffic on the street and sidewalks and buildings;
- Trees increase property values;
- Trees help manage storm runoff and reduce pollution going into Monterey Bay;
- Trees reduce wind flow and wind tunnels from medians and streets;
- Trees provide shade to offset urban heat islands; and,
- Trees provide screening of undesirable structures or objects.

Figure 2-8. *Arbutus marina* on California Avenue.

In 1995, a Tree Committee was established to develop an ordinance to help preserve the City's urban forest. This ordinance governs actions relating to trees in public spaces but includes only limited direction on park strip trees.

The majority of trees on in public spaces in the Downtown area are included in the street medians along Reservation and Del Monte, with limited street tree plantings in the pedestrian portion of the right-of-way located behind the curb. The trees in the medians are typically not indigenous to the area. They are sporadically located. The medians also include some shrubs. Maintenance of these areas is a challenge. A street cross section master plan needs to be developed to provide direction for enhancing these areas.

The few trees that are planted in the sidewalk area are often either poorly suited for Marina's climate, inappropriate for use along sidewalks because of root upheaval, or improperly pruned and therefore visually obtrusive. It is important to select ideal trees for Marina's climate, place trees at appropriate intervals along the street right-of-way, and prune trees to preserve comfortable pedestrian mobility and visibility for drivers in passing cars. Examples of appropriate street trees in Marina and neighboring communities are shown in **Figures 2-8** and **2-9**.

A list of trees ideally suited for Marina's climate is included in **Appendix B: Suggested Trees for Marina**.

Figure 2-9. *Tristania* on Reservation Road.

2.3.4 Pedestrian Environment

Cross sections on streets in Downtown Marina vary significantly. Several planning documents have identified the need to create an attractive pedestrian environment. Beginning in March 2018, the Ad Hoc Committee looked at a variety of cross sections and identified issues relating specifically to the pedestrian experience along Reservation Road and Del Monte Boulevard. Some of the issues identified included ADA access, narrow

sidewalks, damaged sidewalks, visibility on corners, limited space for pedestrians in the pedestrian portion of the right-of-way, street furniture, street trees, directional signage, street lighting, and other elements that would contribute to the character of the Downtown.

This exercise provided understanding of what the Ad Hoc Committee members saw as being important in creating an attractive pedestrian environment. In particular, Ad Hoc Committee members felt that streetscapes should be safe and inviting for pedestrians, and that landscaping should be active, useable space as often as possible. A follow-up exercise, utilizing a free online program called StreetPlan, allowed Ad Hoc Committee members to design cross sections that traffic engineers can use in the development of cross sections for streets in the Downtown. These have been included in **Appendix XX**.

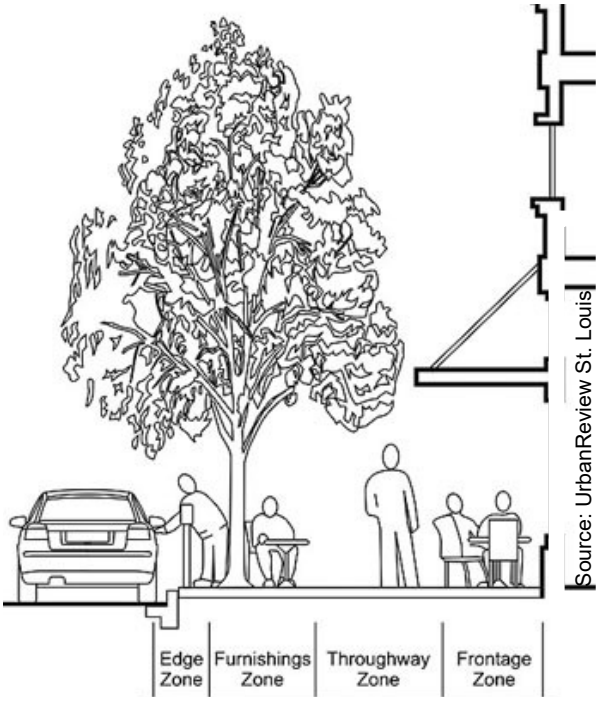


Figure 2-10: Pedestrian portion of the right-of-way.

The pedestrian portion of the right-of-way is of particular importance in the Downtown. There is a need to accommodate the movements of pedestrians along sidewalks (the "throughway zone") while also providing space for people to gather for outdoor dining and other purposes (the "frontage zone"). Amenities such as bus stops, benches, trash receptacles, and light poles take up additional space in the pedestrian right-of-way (the "furnishings zone"). **Figure 2-10** shows the four sections of the pedestrian portion of the right-of-way. **Figures 2-11** and **2-12** demonstrate two different configurations, one with outdoor dining next to the building and the other with outdoor dining next to the street. In either case, pedestrian movement is uninhibited in the Throughway Zone.

Figures 2-11 and 2-12. Pedestrian right-of-way with outdoor dining next to building (top) or street (bottom).

2.3.5 Signs

Signs are an essential part of any community. Civic signage plays a role in helping people understand the location of various uses and events occurring in the community (see **Figure 2-13**), while private signage creates awareness of products and services available. It is essential that signage and lettering on the sign be of sufficient size to address the sign's intended audience. It is also important, if the sign is lighted, that the lighting be bright enough to be visible, but not so bright that it distracts and affects other properties.

Public entryway and directional signs are essential to visitors and new members of the community trying to understand where they are and being able to navigate their way to find desired locations. Public information signage should be oriented to both vehicular and pedestrian traffic and should be centrally located. Currently, public information signage in the Downtown is provided by temporary signs attached to fences and located in the medians. Elected and appointed officials will need to determine the role of civic signage and if current methods are in the best interest of the community, and if so, what types of regulations need to apply.

Commercial signage in the Downtown Core will be attached to buildings and be designed to address both its pedestrian and vehicular audiences (see **Figure 2-14**). Speed limits in the Core are anticipated to be slower to accommodate pedestrian traffic and, as such, should have more limited signage space than might be found on portions of streets with higher traffic speeds.

Figure 2-14. Commercial blade signs—Appropriate in pedestrian areas provided they are limited in size and easily legible. Source: Under Consideration, Rite Lite Signs, Flickr, Pinterest

Figure 2-13. Wayfinding and directional signs.

Commercial signage in the Transition zones may include signage attached to the building as well as freestanding signage where space for such signage is available. The freestanding signage is best located in the front setback of the building but must be kept out of the clear view area to help create a safer interface between vehicles and pedestrians.

2.3.6 Public Art

The inclusion of Public Art in the Downtown is an important opportunity for placemaking. The role of public art has changed significantly over the past 100 years. During the late 19th and early 20th Centuries, public art tended to be associated with historical monuments honoring prominent persons or events within the community, state, or nation. With the introduction of the percent for art program during the mid- 1900s, more modern sculpture was often added. These sculptures were done by professional artists and were typically stand-alone pieces (see **Figure 2-15**).

While both the monumental sculptures and modern stand-alone pieces are still part of the public art palette, more utilitarian, integrated, and inclusive public art projects are often used. These have included public art being incorporated into street furnishings, such as benches, light poles, and bike racks, along with examples which allow people to experience the art piece, such as interactive screens, sculptures, and structures (see **Figure 2-16**).

The City's General Plan includes the following policy statement relating to Public Art:

> **3.34.7.** *Public Art*. The City of Marina should celebrate public art with a focus on placing artwork along roadways, bikeways, sidewalks and recreational trails. Art, art interpretive programs and nature interpretive programs should be developed with participation of the arts community.

This statement encourages the inclusion of Public Art within the City's rights-of-way and other public spaces. It identifies how the arts community can assist with enhancing a wide array of arts programs.

Public Art projects in Marina are somewhat limited. The largest was conducted in 2001-02 by the Marina Arts Council, under the direction of Candy Myers-Owen. The "Dolphins on Parade" project was inspired by Chicago's Cows on Parade, which occurred in 1999. The dolphins that were sculpted by local artist Charles Fischer and fabricated of fiberglass. Three are currently on public

Figure 2-15. These three public art pieces illustrate various approaches to public art. Included are: a statue of General George Henry Thomas located in San Francisco, providing an example of sculpture honoring a prominent person (left); the Picasso Sculpture in Chicago, a typical mid-century public art sculpture (bottom right); and the interactive art piece "Heaven's Cloud", affectionately known as "The Bean", located on the edge of Millennial Park in Chicago.

Figure 2-16. Bicycle rack including the City's logo illustrates how street furniture can be developed to help identify the community.

Figure 2-18. These musical swings in Montreal create beautiful sound when in use (top).

Figure 2-19. The Children's Environmental Wall in Dearborn, Michigan provided an opportunity for children to create paintings that were placed on tile and included in an art installation (right).

display with two placed at the entrance to the Civic Center complex at 211 Hillcrest and one located at the front of the Marina Square Shopping Center on Reservation Road (see **Figure 2-17**). The intent of the project was to include a symbol representative of Marina that would help brand the City.

As the Downtown develops, public art should be a consideration for inclusion in public spaces both in the right-of-way and in plaza and park spaces. The use of public art that adds value to the community can include a range of approaches and products. It will be important to include the citizens of Marina in being a part of process (see **Figures 2-18** and **2-19**).

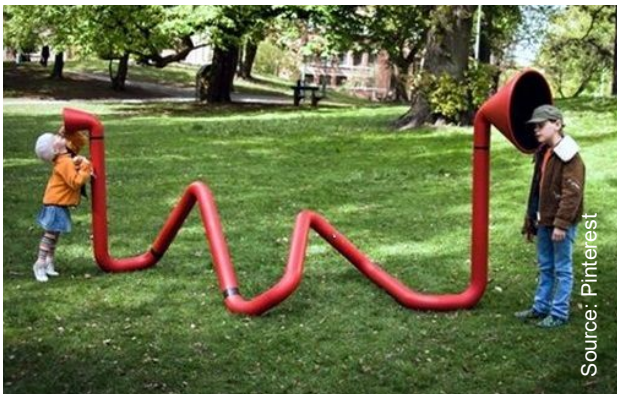
The following pages include a grouping of public art illustrations that provide ideas of the types of projects which have been done.

Figure 2-17. Existing public art in Marina includes this sculpture of a dolphin at Marina City Hall.

Examples of public art (clockwise, from top left): patterned manhole cover, in-pavement dance steps, contemporary sculpture, sculpture commemorating Vietnamese immigrants, interactive chalkboard, interactive sound sculpture, textured mural, painted staircase, reflective pillars, Workers United in Struggle mural, freeway underpass mural, coastal-themed sculpture, sculpture with vertical orientation, colorful crosswalk, sculpture celebrating educator Mary McLeod Bethune.

Source: Vince Parrillo (blog)

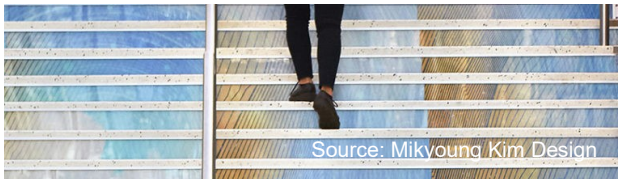
Antes de morir quiero
Antes de morir quiero
Antes de morir quiero
Antes de morir quiero
Source: WTOP


Source: Pinterest

MARY McLEOD BETHUNE
Source: WAMU

Source: Council on Culture and Arts

Source: Flickriver


Source: Mikyoung Kim Design

2.4 Block Layout

Blocks in the Downtown follow one of two typologies: urban or transitional.

In the urban block site layout, building fronts are brought to the lot line tangential with the pedestrian right-of-way, creating a continuous "street wall" (see **Figure 2-20**). Buildings are generally three to five stories in height. Parking is located behind the row of buildings. Minimal landscaping is located at entrances to the shared lots. Entrances to shared lots are found on minor streets perpendicular to the main streets fronted by buildings. Buildings on street corners are built to both the front and side property line and may have chamfered corner entrances. The urban block site layout will be used in the Downtown Core.

In the transitional block site layout, the "street wall" on main streets is interrupted by shared access points to parking lots located on the side of buildings or behind them, with the goal of limiting the number of driveways crossing the pedestrian right-of-way (see **Figure 2-21**). Parking lots are landscaped. Buildings are set back up to 10 feet from the pedestrian right-of-way, and these setbacks are also landscaped. The transitional block site layout will be used in the Transition and Multifamily Residential zones.

A third typology, the suburban site layout, is common in many other areas of Marina. In this layout, parking is located in front of the building and behind a large landscaped setback (see **Figure 2-22**). The setback is often bermed to provide additional screening of the parking lot. Landscaping within the parking lot is also required.

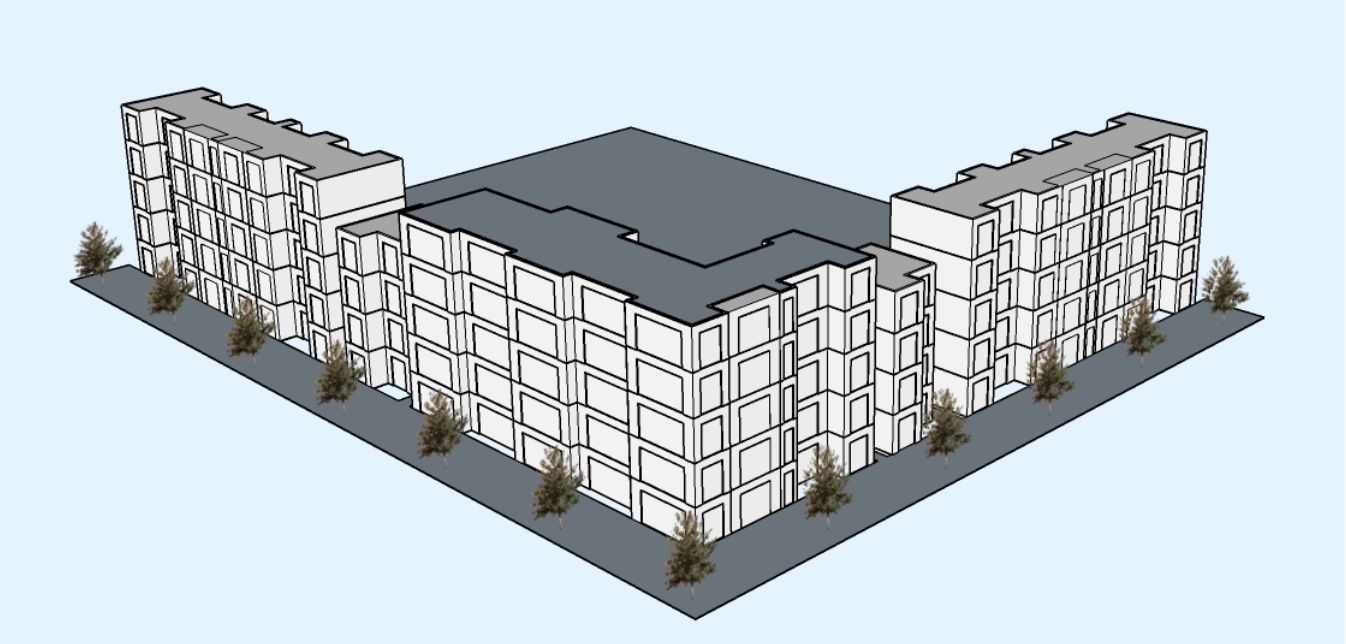


Figure 2-20. Urban block site layout.

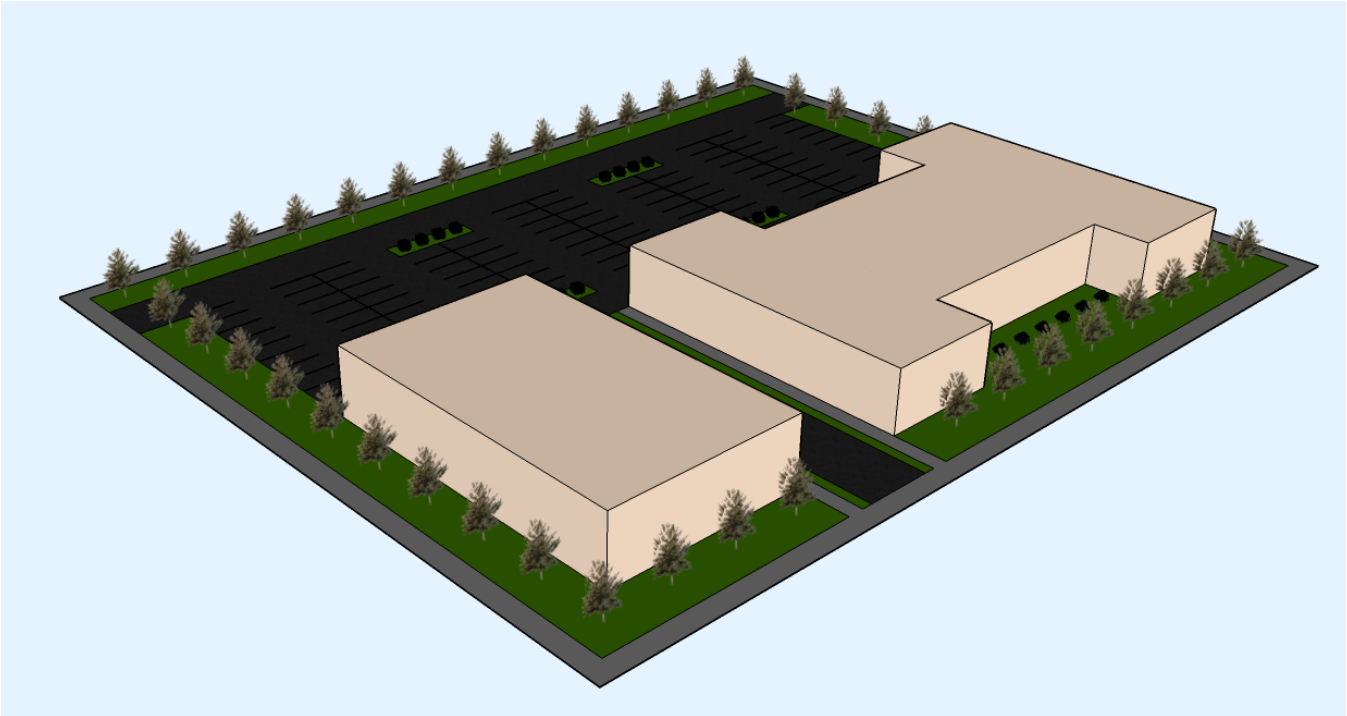


Figure 2-21. Transitional block site layout.

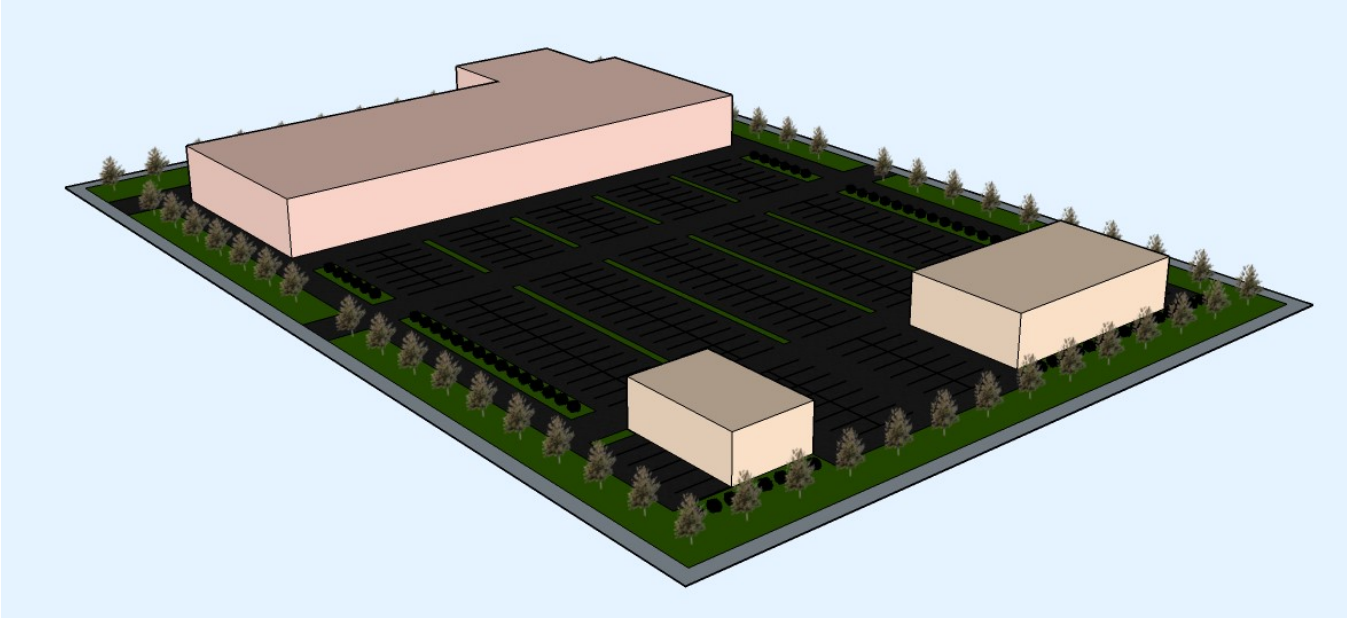


Figure 2-22. Suburban block site layout.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community where people gather for social, cultural, educational, and recreational experiences.

Gateway improvements.

OBJECTIVE 1

Gateways

Make Downtown readily identifiable to residents and visitors by establishing gateways at key locations.

STRATEGIES

1. Develop attractive, visible gateway improvements at the three major entry points into the Downtown.
2. Include such features as landforms, landscaping, vegetation, signage, and public art to define entry points and introduce the Downtown to citizens and visitors.
3. Work with property owners at entry points where insufficient public land is available to include private land that can be counted toward meeting landscaping requirements in order to ensure the gateway features are sufficiently sized to be visibly impactful to motorists.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community where people gather for social, cultural, educational, and recreational experiences.

Planted median with street trees.

OBJECTIVE 2

Urban Forest

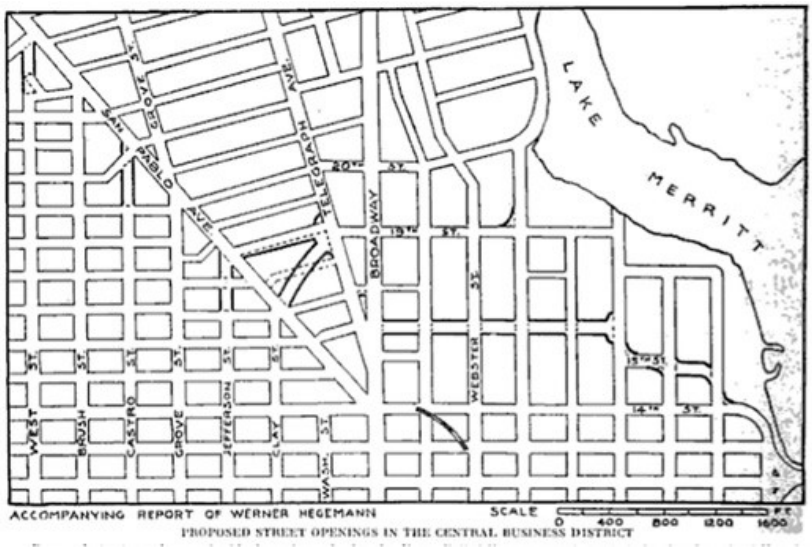
Create a comfortable pedestrian environment through the installation and maintenance of street trees comprising the urban forest.

STRATEGIES

4. Locate street trees within the Furnishings Zone of the pedestrian portion of the right-of-way.
5. Develop a street tree plan that will be implemented in connection with the installation of right-of-way improvements. A list of acceptable street trees is included in **Appendix B: Suggested Trees for Marina**.
6. Ensure that street trees are from the City's approved list of trees and that the base of the crown of the tree is of sufficient height not to interfere with street traffic.
7. Develop a unified, low-maintenance street median plan that includes landscaping, directional or civic signage, public art, and other features that contribute to the vitality and character of Downtown.
8. In the Core Area, ensure proper pruning practices are maintained to open the canopy of the tree, show the branch structure, and allow for building visibility.
9. Encourage new developments to preserve trees on site.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community where people gather for social, cultural, educational, and recreational experiences.



Well-developed street grid (Oakland, CA).
Source: SPUR

OBJECTIVE 3

Block Standards

Develop a street grid that improves connectivity and promotes pedestrian activity.

STRATEGIES

10. Encourage the development of blocks of approximately 5 acres in size within the downtown area to help provide access to landlocked and limited access parcels.
11. Require development of blocks on larger parcels as development and redevelopment of the site occurs.
12. Develop and adopt an urban infill street standard to help provide better access to deep lots and lots with limited access.
13. Allow for phased infill of buildings fronting the sidewalk in downtown commercial/mixed-use zones.
14. For properties within a block under multiple ownership, provide for cross access through the block.
15. Develop and adopt developmental standards that allow greater density on lots with greater street frontage in order to increase urban street wall, resulting in fewer driveways and less pedestrian interference.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community where people gather for social, cultural, educational, and recreational experiences.

OBJECTIVE 4

Pedestrian Environment

Ensure street conditions are comfortable and safe for pedestrians.

STRATEGIES

16. Minimize the number of driveways crossing the pedestrian right-of-way.
17. Install street lighting that meets the needs of pedestrians, bicyclists, and motorists.
18. Adopt design standards for public and private space and update as necessary to ensure that the standards are achieving desired goals of the City for the Downtown.
19. Explore means of financing public plaza space within the Downtown.

OBJECTIVE 5

Signage

Use signs to help create rather than detract from a sense of place in Downtown Marina.

Ensure lighting associated with signs does not negatively impact neighboring properties.

STRATEGIES

20. Update the City's sign ordinance to reflect current trends in signage and ensure that the needs of business owners are met, along with needs of the City.
21. Develop sign ordinance standards that help ensure signs are legible, designed for the intended audience, appropriately placed out of clear view, and that associated lighting is retained onsite and does not negatively affect neighboring properties.
22. Install unified directional signage in the Downtown area.
23. Ensure consistent branding through use of city logos, slogans, and other materials to create an identity for Downtown.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community where people gather for social, cultural, educational, and recreational experiences.

OBJECTIVE 6

Public Art

Use public art to create opportunities for people to connect with others.

STRATEGIES

23. Adopt a program such as a "percent for at" to help ensure that the funding of public art is included in public areas within the Downtown.
24. Provide opportunities for residents to participate in creating and selecting public art projects to help create a sense of ownership in public art installations.
25. Use public art as a vehicle to express the City's history and cultural heritage.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community where people gather for social, cultural, educational, and recreational experiences.

3. Land Use and Development

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3.1 Overview

When taken together, land uses and development standards, along with design standards and guidelines outlined in Section A, form a complete set of policies that will steer future land development and redevelopment within the Downtown. The land use and development standards detailed in this chapter are regulatory tools that will help with achieving the overall vision for Downtown. In tandem with design standards, land use and development standards are intended to reinforce the desired urban image of the Downtown. These standards are also intended to improve the overall aesthetic appearance and functionality of the street network. Finally, land use standards serve as an incentive for private investment in Downtown.

The requirements of this chapter replace the requirements of Marina Municipal Code, Title 17, Zoning, for Downtown Marina. Adoption of the Downtown Vitalization Specific Plan allows for the establishment of land uses and development standards tailored for Downtown. Where direction or regulation is not provided by the Specific Plan, the provisions of the General Plan and Municipal Code shall apply.

3.2 Historic Land Use Patterns

Development in Marina reached a peak in the decades following World War II. Like most communities in those years, Marina's development was spread out, oriented toward the automobile, and characterized by low densities. Land uses were segregated, requiring most residents to drive to shopping, employment, and recreation destinations. Most buildings were only one or two stories in height. This remains the dominant development pattern in Marina today.

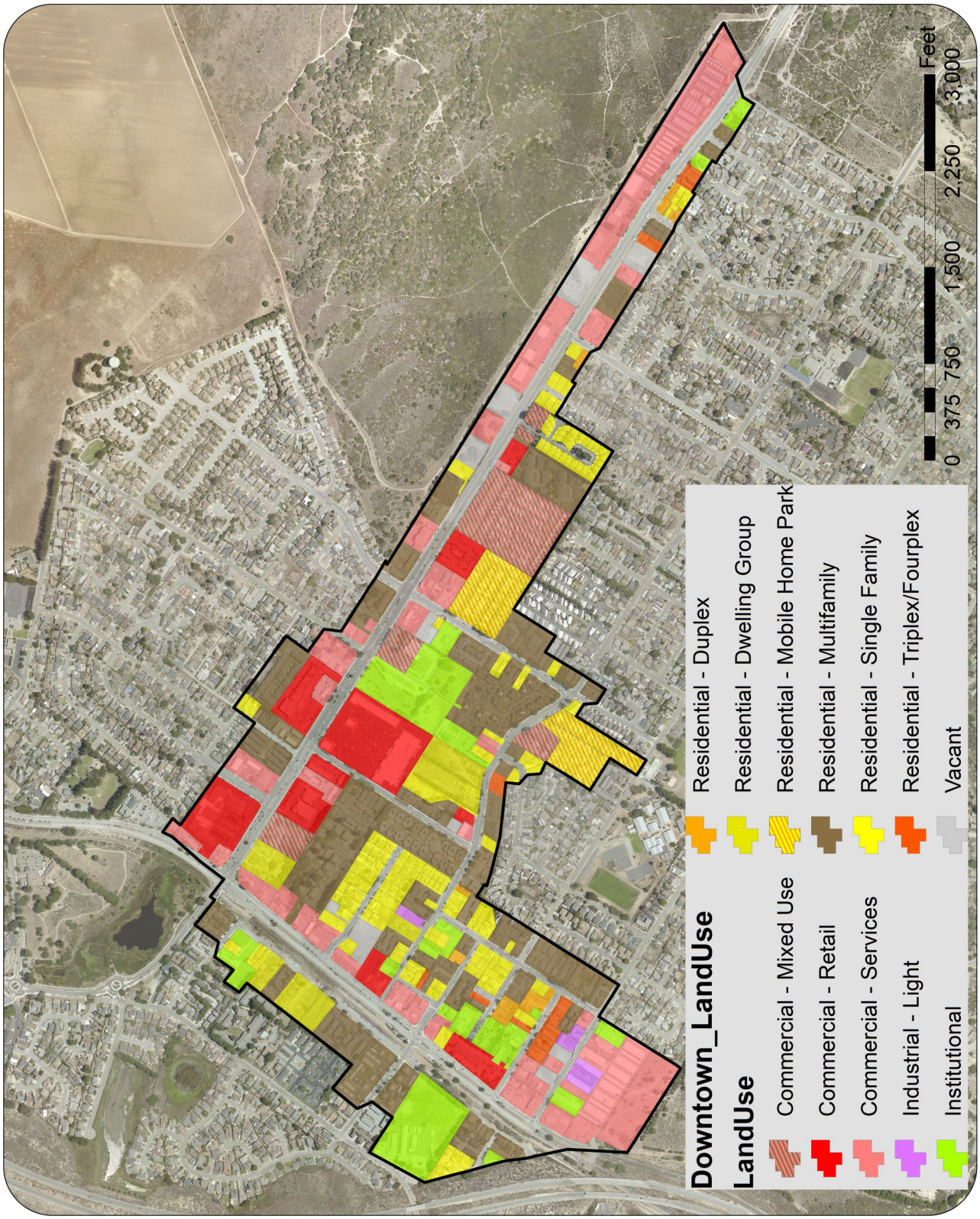
Downtown is no different. Although there is a higher concentration of medium- to high-density apartments and condominiums, most parcels are single use and characterized by suburban design elements like landscaped parking lots in front of buildings.

One thing that distinguishes Marina from many other communities is its sparse street grid. In traditional American cities, 30 to 35 percent of the total land area is devoted to streets, sidewalks, and other elements of the public right-of-way. In Marina, rights-of-way form just seven percent of the City's total land area and 10 percent of the City's developed land area. The street grid is more robust in the Specific Plan area, but even here just 21 percent of the land area is devoted to public rights-of-way. Problems associated with a limited street grid include traffic congestion, speeding, and increased pollution. Additionally, grid-poor communities are often less accessible and less navigable to people who walk and bike, requiring them to drive to reach destinations.

3.2.1 Existing Land Uses

Downtown covers 322 acres in Central Marina. While the downtowns of many cities enjoy mixed land uses that promote pedestrian activity and efficient use of space, single uses dominate most parcels in Downtown Marina (see **Map 3-1**).

A majority of land in this area is devoted to residential (39%) and commercial (24%) uses (see **Table 3-1**). Multifamily uses alone represent more than half of all residential land use in the Specific Plan area (and 22% of total land use). Eight percent of total land area is



Map 3-1. Existing land uses in Downtown Marina.

devoted to single-family homes, with 3% each to dwelling groups and mobile home parks. Duplexes, triplexes, and fourplexes together make up just over 2% of total land area.

Two-thirds of commercial uses are office-related, representing 16% of total land area. Retail and visitor-serving uses take up 8% of the total land area.

The public right-of-way in the Specific Plan area encompasses 67 acres, or 21% of the total land area. This is an unusually small percentage of land for a downtown area. In most downtowns, the public right-of-way occupies around 35% of total land area. Civic leaders should prioritize creating a street grid that includes smaller, more walkable blocks with mid-block crossings to increase access and safety. Acquiring land to develop a grid will take time and require creative solutions.

Remaining land uses are split between institutional and civic (9%), mixed (2%), and light industrial (1%).

There are no recreational uses Downtown. Vacant lots, which comprise 2% of land area, could provide an opportunity for the development of parks and other recreational facilities.

Compared to the City as a whole, Downtown Marina contains higher proportions of multifamily residential and retail/services and office commercial uses (see **Table 3-2**). Just over 50% of the City's multifamily residential housing stock is in the Downtown. Commercial uses make up a quarter of all land uses Downtown but only 5% Citywide.

Table 3-1. Current land uses by acreage in the Downtown Vitalization Specific Plan Area.

Land Use	Acres	%
Multifamily	71.01	22%
Single Family	26.21	8%
Mobile Home Park	11.12	3%
Dwelling Group	9.68	3%
Triplex/Fourplex	3.65	1%
Duplex	2.58	1%
Total Residential	**124.24**	**39%**
Retail/Services	27.35	8%
Office/Other Commercial	50.37	16%
Total Commercial	**77.72**	**24%**
Light Industrial	**2.09**	**1%**
Mixed Use	**15.70**	**5%**
Institutional	27.71	9%
Recreation	0	0%
Right-of-Way	67.03	21%
Total Public Uses	**94.74**	**30%**
Vacant Lots	**7.56**	**2%**
TOTAL	**322.05**	**100%**

Table 3-2 Current land uses in the City of Marina.

Land Use	Acres	%
Multifamily	138.9	2%
Single Family	559.9	9%
Mobile Home Park	24.7	<1%
Dwelling Group	29.4	<1%
Triplex/Fourplex	7.2	<1%
Duplex	26.0	<1%
Preston/Abrams Park	237.06	4%
Total Residential	**1023.12**	**17%**
Retail/Services	75.8	1%
Office/Other Commercial	244.2	4%
Total Commercial	**320.0**	**5%**
Light Industrial	**22.5**	**<1%**
Institutional	629.1	10%
Right-of-Way	415.0	7%
Vacant Lots	**1832.0**	**30%**
All Other Uses	**526.94**	**9%**
TOTAL	**6086**	**100%**

3.2.2 Parking Inventory

Planning staff conducted an inventory of all available parking spaces in the Specific Plan area in July 2018 (see **Table 3-3**). The inventory revealed a total of nearly 8,000 parking spaces. Roughly three-quarters of all available parking (6,144 spaces) is off-street in private lots, including residential, commercial, and industrial areas. Three percent of the area's parking supply—276 spaces—is located off-street in parking lots available to the public, including state court, school, post office, and civic facilities. The remaining 20% of parking (1,570 spaces) is located on the street and is generally accessible to all visitors and residents of Downtown.

Table 3-3. Parking spaces in the Downtown Vitalization Specific Plan Area (July 2018).

Parking		
Off-street in private lots	6,144	77%
Off-street in public lots	276	3%
Total off-street parking	*6,420*	*80%*
On-street	1,570	20%
TOTAL PARKING	**7,990**	**100%**

3.3 Land Use Plan

The primary goals of this Specific Plan are to establish Downtown Marina as a vital destination center that accommodates a mix of commercial, retail, dining, entertainment, and residential uses served by an improved transportation network, and to maximize the City's ability to capture future economic opportunities that otherwise might be lost to neighboring jurisdictions. The Specific Plan promotes these goals by encouraging a mix of new uses within a half-mile radius of transit centers to create a vibrant, thriving Downtown.

Greater densities and building heights will distinguish Downtown from other areas of the City and create visual interest. An overarching aim is to condense important land uses and make Downtown an identifiable area with attractive streetscapes.

The Specific Plan calls for up to 2,904 additional residential units in the Downtown area. Currently, there are 2,301 residential units in the Downtown, so this Plan would more than double the residential capacity of the area. The addition of 2,400 units was initially proposed in the 2010 draft of the Downtown Vitalization Specific Plan.

This Plan also calls for an addition of between 530,000 and 1,380,000 square feet of retail and office space. Currently, there is just over 1 million square feet of retail and office space in the Downtown.

3.3.1 Land Use Designations and Intent

The Specific Plan establishes the following land use designations in order to implement the Land Use Plan (see **Map 3-2: Land Use Plan**). These land uses are consistent with the land use designations shown on the General Plan Land Use Map. The General Plan establishes the density and intensity of the land uses and broad policies guiding land use implementation Citywide. As Downtown develops the City should consider defining specific districts in order to enhance the positive characteristics of the organic development.

Core

The intent of the Core zone is to permit and encourage higher densities in commercial and mixed-use developments. The goal is to create a mix of different land use types in a planned

and integrated manner, including office, retail, and service commercial uses along with multifamily residential uses. The Core will become a vital economic center served by a variety of transportation modes, including facilities for people who walk, bike, and use public transit. Transit-oriented development, particularly around the Monterey Salinas Transit Center, will be a feature of this district.

To complement the desired urban character of the Core, buildings are to be constructed at the lot line facing public streets. Parking is located behind buildings, and shared parking agreements (including providing parking in structures) are encouraged. An additional 1,372 residential units and up to 901,500 square feet of office and retail space are proposed in the Core.

Transition

The intent of the Transition district is to permit and encourage commercial, multifamily residential, and mixed-use developments at about half the density of projects in the Core district. The Transition district serves as a connection between the Core and lower-density, single-use districts in other parts of the City, especially districts dominated by single-family homes. Because the Transition district encompasses two prominent gateways into the City (at east Reservation Road and the confluence of

Table 3-4. Current land uses by zone in the Downtown Specific Plan area.

CURRENT LAND USE				
	ACREAGE		SQUARE FOOTAGE	RESIDENTIAL UNITS
	Acres	*% of Total*		
Core	56.42	16.8%	411,864	286
Retail	---	---	*375,277*	---
Office	---	---	*36,587*	---
Multifamily Residential	106.7	31.7%	---	1,638
Transition	104	30.9%	593,894	377
Retail	---	---	*316,428*	---
Office/Light Manufacturing	---	---	*277,466*	---
Subtotal	267.1	79.4%	---	---
Right-of-Way	69.23	20.6%	---	---
TOTAL	336.3	100.0%	1,005,758	2,301

Highway 1 and Del Monte Boulevard), land uses should be inviting and visually interesting. Parking is screened, located behind or to the side of buildings, and building setbacks are landscaped with appropriate materials. An additional 1,378 residential units and up to 484,000 square feet of office and retail space are proposed in the Transition district.

Multifamily Residential

The intent of the Multifamily Residential district is to permit and encourage residential developments of up to three stories in height with up to 35 units per acre. Multifamily residential uses near the Core are critical for providing an affordable housing supply and population to support businesses Downtown. An additional 154 residential units are proposed in the Multifamily Residential district.

3.3.2 Mixed-use Nodes

The Land Use Plan calls for the creation of two mixed-use nodes: one at the intersection of Reservation Road and California Avenue, and another at the expected junction of Del Monte Boulevard and Patton Parkway (pending expansion of these two roads). These nodes, surrounded by lower-intensity Transition districts, would feature multistory mixed-use buildings with retail and commercial space on the ground floor and additional commercial space or residential uses on the floors above. Mixed-use nodes are strategically located at two gateways into the Downtown Core. This helps to ensure a vibrant, urban atmosphere is

Table 3-5. Anticipated land uses by zone in the Downtown Specific Plan area.

DOWNTOWN SPECIFIC PLAN (PROPOSED NEW DEVELOPMENT)						
	ACREAGE		SQUARE FOOTAGE		RES. UNITS	
	Acres	*% of Total*	*Sq. Feet Min*	*Sq. Feet Max*	*Units/ Acre*	*Units Max*
Core	56.42	16.8%	317,766	901,470	70	1,372
Retail	---	---	*208,427*	*675,390*	---	---
Office	---	---	*109,339*	*226,080*	---	---
Multifamily Residential	106.66	31.7%	---	---	35	154
Transition	104	30.9%	214,322	483,727	50	1,378
Retail	---	---	*70,352*	*199,279*	---	---
Office	---	---	*143,970*	*284,448*	---	---
Subtotal	267.08	79.4%	---	---	---	---
Right-of-Way	69.23	20.6%	---	---	---	---
TOTAL	336.3	100.0%	532,088	1,385,197	---	2,904

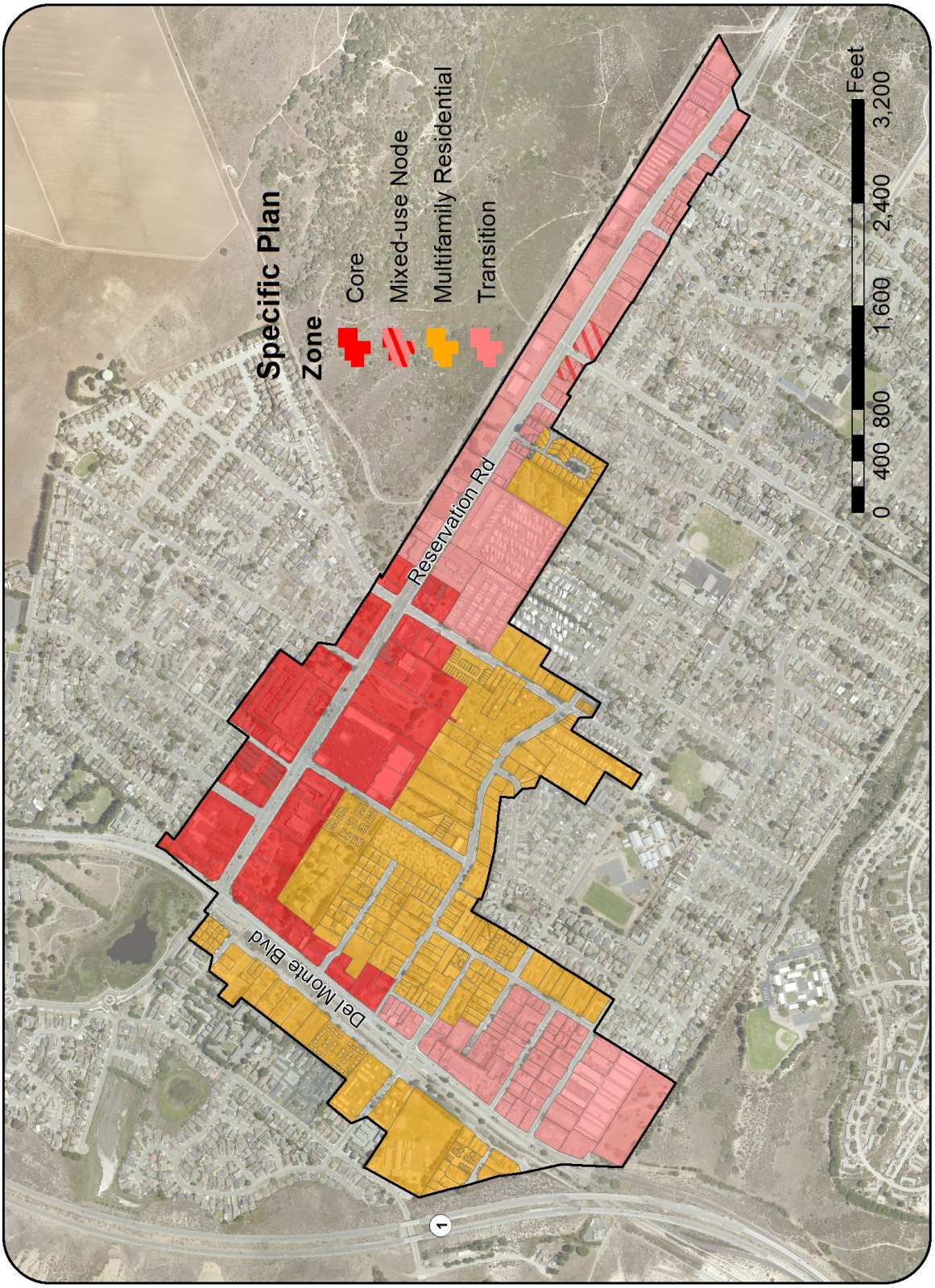
associated with Downtown Marina.

3.3.3 Permitted and Conditionally Permitted Land Uses

Permitted and conditionally permitted land uses within each designation are shown in **Table 3-6: Land Use Matrix**. Where the Specific Plan does not address a specific land use, provisions of the Municipal Code apply.

3.3.4 Lot Consolidation

One method of facilitating development within Downtown is to encourage lot consolidation. This occurs when owners of multiple connected properties consolidate lots into one property. Consolidation allows the owner to maximize incentives offered by the land use regulations of the Specific Plan. Development on lots larger than five acres requires a dedication of land for public streets, so lot consolidation helps to ensure important public right-of-way improvements are made.



Map 3-2. Land Use Plan.

Table 3-6. Downtown Vitalization Specific Plan Land Use Matrix.

Land Use	Land Use Designation		
	Core	Transition	Multifamily Residential
Primary Uses			
Amplified Music/Sound	C	C	C
Assembly, Major	C	C	NP
Assembly, Minor—First Floor facing Del Monte Blvd or Reservation Rd	NP	P	NP
Assembly, Minor—Above First Floor, at first floor facing side streets or alleys, or behind first floor commercial	P	P	NP
Cannabis—Retail, Testing, Manufacturing and Delivery	C	C	-
Card Room	NP	NP	NP
Civic and Community Uses	C	C	C
Commercial Recreation Facility—Indoor	C	P	NP
Commercial Storage	NP	NP	NP
Dwelling, attached—all floors	NP	P	P
Dwelling, attached—above first floor or on first floor behind first floor commercial	P	-	-
Food and Beverage Sales, Major	C	C	NP
Food and Beverage Sales, Minor	P	P	NP
Hotel	C	C	NP
Parking Area, Accessory	P(1)	P(2)	P(1)
Parking Area, Public	C	C	NP
Parking, Subgrade	P	P	P
Retail Sales, Major	NP	C	NP
Retail Sales, Minor	P	P	NP
Restaurant, Major	C	C	NP
Restaurant, Minor	P	P	NP
Seating, Outside	P(3)	P(3)	NP
Service, Major	NP	C	NP
Service, Minor	P	P	NP
Animal Service	C	P	NP
Professional Office, First Floor facing Del Monte Blvd or Reservation Rd	NP	P	NP
Professional Office- Above First Floor, at first floor facing side streets or alleys or behind first floor commercial	P	P	NP
Laundromat	P(4)	P	C

C = Conditional Use
P = Principally Permitted Use
NP = Not Permitted

Land Use	Land Use Designation		
	Core	Transition	Multifamily Residential
Temporary Use	Administrative		
Utility, Major	C	C	C
Utility, Minor	P	P	P
Accessory Uses			
Outdoor display associated with a business	C	C	NP
Drive-thru or drive-in facilities associated with a business	NP	C	NP
Exterior vending machines, accessory use to a business	NP	-	NP

C = Conditional Use
P = Principally Permitted Use
NP = Not Permitted

Notes

(1) On-site parking must be located behind the building.
(2) On-site parking must be located behind the building or on the side of the building.
(3) If seating area is within or partially within the public right-of-way, an encroachment permit or license agreement is required.
(4) Must not face Del Monte Blvd or Reservation Rd.

Definitions

Amplified Music/Sound: The use of any indoor or outdoor amplified, sound or entertainment that is audible from the exterior of a building, from a separate tenant space, or an adjacent property, including but not limited to the use of speakers, microphones, amplifiers, acoustic instruments or the human voice.

Assembly, Major: Includes the following-

Small Group Assembly: An establishment offering entertainment, social exchange, religious services, educational training, or other instructional services to groups of twenty to forty-nine persons in a single room. Examples include performance venues, movie theaters, religious institutions, community centers, college or university extension programs, group addiction services, social clubs, community centers, or similar uses.

Large Group Assembly: An establishment offering entertainment, social exchange, religious services, educational training, or other instructional services to groups of fifty or more persons in a single room. Examples include performance venues, movie theaters, religious institutions, community centers, college or university extension programs, group addiction services, social clubs, community centers, or similar uses.

Assembly, Minor: Includes the following-

Small Instructional Service: An establishment offering classes or educational training to groups of five or fewer students in a single classroom or studio environment. Examples include musical instruction, academic tutoring, and similar uses.

Large Instructional Service: An establishment offering classes, educational training, or other instructional services to groups of six to nineteen students in a single classroom or studio environment. Examples include group exercise training, driving instruction schools, and similar uses.

Cannabis—Retail, Testing, Manufacturing and Delivery: See section xx.xxxx of the Marina Municipal Code for conditions related to this use.

Card Room: Any room, space or enclosure furnished or equipped with a table used or intended to be used for the playing of cards or similar games, and the use of which is available to the public, or any portion of the public; provided, however, that this chapter shall not apply to any bona fide nonprofit society, club, fraternal, labor or other organization as defined in Section 5.32.110 of the Marina Municipal Code.

Civic and Community Uses: Establishments that provide services or facilities for the general public and include uses such as government offices, civic centers, libraries, and museums.

Clinic: An establishment that provides medical, dental, chiropractic, optical and similar services.

Commercial Recreation Facility — indoor: Establishments providing indoor amusement and entertainment services for a fee or admission charge, including: bowling alleys, amusement and electronic game arcades, ice skating and roller skating rinks, pool and billiard rooms as a primary use.

Commercial Storage: A facility exclusively used for the storage of motor vehicles or personal goods, with or without a fee. Includes self-storage and similar facilities.

Dwelling, Attached: A residential dwelling unit that shares a common wall with another unit.

Food and Beverage Sales, Major: Includes the following-

Convenience Store with Beer and Wine Sales: An establishment that contains 5,000 square feet or less of gross floor area and sells food and beverages primarily for consumption off premises, including beer and wine.

Convenience Store with Beer, Wine, and Distilled Spirit Sales: An establishment that contains 5,000 square feet or less of gross floor area and sells food and beverages primarily for consumption off premises, including beer, wine and distilled spirits. Includes Liquor Stores.

Grocery Store: An establishment that contains more than 5,000 square feet of gross floor area and sells food and non-alcoholic beverages primarily for consumption off of the premises, other retail items, and small recycling facilities within convenience drop off zones, as defined by the California Beverage Container Recycling and litter reduction.

Grocery Store with Beer and Wine Sales: An establishment that contains more than 5,000 square feet of gross floor area, sells food and beverages primarily for consumption off of the premises, including beer and wine.

Grocery Store with Beer, Wine, and Distilled Spirit Sales: An establishment that contains more than 5,000 square feet of gross floor area and sells food and beverage primarily for consumption off of the premises, including beer, wine and distilled spirits.

Wine Tasting Shop: An establishment primarily engaged in the retail sale of wine for off-site consumption and as an ancillary use includes the service of wine for on-site consumption.

Food and Beverage Sales, Minor: An establishment that contains 5,000 square feet or less of gross floor area and sells food and non-alcoholic beverages primarily for consumption off premises.

Hotel: An establishment offering lodging to transient patrons. These establishments may provide additional services, such as conference and meeting rooms, restaurants, bars, or recreation facilities available to guests or to the general public. This classification includes, auto courts motor lodges, motels, hostels, extended-stay hotels, and tourist courts, but does not include rooming hotels, boarding houses, or residential hotels designed or intended to be used for sleeping for a period of thirty consecutive days or longer. This classification also excludes bed and breakfast facilities and similar accommodations that an occupant of single-family housing provides on the same premises incidental to the primary residential use of the property.

Park and Recreation Facilities: Parks, plazas and recreation facilities and support uses (parking, snack bars, etc.).

Parking Area, Accessory: An area used for the parking of motor vehicles by persons in residence or employed upon the premises or for clients and customers.

Parking Area, Public: An area or structure, other than a street or other public way, used for the parking of automobiles and available to the public for a fee or free of charge.

Parking Subgrade: Parking under a structure that is below the finished grade of the site.

Retail Sales, Minor: An establishment that primarily offers new or used goods for purchase by the consumer of such goods, excluding other such establishments more specifically described herein. This use category includes vehicle sales if such a use is conducted completely within an enclosed building and does not include outdoor display of vehicles.

Retail Sales, Major: Includes the following-

Adult Businesses: As defined and regulated in the Municipal Code.

Animal Sales and Adoption Services: Retail sales and adoption of small animals typically considered pets. Excludes sale of live fish for personal aquariums.

Outdoor Sales: The retail sales or rental of any merchandise where the gross floor area of the outdoor storage area exceeds 10% of the gross floor area of the enclosed building.

Fuel Sales: An establishment offering the sale of motor fuel for any motor vehicle. Includes gas stations.

Restaurant, Major: Includes the following-

Restaurant with Bar, Major: An establishment that sells food, beer, wine, and distilled spirits for consumption on the premises and contains a bar area that occupies more than 25% of the restaurant area and more than twenty seats.

Bar: An establishment that sells beer, wine or distilled spirits for consumption on the premises and without obligatory food service.

Night Club: An establishment that sells beer, wine or distilled spirits for consumption on the premises without obligatory food service and offers live entertainment.

Social Club with Bar: An establishment occupied by a fraternal, veterans, or similar membership-based organization that sells beer, wine and/or distilled spirits to members and guests only for consumption on the premises.

Restaurant, Minor: Includes the following-

Restaurant: An establishment that sells food and non-alcoholic beverages for consumption on the premises.

Convenience Restaurant: A restaurant or similar establishment offering food and/or beverages for sale for consumption on or off the premises in disposable containers and from a counter.

Restaurant with Beer and Wine Sales: An establishment that sells food, beer and wine for consumption on the premises and does not contain a bar area.

Restaurant with Bar, Minor: An establishment that sells food, beer and wine for consumption on the premises and contains a bar area that occupies 25% or less of the restaurant area with no more than twenty seats.

Seating, Outside: Seating area on the exterior of a business.

Seating, Outside, Major: Seating area over and above 150 square feet in size.

Services, Major: Includes the following-

Animal Boarding: Provision of shelter for small animals on a commercial basis. This classification includes ancillary activities such as feeding, exercising, grooming, and incidental medical care.

Outdoor Service: The provision of any service where the gross floor area of the outdoor service area exceeds 10% of the gross floor area of the enclosed building.

Child Care Center: Any child care facility other than a family child care home, includes infant centers, preschools, and extended child care facilities.

Motor Vehicle Rental: An establishment that offers the rental of new or used automobiles, trucks, recreational vehicles, trailers, boats or other vehicles licensed by the Department of Motor Vehicles.

Motor Vehicle Service: An establishment offering the provision of repair, maintenance, washing, or similar services for motor vehicles.

Massage Establishments: As defined in the Municipal Code.

Service, Minor: Includes the following-

Animal Service: An establishment offering the provision of boarding associated with veterinary services, grooming, or veterinary services for small common household animals.

Bank, Retail: Financial institutions that provide retail banking services to individuals and businesses. This classification includes only those institutions engaged in the on-site circulation of cash money and includes on or off-site automatic teller machines. Freestanding automatic teller machines (ATMs) kiosks are not permitted.

General Service: An establishment offering the direct provision to the customer of personal services including barber and beauty shops, seamstresses, tailors, shoe repair shops, dry cleaning (excluding processing plants), photocopying, mail and packing service centers, self-service laundries, and appliance repair.

Fitness and Health Establishment: Commercial or nonprofit facilities, such as fitness centers and health and athletic clubs, oriented toward promoting physical health. Such facilities can include any of the following: gymnasium, swimming pool, exercise equipment, indoor sauna, spa or hot tub facilities; indoor tennis, handball, racquetball, and other indoor sports activities

Professional Office, Off-site: An establishment offering indirect provision of services on behalf of customers that do not visit the site to receive the service including remote medical or dental laboratories, testing facilities, escort services, telephone call centers, catering services apart from restaurants, and similar uses that do not provide in-person service or interaction with the ultimate recipient of the service.

Professional Offices: An establishment consisting of offices providing professional services directly to a customer. This includes architectural or engineering firms, computer software consulting, data management, financial services, interior design, graphic design, real estate, insurance, legal offices, medical/dental offices, clinics, on-site medical or dental testing, travel services, and title offices.

Temporary Use: The use of a property for the sale of merchandise and temporary events for a period of 60 contiguous days or less and no more than 75 days in a calendar year. Includes pumpkin sales, Christmas tree sales, swap meets, farmers markets, and similar uses.

Utility, Major: Includes a public or privately-owned or operated generating plant, electrical substation, above-ground electrical transmission line, switching building, refuse collection, PWS facility, processing, recycling or disposal facility, water reservoir or similar water storage facility, flood

control or drainage facility, water or wastewater treatment plant, transportation or rail facility, and similar facilities and the following—

Personal Wireless Service (PWS) Facility: A facility for the provision of PWS, as defined in 47 U.S.C. Section 332 (c)(7)(C)(ii). (Ord. 3443 § 4, 2010; Ord. 3278 §1, 5/00)

Utility, Minor: Utility facilities that are necessary to support legally established uses and involve only minor structures such as electrical distribution lines and underground water and sewer lines.

GOAL: Land use that emphasizes community, creates a safe, walkable and vibrant Downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks and trails.

Mixed-use development.

OBJECTIVE 1

Housing Choice

Create a variety of safe housing options for people who live Downtown.

STRATEGIES

1. Encourage mixed-use development. Where single-use developments occur, ensure employment centers and housing are in close proximity to each other, and allow higher residential densities in the Downtown Core.
2. Utilize state law and City ordinances to ensure that a mix of different levels of affordable housing is provided as housing is developed.
3. Generate site and building design standards that require common open space, encourage interaction of residents, and maintain a pedestrian orientation.
4. Provide opportunities for additional multifamily residential units in the Downtown.

GOAL:

Land use that emphasizes community, creates a safe, walkable and vibrant Downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks and trails.

Small park.

OBJECTIVE 2

Downtown as Destination

Make Downtown a destination by developing and retaining appropriate civic, entertainment, and retail uses.

Cycle track.

STRATEGIES

5. In addition to retail, focus on non-retail business opportunities like educational facilities, major employers, medical centers, and offices.
6. Encourage the establishment of an events and activities venue, such as an auditorium.
7. Keep City government buildings within or near the Downtown.
8. Work to attract a higher education institution, such as a satellite campus of the Middlebury Institute of International Studies.
9. Create a civic center and coordinate City facility planning.
10. Establish opportunities for more small parks and resting areas Downtown.
11. Preserve and promote ethnic stores and restaurants.
12. Identify allowable sites for a centralized civic center, community green, indoor or outdoor performing arts and cultural arts center, senior citizens center, as well as other community amenities, all of which should emphasize pedestrian orientation and access.

GOAL: Land use that emphasizes community, creates a safe, walkable and vibrant Downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks and trails.

Public art.

OBJECTIVE 3

Pedestrian Scale

Promote the intended pedestrian scale of Downtown through appropriate design standards, parking standards, and land uses.

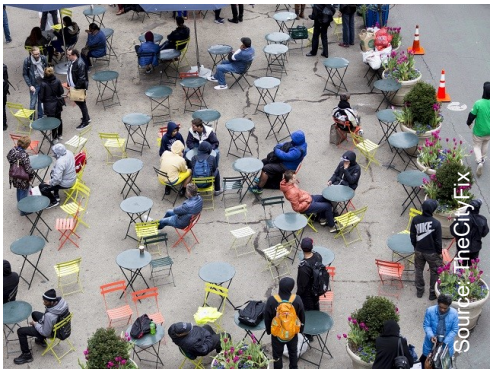
System to monitor available parking spaces.

STRATEGIES

13. Ensure that development standards and design guidelines result in high quality development, and are consistent with a pedestrian-oriented scale and character.
14. Locate parking behind buildings or under buildings in parking structures.
15. Monitor usage of various types of vehicular parking Downtown to determine need. Reduce parking requirements where feasible.
16. Prohibit drive-thru facilities in the Core.
17. Encourage lot consolidation for added flexibility in multiple use, commercial, and residential development.
18. Establish design standards that help to create an intimate Downtown atmosphere, which includes public art, visually interesting landscaping, and other features that enhance Marina's unique character.

GOAL:

Land use that emphasizes community, creates a safe, walkable and vibrant Downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks and trails.



Pedestrian-oriented public space.

STRATEGIES

19. Create pedestrian- and transit-oriented public spaces within Downtown where people can gather for social, cultural, educational, and recreational opportunities.
20. Encourage the inclusion of design elements that reflect the cultural diversity of Marina.
21. Require developers of parcels larger than five acres to dedicate a portion of land to the public right-of-way for development of streets.

4. ECONOMICS

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4.1 Overview

In order for Downtown to be successful and sustainable, the City must create an environment where desired uses are permitted. A diversified economic climate that attracts small– to mid-sized offices and a variety of retail shops, restaurants, entertainment, and mixed uses is the ultimate goal for Downtown Marina.

This chapter will consider existing economic conditions in Marina. It will establish a set of requirements and guidelines designed to guide the City toward its desired economic future. These requirements are in addition to requirements laid out in Marina's General Plan and Economic Development Strategic Plan.

Marina is a mid-sized coastal city that traditionally provided support services to people stationed at or working in the former Fort Ord. Marina has also historically provided housing for working class families with jobs on the Peninsula. Though Marina was greatly affected by the closure of Fort Ord in 1994, services remain an important part of the local economy.

4.2 Market Supply Assessment

Retail sales are an important part of Marina's economy. While retail activity has shifted in recent years from Downtown to South Marina, 12 of the 25 top producers of sales tax in the second quarter of 2018 remained in the Downtown. Dozens of other shops and restaurants in the Downtown cater primarily to residents of Marina.

The long-term viability of Downtown hinges on attracting a regional customer base, including tourists and shoppers from neighboring communities. This is likely to be achieved through the implementation of the design standards in **Section A**, including attractive landscaping, pedestrian design features, appropriate fenestration of buildings, and the creation of a "street wall" by bringing buildings to the sidewalk line in the Downtown Core. Diversity in business offerings and architectural styles can be an economic driver because it creates special interest for people wanting to visit.

A consultant completed a synoptic assessment for the City outlining consumer demand and market supply. The report revealed unfulfilled market supply for consumer demand within Marina in the following business categories:

- General retail merchandise;
- Clothing apparel and shoe stores;
- Restaurants, including casual dining, fast casual, and quick service concepts;
- Building materials and supplies; and,
- Automotive dealerships.

Businesses in the first three categories are ideally suited for the Core or Transition zones. Sales of vehicles and building materials and supplies may be conditionally approved in the Transition zone depending on the scale of the business.

The report identifies a series of strategies designed to transform Downtown Marina into "an effective place to live, shop, and visit." Strategies include:

- Promote opportunities for new businesses Downtown;
- Help facilitate the reuse of vacant shops

and restaurants in the Downtown;

- Host more special events in addition to the Farmers Market;
- Support appropriate residential development within and adjacent to the Downtown; and,
- Invest in strategic infrastructure projects through the City's capital improvement program (CIP) to upgrade pavement and enhance traffic circulation.

4.3 Property Tax Valuation

Commercial and light industrial uses in the Downtown encompass roughly 860,000 square feet on 88 acres. The Downtown Core includes 407,000 square feet of commercial uses on 36 acres. Another 416,000 square feet of commercial uses can be found on 46 acres in the Transition zone.

Tax valuation varies wildly for properties in each zone. The average property tax value per acre in the Core, where buildings are generally older and properties have generally been owned for longer periods of time, is $1,339,750. This compares to an average per-acre property tax value of $1,613,578 in the Transition zone.

One important reason for the discrepancy in property tax values is Proposition 13, the 1978 law that prohibits reassessment of a new base property tax value except when a change of ownership or completion of new construction occurs. Because Prop 13 incentivizes property owners to maintain the status quo, many parcels in the older parts of Marina and neighboring Seaside have not changed hands for decades. In addition, new construction has not taken place on many of these parcels.

Altogether, commercial and light industrial uses in Downtown Marina account for around $51 million in total land valuation and $78 million in improved valuation., or $129 million total.

4.4 Redevelopment Agency Law

In 1945 at the end of World War II, California adopted legislation allowing the establishment of local redevelopment agencies (RDAs). The Community Redevelopment Act permitted cities and counties to declare specific areas blighted and in need of urban renewal. Such a declaration enabled the city or county to distribute most of the increase in property tax revenue in the project area to the RDA.

RDAs became an important tool in the development of affordable housing. In Sacramento, for example, the city's RDA helped upgrade a 360-unit affordable housing complex (Blount et al., 2014). At various projects throughout the state, RDAs used funds to attract businesses to previously depressed or otherwise undesirable locations. RDAs became particularly important in downtown areas, where money was used to redevelop failing businesses and housing complexes, clean up blighted or contaminated sites, and improve streetscapes.

In the early part of the decade, California was looking for ways to fix a $25 billion deficit in the state's general fund. Around this same time a Legislative Analysts Office Report found that RDAs failed to improve overall economic development in California. This informed Governor Jerry Brown's 2011 decision to sign a law abolishing RDAs everywhere in the state. Municipalities and counties challenged this law in a series of court battles but continually

came out on the losing end.

In 2014 and every year since, California has had a budget surplus. In 2015 Gov. Brown signed into law three bills that suggest new redevelopment programs may be on the horizon. Current Governor Gavin Newsom has indicated a willingness to reestablish RDAs in an effort to develop affordable housing in the state. Even so, the closure of the RDA program nearly a decade ago means one important source of funding for downtown revitalization has been lost. The City of Marina and stakeholders in the Downtown will need to look for other sources of funding to carry out the goals and strategies of this plan.

4.5 Previous Technical Studies

Two previous technical studies and a land use concept analysis were commissioned by the City Council and presented to the Council on Sept. 25, 2007.

4.5.1 Retail Sales Leakage Analysis

In retail, leakage occurs when residents of a city spend money outside the city or when money spent inside the city is transferred outside the city. The Retail Sales Leakage Analysis aimed to determine the amount of retail leakage occurring in Marina by quantifying the square footage and type of retail that can be sustained Downtown, given existing and planned regional shopping opportunities and population projections for the City. Specifically, the report examined if there would be enough support for 380,150 square feet of new retail in the Downtown District, as was envisioned.

The combined amount of retail space that could be supported in the Downtown, accounting for 2,400 new housing units and leakage through 2027, totaled 435,038 square feet—more than the initially envisioned 380,150 square feet of new retail in the Downtown District.

4.5.2 Baseline Conditions Analysis

An evaluation of baseline conditions within the Downtown District was conducted in two parts. The first part consisted of a market evaluation, which explored existing Downtown District characteristics and examined the consistency between the proposed land use concept and the findings of the Retail Sales Leakage Analysis. This evaluation determined that:

- The Downtown District is largely built out and has relatively few vacant or underutilized lots;
- Identified “opportunity sites” within the Downtown District would require substantial redevelopment to achieve the Plan’s development targets of 380,150 square feet of commercial space and 2,400 dwelling units; and,
- Providing adequate parking would be challenging and would reduce space available for planned residential and commercial uses.

4.5.3 Proposed Land Use Concept Analysis

Based on the findings of the Retail Sales Leakage Analysis, the City Council developed and studied a Proposed Land Use Concept, which was consistent with the Downtown Vision objectives at the time of the 2010 plan draft. Components of the Proposed Land Use Concept are largely still included in this version of the plan, with modifications based on feedback from the Ad Hoc Committee

- A mixed-use and retail core focused along Reservation Road, between Del Monte Boulevard and Crescent Avenue, and along Del Monte Boulevard between Reservation Road and Carmel Avenue;
- Transition and Multifamily residential uses surrounding the mixed-use and retail core;
- Improved conditions for pedestrians and cyclists, especially on Reservation Road; and,
- A greater number of alternate through traffic routes for cross-town auto trips.

As Central Marina develops, the City should consider defining districts in order to enhance the positive characteristics of organic development.

4.5.4 Economic Development Strategic Plan

In 2011, MJ Zenk & Associates completed an Economic Development Strategic Plan for the City of Marina using funds from a Community Development Block Grant provided by the California Department of Housing and Community Development. The Strategic Plan arose out of the City's broader 2011 Economic Development Plan, which highlighted the importance of providing a diversity of jobs and housing while working to enhance the sense of place and identity of Marina. The Strategic Plan outlined six goals for economic development in Marina:

1. Maintain and grow existing businesses in the City;
2. Support start-up businesses and entrepreneurs in the City;
3. Attract new businesses to the City's existing and developing commercial areas with a focus on sustainable industries;
4. Develop destination related activities and facilities;
5. Create a balance between jobs and housing that provides the greatest possible opportunity both to live and work in Marina; and,
6. Support regional efforts that increase the availability of a skilled workforce for Marina's businesses.

The report outlined a number of ways to accomplish these goals, including increasing broadband internet access, providing higher education for the local workforce, luring developers to available commercial properties, attracting incubator businesses, and working with regional agencies to increase job opportunities.

Although the Strategic Plan did not outline specific strategies for the Downtown, many of these goals and the attendant strategies are broadly applicable to the Downtown.

GOAL:

Create an environment that attracts and sustains economic viability through innovation and business and social opportunities.

OBJECTIVE 1

Economic Development

Create an environment conducive for business to serve Marina residents and attract visitors to the Downtown.

STRATEGIES

1. Strengthen the City's economic base through attracting new businesses and retaining existing ones.
2. Market Downtown Marina as a destination through effective branding and advertising.
3. Develop a current list of public and private funding opportunities to help assist businesses and finance right-of-way improvements.
4. Continue to strengthen partnerships between downtown businesses and the City's Economic Development office.
5. Meet with Downtown businesses on a regular basis to identify concerns and what the City might do to address them.
6. After the Specific Plan is adopted and ready for implementation, consider the City assisting with costs of right-of-way improvements as a pilot project for a developer constructing a mixed-use project.
7. Provide a program to encourage and assist small, non-franchised businesses to open in the Downtown.
8. Consider development incentives (such as tax benefits, small grants, etc.) to encourage appropriate development in the Downtown.
9. Assist developers with projects meeting adopted site plan regulations and standards with a simplified process and shorter timeline for project approval.
10. Encourage employment opportunities in the Downtown to help increase daytime activity.

5. MOBILITY

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5.1 Overview

The Downtown Vitalization Specific Plan strives to create a pedestrian-friendly Downtown Core. This chapter addresses the role of mobility in supporting the vision and goals of the Specific Plan and includes policies related to vehicle, bicycle, and pedestrian circulation, pedestrian-oriented street design, and vehicle and bicycle parking. This chapter establishes a mobility plan for Downtown that promotes an active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around the Downtown to work, shop, and recreate.

The requirements of this chapter are in addition to the requirements of the City of Marina's General Plan and Pedestrian and Bicycle Master Plan, providing greater detail on specific issues where necessary. Where direction or regulation is not provided, the provisions of these related documents shall take precedence. The requirements of this chapter supersede the City of Marina Municipal Code.

5.2 Existing Network

Street conditions in the Downtown reflect a mid-20th Century focus on the automobile at the expense of other forms of transportation (see **Figure 5-1**). Travel lanes are wide, encouraging speeding. Right turn lanes are prevalent, making crosswalks more dangerous for pedestrians. At one major intersection, northbound traffic on Del Monte Blvd turning east onto Reservation Road even has two right turn lanes.

Sidewalks are typically narrow, and there are significant gaps. For example, a two-block stretch of Del Monte Blvd between Palm Ave and Mortimer Lane is mostly devoid of sidewalks, and pedestrians are forced to walk on asphalt directly adjacent to speeding cars. Median refuge islands on major roads are typically not present or functionally outmoded. Sweeping curbs like the ones

Figure 5-1. Typical portion of Del Monte Blvd with wide travel lanes for automobiles and missing sidewalks.

coming onto or off of Vista del Camino from Reservation Road encourage drivers not to stop before making a turn.

Future improvements, including those described in **5.4—Traffic Calming** and **5.5—Active Transportation**, should prioritize pedestrian safety and try to anticipate developing modes of transportation.

5.2.1 Street Grid

In many cities, the downtown consists of a well-connected street grid that comprises around 30-35 percent of the total land area. Connectivity makes a downtown more walkable and more bikeable. Downtown Marina does not follow this pattern.

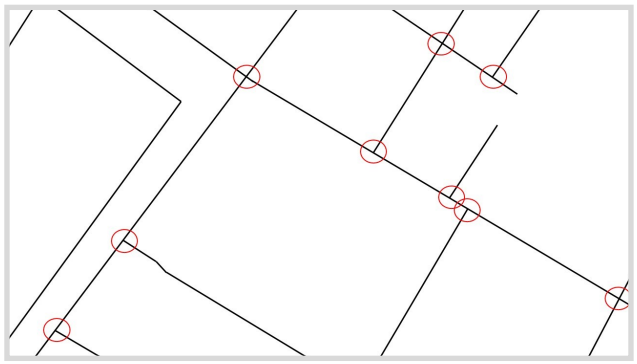
Historically, commercial development sprung up around Marina's two major arterial roads, Del Monte Boulevard and Reservation Road. The resulting development pattern was single-story buildings fronted by large parking lots in a low-density, sprawling pattern. The public right-of-way comprises only 21 percent of total land area in Marina's Downtown. This is one reason the General Plan urges reducing "dependency on the private automobile" based in part on "a land use pattern and street system which makes the provision of transit service or the option of walking or biking from place to place difficult and inconvenient."

Even more telling, the number of three– and four-way intersections in Downtown Marina is dwarfed by the number of intersections in the downtowns of other regional cities. **Table 5-1** compares the intersection density of Downtown Marina with other Central Coast communities. The street grids of several cities are shown in **Figure 5-2**. In a 160-acre portion

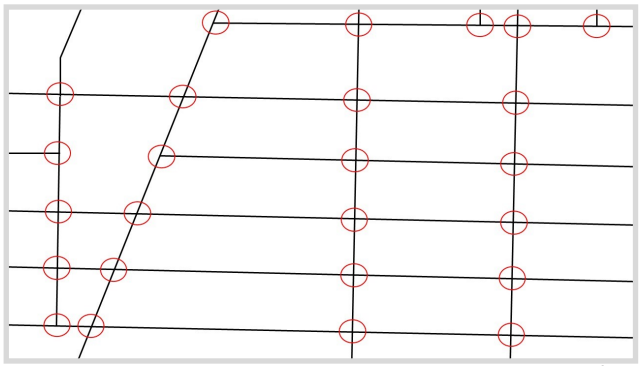
City	Number of Intersections	City	Number of Intersections
Carmel-by-the-Sea	39	Paso Robles	22
Gilroy	24	Salinas	29
Gonzales	24	San Juan Bautista	27
Greenfield	19	San Luis Obispo	29
Hollister	39	Santa Cruz	28
King City	22	Santa Maria	21
Marina	**9**	Seaside	25
Monterey	31	Soledad	22
Pacific Grove	80	Watsonville	22

Table 5-1. Number of three– and four-way intersections in a 160-acre portion of downtown.

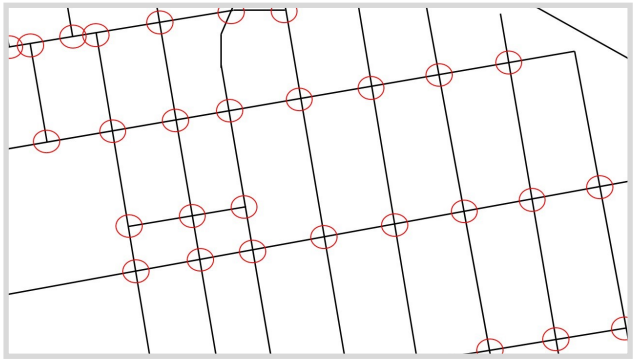
of Downtown, Marina has only nine intersections, compared to 25 in Seaside, 29 in Salinas, 31 in Monterey, and 80 in Pacific Grove. Among communities surveyed for this report, Greenfield had the lowest number of intersections (19) in its downtown outside of Marina. Even so, the intersection density there is double what it is in Marina.



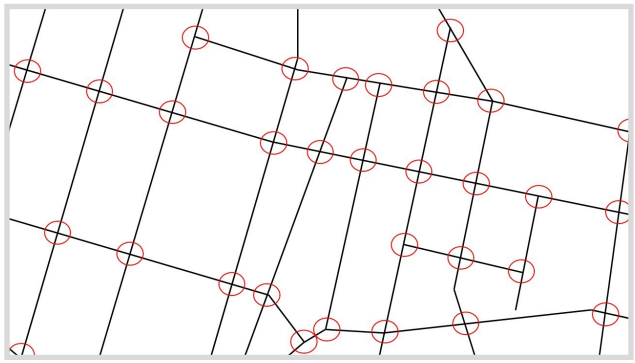
9 **Marina**



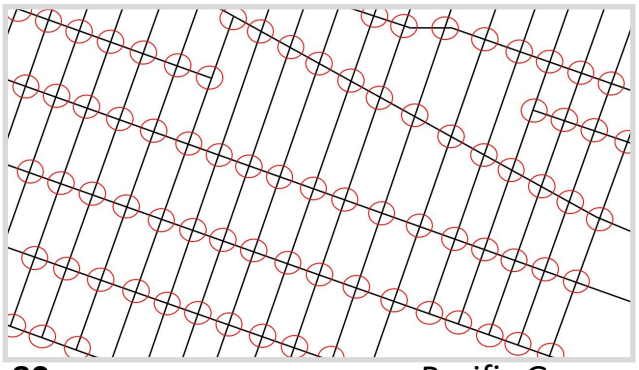
25 Seaside



29 Salinas



31 Monterey



80 Pacific Grove

Figure 5-2. Number of three– and four-way intersections in regional downtowns.

Table 5-2. Roadway Classifications within the Downtown Vitalization Specific Plan Area.

Classification	Roadway
Four-Lane Expressway	• Del Monte Boulevard (near Highway 1 interchange)
Four-Lane Arterial	• Del Monte Boulevard • Reservation Road
Two-Lane Collector	• California Avenue • Carmel Avenue • Crescent Avenue • De Forest Road • Palm Avenue • Reindollar Avenue • Salinas Avenue • Seacrest Avenue • Sunset Avenue • Vista Del Camino
Local Street	• Bayer Street • Bennett Court • Busby Lane • Carmel Circle • Casa de Bolea • Crestview Court • Cypress Avenue • Debbie Drive • Elm Avenue • Eucalyptus Street • Hillcrest Avenue • Lynscott Drive • Marina Drive • Mortimer Lane • Ocean Terrace • Ocean View Court • Paddon Place • Rose Lane • San Pablo Court • Terry Circle • Viking Lane • Zanetta Drive

5.2.2 Existing Vehicle Network

The existing network of roadways throughout Downtown Marina is shown in **Table 5-2: Roadway Classifications**. The network is comprised of expressways, arterials, collectors, and local streets, as defined below.

Expressways

Circulation on expressways is limited to major intersecting streets with large traffic volumes. Intersections along expressways contain full protected left-turn lanes and should contain exclusive right-turn lanes.

Arterials

Arterials are major thoroughfares that provide efficient connections to major destination points and to primary gateways in and out of the City (see **Figure 5-3**). Arterials carry moderate to large traffic volumes, but have lesser capacity than expressways. In most downtown districts arterials serve as major bicycle routes and generally do not contain exclusive right-turn lanes in an effort to be more pedestrian friendly.

Figure 5-3. Reservation Road functions as an arterial street.

Collectors

Collectors function to gather vehicular trips from local streets within a residential neighborhood or commercial district and distribute the trips to the City's major streets. They carry a moderate level of traffic volumes at moderate speeds.

Local Streets

Local streets accommodate vehicular and non-vehicular traffic to and from dwellings and facilities within neighborhoods at low speeds. Traffic flow control utilizes stop signs, narrower widths, and curved alignments.

5.2.3 Existing Pedestrian and Bicycle Network

The existing network of pedestrian and bicycle facilities throughout Downtown is shown in **Map 5-2.**

Figure 5-4. Monterey Bay Coastal Bike Path in Marina.

Sidewalks

The pedestrian sidewalk network within Downtown Marina is fairly well developed, with existing sidewalks on collector and arterial roadways, as well as along most local streets. However, segmented sidewalks can be found on Del Monte Boulevard, Carmel Avenue, Reindollar Avenue, Reservation Road, and Seacrest Avenue. In addition, many sidewalks are not wide enough for simultaneous pedestrian use or have obstructions that partially block pedestrian flow and require right-of-way acquisition.

Bikeways

Existing bicycle facilities within Downtown Marina consist of Class I and Class II bikeways, as defined below.

Class I bikeways are generally referred to as bicycle paths and provide a completely separated right-of-way for the exclusive use of bicycle and pedestrian traffic with minimal cross flow.

There is one Class I bikeway within Downtown: the Monterey Bay Coastal Bike Path, which currently extends 19 miles from Castroville to Pacific Grove (see **Figure 5-2**).

Class II bikeways are referred to as bicycle lanes and provide a striped lane for one-way bike travel on a street or highway. These facilities typically include signs placed along the street segment.

Class II bicycle lanes exist along Reservation Road and Crescent Avenue.

As noted in the City's Pedestrian and Bicycle Master Plan, the existing bicycle network provides limited connections for cyclists within City limits, including the Downtown. The

Monterey Bay Coastal Bike Path provides connections for those who commute to areas outside of the City and for those who use the trail for recreational purposes. Accordingly, the existing network is considered to have a limited ability to encourage those commuters who drive vehicles to instead use bicycles when commuting within the City, and specifically within the Downtown.

5.2.4 Existing Transit Facilities

The Monterey-Salinas Transit (MST) facility within Downtown Marina is known as the Marina Transit Exchange. It is located on the south side of Reservation Road at the intersection with De Forest Road (see **Figure 5-3**). The Transit Exchange was constructed in accordance with the Marina Transit Center Specific Plan (October 2006). In addition to the Transit Exchange itself, the Specific Plan facilitates the development of small-scale, transit and community-oriented mixed-use centers in Downtown Marina. Transit Oriented Development (TOD) will be a compact mixture of uses located adjacent or near to the Transit Exchange.

Figure 5-5. Monterey-Salinas Transit Exchange.

MST routes currently serving Downtown Marina include:

- Marina—CSUMB via Preston Park (Line 16);
- Marina—Dunes—CSUMB—Monterey (Line 18);
- Monterey—Salinas (Line 20);
- Salinas—Pebble Beach (Line 21);
- Watsonville—Marina (Line 27);
- Presidio—Marina Express (Line 67).

The Marina—CSUMB route provides transit from the Marina Transit Exchange to Preston park, Abrams Park, Schoonover Park, and CSUMB. The Marina—Dunes—CSUMB—Monterey route provides local service to the Dunes Shopping Center, Integrated Health, and CSUMB, with additional stopping points in Sand City, Seaside, and Monterey. The Monterey—Salinas route provides transit from Monterey to Salinas with major stopping points in Sand City and Marina. The Salinas—Pebble Beach route provides peak hour only service between Marina, Downtown Monterey, Cannery Row, and Pebble Beach. The Watsonville—Marina route provides transit from Watsonville to Marina with major stopping points in Moss Landing and Castroville. The Presidio—Marina Express route provides transit between the Presidio of Monterey and Marina.

5.3 Technical Studies

5.3.1 Initial Traffic Analysis

In 2007, an Initial Traffic Analysis was prepared for the City by Fehr and Peers to determine the effects of land use changes and narrowing Reservation Road as proposed in

the Downtown Vision. The traffic consultant used the sub-regional traffic model to evaluate traffic flows under an assumption consisting of the following elements:

- Approximately 380,150 square feet of new commercial space and 2,400 new residential units in the Downtown;
- A new circulation pattern that would facilitate pedestrian and bicycle access to the Downtown Core;
- A greater number of alternate through traffic routes for cross-town auto trips; and,
- Narrowing Reservation Road from four to two lanes.

Three scenarios were assessed to determine the effects the proposed plan may have had on the citywide transportation system.

Based on projected traffic volumes, two of the three scenarios would have required the widening of Imjin Parkway to six lanes and the construction of Golf Drive between Del Monte Boulevard and Blanco Road to provide capacity that would be lost with the narrowing of Reservation Road. Scenario 3, which maintained four lanes along Reservation Road, would handle projected capacity without requiring improvements to the Citywide arterial network.

As no further action was taken, Scenario 3 was the de facto choice. Reservation Road has remained four lanes wide.

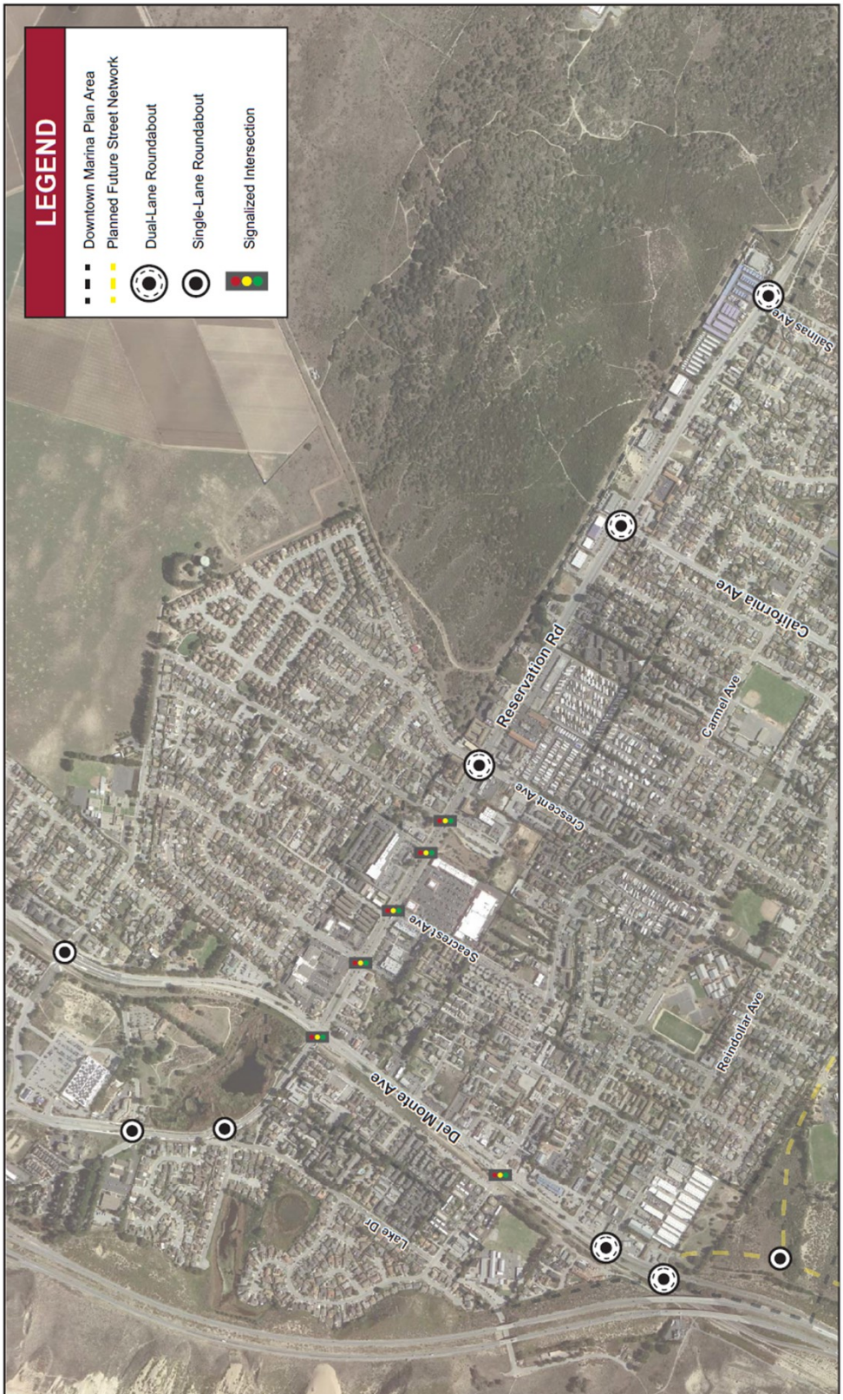
5.3.2 Current Technical Study

In 2018, the City of Marina hired a consultant, Kimley-Horn, to conduct a traffic analysis of the existing transportation system Downtown and a proposed expansion of the system via the extension of Del Monte Boulevard south to 2nd Avenue. Kimley-Horn analyzed local and regional traffic volumes and considered the land use changes and right-of-way widths and design standards proposed by the Ad Hoc Committee as part of the Downtown Vitalization Specific Plan process (see **Chapter 2: Community Identity**, for streetscape concepts developed by the Ad Hoc Committee).

The traffic analysis was based on the assumption that 2,904 residential units will be added to the Downtown along with 530,000—1,385,000 square feet of retail and office space.

As part of the analysis, Kimley-Horn studied the feasibility of reducing the number of travel lanes on Reservation Road from four to two. While the analysis found intersections would operate at an acceptable level of service (LOS) on a two-lane facility, the road diet would result in significant queueing spilling back onto Del Monte Boulevard, Reservation Road, and other side streets. The consultants recommended maintaining four lanes of travel on Reservation Road.

The analysis also considered the implementation of single– and dual-lane roundabouts at several intersections in the Downtown. The analysis concluded that mixing signals and roundabouts on a closely spaced grid system in the Downtown would result in traffic congestion, even with four lanes and a median. This is because arrival and departure patterns between roundabouts and signals are not conducive to traffic flow and operations. Therefore, the recommendation is to cluster traffic signals in the Downtown Core and utilize roundabouts at major intersections in the Transition areas approaching the Core, as shown in **Map 5-1**. **Table 5-3** includes a list of intersections proposed to receive or



Map 5-1. Location of roundabouts and signalized intersections in Downtown Marina.

maintain roundabouts or signalized intersection treatments.

The analysis resulted in several recommendations, including:

- Implementation of protected bike lanes on Reservation Road from Del Monte Boulevard to Salinas Avenue, using funds from a Caltrans Active Transportation Program (ATP) grant (see **Figure 5-6**);
- Green-colored pavement at the beginning of bike facilities, transitional green striping at intersections, and right turn pockets to create safer conditions for cyclists;
- Filling in gaps in the sidewalks on Reservation Road and Del Monte Boulevard;
- Narrowing of travel lanes from 12'-14' to 11' to discourage speeding;
- Extension of Del Monte Boulevard south to 2nd Avenue, with the construction of a two-lane roundabout at the intersection with the Highway 1 northbound offramp;
- Extension of Patton Parkway to the new portion of Del Monte Boulevard, with the construction of a one-lane roundabout at the intersection of these two roads; and,
- Preserving an acceptable LOS while reducing speeds, particularly along Reservation Road and Del Monte Boulevard.

These improvements are expected to affect mobility in a significant way. Protected bike

Table 5-3. Major intersections in the Downtown.

Intersection	Treatment
Del Monte Blvd Patton Pkwy	Single-lane roundabout
Del Monte Blvd Hwy 1	Dual-lane roundabout
Del Monte Blvd Reindollar Ave	Dual-lane roundabout
Del Monte Blvd Palm Ave	Signalized intersection
Del Monte Blvd Reservation Rd	Signalized intersection
Reservation Rd Vista del Camino	Signalized intersection
Reservation Rd Seacrest Ave	Signalized intersection
Reservation Rd Marina Square parking	Signalized intersection
Reservation Rd De Forest Rd	Signalized intersection
Reservation Rd Crescent Ave	Dual-lane roundabout
Reservation Rd California Ave	Dual-lane roundabout
Reservation Rd Salinas Ave	Dual-lane roundabout

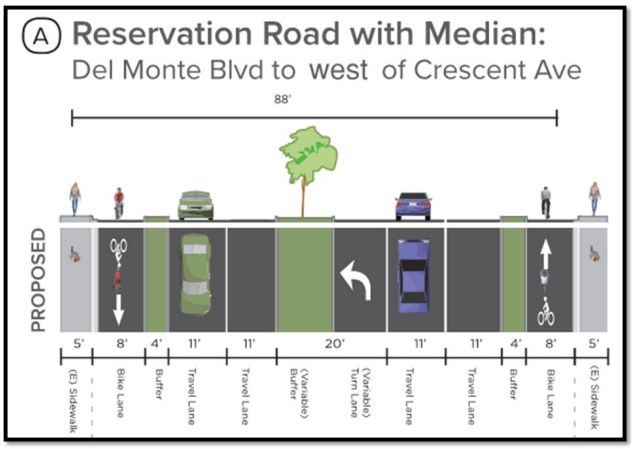


Figure 5-6. Concept for bike lanes on Reservation Road.

lanes could make cycling a feasible option for people who do not currently feel safe riding a bike on Reservation Road. Combined with the land use changes and streetscape enhancements anticipated in the Downtown Vitalization Specific Plan, these bike lanes could help promote compact development in the Downtown (see **Chapter 3: Land Use and Development** and **Section A: Design Standards and Guidelines**).

The extension of Del Monte Boulevard south to 2nd Avenue will help bridge a geographical gap between Downtown Marina and South Marina (the recent areas of redevelopment on the former Fort Ord). This vital connection will reduce the need to get on Highway 1 for trips within the City (see **Figure 5-7**). It also presents an opportunity for further gateway enhancements, which are discussed in detail in **Chapter 2: Community Identity**.

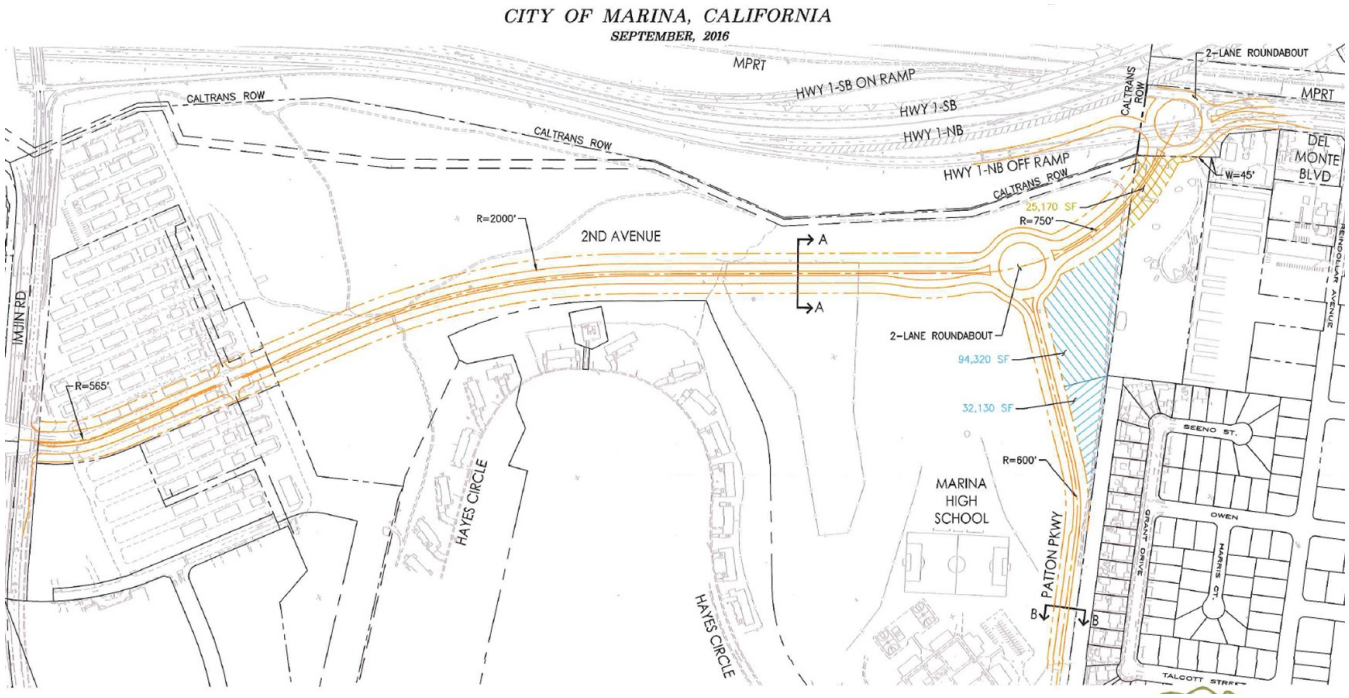


Figure 5-7. Illustrated concept of Del Monte Boulevard extension.

5.4 Urban Street Grid

A well-developed street grid is critical to the success of Downtown. Transitioning from the existing suburban street grid to a more urban street grid will take time. The transformation will happen as new connections are made, existing street widths are diminished, and streets are created or re-envisioned as complete streets.

5.4.1 Connectivity

The City should prioritize increasing the number of three– and four-way intersections in the Downtown. Intersection density is an important metric for determining connectivity. The more connections, the shorter the blocks (see **Figure 5-8**). The shorter the blocks, the more likely people are to walk, bike, or take public transportation to reach a destination. This leads to improved public health and environmental outcomes.

Intersection density is poor in Downtown Marina. One important way to improve this metric is to require developers of large parcels to dedicate a portion of their property to the public right-of-way. This will help ensure new developments are adequately served by the street grid.

Two strategies could help accelerate the development of the street grid. First, developers can combine parcels to increase the amount of developable land. For parcels larger than five acres, developers will be required to dedicate a portion of land to the City for the public right-of-way (see **Chapter 3.3.4: Lot Consolidation**).

Second, the City can incentivize development of streets by providing density bonuses for projects where a high percentage of units face the street. (see **Section B: Implementation**).

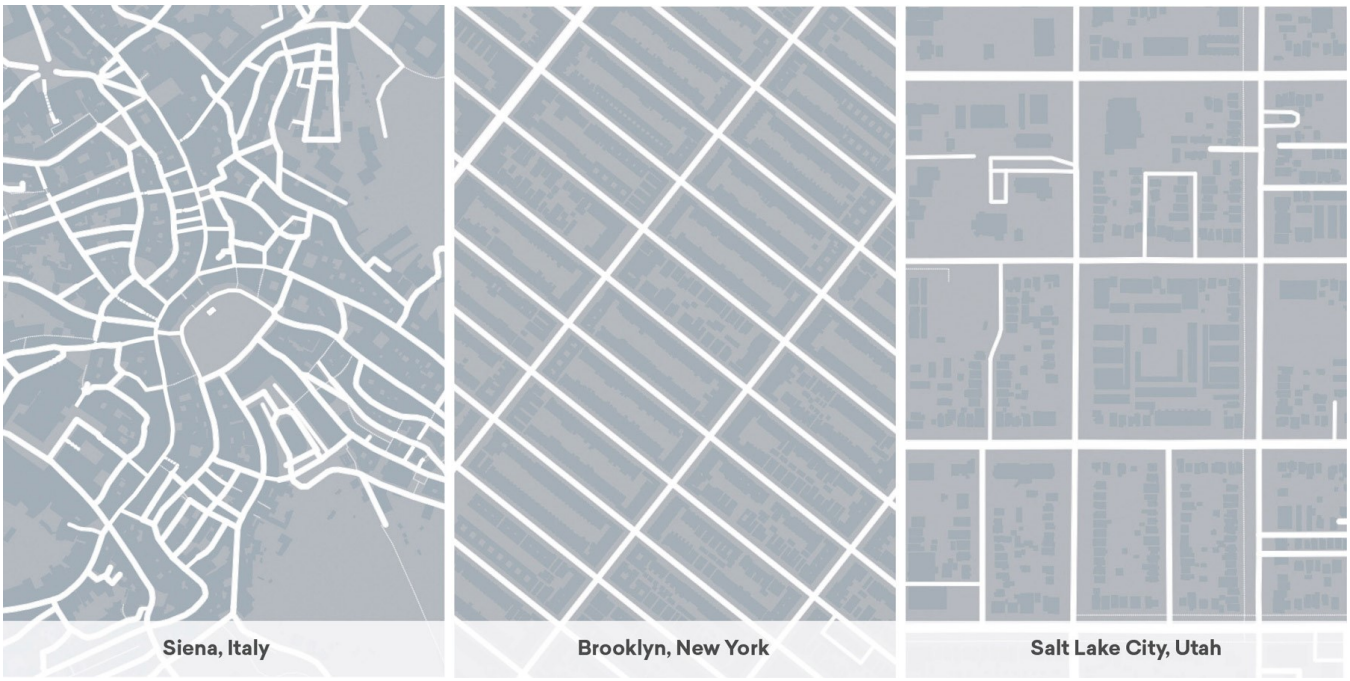


Figure 5-8. Comparison of street networks at the same scale.

Source: Morphocode

5.4.2 Road Diets

A road diet, or lane reduction, involves reducing the width or number of travel lanes in order to improve street conditions. Narrower travel lanes encourage slower vehicle speeds and reduce pedestrian crossing distances. Drivers have been found to travel more slowly on streets with lane widths of 10-11 feet versus more typical 12-foot lanes. Narrower travel lanes require more attention from drivers and are often used in Downtown environments with a higher degree of potential conflicts. Narrower lanes also have the benefit of reducing pedestrian crossing distances, thereby limiting the amount of time pedestrians share in a space with vehicles.

Reducing the number and width of lanes also frees up space for other uses such as bike lanes, landscaped medians, widened sidewalks, dedicated bus lanes, center turn lanes, and parking spaces. Road diets often work best when they create space for two or more of these uses, as show in **Figure 5-9**.

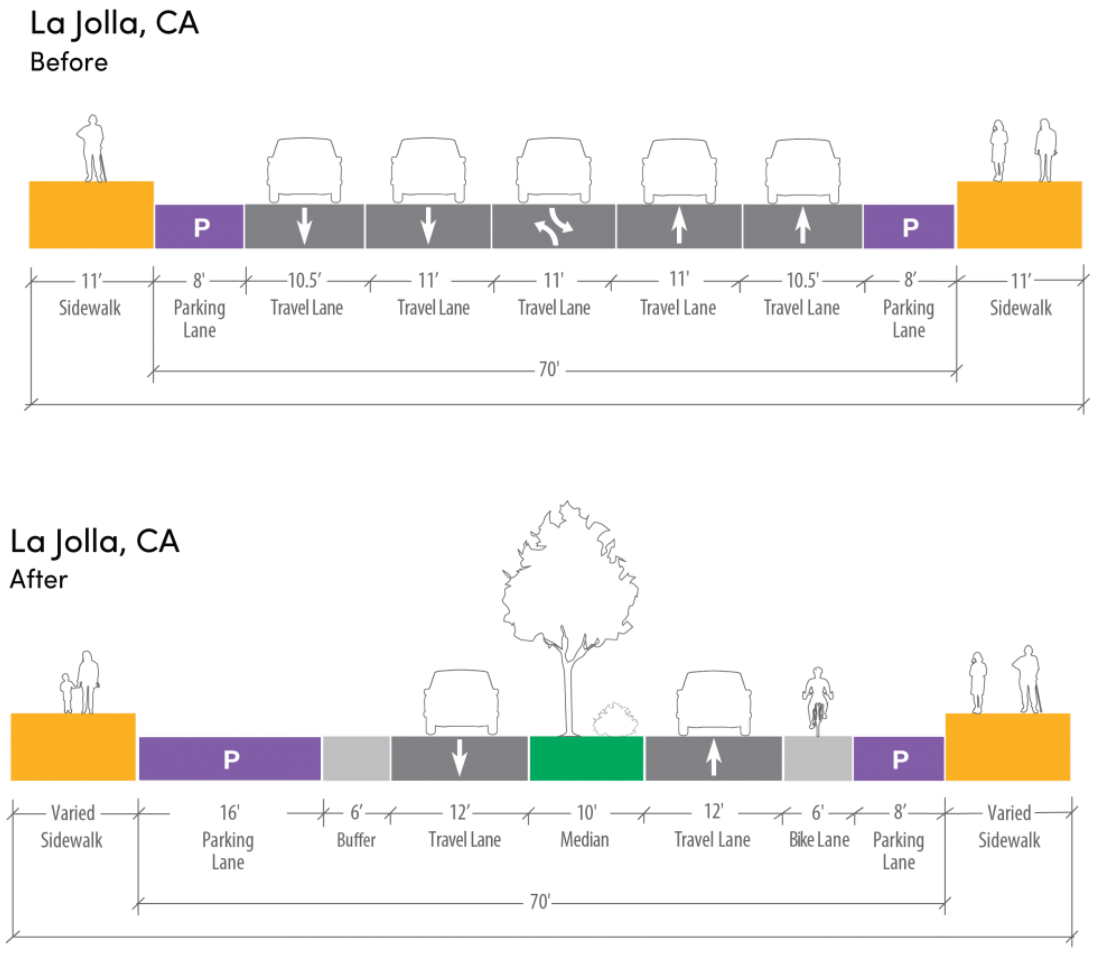


Figure 5-9. Diagram showing before and after road diet treatment of La Jolla Boulevard

5.4.3 Complete Streets

A complete street is a street that accommodates all users. A street is made "complete" through the addition of infrastructure and amenities that make various modes of travel feasible (see **Figure 5-10**).

For example, a protected bike lane or cycle track would improve travel conditions for a cyclist, while a wide sidewalk next to a landscaped park strip would make walking more safe and enjoyable for pedestrians. Different treatments may be appropriate for different streets. A landscaped median, for example, may improve conditions on a wide arterial street while it could be inappropriate on a smaller local street.

Some communities have adopted complete streets policies to ensure new streets comply with the vision of active transportation and better urban design. Grants are sometimes available to retrofit existing streets in a way that makes them safer for all users (see **Section B: Implementation**).

5.5 Traffic Calming

To establish an environment that is safe and inviting to pedestrians it is important to integrate specific traffic calming measures aimed at reducing traffic speeds and increasing pedestrian connectivity. **Table 5-4:** includes a list of popular traffic calming measures. Various traffic calming elements, including bulbouts, landscaped medians, accent paving, and tree-lined streets with building frontage create an urban street environment that encourages lower driving speeds.

5.5.1 Bulbouts

Bulbouts are extensions of street curbs that narrow pedestrian crossing distances at crosswalks while also reducing the speeds at which drivers are able to comfortably make turns at intersections (see **Figure 5-11**). Bulbouts will be incorporated at key intersections leading into and throughout the Downtown. These curb extensions will be designed in conjunction with on-street parking

Figure 5-10. Complete street concept.

Source: Crandall Arambula Urban Design

as they create pockets along the roadway edges for parallel parking opportunities. Cars parked along the side of the road consequently also tighten road widths and can serve as a traffic calming feature.

Figure 5-8. Bulbout.

Source: SF Streetsblog

Table 5-4. Traffic Calming Devices.

Traffic Calming Device	Description
Road Width / Road Diet	Reducing the number and width of traffic lanes
Raised Median Island or Refuge Island	Raised island in the road center (median) narrows lanes and provides pedestrian with a safe place to stop
Curb Extensions / Neckdowns / Chokers	Curb extensions at intersections that reduce the roadway width from curb to curb. Slows traffic and reduces pedestrian crossing distances
Speed Tables / Raised Crosswalks	Ramped surface above roadway
Tight Corner Radii	The radius of street corners affects traffic turning speeds. A tighter radius (90 degrees) forces drivers to reduce speed
Rumble Strips	Low bumps across road make noise when driven over
Roundabouts	Medium to large circles at intersections
Pavement Treatments / Pavement Textures	Special pavement textures (cobbles, bricks, etc.) and markings to designate special areas
Bike Lanes	Marking bike lanes narrows traffic lanes, causing vehicles to slow
Perceptual Design Features	Patterns painted into road surfaces and other perceptual design features that encourage drivers to reduce their speeds
Street Trees and Landscaping	Planting trees or landscaping along a street visually narrows the street, thereby reducing vehicle speed
Woonerf Design	Streets with mixed vehicle and pedestrian traffic, where motorists are required to drive at very low speeds
Speed Reductions	Traffic speed reduction programs. Increased enforcement of speeding violations
On-Street Parking	On-street parking (diagonal or parallel) can serve as a highly effective way to slow traffic in main street and neighborhood environments
Elimination of Turn Lanes	Turn lanes facilitate vehicular movement across pedestrian rights-of-way during walk cycles. Eliminating turn lanes improves pedestrian safety

5.5.2 Accent Paving

Accent paving—unit pavers or colored concrete—will be used to accentuate pedestrian crossings (see **Figure 5-12**). The change in texture gives motorists heightened awareness, both visual and audible, which in turn can slow traffic. Refer to **Section A: Design Standards and Guidelines** for more on accent paving and pedestrian crossings.

Figure 5-12. Accent paving at crosswalk.

5.5.3 Landscaped Medians

Medians improve the overall appearance of streets and help slow traffic (see **Figure 5-13**). In terms of safety, medians with refuge islands reduce conflicts between pedestrians and vehicles because they allow pedestrians to cross one direction of traffic at a time, giving them a safe harbor if needed. Medians along Reservation Road should be enhanced with improved landscaping to provide physical separation between through lanes and the pedestrian refuge area at crossings.

5.5.4 Street Trees

Street trees offer an aesthetic alternative to the open speedway feeling of a treeless road (see **Figure 5-14**). When planted in park strips, wells and medians, trees have a traffic calming effect as they create a visually enclosed street scene. Canopy trees help tie two sides of a street together, narrowing the perceived street width and slowing traffic. **Appendix B: Suggested Trees for Marina**, includes a list of trees appropriate for Downtown.

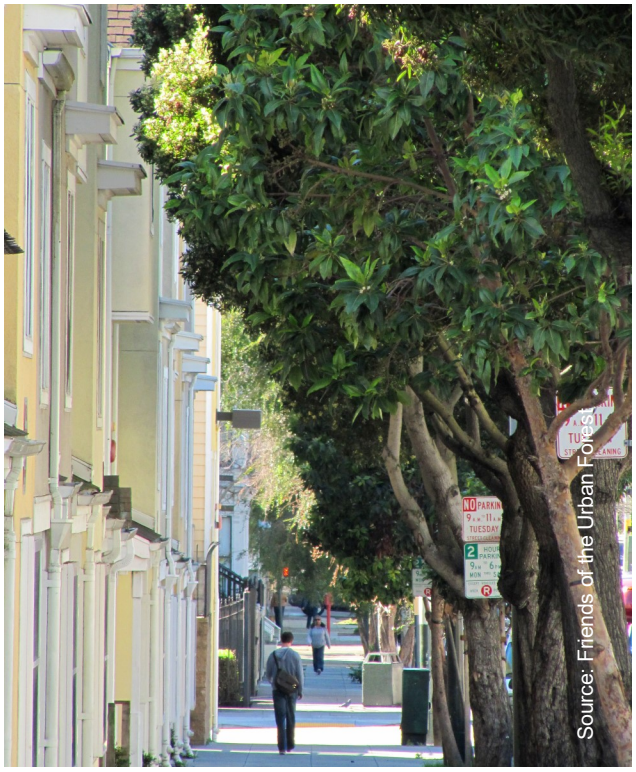


Figure 5-14. Street trees.

Figure 5-13. Landscaped median.

Source: Downtown Brooklyn Partnership

5.6 Active Transportation

The negative impacts of automobiles are well documented and include air pollution, noise, and traffic congestion. Wide roads that accommodate vehicular traffic are unsafe for people who walk, bike, and take public transit. Automobiles require a lot of parking space, which limits opportunities for development of parks, shops, and housing. Automobiles exacerbate problems associated with urban sprawl and obesity. Automobiles contribute tons of $C0_2$ to the atmosphere, accelerating the impacts of climate change.

Consistent with the City's Vision and Mission Statement and in an effort to curb the negative effects of regular automobile use, the Specific Plan calls for investment in active transportation facilities and amenities.

5.6.1 Sidewalk and Bicycle Network

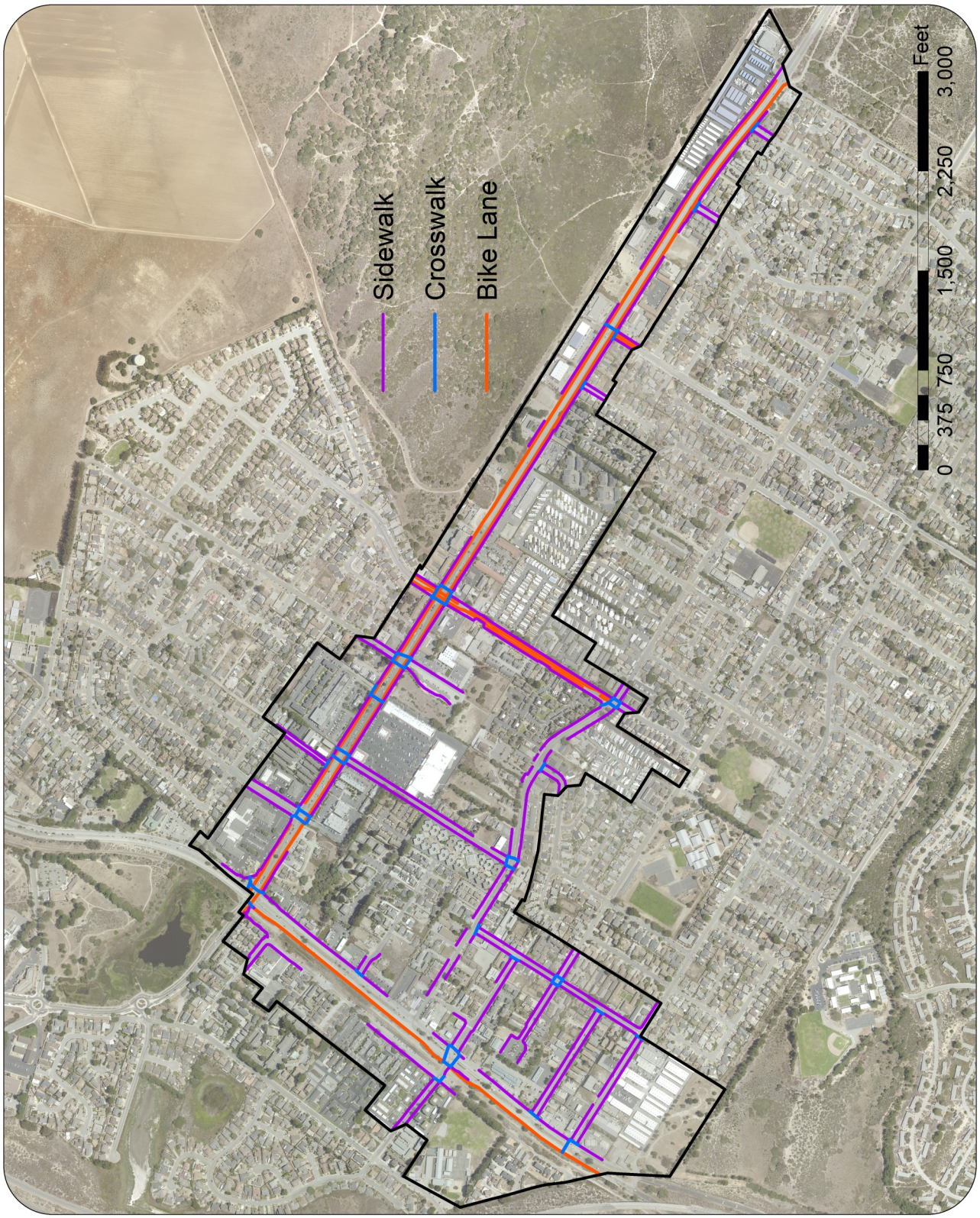
Although walking and biking are important ways for residents and visitors to get around Downtown, significant gaps exist in the City's sidewalk and bicycle network. **Map 5-2** shows where some of the most important gaps occur. In order to promote walking and biking in the Downtown, the City should work toward a robust network of sidewalks and bikeways in Central Marina.

The City's Pedestrian and Bicycle Master Plan (PBMP) was adopted in February 2010. The Plan identifies several guidelines relevant to the development of sidewalks and bicycle facilities in the Downtown. Guidelines related to sidewalks include:

- Sidewalks should be installed on both sides of all streets;
- Sidewalks should be well maintained, attractive, and easy to navigate;
- Sidewalks should provide direct connections between destinations, including homes, schools, shopping areas, public services, work places, parks, and transit facilities;
- Larger sidewalks should be used along arterial streets in the Downtown, in locations where large concentrations of pedestrians are expected, and within one-half mile of a transit center;
- Curb cuts should be designed to inform motorists they are intruding into pedestrian space, as opposed to having pedestrians feel they are intruding into motor vehicle space.

The PBMP identifies several guidelines relating to crosswalks and mid-block crossings, including:

- Intersections should be as compact as possible, and corner radii as small as possible, to facilitate safe crossings;
- Pedestrian refuge islands should be used on wider streets;
- Marked crosswalks should be provided across all street approaches to signalized intersections and at stop-controlled intersections where pedestrian traffic commonly occurs (such as near parks, schools, and transit stops);
- Crosswalks should be clearly visible to motorists at all times through effective use of materials, spacing, and maintenance;
- Mid-block crossings should be used in locations where pedestrians frequently cross the street;
- Mid-block crossings should be visible to motorists through the use of triggered flashing lights, adequate signage, traffic



Map 5-2. Network of sidewalks, street crossings, and bike lanes in Downtown Marina.

calming, or other innovative crossing treatments;

- Mid-block crossings should include functional pedestrian-activated signals and audible indications of the walk interval;

Bikeways should be implemented along key thoroughfares. The PBMP identifies several guidelines relating to bikeways, including:

- Multi-lane roadways with intersections should include on-street bike lanes or independent parallel trails. Existing roadways should receive bike lanes where feasible;
- Bikeways should be maintained to ensure the safety of users;
- Bikeways should be designed to maximize bicycle travel through effective connections.

5.6.2 Pedestrian and Bicycle Amenities

Amenities can help people feel safer and more comfortable while walking or biking to various destinations. **Table 5-5** includes a list of amenities designed to improve conditions for pedestrians and bicyclists. Amenities should be durable, visible, accessible, and well maintained. Where possible, amenities should be co-located to encourage easy access and potentially reduce costs. **Section A.3: Design Standards for Right-of-Way and Civic Space** includes a list of goals and strategies aimed at improving conditions for people who walk and bike.

Benches and Seating Areas

Seating areas should be considered wherever extra sidewalk width allows them (see **Figure 5-15**). Seating space can be included on walls, in alcoves, and along other edges. The use of local stone, masonry, and other building materials complementing area buildings and monuments should be considered.

Figure 5-15. Street furniture.

Source: Blueton Limited

Table 5-5. Pedestrian and Bicycle Amenities.

Pedestrian and Bicycle Amenities	
Benches / Seating areas	Transit stops
Street trees	Effective lighting (pedestrian-oriented lighting and trail lighting)
Kiosks / Newspaper racks	Wayfinding or interpretive signage
Planters	Bicycle racks (U-rack, bollard, or decorative format)
Screening (dumpsters, utility boxes)	Showers
Public art	Lockers

Street Trees

Street trees can be used to visually narrow the street and separate pedestrians from vehicular traffic. Only trees with root systems that will not contribute to sidewalk upheaval should be used. Trees should be pruned regularly to ensure branches do not infringe on the pedestrian or bicycle right-of-way. A complete list of street trees suitable for Marina's climate is included in **Appendix B: Suggested Trees for Marina**.

Kiosks and Newspaper Racks

Kiosks and newspaper racks can increase visual interest in the street. They should not block sidewalks or crosswalks, obstruct access to buses and bicycle racks, or interfere with curb ramps or fire hydrants.

Transit Stops

In conjunction with Monterey-Salinas Transit, the City should work to install attractive bus stops that include shelters, benches, trash receptacles, and appropriate lighting (see **Figure 5-16**). When possible, bus stops should be located near major intersections or mid-block crossings to facilitate the safe movement of people crossing the street.

Figure 5-16. Bus shelter for Monterey-Salinas Transit in Monterey.

Planters

Planters add color and beauty to the streetscape. (see **Figure 5-17**). Materials used to construct planters should be coordinated with the surrounding sidewalk and building materials.

Screening

Dumpsters, utility boxes, and other mechanical equipment should be screened to hide unsightly trash and equipment from public view.

Public Art

Public art provides people with opportunities to connect and reflect. **Chapter 2.3.6: Public Art** includes a discussion about the various types of public art that should be encouraged in Downtown Marina.

Bike Racks

Bike racks should be placed in secure locations outside the pedestrian right-of-way. The City should install attractive and functional bike racks in a U-rack, bollard, or decorative format (see **Figure 5-18**). Wave, grid, and spiral racks should be avoided.

Figure 5-17. Large potted plant incorporated into streetscape.

Figure 5-18. Examples of acceptable bike racks.

Source: City of Portland

Showers and Lockers

Locating showers and lockers in appropriate locations Downtown will help encourage bicycle commuting.

5.6.3 Bikeshare and Scooter-sharing

In recent years, bikeshare and scooter-sharing programs have become popular in some areas of the United States. Some local governments manage bikeshare and scooter-sharing programs, but most programs are run by private companies. For example, Lime has been operating a scooter sharing program intermittently in certain portions of Marina.

With bikeshare programs, bikes are typically stored at secure stations located throughout a neighborhood, district, or entire city (see **Figure 5-19**). Bikes can be manual or electric, and electric bikes are typically charged at the stations where they are secured. Users pay a fee that typically includes a base rental amount coupled with a per-mile charge. One major advantage to electric bikes is that they can help people navigate steep and hilly terrain.

With scooter-sharing programs there are generally not centralized stations where users store scooters. Instead, employees of scooter-sharing companies will collect scooters in large vans to charge them and return them to the public right-of-way for use. The payment process is generally similar to bikeshare programs.

Bike-sharing and scooter-sharing can serve important roles in the Downtown. They could provide people with easy connections to transit stops and facilities. They could help people accomplish short trips to various destinations without use of the automobile.

Figure 5-19. Bikeshare parking/charging station.

They could be a low-cost alternative to ridesharing or carpooling within the Downtown.

Dedicated facilities for bikes are present in many locations Downtown, but separate facilities for scooters have not been put in place. While recognizing the benefits of bike– and scooter-sharing, the City should encourage people to use bikes and scooters in appropriate facilities. For bikes, facilities include dedicated bike lanes and all roadways. For scooters, facilities are limited to collector streets and local streets. Sidewalks should be preserved for pedestrians, and scooters and bikes should not be used there.

5.6.4 Streetscapes

Street design features will enhance the comfort and appeal of the pedestrian environment. Streetscapes should be active and interesting, provide separation between pedestrian rights-of-way and vehicular travel lanes, and feature landscaping and gathering nodes (see **Figure 5-20**). **Section B: Design Standards and Guidelines** contains specific regulations pertaining to pedestrian and bicycle circulation within the Downtown.

The PBMP includes several guidelines relating to the pedestrian orientation of buildings and landscapes. These guidelines include:

- Streetscapes should be active and interesting;
- Buildings should create street-level visual interest and contribute to pedestrian comfort;
- Windows, doors, and entryways should help define pedestrian space.

Figure 5-20. Vibrant streetscape in Burlingame, CA.

5.7 Parking Improvements

Surface parking lots abound in Downtown Marina. They are primarily located along Reservation Road and Del Monte Boulevard. As discussed in **Chapter 3: Land Use and Development**, existing commercial areas are oriented in a strip mall configuration with buildings positioned at the back of lots leaving room for large parking lots in the front.

The Specific Plan features significant intensification of development in the Downtown area which would create an increased demand for off-street parking. There is opportunity to create more on-street parking in some areas, but there will still be a

need for additional parking as higher intensity development occurs. The Specific Plan assumes that structured parking with shared access will eventually replace surface lots when coupled with more intensive mixed-use developments. In order to create a pedestrian-friendly and aesthetically-pleasing Downtown Core, on-site parking lots should be located behind buildings. Specific elements of the proposed parking plan are outlined on page 5-14. Refer also to **Section A: Design Standards**.

5.7.1 On-street Parking

There are a number of benefits with on-street parking: Convenience, separation between the street and pedestrians, and traffic calming, (see **Figure 5-21**). On-street parking will be provided in the Downtown in strategic areas in accordance with the Specific Plan.

5.7.2 Off-street Parking

Off-street parking lots are to be located at the rear of a property in the Core and Multifamily Residential zones and at the rear or side of a property in the Transition zone. This aids in maintaining a streetscape that emphasizes a direct connection between pedestrians, buildings, and the landscape. Parking lots should be landscaped (see **Figure 5-22**).

5.7.3 Parking Lot Consolidation

Parking lot consolidation is encouraged. When spaces are shared between uses, fewer parking lots are needed. Consolidation creates better organization and movement of service and delivery vehicles, opportunities for shared space, and an aesthetically-improved streetscape that favors pedestrian movement.

5.7.4 Structured Parking

Several options are possible for a structured parking garage in Downtown Marina. Locations will be driven by intensity of development. Commercial retail or service uses should be included on the first floor facing the street. **Section A.2: Onsite Design Standards**, includes design standards for parking structures (see also **Figure 5-23**).

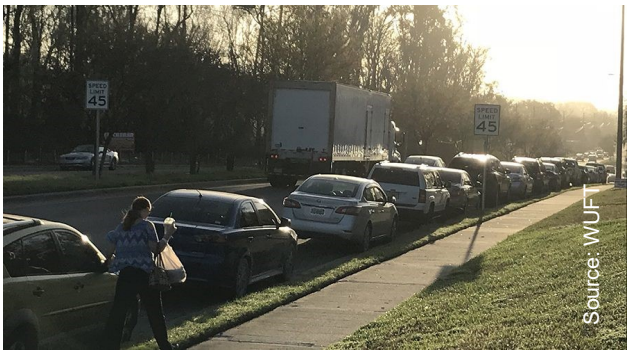


Figure 5-21. On-street parking.

Figure 5-22. Off-street parking.

Figure 5-23. Structured parking.

GOAL: Create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike or use public transportation.

Traffic calming may be accomplished through a combination of geometric, operational, or landscaping features.

OBJECTIVE 1

Traffic Calming

Utilize traffic calming features to lower speeds throughout the Plan Area, creating a safer and more pleasant Downtown environment.

STRATEGIES

1. Install and maintain street trees and intermittent pedestrian-enhanced landscape medians to visually narrow streets.
2. Incorporate a combination of geometric, operational, and landscaping features at roundabouts to alert motorists of the need to slow down.
3. Include treatments at roundabouts such as road width reductions, curb extensions, splitter island flares, yield markings, signs, high emphasis pedestrian crossings, and other appropriate traffic calming measures.
4. Include visually attractive traffic calming features such as bulbouts, accent paving on pedestrian crosswalks, and planted medians.

GOAL: Create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike or use public transportation.

OBJECTIVE 2

Intra– and Inter-Downtown Circulation

Balance the demands of local and regional traffic while seeking to minimize congestion and address the needs of people who walk, bike, and take transit.

STRATEGIES

5. Consider the importance of balancing local and regional traffic needs in designing Reservation Rd and Del Monte Blvd, while addressing the needs of people who walk, bike, and use public transit.
6. Mitigate traffic congestion through capacity management measures rather than road widening.
7. Assist large employers to develop a shuttle system for employees.

OBJECTIVE 3

Parking

Locate parking in appropriate areas and reduce the amount of land devoted to surface parking lots.

Wayfinding signage for parking facilities.

STRATEGIES

8. Encourage alternative transportation, such as walking, biking, and transit, to reduce overall parking demand.
9. Work with businesses and property owners to determine whether there is interest in development of a parking district, considering ideas such as a shared parking program or a fees-in-lieu program allowing funding of off -site, at-grade, or structural parking improvements where on-site parking requirements could not be met.
10. Install wayfinding signage to direct motorists to parking facilities.
11. Work with uses to develop a transportation demand management program that looks at utilization of parking on a 24-hour basis.
12. Track parking needs by periodically updating parking inventory, regularly monitoring parking occupancy, and considering parking permit programs where determined appropriate.
13. Consider development of strategically located parking structures if parking demand requires such and it can be financially self-supporting.

GOAL: Create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike or use public transportation.

OBJECTIVE 4

Pedestrians/Bicycles

Create a street environment that is safe and welcoming for pedestrians and bicyclists.

Mid-block crossing.

Bike lockers.

STRATEGIES

14. Develop an efficient, safe, and attractive pedestrian and bicycle pathway network throughout the Downtown.
15. Implement sections of the Bicycle and Pedestrian Master Plan that will improve pedestrian and bicyclist access to, from, and within Downtown.
16. Develop a complete sidewalk system within the Downtown, eliminating any gaps that might exist.
17. Ensure that street cross-section standards include a pedestrian throughway section of sidewalk that is at least six feet in width whenever possible.
18. Consider installing midblock crossings with enhanced striping, lighting, signage, and other safety features on lengths of major streets greater than 600'.
19. Develop trail connections to shorten distances between streets and destinations, especially in connections with oversized blocks.
20. Work with the Chamber of Commerce to develop programs that encourage walking and biking in Downtown Marina.
21. Ensure bicycle parking is provided at all public facilities and within the right-of-way.
22. Encourage developments to include end-of-trip support facilities such as lockers, changing rooms, and showers.
23. Promote easily-accessible bicycle parking and support facilities, including a bike share program.
24. Post bicycle route and parking maps in the Downtown and on the City website.
25. Ensure property owners are aware of their responsibility to maintain the sidewalk and park strip in front of their properties.

GOAL: Create visually pleasing Downtown pedestrian and vehicle circulation that safely, efficiently, and effectively encourages people to gather, walk, bike or use public transportation.

OBJECTIVE 5

Special Mobility Needs

Ensure streets accommodate people with special mobility needs.

STRATEGIES

26. Ensure right-of-way improvements, such as crosswalks and driveways, meet ADA requirements to address the needs of individuals with special mobility needs.
27. Include refuge islands on medians for individuals who may not be able to cross the street in one traffic light cycle.
28. Roadways should be as narrow as possible while accommodating the desired services.
29. Ensure that all streets accommodate pedestrians with continuous sidewalks on both sides of the street and curb ramps. Ensure sidewalks meet City code and are repaired or replaced as necessary.

OBJECTIVE 6

Transit

Improve pedestrian access to transit facilities.

Monterey-Salinas Transit bus.

STRATEGIES

30. Improve pedestrian access to the Marina Transit Exchange with improved lighting, signage, and other pedestrian amenities.
31. Work with Monterey-Salinas Transit (MST) to ensure high-frequency bus service continues in the Downtown.
32. Work with MST to encourage covered benches at all bus stops in the Downtown.
33. Work with MST to expand bus routes within Marina to improve mobility, encourage outdoor activities, and provide access to biking and walking opportunities in Marina including links to Fort Ord Dunes State Park, Marina State Beach, and Fort Ord National Monument.

7. Environment and Sustainability

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7.1 Overview

Sustainable design refers to design and construction practices that significantly reduce or eliminate the negative impacts of development on the environment. A sustainable design approach can be defined by a variety of green building practices, environmentally-aware landscape improvements, and the availability of pedestrian-oriented amenities. These ideas are rooted in principles such as the Green Building and Sustainable Design Concepts developed by the US Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system, along with the American Planning Association's Smart Growth principles and the New Urbanism movement associated with the Congress for the New Urbanism. Landscaping efforts of Xeriscape Colorado, Inc., founded in 1975, spawned the xeriscape movement, a term they developed in the early 1980s in conjunction with Denver Water. Xeriscaping has become an essential aspect of water conservation.

California State General Plan Guidelines address issues of sustainability as follows: "In a community that is developing sustainably, the neighborhood is the basic building block of urban design and is characterized by walkability, mixed-use development, and mixed-income housing. The Guidelines nite the importance of addressing urban sprawl through compact, multiple use, transit-oriented infill development. Other areas addressed are open space and working landscapes, environmentally sensitive lands, local and regional economies, energy and resources, and equitable development.

The City of Marina includes policies in the General Plan relating to the need to fully utilize the land to accommodate Marina's fair share of the future population and employment growth in Monterey County within the Urban Growth Boundary (UGB), which runs through 2020 (see Primary Policy 1). Other policies focus on ensuring that vacant land located in developed areas within the UGB are developed before undeveloped lands within the UGB (see Primary Policy 2) and future development having such intensity of use as to help ensure the longer term feasibility of public transit for work and other purposes and to help create a pedestrian-oriented community (see Primary Policy 5).

GOAL:

Support development in Downtown Marina that employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.

PROHIBITED: Location of sidewalk tree closer than 10 feet from intersection.

OBJECTIVE 1

Sustainable Design

Implement sustainable design elements that complement the natural setting of Marina.

STRATEGIES

1. Use landscaping materials and methods of construction that are of high quality and appropriate for coastal Monterey County. Consider fog, wind, drought, salt air, and sandy soils in all landscaping decisions.
2. Minimize impervious surfaces on all streetscapes.
3. Plumb irrigation infrastructure to accommodate graywater systems. Stormwater management systems shall detain onsite runoff and include cistern systems for capturing recycled stormwater runoff.
4. Arrange a grid of local streets to increase connectivity and pedestrian activity and reduce reliance on the car.
5. Use Monterey County native plant species and low-water Mediterranean plants and xeriscaping for landscaping.
6. Use high-efficiency irrigation systems and existing natural drainage in landscaping.
7. Carefully select street trees for Marina's coastal climate. **Table xx-xx** includes a list of acceptable street trees.

GOAL:

Support development in Downtown Marina that employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.

Carmel Ceanothus.

STRATEGIES

8. Use locally available and recycled material wherever possible.
9. Encourage the creation of "living walls"—the outdoor walls of a building covered with plant material arranged on a lattice or similar structure—where appropriate.

Pajaro Manzanita.

Seaside Fleabane.

Dune Manzanita.

Monterey Pine.

Blue Elderberry.

GOAL:

Support development in Downtown Marina that employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.

OBJECTIVE 2

Building Technology

Construct buildings that utilize state-of-the-art technology to reduce the City's overall carbon footprint.

STRATEGIES

10. Design water and lighting fixtures for efficiency. Water conserving fixtures may include low-flow faucets, showerheads, and toilets, as well as drip irrigation systems.
11. Require all future private and public projects to demonstrate how they will contribute to the long-term sustainability of Marina. Methods for contributing to sustainability could include green building and streetscape technologies, enhanced pedestrian access to transit, variety in housing options, drought-tolerant landscaping, outdoor low-light options to mitigate light pollution, and bicycle racks.
12. Encourage the construction of Net Zero Buildings and green building techniques that conserve resources and produce more healthful living and working environments.
13. Encourage development to use renewable energy sources and meaningful energy conservation measures.

OBJECTIVE 3

Compact Development

Promote compact, mixed-use development that makes efficient use of space.

STRATEGIES

14. Create high-density and high-intensity multiple use areas that promote travel by transit, walking, and bicycling.
15. Allow for compact form and multiple use patterns of development that reduce dependency on the automobile and support other modes of transportation.
16. Encourage pedestrian and bike linkages to provide better connectivity where street rights-of-way are not available.

GOAL:

Support development in Downtown Marina that employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.

OBJECTIVE 4

Local Environment

Consider the local environment in all decisions related to landscaping, building, and public spaces.

STRATEGIES

17. Incorporate native plant species, drought tolerant species, rock, and stone in landscaping, with selection appropriate for location.
18. Maximize the use of available reclaimed water.
19. Be conscious of wind direction at the building site. Protect open spaces and pedestrian plazas from wind, and avoid development that creates wind tunnels.
20. Utilize construction materials and methods appropriate to the local area. Materials should be locally produced wherever possible, and preferably have at least some recycled components.
21. Integrate low impact development (LID) technologies, including pervious pavers and surfaces, filter strips, tree boxes, rain gardens, vegetated bioswales, and parking lot infiltration techniques.
22. Follow principles of the International Dark Sky Association, including shielding light fixtures and directing light bulbs downward, to minimize impacts of outdoor lighting.
23. Enforce existing policies on inappropriate dumping of trash and debris.
24. Encourage local businesses to participate in food composting programs provided by Monterey Peninsula Regional Waste Management District.

GOAL:

Support development in Downtown Marina that employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.

OBJECTIVE 5

Clean Environment

Maintain a clean, attractive environment free from trash and debris.

STRATEGIES

25. Work with the private company that collects solid waste to increase recycling opportunities Downtown.
26. Provide a spring or fall cleanup trash collection program.
27. Provide residents with information about proper waste disposal, recycling, hazardous waste disposal, and reducing waste.
28. Encourage owners of animals to clean up animal waste in public places. Install dog waste stations in conspicuous public locations. Enforce penalties for noncompliance.
29. Encourage Marina restaurants to participate in the food compost waste program provided by the Monterey Peninsula Water Management District.
30. Provide well-designed, easily accessible trash enclosures to accommodate all recyclable needs.
31. Use hydrodynamic separators in all storm drains in the Downtown.

A. Design Standards

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A.3 Design Standards for Right-of-Way and Civic Space A-21

A.1 Overview

This Design Standards and Guidelines section establishes procedures for the consistent promotion of high quality, well-designed development to be appropriately located throughout Downtown Marina. The Design Standards and Guidelines are composed of written statements and graphic illustrations describing the design intent and community character for the Downtown. The overarching goal of this section is to prevent "rubber stamped" development prevalent in places like the Silicon Valley while fostering creative designs that enhance Marina's unique community character. An additional goal is to promote harmony with the natural environment.

All new construction and proposed structural and façade changes are required to be consistent with the Objectives and Design Standards presented here. Design Standards are minimum requirements, and permit applicants may be required to provide additional amenities to meet the goals and policies of the Specific Plan. Design Guidelines provide additional direction to meet overall design goals for Downtown. Additional standards or guidelines from the City's Design Guidelines, Sign Ordinance, and Zoning Ordinance may be applicable as well. If there is a perceived conflict between DVSP Design Standards and the Design Standards of other City plans and ordinances, the DVSP shall take precedence. If certain design issues are not specifically addressed in these Standards and Guidelines, then the aforementioned documents, city staff, or relevant commissions and boards may provide further direction.

This portion of the document is divided into two main parts: (1) background and regulatory information; and (2) Design Standards and Guidelines.

The organization of the Design Standards and Guidelines portion of this document is as follows:

1. **Objectives** establish the intent for each topic. Objectives may be used to determine the appropriateness of projects or portions of projects that do not meet Design Standards.
2. **Design Standards** establish specific criteria for meeting Objectives. Design Standards are readily identified by "shall" statements. Compliance is required.
3. **Design Guidelines** provide additional suggestions that are strongly encouraged to help achieve the Objectives listed for each topic.

Objectives, along with Design Standards and Guidelines, are intended to create a framework for the design review process while preserving the flexibility needed for creative design. Pages A-3 and A-19 feature a sample layout with additional details regarding the format and use of these elements.

>>How to Use This Document

TOPIC

Objectives

- Objectives appear as a bulleted list and tie the Design standards and guidelines to broader goals laid out in the Downtown Vitalization Specific Plan.

Additional images may be used to illustrate concepts in the Design standards and guidelines. C *

Images illustrate concepts specified in the Design standards and guidelines. C *

DESIGN STANDARDS

1. **Design Standards** establish specific criteria that applicants are required for meeting Objectives. Design standards are readily identified by "shall" or "must" statements. Compliance is mandatory. C T M *

DESIGN GUIDELINES

2. **Design Guidelines** provide additional suggestions for achieving objectives. Design guidelines use "should", "consider", or other similar statements. Compliance is encouraged, not mandatory. C T M *

*Symbols appear next to every design standard and design guideline and some images. Symbols indicate to which zones a design standard or guideline applies, according to the table at right.

Symbol	Zone
C	Core
T	Transition
M	Multifamily Residential

A.2 Onsite Design Standards

The following onsite design standards were developed to enhance the architectural character of Downtown Marina and encourage sustainable site designs. Architecture in the Downtown should be visually interesting, clean, and functional.

Chapter 17.50 of the Marina Municipal Code outlines the Site and Architectural Design Review process for the City, which applies to all new development within the Downtown. In accordance with this chapter, a Site and Architectural Design Review Board (DRB) appointed by the Planning Commission has the power to review and make recommendations to the Planning Commission regarding all applications for developments in the City.

The DRB considers "all necessary plans, drawings, and statements in an endeavor to encourage buildings, structures, or other improvements [are] designed and constructed, and so located, that they will not be unsightly, undesirable, or obnoxious in appearance to the extent that they will hinder the orderly and harmonious development of the city, impair the desirability of residence or investment or occupation in the city, limit the opportunity to obtain the optimum use and value of the land and improvements, impair the desirability of living conditions on or adjacent to the subject site, conform with the standards included in the local coastal land use plan, and/or otherwise adversely affect the general welfare of the community."

The design standards and guidelines describe the desired character of multiple use, commercial (office and retail), and residential development within the Downtown. Standards are designated with some combination of the markers shown on Page A-3, indicating to which zones within the Downtown the standards and guidelines apply.

BUILDING DESIGN, MASS, AND SCALE

Objectives

- To encourage varied building massing that accentuates the human scale of Downtown.
- To minimize the appearance of large box-like buildings.
- To create a varied and attractive streetscape.
- To establish Downtown as a destination for pedestrians.
- To achieve variety in building façades.
- To ensure buildings are well articulated on all exposed sides.
- To encourage the incorporation of building design elements reflective of the multicultural history of the community.

DESIGN STANDARDS

1. Building façades shall include elements of traditional storefronts, which may be done with a traditional or more contemporary design (see **Figure xx-xx**). On the first floor, 70% of the building face shall be a transparent surface, and 20% of any floor above the first shall be a transparent surface. C
2. Blank walls on elevations visible to the public are prohibited. The wall plane on all façades visible from a public street shall include architectural elements such as cornice, parapet, upper story window header and sill, transom window, bulkhead, bay windows, and other features to break up monolithic building façades. C T M
3. Architectural details and materials shall be incorporated on the lower part of façades to relate to human scale and create visual interest. Pedestrian scale elements can include awnings, trellises, windows, base articulation, and changes in materials, textures, and colors. C T M
4. For building lengths of over 50 feet, designs shall articulate individual units or clusters of units by varied height and setback. T M
5. Surface detailing, such as score lines, shall not serve as a substitute for distinctive massing. C T M
6. Stairways shall be designed as an integral part of the overall architecture of the building. Stairways shall complement the building's mass and form. C T M
7. Internally facing walls that face walkways shall be effectively articulated to enhance the pedestrian experience. C T M

DESIGN GUIDELINES

8. The third story of a building may be stepped back to reduce the scale of façades facing narrower streets. Façades should provide a clear visual distinction between each floor through the use of articulation and attractive ornamentation. T M

Cornice.

Bulkhead.

Transom.

DESIGN GUIDELINES

9. Strongly consider inclusion of subtle architectural elements reflective of, or modern architectural interpretations of, the various cultural groups of Marina. Refer to **Appendix xx-xx** for examples of traditional architectural elements associated with the Asian community and other cultures in Marina. C T M

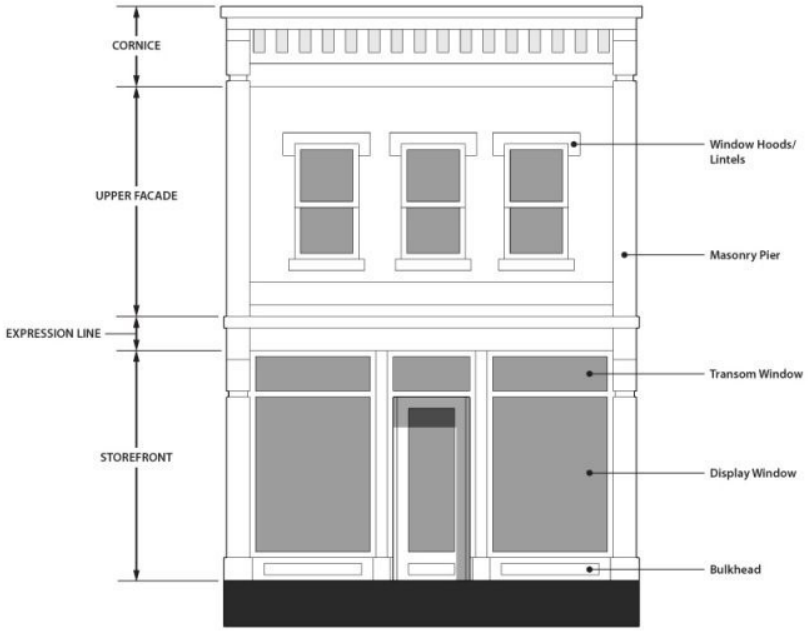


Figure xx.xx. Traditional urban storefront.
Source: Sterling Codifiers

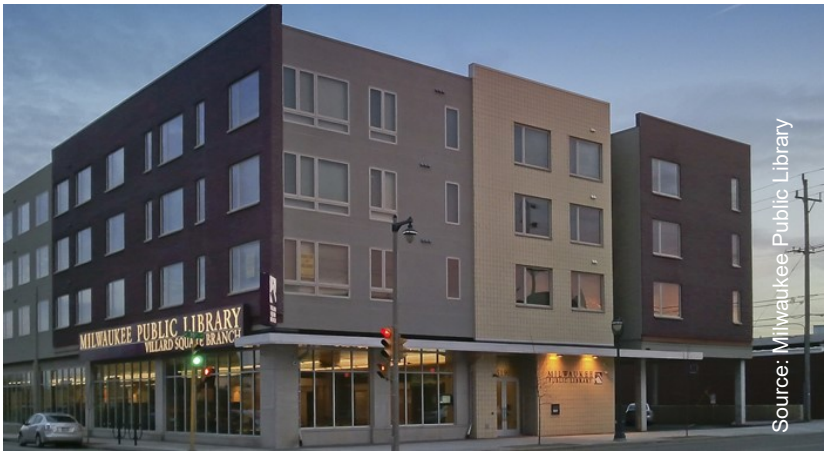
Figure xx.xx. Modern interpretation of traditional urban storefront.

BUILDING LOCATION AND ORIENTATION

Objectives

- To ensure a continuous street wall is maintained in the Core.
- To design buildings that engage with the street and promote a unique Downtown character.
- To create an environment that feels safe, welcoming, and engaging for pedestrians throughout the Downtown.
- To clearly define various districts in the Downtown.

REQUIRED: Building fronts face public rights-of-way or fronts of other buildings. C T M



REQUIRED: Building oriented toward the street, meeting the edge of the sidewalk. C

DESIGN STANDARDS

10. Building fronts shall face public rights-of-way or fronts of other buildings. C T M
11. Primary building façades shall be parallel to the front lot line and shall not be at an angle. Buildings on corner lots may have chamfered entrances (see **Guideline 62**). C
12. Building shall be built to side property lines unless the design includes a pedestrian paseo or plaza. C
13. Buildings with frontage on two streets shall be oriented toward the primary street (see **Table xx-xx**). C T M
14. Climatic factors—including prevailing winds, shade trees, window and door orientation, and the positioning of buildings on the site—shall be considered as part of the design review process with the intent of maximizing energy conservation and providing comfort. C T M

ROOFS

Objectives

- To distinguish various building forms.
- To create interesting roof lines.
- To break up the massing of large buildings.
- To create an attractive streetscape that provides visual interest.
- To distinguish residential buildings from multiple use, office, commercial retail, and civic buildings.

REQUIRED: Deep roof overhang of at least 16 inches. T M

REQUIRED: Commercial roof with parapet. C T M

DESIGN STANDARDS

15. Buildings shall incorporate parapets or other architectural elements at varying heights to break up long horizontal rooflines. C T M
16. Exposed roofing colors shall not be reflective. Roofs with solar panels shall include design features that block glare, such as a parapet or screen. C T M
17. Roof elements shall continue all the way around the building, not just in the most visible locations. C T M
18. For all non-parapet roofs an overhang of at least 16 inches is required. T M

DESIGN GUIDELINES

19. If the interior side of a parapet is visible from pedestrian view, it should be finished with the same materials and a similar level of detail as the front façade. C T M
20. Light-colored (not highly reflective) roofing materials are encouraged to reduce urban heat island effect. C T M

BUILDING MATERIALS

Objectives

- To improve the character and overall quality of development.
- To encourage quality development and a sense of permanence, strength, and stability in the Downtown.
- To simulate authentic and timeless materials.
- To add texture and richness to the pedestrian environment.
- To celebrate, through architecture, the diversity of the City of Marina.

REQUIRED: Durable materials at the pedestrian street level. C T M

ENCOURAGED: No more than three different types of materials on exterior walls. C T M

DESIGN STANDARDS

21. Building materials designed to withstand the coastal climate shall be used for exterior surfaces. C T M

24. At the pedestrian street level, materials shall be selected that are durable and highly resistant to pedestrian traffic, such as precast concrete, stone masonry, brick, and commercial grade ceramic tile. C T M

25. The following façade materials are prohibited:

- Mirrored glass and heavily tinted glass; C T M
- Windows with "tape on" divisions/mullions; C T M
- Vinyl and aluminum siding; C
- Plywood siding; C T M
- Corrugated fiberglass. C T M

26. The following roof materials are prohibited:

- Highly reflective material (i.e. high gloss tile); C T M
- Simulated clay tile roofs in metal; C T M
- Corrugated metal roof panels. C T M

REQUIRED: Heavier materials at the base of a building. C T M

27. Material changes shall occur at intersecting planes, preferably at inside corners of changing wall planes or where architectural elements intersect such as a chimney, pilaster, projection, or fence line. C T M
28. Heavier materials shall be used to form the building base and not located above the first floor. C T M

DESIGN GUIDELINES

29. Materials should come from renewable resources whenever possible. C T M
30. Materials and textures may vary between the base and body of a building to break up large wall planes and add visual interest to the building. C T M
31. No more than three different types of materials should be used on exterior walls. Changes in material shall occur when there is a change in the plane of the façade. C T M

REQUIRED: Material changes at intersecting wall planes. C T M

COLORS

Objectives

- To add to the liveliness and character of the neighborhood experience.
- To complement the surrounding environment.
- To achieve a desired design character.

PROHIBITED: Fluorescent, neon, metallic, or "day-glo" colors. C T M

ENCOURAGED: Color used to enhance façade. C T M

DESIGN STANDARDS

32. Colors shall be consistent with the desired architectural style. C T M
33. Fluorescent, neon, metallic, or "day-glo" colors are prohibited. C T M

DESIGN GUIDELINES

34. Building color choices should avoid more intense hues of a color as a primary design element. Avoid using more than one intense vivid color per building. C T M
35. Contrasting accent colors are encouraged for architectural details, awnings, and at entrances. C T M
36. Colors may be used to enhance different parts of a building's façade. C T M
37. Where rain gutters, downspouts, and wall venting are not integrated into the exterior walls, their color should blend with adjacent surfaces. Copper downspouts and gutters may be used. C T M

AWNINGS AND CANOPIES

Objectives

- To provide shade and protection from inclement weather.
- To enhance the pedestrian environment at the ground level.
- To help define pedestrian space and the public realm along building façades.

ENCOURAGED: A variety of awning styles. Sources: Pinterest, Best Awnings Long Island, CRL Arch

C T M

REQUIRED: Single-bay awnings. C T

DESIGN STANDARDS

38. Awnings shall fit within individual bays or structural divisions of the building façade rather than extending beyond a single bay. C T
39. The height of an awning shall be one-third to two-thirds the depth of the awning. C T
40. Canopies and awnings shall be consistent with window design. C T M
41. Awnings and canopies shall be constructed of canvas, glass, or metal. Vinyl and plastic awnings and canopies are not permitted. C T M
42. Internal lighting of awnings is prohibited. C T M
43. Awnings shall be consistent in style for each building in the Downtown. C T M

DESIGN GUIDELINES

44. Use canopies, arcades, awnings, and overhangs throughout the Downtown on the ground floor of commercial uses. C T
45. Awnings and canopies over storefronts and entries provide colorful accents and create the appearance of an interesting and active streetscape. A variety of solid and striped colored awnings may be considered. C T
46. Painted or baked enamel metal awnings may be considered when an integral design element to the building. C T M

ANCILLARY STRUCTURES

Objectives

- To ensure ancillary structures complement main buildings on a site.
- To ensure ancillary structures are an integral part of site development.

REQUIRED: Mailbox enclosure that complements surrounding residential buildings. M

DESIGN STANDARDS

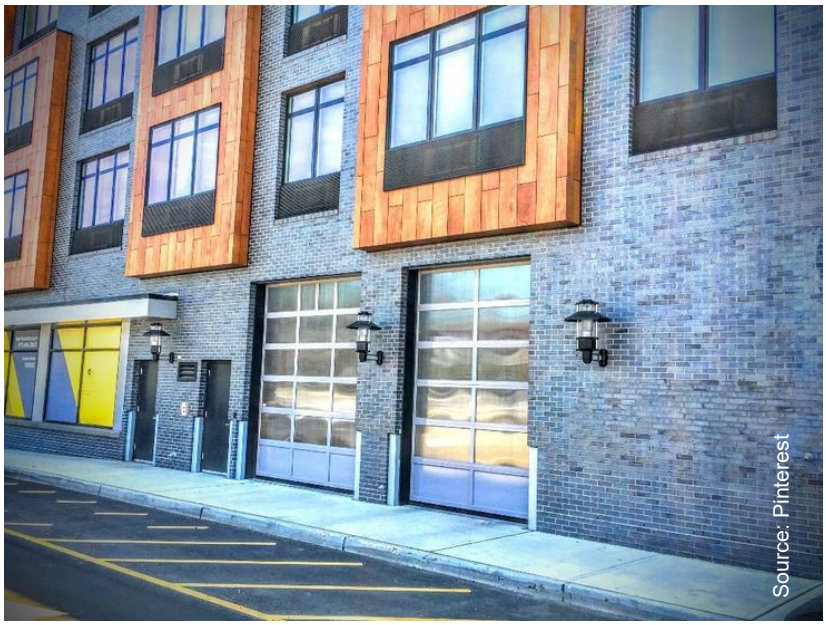
47. Ancillary structures shall incorporate similar or complementary roof pitch, materials, and architectural style as the main buildings within the project. C T M
48. Common mailbox enclosures shall be designed similar or complementary in form, material, and color to the surrounding residential buildings. M
49. Garage doors shall not face public streets. M

SERVICE AREAS

Objectives

- To preserve the pedestrian environment along sidewalks.
- To limit noise pollution emanating from loading docks in public places.
- To beautify streetscapes and properties in the Downtown.
- To promote public health, safety, and welfare.

REQUIRED: Loading area at the rear or side of building. C T



REQUIRED: Screened loading dock. C T

DESIGN STANDARDS

50. Service areas, including loading docks and storage areas, shall be screened from adjoining walkways with vines, evergreen shrubs, evergreen trees, decorative walls, or decorative fences. C T
51. Loading areas shall be located and designed to minimize visibility from public areas and adjacent properties. C T
52. Loading areas shall be accessible from side streets or alleys rather than from the front of buildings. C T
53. Loading areas shall be functionally separated from parking and pedestrian walkways for safety, and to provide convenient access for delivery trucks. C T

ENTRYWAYS, DOORS, WINDOWS

Objectives

- To clearly define thresholds for pedestrians.
- To break up the massing of large buildings.
- To introduce human-scale elements to the building façade.
- To create an attractive streetscape that provides a sense of security and visual interest.
- To distinguish the main building entrance from the rest of the building.
- To capture the desired architectural style of a building.

REQUIRED: Recessed building entryway. C T M

DESIGN STANDARDS

54. The primary entry shall be easily identifiable and distinguishable. C T M
55. Entry design shall incorporate two or more of the following methods: front porch, decorative detailing or placement of art, a projecting element above the entrance, changes in the roofline, a tower, or a change in the wall plane. C T M
56. Primary pedestrian entries shall be accessible directly from a public street or sidewalk. C T M
57. Project entry features shall reflect the architectural character of the project. C T M
58. All building entries shall be clearly defined with recesses, overhangs, special materials, and detailing. C T M
59. Window and door type, material, shape, and proportion shall complement the architectural style of the building. C T M

PERMITTED: Chamfered corner entrance on corner building. C

REQUIRED: Permeable glass storefront. C

DESIGN STANDARDS

60. Storefront and office windows shall use visually permeable glass. Mirrored or reflective glass is prohibited. C T M

61. Windows shall be either recessed or include a surround in order to provide architectural relief on the façade. C T M

DESIGN GUIDELINES

62. Buildings on corner lots may have chamfered corner entrances. Elements, such as a corner tower or variation in roof form at the corner can also be used to highlight a corner entrance. C

63. Windows should be articulated with accent trim, sills, kickers, shutters, window flower boxes, balconies, awnings, or trellises authentic to the architectural style of the building. C T M

64. Windows and skylights should be located to maximize day lighting and reduce the need for indoor lighting. C T M

PARKING STRUCTURES

Objectives

- To preserve frontage on major streets for buildings.
- To promote ground floor retail in parking structures.
- To minimize vehicular-pedestrian conflicts.
- To provide adequate parking for visitors to and residents of the Downtown.
- To preserve Downtown's sense of place and character.
- To minimize negative visual impacts on the public realm surrounding a parking structure.

REQUIRED: Pedestrian entrance to parking structure. C

REQUIRED: Articulation of parking structure façade. Façade may be articulated with interesting design elements and artwork. C

DESIGN STANDARDS

65. Horizontal openings shall be broken up with vertical columns to create a rhythm of openings. C
66. Parapet additions shall be added to key areas on the building to change the roof line and reduce its horizontal appearance. C
67. Entrance and exit points for parking structures shall be accessible and easy to find, and separate pedestrian routes shall be provided to the outside. C
68. Entries and exits to parking structures shall be located in areas that will minimize impacts to pedestrians and neighboring land uses. C
69. Vehicular entries and exits to parking garages shall be recessed to help subordinate their impact. C
70. At least 60 percent of the wall face on parking structures shall be articulated with one or more of the following design elements: architectural treatments, artwork, durable lattices, and other design features. C
71. Elevators and stairways shall be located to increase visibility and improve safety. C

ENCOURAGED: Ground floor retail in parking structures. C

REQUIRED: Articulation of parking structure façade. Façade may be articulated with landscaping elements. C

72. Parking structures shall use full spectrum lighting to increase safety and comfort. Fixtures shall shine down, not out to the street, to minimize light pollution. C

DESIGN GUIDELINES

73. Street facing portions of parking structures should include commercial retail uses. C
74. Parking structures should make provisions for car sharing priority spaces and electrical charging stations. C
75. Interior walls and ceilings should be painted a light color to improve illumination. C
76. All mechanical equipment and piping should be painted to match the interior of the structure. C
77. Paved surfaces within parking structures should be designed to reduce tire squeal. C
78. Where possible, parking structures should not be located on corner lots. C

>>How to Use This Document

TOPIC

Objectives

- Objectives tie the design standards and guidelines to broader goals laid out in the Downtown Vitalization Specific Plan.

Images illustrate concepts specified in the Design standards and guidelines.

BACKGROUND

A narrative background explains the connection between broad objectives (above) and specific design standards and guidelines (right).

Additional images may be used to illustrate concepts in the design standards and guidelines.

DESIGN STANDARDS

1. **Design Standards** establish specific criteria that applicants are required to meet Objectives. Design standards are readily identified by “shall” or “must” statements. Compliance is mandatory.

DESIGN GUIDELINES

2. **Design Guidelines** provide additional suggestions for achieving objectives. Design guidelines use “should”, “consider”, or other similar statements. Compliance is encouraged, not mandatory.

A.3 Design Standards for Right-of-Way and Civic Space

The following design standards for civic space, including the public right-of-way, were developed to enhance the overall aesthetic of the Downtown and encourage a walkable street environment. Streetscapes in the Downtown should be visually interesting, comfortable, and accommodating to people who walk, bike, and use transit.

The design standards and guidelines describe the desired character of streetscapes within the Downtown. Some standards and guidelines apply only to certain portions of the pedestrian zones identified in **Figure xx-xx** below. When this is the case, standards and guidelines will be clearly identified with one or more of these four zones (Edge, Furnishings, Throughway, and Frontage).

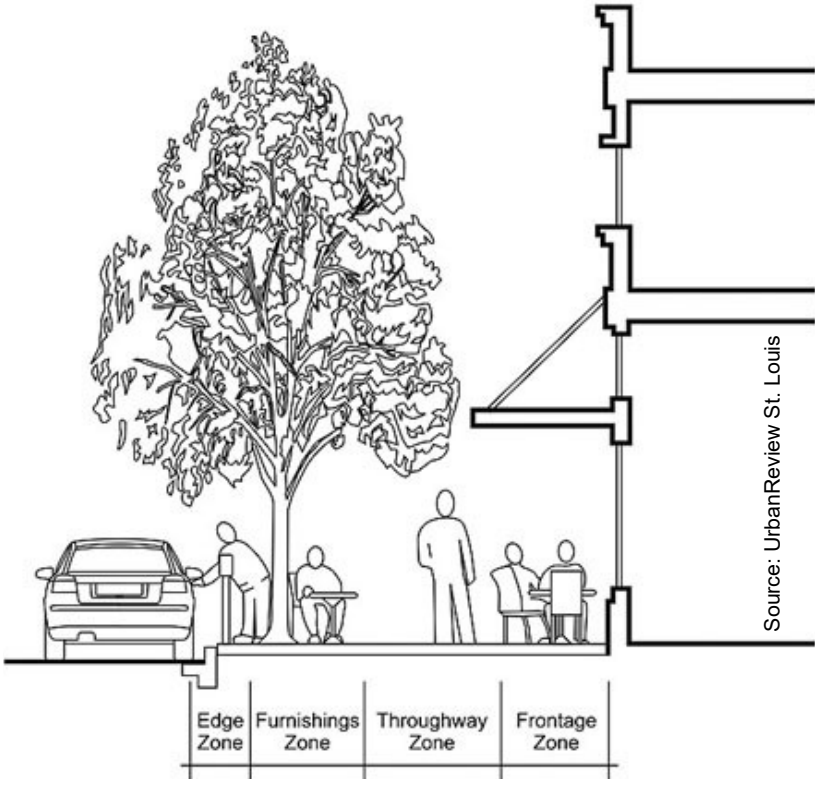


Figure xx-xx: Pedestrian zones.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.

GATEWAYS

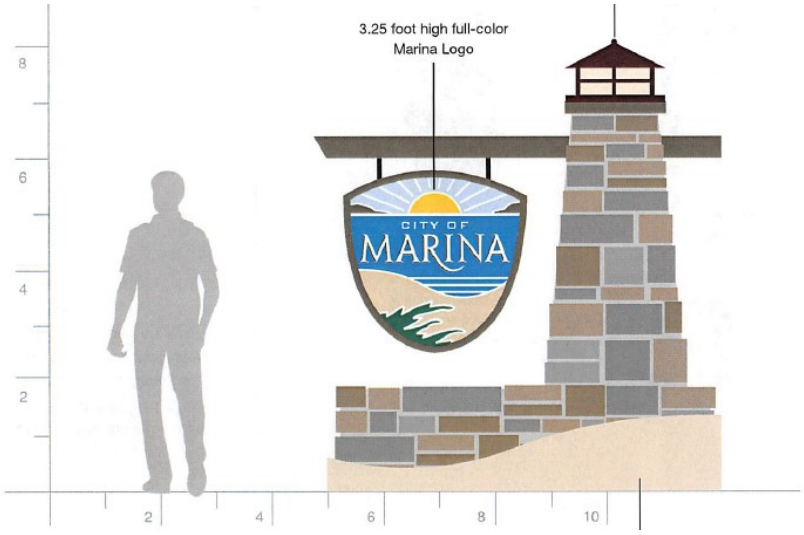
Objective 1

Design attractive gateways that welcome residents and visitors to Downtown.

BACKGROUND

Gateway improvements provide an important sense of arrival for pedestrians and motorists entering the Downtown. Gateways should include unifying elements that tie them to the district. These gateways may vary in size, depending on space available for improvements. They may be included on medians or on the side of the street. Gateways have been identified at the following intersections: Reservation Road and California Avenue, Reservation Road and Del Monte Boulevard, and Del Monte Boulevard at the offramp of Highway 1.

Gateway to Downtown Littleton, Colorado.



Example of a gateway sign that could be used at key locations in Marina. This concept was developed in 2007 as part of the *Citywide Public Sign and Identity Program Guidelines*.

DESIGN STANDARDS

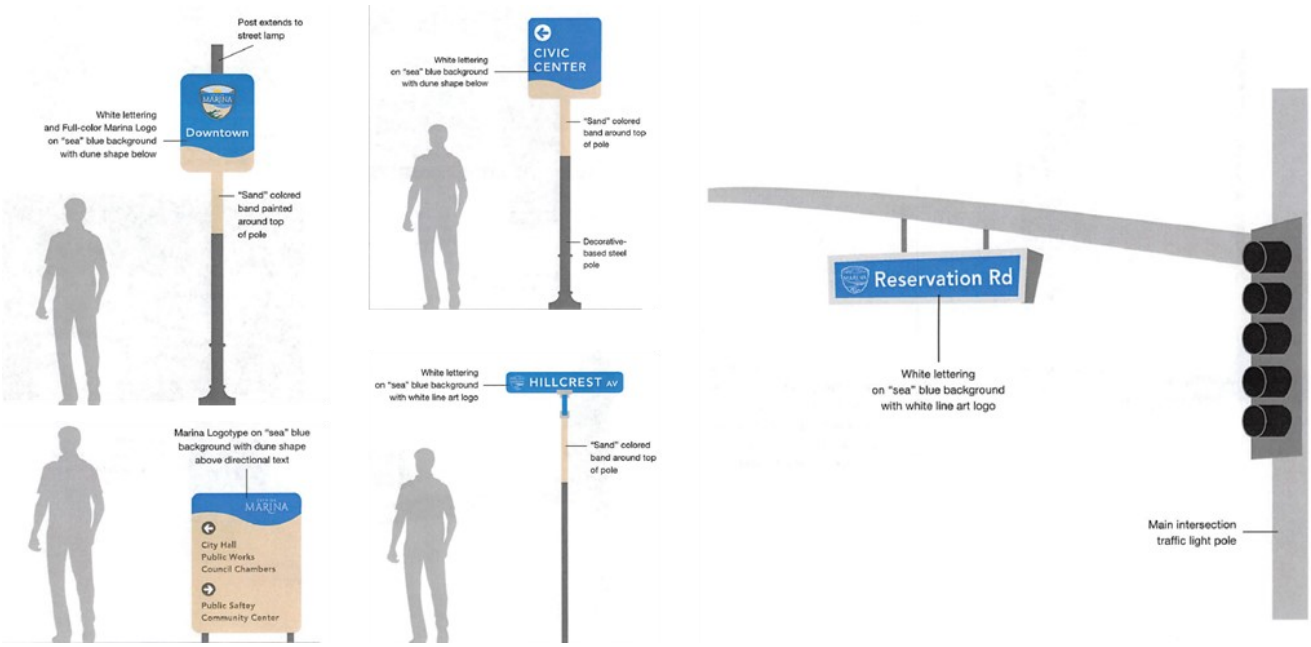
1. Gateways shall be designed to complement the overall architectural character of the Downtown.
2. Gateways shall include a combination of features including public art, landscaping, signs, enhanced paving, and outdoor seating, along with defining architectural features on buildings such as tower elements.

DESIGN GUIDELINES

3. Over-street banners announcing community events may be places on posts at gateways in accordance with regulations governing signs.
4. Colored, textured, and permeable paving should be installed at significant intersection and entry drives.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.



Wayfinding signs that utilize a consistent shape, font, and pattern. These concepts were developed in 2007 as part of the *Citywide Public Sign and Identity Program Guidelines*.

WAYFINDING

Objective 2

Strategically locate informative wayfinding signs throughout the Downtown.

BACKGROUND

Wayfinding signs should provide directional information in a consistent format that enables persons unfamiliar with the area to navigate to a desired location within the Downtown. This information must be legible and easily understood.

DESIGN STANDARDS

5. Wayfinding signs shall have a consistent shape, font, and pattern.
6. Wayfinding signs shall incorporate a consistent level of contrast (e.g. white lettering with blue background) to increase sign visibility.
7. Sign lettering shall be of sufficient size to be legible to motorists given existing speed limits.
8. Wayfinding signs shall use universal symbols, pictures, or colors to communicate a destination.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.

STREET FURNISHINGS

Objective 3

Use street furnishings to create visual interest and opportunities for gathering and relaxing.

BACKGROUND

Those areas of the street intended for pedestrian use should be considered to be part of a large living space that includes places to do things such as sit, talk, observe, and relax. Street furniture includes a wide variety of structures that help make this space useful to pedestrians, such as places to sit, places to dispose of trash, places for plants and trees, places to park bikes and scooters, places for public art, places for media, and places for lighting. These things are typically located in the Furnishings Zone of the pedestrian portion of the right-of-way. Materials used in these areas need to be durable given the climate, location and utilization of the improvements.

Use a consistent design theme for benches, light posts, and other furnishings.

DESIGN STANDARDS

9. A consistent design theme for benches, light posts, trash receptacles, and other furnishings shall be used throughout the Downtown.
10. Benches shall be constructed of coastal-appropriate materials such as stone or masonry and shall include arms or features designed to help people sit and stand.
11. Amenities in the Furnishings Zone or Frontage Zone shall not interfere with pedestrian traffic in the Throughway Zone (see **Figure xx-xx**).
12. Newspaper racks may be located in the Furnishings Zone but shall not negatively impact accessibility to crosswalks, transit and bike facilities, and pedestrian traffic in the Throughway Zone. Vending machines are not permitted.
13. Benches and trash receptacles shall be placed approximately every 100 feet on major corridors and at other key locations.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.

Use combination recycle and trash receptacles.

Expandable tree grates.

Install benches constructed of stone, masonry, or other coastal-appropriate materials.

DESIGN GUIDELINES

14. Combination recycle and trash receptacles should be used throughout the Downtown.
15. Public art should be incorporated into the streetscape and in medians. Bike racks should include an artistic design element.
16. Planter pots should be consistent in finish and style in key locations throughout the Downtown Core.
17. Expandable grates should be used to accommodate tree growth. Install gravel mulch to prevent accumulation of litter.

Bike racks may include an artistic design element.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.

Fill gaps in sidewalks to improve connectivity.

Permeable materials such as these interlocking pavers may be used to minimize runoff.

SIDEWALKS AND PLAZAS

Objective 4

Integrate sidewalks, plazas, paseos, and walkways throughout the Downtown.

DESIGN STANDARDS

18. Sidewalks and street crossings shall be designed to allow people to easily find a direct route to destinations.
19. Sidewalks shall be located on both sides of the street, and gaps in sidewalks shall be filled to improve connectivity.
20. Sidewalk surfaces shall be stable, firm, smooth, and slip-resistant.
21. Sidewalks shall be designed, built, and maintained to appropriate specifications to accommodate all users, including mobility impaired persons.
22. Street trees and planted park strips shall be used to separate pedestrians from vehicular traffic and to enhance safety and sense of place.
23. Crosswalks shall be clearly visible to motorists and made of durable materials.
24. Sidewalks shall be appropriately designed, constructed, and maintained.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.

Use in-pavement flashers at high-risk crossings.

DESIGN GUIDELINES

25. Permeable materials such as interlocking pavers or porous surface paving should be used.
26. "Structural soil" should be used as a base material below sidewalks to encourage sidewalk tree growth without damage to concrete.
27. Accent treatments should be applied in the sidewalk at street edge in key locations, around tree grates, around planters, at corners, and at the entry of paseos.
28. In-pavement flashers should be used at high-risk crossings with higher traffic and pedestrian volumes.
29. Safe mid-block crossings should be implemented at appropriate locations to enhance accessibility and increase pedestrian safety for blocks of 600 feet or greater.

Accent treatments should be applied in the sidewalk at street edge.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.

Landscape roundabouts.

Plant drought-tolerant shrubs.

MEDIANS AND ROUNDABOUTS

Objective 5

Landscape medians and roundabouts to provide visual interest.

DESIGN STANDARDS

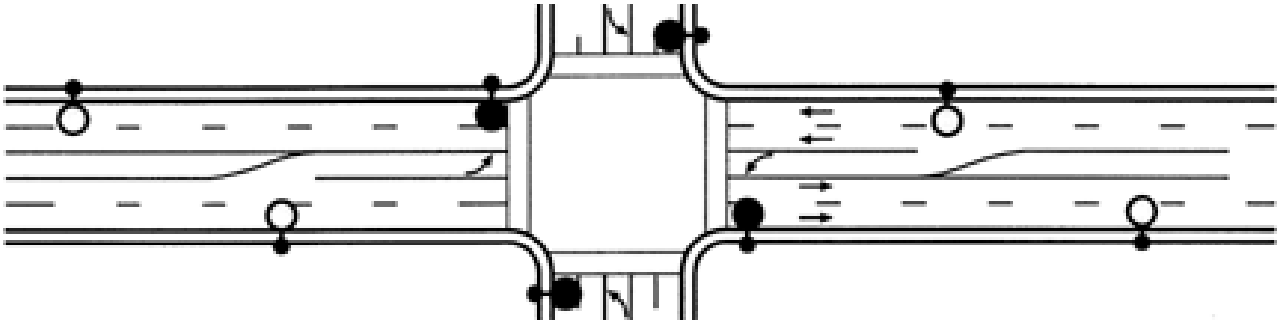
30. Drought-tolerant plant materials native or adaptable to the area shall be used in medians and roundabouts.
31. Drip or low-water irrigation systems shall be used in medians and roundabouts.

DESIGN GUIDELINES

32. Colorful shrub masses or contrast in texture and hue of shrubs should be used to complement median trees.
33. Drought-tolerant shrubs should be used.
34. Medians narrower than four feet in width should be paved with pervious concrete
35. Planted medians should include a one-foot wide maintenance band running along the back of the curb.
36. Landscaping of roundabouts should make the central island more conspicuous and complement surrounding streetscapes.

GOAL:

A Downtown which complements our natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.



Ensure there is sufficient spacing between poles to minimize glare and conserve energy.
Source: Gvsigmini

LIGHTING

Objective 6

Install lighting that provides safety, protects the dark night sky, and reduces energy usage.

DESIGN STANDARDS

37. Lamps shall be directed downward (except those highlighting architectural features) and shall not be visible from the side or from behind the fixture.
38. Lamps shall be shielded to provide sufficient light for safety while not generating excessive glare.
39. Street light poles shall be no taller than 15 feet on local streets and 25 feet on arterial roads.
40. Energy-efficient bulbs of a consistent color range below 3000K shall be used in all street lamps.
41. Exterior lighting in public spaces shall be compatible with the character of the neighborhood.
42. Pedestrian-scale lighting shall be used in the Downtown.
43. Street light fixtures shall accommodate banner attachment arms in Core and Transition zones.

DESIGN GUIDELINES

44. Light poles should be positioned at intersecting property lines and at least five feet from driveways.
45. Street lamps should be constructed of galvanized steel.

APPENDIX

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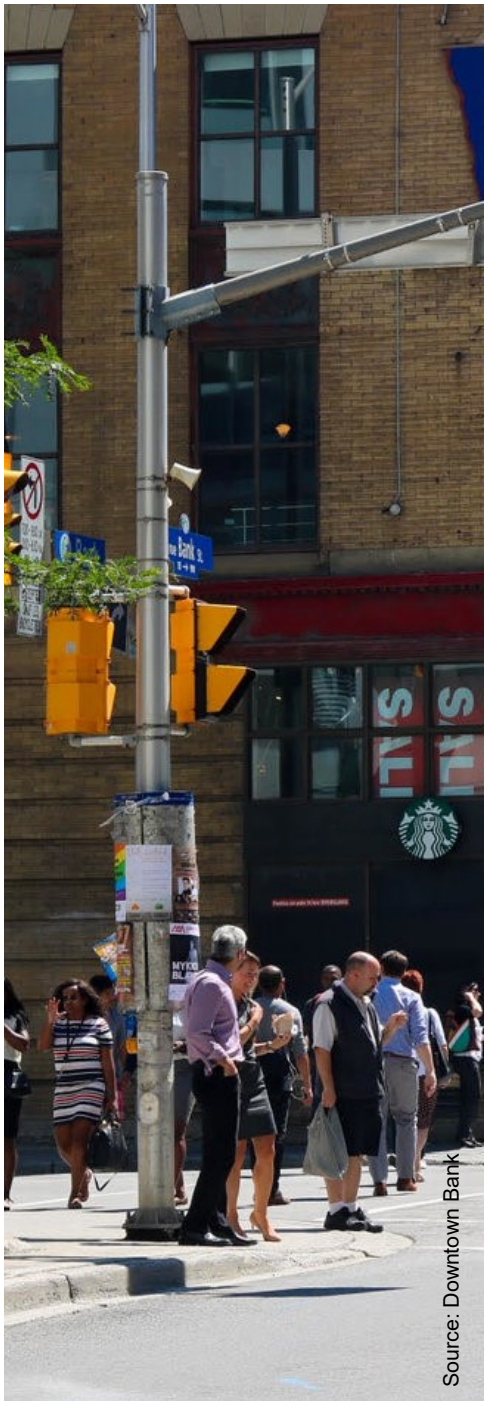
APPENDIX A

CULTURAL DESIGN / LANDSCAPING ELEMENTS

The architecture in the commercial area of Downtown Marina primarily reflects the mid- to late-20th Century period during which it was built. The architecture and site planning of the area is very suburban in nature and does not contain a planned baseline that would provide architectural clues to guide the design of a more urban Downtown.

In urban downtowns, buildings are located immediately adjacent to the right-of-way, with most architectural features facing the public street or streets, in the case of corner lots. The intent of the design standards and guidelines for the Downtown is to ensure certain features in the façade contribute to the visual interest of the building and help create a more transparent street wall, providing the ability to see into and out of the street-level floor of the building. Beyond these basic features, there are a variety of architectural elements that can be used to help provide identity to the building and contribute to the overall interest of the Downtown.



Bank Street in Ottawa.

Greektown in Detroit.

History is often an important source in providing visual clues for development of the downtown areas of cities. Many cities have ethnic pockets, reflecting the origins of residents of the City. Most people have visited a Chinatown, Little Italy, Koreatown, Greektown, Hmongtown, or Little Ethiopia located in larger cities in their travels. In smaller towns such as Marina, these pockets rarely develop, and yet the cultural makeup of the community is an important part of the City's identity.

The various cultures within Marina can be an important resource for architectural elements and design of buildings in the Downtown. During the development of the Downtown Vitalization Specific Plan, several interested citizens prepared a collection of examples of Asian architectural elements for inclusion in the appendix of the Plan. The City would welcome and encourage other interested ethnic groups to develop similar design element examples for inclusion in the document. The intent of this section is to be inclusive of the variety of cultures who have come together to make up the City of Marina. As this portion of the appendix is intended to be informational, proposed additions to this would be reviewed by Staff and approved for inclusion by the Planning Commission, who serve as the final arbiters of design review for the Downtown area.

Applicants are encouraged to consider the multicultural nature of Marina in the development of building and site design, form, and architectural details and features. According to the 2016 American Community Survey, 52% of the population self-identifies as white and 20% identify as some other race or two or more races (see **Table 1-1** on page 1-11). Additionally, 26% self-identify as Hispanic and 18% as Asian, while 7% self-identify as Black or African-American. Three percent self-identify as Pacific Islanders, with less than one percent as Native Americans. Developers are encouraged to reflect the cultural and ethnic diversity of Marina in new architecture, which will help to create a unique identity that will distinguish Marina from neighboring communities.

Koreatown in New York City.

Little Ethiopia in Los Angeles.

ASIAN DESIGN / LANDSCAPING ELEMENTS

An example of architecture that celebrates Marina's Asian community is the Junsay Oaks Apartments, which utilized an Asian-hybrid style (see **Figure xx-xx**). The City intends to encourage the character of buildings, styles, and landscaping that enhance the community's multicultural identity. This is evident in a General Plan goal that calls for "A City physically and visually distinguishable from the other communities of the Monterey Bay region, with a sense of place and identity in which residents can take pride" (Plan, 10).

The intent of these design elements is to have buildings incorporating subtle elements or modern interpretations of various Asian styles. **Table APX-1** includes common architectural elements and forms that may be integrated into building architecture and common open space.

These goals are compatible with a citizen-led effort to encourage Asian-hybrid styles that recognize the diversity of Marina. A petition signed by more than 350 residents and business owners called for "Asian design elements for buildings and landscaping...[that will] give visibility to the important cultural make-up of the City of Marina."

Included in this Appendix are images and text that illustrate the roofs and building forms, doors and windows, colors and materials, and elements of ornamentation and landscaping that illustrate the suggested design guidelines for developers to apply in residential, commercial, and mixed-use projects.

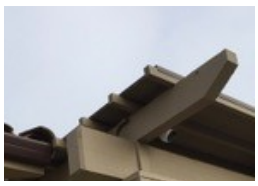
Top left, middle: Landscaping with traditional Asian themes.
Bottom left: Building incorporating subtle Asian elements of architecture: Multi-level roofs, horizontal lines, extended roof eaves, simple lines, red door, large windows.

Junsay Oaks Apartments.

Table APX-1. Common architectural elements and forms in Asian-themed architecture.

Roof/Building Forms/ Exterior Walls	Doors and Windows	Colors and Materials	Ornamentation/ Landscaping
Tiled roof	Prominent horizontal paned windows	Subdued color pallet	Rock gardens
Multiple roof planes including asymmetrical positioning	Paned windows in shoji style	Natural wood	Stone lanterns
Multiple roof pitches	Simple 90-degree geometric door ornamentation	Natural stone	Light fixtures favoring horizontal/vertical lines
Extended roof eaves	Red colored doors	Bamboo	Wooden Asian style trellis/arbors
Exposed rafter beams with angled ends	Circular forms	Natural materials and colors	Stone bridges, benches, stepping stones for accents
Black/brown horizontal/ vertical wood trim over white wall face	Expansive windows for sense of connectedness to nature	Synthetic materials that simulate natural materials	Modern/simple designed pagoda style gate
Emphasizing horizontal plane			
Emphasizing simple, clean lines			

ROOFS | BUILDING FORMS | EXTERIOR WALLS



Clockwise, from top left: black/brown horizontal/ vertical wood trim over white wall fence; emphasis on horizontal plane; multiple roof planes including asymmetrical positioning; extended roof eaves; exposed rafter beams with angled ends; tiled roof; emphasis on simple, clean lines; multiple roof pitches.

DOORS | WINDOWS

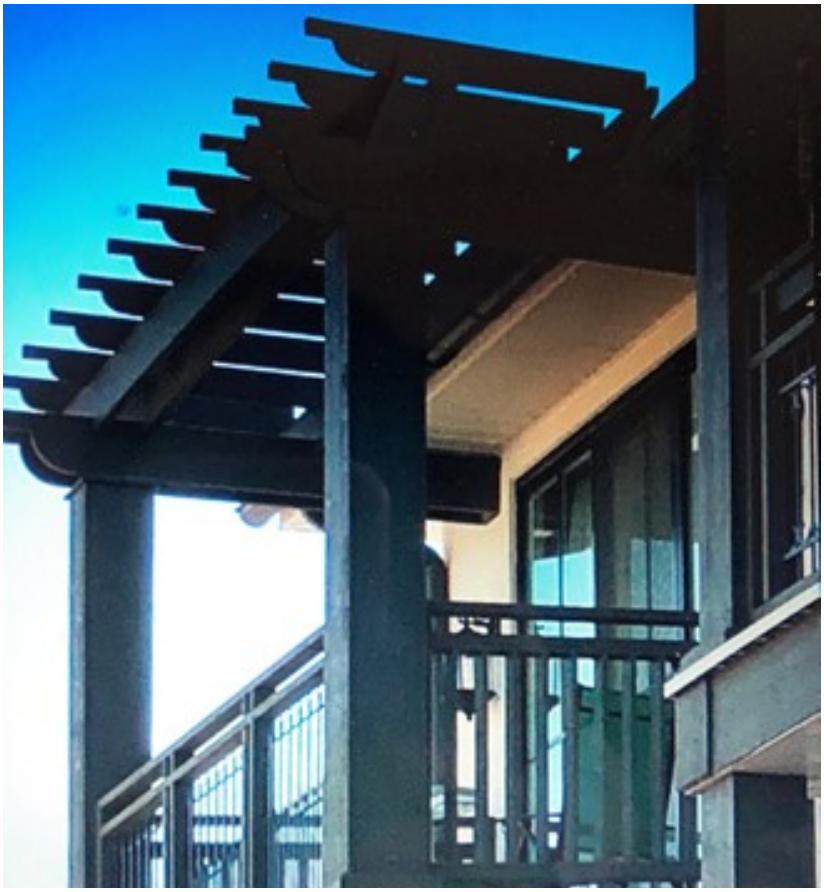
Clockwise, from top left: Paned windows in shoji style; prominent horizontal paned windows; circular forms; simple 90-degree geometric door ornamentation; red colored doors; expansive windows for sense of connectedness to nature.

COLORS | MATERIALS

Clockwise, from top left: Natural materials and colors; natural wood; natural stone; synthetic materials that simulate natural materials; subdued color pallet.

ORNAMENTATION | LANDSCAPING

Clockwise, from top left: Stone bench; trellis; pagoda-style gate; trellis; lanterns; fence; rock garden; simple landscaping; stepping stones; stone lanterns; rock garden.



APPENDIX B

For more information about trees suited for Marina's climate, visit the following websites:

>Marina Tree & Garden Club (http://www.marinatreeandgarden.org/treelist.html)

>Urban Forest Ecosystems Institute (https://selectree.calpoly.edu/)

>Friends of the Urban Forest (https://www.fuf.net/)

SUGGESTED TREES FOR MARINA

Trees are an important part of a healthy coastal community. A well-maintained urban forest improves street safety, adds character to neighborhoods and districts, provides habitat for birds and insects, improves drainage, reduces air pollution, and creates an inviting street environment. It is important to select ideal trees for Marina's climate, place trees at appropriate intervals along the street right-of-way, and prune trees to preserve comfortable pedestrian mobility and visibility for drivers in passing cars.

This appendix includes two lists of recommended street trees in Marina. The first list, "Recommended List of Preferred Trees", was compiled by City Planning Staff and includes the botanical and common names of trees, the mature height and spread of trees, the tolerance of trees to coastal winds and drought, and the suitability of trees for planting in park strips and near overhead utilities.

The second list, "Marina Tree List", was compiled by the Marina Tree & Garden Club, a group comprised of local volunteers. The Marina Tree & Garden Club has assisted with several significant public and private landscaping projects in Marina, including at the Marina Public Library. This tree list includes the botanical and common names of recommended trees. Online, links for each tree provide additional information, including the maximum height and spread of the tree, the lifespan of the tree, and a narrative description of the characteristics of the tree. A matrix rates the cost of installing and maintaining the tree; the resistance of each tree to drought, wind, frost, and disease; and the propensity of the tree's roots to upheave sidewalks and interfere with power lines. Finally, the list includes several images of each recommended tree, including local examples of trees with captions explaining their locations.

Top left: Red flower gum (*eucalyptus ficifolia*).
Bottom left: Brisbane box (*lophostemon confertus*).

RECOMMENDED LIST OF PREFERRED TREES

Tree Species: *Botanical name* Common name (1) (2) (3)	Mature Size (feet):		Tolerances: (5=Best)		Site Suitability: (5=Best)	
	Height	Spread	Coastal Winds	Drought	Street Tree	Overhead Utilities
Arbutus unedo (2) strawberry tree	20-35	20-35	4	3	5	4
Arbutus 'Marina' strawberry tree	20-35	20-35	2	4	3	3
Brachychiton poulneus bottle tree	30-50	25-30	2	4	3	2
Callistemon citrinus Lemon bottlebrush	20-25	15-20	1	1	2	5
Casuarina cunninghamiana river she-oak	40-70	30-50	4	4	3	1
Casuarina strict coast beefwood	20-35	20-30	5	5	5	3
Cinnamomum camphora camphor tree	30-50	40-50	3	4	4	2
Corynocarpus laevigata New Zealand laurel air	20-40	15-30	2	2	2	3
Cupressus Macrocarpa (2) Monterey cypress	50-80	40-70	5	5	5	1
Erobotrya japonica Loquat	15-30	20-30	3	3	3	4
Eucalyptus ficifolia red flower gum	30-40	20-30	5	4	5	3
Eucalyptus nicholii Willow-leaf pepermint	30-40	20-30	5	4	5	3
Eucalyptus polyanthemos Silver dollar gum	20-60	20-30	4	5	4	1
Eucalyptus viminalis Manna gum	100-150	30-40	4	5	3	1
Geijera Parvifiora Australian willow	25-30	15-20	1	2	4	4
Ginko biloba maidenhair autumn gold	35-50	25-40	1	2	2	1
Lauris nobilis Grecian laurel	12-40	15-30	3	3	4	3
Leptospermum laevigatum Australian tea tree	15-30	15-25	5	5	4	4
Liquidambar styracifiua American sweet gum	30-60	25-40	4	4	4	1

Tree Species: *Botanical name* Common name (1) (2) (3)	Mature Size (feet):		Tolerances: (5=Best)		Site Suitability: (5=Best)	
	Height	Spread	Coastal Winds	Drought	Street Tree	Overhead Utilities
Lophostemon Conifertus Brisbane box	35-60	25	5	5	5	1
Lyonothamnue floribuncus Catalina ironwood	30-60	15-20	5	5	5	1
Malus Floribunda Japan flower crabapple	20-30	15-20	1	2	4	4
Maytenus Boaria green showers'	30-50	15-20	1	1	1	2
Melaleuca quinquenervia cajeput tree	20-40	20-35	2	4	4	3
Melaleuca styphelioides rigid leaf paperbark	20-40	20-35	1	2	2	3
Metrosderos excelsus New Zealand Xmas	20-30	20-30	2	2	3	4
Olea europaea Olive	25-30	25-30	4	5	5	4
Pinus canariensis Canary Island pine	60-80	20-40	1	2	1	1
Pinus halepensis Allepo pine	30-60	20-35	2	4	3	1
Pinus pinea Italian stone pine	30-60	30-50	2	3	2	1
Pinus radiate (2) Monterey pine	60-90	20-40	4	3	3	1
Pinus sabiniana (3) foothill pine	40-50	20-40	1	2	2	2
Pinus Torreyana (3) torrey pine	40-60	30-50	2	2	2	1
Pittosporum crassifolium none	15-25	15-25	5	4	4	5
Pittosporum undulatum Victorian box	30-40	20-40	1	1	2	3
Platanus Acerifolia Sycamore – London Plane	40-80	25-40	1	2	2	1
Podocarpus gracilior African fern pine	30-50	20-35	1	2	1	2
Prunus cerasifolia flowering plum	20-30	15-20	1	3	4	4

Tree Species: *Botanical name* Common name (1) (2) (3)	Mature Size (feet):		Tolerances: (5=Best)		Site Suitability: (5=Best)	
	Height	Spread	Coastal Winds	Drought	Street Tree	Overhead Utilities
Prunus caroliniana Carolina laurel cherry	20-40	20-30	1	1	1	3
Prunus ilicifolia (3) holly leaf cherry	20-30	20-30	1	1	2	4
Pyrus calleryana ornamental flower pear	25-50	25-40	1	1	1	2
Quercus agrifolia (1) California coast live oak	30-40	30-40	2	5	5	3
Quercus Ilex holly oak	30-50	40-50	2	4	3	2
Quercus suber cork oak	30-50	40-50	1	2	1	2
Rhus lancea African zumac	15-25	15-25	3	3	4	5
Robinia ambiqua locust	40-50	15-20	3	2	2	2
Tristania laurina elegant Brisbane box	30-60	20-40	5	5	5	2
Schinus Terebinthifolius Brazilian pepper tree	20-30	20-30	3	3	4	4

Footnotes:

1) Native to Marina
2) Native to Monterey Peninsula
3) Native to California
4) Tree list is not all inclusive
5) More detailed tree information is available at the Planning Division

MARINA TREE & GARDEN CLUB—TREE LIST

Marina Tree List - tree species that grow well in Marina

***Asterisk denotes good choice for replacing Myoporum infected by Myoporum thrips.**

For more info and a single listing of suggested replacement trees for Myoporum - click here

Acacia baileyana 'Purpurea'	Purple Acacia
Acacia salicina	Willow Acacia*
Arbutus "Marina"	Strawberry tree*
Callistemon citrinus	Lemon Bottlebrush
Casaurina stricta	Coast Beefwood
Ceanothus 'Ray Hartman'	California Wild Lilac - **BUSH/SHRUB**
Cinnamomum camphora	Camphor Tree
Corynocarpus laevigatus	New Zealand Laurel*
Cotinus obovata	Smoke Tree - **BUSH/SHRUB**
Cupaniopsis anacardioides	Carrot Wood*
Cupressus macrocarpa	Monterey Cypress
Eriobotrya japonica	Loquat
Eucalyptus ficifolia	Red Flowering Gum
Eucalyptus nicholii	Willow-leaved Peppermint
Eucalyptus polyanthemos	Silver Dollar Eucalyptus
Geijera parvifiora	Australian Willow*
Hakea suaveolens	Sweet Hakea - **BUSH/SHRUB**
Heteromeles arbutifolia	Toyon*
Ilex aquifolium	English Holly
Laurus 'Saratoga'	Saratoga Bay Laurel*
Leptospermum laevigatum	Australian Tea Tree*
Lophostemon confertus	Brisbane Box*
Lyonothamnus floribundus	Catalina Ironwood*
Maytenus boaria	Mayten Tree
Melaleuca ericifolia	Heath Melaleuca*
Melaleuca linariifolia	Flaxleaf Paperbark*
Melaleuca nesophila	Pink Melaleuca - **BUSH/SHRUB**
Melaleuca quinquenervia (aka M. leucadendra)	Cajeput Tree*
Melaleuca styphelioides	Black Tea Tree*
Metrosideros excelsus**	New Zealand Christmas Tree
Myoporum laetum "Carsonii"* NOT RECOMMENDED	Lollypop Tree - *please see write up*
Olea europaea	Olive
Pinus canariensus	Canary Island Pine
Pinus radiate	Monterey Pine
Pittosporum crassifolium	Karo Tree*

Podocarpus gracilior	Fern Pine
Prunus cerasifera	Flowering plum
Quercus agrifolia	Coast Live Oak*
Rhamnus alaternus	Italian Buckthorn
Rhus lancea	African Sumac*
Schinus terebinthifolius	Brazillian Pepper tree
Tristaniopsis laurina 'Elegant'	Small-Leaf Tristania*

Note: Many, but not all, make good street trees. Some trees are especially prone to lifting concrete slabs. Monterey Cypress trees grow fast and big and are expensive to trim when they mature. Further information on specific tree species can be found by clicking on tree name links.

****UPDATE** asterisk denote species that showed severe frost damage in the 2007 freeze.

References

Friends of the Urban Forest, Trees for San Francisco:
A Guide to Street-Tree Planting and Care, FUF. 1994
www.fuf.net

CalPoly Select a Tree
www.selectree.calpoly.edu/

Sunset Western Garden Book, Menlo Park, CA, 2001
www.sunset.com

Mixed-use Nodes

Mixed-use nodes are designed for multistory mixed-use buildings with retail and commercial space on the ground floor and residential uses on the floors above. Mixed-use nodes help to ensure a vibrant, urban atmosphere is associated with Downtown Marina. Single-use residential buildings may be built on site so long as vertical mixed-use buildings are constructed at the street edge.

RESIDENTIAL DENSITY

Units/acre (max)	70

LOT COVERAGE (MIN—MAX)

Lot coverage	70%

% OF FRONT FAÇADE WITHIN MINIMUM FRONT SETBACK

Reservation Rd/Del Monte Blvd	75%
Other Streets	50%

GROUND FLOOR COMMERCIAL

All street-facing buildings shall include commercial uses on the ground floor. Residential uses on the ground floor are permitted for buildings not facing the street.

BUILDING SETBACKS (MIN—MAX)

Front	0’
Side (min.)	0’
Side common wall	0’
Rear (min.)	10’

BUILDING HEIGHTS (MAX)

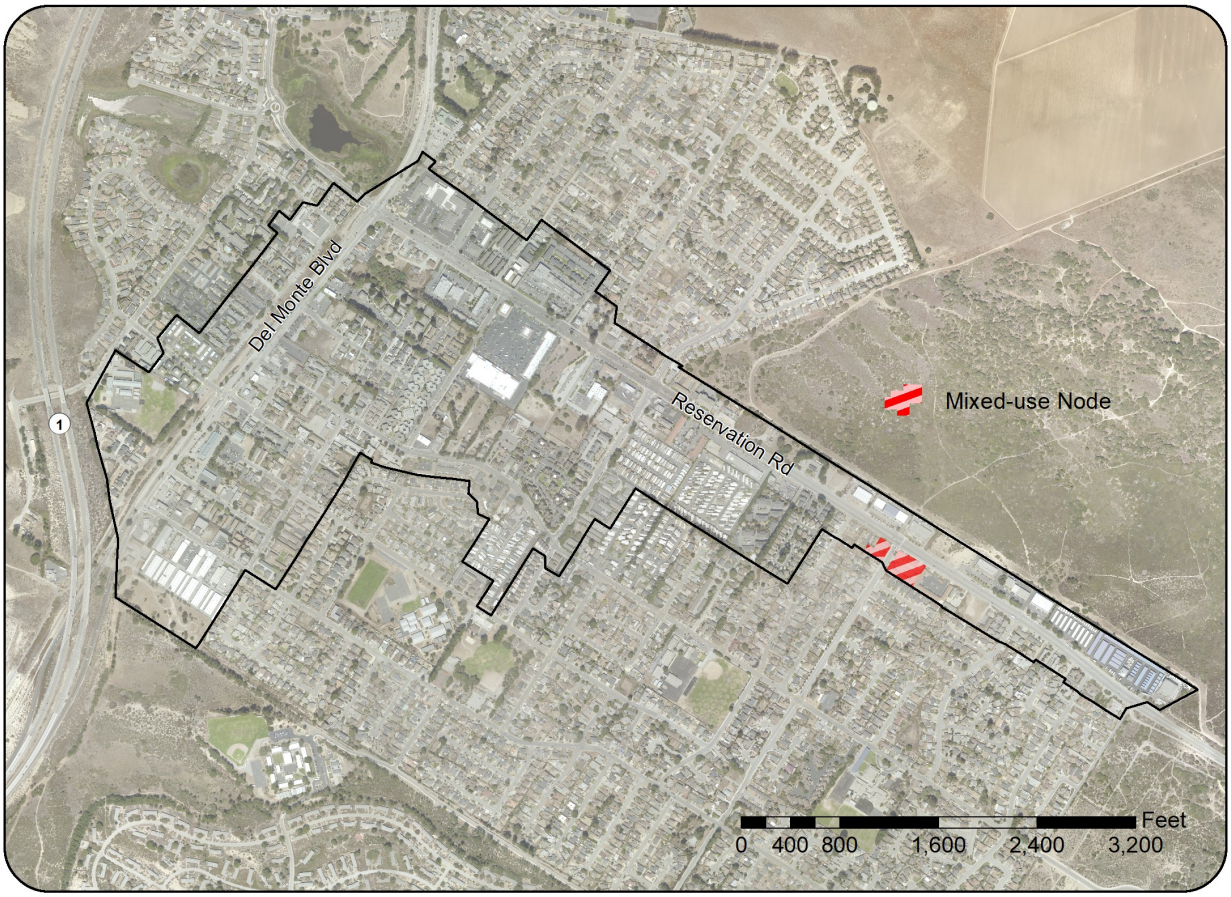
All buildings	36’ or three stories, whichever is less

GROUND FLOOR HEIGHT (MIN)

Commercial Ground Floor Height	12’

RESIDENTIAL DESIGN STANDARDS

Residential projects shall comply with the design standards in Chapter xx.xx.



Location of mixed-use node.

FENESTRATION (MIN)

Ground floor frontage	60%
Upper floors frontage	20%
Residential—all floors	20%

LAND SET ASIDES

While no overall landscaped percentage is required, appropriately placed paseos, plazas, courtyards, and alcoves are encouraged. Properties in the Core must adhere to standards in the City landscape and parking ordinances.

PARKING

Location	Rear
Rear parking setback	5’

Residential

Studio/one bedroom units (min—max)	0.5—1.5 stalls/unit
Two bedroom or larger units (min—max)	0.5—2 stalls/unit

Commercial

Retail	1 stall per 600 GSF

Appendix BIO

Biological Resources Assessment

Downtown Vitalization Specific Plan

Biological Resources Assessment

prepared by

City of Marina
Community Development Department
209 Cypress Avenue
Marina, California 93933
Contact: Fred Aegerter, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.
437 Figueroa Street, Suite 203
Monterey, California 93940

July 2019

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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July 2019

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Executive Summary

This Biological Resources Assessment was prepared to support environmental review of the City of Marina's Downtown Vitalization Specific Plan (Specific Plan). The Specific Plan was developed to provide guidance for future development within the City's downtown area. The intent of the Specific Plan is to provide opportunities for vitalization and enhancement within downtown Marina.

Six vegetation communities and/or land cover types were identified within the Specific Plan: developed, Ice plant mat, ruderal, sand mat manzanita (*Arctostaphylos pumila*), annual grassland, and willow riparian.

Suitable habitat is present for 14 special status plant species. Of the 14 species, five federal or state listed plant species have the potential to occur within the project area: Monterey spineflower (*Chorizanthe pungens* var. *pungens*), and Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*), robust spineflower (*Chorizanthe robusta* var. *robusta*), seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*), and Yadon's rein orchid (*Piperia yadonii*). Of the remaining 9 non-listed species, three were observed in the Specific Plan: sandmat manzanita (*Arctostaphylos pumila*), Monterey cypress (*Hesperocyparis macrocarpa*), and Monterey Pine (*Pinus radiata*). Monterey cypress and Monterey pine are not naturally occurring however, and are largely contained with landscaped areas The remaining six non-listed species include Fort Ord spineflower (*Chorizanthe minutiflora*), Eastwood's goldenbush (*Ericameria fasciculata*), sand-loving wallflower (*Erysimum ammophilum*), Kellogg's horkelia (*Horkelia cuneata* var. *sericea*), Point Reyes horkelia (*Horkelia marinensis*), and northern curly-leaved monardella (*Monardella sinuata* ssp. *Nigrescens*).

Seven special status wildlife species have the potential to occur within the Specific Plan area: Smith's blue butterfly (*Euphilotes enoptes smithi*), tricolored blackbird (*Agelaius tricolor*), northern California legless lizard (*Anniella pulchra*), coast horned lizard (*Phrynosoma blainvillii*), burrowing owl (*Athene cunicularia*), white-tailed kite (*Elanus leucurus*) and Monterey shrew (*Sorex ornatus salarius*).

Potentially jurisdictional waters in the Specific Plan area include two detention basins, riparian habitat at Locke-Paddon Park, and a pond on private property. These features are potentially under the jurisdiction of the USACE, RWQCB, and or CDFW.

Eight mitigation measures have been proposed to reduce impacts to biological resources to less than significant under the California Environmental Quality Act (CEQA).

1 Introduction

Rincon Consultants, Inc. (Rincon) has prepared this Biological Resources Assessment (BRA) to document existing conditions, summarize previous biological resource reports and studies, and provide a basis for evaluation of potential impacts to special status and sensitive biological resources from the implementation of the Specific Plan located in the City of Marina, California (City). This BRA has been prepared to support CEQA environmental review of the Specific Plan. The Specific Plan Environmental Impact Report will be a programmatic environmental review, and this BRA provides programmatic-level analysis, with mitigation measures designed to be implemented at the project-level, when individual projects are proposed for development.

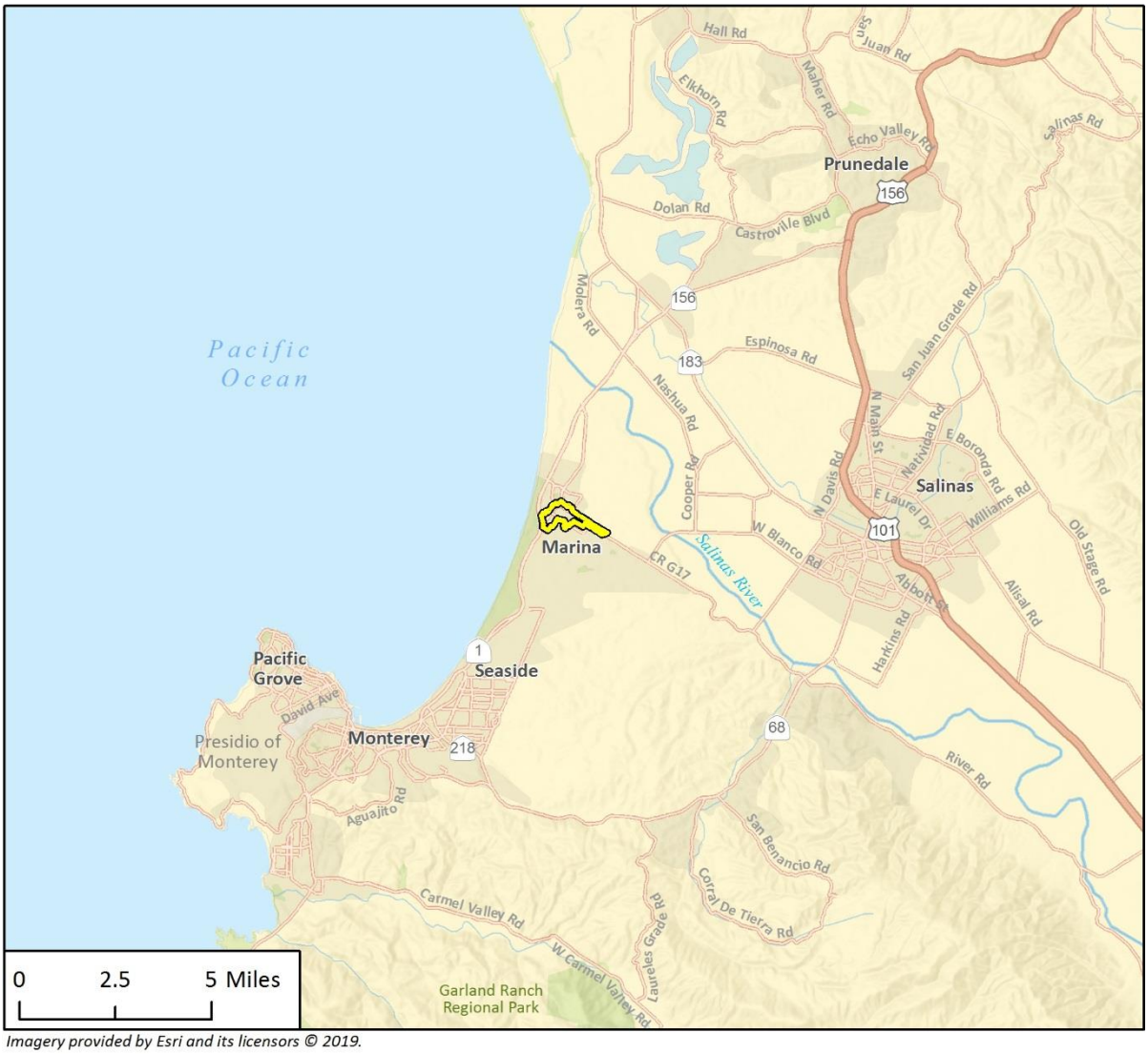
1.1 Project Location

The City of Marina is located in Monterey County, adjacent to Monterey Bay along State Route 1 (SR1) between the cities of Monterey and Santa Cruz (Figure 1). The Specific Plan area encompasses approximately 322 acres near the center of the City of Marina. The Specific Plan is depicted within the Marina, California United States Geological Survey (USGS) 7.5-minute topographic quadrangle, and is generally bounded by development to the north and south, SR1 to the west, and open space to the east (Figure 2). In the greater vicinity, to the west is the Pacific Ocean, to the north are agricultural lands, to the east is the Marina Airport, and to the south is the former Fort Ord.

1.2 Project Description

The Specific Plan implements the goals and policies of the City of Marina General Plan and provides specific direction to reflect conditions unique to the Downtown area. The Specific Plan includes land use designations, access requirements and standards, infrastructure location and sizing, financing, and development standards. The maximum buildout would increase residential, retail, and office space in the downtown area, and would focus on mixed-use and retail along Reservation Road, with multi-family residential uses in the surrounding area. The Specific Plan also provides road and access improvements for pedestrians, cyclists, and motorists.

Figure 1 Regional Location Map



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Specific Plan Area

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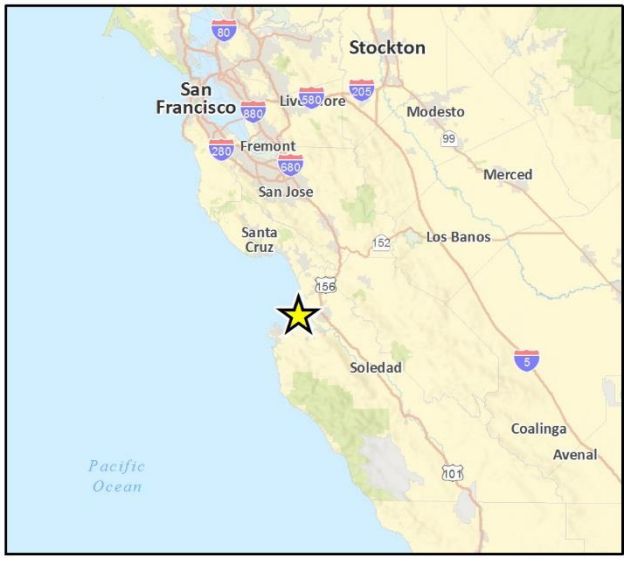


Figure 2 Project Area Map

Imagery provided by Esri and its licensors © 2019.

Fig 2 Project Location

2 Methodology

2.1 Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special status plant and animal species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by Federal, State, and local authorities. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the City of Marina).

2.1.1 Definition of Special Status Species

For the purposes of this report, special status species include:

- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA); species that are under review may be included if there is a reasonable expectation of listing within the life of the project
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA)
- Species designated as Fully Protected, Species of Special Concern, or Watch List by the California Department of Fish and Wildlife (CDFW)
- Species designated as sensitive by the U.S. Forest Service or Bureau of Land Management, if the project would affect lands administered by these agencies
- Species designated as locally important by the Local Agency and/or otherwise protected through ordinance or local policy

2.1.2 Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes (Appendix A):

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- City of Marina Municipal Code

The Specific Plan area is located outside of the coastal zone, and is therefore not subject to the regulations contained in the Marina Local Coastal Land Use Plan (LCLUP).

2.1.3 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

a) *Have substantial adverse effects, 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 Wildlife or U.S. Fish and Wildlife Service.*

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

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.*

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

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.*

2.2 Literature Review

Rincon reviewed literature for baseline information on biological resources potentially occurring In the Specific Plan and vicinity. The purpose of this review was to identify biological resources that could be affected by development under the Specific Plan goals and policies. The literature review included information available in peer reviewed journals, standard reference materials, and online databases (e.g., Holland, 1986; Baldwin et al., 2012, Sawyer et al., 2009; Stebbins, 2003; Sibley, 2016; Sullivan et al., 2009).

Rincon also conducted a review of relevant databases of sensitive resource occurrences from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB) (CDFW, 2019a) and Biogeographic Information and Observation System (CDFW, 2019b); the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS, 2019a), National Wetlands Inventory Wetlands Mapper (USFWS, 2019b), and Information for Planning and Consultation (IPaC) System (USFWS, 2019c); the United States Department of Agriculture, Natural Resources Conservation Service (USDA, NRCS) Web Soil Survey (USDA, NRCS, 2019); and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS, 2019). Other sources of information about the site included aerial photographs, topographic maps, geologic maps, climatic data, and project plans.

Queries of the CDFW CNDDB and the CNPS Inventory of Rare and Endangered Plants of California included the *Marina*, California USGS 7.5-minute topographic quadrangles, and surrounding six quadrangles; *Spreckels, Prunedale, Salinas, Monterey, Seaside,* and *Moss Landing*. A list of federal

species known to occur in Monterey County was acquired from the USFWS IPaC System. The results of these scientific database queries were compiled into a table that is presented as Appendix A.

2.3 Field Reconnaissance Survey

A biological resource reconnaissance survey was conducted to assess the habitat suitability for potential special status species, map the existing vegetation, map any evident sensitive biological resources currently onsite, note the presence of potential jurisdictional waters or wetlands, document any wildlife connectivity/movement features, and record all observations of plant and wildlife species within the Specific Plan area. The focus of this survey was to asses undeveloped areas identified through a review of areal imagery as possibly contain sensitive biological resources, natural habitat, or habitat that is potentially suitable for special status species. Most of the survey area could be assessed from the public right of way. Meandering transects were walked throughout vacant lots that were accessible from the public right of way. A wind shield survey was conducted throughout the rest of the developed area to confirm the desk top evaluation of aerial imagery. Rincon Biologist Samantha Kehr conducted the site visit on June 17, 2019, between the hours of 2:00pm and 4:00pm. Conditions onsite were 65°F and clear with a slight breeze. Site photos from the survey are included as Appendix B.

3 Existing Conditions

3.1 Physical Characteristics

The Specific Plan areas is located at the southern end of Monterey Bay, within the Central California Coast Ecoregion. It is bordered to the west by the Pacific Ocean and to the east by Fort Ord National Monument. The climate in this region is generally mild with an annual minimum temperature of 39.9°F, a maximum average temperature of 67.9°F, and an annual precipitation of 14.89 inches (WRCC 2019). Elevation within the City ranges from approximately 19 feet mean sea level (msl) near Locke-Paddon Park, to 64 feet above msl along the Specific Plan area's eastern border along Reservation Road.

The Specific Plan area covers 336 acres comprised primarily of existing residential development and commercial and industrial development. A small component of the Specific Plan area is comprised of vacant lots and small patches of open space, primarily within existing development. As such the Specific Plan area is largely developed, with very little natural habitat. What natural or semi-natural habitat is present is limited to the eastern edge of the Specific Plan area along reservation Road, the eastern edge of Locke-Paddon Park, and south of development at Reindollar Avenue between SR1 and George Patton Senior Elementary School.

3.1.1 Watershed and Drainages

The Specific Plan is located in the Monterey Bay Subwatershed (HUC12 180600150305), south of the Salinas River watershed. According to the National Wetland Inventory (NWI) (USFWS, 2019b), known jurisdictional wetlands and waters within the Specific Plan area are limited to the freshwater wetlands at Locke-Paddon Park in the north west corner. No other wetlands or waters are mapped in the Specific Plan area.

3.1.2 Soils

Based on the most recent Natural Resources Conservation Service (NRCS) soil survey for Monterey County (USDA 2019), the Specific Plan contains one soil map unit:

Baywood Sand, 2 to 15 Percent Slopes

Baywood sand is somewhat excessively drained soils derived from stabilized sandy eolian sands with 2 to 15 percent slopes. This soil map unit has 8 centimeters (cm) of available water storage. This soil map unit typically lacks hydric soils.

3.2 Vegetation and Other Land Cover

Vegetation community mapping for the Specific Plan is based on aerial imagery and reconnaissance surveys conducted on June 17, 2019. Vegetation classification was based on *A Manual of California Vegetation, Second Edition* (Sawyer et al., 2009), *Preliminary Descriptions of the Terrestrial Communities of California* (Holland, 1986), and *A Guide to Wildlife Habitats of California* (Mayer and

Laudenslayer, 1988); however, classifications have been modified as needed to accurately describe the existing habitats observed on-site.

Vegetation composition and structure within the Specific Plan is generally limited to landscape and ruderal vegetation types, with developed being the dominate land cover type in the Specific Plan (Figure 3).

Developed

This land cover type is not described by Holland (1986), Sawyer et al. (2009), or Mayer and Laudenslayer (1988). It includes all areas that have been developed, including paved roads, sidewalks, parking lots, buildings, and basketball courts. Vegetation in this land cover type consists of primarily non-native ornamental plantings in lawns, park strips, parking lots, commercial parks, baseball fields, etc. Tree species found in this community are highly variable and typically non-native or not occurring as part of a natural woodland. Species observed within this land cover type in the Specific Plan are primarily Monterey cypress (*Hesperocyparis macrocarpa*) and eucalyptus (*Eucalyptus* sp.), with some Monterey pine (*Pinus radiata*). Bushes and shrubs in this community are variable by occurrence and may include coyote brush (*Baccharis pilularis*), California poppy (*Eschscholzia californica*), sweet alyssum (*Lobularia maritima*), and juniper (*Juniperus* spp.). A drought tolerant demonstration garden was also observed within the developed area of the Specific Plan, planted at the Marina Coast water Districts Well site 11, on Reservation Road west of Salinas Avenue. Native and drought tolerant species were planted at the site in 2002 by the Marina Tree and Garden Club, including Pajaro manzanita (*Arctostaphylos pajaroensis*), Hooker's manzanita (*Arctostaphylos hookerI*), matilija poppy (*Romneya coulterI*), Red Monkeyflower (*Diplacus parvifolius*), Coast Buckwheat (*Eriogonum fasciculatum*), and statice (*Limonium sinuatum*).

Ice Plant Mat

Ice plant species (*Carpobrotus edulis*, *C. chilensis*) are non-native invasive species, originally planted in the 1940s and 1950s for landscaping and dune stabilization (USACE 1992). These perennial ground-hugging succulents form large monospecific mats (Sawyer et al., 2009). *Carpobrotus edulis* is an invasive species with a Cal ICP rating of "High" for its invasive tendencies. This hardy species spreads readily from landscaped areas into dune and scrub habitats, out competing native species for space, nutrients, and moisture.

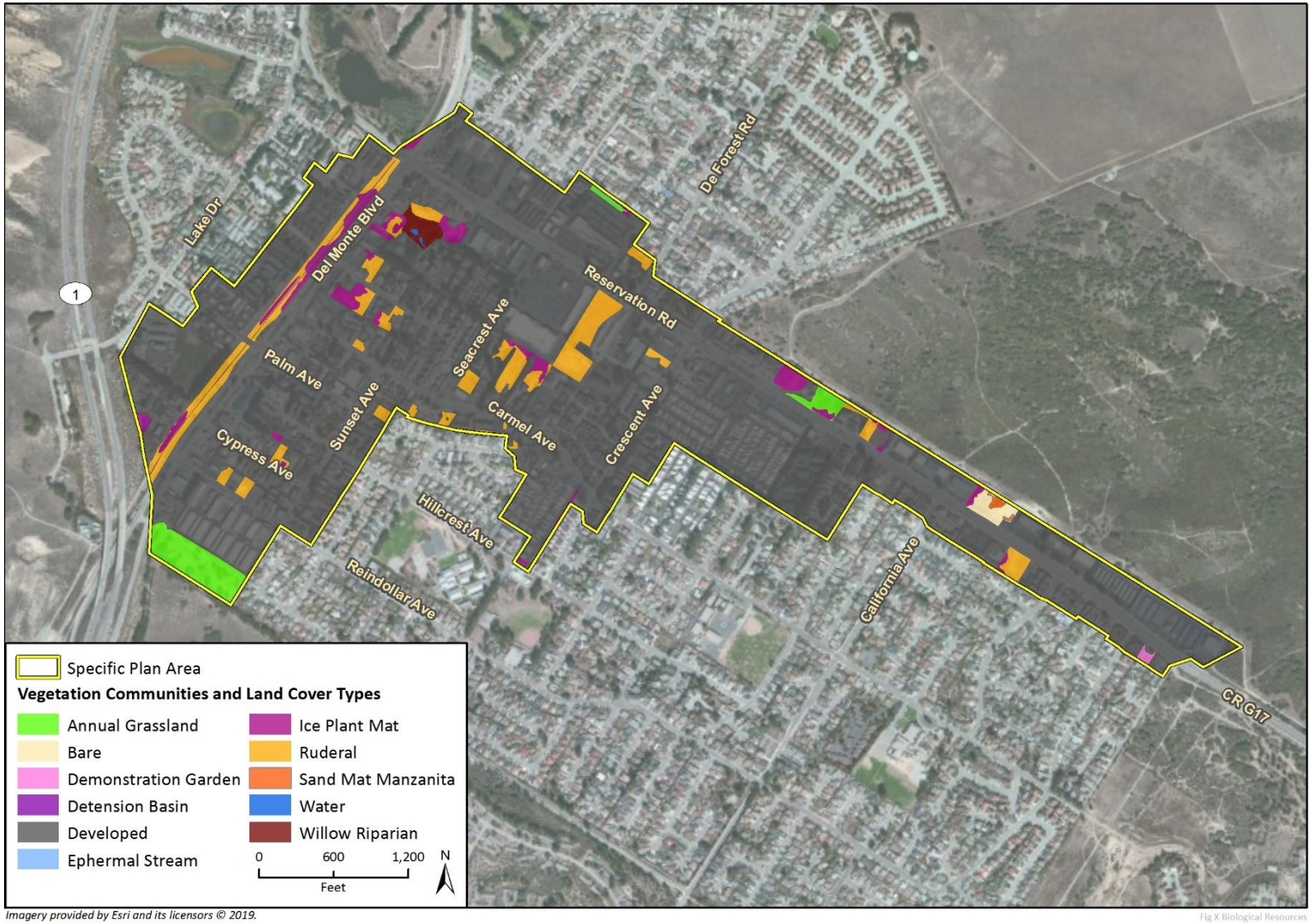
Ruderal

Ruderal vegetation communities are also not described by Holland (1986), Sawyer et al. (2009), or Mayer and Laudenslayer (1988). This vegetation community is highly variable and contains a large component of bare soil or sand. Species found in this community are typical of disturbed areas between development, and are largely non-native, invasive, or ornamental, including wild oats (*Avena* ssp.), ripgut brome (*Bromus diandrus*), sweet alyssum, statice, and ice plant.

Sandmat Manzanita

A small patch of sandmat manzanita (*Arctostaphylos pumila*) was observed on an open parcel adjacent to the ranch to the north of Reservation Road. Other species observed in this area include black sage (*Salvia mellifera*), manzanita (*Arctostaphylos* sp.), and coast live oak (*Quercus agrifolia*).

Figure 3 Vegetation Communities and Land Cover Types



Annual Grassland

This community is typically comprised of grasses and forbs introduced during and since the Spanish colonial period. While some invasive plants may have been first introduced during the 16th century as Spanish explorers came to California's coast, it is likely that the majority of invasive plants were introduced after people of Old World descent began to settle in California. Non-native species are dominant, including annual grasses such as wild oats, ripgut brome, rattail fescue (*Festuca myuros*), Italian rye (*Festuca perennis*), and foxtail barley (*Hordeum murinum* var. *leporinum*).

Willow Riparian

This community occurs along the margins of Locke-Paddon Park and around a perennial pond on private property south of Styles Court and is dominated by arroyo willow (*Salix lasiolepis*) in tree form. Other trees in this community include Monterey cypress and occasional coast live oak trees. In the understory at Locke-Paddon Park California blackberry and coyote brush are present.

3.3 General Wildlife

Wildlife observed in the Specific Plan is consistent with urban disturbance tolerant species, including American crow (*Corvus brachyrhynchos*), anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), red-shouldered hawk (*Buteo lineatus*), and red-tailed hawk (*Buteo jamaicensis*). Parks and landscaped trees also provide habitat for migratory birds such as California towhee (*Melozone crissalis*), bushtit (*Psaltriparus minimus*), western scrub jay (*Aphelocoma californica*), and chestnut-backed chickadee (*Poecile rufescens*).

4 Sensitive Biological Resources

Local, state, and federal agencies regulate special status species and other sensitive biological resources and require an assessment of their presence or potential presence to be conducted on-site prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed on the project site, and evaluates the potential for the project site to support additional sensitive biological resources. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, species occurrence records from other sites in the vicinity of the survey area, previous reports for the project site, and the results of surveys of the project site. The potential for each special status species to occur in the study area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site. Protocol surveys (if conducted) did not detect species.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

4.1 Special Status Species

4.1.1 Special Status Plant Species

Based on the database and literature review, 53 special status plants species were documented within the *Marina*, California USGS 7.5-minute topographic quadrangle (within which the Specific Plan area is located) and the six surrounding quadrangles. Thirty-nine (39) of these could be eliminated based on the absence of suitable habitat, lack of suitable soils, and existing development in the Specific Plan (see Appendix D for a species by species evaluation). Of the remaining 14 species, three (3) Federal and/or State listed plant species and three (3) non-listed species with a rare plant rank of 1B to 2B have a low potential to occur in the Specific Plan area. Eight (8) special status plant species are known to occur, or have at least a moderate potential to occur within the vicinity of the Specific Plan area.

Federal and/or State Listed Species

- Monterey spineflower (*Chorizanthe pungens* var. *pungens*)
- Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*)
- Robust spineflower (*Chorizanthe robusta* var. *robusta*)
- Seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*)
- Yadon's rein orchid (*Piperia yadonii*)

One special status plant species with a CRPR rank of 1B.2, sandmat manzanita (*Arctostaphylos pumila*), was observed in the Specific Plan and is considered present.

Two rare plants were observed in landscaping, Monterey cypress (*Hesperocyparis macrocarpa*) 1B.2, and Monterey Pine (*Pinus radiata*) 1B.1; however, these individuals occur as isolated remnants or occur as landscaping. Both species have special status only when they occur as part of a natural stand or woodland. They are protected by the City of Marina's municipal code however, which requires a permit for the removal of any tree with a diameter at breast height (DBH) of ten inches or more. No Federal or State listed plants were observed within the Specific Plan area.

The remaining six non-listed species include:

- Fort Ord spineflower (*Chorizanthe minutiflora*)
- Eastwood's goldenbush (Ericameria fasciculata)
- Sand-loving wallflower (*Erysimum ammophilum*)
- Kellogg's horkelia (*Horkelia cuneata* var. *sericea*)
- Point Reyes horkelia (*Horkelia marinensis*)
- Northern curly-leaved monardella (*Monardella sinuata* ssp. *Nigrescens*)

The limited portions of the Specific Plan area where natural vegetation communities occur generally provide marginal habitat due to development, landscaping, and the presence of non-native invasive species. Bare patches in ice plant mats and lawns provide sandy open habitat for dune species such as seaside bird's-beak, Monterey spineflower, and Monterey gilia. Remnant patches of chaparral species north of Reservation Road may also contain robust spineflower, and Yadon's rein-orchid.

4.1.2 Special Status Animal Species

Based on the database and literature review, 33 special status wildlife species were documented within the *Marina*, California USGS 7.5-minute topographic quadrangle (within which the Specific Plan area is located) and the six surrounding quadrangles. Twenty-six (26) of these could be eliminated based on the absence of suitable habitat (e.g., aquatic habitat, specific vegetation communities) and existing development in the Specific Plan area (see Appendix D). One (1) non-listed special status species was determined to have a low potential to occur in the Specific Plan area. The remaining six (6) species have low to high potential to occur based on the potential presence of suitable habitat and known occurrences

Species with potential to occur within the Specific Plan area include:

- Smith's blue butterfly (*Euphilotes enoptes smithi*) – Federally Endangered
- Tricolored blackbird (*Agelaius tricolor*) –State Threatened
- Northern California legless lizard (*Anniella pulchra*) – SSC

- Coast horned lizard (*Phrynosoma blainvillii*) – SSC
- Burrowing owl (*Athene cunicularia*) - SSC
- White-tailed kite (*Elanus leucurus*) - FP
- Monterey shrew (*Sorex ornatus salarius*) – SSC

Because these species have very specific habitat requirements, their potential to occur within the Specific Plan is restricted to undeveloped habitats and ruderal or landscaped areas adjacent to undeveloped habitat, particularly for small terrestrial species with limited mobility and small home ranges such as coast horned lizard, northern California legless lizard, and Monterey shrew. Smith's blue butterfly is dependent on its host plant coast buckheat (*Eriogonum latifolium*) and sea cliff buckwheat (*Eriogonum parvifolium*), which may occur in sandmat manzanita communities or on undeveloped areas north of Reservation Road. Suitable habitat for tricolored blackbird within the Specific Plan is restricted to willow riparian habitat at Locke-Paddon Park and the pond on private property. Burrowing owl is a highly mobile species which nests and roosts in California ground squirrel burrows. This species may utilize ruderal and grassland habitats on vacant lots within the Specific Plan, however this species also requires a sufficient prey base of insects, therefore smaller vacant lots and ruderal areas are likely unsuitable for burrowing owl.

4.1.3 Other Protected Species

Migratory birds protected by California Fish and Game Code were also observed in the Specific Plan. Trees, shrubs, buildings and other structures in the Specific Plan provide suitable nesting habitat for many migratory birds commonly found in developed areas.

4.2 Sensitive Plant Communities and Critical Habitats

Sensitive natural communities are vegetation types, associations, or sub-associations that support concentrations of special status plant and/or wildlife species, are of relatively limited distribution, and/or are of particular value to wildlife. According to the CDFW Vegetation Program, Alliances with State ranks of S1-S3 are considered to be imperiled, and thus, potentially of special concern. Natural communities with these ranks are generally addressed during CEQA environmental review with compensatory mitigation prescribed for impacts as applicable.

Sensitive natural communities documented within five miles of the Specific Plan area include:

- Central dune scrub
- Central maritime chaparral
- Valley needlegrass grassland

Sandmat manzanita (G1 S1) is considered a sensitive natural community by CDFW, however the sandmat manzanita observed in the Specific Plan is largely isolated from adjacent higher quality habitats and is highly disturbed.

4.3 Jurisdictional Waters and Wetlands

The Specific Plan area is located within the Salinas River watershed, which covers approximately 4,600 square miles from San Luis Obispo to Monterey County. No CDFW or USACE jurisdictional wetlands or waters are present in the Specific Plan area. Two small isolated stormwater retention

basins were observed north of Cypress Avenue and southwest of San Pablo Court, which appear to be properly maintained (Figure 3). These stormwater features drain water from the street and surrounding development, no “bed,” “Bank,” “channel,” or riparian vegetation was observed at either basin. They are therefore not likely to be USACE or CDFW jurisdictional, but would potentially be considered a RWQCB jurisdictional stormwater feature under the Porter-Cologne Water Quality Control Act, which regulates discharge to waters of the State, including discharge of stormwater.

The edge of riparian vegetation at Locke-Paddon Park also falls within the Specific Plan and is likely to be jurisdictional under CDFW. A “pond” observed on aerial imagery on private property may also be USACE, RWQCB, or CDFW jurisdictional. Historical topographic maps of the area depict a wetland in this area prior to the surrounding development (USGS 2019). Additionally, a stormwater drainage runs above ground for approximately 325 feet south of Viking Lane.

4.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations or those populations that are at risk of becoming isolated. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time. Wildlife movement corridors can be both large and small scale.

The California Essential Habitat Connectivity Project commissioned by the California Department of Transportation (Caltrans) and CDFW; identifies “natural landscape blocks” which support native biodiversity and the “essential connectivity areas” which link them (Spencer et al., 2010). No essential connectivity areas or landscape blocks are mapped within the Specific Plan. There is some open space to the north of Reservation Road and former Fort Ord lands to the south and west, however, the extent of existing development has isolated the Specific Plan, and it is not likely to function as an essential connectivity area or an important regional wildlife movement corridor.

4.5 Resources Protected By Local Policies and Ordinances

Protected Trees

The City of Marina Municipal Code Chapter 17.51 (Tree Removal, Preservation and Protection) requires a tree removal permit for the removal of any tree within the city with a single stem six inches or more in diameter at breast height (DBH), or a multistemmed plant having an aggregate diameter of ten inches or more DBH, and any living woody plant which was planted as part of an approved compensation plan or landscaping plan. The City also designates landmark trees for protection, and the City Tree Committee maintains a list of designated landmark trees. No landmark trees occur within the Specific Plan.

4.6 Habitat Conservation Plans

The Specific Plan is not within any Habitat Conservation Plan (HCP) or other conservation plan areas. It is also outside of the Fort Ord Base Reuse Plan area.

5 Impact Analysis and Mitigation Measures

5.1 Special Status Species

The proposed project would have a significant effect on biological resources if it would:

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 Wildlife or U.S. Fish and Wildlife Service.*

State and/or federally listed animal species with the potential to occur in areas of species-specific, suitable natural habitat within the Specific Plan area include tricolored blackbird and Smith's blue butterfly. State and/or federally listed plant species with the potential to occur in areas of species-specific, suitable natural habitat within the Specific Plan area include seaside bird's-beak, Monterey gilia, robust spineflower, Yadon's rein orchid, and Monterey spineflower. Additionally, non-listed special status species, rare plants, and birds protected by California Fish and Game code have the potential to occur in areas of natural habitat and ruderal areas of the Specific Plan area. Special status species are most likely to occur in undeveloped or ruderal areas, however Monterey spineflower and Monterey gillia may occur in sandy openings within landscaped areas.

Construction activity associated with individual projects developed under the Specific Plan could include demolition, grading, vegetation removal, equipment and vehicle staging, parking, construction noise and construction staging. At the individual project level these activities have the potential to directly impact special status plant and wildlife species. Wildlife species may be injured or killed by construction activity if present during construction. Wildlife present in the Specific Plan or in adjacent areas could be impacted by construction noise and activity if that activity causes individuals to abandon breeding activity and increases competition with other individuals of the same species. Special status plant species would be directly impacted through clearing, grading and vegetation removal in vegetated portions of the Specific Plan area if those species are present.

Impacts may also occur if the quality of habitat were degraded by development in adjacent areas through the introduction of invasive weeds, human disturbance, and altered hydrology. Impacts to CRPR 1B and 2B plants are generally considered significant under CEQA if the loss of individuals represented a population-level impact that resulted in a loss of, or risk to an entire local or regional population. The impacts to the sensitive biological resources listed above and resulting from projects developed under the Specific Plan would potentially be significant under CEQA without mitigation. Implementation of measures BIO-1(a) through BIO-1(h) would reduce impacts to less than significant.

Mitigation Measures

BIO-1(a) Biological Resources Screening and Assessment

For projects proposed for development within the Specific Plan the City should engage a qualified biologist to perform a preliminary biological resource screening to determine whether the project has any potential to impact special status biological resources, inclusive of special status plants and

animals, sensitive vegetation communities, jurisdictional waters (including creeks, drainages, streams, ponds, vernal pools, riparian areas and other wetlands), or biological resources protected under local or regional ordinances. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a project-specific biological analysis to document the existing biological resources within a project footprint plus a minimum buffer of 100 feet around the project footprint, as is feasible, and to determine the potential impacts to those resources. If the project would have the potential to impact biological resources, the following mitigation measures [BIO-1(b) through BIO-1(h)] should be incorporated, as applicable, to reduce impacts to a less than significant. Pending the results of the project-specific biological analysis, design alterations, further technical studies (e.g., protocol surveys) and consultations with the USFWS, NMFS, CDFW, and/or other local, state, and federal agencies may be required. Note that specific surveys described in the mitigation measures below may be completed as part of the project-specific biological analysis where suitable habitat is present.

BIO-1(b) Special Status Plant Pre-Construction Survey

Surveys for special status plants should be completed by the project proponent prior to any vegetation removal, grubbing, or other construction activity (including staging and mobilization). The surveys should be floristic in nature, that is, every plant observed should be identified to species subspecies, or variety, sufficient to identify listed plants. The surveys should be seasonally timed to coincide with the target Federal and State listed species and rare plants identified above. All plant surveys should be conducted by a City-approved biologist during the appropriate blooming period during the year prior to initial ground disturbance. All special status plant species identified on-site should be mapped onto a site-specific aerial photograph or topographic map with the use of Global Positioning System (GPS) unit. Surveys should be conducted in accordance with the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results should be submitted to the implementing agency. If impacts to federal or state-listed species are identified for an individual project, consultation with CDFW and/or USFWS, as appropriate, may be required.

BIO-1(c) Special Status Plant Species Avoidance, Minimization, and Mitigation

If Federal and/or State listed species are found during special status plant pre-construction surveys [required under Mitigation Measure BIO-1(b)], avoidance of, or mitigation for impacts to, occupied habitat should be required. If populations of CRPR List 1B or 2 species are found during special status plant pre-construction surveys, the City-approved biologist should evaluate whether the loss of occupied areas would result in a local or regional population-level impact (i.e., jeopardize the continued existence of a local or regional population). Mitigation for regional population level impacts to rare plants should be required by the City. If feasible, the Proposed Project should be re-designed to avoid development in locations of Federal and/or State listed or CRPR List 1B or 2 species. Federal and/or State listed or CRPR List 1B or 2 species occurrences that are not within the immediate disturbance footprint and would be avoided, but which are located within 50 feet of disturbance limits, should have bright orange protective fencing installed at an appropriate distance (as determined by a qualified biologist) to ensure they are protected during construction activities.

If development cannot avoid Federally or State listed plants species, then USFWS and CDFW, as appropriate, should be consulted regarding the potential for salvage of individual plants or seek compensation (minimum compensation ratio of 1:1 for the impact area, with the conservation area of a similar density of individuals) for the loss of these individuals or their habitat either in an on-site

or off-site preserve, through payments to an appropriate mitigation bank, or as otherwise determined in coordination with USFWS and CDFW. Project applicants should consult with USFWS and CDFW for the potential to salvage or "take" listed species and to determine if take authorization would be required by one or both agencies. Impacts to Federal and/or State listed or CRPR List 1B or 2 species would require adherence to Mitigation Measure BIO-1(c).

BIO-1(d) Restoration and Monitoring

If development cannot avoid Federal or State listed plant species, all impacts should be mitigated by the project applicant at a minimum ratio of 1:1 for areas occupied by the species. Ratios may be higher pending consultation with CDFW and/or USFWS for listed species. Restoration areas should be of a similar density of individuals as areas impacted Project activities. A restoration plan should be prepared by the project applicant and submitted to the City for review and approval. Documentation demonstrating consultation with CDFW and USFWS regarding impacts to federal or state listed species should be submitted to the City. Population level impacts to CRPR List 1B or 2 species should also be mitigated at a 1:1 ratio for occupied areas, and should also require a restoration plan in coordination with the City. The restoration plan(s) should include, at a minimum, the following components:

- Description of the project/affected species location(s) (i.e., location, responsible parties, areas to be impacted by habitat type)
- Compensatory mitigation [type(s) and area(s) species to be established, restored, enhanced, and/or preserved; specific functions and values of species type(s) to be established, restored, enhanced, and/or preserved]
- Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values)
- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan)
- Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule)
- Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports)
- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type
- An adaptive management program and remedial measures to address any shortcomings in meeting success criteria
- Notification of completion of compensatory mitigation and agency confirmation
- Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism)

BIO-1(e) Special Status Wildlife Pre-Construction Surveys

GENERAL WILDLIFE SURVEYS

Pre-construction clearance surveys for northern California legless lizard and coast horned lizard should be conducted within 14 days prior to the start of construction (including staging and mobilization) in areas of suitable habitat. The surveys should cover the entire disturbance footprint

plus a minimum 200-foot buffer within suitable habitat, where permissible, and should identify all special status animal species that may occur on-site. California legless lizard and coast horned lizard should be relocated from the site to a safe location within suitable habitat as near to the project area as possible by a qualified biologist.

BURROWING OWL SURVEYS

A qualified biologist should conduct pre-construction clearance surveys prior to ground disturbance activities within suitable natural habitats and ruderal areas to confirm the presence/absence of burrowing owls. The surveys should be consistent with the recommended survey methodology provided by CDFW (2012). Clearance surveys should be conducted within 14 days prior to construction and ground disturbance activities. If no burrowing owls are observed, no further actions are required. If burrowing owls are detected during the pre-construction clearance surveys, the following measures should apply:

- Avoidance buffers during the breeding and non-breeding season should be implemented in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993) minimization mitigation measures.
- If avoidance of burrowing owls is not feasible, then additional measures such as passive relocation during the nonbreeding season and construction buffers of 200 feet during the breeding season should be implemented, in consultation with CDFW. In addition, a Burrowing Owl Exclusion Plan and Mitigation and Monitoring Plan will be developed by a qualified biologist in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993).

SMITH'S BLUE BUTTERFLY HOST PLANT SURVEYS

Prior to grading and construction in undeveloped areas, an approved biologist should conduct surveys for seacliff buckwheat (*Eriogonum parvifolium*) and seaside buckwheat (*Eriogonum latifolium*), host plants of Smith's blue butterfly in areas of suitable habitat.

If Smith's blue butterfly host plants are not located, no further action is required. If host plants are located within proposed disturbance areas, they should be avoided if feasible. If avoidance is not feasible, focused surveys should be conducted to determine presence or absence of the butterfly species. This may include surveys during the adult flight period (mid-June through early September), and/or inspection of host plants for all life forms (egg, larva, pupa, and adult). If individuals of any life stage that may be impacted by the Proposed Project are detected during focused surveys, a permit for relocation should be obtained from USFWS, and they should be relocated by a USFWS permitted biologist.

REPORTING

A report of all pre-construction and pre-demolition survey results should be submitted to the City for its review prior to the start of demolition. The report should include a description of the survey methodology for each species, the environmental conditions at the time of the survey(s), the results of the survey, any requirements for addressing special status species identified during surveys, and the biological qualifications of the surveyors. The report should be accompanied by maps and figures showing the location of any special status species occurrences and associated avoidance buffers.

BIO-1(f) Biological Resources Avoidance and Minimization

The following measures should be applied to avoid impacts to sensitive species and biological resources. The project applicant should be responsible for implementing selected measures.

- Ground disturbance should be limited to the minimum necessary to complete the project. The limits of disturbance for each construction phase should be flagged. Areas of special biological concern within or adjacent to the limits of disturbance should have highly visible orange construction fencing installed between said area and the limits of disturbance.
- All construction occurring within or adjacent to natural habitats that may support Federally and/or State listed endangered/threatened species, State fully protected species, and/or special status species should have a qualified biological monitor present during all initial ground disturbing/vegetation clearing activities.
- No endangered/threatened species should be captured and relocated without express permission from the CDFW and/or USFWS.
- If at any time during construction an endangered, threatened, or fully protected species enters the construction site or otherwise may be impacted, all construction activities should cease. A CDFW/USFWS-approved biologist should document the occurrence and consult with the CDFW and USFWS, as appropriate, to determine whether it was safe for project activities to resume.
- At the end of each workday, excavations should be secured with cover or a ramp provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures should be inspected for animals prior to burying, capping, moving, or filling.
- If night work is required, all construction lighting should be pointed down and directed only on the work area.
- The City should approve one or more qualified biologists to oversee and monitor biological compliance for the project. At least one qualified biologist should be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities.

BIO-1(g) Pre-Construction Nesting Birds Surveys

Ground disturbance, building demolition, and vegetation removal activities should be restricted to the non-breeding season (September 16 to January 31) when feasible. For ground disturbance, building demolition, and vegetation removal activities occurring in natural habitat areas, ruderal areas and developed areas during the bird nesting season (February 1 to September 15), general pre-construction nesting bird surveys should be conducted by a qualified biologist, including for, but not limited to, the tricolored blackbird and White-tailed kite, not more than 14 days prior to construction activities involving ground clearing, vegetation removal/trimming, or building demolition. The surveys should include the disturbance area plus a 200-foot buffer around the site if feasible, and a 500-foot buffer for tricolored blackbird and White-tailed kite. If active nests are located, an appropriate avoidance buffer should be established within which no work activity will be allowed which would impact these nests. The avoidance buffer would be established by the qualified biologist on a case-by-case basis based on the species and site conditions. In no cases should the buffer be smaller than 50 feet for non-raptor bird species, 200 feet for raptor species, or a 500-foot buffer for White-tailed kite. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. If fully protected White-tailed kites are documented nesting within 500 feet of construction activities, CDFW should be

consulted on appropriate avoidance and minimization methods. The buffer area(s) should be closed to all construction personnel and equipment until juveniles have fledged and the nest is inactive. City-approved Biologist should confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer.

BIO-1(h) Worker Environmental Awareness Program (WEAP)

Prior to initiation of construction activities (including staging and mobilization) for projects developed under the Specific Plan for which potential impacts to biological resources have been identified at the biological scoping phase (Measure BIO-1[a]), the project proponent should arrange for all personnel associated with project construction for the applicable phase to attend WEAP training, conducted by a City-approved biologist, to aid workers in recognizing special status resources that may occur in the construction area. The specifics of this program should include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information should also be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees should sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. The form should be submitted to the City to document compliance.

5.2 Sensitive Plant Communities

The proposed project would have a significant effect on biological resources if it would:

b) Have a substantial adverse impact 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 Wildlife or US Fish and Wildlife Service.

The small patch of sandmat manzanita in the Specific Plan is isolated and highly degraded by the surrounding development and incursion of ice plant. This vegetation community has a limited distribution, largely restricted to coastal areas of Monterey County. It is locally common in the vicinity of the Specific Plan; however, given the higher quality chaparral habitat to the north of Reservation Road and within the Fort Ord National Monument, removal of a small patch of sandmat manzanita would not represent a significant impact to this vegetation community.

Mitigation Measures

No mitigation is required.

5.3 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Alteration of the two stormwater basins and the drainage would require authorization from the City of Marina and evaluation under the City's NPDES permit. The Specific Plan will include storm drainage improvements, which will likely be implemented under the City's NPDES permit. No project

elements are planned that would alter or impact riparian vegetation at Locke-Paddon Park. Impacts to these features that resulted from development under the Specific Plan would therefore be less than significant. If alteration of the pond located on private property is proposed, a jurisdictional delineation and potential permitting would be required. Impacts to this feature may be significant but mitigable to less than significant.

BIO-2 Jurisdictional Delineation

If a proposed project under the Specific Plan would impact a potentially jurisdictional feature as determined at the biological scoping phase (Measure BIO-1[a]), a qualified biologist should complete a jurisdictional delineation. The jurisdictional delineation will determine the extent of the jurisdiction for CDFW, USACE, and/or RWQCB, and should be conducted in accordance with the requirement set forth by each agency. The result will be a preliminary jurisdictional delineation report that should be submitted to the implementing agency, USACE, RWQCB, and CDFW, as appropriate, for review and approval. Jurisdictional areas should be avoided to the maximum extent possible. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements (WDRs) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 et seq. of the CFGC would also be required prior to construction within the areas of CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the CWA would likely be required. Furthermore, a compensatory mitigation program should be implemented, and the measures set forth by the regulatory agencies during the permitting process. Compensatory mitigations for all permanent impacts to waters of the U.S. and waters of the state shall be completed at a ratio as required in applicable permits, but should not be less than a minimum ratio of 1:1. All temporary impacts to waters of the U.S. and waters of the state should be fully restored to natural condition.

5.4 Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

No significant corridors for wildlife movement occur within the Specific Plan and there are no policies related to wildlife movement in the Specific Plan. Therefore, there are no impacts to movement from development under the Specific Plan.

Mitigation Measures

No mitigation is required.

5.5 Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

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

The Specific Plan includes an objective about urban forestry, which outlines the need for preservation of the City's trees while improving accessibility and aesthetics due to root upheaval and improper planting/pruning. The Specific Plan also includes a discussion of the City's tree committee and links to the City's recommended street tree species list. The strategies outlined for this objective include developing a street tree plan to ensure suitable species are incorporated into right of way improvements and properly maintained. This strategy also includes encouraging developers to preserve trees onsite. Tree removal as a result of proposed projects under the Specific Plan will be required to get approval from the City of Marina, and therefore would not conflict with the local tree policy and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

5.6 Adopted or Approved Plans

The proposed project would have a significant effect on biological resources if it would:

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

There are no habitat conservation plans or natural community conservation plans that have been adopted in the Specific Plan area. Therefore, development facilitated by the Specific Plan would not conflict with any such plans and no impact would occur.

Mitigation Measures

No mitigation is required.

6 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Reconnaissance biological surveys for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis, or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regulatory Setting

Regulatory Setting

Special status habitats are vegetation types, associations, or sub-associations that support concentrations of special status plant or animal species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- Central Coast Regional Water Quality Control Board (waters of the State);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; Species of Special Concern; nesting birds);
- City of Marina Municipal Code

U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material into wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters (typically a navigable water). The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through avoidance and minimization to the extent practicable, followed by compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the local Regional Water Quality Control Board (RWQCB) have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters,

within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The RWQCB administers actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadramous species. Projects that would result in "take" of any federally threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is restricted to direct mortality of a listed species and the law does not prohibit indirect harm by way of habitat modification. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated.

The CDFW also enforces Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibits take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided.

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level office to take any bird in violation of the federal Migratory Bird Treaty Act. CDFW administers these requirements.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the

CDFW for use as a management tool to include these species in special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Perennial, intermittent, and ephemeral streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq*. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over activities that divert, obstruct, or alter the channel, bed, or bank of any river, stream or lake.

1997 Fort Ord Reuse Authority (FORA) Base Reuse Plan

The Fort Ord Reuse Authority (FORA) adopted the *Fort Ord Base Reuse Plan* (BRP) in June 1997, and a revised version of the BRP was published in digital format in September 2001, incorporating various corrections and errata. The main objectives related to biological resources that are outlined in the BRP for the City of Seaside are: to preserve and protect the sensitive species and habitats addressed in the HMP; preserve and protect the sensitive species and habitats that are not addressed in the HMP; avoid or minimize disturbance to natural land features and habitats through project design; promote awareness and education concerning the biological resources on the former Fort Ord; and develop strategies for interim management of undeveloped natural land areas.

Conservation goals, policies, and programs are defined in the BRP to accomplish these objectives. Some of the main policies outlined for the City of Seaside are as follows. Policy A-4 requires the City to encourage the preservation of small pockets of habitat and populations of HMP species within and around developed areas. Policy B-1 requires that the City strive to avoid or minimize loss of any sensitive species occurring in areas planned for development. Policy B-3 requires the City to preserve, enhance and protect wetland areas. Policy C-2 requires the City to encourage the preservation and enhancement of oak woodland elements in the natural and built environments. Policy D-2 requires the City to encourage and participate in the preparation of educational materials through various media sources which describe the biological resources on the former Fort Ord. Policy E-1 requires that the City develop a plan describing how it intends to address the interim management of natural land areas for which the City is designated as the responsible party.

Fort Ord Habitat Management Plan and Habitat Conservation Plan

The Fort Ord Habitat Management Plan (HMP) was published by the USACE in 1997 in compliance with the USFWS final Biological Opinion for disposal and reuse of former Fort Ord lands. The HMP establishes guidelines for the conservation and management of plant and wildlife species and their habitat that occur on former Fort Ord lands. The HMP promotes preservation, enhancement, and restoration of habitat and populations of HMP covered species while allowing development on selected properties that promotes economic recovery after closure of the fort.

The Fort Ord Habitat Conservation Plan (HCP) is currently being prepared by the Fort Ord Reuse Authority and is independent of the Fort Ord HMP. The HCP provides the framework for ensuring conservation of State and federally listed plant and animal species (HCP species) and the natural communities that support them on former Fort Ord. The HCP incorporates all relevant information

from the HMP, and would supersede it as the primary conservation planning document for listed species and non-federal recipients of Fort Ord lands; however, the HCP has not yet been adopted. To date, USFWS has generally accepted adherence to the HMP conditions as sufficient to avoid and mitigate impacts to federally listed plant species within designated development areas of the FORA. CDFW has generally accepted adherence to the HMP conditions as sufficient to avoid and mitigate impacts to non-listed sensitive species within designated development areas of the FORA. However, these are project-specific determinations, and impacts to federally or state listed wildlife generally requires individual take authorization from one or both agencies.

Local Jurisdiction

City of Marina Municipal Code

The City of Marina Municipal Code Chapter 17.51 (Tree Removal, Preservation and Protection) requires a tree removal permit for the removal of any tree within the city with a single stem six inches or more in diameter at breast height (DBH), or a multistemmed plant having an aggregate diameter of ten inches or more DBH, and any living woody plant which was planted as part of an approved compensation plan or landscaping plan. Conditions imposed on the removal may include, but would not be limited to, one or more of the following:

1) Preparation of a tree removal and protection plan, including tree protection guidelines.
2) A compensation plan requiring the replacement or placement of additional trees on the property and/or the payment to the city to fund the purchase, planting, and maintenance of off-site replacement trees.
3) Preparation of a site restoration plan requiring restoration of ground surface area in the vicinity of tree removals.

Additionally, section 17.51.070 provides for the protection of Landmark trees and landmark tree stands. Landmark trees and landmark tree stands are defined by the City as;

1) Prominently visible from public streets, public parking areas, parks or open space, from a minimum distance of one hundred feet; and
2) Indicate at least a seventy percent chance of surviving more than ten years, and be able to be maintained without excessive threat to the public health, safety and welfare.

Landmark trees and landmark tree stands must also meet one of the following criteria:

1) Possesses special beauty, or horticultural or historic interest;
2) Is of such substantial size or prominence that it has significant visibility from city streets, parks or open space;
3) Is of such substantial size that it makes a significant contribution to the forested skyline of the city;
4) Is a rare or unusual species for this area; and
5) Is a particularly outstanding representative of the species.

Applications for the removal of landmark trees and landmark tree stands must be reviewed and approved by the City Planning Commission and tree committee.

City of Marina General Plan

The City of Marina General Plan (GP) includes policies to provide "Habitat Reserves and Other Open Space for the protection of important habitat areas, scenic areas, and other areas of natural open space." Under the GP areas designated as "Habitat Reserve and Other Open Space" will be permanently maintained to "protect significant plants and wildlife inhabiting these areas." These areas include;

1. Riparian habitats and vegetation along the Salinas River;
2. Coastal Strand and Dunes;
3. 1,160 acres of maritime chaparral, coastal scrub, and coast live oak woodland designated for protection within the University of California Natural Reserve System, a 124 acre reserve site and adjacent land on Armstrong Ranch, 160 acres within the East Garrison Reserve, a 227 acre reserve south of Imjin Road, and a 50 acre reserve located along the east side of Highway 1 near the planned extension of Del Monte Boulevard; and
4. Wetlands, including habitat at the Armstrong Ranch to preserve vernal pools. The GP also requires a biological field survey to determine if additional vernal ponds exist prior to development on the Armstrong Ranch. If vernal pools are present, development must preserve vernal pools or provide either for the replacement of habitat. Several ponds in the developed areas of the City are also protected as open space.

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Appendix B

Site Photographs

Photograph 1. A detention basin on Cypress Avenue, facing east

Photograph 2. Annual grassland south of Reindollar Avenue, facing east

Photograph 3. A vacant lot with ruderal vegetation, facing south

Photograph 4. Landscaped Monterey cypress between commercial and residential development, facing south

Photograph 5. The pond and willow riparian vegetation on private property, facing west

Photograph 6. Reservation Road near the east end of the Specific Plan, facing west

Photograph 7. A parcel containing sandmat manzanita, bare ground, and ice plant mat, facing west

Photograph 8. The drainage south of Viking Avenue, facing east

Appendix C

Special Status Species Evaluation Tables

Special Status Plant and Lichen Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Agrostis lacuna-vernalis vernal pool bent grass	None/None G1/S1 1B.1	Vernal pools. In mima mound areas or on the margins of vernal pools. 125-150 m. annual herb. Blooms Apr-May	Not Expected	Vernal Pools are not present.
Allium hickmanii Hickman's onion	None/None G2/S2 1B.2	Closed-cone coniferous forest, chaparral, coastal scrub, coastal prairie, cismontane woodland. Sandy loam, damp ground and vernal swales; mostly in grassland though can be associated with chaparral or woodland. 5-200 m. perennial bulbiferous herb. Blooms Mar-May	Not Expected	Suitable habitats are not present.
Arctostaphylos hookeri ssp. *hookeri* Hooker's manzanita	None/None G3T2/S2 1B.2	Chaparral, coastal scrub, closed-cone coniferous forest, cismontane woodland. Sandy soils, sandy shales, sandstone outcrops. 30-550 m. perennial evergreen shrub. Blooms Jan-Jun	Not Expected	Suitable habitats are not present.
Arctostaphylos montereyensis Toro manzanita	None/None G2?/S2? 1B.2	Chaparral, cismontane woodland, coastal scrub. Sandy soil, usually with chaparral associates. 45-765 m. perennial evergreen shrub. Blooms Feb-Mar	Not Expected	Suitable habitats are not present.
Arctostaphylos pajaroensis Pajaro manzanita	None/None G1/S1 1B.1	Chaparral. Sandy soils. 30-155 m. perennial evergreen shrub. Blooms Dec-Mar	Not Expected	Suitable habitats are not present.
Arctostaphylos pumila sandmat manzanita	None/None G1/S1 1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, coastal scrub. On sandy soil with other chaparral associates. 3-210 m. perennial evergreen shrub. Blooms Feb-May	Present	A small patch of Sandmat manzanita was observed in the Specific Plan north of Reservation Road.
Astragalus tener var. *tener* alkali milk-vetch	None/None G2T1/S1 1B.2	Alkali playa, valley and foothill grassland, vernal pools. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 0-168 m. annual herb. Blooms Mar-Jun	Not Expected	Vernal Pools and alkali soils are not present, and there are no known occurrences within 5 miles.
Astragalus tener var. *titi* coastal dunes milk-vetch	Endangered/ Endangered G2T1/S1 1B.1	Coastal bluff scrub, coastal dunes, coastal prairie. Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. 1-45 m. annual herb. Blooms Mar-May	Not Expected	Natural dune habitats and moist soils are not present, and there are no known occurrences within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Bryoria spiralifera twisted horsehair lichen	None/None G3/S1S2 1B.1	North coast coniferous forest. Usually on conifers. 0-30 m. fruticose lichen (epiphytic).	Not Expected	Coniferous forests are not present, and there are no known occurrences within 5 miles.
Castilleja ambigua var. *insalutata* pink Johnny-nip	None/None G4T2/S2 1B.1	Coastal bluff scrub, coastal prairie. 0-100 m. annual herb (hemiparasitic). Blooms May-Aug	Not Expected	Natural dune habitats are not present.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	None/None G3T1T2/S1S2 1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0-230 m. annual herb. Blooms May-Oct(Nov)	Not Expected	Suitable habitats and alkaline soils are not present, and there are no known occurrences within 5 miles.
Chorizanthe minutiflora Fort Ord spineflower	None/None G1/S1 1B.2	Coastal scrub, chaparral (maritime). Sandy, openings. 60-145 m. annual herb. Blooms Apr-Jul	Low Potential	Sandy soils are present and there are 4 known occurrences within 5 miles.
Chorizanthe pungens var. *pungens* Monterey spineflower	Threatened/ None G2T2/S2 1B.2	Coastal dunes, chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Sandy soils in coastal dunes or more inland within chaparral or other habitats. 0-170 m. annual herb. Blooms Apr-Jun(Jul-Aug)	High Potential	Sandy soils are present and there are 12 known occurrences within 5 miles, including areas directly adjacent to the Specific Plan.
Chorizanthe robusta var. *robusta* robust spineflower	Endangered/ None G2T1/S1 1B.1	Cismontane woodland, coastal dunes, coastal scrub, chaparral. Sandy terraces and bluffs or in loose sand. 9-245 m. annual herb. Blooms Apr-Sep	Low Potential	Sandy soils are present, however there are no known occurrences within 5 miles.
Clarkia jolonensis Jolon clarkia	None/None G2/S2 1B.2	Cismontane woodland, chaparral, coastal scrub, riparian woodland. 10-1280 m. annual herb. Blooms Apr-Jun	Not Expected	Suitable habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Collinsia multicolor San Francisco collinsia	None/None G2/S2 1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 30-275 m. annual herb. Blooms (Feb)Mar-May	Not Expected	Suitable habitats on shale soils are not present, and there are no known occurrences within 5 miles.
Cordylanthus rigidus ssp. *littoralis* seaside bird's-beak	None/ Endangered G5T2/S2 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, coastal dunes. Sandy, often disturbed sites, usually within chaparral or coastal scrub. 30-520 m. annual herb (hemiparasitic). Blooms Apr-Oct	Low Potential	Sandy soils and disturbed sites are present, and there are 9 known occurrences within 5 miles.
Delphinium californicum ssp. *interius* Hospital Canyon larkspur	None/None G3T3/S3 1B.2	Cismontane woodland, chaparral, coastal scrub. In wet, boggy meadows, openings in chaparral and in canyons. 195-1095 m. perennial herb. Blooms Apr-Jun	Not Expected	Suitable habitats in wet areas are not present, and there are no known occurrences within 5 miles.
Delphinium hutchinsoniae Hutchinson's larkspur	None/None G2/S2 1B.2	Broadleafed upland forest, chaparral, coastal prairie, coastal scrub. On semi-shaded, slightly moist slopes, usually west-facing. 15-535 m. perennial herb. Blooms Mar-Jun	Not Expected	Suitable habitats in wet areas are not present, and there are no known occurrences within 5 miles.
Delphinium umbraculorum umbrella larkspur	None/None G3/S3 1B.3	Cismontane woodland, chaparral. Mesic sites. 215-2075 m. perennial herb. Blooms Apr-Jun	Not Expected	Suitable habitats in wet areas are not present, and there are no known occurrences within 5 miles.
Ericameria fasciculata Eastwood's goldenbush	None/None G2/S2 1B.1	Closed-cone coniferous forest, chaparral (maritime), coastal scrub, coastal dunes. In sandy openings. 30-215 m. perennial evergreen shrub. Blooms Jul-Oct	High Potential	Sandy soils are present and there are 9 known occurrences within 5 miles, one of which includes the eastern end of the Specific Plan area, at the corner of Salinas Ave and Reservation Rd.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Eriogonum nortonii Pinnacles buckwheat	None/None G2/S2 1B.3	Chaparral, valley and foothill grassland. Sandy soils; often on recent burns; western Santa Lucias. 90-975 m. annual herb. Blooms (Apr)May-Aug(Sep)	Not Expected	Suitable habitats are not present, and there are no known occurrences within 5 miles.
Erysimum ammophilum sand-loving wallflower	None/None G2/S2 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 5-130 m. perennial herb. Blooms Feb-Jun	High Potential	Sandy soils are present and there are 15 known occurrences within 5 miles, one of which includes the undeveloped area south of Reindollar Ave.
Erysimum menziesii Menzies' wallflower	Endangered/ Endangered G1/S1 1B.1	Coastal dunes. Localized on dunes and coastal strand. 1-25 m. perennial herb. Blooms Mar-Sep	Not Expected	Natural dune habitats are not present.
Fritillaria liliacea fragrant fritillary	None/None G2/S2 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-400 m. perennial bulbiferous herb. Blooms Feb-Apr	Not Expected	Suitable habitats on serpentine soils are not present, and there are no known occurrences within 5 miles.
Gilia tenuiflora ssp. *arenaria* Monterey gilia	Endangered/ Threatened G3G4T2/S2 1B.2	Coastal dunes, coastal scrub, chaparral (maritime), cismontane woodland. Sandy openings in bare, wind-sheltered areas. Often near dune summit or in the hind dunes; two records from Pleistocene inland dunes. 5-245 m. annual herb. Blooms Apr-Jun	High Potential	Sandy soils are present and there are 15 known occurrences within 5 miles, one of which includes the eastern end of the Specific Plan area, at the corner of Salinas Ave and Reservation Rd. A second occurrence also crosses the Specific Plan area south of Reindollar Ave.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Hesperocyparis goveniana Gowen cypress	Threatened/ None G1/S1 1B.2	Closed-cone coniferous forest, chaparral. Coastal terraces; usually in sandy soils; sometimes with Monterey pine, bishop pine. 100-125 m. perennial evergreen tree.	Not Expected	Natural coniferous forest and chaparral habitats are not present, and there are no known occurrences within 5 miles.
Hesperocyparis macrocarpa Monterey cypress	None/None G1/S1 1B.2	Closed-cone coniferous forest. Granitic soils. 10-20 m. perennial evergreen tree.	Present (landscaped)	This species is present in the Specific Plan area as a commonly cultivated species.
Holocarpha macradenia Santa Cruz tarplant	Threatened/ Endangered G1/S1 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland. Light, sandy soil or sandy clay; often with nonnatives. 10-220 m. annual herb. Blooms Jun-Oct	Not Expected	Suitable habitats are not present, and there are no known occurrences within 5 miles.
Horkelia cuneata var. *sericea* Kellogg's horkelia	None/None G4T1?/S1? 1B.1	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. 5-430 m. perennial herb. Blooms Apr-Sep	High Potential	Sandy soils are present and there are 12 known occurrences within 5 miles, one of which occurs approximately 0.2 miles south of the Specific Plan area along Hwy 1.
Horkelia marinensis Point Reyes horkelia	None/None G2/S2 1B.2	Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 2-775 m. perennial herb. Blooms May-Sep	Low Potential	Sandy soils are present and there is 1 known occurrence just west of the Specific Plan area at the
Lasthenia conjugens Contra Costa goldfields	Endangered/ None G1/S1 1B.1	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 1-450 m. annual herb. Blooms Mar-Jun	Not Expected	Vernal Pools are not present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Layia carnosa beach layia	Endangered/ Endangered G2/S2 1B.1	Coastal dunes, coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 0-30 m. annual herb. Blooms Mar-Jul	Not Expected	Native dune communities are not present and the are no known occurrences of this species within 5 miles.
Legenere limosa legenere	None/None G2/S2 1B.1	Vernal pools. In beds of vernal pools. 1-1005 m. annual herb. Blooms Apr-Jun	Not Expected	Vernal Pools are not present.
Lupinus tidestromii Tidestrom's lupine	Endangered/ Endangered G1/S1 1B.1	Coastal dunes. Partially stabilized dunes, immediately near the ocean. 4-25 m. perennial rhizomatous herb. Blooms Apr-Jun	Not Expected	Native dune communities are not present and the are no known occurrences of this species within 5 miles.
Malacothamnus palmeri var. *involucratus* Carmel Valley bush-mallow	None/None G3T2Q/S2 1B.2	Cismontane woodland, chaparral, coastal scrub. Talus hilltops and slopes, sometimes on serpentine. Fire dependent. 5-520 m. perennial deciduous shrub. Blooms Apr-Oct	Not Expected	Suitable habitats and soils are not present and the are no known occurrences of this species within 5 miles.
Malacothamnus palmeri var. *palmeri* Santa Lucia bush-mallow	None/None G3T2Q/S2 1B.2	Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons to the sea. 3-670 m. perennial deciduous shrub. Blooms May-Jul	Not Expected	Suitable habitats and soils are not present and the are no known occurrences of this species within 5 miles.
Malacothrix saxatilis var. *arachnoidea* Carmel Valley malacothrix	None/None G5T2/S2 1B.2	Chaparral, coastal scrub. Rock outcrops or steep rocky roadcuts. 30-1040 m. perennial rhizomatous herb. Blooms (Mar)Jun-Dec	Not Expected	Suitable habitats and soils are not present and the are no known occurrences of this species within 5 miles.
Meconella oregana Oregon meconella	None/None G2G3/S2 1B.1	Coastal prairie, coastal scrub. Open, moist places. 60-640 m. annual herb. Blooms Mar-Apr	Not Expected	Suitable habitats and moist soils are not present.
Microseris paludosa marsh microseris	None/None G2/S2 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 3-610 m. perennial herb. Blooms Apr-Jun(Jul)	Not Expected	Suitable habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Monardella sinuata ssp. *nigrescens* northern curly-leaved monardella	None/None G3T2/S2 1B.2	Coastal dunes, coastal scrub, chaparral, lower montane coniferous forest. Sandy soils. 10-245 m. annual herb. Blooms (Apr)May-Jul(Aug-Sep)	Low potential	Sandy soils are present and there are 4 known occurrences within 5 mile, however the habitats within the Specific Plan area are heavily disturbed.
Monolopia gracilens woodland woollythreads	None/None G3/S3 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, North Coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. 120-975 m. annual herb. Blooms (Feb)Mar-Jul	Not Expected	Suitable habitats and soils are not present and the are no known occurrences of this species within 5 miles.
Pinus radiata Monterey pine	None/None G1/S1 1B.1	Closed-cone coniferous forest, cismontane woodland. Three primary stands are native to California. Dry bluffs and slopes. 60-125 m. perennial evergreen tree.	Present (landscaped)	This species is present in the Specific Plan area as a commonly cultivated species.
Piperia yadonii Yadon's rein orchid	Endangered/ None G1/S1 1B.1	Closed-cone coniferous forest, chaparral, coastal bluff scrub. On sandstone and sandy soil, but poorly drained and often dry. 10-505 m. perennial herb. Blooms (Feb)May-Aug	Low Potential	Sandy soils are present and there is a known occurrence approximately 250 feet south of the Specific Plan area, however the habitats within the Specific Plan area are heavily disturbed.
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	None/None G3T1Q/S1 1B.2	Chaparral, coastal scrub, coastal prairie. Mesic sites. 2-705 m. annual herb. Blooms Mar-Jun	Not Expected	Suitable habitats and moist soils are not present.
Potentilla hickmanii Hickman's cinquefoil	Endangered/ Endangered G1/S1 1B.1	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps. Freshwater marshes, seeps, and small streams in open or forested areas along the coast. 5-125 m. perennial herb. Blooms Apr-Aug	Not Expected	Suitable habitats and mesic sites are not present and the are no known occurrences of this species within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Ramalina thrausta angel's hair lichen	None/None G5/S2? 2B.1	North coast coniferous forest. On dead twigs and other lichens. 75-430 m. fruticose lichen (epiphytic).	Not Expected	Suitable habitats not present and the are no known occurrences of this species within 5 miles.
Rosa pinetorum pine rose	None/None G2/S2 1B.2	Closed-cone coniferous forest, cismontane woodland. 5-1090 m. perennial shrub. Blooms May-Jul	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Stebbinsoseris decipiens Santa Cruz microseris	None/None G2/S2 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. 90-750 m. annual herb. Blooms Apr-May	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Trifolium buckwestiorum Santa Cruz clover	None/None G2/S2 1B.1	Coastal prairie, broadleafed upland forest, cismontane woodland. Moist grassland. Gravelly margins. 30-550 m. annual herb. Blooms Apr-Oct	Not Expected	Suitable habitats are not present.
Trifolium hydrophilum saline clover	None/None G2/S2 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 1-335 m. annual herb. Blooms Apr-Jun	Not Expected	Suitable habitats and mesic sites are not present and the are no known occurrences of this species within 5 miles.
Trifolium polyodon Pacific Grove clover	None/Rare G1/S1 1B.1	Closed-cone coniferous forest, meadows and seeps, coastal prairie, valley and foothill grassland. Along small springs and seeps in grassy openings. 5-260 m. annual herb. Blooms Apr-Jun(Jul)	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Trifolium trichocalyx Monterey clover	Endangered/ Endangered G1/S1 1B.1	Closed-cone coniferous forest. Openings, burned areas, and roadsides. Sandy soils. 60-210 m. annual herb. Blooms Apr-Jun	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale

Regional Vicinity refers to within a 7-quad search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species

SE = State Endangered ST = State Threatened SC = State Candidate SR = State Rare

CRPR (CNPS California Rare Plant Rank)

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2A=Plants presumed extirpated in California, but more common elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1=Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)

Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Invertebrates				
Danaus plexippus pop. 1 monarch - California overwintering population	None/None G4T2T3/S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not Expected	There are no known occurrences of wintering monarchs this species within 5 miles.
Euphilotes enoptes smithi Smith's blue butterfly	Endangered/None G5T1T2/S1S2	Most commonly associated with coastal dunes & coastal sage scrub plant communities in Monterey & Santa Cruz counties. Hostplant: *Eriogonum latifolium* and *Eriogonum parvifolium* are utilized as both larval and adult food plants.	High Potential in undeveloped areas	There are 5 known occurrences within 5 mile one of which is approximately 773 feet west of the Specific Plan area. One occurrence of host plant *Eriogonum latifolium*, was also reported from just north of the Specific Plan area adjacent to the small patch of sandmat manzanita.
Fish				
Eucyclogobius newberryi tidewater goby	Endangered/None G3/S3 SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not Expected	Suitable Aquatic habitats are not present.
Oncorhynchus mykiss irideus pop. 9 steelhead - south-central California coast DPS	Threatened/None G5T2Q/S2	Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Spirinchus thaleichthys longfin smelt	Candidate Threatened G5/S1 SSC	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Reptiles				
Anniella pulchra northern California legless lizard	None/None G3/S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	High Potential in undeveloped	Suitable sandy soils are present and there are 27 known occurrences within 5 miles, including one within

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
			areas	the Specific Plan area.
Emys marmorata western pond turtle	None/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not Expected	The Specific Plan area does not contain suitable ponds or connectivity to suitable ponds.
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	High Potential in undeveloped areas	Suitable sandy soils are present and there are 5 known occurrences within 5 miles.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Amphibians				
Ambystoma californiense California tiger salamander	Threatened/ Threatened G2G3/S2S3 WL	Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not Expected	Suitable breeding habitats are not present and there is no connectivity to populations on the former Fort Ord.
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	Endangered/ Endangered G5T1T2/S1S2 FP	Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey counties. Aquatic larvae prefer shallow (<12 inches) water, using clumps of vegetation or debris for cover. Adults use mammal burrows.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Rana boylii foothill yellow-legged frog	None/Candidate Threatened G3/S3 SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Rana draytonii California red-legged frog	Threatened/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not Expected	There is one occurrence within 5 miles, from the Salinas River approximately 2.6 miles north of the Specific Plan area, however suitable Aquatic habitats are not

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
				present and agricultural and airport development are likely to block movement from the river.
Spea hammondii western spadefoot	None/None G3/S3 SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Taricha torosa Coast Range newt	None/None G4/S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow moving streams.	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Birds				
Agelaius tricolor tricolored blackbird	None/Threatened G2G3/S1S2 SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Moderate Potential at Locke-Paddon Park only	There is one known occurrence that overlaps the Specific Plan area at Locke-Paddon Park, however it only overlaps a small area.
Asio flammeus short-eared owl	None/None G5/S3 SSC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Athene cunicularia burrowing owl	None/None G4/S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Moderate Potential in undeveloped areas	There is a known occurrence within the Specific Plan area, however the Specific Plan is mostly developed, with small isolated patches of suitable habitat.
Buteo regalis ferruginous hawk	None/None G4/S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Not Expected	Suitable foraging habitat occurs in the open grasslands and agricultural lands to the north of the Specific Plan and this species is known to winter there, however vacant lots and open spaces within the Specific Plan are too small to be considered foraging habitat for large raptors.
Charadrius alexandrinus nivosus	Threatened/None G3T3/S2S3	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not Expected	Suitable nesting habitat is not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
western snowy plover	SSC			
Coturnicops noveboracensis yellow rail	None/None G4/S1S2 SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Not Expected	Suitable marsh habitat is not present.
Cypseloides niger black swift	None/None G4/S2 SSC	Coastal belt of Santa Cruz and Monterey counties; central & southern Sierra Nevada; San Bernardino & San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	Not Expected	Suitable nesting habitat is not present.
Elanus leucurus white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Low potential for nesting in stands of trees	Large trees in the Specific Plan may provide nesting habitat, and there are multiple occurrences in the vicinity of the Specific Plan (ebird 2019).
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, “bald” hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Not Expected	Suitable grassland habitats are not present.
Falco mexicanus prairie falcon	None/None G5/S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Not Expected	Suitable open habitats are not present.
Falco peregrinus anatum American peregrine falcon	Delisted/Delisted G4T4/S3S4 FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Not Expected	Buildings tall enough to provide
Laterallus jamaicensis coturniculus California black rail	None/Threatened G3G4T1/S1 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not Expected	Suitable marsh habitat is not present.
Pelecanus occidentalis californicus California brown pelican	Delisted/Delisted G4T3T4/S3 FP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Not Expected	Suitable nesting habitat and nest colonies are not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Rallus obsoletus obsoletus California Ridgway's rail	Endangered/ Endangered G5T1/S1 FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	Not Expected	Suitable marsh habitat is not present.
Riparia riparia bank swallow	None/Threatened G5/S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not Expected	Suitable nesting habitat is not present.
Mammals				
Corynorhinus townsendii Townsend's big-eared bat	None/None G3G4/S2 SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not Expected	Suitable roosting habitat is not present.
Sorex ornatus salarius Monterey shrew	None/None G5T1T2/S1S2 SSC	Riparian, wetland & upland areas in the vicinity of the Salinas River delta. Prefers moist microhabitats. feeds on insects & other invertebrates found under logs, rocks & litter.	Low Potential in suitable habitat adjacent to wetlands only	Marginal habitat occurs in the Specific Plan, and there are no known occurrences within 5 miles.
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected	Suitable open habitat is not present.

Regional Vicinity refers to within a 7-quad search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species FS=Federally Sensitive

SE = State Endangered ST = State Threatened SC = State Candidate SS=State Sensitive

SSC = CDFW Species of Special Concern SFP = State Fully Protected

Appendix TRIBAL

AB 52 Tribal Consultation Correspondence

City of Marina

City of Marina
211 HILLCREST AVENUE
MARINA, CA 93933
831-884-1278; FAX 831-384-9148
www.cityofmarina.org

June 26, 2019

Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, CA 94062

Regarding: Assembly Bill 52 and Senate Bill 18 Consultation, Marina Downtown Vitalization Specific Plan Focused EIR, Marina, Monterey County, California

Dear Ms. Sayers:

The City of Marina is preparing a Focused Environmental Impact Report for the Marina Downtown Vitalization Specific Plan. The project proposes the development of a Specific Plan to guide future development within an approximately 322-acre area around Reservation Road and Del Monte Boulevard within the City of Marina (see enclosed map).

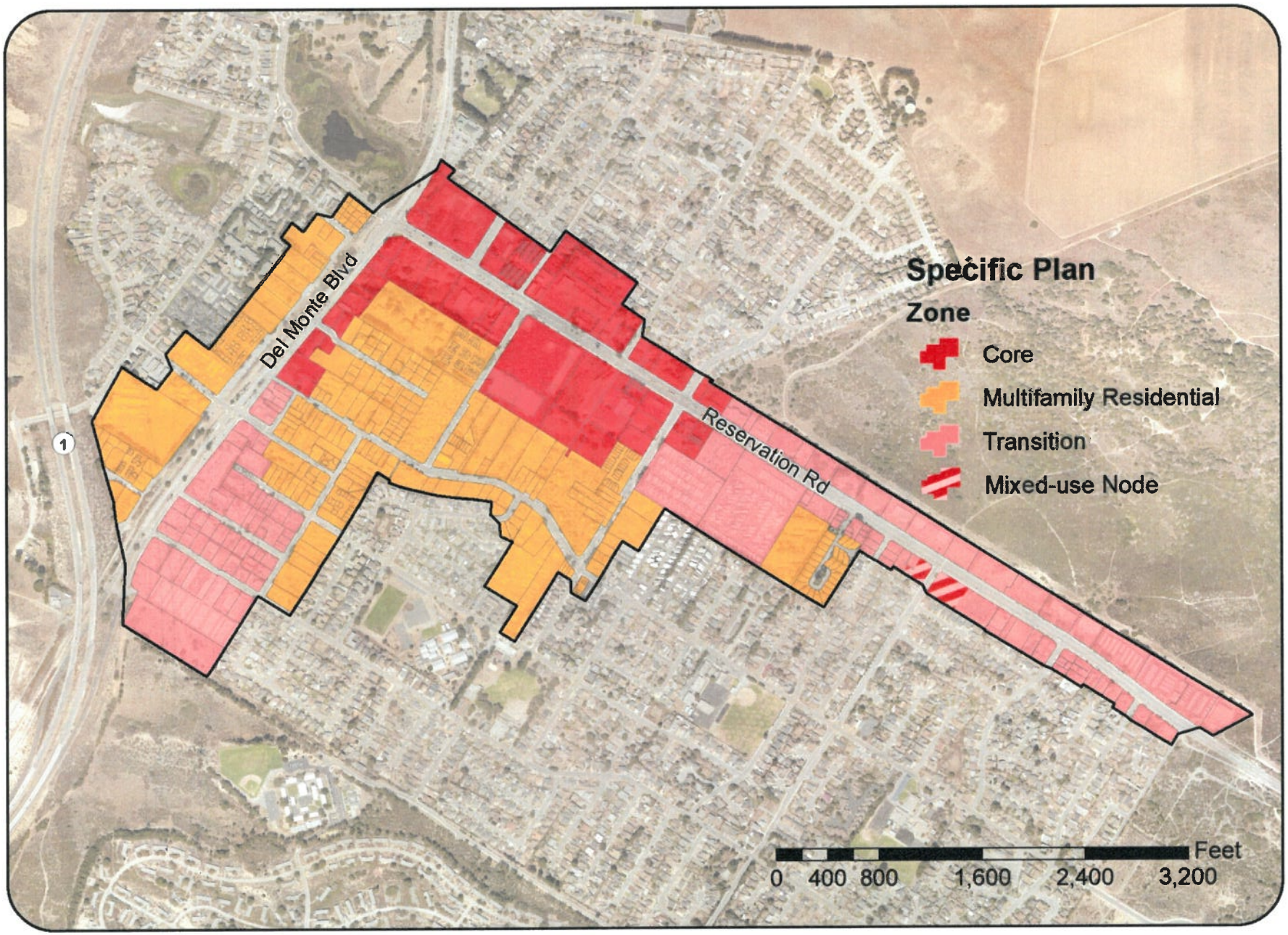
The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The proposed project consists of the implementation of a Specific Plan and, therefore, must also comply with California Public Resources Code § 65352.3 – 65352.4 (Senate Bill 18), which requires local governments to conduct meaningful consultation with California Native American tribes on the contact list maintained by the Native American Heritage Commission prior to the adoption or amendment of a city or county general plan for the purpose of protecting cultural places on lands affected by the proposal.

Your tribe's input is important to the City's planning process. We request that you advise us as early as possible if you wish to consult on the proposed project. Under AB 52, you have 30 days and under the provisions of SB 18, have 90 days from the date of receipt of this notice to advise the City if you are interested in further consultation. If you require any additional information or have any questions, please contact me at (831) 884-1217 or via e-mail at abarton@cityofmarina.org. Thank you for your assistance.

Respectfully,

Alec Barton
Assistant Planner
Community Development Department
City of Marina


Specific Plan
Zone
Core
Multifamily Residential
Transition
Mixed-use Node
Del Monte Blvd
Reservation Rd
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Feet

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211 HILLCREST AVENUE
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831-884-1278; FAX 831-384-9148
www.cityofmarina.org

June 26, 2019

Indian Canyon Mutsun Band of Costanoan
PO Box 28
Hollister, CA 95024

Regarding: Assembly Bill 52 and Senate Bill 18 Consultation, Marina Downtown Vitalization Specific Plan Focused EIR, Marina, Monterey County, California

Dear Ms. Sayers:

The City of Marina is preparing a Focused Environmental Impact Report for the Marina Downtown Vitalization Specific Plan. The project proposes the development of a Specific Plan to guide future development within an approximately 322-acre area around Reservation Road and Del Monte Boulevard within the City of Marina (see enclosed map).

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Alec Barton
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Community Development Department
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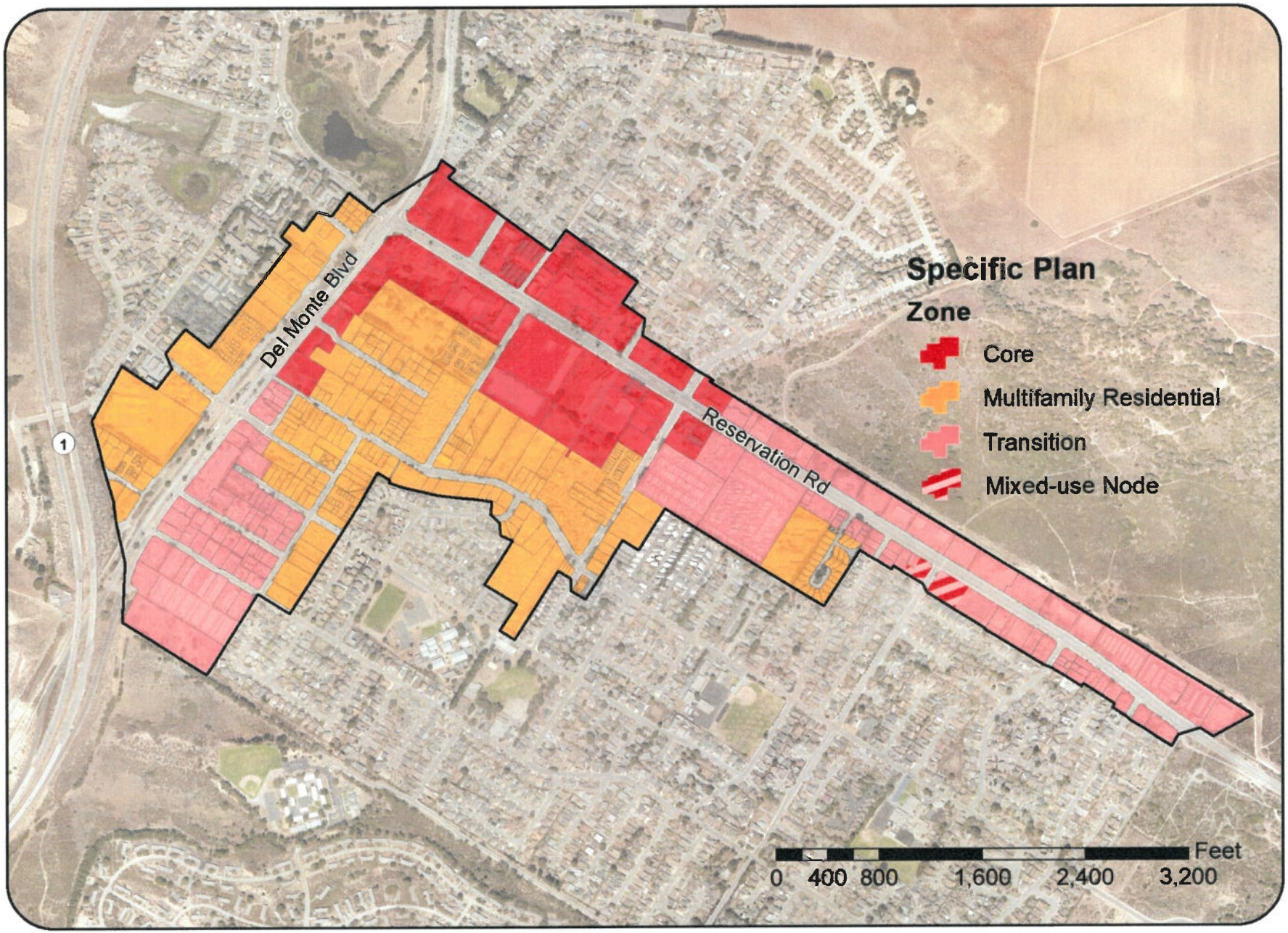
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June 26, 2019

Amah Mutsun Tribal Band
PO Box 5272
Galt, CA 95632

Regarding: Assembly Bill 52 and Senate Bill 18 Consultation, Marina Downtown Vitalization Specific Plan Focused EIR, Marina, Monterey County, California

Dear Mr. Lopez:

The City of Marina is preparing a Focused Environmental Impact Report for the Marina Downtown Vitalization Specific Plan. The project proposes the development of a Specific Plan to guide future development within an approximately 322-acre area around Reservation Road and Del Monte Boulevard within the City of Marina (see enclosed map).

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Alec Barton
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Community Development Department
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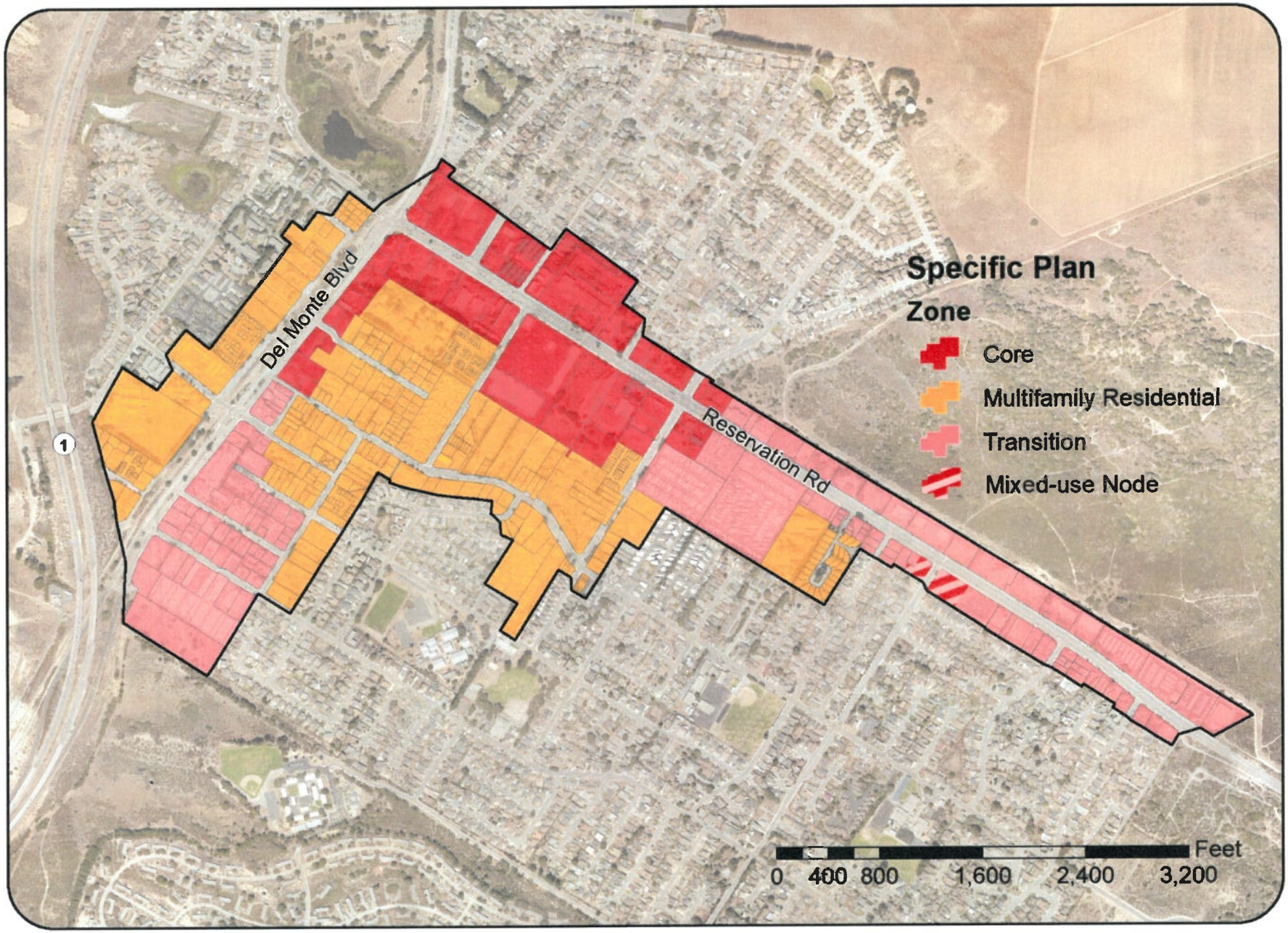
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June 26, 2019

Ohlone/Coastanoan-Esselen Nation
PO Box 1301
Monterey, CA 93942

Regarding: Assembly Bill 52 and Senate Bill 18 Consultation, Marina Downtown Vitalization Specific Plan Focused EIR, Marina, Monterey County, California

Dear Ms. Miranda-Ramirez:

The City of Marina is preparing a Focused Environmental Impact Report for the Marina Downtown Vitalization Specific Plan. The project proposes the development of a Specific Plan to guide future development within an approximately 322-acre area around Reservation Road and Del Monte Boulevard within the City of Marina (see enclosed map).

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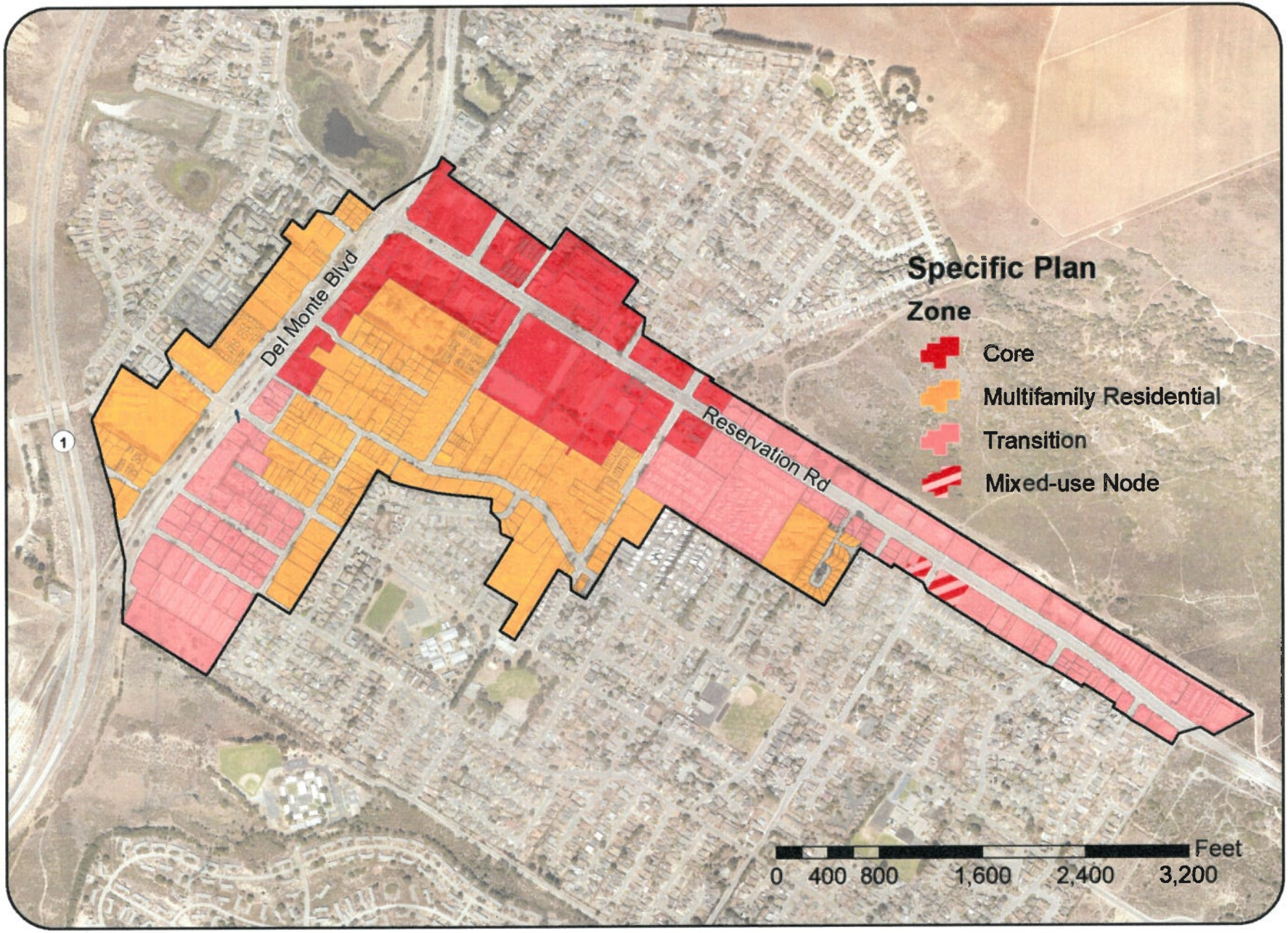
Alec Barton
Assistant Planner
Community Development Department
City of Marina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www.cityofmarina.org

June 26, 2019

Coastanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomona, CA 91766

Regarding: Assembly Bill 52 and Senate Bill 18 Consultation, Marina Downtown Vitalization Specific Plan Focused EIR, Marina, Monterey County, California

Dear Mr. Cerda:

The City of Marina is preparing a Focused Environmental Impact Report for the Marina Downtown Vitalization Specific Plan. The project proposes the development of a Specific Plan to guide future development within an approximately 322-acre area around Reservation Road and Del Monte Boulevard within the City of Marina (see enclosed map).

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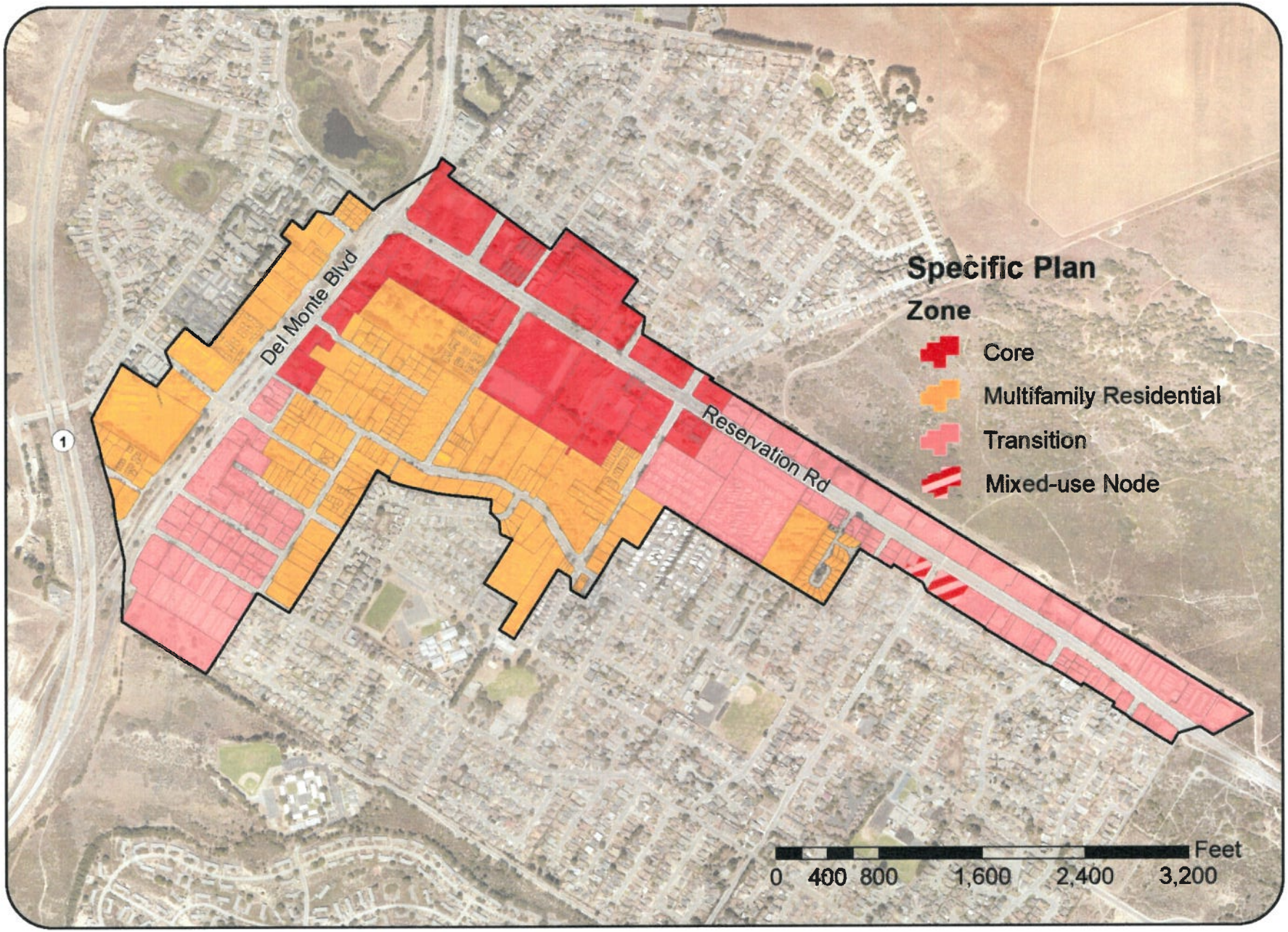
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June 26, 2019

Esselen Tribe of Monterey County
38655 Tassajara Road
Carmel Valley, CA 93924

Regarding: Assembly Bill 52 and Senate Bill 18 Consultation, Marina Downtown Vitalization Specific Plan Focused EIR, Marina, Monterey County, California

Dear Mr. Nason:

The City of Marina is preparing a Focused Environmental Impact Report for the Marina Downtown Vitalization Specific Plan. The project proposes the development of a Specific Plan to guide future development within an approximately 322-acre area around Reservation Road and Del Monte Boulevard within the City of Marina (see enclosed map).

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Respectfully,

Alec Barton
Assistant Planner
Community Development Department
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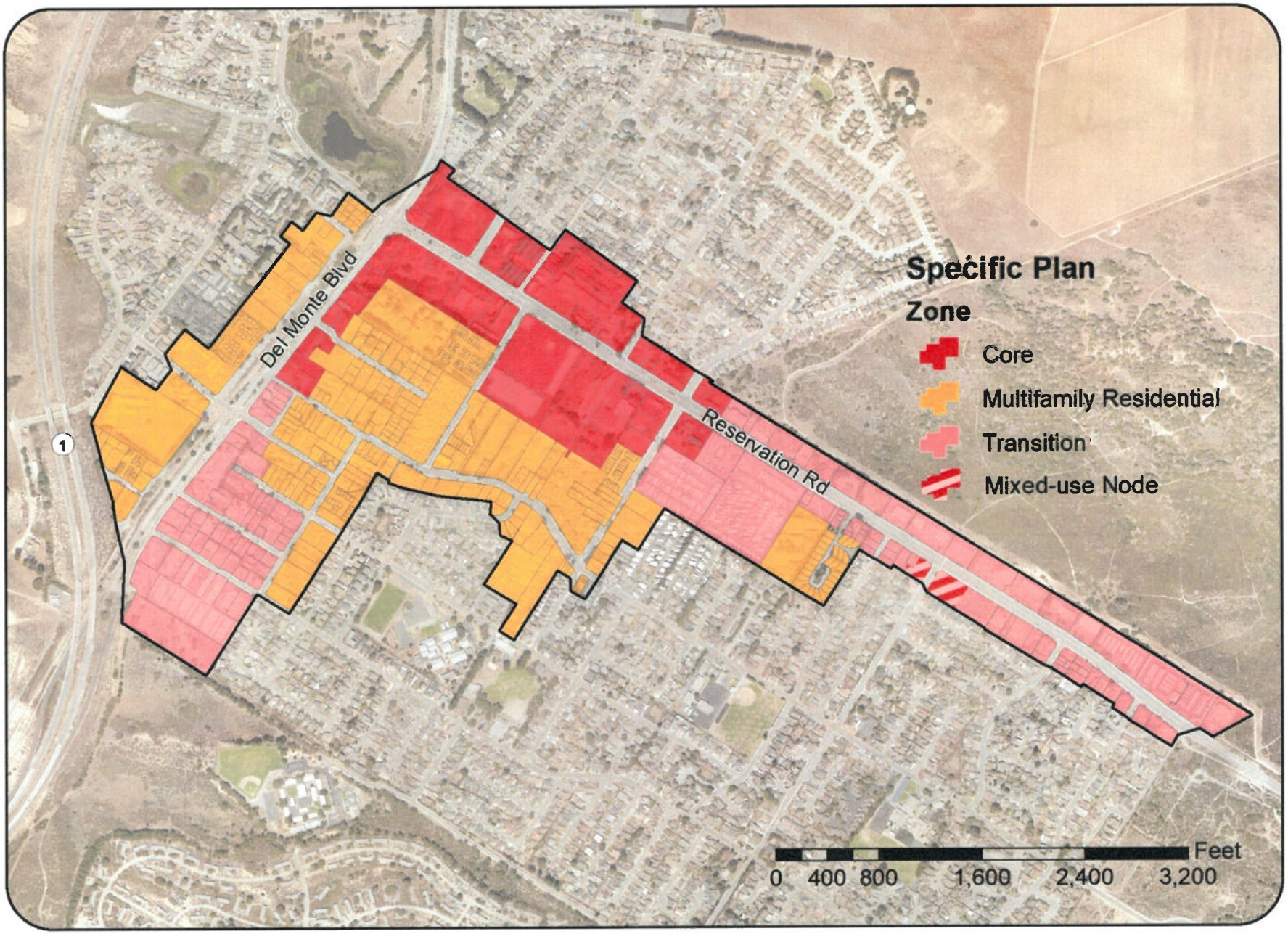
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Appendix NOI

Noise Analysis Data

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

BVSP Downtown Vitalization Specific Plan

Project Name: ~~American Canyon~~ **Job Number:** 19-07378

Date: 6/18/19 **Operator Name:** Christy B Saldoor Karli Grigsby

Measurement #1

Location: Lake Drive and Hwy. 1 **Begin time:** 10:30 AM **Finish time:** 10:45 AM

Measurement No.: ST2 (#1) **Wind (mph):** 3 gusts up to 10 **Direction:** ~~SE~~ ~~Southeast~~ WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94

Primary Noise Sources: wind, highway traffic **Distance:** 50ft. from roadway centerline

Secondary Noise Sources: birds, kids outside school, wind chimes, dog barking

Notes:

Traffic Count: Passenger Cars: 11 (2)

Medium to Heavy Duty Trucks (3 axles): _____ Heavy Duty Trucks (4+ axles): _____

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

~~Either~~

Leq: 59.5 **SEL:** 89.0 **Lmax:** 69.0 **Lmin:** 45.1 **PK:** ← Pk: 112.5

L(05): 63.3 **L(10):** 62.3 **L(50):** 58.5 **L(90):** 54.2 **L(95):** 53.0

Response: Slow Fast Peak Impulse

Measurement #2

Location: _____ **Begin time:** _____ **Finish time:** _____

Measurement No.: _____ **Wind (mph):** _____ **Direction:** _____

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: _____ End: _____

Primary Noise Sources: _____ **Distance:** _____

Secondary Noise Sources: _____

Notes: _____

Traffic Count: Passenger Cars: _____

Medium to Heavy Duty Trucks (3 axles): _____ Heavy Duty Trucks (4+ axles): _____

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.): _____

Leq: _____ **SEL:** _____ **Lmax:** _____ **Lmin:** _____ **PK:** _____

L(05): _____ **L(10):** _____ **L(50):** _____ **L(90):** _____ **L(95):** _____

Response: Slow Fast Peak Impulse

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP Downtown Vitalization Specific Plan

Project Name: ~~American Tin Cannery~~ **Job Number:** 19-07378

Date: 6/18/19 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Del Monte blvd. + Palm Ave. **Begin time:** 10:56 AM **Finish time:** 11:11 AM

Measurement No.: ST3 (#2) **Wind (mph):** 3 mph **Direction:** WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94

Primary Noise Sources: ~~roadway traffic~~ **Distance:** 50 feet

Secondary Noise Sources: people talking at 7-11 gas station + bus stop, wind, birds, fire station - fire truck backing up

Notes:

Traffic Count: Passenger Cars: |||| |||| |||| |||| |||| + approx. 300 = 335

Medium to Heavy Duty Trucks (3 axles): 11 Heavy Duty Trucks (4+ axles): |||| |

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 70.0 **SEL:** 99.5 **Lmax:** 83.6 **Lmin:** 50.8 **PK:** 111.1 (PK)

L(05): 74.1 **L(10):** 72.8 **L(50):** 63.4 **L(90):** 55.2 **L(95):** 53.5

Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP Downtown Visitation Specific Plan

Project Name: American Tin Cannery **Job Number:** 19-07378

Date: 6/18/19 **Operator Name:** Christy Salado + Karli Quigley

Measurement #1

Location: Reservation Rd. + Mortimer Lane **Begin time:** 11:20 AM **Finish time:** 11:35 AM

Measurement No.: ST4 (#3) **Wind (mph):** 3 **Direction:** WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94

Primary Noise Sources: roadway traffic. **Distance:** 50 ft from centerline of Reservation Road

Secondary Noise Sources: birds, people talking/wind, Marina Drive, doctors on duty + KFC parking lot

Notes:

Traffic Count: Passenger Cars: 268

Medium to Heavy Duty Trucks (3 axles): IIII III Heavy Duty Trucks (4+ axles): III II

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 70.0 **SEL:** 99.5 **Lmax:** 79.5 **Lmin:** 47.6 **PK:** 111.7 (PH)

L(05): 74.3 **L(10):** 72.9 **L(50):** 64.3 **L(90):** 51.1 **L(95):** 49.2

Response: (Slow) Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP

Project Name: ~~American Tin Cannery~~ **Job Number:** 19-07378

Date: 5/18/19 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Reservation Rd. & De Forest Rd **Begin time:** 11:54 AM **Finish time:** 12:14 PM

Measurement No.: ST5 (#4) **Wind (mph):** 3 **Direction:** WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) (Sunny) (<20%)

Calibration (dB): Start: 94 End: 94.3

Primary Noise Sources: roadway traffic, wind **Distance:** 30 & 150 ft. from centerline

Secondary Noise Sources: bus transit exchange station, people biking + skateboarding

Notes:

Traffic Count: Passenger Cars: 287

Medium to Heavy Duty Trucks (3 axles): 11 Heavy Duty Trucks (4+ axles): 𝍸 𝍸 III

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 59.9 **SEL:** 89.4 **Lmax:** 74.8 **Lmin:** 49.7 **PK:** 110.5 (P#)

L(05): 63.8 **L(10):** 62.5 **L(50):** 57.6 **L(90):** 53.0 **L(95):** 51.7

Response: (Slow) Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP

Project Name: ~~American Tin Cannery~~ **Job Number:** 19-07378

Date: 6/18/19 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Reservation Rd. + ~~[illegible]~~ Bayer St. **Begin time:** 12:30 PM **Finish time:** 12:45 PM

Measurement No.: ST6 (#5) **Wind (mph):** 9 **Direction:** WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94.2

Primary Noise Sources: roadway traffic, wind, **Distance:** 100 ft. from centerline

Secondary Noise Sources: flag + flagpole, children in apts. nearby

Notes:

Traffic Count: Passenger Cars: 239

Medium to Heavy Duty Trucks (3 axles): ~~||||~~ Heavy Duty Trucks (4+ axles): ~~||||~~

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 70.0 **SEL:** 99.5 **Lmax:** 82.4 **Lmin:** 48.1 **PK:** 111.7 (PH)

L(05): 77.0 **L(10):** 75.6 **L(50):** 69.2 **L(90):** 55.9 **L(95):** 52.5

Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP

Project Name: American Tin Cannery **Job Number:** 19-07378

Date: 6-18-2019 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Seacrest Ave. **Begin time:** 1:04 PM **Finish time:** 1:19 PM

Measurement No.: ST8 (#6) **Wind (mph):** 9 **Direction:** WNW

Cloud Cover Class: ~~Overcast (>80%)~~ Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: ~~94~~ 93.8

Primary Noise Sources: roadway traffic **Distance:** 50 ft. from centerline

Secondary Noise Sources: car stereo, leaf blower, pedestrian walking, child on bike

Notes:

Traffic Count: Passenger Cars: 95

Medium to Heavy Duty Trucks (3 axles): 1 Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 61.5 **SEL:** 91.0 **Lmax:** 75.9 **Lmin:** 49.0 **PK:** 109.7 (PH)

L(05): 66.2 **L(10):** 65.3 **L(50):** 58.4 **L(90):** 51.5 **L(95):** 50.2

Response: (Slow) Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP

Project Name: American Tin Cannery **Job Number:** 19-07378

Date: 6/18/19 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Carmel Avenue **Begin time:** 1:32 PM **Finish time:** 1:47 PM

Measurement No.: ST87 (#1) **Wind (mph):** 9 **Direction:** WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94.2

Primary Noise Sources: ~~roadway traffic~~, birds **Distance:** 50 ft. from centerline

Secondary Noise Sources: truck backing up

Notes:

Traffic Count: Passenger Cars: 66

Medium to Heavy Duty Trucks (3 axles): 1 Heavy Duty Trucks (4+ axles): 1

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 60.8 **SEL:** 90.3 **Lmax:** 74.8 **Lmin:** 47.3 **PK:** 113.9 (PH)

L(05): 65.9 **L(10):** 64.8 **L(50):** 57.0 **L(90):** 50.3 **L(95):** 49.0

Response: (Slow) Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

LT San Pablo Ct. Msmt.
~12:[illegible] PM
52
6-20-2019 Karli Grigsby

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP

Project Name: ~~American Tin Cannery~~ **Job Number:** 19-07378

Date: ~~6/18/19~~ 6-20-2019 **Operator Name:** Karli Grigsby

Measurement #1

Location: San Pablo Ct. **Begin time:** 12:58 PM **Finish time:** 1:13 PM

Measurement No.: ST1 (#1) **Wind (mph):** 11 **Direction:** W

Cloud Cover Class: (Overcast (>80%)) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94

Primary Noise Sources: ~~roadway traffic~~, birds **Distance:** 200 ft. from Hwy. 1

Secondary Noise Sources: dog barking

Notes:

Traffic Count: Passenger Cars: IIII (4)

Medium to Heavy Duty Trucks (3 axles): _____ Heavy Duty Trucks (4+ axles): _____

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 58.0 **SEL:** 87.5 **Lmax:** 62.9 **Lmin:** 53.4 **PK:** —

L(05): — **L(10):** — **L(50):** — **L(90):** — **L(95):** —

Response: (Slow) Fast Peak Impulse

Measurement #2

Location: _____ **Begin time:** _____ **Finish time:** _____

Measurement No.: _____ **Wind (mph):** _____ **Direction:** _____

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: _____ End: _____

Primary Noise Sources: _____ **Distance:** _____

Secondary Noise Sources: _____

Notes: _____

Traffic Count: Passenger Cars: _____

Medium to Heavy Duty Trucks (3 axles): _____ Heavy Duty Trucks (4+ axles): _____

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.): _____

Leq: _____ **SEL:** _____ **Lmax:** _____ **Lmin:** _____ **PK:** _____

L(05): _____ **L(10):** _____ **L(50):** _____ **L(90):** _____ **L(95):** _____

Response: Slow Fast Peak Impulse

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Notes: DVSP

6-20-2019 Karli Grigsby

Lake Ct. Start: 1:22 PM End: 1:37 PM

ST2 (#2) wind 11 mph W

Calibration: 94 (start) (end)

overcast >80%

Distance: 50 ft. from Lake Ct. centerline

primary noise: roadway traffic secondary: children outside at school

Leq: 61.9 SEL: 91.4 Lmax: 67.5 Lmin: 55.9

response: slow

passenger cars: NN

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/19/2019
Case Description: Marina DVSP

				---- Receptor #1 ----
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	50	0
Dump Truck	No	40		76.5	50	0
Front End Loader	No	40		79.1	50	0

Results

Calculated (dBA)

Equipment		*Lmax	Leq
Excavator		80.7	76.7
Dump Truck		76.5	72.5
Front End Loader		79.1	75.1
	Total	80.7	79.9

*Calculated Lmax is the Loudest value.

Report date: 6/19/2019
Case Description: Marina DVSP

				---- Receptor #1 ----
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	500	0
Dump Truck	No	40		76.5	500	0
Front End Loader	No	40		79.1	500	0

		Results	
		Calculated (dBA)	
Equipment		*Lmax	Leq
Excavator		60.7	56.7
Dump Truck		56.5	52.5
Front End Loader		59.1	55.1
	Total	60.7	59.9

*Calculated Lmax is the Loudest value.

OPERATION AIR QUANTITY LIMITS

48PG03-14 Vertical and Horizontal Units

UNIT 48PG	COOLING (cfm)		HEATING (cfm)*	
	Min	Max	Min	Max
03	600	1000	600	1680
04 (Low Heat)	900	1500	600	1680
04 (Med Heat)	900	1500	940	2810
04 (High Heat)	900	1500	1130	2820
05 (Low Heat)	1200	2000	600	1680
05 (Med Heat)	1200	2000	940	2810
05 (High Heat)	1200	2000	1130	2820
06 (Low Heat)	1500	2500	940	2810
06 (Med Heat)	1500	2500	1130	2820
06 (High Heat)	1500	2500	1510	2520
07 (Low Heat)	1800	3000	940	2810
07 (Med Heat)	1800	3000	1130	2820
07 (High Heat)	1800	3000	1510	2520
08 (Low Heat)	2250	3750	2060	5160
08 (Med Heat)	2250	3750	2110	6870
08 (High Heat)	2250	3750	2450	4900
09 (Low Heat)	2550	4250	2060	5160
09 (Med Heat)	2550	4250	2110	6870
09 (High Heat)	2550	4250	2450	4900
12 (Low Heat)	3000	5000	2110	6870
12 (Med Heat)	3000	5000	2450	4900
12 (High Heat)	3000	5000	3150	6300
14 (Low Heat)	3750	6250	2110	6870
14 (Med Heat)	3750	6250	2450	4900
14 (High Heat)	3750	6250	3150	6300

*Consult tables on pages 8 and 9 if using a stainless steel heat exchanger.

Outdoor Sound Power (Total Unit)

UNIT 48PG	A–WEIGHTED* (dB)	OCTAVE BAND LEVELS dB							
		63	125	250	500	1000	2000	4000	8000
03	75.0	82.6	79.9	75.7	73.3	70.0	64.3	58.4	50.5
04	73.2	79.8	77.2	74.1	70.1	68.0	63.6	58.4	51.9
05	71.9	79.7	79.6	72.6	69.6	66.0	61.4	56.4	48.5
06	78.5	82.2	82.6	79.5	75.7	73.9	68.6	64.0	56.3
07	78.5	87.5	83.0	78.5	76.3	73.8	68.4	63.8	56.5
08	80.0	91.7	83.6	81.0	77.9	75.0	69.9	66.0	59.3
09	79.9	89.1	82.7	80.0	77.7	75.0	70.2	66.3	57.8
12	80.0	90.4	83.1	80.9	77.8	75.2	70.0	66.1	57.6
14	83.3	86.4	85.9	85.3	81.8	78.2	72.2	67.9	59.9

LEGEND

dB – Decibel

***** Sound Rating AHRI or tone Adjusted, A–Weighted Sound Power Level in dB. For sizes 03–12, the sound rating is in accordance with AHRI Standard 270–1995. For sizes 14, the sound rating is in accordance with AHRI 370–2010.

FHWA RD-77-108

Traffic Noise Prediction Model

Data Input Sheet

Project Name : Marina DVSP
Project Number : 19-07378
Modeled Condition : Existing

Surface Refelction: Ldn
Assessment Metric: Soft
Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
1	Del Monte Blvd	HW1 to Reindollar Ave		2,135	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
2		Reindollar Ave to Palm Ave		1,663	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
3		Palm Ave to Reservation Rd		1,510	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
4	Reservation Rd	Del Monte Blvd to Vista Del Camino		1,763	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
5		Vista Del Camino Cir to Seacrest Ave		1,759	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
6		Seacrest Ave to De Forest Rd		1,696	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
7		De Forest Rd to Crescent Ave		1,720	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
8		Crescent Ave to California Ave		1,669	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
9		California Ave to Salinas Ave		1,515	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
10		Salinas Ave to out of DVSP		1,518	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
11	Reindollar Ave	Del Monte Blvd to east		678	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
12	Cypress Ave	Del Monte Blvd to east		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
13	Palm Ave	Del Monte Blvd to east		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
14	Carmel Ave	Del Monte Blvd to east		678	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
15	Mortimer Ln	Del Monte Blvd to east		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
16	Vista Del Camino Cir	Reservation Road to north		584	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
17	Seacrest Ave	Reservation Road to south		550	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
18	De Forest Rd	Reservation Road to north		225	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
19	Crescent	Reservation Road to north		203	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
20		Reservation Road to south		422	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
21	California Ave	Reservation Road to south		378	35	50	98.50	1.00	0.50	84.00	0.00	16.00	
22	Lynscott Dr	Reservation Road to south		378	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
23	Bayer St	Reservation Road to south		378	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
24	Salinas Ave	Reservation Road to south		34	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
25	Sunset Avenue	Reindollar Ave to Carmel Ave		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
26	Hillcrest Ave	End of street towards Zanetta Drive		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	

FHWA RD-77-108

Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : Marina DVSP
Project Number : 19-07378
Modeled Condition : Existing
Assessment Metric: Soft

		Segment		Noise Levels, dBA Soft				Distance to Traffic Noise Level Contours, Feet					
Segment	Roadway	From	To	Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Del Monte Blvd	HW1 to Reindollar Ave		67.5	60.4	65.6	70	24	51	109	236	508	1,094
2		Reindollar Ave to Palm Ave		66.4	59.3	64.5	69	20	43	92	199	429	924
3		Palm Ave to Reservation Rd		66.0	58.9	64.0	69	19	40	87	187	403	869
4	Reservation Rd	Del Monte Blvd to Vista Del Camino		66.6	59.5	64.7	69	21	45	97	208	449	967
5		Vista Del Camino Cir to Seacrest Ave		66.6	59.5	64.7	69	21	45	97	208	449	967
6		Seacrest Ave to De Forest Rd		66.5	59.4	64.6	69	20	44	94	202	435	938
7		De Forest Rd to Crescent Ave		66.5	59.4	64.6	69	21	44	95	205	442	953
8		Crescent Ave to California Ave		68.1	60.2	65.0	70	24	52	113	243	524	1,128
9		California Ave to Salinas Ave		67.7	59.8	64.6	70	23	49	106	229	492	1,061
10		Salinas Ave to out of DVSP		67.7	59.8	64.6	70	23	49	106	229	492	1,061
11	Reindollar Ave	Del Monte Blvd to east		58.4	50.1	54.7	60	5	11	25	53	115	247
12	Cypress Ave	Del Monte Blvd to east		52.6	44.3	48.9	55	2	5	10	21	46	100
13	Palm Ave	Del Monte Blvd to east		52.6	44.3	48.9	55	2	5	10	21	46	100
14	Carmel Ave	Del Monte Blvd to east		58.4	50.1	54.7	60	5	11	25	53	115	247
15	Mortimer Ln	Del Monte Blvd to east		52.6	44.3	48.9	55	2	5	10	21	46	100
16	Vista Del Camino Cir	Reservation Road to north		57.8	49.4	54.1	60	5	10	22	48	103	222
17	Seacrest Ave	Reservation Road to south		57.5	49.2	53.8	60	5	10	21	46	100	215
18	De Forest Rd	Reservation Road to north		53.6	45.3	49.9	56	3	5	12	25	55	118
19	Crescent	Reservation Road to north		53.2	44.8	49.5	55	2	5	11	24	51	109
20		Reservation Road to south		56.3	48.0	52.6	58	4	8	18	39	83	179
21	California Ave	Reservation Road to south		60.1	49.8	52.0	61	6	13	27	58	126	271
22	Lynscott Dr	Reservation Road to south		55.9	47.5	52.2	58	4	8	17	36	77	166
23	Bayer St	Reservation Road to south		55.9	47.5	52.2	58	4	8	17	36	77	166
24	Salinas Ave	Reservation Road to south		45.4	37.1	41.7	47	1	2	3	7	16	34
25	Sunset Avenue	Reindollar Ave to Carmel Ave		52.6	44.3	48.9	55	2	5	10	21	46	100
26	Hillcrest Ave	End of street towards Zanetta Drive		52.6	44.3	48.9	55	2	5	10	21	46	100

FHWA RD-77-108

Traffic Noise Prediction Model

Data Input Sheet

Project Name : Marina DVSP
Project Number : 19-07378
Modeled Condition : Future

Surface Refelction: Ldn
Assessment Metric: Soft
Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
1	Del Monte Blvd	HW1 to Reindollar Ave		2,493	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
2		Reindollar Ave to Palm Ave		1,959	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
3		Palm Ave to Reservation Rd		1,714	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
4	Reservation Rd	Del Monte Blvd to Vista Del Camino		2,139	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
5		Vista Del Camino Cir to Seacrest Ave		2,018	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
6		Seacrest Ave to De Forest Rd		1,995	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
7		De Forest Rd to Crescent Ave		1,993	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
8		Crescent Ave to California Ave		1,917	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
9		California Ave to Salinas Ave		1,840	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
10		Salinas Ave to out of DVSP		1,880	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
11	Reindollar Ave	Del Monte Blvd to east		945	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
12	Cypress Ave	Del Monte Blvd to east		248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
13	Palm Ave	Del Monte Blvd to east		248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
14	Carmel Ave	Del Monte Blvd to east		945	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
15	Mortimer Ln	Del Monte Blvd to east		248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
16	Vista Del Camino Cir	Reservation Road to north		757	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
17	Seacrest Ave	Reservation Road to south		774	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
18	De Forest Rd	Reservation Road to north		322	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
19	Crescent	Reservation Road to north		246	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
20		Reservation Road to south		584	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
21	California Ave	Reservation Road to south		547	35	50	98.50	1.00	0.50	84.00	0.00	16.00	
22	Lynscott Dr	Reservation Road to south		547	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
23	Bayer St	Reservation Road to south		547	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
24	Salinas Ave	Reservation Road to south		136	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
25	Sunset Avenue	Reindollar Ave to Carmel Ave		248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
26	Hillcrest Ave	End of street towards Zanetta Drive		248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	

FHWA RD-77-108

Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : Marina DVSP
Project Number : 19-07378
Modeled Condition : Future
Assessment Metric: Soft

		Segment		Noise Levels, dBA Soft				Distance to Traffic Noise Level Contours, Feet					
Segment	Roadway	From	To	Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Del Monte Blvd	HW1 to Reindollar Ave		68.2	61.0	66.2	71	26	57	122	262	565	1,218
2		Reindollar Ave to Palm Ave		67.1	60.0	65.2	70	22	48	103	222	477	1,029
3		Palm Ave to Reservation Rd		66.5	59.4	64.6	69	21	44	95	205	442	953
4	Reservation Rd	Del Monte Blvd to Vista Del Camino		67.5	60.4	65.6	70	24	51	109	236	508	1,094
5		Vista Del Camino Cir to Seacrest Ave		67.2	60.1	65.3	70	23	49	106	229	492	1,061
6		Seacrest Ave to De Forest Rd		67.2	60.1	65.3	70	23	48	104	225	485	1,045
7		De Forest Rd to Crescent Ave		67.2	60.1	65.3	70	23	48	104	225	485	1,045
8		Crescent Ave to California Ave		68.7	60.8	65.6	71	27	57	124	266	574	1,237
9		California Ave to Salinas Ave		68.5	60.6	65.4	71	26	56	120	258	557	1,199
10		Salinas Ave to out of DVSP		68.6	60.7	65.5	71	26	57	122	262	565	1,218
11	Reindollar Ave	Del Monte Blvd to east		59.8	51.5	56.1	62	7	14	31	66	142	306
12	Cypress Ave	Del Monte Blvd to east		54.0	45.7	50.3	56	3	6	13	27	58	126
13	Palm Ave	Del Monte Blvd to east		54.0	45.7	50.3	56	3	6	13	27	58	126
14	Carmel Ave	Del Monte Blvd to east		59.8	51.5	56.1	62	7	14	31	66	142	306
15	Mortimer Ln	Del Monte Blvd to east		54.0	45.7	50.3	56	3	6	13	27	58	126
16	Vista Del Camino Cir	Reservation Road to north		58.9	50.6	55.2	61	6	12	27	57	124	266
17	Seacrest Ave	Reservation Road to south		59.0	50.7	55.3	61	6	12	27	57	124	266
18	De Forest Rd	Reservation Road to north		55.2	46.9	51.5	57	3	7	15	32	69	149
19	Crescent	Reservation Road to north		54.0	45.7	50.3	56	3	6	13	27	58	126
20		Reservation Road to south		57.8	49.4	54.1	60	5	10	22	48	103	222
21	California Ave	Reservation Road to south		61.7	51.4	53.6	63	7	16	35	75	161	346
22	Lynscott Dr	Reservation Road to south		57.5	49.2	53.8	59	5	10	21	46	98	212
23	Bayer St	Reservation Road to south		57.5	49.2	53.8	59	5	10	21	46	98	212
24	Salinas Ave	Reservation Road to south		51.4	43.1	47.7	53	2	4	8	18	39	84
25	Sunset Avenue	Reindollar Ave to Carmel Ave		54.0	45.7	50.3	56	3	6	13	27	58	126
26	Hillcrest Ave	End of street towards Zanetta Drive		54.0	45.7	50.3	56	3	6	13	27	58	126

Appendix AIR

CalEEMod Data

Marina Downtown Vitalization Specific Plan - Proposed - 2040

Monterey Bay Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	510.53	1000sqft	11.72	510,528.00	0
Apartments Low Rise	2,904.00	Dwelling Unit	181.50	2,904,000.00	7957
Regional Shopping Center	874.67	1000sqft	20.08	874,669.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	97.62	**CH4 Intensity (lb/MWhr)**	0.005	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Linear interpolation of RPS for 2030 and 2045.

Land Use - Land uses based on PD. Pop based on US Census 2019 estimate of 2.74 persons per household in Marina.

Construction Phase - Phase lengths are default. Adjusted start dates so that all phases would be overlapping to estimate worst case impacts.

Trips and VMT -

Demolition - Estimated that half of existing residential units and half of existing retail/office space would be demolished and redeveloped.

Grading - Assumed no substantial import/export required.

Architectural Coating - MBARD Rule 426

Vehicle Trips - Calculated in EMFAC2017

Woodstoves -

Area Coating - MBARD Rule 426

Energy Use - Includes 30% reduction in nonresidential electricity use for 2019 Code. 2019 Building Code requires all electricity met by solar on low-rise residential

Water And Wastewater - Reduced indoor water use by 20% for CALGreen. Monterey One Water uses anaerobic digestors only.

Solid Waste -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation - Compliance with CALGreen and DVSP ES Objective 1, Strategy 6

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	100.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	100
tblAreaCoating	Area_EF_Parking	150	100
tblEnergyUse	LightingElect	810.36	0.00
tblEnergyUse	NT24E	3,172.76	0.00

tblEnergyUse	T24E	365.68	0.00
tblEnergyUse	T24E	6.11	4.28
tblEnergyUse	T24E	2.76	1.93
tblLandUse	LandUseSquareFeet	510,530.00	510,528.00
tblLandUse	LandUseSquareFeet	874,670.00	874,669.00
tblLandUse	Population	8,305.00	7,957.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.005
tblProjectCharacteristics	CO2IntensityFactor	641.35	97.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblVehicleTrips	HO_TTP	37.20	37.00
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	ST_TR	7.16	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	6.07	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	6.59	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	42.70	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	179.6600	230.0563	228.7790	0.6066	61.9322	7.7342	69.6665	22.3178	7.1646	29.4824	0.0000	60,715.3854	60,715.3854	7.4737	0.0000	60,902.2278
2022	173.0907	167.2949	193.0419	0.5569	45.8876	4.7222	50.6098	12.8804	4.3872	17.2676	0.0000	55,866.2244	55,866.2244	6.1445	0.0000	56,019.8365
2023	163.8546	72.6158	115.2958	0.3985	28.6172	1.0299	29.6470	7.6729	0.9707	8.6436	0.0000	40,329.1941	40,329.1941	2.0372	0.0000	40,380.1245
2024	11.8772	66.9005	92.4480	0.3500	24.4524	0.8316	25.2840	6.5682	0.7803	7.3485	0.0000	35,515.5226	35,515.5226	1.8234	0.0000	35,561.1068
2025	11.1680	64.2883	86.4140	0.3418	24.4526	0.7381	25.1906	6.5683	0.6923	7.2606	0.0000	34,697.7920	34,697.7920	1.7604	0.0000	34,741.8024
2026	10.6467	62.9097	81.1679	0.3340	24.4527	0.7290	25.1816	6.5683	0.6838	7.2521	0.0000	33,930.1494	33,930.1494	1.7025	0.0000	33,972.7126
2027	10.1524	61.6547	76.5955	0.3276	24.4527	0.7176	25.1703	6.5683	0.6731	7.2414	0.0000	33,292.5358	33,292.5358	1.6526	0.0000	33,333.8502
2028	9.6491	60.5915	72.6482	0.3220	24.4528	0.7056	25.1584	6.5684	0.6620	7.2303	0.0000	32,731.9809	32,731.9809	1.6068	0.0000	32,772.1499
2029	9.1117	59.6129	68.8429	0.3170	24.4528	0.6946	25.1474	6.5684	0.6517	7.2201	0.0000	32,234.8918	32,234.8918	1.5636	0.0000	32,273.9822
2030	8.5283	54.2108	65.5537	0.3166	24.4529	0.3050	24.7578	6.5684	0.2941	6.8625	0.0000	32,142.2834	32,142.2834	1.0387	0.0000	32,168.2508
2031	7.9701	53.4231	62.3358	0.3128	24.4529	0.2956	24.7485	6.5684	0.2855	6.8539	0.0000	31,765.7448	31,765.7448	1.0026	0.0000	31,790.8102

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2032	7.4830	52.7392	59.5657	0.3095	24.4529	0.2872	24.7401	6.5684	0.2776	6.8460	0.0000	31,443.4759	31,443.4759	0.9715	0.0000	31,467.7642
2033	7.0739	52.1592	57.2350	0.3068	24.4530	0.2796	24.7326	6.5684	0.2707	6.8391	0.0000	31,167.5398	31,167.5398	0.9457	0.0000	31,191.1824
2034	6.7289	51.6632	55.0731	0.3044	24.4530	0.2727	24.7257	6.5684	0.2642	6.8326	0.0000	30,931.6746	30,931.6746	0.9216	0.0000	30,954.7144
2035	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
2036	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
2037	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
2038	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
2039	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
Maximum	**179.6600**	**230.0563**	**228.7790**	**0.6066**	**61.9322**	**7.7342**	**69.6665**	**22.3178**	**7.1646**	**29.4824**	**0.0000**	**60,715.3854**	**60,715.3854**	**7.4737**	**0.0000**	**60,902.2278**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	179.6600	230.0563	228.7790	0.6066	61.9322	7.7342	69.6665	22.3178	7.1646	29.4824	0.0000	60,715.3854	60,715.3854	7.4737	0.0000	60,902.2277
2022	173.0907	167.2949	193.0419	0.5569	45.8876	4.7222	50.6098	12.8804	4.3872	17.2676	0.0000	55,866.2244	55,866.2244	6.1445	0.0000	56,019.8365
2023	163.8546	72.6158	115.2958	0.3985	28.6172	1.0299	29.6470	7.6729	0.9707	8.6436	0.0000	40,329.1941	40,329.1941	2.0372	0.0000	40,380.1244

Marina Downtown Vitalization Specific Plan - Proposed - 2040 - Monterey Bay Unified APCD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	11.8772	66.9005	92.4480	0.3500	24.4524	0.8316	25.2840	6.5682	0.7803	7.3485	0.0000	35,515.5226	35,515.5226	1.8234	0.0000	35,561.1068
2025	11.1680	64.2883	86.4140	0.3418	24.4526	0.7381	25.1906	6.5683	0.6923	7.2606	0.0000	34,697.7920	34,697.7920	1.7604	0.0000	34,741.8024
2026	10.6467	62.9097	81.1679	0.3340	24.4527	0.7290	25.1816	6.5683	0.6838	7.2521	0.0000	33,930.1494	33,930.1494	1.7025	0.0000	33,972.7126
2027	10.1524	61.6547	76.5955	0.3276	24.4527	0.7176	25.1703	6.5683	0.6731	7.2414	0.0000	33,292.5358	33,292.5358	1.6526	0.0000	33,333.8502
2028	9.6491	60.5915	72.6482	0.3220	24.4528	0.7056	25.1584	6.5684	0.6620	7.2303	0.0000	32,731.9809	32,731.9809	1.6068	0.0000	32,772.1499
2029	9.1117	59.6129	68.8429	0.3170	24.4528	0.6946	25.1474	6.5684	0.6517	7.2201	0.0000	32,234.8918	32,234.8918	1.5636	0.0000	32,273.9822
2030	8.5283	54.2108	65.5537	0.3166	24.4529	0.3050	24.7578	6.5684	0.2941	6.8625	0.0000	32,142.2834	32,142.2834	1.0387	0.0000	32,168.2508
2031	7.9701	53.4231	62.3358	0.3128	24.4529	0.2956	24.7485	6.5684	0.2855	6.8539	0.0000	31,765.7448	31,765.7448	1.0026	0.0000	31,790.8102
2032	7.4830	52.7392	59.5657	0.3095	24.4529	0.2872	24.7401	6.5684	0.2776	6.8460	0.0000	31,443.4759	31,443.4759	0.9715	0.0000	31,467.7642
2033	7.0739	52.1592	57.2350	0.3068	24.4530	0.2796	24.7326	6.5684	0.2707	6.8391	0.0000	31,167.5398	31,167.5398	0.9457	0.0000	31,191.1824
2034	6.7289	51.6632	55.0731	0.3044	24.4530	0.2727	24.7257	6.5684	0.2642	6.8326	0.0000	30,931.6746	30,931.6746	0.9216	0.0000	30,954.7144
2035	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
2036	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
2037	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
2038	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
2039	6.3326	50.4860	53.1560	0.3023	24.4530	0.2087	24.6617	6.5684	0.2007	6.7692	0.0000	30,731.7064	30,731.7064	0.8932	0.0000	30,754.0353
Maximum	**179.6600**	**230.0563**	**228.7790**	**0.6066**	**61.9322**	**7.7342**	**69.6665**	**22.3178**	**7.1646**	**29.4824**	**0.0000**	**60,715.3854**	**60,715.3854**	**7.4737**	**0.0000**	**60,902.2277**

Marina Downtown Vitalization Specific Plan - Proposed - 2040 - Monterey Bay Unified APCD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	112.4107	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291	0.0000	431.6990	431.6990	0.4114	0.0000	441.9840
Energy	1.1833	10.2795	5.5354	0.0645		0.8175	0.8175		0.8175	0.8175		12,908.2254	12,908.2254	0.2474	0.2367	12,984.9325
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**113.5940**	**13.0341**	**244.2072**	**0.0772**	**0.0000**	**2.1466**	**2.1466**	**0.0000**	**2.1466**	**2.1466**	**0.0000**	**13,339.9244**	**13,339.9244**	**0.6588**	**0.2367**	**13,426.9166**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	112.4107	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291	0.0000	431.6990	431.6990	0.4114	0.0000	441.9840
Energy	1.1833	10.2795	5.5354	0.0645		0.8175	0.8175		0.8175	0.8175		12,908.2254	12,908.2254	0.2474	0.2367	12,984.9325
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**113.5940**	**13.0341**	**244.2072**	**0.0772**	**0.0000**	**2.1466**	**2.1466**	**0.0000**	**2.1466**	**2.1466**	**0.0000**	**13,339.9244**	**13,339.9244**	**0.6588**	**0.2367**	**13,426.9166**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	2/24/2022	5	300	
2	Site Preparation	Site Preparation	2/3/2021	10/12/2021	5	180	
3	Grading	Grading	3/2/2021	12/12/2022	5	465	
4	Building Construction	Building Construction	4/1/2021	1/26/2039	5	4650	
5	Paving	Paving	7/1/2021	10/5/2022	5	330	
6	Architectural Coating	Architectural Coating	10/1/2021	1/5/2023	5	330	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1162.5

Acres of Paving: 0

Residential Indoor: 5,880,600; Residential Outdoor: 1,960,200; Non-Residential Indoor: 2,077,796; Non-Residential Outdoor: 692,599; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Marina Downtown Vitalization Specific Plan - Proposed - 2040 - Monterey Bay Unified APCD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	7,523.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,534.00	537.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	507.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5294	0.0000	5.5294	0.8374	0.0000	0.8374			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**5.5294**	**1.5513**	**7.0807**	**0.8374**	**1.4411**	**2.2785**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1990	6.7391	1.3039	0.0198	0.4878	0.0255	0.5134	0.1323	0.0244	0.1567		2,086.7031	2,086.7031	0.0898		2,088.9485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0663	0.0584	0.5049	1.1800e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		117.7696	117.7696	4.5700e-003		117.8839
Total	**0.2653**	**6.7975**	**1.8088**	**0.0210**	**0.6111**	**0.0265**	**0.6376**	**0.1650**	**0.0253**	**0.1903**		**2,204.4727**	**2,204.4727**	**0.0944**		**2,206.8324**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5294	0.0000	5.5294	0.8374	0.0000	0.8374			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**5.5294**	**1.5513**	**7.0807**	**0.8374**	**1.4411**	**2.2785**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1990	6.7391	1.3039	0.0198	0.4878	0.0255	0.5134	0.1323	0.0244	0.1567		2,086.7031	2,086.7031	0.0898		2,088.9485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0663	0.0584	0.5049	1.1800e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		117.7696	117.7696	4.5700e-003		117.8839
Total	**0.2653**	**6.7975**	**1.8088**	**0.0210**	**0.6111**	**0.0265**	**0.6376**	**0.1650**	**0.0253**	**0.1903**		**2,204.4727**	**2,204.4727**	**0.0944**		**2,206.8324**

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5294	0.0000	5.5294	0.8374	0.0000	0.8374			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.5294**	**1.2427**	**6.7720**	**0.8374**	**1.1553**	**1.9926**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1859	6.1527	1.2417	0.0195	2.6571	0.0218	2.6789	0.6648	0.0209	0.6856		2,060.4534	2,060.4534	0.0885		2,062.6663
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0523	0.4598	1.1400e-003	0.1232	9.6000e-004	0.1242	0.0327	8.8000e-004	0.0336		113.6169	113.6169	4.0800e-003		113.7189
Total	**0.2475**	**6.2050**	**1.7014**	**0.0207**	**2.7803**	**0.0228**	**2.8031**	**0.6974**	**0.0218**	**0.7192**		**2,174.0703**	**2,174.0703**	**0.0926**		**2,176.3852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5294	0.0000	5.5294	0.8374	0.0000	0.8374			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.5294**	**1.2427**	**6.7720**	**0.8374**	**1.1553**	**1.9926**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1859	6.1527	1.2417	0.0195	2.6571	0.0218	2.6789	0.6648	0.0209	0.6856		2,060.4534	2,060.4534	0.0885		2,062.6663
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0523	0.4598	1.1400e-003	0.1232	9.6000e-004	0.1242	0.0327	8.8000e-004	0.0336		113.6169	113.6169	4.0800e-003		113.7189
Total	**0.2475**	**6.2050**	**1.7014**	**0.0207**	**2.7803**	**0.0228**	**2.8031**	**0.6974**	**0.0218**	**0.7192**		**2,174.0703**	**2,174.0703**	**0.0926**		**2,176.3852**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0796	0.0701	0.6059	1.4200e-003	0.1479	1.1900e-003	0.1491	0.0392	1.1000e-003	0.0403		141.3235	141.3235	5.4900e-003		141.4607
Total	**0.0796**	**0.0701**	**0.6059**	**1.4200e-003**	**0.1479**	**1.1900e-003**	**0.1491**	**0.0392**	**1.1000e-003**	**0.0403**		**141.3235**	**141.3235**	**5.4900e-003**		**141.4607**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0796	0.0701	0.6059	1.4200e-003	0.1479	1.1900e-003	0.1491	0.0392	1.1000e-003	0.0403		141.3235	141.3235	5.4900e-003		141.4607
Total	**0.0796**	**0.0701**	**0.6059**	**1.4200e-003**	**0.1479**	**1.1900e-003**	**0.1491**	**0.0392**	**1.1000e-003**	**0.0403**		**141.3235**	**141.3235**	**5.4900e-003**		**141.4607**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0884	0.0778	0.6732	1.5800e-003	0.1643	1.3300e-003	0.1656	0.0436	1.2200e-003	0.0448		157.0261	157.0261	6.1000e-003		157.1786
Total	**0.0884**	**0.0778**	**0.6732**	**1.5800e-003**	**0.1643**	**1.3300e-003**	**0.1656**	**0.0436**	**1.2200e-003**	**0.0448**		**157.0261**	**157.0261**	**6.1000e-003**		**157.1786**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0884	0.0778	0.6732	1.5800e-003	0.1643	1.3300e-003	0.1656	0.0436	1.2200e-003	0.0448		157.0261	157.0261	6.1000e-003		157.1786
Total	**0.0884**	**0.0778**	**0.6732**	**1.5800e-003**	**0.1643**	**1.3300e-003**	**0.1656**	**0.0436**	**1.2200e-003**	**0.0448**		**157.0261**	**157.0261**	**6.1000e-003**		**157.1786**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0821	0.0697	0.6130	1.5200e-003	0.1643	1.2800e-003	0.1656	0.0436	1.1800e-003	0.0448		151.4893	151.4893	5.4400e-003		151.6252
Total	**0.0821**	**0.0697**	**0.6130**	**1.5200e-003**	**0.1643**	**1.2800e-003**	**0.1656**	**0.0436**	**1.1800e-003**	**0.0448**		**151.4893**	**151.4893**	**5.4400e-003**		**151.6252**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0821	0.0697	0.6130	1.5200e-003	0.1643	1.2800e-003	0.1656	0.0436	1.1800e-003	0.0448		151.4893	151.4893	5.4400e-003		151.6252
Total	**0.0821**	**0.0697**	**0.6130**	**1.5200e-003**	**0.1643**	**1.2800e-003**	**0.1656**	**0.0436**	**1.1800e-003**	**0.0448**		**151.4893**	**151.4893**	**5.4400e-003**		**151.6252**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.0628	61.0018	16.1819	0.1499	3.6357	0.1910	3.8267	1.0466	0.1827	1.2293		15,736.3106	15,736.3106	0.8967		15,758.7292
Worker	11.1983	9.8620	85.2950	0.2000	20.8162	0.1680	20.9842	5.5214	0.1550	5.6764		19,895.2039	19,895.2039	0.7729		19,914.5255
Total	**13.2610**	**70.8637**	**101.4768**	**0.3499**	**24.4519**	**0.3590**	**24.8110**	**6.5681**	**0.3377**	**6.9057**		**35,631.5145**	**35,631.5145**	**1.6696**		**35,673.2547**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.0628	61.0018	16.1819	0.1499	3.6357	0.1910	3.8267	1.0466	0.1827	1.2293		15,736.3106	15,736.3106	0.8967		15,758.7292
Worker	11.1983	9.8620	85.2950	0.2000	20.8162	0.1680	20.9842	5.5214	0.1550	5.6764		19,895.2039	19,895.2039	0.7729		19,914.5255
Total	**13.2610**	**70.8637**	**101.4768**	**0.3499**	**24.4519**	**0.3590**	**24.8110**	**6.5681**	**0.3377**	**6.9057**		**35,631.5145**	**35,631.5145**	**1.6696**		**35,673.2547**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.8941	57.6586	14.6634	0.1485	3.6359	0.1665	3.8024	1.0467	0.1592	1.2059		15,591.4742	15,591.4742	0.8743		15,613.3320
Worker	10.4066	8.8307	77.6709	0.1929	20.8162	0.1621	20.9783	5.5214	0.1495	5.6709		19,193.6877	19,193.6877	0.6892		19,210.9185
Total	**12.3007**	**66.4893**	**92.3343**	**0.3413**	**24.4521**	**0.3286**	**24.7807**	**6.5681**	**0.3087**	**6.8768**		**34,785.1618**	**34,785.1618**	**1.5636**		**34,824.2506**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.8941	57.6586	14.6634	0.1485	3.6359	0.1665	3.8024	1.0467	0.1592	1.2059		15,591.4742	15,591.4742	0.8743		15,613.3320
Worker	10.4066	8.8307	77.6709	0.1929	20.8162	0.1621	20.9783	5.5214	0.1495	5.6709		19,193.6877	19,193.6877	0.6892		19,210.9185
Total	**12.3007**	**66.4893**	**92.3343**	**0.3413**	**24.4521**	**0.3286**	**24.7807**	**6.5681**	**0.3087**	**6.8768**		**34,785.1618**	**34,785.1618**	**1.5636**		**34,824.2506**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4243	47.4312	12.4082	0.1458	3.6361	0.0708	3.7068	1.0467	0.0677	1.1144		15,313.6175	15,313.6175	0.6762		15,330.5229
Worker	9.6884	7.9134	70.6891	0.1856	20.8162	0.1571	20.9733	5.5214	0.1448	5.6663		18,481.2166	18,481.2166	0.6136		18,496.5555
Total	**11.1127**	**55.3446**	**83.0973**	**0.3314**	**24.4523**	**0.2279**	**24.6802**	**6.5682**	**0.2125**	**6.7807**		**33,794.8342**	**33,794.8342**	**1.2898**		**33,827.0784**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4243	47.4312	12.4082	0.1458	3.6361	0.0708	3.7068	1.0467	0.0677	1.1144		15,313.6175	15,313.6175	0.6762		15,330.5229
Worker	9.6884	7.9134	70.6891	0.1856	20.8162	0.1571	20.9733	5.5214	0.1448	5.6663		18,481.2166	18,481.2166	0.6136		18,496.5555
Total	**11.1127**	**55.3446**	**83.0973**	**0.3314**	**24.4523**	**0.2279**	**24.6802**	**6.5682**	**0.2125**	**6.7807**		**33,794.8342**	**33,794.8342**	**1.2898**		**33,827.0784**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3473	46.3441	11.5053	0.1446	3.6362	0.0657	3.7020	1.0468	0.0629	1.1097		15,191.1759	15,191.1759	0.6710		15,207.9496
Worker	9.0584	7.1127	64.7759	0.1784	20.8162	0.1525	20.9687	5.5214	0.1405	5.6620		17,768.6478	17,768.6478	0.5481		17,782.3495
Total	**10.4057**	**53.4568**	**76.2812**	**0.3230**	**24.4524**	**0.2183**	**24.6707**	**6.5682**	**0.2034**	**6.7716**		**32,959.8237**	**32,959.8237**	**1.2190**		**32,990.2991**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3473	46.3441	11.5053	0.1446	3.6362	0.0657	3.7020	1.0468	0.0629	1.1097		15,191.1759	15,191.1759	0.6710		15,207.9496
Worker	9.0584	7.1127	64.7759	0.1784	20.8162	0.1525	20.9687	5.5214	0.1405	5.6620		17,768.6478	17,768.6478	0.5481		17,782.3495
Total	**10.4057**	**53.4568**	**76.2812**	**0.3230**	**24.4524**	**0.2183**	**24.6707**	**6.5682**	**0.2034**	**6.7716**		**32,959.8237**	**32,959.8237**	**1.2190**		**32,990.2991**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2814	45.3885	10.7571	0.1435	3.6364	0.0613	3.6977	1.0469	0.0586	1.1055		15,078.1477	15,078.1477	0.6659		15,094.7947
Worker	8.5193	6.4301	59.5723	0.1713	20.8162	0.1492	20.9654	5.5214	0.1375	5.6589		17,063.1699	17,063.1699	0.4936		17,075.5096
Total	**9.8006**	**51.8187**	**70.3294**	**0.3148**	**24.4526**	**0.2105**	**24.6631**	**6.5683**	**0.1961**	**6.7643**		**32,141.3176**	**32,141.3176**	**1.1595**		**32,170.3043**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2814	45.3885	10.7571	0.1435	3.6364	0.0613	3.6977	1.0469	0.0586	1.1055		15,078.1477	15,078.1477	0.6659		15,094.7947
Worker	8.5193	6.4301	59.5723	0.1713	20.8162	0.1492	20.9654	5.5214	0.1375	5.6589		17,063.1699	17,063.1699	0.4936		17,075.5096
Total	**9.8006**	**51.8187**	**70.3294**	**0.3148**	**24.4526**	**0.2105**	**24.6631**	**6.5683**	**0.1961**	**6.7643**		**32,141.3176**	**32,141.3176**	**1.1595**		**32,170.3043**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2334	44.6046	10.2472	0.1427	3.6364	0.0581	3.6945	1.0469	0.0555	1.1024		14,993.8290	14,993.8290	0.6581		15,010.2805
Worker	8.0459	5.8354	54.8360	0.1644	20.8162	0.1434	20.9596	5.5214	0.1320	5.6535		16,379.8460	16,379.8460	0.4435		16,390.9341
Total	**9.2793**	**50.4400**	**65.0832**	**0.3071**	**24.4527**	**0.2014**	**24.6541**	**6.5683**	**0.1876**	**6.7559**		**31,373.6750**	**31,373.6750**	**1.1016**		**31,401.2145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2334	44.6046	10.2472	0.1427	3.6364	0.0581	3.6945	1.0469	0.0555	1.1024		14,993.8290	14,993.8290	0.6581		15,010.2805
Worker	8.0459	5.8354	54.8360	0.1644	20.8162	0.1434	20.9596	5.5214	0.1320	5.6535		16,379.8460	16,379.8460	0.4435		16,390.9341
Total	**9.2793**	**50.4400**	**65.0832**	**0.3071**	**24.4527**	**0.2014**	**24.6541**	**6.5683**	**0.1876**	**6.7559**		**31,373.6750**	**31,373.6750**	**1.1016**		**31,401.2145**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1922	43.8854	9.8090	0.1420	3.6365	0.0551	3.6916	1.0469	0.0526	1.0995		14,920.4084	14,920.4084	0.6511		14,936.6867
Worker	7.5928	5.2996	50.7019	0.1587	20.8162	0.1349	20.9512	5.5214	0.1242	5.6456		15,815.6530	15,815.6530	0.4005		15,825.6654
Total	**8.7850**	**49.1850**	**60.5108**	**0.3007**	**24.4527**	**0.1900**	**24.6427**	**6.5683**	**0.1768**	**6.7452**		**30,736.0614**	**30,736.0614**	**1.0516**		**30,762.3521**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1922	43.8854	9.8090	0.1420	3.6365	0.0551	3.6916	1.0469	0.0526	1.0995		14,920.4084	14,920.4084	0.6511		14,936.6867
Worker	7.5928	5.2996	50.7019	0.1587	20.8162	0.1349	20.9512	5.5214	0.1242	5.6456		15,815.6530	15,815.6530	0.4005		15,825.6654
Total	**8.7850**	**49.1850**	**60.5108**	**0.3007**	**24.4527**	**0.1900**	**24.6427**	**6.5683**	**0.1768**	**6.7452**		**30,736.0614**	**30,736.0614**	**1.0516**		**30,762.3521**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1579	43.2966	9.4759	0.1414	3.6366	0.0525	3.6890	1.0469	0.0502	1.0971		14,860.6784	14,860.6784	0.6422		14,876.7325
Worker	7.1238	4.8252	47.0877	0.1536	20.8162	0.1256	20.9418	5.5214	0.1155	5.6370		15,314.8281	15,314.8281	0.3637		15,323.9193
Total	**8.2817**	**48.1218**	**56.5636**	**0.2950**	**24.4528**	**0.1780**	**24.6308**	**6.5684**	**0.1657**	**6.7340**		**30,175.5065**	**30,175.5065**	**1.0058**		**30,200.6518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1579	43.2966	9.4759	0.1414	3.6366	0.0525	3.6890	1.0469	0.0502	1.0971		14,860.6784	14,860.6784	0.6422		14,876.7325
Worker	7.1238	4.8252	47.0877	0.1536	20.8162	0.1256	20.9418	5.5214	0.1155	5.6370		15,314.8281	15,314.8281	0.3637		15,323.9193
Total	**8.2817**	**48.1218**	**56.5636**	**0.2950**	**24.4528**	**0.1780**	**24.6308**	**6.5684**	**0.1657**	**6.7340**		**30,175.5065**	**30,175.5065**	**1.0058**		**30,200.6518**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1280	42.7622	9.1787	0.1409	3.6366	0.0502	3.6868	1.0469	0.0480	1.0949		14,808.3849	14,808.3849	0.6350		14,824.2585
Worker	6.6162	4.3810	43.5795	0.1491	20.8162	0.1169	20.9331	5.5214	0.1075	5.6289		14,870.0325	14,870.0325	0.3277		14,878.2255
Total	**7.7443**	**47.1432**	**52.7582**	**0.2900**	**24.4528**	**0.1670**	**24.6198**	**6.5684**	**0.1555**	**6.7238**		**29,678.4174**	**29,678.4174**	**0.9627**		**29,702.4841**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1280	42.7622	9.1787	0.1409	3.6366	0.0502	3.6868	1.0469	0.0480	1.0949		14,808.3849	14,808.3849	0.6350		14,824.2585
Worker	6.6162	4.3810	43.5795	0.1491	20.8162	0.1169	20.9331	5.5214	0.1075	5.6289		14,870.0325	14,870.0325	0.3277		14,878.2255
Total	**7.7443**	**47.1432**	**52.7582**	**0.2900**	**24.4528**	**0.1670**	**24.6198**	**6.5684**	**0.1555**	**6.7238**		**29,678.4174**	**29,678.4174**	**0.9627**		**29,702.4841**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1040	42.3048	8.9553	0.1405	3.6367	0.0482	3.6848	1.0470	0.0460	1.0930		14,768.1869	14,768.1869	0.6267		14,783.8546
Worker	6.1152	3.9714	40.4414	0.1451	20.8162	0.1087	20.9249	5.5214	0.1000	5.6214		14,476.5498	14,476.5498	0.2957		14,483.9433
Total	**7.2192**	**46.2762**	**49.3968**	**0.2856**	**24.4529**	**0.1568**	**24.6097**	**6.5684**	**0.1460**	**6.7144**		**29,244.7366**	**29,244.7366**	**0.9225**		**29,267.7979**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1040	42.3048	8.9553	0.1405	3.6367	0.0482	3.6848	1.0470	0.0460	1.0930		14,768.1869	14,768.1869	0.6267		14,783.8546
Worker	6.1152	3.9714	40.4414	0.1451	20.8162	0.1087	20.9249	5.5214	0.1000	5.6214		14,476.5498	14,476.5498	0.2957		14,483.9433
Total	**7.2192**	**46.2762**	**49.3968**	**0.2856**	**24.4529**	**0.1568**	**24.6097**	**6.5684**	**0.1460**	**6.7144**		**29,244.7366**	**29,244.7366**	**0.9225**		**29,267.7979**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0833	41.9089	8.7644	0.1402	3.6367	0.0463	3.6830	1.0470	0.0443	1.0913		14,738.7815	14,738.7815	0.6212		14,754.3125
Worker	5.5777	3.5796	37.4145	0.1416	20.8162	0.1012	20.9174	5.5214	0.0931	5.6145		14,129.4165	14,129.4165	0.2651		14,136.0448
Total	**6.6610**	**45.4885**	**46.1788**	**0.2818**	**24.4529**	**0.1475**	**24.6004**	**6.5684**	**0.1374**	**6.7058**		**28,868.1980**	**28,868.1980**	**0.8864**		**28,890.3573**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0833	41.9089	8.7644	0.1402	3.6367	0.0463	3.6830	1.0470	0.0443	1.0913		14,738.7815	14,738.7815	0.6212		14,754.3125
Worker	5.5777	3.5796	37.4145	0.1416	20.8162	0.1012	20.9174	5.5214	0.0931	5.6145		14,129.4165	14,129.4165	0.2651		14,136.0448
Total	**6.6610**	**45.4885**	**46.1788**	**0.2818**	**24.4529**	**0.1475**	**24.6004**	**6.5684**	**0.1374**	**6.7058**		**28,868.1980**	**28,868.1980**	**0.8864**		**28,890.3573**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0669	41.5621	8.6220	0.1400	3.6367	0.0447	3.6815	1.0470	0.0428	1.0897		14,720.7628	14,720.7628	0.6166		14,736.1780
Worker	5.1070	3.2425	34.7867	0.1385	20.8162	0.0943	20.9105	5.5214	0.0867	5.6082		13,825.1663	13,825.1663	0.2387		13,831.1334
Total	**6.1739**	**44.8046**	**43.4087**	**0.2786**	**24.4529**	**0.1390**	**24.5920**	**6.5684**	**0.1295**	**6.6979**		**28,545.9291**	**28,545.9291**	**0.8553**		**28,567.3113**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0669	41.5621	8.6220	0.1400	3.6367	0.0447	3.6815	1.0470	0.0428	1.0897		14,720.7628	14,720.7628	0.6166		14,736.1780
Worker	5.1070	3.2425	34.7867	0.1385	20.8162	0.0943	20.9105	5.5214	0.0867	5.6082		13,825.1663	13,825.1663	0.2387		13,831.1334
Total	**6.1739**	**44.8046**	**43.4087**	**0.2786**	**24.4529**	**0.1390**	**24.5920**	**6.5684**	**0.1295**	**6.6979**		**28,545.9291**	**28,545.9291**	**0.8553**		**28,567.3113**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0540	41.2632	8.5087	0.1399	3.6368	0.0434	3.6801	1.0470	0.0415	1.0885		14,709.7498	14,709.7498	0.6131		14,725.0763
Worker	4.7107	2.9614	32.5693	0.1359	20.8162	0.0881	20.9043	5.5214	0.0811	5.6025		13,560.2433	13,560.2433	0.2164		13,565.6532
Total	**5.7647**	**44.2245**	**41.0780**	**0.2758**	**24.4530**	**0.1315**	**24.5845**	**6.5684**	**0.1225**	**6.6909**		**28,269.9931**	**28,269.9931**	**0.8295**		**28,290.7295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0540	41.2632	8.5087	0.1399	3.6368	0.0434	3.6801	1.0470	0.0415	1.0885		14,709.7498	14,709.7498	0.6131		14,725.0763
Worker	4.7107	2.9614	32.5693	0.1359	20.8162	0.0881	20.9043	5.5214	0.0811	5.6025		13,560.2433	13,560.2433	0.2164		13,565.6532
Total	**5.7647**	**44.2245**	**41.0780**	**0.2758**	**24.4530**	**0.1315**	**24.5845**	**6.5684**	**0.1225**	**6.6909**		**28,269.9931**	**28,269.9931**	**0.8295**		**28,290.7295**

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0426	41.0008	8.4070	0.1399	3.6368	0.0421	3.6789	1.0470	0.0403	1.0873		14,704.7879	14,704.7879	0.6096		14,720.0275
Worker	4.3772	2.7277	30.5092	0.1335	20.8162	0.0824	20.8986	5.5214	0.0758	5.5972		13,329.3399	13,329.3399	0.1958		13,334.2340
Total	**5.4198**	**43.7286**	**38.9161**	**0.2734**	**24.4530**	**0.1245**	**24.5775**	**6.5684**	**0.1161**	**6.6845**		**28,034.1279**	**28,034.1279**	**0.8054**		**28,054.2616**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0426	41.0008	8.4070	0.1399	3.6368	0.0421	3.6789	1.0470	0.0403	1.0873		14,704.7879	14,704.7879	0.6096		14,720.0275
Worker	4.3772	2.7277	30.5092	0.1335	20.8162	0.0824	20.8986	5.5214	0.0758	5.5972		13,329.3399	13,329.3399	0.1958		13,334.2340
Total	**5.4198**	**43.7286**	**38.9161**	**0.2734**	**24.4530**	**0.1245**	**24.5775**	**6.5684**	**0.1161**	**6.6845**		**28,034.1279**	**28,034.1279**	**0.8054**		**28,054.2616**

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0325	40.7824	8.3197	0.1399	3.6368	0.0411	3.6779	1.0470	0.0393	1.0863		14,703.4628	14,703.4628	0.6074		14,718.6471
Worker	4.0833	2.5423	28.7186	0.1315	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,130.6968	13,130.6968	0.1779		13,135.1434
Total	**5.1158**	**43.3247**	**37.0383**	**0.2714**	**24.4530**	**0.1183**	**24.5713**	**6.5684**	**0.1103**	**6.6787**		**27,834.1596**	**27,834.1596**	**0.7852**		**27,853.7905**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0663	0.0584	0.5049	1.1800e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		117.7696	117.7696	4.5700e-003		117.8839
Total	**0.0663**	**0.0584**	**0.5049**	**1.1800e-003**	**0.1232**	**9.9000e-004**	**0.1242**	**0.0327**	**9.2000e-004**	**0.0336**		**117.7696**	**117.7696**	**4.5700e-003**		**117.8839**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0663	0.0584	0.5049	1.1800e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		117.7696	117.7696	4.5700e-003		117.8839
Total	**0.0663**	**0.0584**	**0.5049**	**1.1800e-003**	**0.1232**	**9.9000e-004**	**0.1242**	**0.0327**	**9.2000e-004**	**0.0336**		**117.7696**	**117.7696**	**4.5700e-003**		**117.8839**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0523	0.4598	1.1400e-003	0.1232	9.6000e-004	0.1242	0.0327	8.8000e-004	0.0336		113.6169	113.6169	4.0800e-003		113.7189
Total	**0.0616**	**0.0523**	**0.4598**	**1.1400e-003**	**0.1232**	**9.6000e-004**	**0.1242**	**0.0327**	**8.8000e-004**	**0.0336**		**113.6169**	**113.6169**	**4.0800e-003**		**113.7189**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0523	0.4598	1.1400e-003	0.1232	9.6000e-004	0.1242	0.0327	8.8000e-004	0.0336		113.6169	113.6169	4.0800e-003		113.7189
Total	**0.0616**	**0.0523**	**0.4598**	**1.1400e-003**	**0.1232**	**9.6000e-004**	**0.1242**	**0.0327**	**8.8000e-004**	**0.0336**		**113.6169**	**113.6169**	**4.0800e-003**		**113.7189**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**149.2580**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.2405	1.9732	17.0657	0.0400	4.1649	0.0336	4.1985	1.1047	0.0310	1.1357		3,980.6110	3,980.6110	0.1546		3,984.4769
Total	**2.2405**	**1.9732**	**17.0657**	**0.0400**	**4.1649**	**0.0336**	**4.1985**	**1.1047**	**0.0310**	**1.1357**		**3,980.6110**	**3,980.6110**	**0.1546**		**3,984.4769**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**149.2580**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.2405	1.9732	17.0657	0.0400	4.1649	0.0336	4.1985	1.1047	0.0310	1.1357		3,980.6110	3,980.6110	0.1546		3,984.4769
Total	**2.2405**	**1.9732**	**17.0657**	**0.0400**	**4.1649**	**0.0336**	**4.1985**	**1.1047**	**0.0310**	**1.1357**		**3,980.6110**	**3,980.6110**	**0.1546**		**3,984.4769**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**149.2436**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.0821	1.7668	15.5403	0.0386	4.1649	0.0324	4.1973	1.1047	0.0299	1.1346		3,840.2524	3,840.2524	0.1379		3,843.7000
Total	**2.0821**	**1.7668**	**15.5403**	**0.0386**	**4.1649**	**0.0324**	**4.1973**	**1.1047**	**0.0299**	**1.1346**		**3,840.2524**	**3,840.2524**	**0.1379**		**3,843.7000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**149.2436**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.0821	1.7668	15.5403	0.0386	4.1649	0.0324	4.1973	1.1047	0.0299	1.1346		3,840.2524	3,840.2524	0.1379		3,843.7000
Total	**2.0821**	**1.7668**	**15.5403**	**0.0386**	**4.1649**	**0.0324**	**4.1973**	**1.1047**	**0.0299**	**1.1346**		**3,840.2524**	**3,840.2524**	**0.1379**		**3,843.7000**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**149.2307**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.9384	1.5833	14.1434	0.0371	4.1649	0.0314	4.1963	1.1047	0.0290	1.1337		3,697.7020	3,697.7020	0.1228		3,700.7710
Total	**1.9384**	**1.5833**	**14.1434**	**0.0371**	**4.1649**	**0.0314**	**4.1963**	**1.1047**	**0.0290**	**1.1337**		**3,697.7020**	**3,697.7020**	**0.1228**		**3,700.7710**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**149.2307**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.9384	1.5833	14.1434	0.0371	4.1649	0.0314	4.1963	1.1047	0.0290	1.1337		3,697.7020	3,697.7020	0.1228		3,700.7710
Total	**1.9384**	**1.5833**	**14.1434**	**0.0371**	**4.1649**	**0.0314**	**4.1963**	**1.1047**	**0.0290**	**1.1337**		**3,697.7020**	**3,697.7020**	**0.1228**		**3,700.7710**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	44.00	19.00	37.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482
General Office Building	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482
Regional Shopping Center	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.1833	10.2795	5.5354	0.0645		0.8175	0.8175		0.8175	0.8175		12,908.2254	12,908.2254	0.2474	0.2367	12,984.9325
NaturalGas Unmitigated	1.1833	10.2795	5.5354	0.0645		0.8175	0.8175		0.8175	0.8175		12,908.2254	12,908.2254	0.2474	0.2367	12,984.9325

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	81143.7	0.8751	7.4780	3.1821	0.0477		0.6046	0.6046		0.6046	0.6046		9,546.3208	9,546.3208	0.1830	0.1750	9,603.0499
General Office Building	22896.8	0.2469	2.2448	1.8856	0.0135		0.1706	0.1706		0.1706	0.1706		2,693.7448	2,693.7448	0.0516	0.0494	2,709.7524
Regional Shopping Center	5679.36	0.0613	0.5568	0.4677	3.3400e-003		0.0423	0.0423		0.0423	0.0423		668.1597	668.1597	0.0128	0.0123	672.1303
Total		**1.1833**	**10.2795**	**5.5354**	**0.0645**		**0.8175**	**0.8175**		**0.8175**	**0.8175**		**12,908.2254**	**12,908.2254**	**0.2474**	**0.2367**	**12,984.9325**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	81.1437	0.8751	7.4780	3.1821	0.0477		0.6046	0.6046		0.6046	0.6046		9,546.3208	9,546.3208	0.1830	0.1750	9,603.0499
General Office Building	22.8968	0.2469	2.2448	1.8856	0.0135		0.1706	0.1706		0.1706	0.1706		2,693.7448	2,693.7448	0.0516	0.0494	2,709.7524
Regional Shopping Center	5.67936	0.0613	0.5568	0.4677	3.3400e-003		0.0423	0.0423		0.0423	0.0423		668.1597	668.1597	0.0128	0.0123	672.1303
Total		**1.1833**	**10.2795**	**5.5354**	**0.0645**		**0.8175**	**0.8175**		**0.8175**	**0.8175**		**12,908.2254**	**12,908.2254**	**0.2474**	**0.2367**	**12,984.9325**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	112.4107	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291	0.0000	431.6990	431.6990	0.4114	0.0000	441.9840
Unmitigated	112.4107	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291	0.0000	431.6990	431.6990	0.4114	0.0000	441.9840

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	13.4748					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	91.7888					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.1471	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291		431.6990	431.6990	0.4114		441.9840
Total	**112.4107**	**2.7545**	**238.6717**	**0.0127**		**1.3291**	**1.3291**		**1.3291**	**1.3291**	**0.0000**	**431.6990**	**431.6990**	**0.4114**	**0.0000**	**441.9840**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	13.4748					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	91.7888					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.1471	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291		431.6990	431.6990	0.4114		441.9840
Total	**112.4107**	**2.7545**	**238.6717**	**0.0127**		**1.3291**	**1.3291**		**1.3291**	**1.3291**	**0.0000**	**431.6990**	**431.6990**	**0.4114**	**0.0000**	**441.9840**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Marina Downtown Vitalization Specific Plan - Proposed - 2040

Monterey Bay Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	510.53	1000sqft	11.72	510,528.00	0
Apartments Low Rise	2,904.00	Dwelling Unit	181.50	2,904,000.00	7957
Regional Shopping Center	874.67	1000sqft	20.08	874,669.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	97.62	**CH4 Intensity (lb/MWhr)**	0.005	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Marina Downtown Vitalization Specific Plan - Proposed - 2040 - Monterey Bay Unified APCD Air District, Summer

Project Characteristics - Linear interpolation of RPS for 2030 and 2045.

Land Use - Land uses based on PD. Pop based on US Census 2019 estimate of 2.74 persons per household in Marina.

Construction Phase - Phase lengths are default. Adjusted start dates so that all phases would be overlapping to estimate worst case impacts.

Trips and VMT -

Demolition - Estimated that half of existing residential units and half of existing retail/office space would be demolished and redeveloped.

Grading - Assumed no substantial import/export required.

Architectural Coating - MBARD Rule 426

Vehicle Trips - Calculated in EMFAC2017

Woodstoves -

Area Coating - MBARD Rule 426

Energy Use - Includes 30% reduction in nonresidential electricity use for 2019 Code. 2019 Building Code requires all electricity met by solar on low-rise residential

Water And Wastewater - Reduced indoor water use by 20% for CALGreen. Monterey One Water uses anaerobic digestors only.

Solid Waste -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation - Compliance with CALGreen and DVSP ES Objective 1, Strategy 6

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	100.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	100
tblAreaCoating	Area_EF_Parking	150	100
tblEnergyUse	LightingElect	810.36	0.00
tblEnergyUse	NT24E	3,172.76	0.00

tblEnergyUse	T24E	365.68	0.00
tblEnergyUse	T24E	6.11	4.28
tblEnergyUse	T24E	2.76	1.93
tblLandUse	LandUseSquareFeet	510,530.00	510,528.00
tblLandUse	LandUseSquareFeet	874,670.00	874,669.00
tblLandUse	Population	8,305.00	7,957.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.005
tblProjectCharacteristics	CO2IntensityFactor	641.35	97.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblVehicleTrips	HO_TTP	37.20	37.00
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	ST_TR	7.16	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	6.07	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	6.59	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	42.70	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	178.3440	227.1285	227.2392	0.6275	61.9322	7.7249	69.6572	22.3178	7.1557	29.4735	0.0000	62,837.5245	62,837.5245	7.4175	0.0000	63,022.9613
2022	171.8661	164.7622	191.9290	0.5771	45.8876	4.7135	50.6010	12.8804	4.3788	17.2592	0.0000	57,924.2509	57,924.2509	6.0863	0.0000	58,076.4092
2023	162.7425	70.5625	114.9882	0.4175	28.6172	1.0277	29.6449	7.6729	0.9686	8.6415	0.0000	42,255.2352	42,255.2352	2.0068	0.0000	42,305.4040
2024	10.9791	65.3659	92.1291	0.3660	24.4524	0.8296	25.2821	6.5682	0.7784	7.3467	0.0000	37,150.4078	37,150.4078	1.7850	0.0000	37,195.0329
2025	10.3079	62.9199	86.2278	0.3573	24.4526	0.7364	25.1890	6.5683	0.6907	7.2590	0.0000	36,279.5202	36,279.5202	1.7204	0.0000	36,322.5306
2026	9.8126	61.6881	81.0424	0.3491	24.4527	0.7275	25.1801	6.5683	0.6823	7.2507	0.0000	35,463.5966	35,463.5966	1.6610	0.0000	35,505.1216
2027	9.3456	60.5664	76.5518	0.3423	24.4527	0.7162	25.1689	6.5683	0.6718	7.2401	0.0000	34,787.4407	34,787.4407	1.6100	0.0000	34,827.6900
2028	8.8787	59.6179	72.6571	0.3363	24.4528	0.7044	25.1571	6.5684	0.6608	7.2291	0.0000	34,192.7619	34,192.7619	1.5633	0.0000	34,231.8436
2029	8.3843	58.7468	68.9135	0.3310	24.4528	0.6935	25.1463	6.5684	0.6507	7.2190	0.0000	33,665.9099	33,665.9099	1.5193	0.0000	33,703.8917
2030	7.8447	53.4442	65.6740	0.3304	24.4529	0.3040	24.7568	6.5684	0.2932	6.8616	0.0000	33,548.2049	33,548.2049	0.9937	0.0000	33,573.0465
2031	7.3373	52.7516	62.5123	0.3264	24.4529	0.2947	24.7476	6.5684	0.2846	6.8530	0.0000	33,150.5932	33,150.5932	0.9567	0.0000	33,174.5102

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2032	6.8942	52.1507	59.7819	0.3230	24.4529	0.2863	24.7393	6.5684	0.2768	6.8453	0.0000	32,810.9578	32,810.9578	0.9247	0.0000	32,834.0761
2033	6.5207	51.6415	57.4808	0.3200	24.4530	0.2789	24.7319	6.5684	0.2699	6.8384	0.0000	32,520.7884	32,520.7884	0.8981	0.0000	32,543.2400
2034	6.2022	51.2059	55.3437	0.3175	24.4530	0.2720	24.7250	6.5684	0.2636	6.8320	0.0000	32,273.3223	32,273.3223	0.8732	0.0000	32,295.1522
2035	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
2036	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
2037	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
2038	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
2039	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
Maximum	**178.3440**	**227.1285**	**227.2392**	**0.6275**	**61.9322**	**7.7249**	**69.6572**	**22.3178**	**7.1557**	**29.4735**	**0.0000**	**62,837.5245**	**62,837.5245**	**7.4175**	**0.0000**	**63,022.9613**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	178.3440	227.1285	227.2392	0.6275	61.9322	7.7249	69.6572	22.3178	7.1557	29.4735	0.0000	62,837.5245	62,837.5245	7.4175	0.0000	63,022.9612
2022	171.8661	164.7622	191.9290	0.5771	45.8876	4.7135	50.6010	12.8804	4.3788	17.2592	0.0000	57,924.2509	57,924.2509	6.0863	0.0000	58,076.4092
2023	162.7425	70.5625	114.9882	0.4175	28.6172	1.0277	29.6449	7.6729	0.9686	8.6415	0.0000	42,255.2352	42,255.2352	2.0068	0.0000	42,305.4040

Marina Downtown Vitalization Specific Plan - Proposed - 2040 - Monterey Bay Unified APCD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	10.9791	65.3659	92.1291	0.3660	24.4524	0.8296	25.2821	6.5682	0.7784	7.3467	0.0000	37,150.4078	37,150.4078	1.7850	0.0000	37,195.0329
2025	10.3079	62.9199	86.2278	0.3573	24.4526	0.7364	25.1890	6.5683	0.6907	7.2590	0.0000	36,279.5202	36,279.5202	1.7204	0.0000	36,322.5306
2026	9.8126	61.6881	81.0424	0.3491	24.4527	0.7275	25.1801	6.5683	0.6823	7.2507	0.0000	35,463.5966	35,463.5966	1.6610	0.0000	35,505.1216
2027	9.3456	60.5664	76.5518	0.3423	24.4527	0.7162	25.1689	6.5683	0.6718	7.2401	0.0000	34,787.4407	34,787.4407	1.6100	0.0000	34,827.6900
2028	8.8787	59.6179	72.6571	0.3363	24.4528	0.7044	25.1571	6.5684	0.6608	7.2291	0.0000	34,192.7619	34,192.7619	1.5633	0.0000	34,231.8436
2029	8.3843	58.7468	68.9135	0.3310	24.4528	0.6935	25.1463	6.5684	0.6507	7.2190	0.0000	33,665.9099	33,665.9099	1.5193	0.0000	33,703.8917
2030	7.8447	53.4442	65.6740	0.3304	24.4529	0.3040	24.7568	6.5684	0.2932	6.8616	0.0000	33,548.2049	33,548.2049	0.9937	0.0000	33,573.0465
2031	7.3373	52.7516	62.5123	0.3264	24.4529	0.2947	24.7476	6.5684	0.2846	6.8530	0.0000	33,150.5932	33,150.5932	0.9567	0.0000	33,174.5102
2032	6.8942	52.1507	59.7819	0.3230	24.4529	0.2863	24.7393	6.5684	0.2768	6.8453	0.0000	32,810.9578	32,810.9578	0.9247	0.0000	32,834.0761
2033	6.5207	51.6415	57.4808	0.3200	24.4530	0.2789	24.7319	6.5684	0.2699	6.8384	0.0000	32,520.7884	32,520.7884	0.8981	0.0000	32,543.2400
2034	6.2022	51.2059	55.3437	0.3175	24.4530	0.2720	24.7250	6.5684	0.2636	6.8320	0.0000	32,273.3223	32,273.3223	0.8732	0.0000	32,295.1522
2035	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
2036	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
2037	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
2038	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
2039	5.8283	50.0781	53.4468	0.3154	24.4530	0.2081	24.6611	6.5684	0.2001	6.7686	0.0000	32,063.7805	32,063.7805	0.8440	0.0000	32,084.8802
Maximum	**178.3440**	**227.1285**	**227.2392**	**0.6275**	**61.9322**	**7.7249**	**69.6572**	**22.3178**	**7.1557**	**29.4735**	**0.0000**	**62,837.5245**	**62,837.5245**	**7.4175**	**0.0000**	**63,022.9612**

Marina Downtown Vitalization Specific Plan - Proposed - 2040 - Monterey Bay Unified APCD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	112.4107	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291	0.0000	431.6990	431.6990	0.4114	0.0000	441.9840
Energy	1.1833	10.2795	5.5354	0.0645		0.8175	0.8175		0.8175	0.8175		12,908.2254	12,908.2254	0.2474	0.2367	12,984.9325
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**113.5940**	**13.0341**	**244.2072**	**0.0772**	**0.0000**	**2.1466**	**2.1466**	**0.0000**	**2.1466**	**2.1466**	**0.0000**	**13,339.9244**	**13,339.9244**	**0.6588**	**0.2367**	**13,426.9166**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	112.4107	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291	0.0000	431.6990	431.6990	0.4114	0.0000	441.9840
Energy	1.1833	10.2795	5.5354	0.0645		0.8175	0.8175		0.8175	0.8175		12,908.2254	12,908.2254	0.2474	0.2367	12,984.9325
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**113.5940**	**13.0341**	**244.2072**	**0.0772**	**0.0000**	**2.1466**	**2.1466**	**0.0000**	**2.1466**	**2.1466**	**0.0000**	**13,339.9244**	**13,339.9244**	**0.6588**	**0.2367**	**13,426.9166**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	2/24/2022	5	300	
2	Site Preparation	Site Preparation	2/3/2021	10/12/2021	5	180	
3	Grading	Grading	3/2/2021	12/12/2022	5	465	
4	Building Construction	Building Construction	4/1/2021	1/26/2039	5	4650	
5	Paving	Paving	7/1/2021	10/5/2022	5	330	
6	Architectural Coating	Architectural Coating	10/1/2021	1/5/2023	5	330	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1162.5

Acres of Paving: 0

Residential Indoor: 5,880,600; Residential Outdoor: 1,960,200; Non-Residential Indoor: 2,077,796; Non-Residential Outdoor: 692,599; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Marina Downtown Vitalization Specific Plan - Proposed - 2040 - Monterey Bay Unified APCD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	7,523.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,534.00	537.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	507.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5294	0.0000	5.5294	0.8374	0.0000	0.8374			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**5.5294**	**1.5513**	**7.0807**	**0.8374**	**1.4411**	**2.2785**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1920	6.6224	1.1781	0.0202	0.4878	0.0248	0.5127	0.1323	0.0238	0.1560		2,133.1004	2,133.1004	0.0819		2,135.1484
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0465	0.5094	1.2600e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		125.3214	125.3214	4.7800e-003		125.4408
Total	**0.2526**	**6.6689**	**1.6875**	**0.0215**	**0.6111**	**0.0258**	**0.6369**	**0.1650**	**0.0247**	**0.1896**		**2,258.4218**	**2,258.4218**	**0.0867**		**2,260.5893**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5294	0.0000	5.5294	0.8374	0.0000	0.8374			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**5.5294**	**1.5513**	**7.0807**	**0.8374**	**1.4411**	**2.2785**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1920	6.6224	1.1781	0.0202	0.4878	0.0248	0.5127	0.1323	0.0238	0.1560		2,133.1004	2,133.1004	0.0819		2,135.1484
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0465	0.5094	1.2600e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		125.3214	125.3214	4.7800e-003		125.4408
Total	**0.2526**	**6.6689**	**1.6875**	**0.0215**	**0.6111**	**0.0258**	**0.6369**	**0.1650**	**0.0247**	**0.1896**		**2,258.4218**	**2,258.4218**	**0.0867**		**2,260.5893**

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5294	0.0000	5.5294	0.8374	0.0000	0.8374			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.5294**	**1.2427**	**6.7720**	**0.8374**	**1.1553**	**1.9926**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1793	6.0572	1.1226	0.0200	2.6571	0.0212	2.6783	0.6648	0.0202	0.6850		2,106.7861	2,106.7861	0.0806		2,108.8020
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0563	0.0416	0.4655	1.2100e-003	0.1232	9.6000e-004	0.1242	0.0327	8.8000e-004	0.0336		120.9038	120.9038	4.2700e-003		121.0106
Total	**0.2356**	**6.0988**	**1.5881**	**0.0212**	**2.7803**	**0.0221**	**2.8025**	**0.6974**	**0.0211**	**0.7186**		**2,227.6898**	**2,227.6898**	**0.0849**		**2,229.8126**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5294	0.0000	5.5294	0.8374	0.0000	0.8374			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.5294**	**1.2427**	**6.7720**	**0.8374**	**1.1553**	**1.9926**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1793	6.0572	1.1226	0.0200	2.6571	0.0212	2.6783	0.6648	0.0202	0.6850		2,106.7861	2,106.7861	0.0806		2,108.8020
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0563	0.0416	0.4655	1.2100e-003	0.1232	9.6000e-004	0.1242	0.0327	8.8000e-004	0.0336		120.9038	120.9038	4.2700e-003		121.0106
Total	**0.2356**	**6.0988**	**1.5881**	**0.0212**	**2.7803**	**0.0221**	**2.8025**	**0.6974**	**0.0211**	**0.7186**		**2,227.6898**	**2,227.6898**	**0.0849**		**2,229.8126**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0727	0.0558	0.6113	1.5100e-003	0.1479	1.1900e-003	0.1491	0.0392	1.1000e-003	0.0403		150.3856	150.3856	5.7300e-003		150.5290
Total	**0.0727**	**0.0558**	**0.6113**	**1.5100e-003**	**0.1479**	**1.1900e-003**	**0.1491**	**0.0392**	**1.1000e-003**	**0.0403**		**150.3856**	**150.3856**	**5.7300e-003**		**150.5290**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0727	0.0558	0.6113	1.5100e-003	0.1479	1.1900e-003	0.1491	0.0392	1.1000e-003	0.0403		150.3856	150.3856	5.7300e-003		150.5290
Total	**0.0727**	**0.0558**	**0.6113**	**1.5100e-003**	**0.1479**	**1.1900e-003**	**0.1491**	**0.0392**	**1.1000e-003**	**0.0403**		**150.3856**	**150.3856**	**5.7300e-003**		**150.5290**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0808	0.0620	0.6792	1.6800e-003	0.1643	1.3300e-003	0.1656	0.0436	1.2200e-003	0.0448		167.0952	167.0952	6.3700e-003		167.2545
Total	**0.0808**	**0.0620**	**0.6792**	**1.6800e-003**	**0.1643**	**1.3300e-003**	**0.1656**	**0.0436**	**1.2200e-003**	**0.0448**		**167.0952**	**167.0952**	**6.3700e-003**		**167.2545**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0808	0.0620	0.6792	1.6800e-003	0.1643	1.3300e-003	0.1656	0.0436	1.2200e-003	0.0448		167.0952	167.0952	6.3700e-003		167.2545
Total	**0.0808**	**0.0620**	**0.6792**	**1.6800e-003**	**0.1643**	**1.3300e-003**	**0.1656**	**0.0436**	**1.2200e-003**	**0.0448**		**167.0952**	**167.0952**	**6.3700e-003**		**167.2545**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0750	0.0555	0.6207	1.6200e-003	0.1643	1.2800e-003	0.1656	0.0436	1.1800e-003	0.0448		161.2050	161.2050	5.7000e-003		161.3475
Total	**0.0750**	**0.0555**	**0.6207**	**1.6200e-003**	**0.1643**	**1.2800e-003**	**0.1656**	**0.0436**	**1.1800e-003**	**0.0448**		**161.2050**	**161.2050**	**5.7000e-003**		**161.3475**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0750	0.0555	0.6207	1.6200e-003	0.1643	1.2800e-003	0.1656	0.0436	1.1800e-003	0.0448		161.2050	161.2050	5.7000e-003		161.3475
Total	**0.0750**	**0.0555**	**0.6207**	**1.6200e-003**	**0.1643**	**1.2800e-003**	**0.1656**	**0.0436**	**1.1800e-003**	**0.0448**		**161.2050**	**161.2050**	**5.7000e-003**		**161.3475**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.9319	60.6521	13.8312	0.1547	3.6357	0.1824	3.8181	1.0466	0.1744	1.2211		16,246.8151	16,246.8151	0.8061		16,266.9683
Worker	10.2380	7.8559	86.0584	0.2127	20.8162	0.1680	20.9842	5.5214	0.1550	5.6764		21,170.9554	21,170.9554	0.8073		21,191.1386
Total	**12.1699**	**68.5079**	**99.8896**	**0.3675**	**24.4519**	**0.3504**	**24.8023**	**6.5681**	**0.3294**	**6.8975**		**37,417.7705**	**37,417.7705**	**1.6135**		**37,458.1069**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.9319	60.6521	13.8312	0.1547	3.6357	0.1824	3.8181	1.0466	0.1744	1.2211		16,246.8151	16,246.8151	0.8061		16,266.9683
Worker	10.2380	7.8559	86.0584	0.2127	20.8162	0.1680	20.9842	5.5214	0.1550	5.6764		21,170.9554	21,170.9554	0.8073		21,191.1386
Total	**12.1699**	**68.5079**	**99.8896**	**0.3675**	**24.4519**	**0.3504**	**24.8023**	**6.5681**	**0.3294**	**6.8975**		**37,417.7705**	**37,417.7705**	**1.6135**		**37,458.1069**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.7733	57.4117	12.4924	0.1533	3.6359	0.1584	3.7943	1.0467	0.1515	1.1982		16,101.5983	16,101.5983	0.7841		16,121.2010
Worker	9.5070	7.0351	78.6359	0.2052	20.8162	0.1621	20.9783	5.5214	0.1495	5.6709		20,424.6736	20,424.6736	0.7220		20,442.7229
Total	**11.2804**	**64.4468**	**91.1283**	**0.3585**	**24.4521**	**0.3205**	**24.7726**	**6.5681**	**0.3010**	**6.8691**		**36,526.2719**	**36,526.2719**	**1.5061**		**36,563.9239**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.7733	57.4117	12.4924	0.1533	3.6359	0.1584	3.7943	1.0467	0.1515	1.1982		16,101.5983	16,101.5983	0.7841		16,121.2010
Worker	9.5070	7.0351	78.6359	0.2052	20.8162	0.1621	20.9783	5.5214	0.1495	5.6709		20,424.6736	20,424.6736	0.7220		20,442.7229
Total	**11.2804**	**64.4468**	**91.1283**	**0.3585**	**24.4521**	**0.3205**	**24.7726**	**6.5681**	**0.3010**	**6.8691**		**36,526.2719**	**36,526.2719**	**1.5061**		**36,563.9239**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3310	47.3071	10.7154	0.1506	3.6361	0.0686	3.7047	1.0467	0.0656	1.1123		15,817.0387	15,817.0387	0.6079		15,832.2371
Worker	8.8394	6.3059	71.8433	0.1975	20.8162	0.1571	20.9733	5.5214	0.1448	5.6663		19,666.6552	19,666.6552	0.6451		19,682.7820
Total	**10.1704**	**53.6130**	**82.5587**	**0.3480**	**24.4523**	**0.2257**	**24.6780**	**6.5682**	**0.2104**	**6.7786**		**35,483.6939**	**35,483.6939**	**1.2530**		**35,515.0190**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3310	47.3071	10.7154	0.1506	3.6361	0.0686	3.7047	1.0467	0.0656	1.1123		15,817.0387	15,817.0387	0.6079		15,832.2371
Worker	8.8394	6.3059	71.8433	0.1975	20.8162	0.1571	20.9733	5.5214	0.1448	5.6663		19,666.6552	19,666.6552	0.6451		19,682.7820
Total	**10.1704**	**53.6130**	**82.5587**	**0.3480**	**24.4523**	**0.2257**	**24.6780**	**6.5682**	**0.2104**	**6.7786**		**35,483.6939**	**35,483.6939**	**1.2530**		**35,515.0190**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2602	46.2531	9.9229	0.1493	3.6362	0.0638	3.7000	1.0468	0.0610	1.1078		15,686.2451	15,686.2451	0.6024		15,701.3050
Worker	8.2474	5.6690	66.0393	0.1898	20.8162	0.1525	20.9687	5.5214	0.1405	5.6620		18,908.4639	18,908.4639	0.5783		18,922.9203
Total	**9.5076**	**51.9221**	**75.9622**	**0.3391**	**24.4524**	**0.2163**	**24.6688**	**6.5682**	**0.2015**	**6.7698**		**34,594.7089**	**34,594.7089**	**1.1807**		**34,624.2252**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2602	46.2531	9.9229	0.1493	3.6362	0.0638	3.7000	1.0468	0.0610	1.1078		15,686.2451	15,686.2451	0.6024		15,701.3050
Worker	8.2474	5.6690	66.0393	0.1898	20.8162	0.1525	20.9687	5.5214	0.1405	5.6620		18,908.4639	18,908.4639	0.5783		18,922.9203
Total	**9.5076**	**51.9221**	**75.9622**	**0.3391**	**24.4524**	**0.2163**	**24.6688**	**6.5682**	**0.2015**	**6.7698**		**34,594.7089**	**34,594.7089**	**1.1807**		**34,624.2252**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1999	45.3246	9.2725	0.1481	3.6364	0.0596	3.6960	1.0469	0.0570	1.1039		15,565.3649	15,565.3649	0.5974		15,580.3009
Worker	7.7406	5.1257	60.8707	0.1822	20.8162	0.1492	20.9654	5.5214	0.1375	5.6589		18,157.6809	18,157.6809	0.5220		18,170.7316
Total	**8.9405**	**50.4502**	**70.1431**	**0.3303**	**24.4526**	**0.2088**	**24.6614**	**6.5683**	**0.1945**	**6.7627**		**33,723.0458**	**33,723.0458**	**1.1195**		**33,751.0325**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1999	45.3246	9.2725	0.1481	3.6364	0.0596	3.6960	1.0469	0.0570	1.1039		15,565.3649	15,565.3649	0.5974		15,580.3009
Worker	7.7406	5.1257	60.8707	0.1822	20.8162	0.1492	20.9654	5.5214	0.1375	5.6589		18,157.6809	18,157.6809	0.5220		18,170.7316
Total	**8.9405**	**50.4502**	**70.1431**	**0.3303**	**24.4526**	**0.2088**	**24.6614**	**6.5683**	**0.1945**	**6.7627**		**33,723.0458**	**33,723.0458**	**1.1195**		**33,751.0325**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1557	44.5667	8.8256	0.1473	3.6364	0.0565	3.6930	1.0469	0.0541	1.1009		15,476.5317	15,476.5317	0.5901		15,491.2848
Worker	7.2895	4.6518	56.1322	0.1749	20.8162	0.1434	20.9596	5.5214	0.1320	5.6535		17,430.5905	17,430.5905	0.4699		17,442.3387
Total	**8.4452**	**49.2184**	**64.9578**	**0.3221**	**24.4527**	**0.1999**	**24.6526**	**6.5683**	**0.1861**	**6.7544**		**32,907.1222**	**32,907.1222**	**1.0601**		**32,933.6235**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1557	44.5667	8.8256	0.1473	3.6364	0.0565	3.6930	1.0469	0.0541	1.1009		15,476.5317	15,476.5317	0.5901		15,491.2848
Worker	7.2895	4.6518	56.1322	0.1749	20.8162	0.1434	20.9596	5.5214	0.1320	5.6535		17,430.5905	17,430.5905	0.4699		17,442.3387
Total	**8.4452**	**49.2184**	**64.9578**	**0.3221**	**24.4527**	**0.1999**	**24.6526**	**6.5683**	**0.1861**	**6.7544**		**32,907.1222**	**32,907.1222**	**1.0601**		**32,933.6235**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1178	43.8727	8.4406	0.1465	3.6365	0.0537	3.6902	1.0469	0.0513	1.0982		15,399.7532	15,399.7532	0.5837		15,414.3459
Worker	6.8604	4.2240	52.0265	0.1688	20.8162	0.1349	20.9512	5.5214	0.1242	5.6456		16,831.2132	16,831.2132	0.4253		16,841.8460
Total	**7.9782**	**48.0967**	**60.4671**	**0.3153**	**24.4527**	**0.1886**	**24.6413**	**6.5683**	**0.1755**	**6.7439**		**32,230.9663**	**32,230.9663**	**1.0090**		**32,256.1919**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1178	43.8727	8.4406	0.1465	3.6365	0.0537	3.6902	1.0469	0.0513	1.0982		15,399.7532	15,399.7532	0.5837		15,414.3459
Worker	6.8604	4.2240	52.0265	0.1688	20.8162	0.1349	20.9512	5.5214	0.1242	5.6456		16,831.2132	16,831.2132	0.4253		16,841.8460
Total	**7.9782**	**48.0967**	**60.4671**	**0.3153**	**24.4527**	**0.1886**	**24.6413**	**6.5683**	**0.1755**	**6.7439**		**32,230.9663**	**32,230.9663**	**1.0090**		**32,256.1919**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0863	43.3020	8.1484	0.1459	3.6366	0.0512	3.6878	1.0469	0.0490	1.0959		15,336.8807	15,336.8807	0.5756		15,351.2697
Worker	6.4250	3.8462	48.4241	0.1635	20.8162	0.1256	20.9418	5.5214	0.1155	5.6370		16,299.4068	16,299.4068	0.3868		16,309.0758
Total	**7.5113**	**47.1482**	**56.5725**	**0.3094**	**24.4528**	**0.1768**	**24.6296**	**6.5684**	**0.1645**	**6.7329**		**31,636.2875**	**31,636.2875**	**0.9623**		**31,660.3455**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0863	43.3020	8.1484	0.1459	3.6366	0.0512	3.6878	1.0469	0.0490	1.0959		15,336.8807	15,336.8807	0.5756		15,351.2697
Worker	6.4250	3.8462	48.4241	0.1635	20.8162	0.1256	20.9418	5.5214	0.1155	5.6370		16,299.4068	16,299.4068	0.3868		16,309.0758
Total	**7.5113**	**47.1482**	**56.5725**	**0.3094**	**24.4528**	**0.1768**	**24.6296**	**6.5684**	**0.1645**	**6.7329**		**31,636.2875**	**31,636.2875**	**0.9623**		**31,660.3455**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0589	42.7839	7.8878	0.1454	3.6366	0.0491	3.6857	1.0469	0.0469	1.0938		15,281.9637	15,281.9637	0.5690		15,296.1889
Worker	5.9580	3.4932	44.9411	0.1587	20.8162	0.1169	20.9331	5.5214	0.1075	5.6289		15,827.4718	15,827.4718	0.3493		15,836.2047
Total	**7.0169**	**46.2771**	**52.8289**	**0.3041**	**24.4528**	**0.1659**	**24.6187**	**6.5684**	**0.1544**	**6.7228**		**31,109.4355**	**31,109.4355**	**0.9183**		**31,132.3936**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0589	42.7839	7.8878	0.1454	3.6366	0.0491	3.6857	1.0469	0.0469	1.0938		15,281.9637	15,281.9637	0.5690		15,296.1889
Worker	5.9580	3.4932	44.9411	0.1587	20.8162	0.1169	20.9331	5.5214	0.1075	5.6289		15,827.4718	15,827.4718	0.3493		15,836.2047
Total	**7.0169**	**46.2771**	**52.8289**	**0.3041**	**24.4528**	**0.1659**	**24.6187**	**6.5684**	**0.1544**	**6.7228**		**31,109.4355**	**31,109.4355**	**0.9183**		**31,132.3936**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0367	42.3419	7.6914	0.1450	3.6367	0.0472	3.6838	1.0470	0.0451	1.0920		15,240.4042	15,240.4042	0.5616		15,254.4444
Worker	5.4989	3.1677	41.8256	0.1545	20.8162	0.1087	20.9249	5.5214	0.1000	5.6214		15,410.2540	15,410.2540	0.3158		15,418.1492
Total	**6.5356**	**45.5096**	**49.5170**	**0.2995**	**24.4529**	**0.1558**	**24.6087**	**6.5684**	**0.1450**	**6.7134**		**30,650.6582**	**30,650.6582**	**0.8774**		**30,672.5936**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0367	42.3419	7.6914	0.1450	3.6367	0.0472	3.6838	1.0470	0.0451	1.0920		15,240.4042	15,240.4042	0.5616		15,254.4444
Worker	5.4989	3.1677	41.8256	0.1545	20.8162	0.1087	20.9249	5.5214	0.1000	5.6214		15,410.2540	15,410.2540	0.3158		15,418.1492
Total	**6.5356**	**45.5096**	**49.5170**	**0.2995**	**24.4529**	**0.1558**	**24.6087**	**6.5684**	**0.1450**	**6.7134**		**30,650.6582**	**30,650.6582**	**0.8774**		**30,672.5936**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0178	41.9601	7.5234	0.1447	3.6367	0.0454	3.6821	1.0470	0.0434	1.0904		15,210.6225	15,210.6225	0.5567		15,224.5389
Worker	5.0103	2.8570	38.8319	0.1508	20.8162	0.1012	20.9174	5.5214	0.0931	5.6145		15,042.4239	15,042.4239	0.2838		15,049.5185
Total	**6.0281**	**44.8170**	**46.3553**	**0.2954**	**24.4529**	**0.1466**	**24.5995**	**6.5684**	**0.1365**	**6.7049**		**30,253.0464**	**30,253.0464**	**0.8404**		**30,274.0573**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0178	41.9601	7.5234	0.1447	3.6367	0.0454	3.6821	1.0470	0.0434	1.0904		15,210.6225	15,210.6225	0.5567		15,224.5389
Worker	5.0103	2.8570	38.8319	0.1508	20.8162	0.1012	20.9174	5.5214	0.0931	5.6145		15,042.4239	15,042.4239	0.2838		15,049.5185
Total	**6.0281**	**44.8170**	**46.3553**	**0.2954**	**24.4529**	**0.1466**	**24.5995**	**6.5684**	**0.1365**	**6.7049**		**30,253.0464**	**30,253.0464**	**0.8404**		**30,274.0573**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0027	41.6267	7.3969	0.1445	3.6367	0.0439	3.6806	1.0470	0.0420	1.0890		15,193.3124	15,193.3124	0.5525		15,207.1241
Worker	4.5824	2.5893	36.2281	0.1475	20.8162	0.0943	20.9105	5.5214	0.0867	5.6082		14,720.0987	14,720.0987	0.2560		14,726.4991
Total	**5.5851**	**44.2160**	**43.6250**	**0.2920**	**24.4529**	**0.1382**	**24.5911**	**6.5684**	**0.1287**	**6.6971**		**29,913.4111**	**29,913.4111**	**0.8085**		**29,933.6233**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0027	41.6267	7.3969	0.1445	3.6367	0.0439	3.6806	1.0470	0.0420	1.0890		15,193.3124	15,193.3124	0.5525		15,207.1241
Worker	4.5824	2.5893	36.2281	0.1475	20.8162	0.0943	20.9105	5.5214	0.0867	5.6082		14,720.0987	14,720.0987	0.2560		14,726.4991
Total	**5.5851**	**44.2160**	**43.6250**	**0.2920**	**24.4529**	**0.1382**	**24.5911**	**6.5684**	**0.1287**	**6.6971**		**29,913.4111**	**29,913.4111**	**0.8085**		**29,933.6233**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9908	41.3408	7.2950	0.1444	3.6368	0.0426	3.6794	1.0470	0.0408	1.0877		15,183.8202	15,183.8202	0.5493		15,197.5515
Worker	4.2207	2.3660	34.0288	0.1447	20.8162	0.0881	20.9043	5.5214	0.0811	5.6025		14,439.4215	14,439.4215	0.2326		14,445.2356
Total	**5.2116**	**43.7068**	**41.3238**	**0.2891**	**24.4530**	**0.1307**	**24.5837**	**6.5684**	**0.1218**	**6.6902**		**29,623.2417**	**29,623.2417**	**0.7818**		**29,642.7871**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9908	41.3408	7.2950	0.1444	3.6368	0.0426	3.6794	1.0470	0.0408	1.0877		15,183.8202	15,183.8202	0.5493		15,197.5515
Worker	4.2207	2.3660	34.0288	0.1447	20.8162	0.0881	20.9043	5.5214	0.0811	5.6025		14,439.4215	14,439.4215	0.2326		14,445.2356
Total	**5.2116**	**43.7068**	**41.3238**	**0.2891**	**24.4530**	**0.1307**	**24.5837**	**6.5684**	**0.1218**	**6.6902**		**29,623.2417**	**29,623.2417**	**0.7818**		**29,642.7871**

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9802	41.0911	7.2028	0.1444	3.6368	0.0414	3.6782	1.0470	0.0396	1.0866		15,180.9812	15,180.9812	0.5461		15,194.6340
Worker	3.9129	2.1802	31.9839	0.1422	20.8162	0.0824	20.8986	5.5214	0.0758	5.5972		14,194.7944	14,194.7944	0.2108		14,200.0654
Total	**4.8931**	**43.2712**	**39.1867**	**0.2866**	**24.4530**	**0.1239**	**24.5768**	**6.5684**	**0.1154**	**6.6838**		**29,375.7756**	**29,375.7756**	**0.7570**		**29,394.6994**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.5 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9802	41.0911	7.2028	0.1444	3.6368	0.0414	3.6782	1.0470	0.0396	1.0866		15,180.9812	15,180.9812	0.5461		15,194.6340
Worker	3.9129	2.1802	31.9839	0.1422	20.8162	0.0824	20.8986	5.5214	0.0758	5.5972		14,194.7944	14,194.7944	0.2108		14,200.0654
Total	**4.8931**	**43.2712**	**39.1867**	**0.2866**	**24.4530**	**0.1239**	**24.5768**	**6.5684**	**0.1154**	**6.6838**		**29,375.7756**	**29,375.7756**	**0.7570**		**29,394.6994**

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.5 Building Construction - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9709	40.8842	7.1233	0.1444	3.6368	0.0404	3.6772	1.0470	0.0386	1.0857		15,181.9064	15,181.9064	0.5441		15,195.5086
Worker	3.6405	2.0325	30.2057	0.1401	20.8162	0.0772	20.8935	5.5214	0.0711	5.5925		13,984.3273	13,984.3273	0.1920		13,989.1269
Total	**4.6114**	**42.9167**	**37.3290**	**0.2844**	**24.4530**	**0.1177**	**24.5707**	**6.5684**	**0.1097**	**6.6781**		**29,166.2337**	**29,166.2337**	**0.7361**		**29,184.6355**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0465	0.5094	1.2600e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		125.3214	125.3214	4.7800e-003		125.4408
Total	**0.0606**	**0.0465**	**0.5094**	**1.2600e-003**	**0.1232**	**9.9000e-004**	**0.1242**	**0.0327**	**9.2000e-004**	**0.0336**		**125.3214**	**125.3214**	**4.7800e-003**		**125.4408**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0465	0.5094	1.2600e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		125.3214	125.3214	4.7800e-003		125.4408
Total	**0.0606**	**0.0465**	**0.5094**	**1.2600e-003**	**0.1232**	**9.9000e-004**	**0.1242**	**0.0327**	**9.2000e-004**	**0.0336**		**125.3214**	**125.3214**	**4.7800e-003**		**125.4408**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0563	0.0416	0.4655	1.2100e-003	0.1232	9.6000e-004	0.1242	0.0327	8.8000e-004	0.0336		120.9038	120.9038	4.2700e-003		121.0106
Total	**0.0563**	**0.0416**	**0.4655**	**1.2100e-003**	**0.1232**	**9.6000e-004**	**0.1242**	**0.0327**	**8.8000e-004**	**0.0336**		**120.9038**	**120.9038**	**4.2700e-003**		**121.0106**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0563	0.0416	0.4655	1.2100e-003	0.1232	9.6000e-004	0.1242	0.0327	8.8000e-004	0.0336		120.9038	120.9038	4.2700e-003		121.0106
Total	**0.0563**	**0.0416**	**0.4655**	**1.2100e-003**	**0.1232**	**9.6000e-004**	**0.1242**	**0.0327**	**8.8000e-004**	**0.0336**		**120.9038**	**120.9038**	**4.2700e-003**		**121.0106**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**149.2580**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.0484	1.5718	17.2185	0.0426	4.1649	0.0336	4.1985	1.1047	0.0310	1.1357		4,235.8620	4,235.8620	0.1615		4,239.9003
Total	**2.0484**	**1.5718**	**17.2185**	**0.0426**	**4.1649**	**0.0336**	**4.1985**	**1.1047**	**0.0310**	**1.1357**		**4,235.8620**	**4,235.8620**	**0.1615**		**4,239.9003**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**149.2580**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.0484	1.5718	17.2185	0.0426	4.1649	0.0336	4.1985	1.1047	0.0310	1.1357		4,235.8620	4,235.8620	0.1615		4,239.9003
Total	**2.0484**	**1.5718**	**17.2185**	**0.0426**	**4.1649**	**0.0336**	**4.1985**	**1.1047**	**0.0310**	**1.1357**		**4,235.8620**	**4,235.8620**	**0.1615**		**4,239.9003**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**149.2436**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.9022	1.4076	15.7334	0.0411	4.1649	0.0324	4.1973	1.1047	0.0299	1.1346		4,086.5468	4,086.5468	0.1445		4,090.1581
Total	**1.9022**	**1.4076**	**15.7334**	**0.0411**	**4.1649**	**0.0324**	**4.1973**	**1.1047**	**0.0299**	**1.1346**		**4,086.5468**	**4,086.5468**	**0.1445**		**4,090.1581**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**149.2436**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.9022	1.4076	15.7334	0.0411	4.1649	0.0324	4.1973	1.1047	0.0299	1.1346		4,086.5468	4,086.5468	0.1445		4,090.1581
Total	**1.9022**	**1.4076**	**15.7334**	**0.0411**	**4.1649**	**0.0324**	**4.1973**	**1.1047**	**0.0299**	**1.1346**		**4,086.5468**	**4,086.5468**	**0.1445**		**4,090.1581**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**149.2307**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.7686	1.2617	14.3743	0.0395	4.1649	0.0314	4.1963	1.1047	0.0290	1.1337		3,934.8833	3,934.8833	0.1291		3,938.1099
Total	**1.7686**	**1.2617**	**14.3743**	**0.0395**	**4.1649**	**0.0314**	**4.1963**	**1.1047**	**0.0290**	**1.1337**		**3,934.8833**	**3,934.8833**	**0.1291**		**3,938.1099**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	149.0391					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**149.2307**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.7686	1.2617	14.3743	0.0395	4.1649	0.0314	4.1963	1.1047	0.0290	1.1337		3,934.8833	3,934.8833	0.1291		3,938.1099
Total	**1.7686**	**1.2617**	**14.3743**	**0.0395**	**4.1649**	**0.0314**	**4.1963**	**1.1047**	**0.0290**	**1.1337**		**3,934.8833**	**3,934.8833**	**0.1291**		**3,938.1099**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	44.00	19.00	37.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482
General Office Building	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482
Regional Shopping Center	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.1833	10.2795	5.5354	0.0645		0.8175	0.8175		0.8175	0.8175		12,908.2254	12,908.2254	0.2474	0.2367	12,984.9325
NaturalGas Unmitigated	1.1833	10.2795	5.5354	0.0645		0.8175	0.8175		0.8175	0.8175		12,908.2254	12,908.2254	0.2474	0.2367	12,984.9325

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	81143.7	0.8751	7.4780	3.1821	0.0477		0.6046	0.6046		0.6046	0.6046		9,546.3208	9,546.3208	0.1830	0.1750	9,603.0499
General Office Building	22896.8	0.2469	2.2448	1.8856	0.0135		0.1706	0.1706		0.1706	0.1706		2,693.7448	2,693.7448	0.0516	0.0494	2,709.7524
Regional Shopping Center	5679.36	0.0613	0.5568	0.4677	3.3400e-003		0.0423	0.0423		0.0423	0.0423		668.1597	668.1597	0.0128	0.0123	672.1303
Total		**1.1833**	**10.2795**	**5.5354**	**0.0645**		**0.8175**	**0.8175**		**0.8175**	**0.8175**		**12,908.2254**	**12,908.2254**	**0.2474**	**0.2367**	**12,984.9325**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	81.1437	0.8751	7.4780	3.1821	0.0477		0.6046	0.6046		0.6046	0.6046		9,546.3208	9,546.3208	0.1830	0.1750	9,603.0499
General Office Building	22.8968	0.2469	2.2448	1.8856	0.0135		0.1706	0.1706		0.1706	0.1706		2,693.7448	2,693.7448	0.0516	0.0494	2,709.7524
Regional Shopping Center	5.67936	0.0613	0.5568	0.4677	3.3400e-003		0.0423	0.0423		0.0423	0.0423		668.1597	668.1597	0.0128	0.0123	672.1303
Total		**1.1833**	**10.2795**	**5.5354**	**0.0645**		**0.8175**	**0.8175**		**0.8175**	**0.8175**		**12,908.2254**	**12,908.2254**	**0.2474**	**0.2367**	**12,984.9325**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	112.4107	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291	0.0000	431.6990	431.6990	0.4114	0.0000	441.9840
Unmitigated	112.4107	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291	0.0000	431.6990	431.6990	0.4114	0.0000	441.9840

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	13.4748					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	91.7888					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.1471	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291		431.6990	431.6990	0.4114		441.9840
Total	**112.4107**	**2.7545**	**238.6717**	**0.0127**		**1.3291**	**1.3291**		**1.3291**	**1.3291**	**0.0000**	**431.6990**	**431.6990**	**0.4114**	**0.0000**	**441.9840**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	13.4748					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	91.7888					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.1471	2.7545	238.6717	0.0127		1.3291	1.3291		1.3291	1.3291		431.6990	431.6990	0.4114		441.9840
Total	**112.4107**	**2.7545**	**238.6717**	**0.0127**		**1.3291**	**1.3291**		**1.3291**	**1.3291**	**0.0000**	**431.6990**	**431.6990**	**0.4114**	**0.0000**	**441.9840**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Planning Inventory Report
Date: 01/22/2021
Time: 14:00:37
EMFAC2017 Version: v1.0.3

Field Name	Pollutant	Units	Process
TOG_RUNEX	Total Organic Gases	Tons Per Day	Running Exhaust
TOG_IDLEX	Total Organic Gases	Tons Per Day	Idle Exhaust
TOG_STREX	Total Organic Gases	Tons Per Day	Start Exhaust
TOG_TOTEX	Total Organic Gases	Tons Per Day	Total Exhaust
TOG_DIURN	Total Organic Gases	Tons Per Day	Diurnal
TOG_HTSK	Total Organic Gases	Tons Per Day	Hot Soak
TOG_RUNLS	Total Organic Gases	Tons Per Day	Running Loss
TOG_RESTL	Total Organic Gases	Tons Per Day	Resting Loss
TOG_TOTAL	Total Organic Gases	Tons Per Day	Total
ROG_RUNEX	Reactive Organic Gases	Tons Per Day	Running Exhaust
ROG_IDLEX	Reactive Organic Gases	Tons Per Day	Idle Exhaust
ROG_STREX	Reactive Organic Gases	Tons Per Day	Start Exhaust
ROG_TOTEX	Reactive Organic Gases	Tons Per Day	Total Exhaust
ROG_DIURN	Reactive Organic Gases	Tons Per Day	Diurnal
ROG_HTSK	Reactive Organic Gases	Tons Per Day	Hot Soak
ROG_RUNLS	Reactive Organic Gases	Tons Per Day	Running Loss
ROG_RESTL	Reactive Organic Gases	Tons Per Day	Resting Loss
ROG_TOTAL	Reactive Organic Gases	Tons Per Day	Total
CO_RUNEX	Carbon Monoxide	Tons Per Day	Running Exhaust
CO_IDLEX	Carbon Monoxide	Tons Per Day	Idle Exhaust
CO_STREX	Carbon Monoxide	Tons Per Day	Start Exhaust
CO_TOTEX	Carbon Monoxide	Tons Per Day	Total
NOx_RUNEX	Nitrogen Dioxide	Tons Per Day	Running Exhaust
NOx_IDLEX	Nitrogen Dioxide	Tons Per Day	Idle Exhaust
NOx_STREX	Nitrogen Dioxide	Tons Per Day	Start Exhaust
NOx_TOTEX	Nitrogen Dioxide	Tons Per Day	Total
CO2_RUNEX	Carbon Dioxide	Tons Per Day	Running Exhaust
CO2_IDLEX	Carbon Dioxide	Tons Per Day	Idle Exhaust
CO2_STREX	Carbon Dioxide	Tons Per Day	Start Exhaust
CO2_TOTEX	Carbon Dioxide	Tons Per Day	Total
PM10_RUNEX	Fine Particulate Matter (<10 microns)	Tons Per Day	Running Exhaust
PM10_IDLEX	Fine Particulate Matter (<10 microns)	Tons Per Day	Idle Exhaust
PM10_STREX	Fine Particulate Matter (<10 microns)	Tons Per Day	Start Exhaust
PM10_TOTEX	Fine Particulate Matter (<10 microns)	Tons Per Day	Total Exhaust
PM10_PMTW	Fine Particulate Matter (<10 microns)	Tons Per Day	Tire Wear
PM10_PMBW	Fine Particulate Matter (<10 microns)	Tons Per Day	Brake Wear
PM10_TOTAL	Fine Particulate Matter (<10 microns)	Tons Per Day	Total
PM2_5_RUNEX	Fine Particulate Matter (<2.5 microns)	Tons Per Day	Running Exhaust
PM2_5_IDLEX	Fine Particulate Matter (<2.5 microns)	Tons Per Day	Idle Exhaust
PM2_5_STREX	Fine Particulate Matter (<2.5 microns)	Tons Per Day	Start Exhaust
PM2_5_TOTEX	Fine Particulate Matter (<2.5 microns)	Tons Per Day	Total Exhaust
PM2_5_PMTW	Fine Particulate Matter (<2.5 microns)	Tons Per Day	Tire Wear
PM2_5_PMBW	Fine Particulate Matter (<2.5 microns)	Tons Per Day	Brake Wear
PM2_5_TOTAL	Fine Particulate Matter (<2.5 microns)	Tons Per Day	Total
SOx_RUNEX	Sulfur Oxides	Tons Per Day	Running Exhaust
SOx_IDLEX	Sulfur Oxides	Tons Per Day	Idle Exhaust
SOx_STREX	Sulfur Oxides	Tons Per Day	Start Exhaust
SOx_TOTEX	Sulfur Oxides	Tons Per Day	Total
Fuel_GAS	Fuel	1000s Gallons	Gasoline
Fuel_DSL	Fuel	1000s Gallons	Diesel

Area	Sub-Area	Cal. Year	Season	Veh_Tech	EMFAC2007 Category	Population	VMT	Trips	ROG_TOTAL	CO_TOTEX	NOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	SOx_TOTEX
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	All Vehicles	All Vehicles	3,191.5	97,807.0	15,505.3	0.0099	0.0918	0.0186	0.0056	0.0023	0.0003
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	ALL OTHER BUSES - DSL	OBUS - DSL	2.005797637	94.1	16.8	0.0000	0.0000	0.0003	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LDA - DSL	LDA - DSL	20.5	643.8	95.1	0.0000	0.0002	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LDA - GAS	LDA - GAS	1,769.9	55,246.8	8,190.8	0.0030	0.0365	0.0022	0.0028	0.0011	0.0001
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LDT1 - DSL	LDT1 - DSL	0.0222	0.6736	0.1028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LDT1 - GAS	LDT1 - GAS	181.3	5,280.6	821.0	0.0004	0.0039	0.0003	0.0003	0.0001	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LDT2 - DSL	LDT2 - DSL	5.725554198	171.8	26.4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LDT2 - GAS	LDT2 - GAS	598.5	17,351.0	2,720.0	0.0016	0.0153	0.0009	0.0009	0.0004	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LHD1 - DSL	LHDT1 - DSL	28.9	870.2	362.9	0.0001	0.0006	0.0003	0.0001	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LHD1 - GAS	LHDT1 - GAS	32.2	956.4	479.3	0.0003	0.0011	0.0002	0.0001	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LHD2 - DSL	LHDT2 - DSL	12.0	347.1	151.5	0.0001	0.0003	0.0002	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	LHD2 - GAS	LHDT2 - GAS	4.233734003	128.5	63.1	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	MCY - GAS	MCY - GAS	71.1	644.6	142.3	0.0026	0.0145	0.0009	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	MDV - DSL	MDV - DSL	12.8	374.3	58.6	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	MDV - GAS	MDV - GAS	388.8	10,839.9	1,742.0	0.0014	0.0102	0.0007	0.0005	0.0002	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	MH - DSL	MH - DSL	2.351724878	18.2	0.2352	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	MH - GAS	MH - GAS	4.282293996	39.0	0.4284	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	MOTOR COACH - DSL	OBUS - DSL	0.8128	100.5	11.9	0.0000	0.0001	0.0003	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	OBUS - GAS	OBUS - GAS	0.9291	53.4	18.6	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	PTO - DSL	HHDT - DSL	0	32.8		0.0000	0.0000	0.0002	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	SBUS - DSL	SBUS - DSL	2.672320408	85.2	30.8	0.0000	0.0000	0.0003	0.0001	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	SBUS - GAS	SBUS - GAS	0.5603	37.6	2.241000445	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 AG - DSL	MHDT - DSL	0.3307	0.6825	1.455066251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 CAIRP HEAVY - DSL	MHDT - DSL	0.3019	50.3	4.407586029	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 CAIRP SMALL - DSL	MHDT - DSL	0.1541	6.602124002	2.249264	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 INSTATE CONSTRUCTION HEAVY - DSL	MHDT - DSL	0.6679	43.8	3.019513036	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 INSTATE CONSTRUCTION SMALL - DSL	MHDT - DSL	3.9152855	194.8	17.7	0.0000	0.0000	0.0005	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 INSTATE HEAVY - DSL	MHDT - DSL	5.844594017	556.5	67.4	0.0000	0.0001	0.0012	0.0001	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 INSTATE SMALL - DSL	MHDT - DSL	15.8	709.4	182.7	0.0000	0.0001	0.0016	0.0001	0.0001	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 OOS HEAVY - DSL	MHDT - DSL	0.1778	29.8	2.595668842	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 OOS SMALL - DSL	MHDT - DSL	0.0822	3.480327328	1.200194521	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 PUBLIC - DSL	MHDT - DSL	0.8076	12.4	2.449655502	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6 UTILITY - DSL	MHDT - DSL	0.5803	9.677248301	6.673065339	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T6TS - GAS	MHDT - GAS	3.292899564	247.4	65.9	0.0000	0.0003	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 AG - DSL	HHDT - DSL	0.1580	0.2412	0.6950	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 CAIRP - DSL	HHDT - DSL	2.701771315	571.6	39.4	0.0000	0.0006	0.0018	0.0001	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 CAIRP CONSTRUCTION - DSL	HHDT - DSL	0.1761	31.4	0.7961	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 NNOOS - DSL	HHDT - DSL	4.186774129	697.0	61.1	0.0001	0.0010	0.0023	0.0001	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 NOOS - DSL	HHDT - DSL	1.073480135	224.6	15.7	0.0000	0.0003	0.0007	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 OTHER PORT - DSL	HHDT - DSL	0.0000	0.0000	0.0000	5.14204E-14	7.40501E-13	5.54994E-12	1.51506E-13	6.72786E-14	1.48328E-14
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 POAK - DSL	HHDT - DSL	0.3917	67.8	2.977143414	0.0000	0.0000	0.0003	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 POLA - DSL	HHDT - DSL	0.0000	0.0000	0.0000	7.28253E-14	1.05246E-12	6.88164E-12	1.85397E-13	8.23566E-14	1.92087E-14
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 PUBLIC - DSL	HHDT - DSL	0.8640	17.5	2.620919071	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 SINGLE - DSL	HHDT - DSL	2.120285345	165.2	24.5	0.0000	0.0001	0.0006	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 SINGLE CONSTRUCTION - DSL	HHDT - DSL	1.024778135	78.0	4.632982104	0.0000	0.0001	0.0003	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 SWCV - DSL	HHDT - DSL	1.334168648	54.4	5.203257726	0.0000	0.0002	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 TRACTOR - DSL	HHDT - DSL	3.512855102	441.7	44.6	0.0000	0.0002	0.0010	0.0001	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 TRACTOR CONSTRUCTION - DSL	HHDT - DSL	0.8588	64.4	3.88258208	0.0000	0.0001	0.0003	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7 UTILITY - DSL	HHDT - DSL	0.1364	2.765258483	1.568779966	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	T7IS - GAS	HHDT - GAS	0.0125	2.289964787	0.2499	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	UBUS - DSL	UBUS - DSL	1.00481974	167.9	4.019278961	0.0000	0.0053	0.0001	0.0000	0.0000	0.0000
Monterey Bay Unified APCD	All Sub-Areas	2040	Annual	UBUS - GAS	UBUS - GAS	0.3478	38.7	1.391288871	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TOTAL (lbs/day)									20	184	37	11	5	1

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	510.53	1000sqft	11.72	510,528.00	0
Apartments Low Rise	2,904.00	Dwelling Unit	181.50	2,904,000.00	7957
Regional Shopping Center	874.67	1000sqft	20.08	874,669.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	292.85	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS for 2030.

Land Use - Land uses based on PD. Pop based on US Census 2019 estimate of 2.74 persons per household in Marina.

Construction Phase - Phase lengths are default. Adjusted start dates so that all phases would be overlapping to estimate worst case impacts.

Trips and VMT -

Demolition - Estimated that half of existing residential units and half of existing retail/office space would be demolished and redeveloped.

Grading - Assumed no substantial import/export required.

Architectural Coating - MBARD Rule 426

Vehicle Trips - Calculated in EMFAC2017

Woodstoves -

Area Coating - MBARD Rule 426

Energy Use - Includes 30% reduction in nonresidential electricity use for 2019 Code. 2019 Building Code requires all electricity met by solar on low-rise residential.

Water And Wastewater - Reduced indoor water use by 20% for CALGreen. Monterey One Water uses anaerobic digestors only.

Solid Waste -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation - Compliance with CALGreen and DVSP ES Objective 1, Strategy 6

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	100.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	100
tblAreaCoating	Area_EF_Parking	150	100
tblEnergyUse	LightingElect	810.36	0.00
tblEnergyUse	NT24E	3,172.76	0.00

tblEnergyUse	T24E	365.68	0.00
tblEnergyUse	T24E	6.11	4.28
tblEnergyUse	T24E	2.76	1.93
tblLandUse	LandUseSquareFeet	510,530.00	510,528.00
tblLandUse	LandUseSquareFeet	874,670.00	874,669.00
tblLandUse	Population	8,305.00	7,957.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	641.35	292.85
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	0.00
tblVehicleTrips	HO_TTP	37.20	0.00
tblVehicleTrips	HS_TL	7.30	0.00
tblVehicleTrips	HS_TTP	18.80	0.00
tblVehicleTrips	HW_TL	10.80	4.94
tblVehicleTrips	HW_TTP	44.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	7.59
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	6.07	6.25
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	6.59	6.81
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	42.70	0.00

tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021											0.0000	5,347.1588	5,347.1588	0.6744	0.0000	5,364.0197
2022											0.0000	5,938.8569	5,938.8569	0.5709	0.0000	5,953.1286
2023											0.0000	4,338.8465	4,338.8465	0.2194	0.0000	4,344.3325
2024											0.0000	4,264.7761	4,264.7761	0.2122	0.0000	4,270.0800
2025											0.0000	4,150.7652	4,150.7652	0.2040	0.0000	4,155.8643
2026											0.0000	4,059.1977	4,059.1977	0.1972	0.0000	4,064.1271

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027											0.0000	3,983.1842	3,983.1842	0.1913	0.0000	3,987.9674
2028											0.0000	3,901.3392	3,901.3392	0.1853	0.0000	3,905.9706
2029											0.0000	3,857.0868	3,857.0868	0.1809	0.0000	3,861.6097
2030											0.0000	3,845.8305	3,845.8305	0.1188	0.0000	3,848.8013
2031											0.0000	3,801.0541	3,801.0541	0.1146	0.0000	3,803.9190
2032											0.0000	3,777.2162	3,777.2162	0.1114	0.0000	3,780.0004
2033											0.0000	3,715.8137	3,715.8137	0.1075	0.0000	3,718.5009
2034											0.0000	3,688.0292	3,688.0292	0.1047	0.0000	3,690.6458
2035											0.0000	3,678.5973	3,678.5973	0.1017	0.0000	3,681.1400
2036											0.0000	3,692.6916	3,692.6916	0.1021	0.0000	3,695.2440
2037											0.0000	3,678.5973	3,678.5973	0.1017	0.0000	3,681.1400
2038											0.0000	3,678.5973	3,678.5973	0.1017	0.0000	3,681.1400
2039											0.0000	253.6964	253.6964	7.0100e-003	0.0000	253.8717
Maximum											**0.0000**	**5,938.8569**	**5,938.8569**	**0.6744**	**0.0000**	**5,953.1286**

2.1 Overall Construction

Mitigated Construction

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021											0.0000	5,347.1568	5,347.1568	0.6744	0.0000	5,364.0176
2022											0.0000	5,938.8553	5,938.8553	0.5709	0.0000	5,953.1271
2023											0.0000	4,338.8462	4,338.8462	0.2194	0.0000	4,344.3322
2024											0.0000	4,264.7757	4,264.7757	0.2122	0.0000	4,270.0796
2025											0.0000	4,150.7648	4,150.7648	0.2040	0.0000	4,155.8639
2026											0.0000	4,059.1973	4,059.1973	0.1972	0.0000	4,064.1267
2027											0.0000	3,983.1838	3,983.1838	0.1913	0.0000	3,987.9671
2028											0.0000	3,901.3389	3,901.3389	0.1853	0.0000	3,905.9702
2029											0.0000	3,857.0864	3,857.0864	0.1809	0.0000	3,861.6093
2030											0.0000	3,845.8301	3,845.8301	0.1188	0.0000	3,848.8009
2031											0.0000	3,801.0536	3,801.0536	0.1146	0.0000	3,803.9185
2032											0.0000	3,777.2158	3,777.2158	0.1114	0.0000	3,780.0000
2033											0.0000	3,715.8133	3,715.8133	0.1075	0.0000	3,718.5005
2034											0.0000	3,688.0288	3,688.0288	0.1047	0.0000	3,690.6454
2035											0.0000	3,678.5969	3,678.5969	0.1017	0.0000	3,681.1396
2036											0.0000	3,692.6912	3,692.6912	0.1021	0.0000	3,695.2436
2037											0.0000	3,678.5969	3,678.5969	0.1017	0.0000	3,681.1396
2038											0.0000	3,678.5969	3,678.5969	0.1017	0.0000	3,681.1396

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2039											0.0000	253.6963	253.6963	7.0100e-003	0.0000	253.8717
Maximum											**0.0000**	**5,938.8553**	**5,938.8553**	**0.6744**	**0.0000**	**5,953.1271**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	48.9539	48.9539	0.0467	0.0000	50.1213
Energy											0.0000	4,367.7497	4,367.7497	0.1552	0.0620	4,390.1155
Mobile											0.0000	14,078.0431	14,078.0431	0.6525	0.0000	14,094.3549
Waste											553.9684	0.0000	553.9684	32.7386	0.0000	1,372.4333
Water											121.9677	347.5590	469.5267	0.4376	0.2688	560.5692
Total											**675.9361**	**18,842.3057**	**19,518.2418**	**34.0306**	**0.3308**	**20,467.5942**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	48.9539	48.9539	0.0467	0.0000	50.1213
Energy											0.0000	4,367.7497	4,367.7497	0.1552	0.0620	4,390.1155
Mobile											0.0000	14,078.0431	14,078.0431	0.6525	0.0000	14,094.3549
Waste											553.9684	0.0000	553.9684	32.7386	0.0000	1,372.4333
Water											97.5742	298.0022	395.5763	0.3511	0.2152	468.4968
Total											**651.5426**	**18,792.7489**	**19,444.2914**	**33.9441**	**0.2773**	**20,375.5218**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.61**	**0.26**	**0.38**	**0.25**	**16.19**	**0.45**

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	2/24/2022	5	300	
2	Site Preparation	Site Preparation	2/3/2021	10/12/2021	5	180	
3	Grading	Grading	3/2/2021	12/12/2022	5	465	
4	Building Construction	Building Construction	4/1/2021	1/26/2039	5	4650	
5	Paving	Paving	7/1/2021	10/5/2022	5	330	
6	Architectural Coating	Architectural Coating	10/1/2021	1/5/2023	5	330	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1162.5

Acres of Paving: 0

Residential Indoor: 5,880,600; Residential Outdoor: 1,960,200; Non-Residential Indoor: 2,077,796; Non-Residential Outdoor: 692,599; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	7,523.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,534.00	537.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	507.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	443.7102	443.7102	0.1249	0.0000	446.8324
Total											**0.0000**	**443.7102**	**443.7102**	**0.1249**	**0.0000**	**446.8324**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	250.2257	250.2257	0.0101	0.0000	250.4782
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	14.0080	14.0080	5.4000e-004	0.0000	14.0215
Total											**0.0000**	**264.2337**	**264.2337**	**0.0106**	**0.0000**	**264.4997**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	443.7097	443.7097	0.1249	0.0000	446.8319
Total											**0.0000**	**443.7097**	**443.7097**	**0.1249**	**0.0000**	**446.8319**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	250.2257	250.2257	0.0101	0.0000	250.4782
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	14.0080	14.0080	5.4000e-004	0.0000	14.0215
Total											**0.0000**	**264.2337**	**264.2337**	**0.0106**	**0.0000**	**264.4997**

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	66.2809	66.2809	0.0186	0.0000	66.7464
Total											**0.0000**	**66.2809**	**66.2809**	**0.0186**	**0.0000**	**66.7464**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	36.9250	36.9250	1.4900e-003	0.0000	36.9622
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.0194	2.0194	7.0000e-005	0.0000	2.0212
Total											**0.0000**	**38.9444**	**38.9444**	**1.5600e-003**	**0.0000**	**38.9833**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	66.2809	66.2809	0.0186	0.0000	66.7463
Total											**0.0000**	**66.2809**	**66.2809**	**0.0186**	**0.0000**	**66.7463**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	36.9250	36.9250	1.4900e-003	0.0000	36.9622
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	2.0194	2.0194	7.0000e-005	0.0000	2.0212
Total											**0.0000**	**38.9444**	**38.9444**	**1.5600e-003**	**0.0000**	**38.9833**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	300.9215	300.9215	0.0973	0.0000	303.3546
Total											**0.0000**	**300.9215**	**300.9215**	**0.0973**	**0.0000**	**303.3546**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	11.5928	11.5928	4.5000e-004	0.0000	11.6040
Total											**0.0000**	**11.5928**	**11.5928**	**4.5000e-004**	**0.0000**	**11.6040**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	300.9211	300.9211	0.0973	0.0000	303.3542
Total											**0.0000**	**300.9211**	**300.9211**	**0.0973**	**0.0000**	**303.3542**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	11.5928	11.5928	4.5000e-004	0.0000	11.6040
Total											**0.0000**	**11.5928**	**11.5928**	**4.5000e-004**	**0.0000**	**11.6040**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	596.7201	596.7201	0.1930	0.0000	601.5448
Total											**0.0000**	**596.7201**	**596.7201**	**0.1930**	**0.0000**	**601.5448**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	15.6718	15.6718	6.0000e-004	0.0000	15.6869
Total											**0.0000**	**15.6718**	**15.6718**	**6.0000e-004**	**0.0000**	**15.6869**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	596.7193	596.7193	0.1930	0.0000	601.5441
Total											**0.0000**	**596.7193**	**596.7193**	**0.1930**	**0.0000**	**601.5441**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	15.6718	15.6718	6.0000e-004	0.0000	15.6869
Total											**0.0000**	**15.6718**	**15.6718**	**6.0000e-004**	**0.0000**	**15.6869**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	670.7756	670.7756	0.2169	0.0000	676.1991
Total											**0.0000**	**670.7756**	**670.7756**	**0.2169**	**0.0000**	**676.1991**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	16.9833	16.9833	6.0000e-004	0.0000	16.9984
Total											**0.0000**	**16.9833**	**16.9833**	**6.0000e-004**	**0.0000**	**16.9984**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	670.7748	670.7748	0.2169	0.0000	676.1983
Total											**0.0000**	**670.7748**	**670.7748**	**0.2169**	**0.0000**	**676.1983**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	16.9833	16.9833	6.0000e-004	0.0000	16.9984
Total											**0.0000**	**16.9833**	**16.9833**	**6.0000e-004**	**0.0000**	**16.9984**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	228.1627	228.1627	0.0551	0.0000	229.5389
Total											**0.0000**	**228.1627**	**228.1627**	**0.0551**	**0.0000**	**229.5389**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,432.6048	1,432.6048	0.0756	0.0000	1,434.4942
Worker											0.0000	1,786.1479	1,786.1479	0.0687	0.0000	1,787.8659
Total											**0.0000**	**3,218.7527**	**3,218.7527**	**0.1443**	**0.0000**	**3,222.3601**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	228.1625	228.1625	0.0551	0.0000	229.5386
Total											**0.0000**	**228.1625**	**228.1625**	**0.0551**	**0.0000**	**229.5386**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,432.6048	1,432.6048	0.0756	0.0000	1,434.4942
Worker											0.0000	1,786.1479	1,786.1479	0.0687	0.0000	1,787.8659
Total											**0.0000**	**3,218.7527**	**3,218.7527**	**0.1443**	**0.0000**	**3,222.3601**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total											**0.0000**	**301.2428**	**301.2428**	**0.0722**	**0.0000**	**303.0471**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,873.6411	1,873.6411	0.0971	0.0000	1,876.0691
Worker											0.0000	2,274.2434	2,274.2434	0.0810	0.0000	2,276.2684
Total											**0.0000**	**4,147.8844**	**4,147.8844**	**0.1781**	**0.0000**	**4,152.3375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total											**0.0000**	**301.2425**	**301.2425**	**0.0722**	**0.0000**	**303.0467**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,873.6411	1,873.6411	0.0971	0.0000	1,876.0691
Worker											0.0000	2,274.2434	2,274.2434	0.0810	0.0000	2,276.2684
Total											**0.0000**	**4,147.8844**	**4,147.8844**	**0.1781**	**0.0000**	**4,152.3375**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total											**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,840.4143	1,840.4143	0.0753	0.0000	1,842.2956
Worker											0.0000	2,189.8348	2,189.8348	0.0723	0.0000	2,191.6411
Total											**0.0000**	**4,030.2491**	**4,030.2491**	**0.1475**	**0.0000**	**4,033.9366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total											**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,840.4143	1,840.4143	0.0753	0.0000	1,842.2956
Worker											0.0000	2,189.8348	2,189.8348	0.0723	0.0000	2,191.6411
Total											**0.0000**	**4,030.2491**	**4,030.2491**	**0.1475**	**0.0000**	**4,033.9366**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total											**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,839.4453	1,839.4453	0.0752	0.0000	1,841.3247
Worker											0.0000	2,121.6085	2,121.6085	0.0652	0.0000	2,123.2374
Total											**0.0000**	**3,961.0538**	**3,961.0538**	**0.1403**	**0.0000**	**3,964.5621**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total											**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,839.4453	1,839.4453	0.0752	0.0000	1,841.3247
Worker											0.0000	2,121.6085	2,121.6085	0.0652	0.0000	2,123.2374
Total											**0.0000**	**3,961.0538**	**3,961.0538**	**0.1403**	**0.0000**	**3,964.5621**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,818.5048	1,818.5048	0.0743	0.0000	1,820.3621
Worker											0.0000	2,029.6055	2,029.6055	0.0585	0.0000	2,031.0687
Total											**0.0000**	**3,848.1103**	**3,848.1103**	**0.1328**	**0.0000**	**3,851.4308**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,818.5048	1,818.5048	0.0743	0.0000	1,820.3621
Worker											0.0000	2,029.6055	2,029.6055	0.0585	0.0000	2,031.0687
Total											**0.0000**	**3,848.1103**	**3,848.1103**	**0.1328**	**0.0000**	**3,851.4308**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,808.2130	1,808.2130	0.0734	0.0000	1,810.0478
Worker											0.0000	1,948.3298	1,948.3298	0.0526	0.0000	1,949.6458
Total											**0.0000**	**3,756.5428**	**3,756.5428**	**0.1260**	**0.0000**	**3,759.6936**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,808.2130	1,808.2130	0.0734	0.0000	1,810.0478
Worker											0.0000	1,948.3298	1,948.3298	0.0526	0.0000	1,949.6458
Total											**0.0000**	**3,756.5428**	**3,756.5428**	**0.1260**	**0.0000**	**3,759.6936**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,799.2907	1,799.2907	0.0726	0.0000	1,801.1056
Worker											0.0000	1,881.2386	1,881.2386	0.0476	0.0000	1,882.4283
Total											**0.0000**	**3,680.5293**	**3,680.5293**	**0.1202**	**0.0000**	**3,683.5339**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,799.2907	1,799.2907	0.0726	0.0000	1,801.1056
Worker											0.0000	1,881.2386	1,881.2386	0.0476	0.0000	1,882.4283
Total											**0.0000**	**3,680.5293**	**3,680.5293**	**0.1202**	**0.0000**	**3,683.5339**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total											**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,785.1380	1,785.1380	0.0713	0.0000	1,786.9207
Worker											0.0000	1,814.7060	1,814.7060	0.0431	0.0000	1,815.7827
Total											**0.0000**	**3,599.8440**	**3,599.8440**	**0.1144**	**0.0000**	**3,602.7035**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total											**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,785.1380	1,785.1380	0.0713	0.0000	1,786.9207
Worker											0.0000	1,814.7060	1,814.7060	0.0431	0.0000	1,815.7827
Total											**0.0000**	**3,599.8440**	**3,599.8440**	**0.1144**	**0.0000**	**3,602.7035**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,785.6330	1,785.6330	0.0708	0.0000	1,787.4023
Worker											0.0000	1,768.7988	1,768.7988	0.0390	0.0000	1,769.7739
Total											**0.0000**	**3,554.4319**	**3,554.4319**	**0.1098**	**0.0000**	**3,557.1762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,785.6330	1,785.6330	0.0708	0.0000	1,787.4023
Worker											0.0000	1,768.7988	1,768.7988	0.0390	0.0000	1,769.7739
Total											**0.0000**	**3,554.4319**	**3,554.4319**	**0.1098**	**0.0000**	**3,557.1762**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total											**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,780.7808	1,780.7808	0.0699	0.0000	1,782.5270
Worker											0.0000	1,722.0161	1,722.0161	0.0352	0.0000	1,722.8966
Total											**0.0000**	**3,502.7969**	**3,502.7969**	**0.1051**	**0.0000**	**3,505.4236**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total											**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,780.7808	1,780.7808	0.0699	0.0000	1,782.5270
Worker											0.0000	1,722.0161	1,722.0161	0.0352	0.0000	1,722.8966
Total											**0.0000**	**3,502.7969**	**3,502.7969**	**0.1051**	**0.0000**	**3,505.4236**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total											**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,777.2738	1,777.2738	0.0692	0.0000	1,779.0047
Worker											0.0000	1,680.7466	1,680.7466	0.0316	0.0000	1,681.5366
Total											**0.0000**	**3,458.0204**	**3,458.0204**	**0.1008**	**0.0000**	**3,460.5413**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total											**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,777.2738	1,777.2738	0.0692	0.0000	1,779.0047
Worker											0.0000	1,680.7466	1,680.7466	0.0316	0.0000	1,681.5366
Total											**0.0000**	**3,458.0204**	**3,458.0204**	**0.1008**	**0.0000**	**3,460.5413**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total											**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,781.9909	1,781.9909	0.0690	0.0000	1,783.7153
Worker											0.0000	1,650.8774	1,650.8774	0.0286	0.0000	1,651.5919
Total											**0.0000**	**3,432.8683**	**3,432.8683**	**0.0976**	**0.0000**	**3,435.3071**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total											**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,781.9909	1,781.9909	0.0690	0.0000	1,783.7153
Worker											0.0000	1,650.8774	1,650.8774	0.0286	0.0000	1,651.5919
Total											**0.0000**	**3,432.8683**	**3,432.8683**	**0.0976**	**0.0000**	**3,435.3071**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total											**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,767.1932	1,767.1932	0.0681	0.0000	1,768.8944
Worker											0.0000	1,606.9012	1,606.9012	0.0257	0.0000	1,607.5444
Total											**0.0000**	**3,374.0944**	**3,374.0944**	**0.0938**	**0.0000**	**3,376.4389**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total											**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,767.1932	1,767.1932	0.0681	0.0000	1,768.8944
Worker											0.0000	1,606.9012	1,606.9012	0.0257	0.0000	1,607.5444
Total											**0.0000**	**3,374.0944**	**3,374.0944**	**0.0938**	**0.0000**	**3,376.4389**

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total											**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

3.5 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,766.7532	1,766.7532	0.0677	0.0000	1,768.4448
Worker											0.0000	1,579.5567	1,579.5567	0.0233	0.0000	1,580.1389
Total											**0.0000**	**3,346.3099**	**3,346.3099**	**0.0910**	**0.0000**	**3,348.5837**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total											**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

3.5 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,766.7532	1,766.7532	0.0677	0.0000	1,768.4448
Worker											0.0000	1,579.5567	1,579.5567	0.0233	0.0000	1,580.1389
Total											**0.0000**	**3,346.3099**	**3,346.3099**	**0.0910**	**0.0000**	**3,348.5837**

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total											**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.5 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker											0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total											**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total											**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.5 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker											0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total											**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	344.3479	344.3479	0.0128	0.0000	344.6686
Total											**0.0000**	**344.3479**	**344.3479**	**0.0128**	**0.0000**	**344.6686**

3.5 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,780.3413	1,780.3413	0.0679	0.0000	1,782.0396
Worker											0.0000	1,568.0023	1,568.0023	0.0213	0.0000	1,568.5359
Total											**0.0000**	**3,348.3436**	**3,348.3436**	**0.0893**	**0.0000**	**3,350.5754**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	344.3475	344.3475	0.0128	0.0000	344.6682
Total											**0.0000**	**344.3475**	**344.3475**	**0.0128**	**0.0000**	**344.6682**

3.5 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,780.3413	1,780.3413	0.0679	0.0000	1,782.0396
Worker											0.0000	1,568.0023	1,568.0023	0.0213	0.0000	1,568.5359
Total											**0.0000**	**3,348.3436**	**3,348.3436**	**0.0893**	**0.0000**	**3,350.5754**

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total											**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.5 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker											0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total											**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total											**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.5 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker											0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total											**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total											**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.5 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker											0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total											**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total											**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.5 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker											0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total											**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	23.6575	23.6575	8.8000e-004	0.0000	23.6795
Total											**0.0000**	**23.6575**	**23.6575**	**8.8000e-004**	**0.0000**	**23.6795**

3.5 Building Construction - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	122.3135	122.3135	4.6700e-003	0.0000	122.4302
Worker											0.0000	107.7254	107.7254	1.4700e-003	0.0000	107.7620
Total											**0.0000**	**230.0389**	**230.0389**	**6.1400e-003**	**0.0000**	**230.1922**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	23.6575	23.6575	8.8000e-004	0.0000	23.6795
Total											**0.0000**	**23.6575**	**23.6575**	**8.8000e-004**	**0.0000**	**23.6795**

3.5 Building Construction - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	122.3135	122.3135	4.6700e-003	0.0000	122.4302
Worker											0.0000	107.7254	107.7254	1.4700e-003	0.0000	107.7620
Total											**0.0000**	**230.0389**	**230.0389**	**6.1400e-003**	**0.0000**	**230.1922**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	132.1550	132.1550	0.0427	0.0000	133.2235
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											**0.0000**	**132.1550**	**132.1550**	**0.0427**	**0.0000**	**133.2235**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	7.0845	7.0845	2.7000e-004	0.0000	7.0913
Total											**0.0000**	**7.0845**	**7.0845**	**2.7000e-004**	**0.0000**	**7.0913**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	132.1548	132.1548	0.0427	0.0000	133.2234
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											**0.0000**	**132.1548**	**132.1548**	**0.0427**	**0.0000**	**133.2234**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	7.0845	7.0845	2.7000e-004	0.0000	7.0913
Total											**0.0000**	**7.0845**	**7.0845**	**2.7000e-004**	**0.0000**	**7.0913**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	198.2728	198.2728	0.0641	0.0000	199.8760
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											**0.0000**	**198.2728**	**198.2728**	**0.0641**	**0.0000**	**199.8760**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.2521	10.2521	3.7000e-004	0.0000	10.2612
Total											**0.0000**	**10.2521**	**10.2521**	**3.7000e-004**	**0.0000**	**10.2612**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	198.2726	198.2726	0.0641	0.0000	199.8757
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											**0.0000**	**198.2726**	**198.2726**	**0.0641**	**0.0000**	**199.8757**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.2521	10.2521	3.7000e-004	0.0000	10.2612
Total											**0.0000**	**10.2521**	**10.2521**	**3.7000e-004**	**0.0000**	**10.2612**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	8.4257	8.4257	5.8000e-004	0.0000	8.4402
Total											**0.0000**	**8.4257**	**8.4257**	**5.8000e-004**	**0.0000**	**8.4402**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	119.7282	119.7282	4.6100e-003	0.0000	119.8434
Total											**0.0000**	**119.7282**	**119.7282**	**4.6100e-003**	**0.0000**	**119.8434**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	8.4257	8.4257	5.8000e-004	0.0000	8.4402
Total											**0.0000**	**8.4257**	**8.4257**	**5.8000e-004**	**0.0000**	**8.4402**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	119.7282	119.7282	4.6100e-003	0.0000	119.8434
Total											**0.0000**	**119.7282**	**119.7282**	**4.6100e-003**	**0.0000**	**119.8434**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	33.1923	33.1923	2.1600e-003	0.0000	33.2463
Total											**0.0000**	**33.1923**	**33.1923**	**2.1600e-003**	**0.0000**	**33.2463**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	455.0282	455.0282	0.0162	0.0000	455.4333
Total											**0.0000**	**455.0282**	**455.0282**	**0.0162**	**0.0000**	**455.4333**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	33.1923	33.1923	2.1600e-003	0.0000	33.2463
Total											**0.0000**	**33.1923**	**33.1923**	**2.1600e-003**	**0.0000**	**33.2463**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	455.0282	455.0282	0.0162	0.0000	455.4333
Total											**0.0000**	**455.0282**	**455.0282**	**0.0162**	**0.0000**	**455.4333**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	0.5107	0.5107	3.0000e-005	0.0000	0.5114
Total											**0.0000**	**0.5107**	**0.5107**	**3.0000e-005**	**0.0000**	**0.5114**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.7406	6.7406	2.2000e-004	0.0000	6.7462
Total											**0.0000**	**6.7406**	**6.7406**	**2.2000e-004**	**0.0000**	**6.7462**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	0.5107	0.5107	3.0000e-005	0.0000	0.5114
Total											**0.0000**	**0.5107**	**0.5107**	**3.0000e-005**	**0.0000**	**0.5114**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.7406	6.7406	2.2000e-004	0.0000	6.7462
Total											**0.0000**	**6.7406**	**6.7406**	**2.2000e-004**	**0.0000**	**6.7462**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	14,078.0431	14,078.0431	0.6525	0.0000	14,094.3549
Unmitigated											0.0000	14,078.0431	14,078.0431	0.6525	0.0000	14,094.3549

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	19,776.24	22,041.36	18150.00	35,724,959	35,724,959
General Office Building	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	19,776.24	22,041.36	18,150.00	35,724,959	35,724,959

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	4.94	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.569571	0.024470	0.206145	0.106238	0.013217	0.004041	0.019725	0.043623	0.003075	0.001900	0.006327	0.001084	0.000583
General Office Building	0.569571	0.024470	0.206145	0.106238	0.013217	0.004041	0.019725	0.043623	0.003075	0.001900	0.006327	0.001084	0.000583
Regional Shopping Center	0.569571	0.024470	0.206145	0.106238	0.013217	0.004041	0.019725	0.043623	0.003075	0.001900	0.006327	0.001084	0.000583

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	2,230.6483	2,230.6483	0.1143	0.0229	2,240.3143
Electricity Unmitigated											0.0000	2,230.6483	2,230.6483	0.1143	0.0229	2,240.3143
NaturalGas Mitigated											0.0000	2,137.1015	2,137.1015	0.0410	0.0392	2,149.8012
NaturalGas Unmitigated											0.0000	2,137.1015	2,137.1015	0.0410	0.0392	2,149.8012

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.96175e+007											0.0000	1,580.5005	1,580.5005	0.0303	0.0290	1,589.8926
General Office Building	8.35734e+006											0.0000	445.9797	445.9797	8.5500e-003	8.1800e-003	448.6299
Regional Shopping Center	2.07297e+006											0.0000	110.6213	110.6213	2.1200e-003	2.0300e-003	111.2787
Total												**0.0000**	**2,137.1015**	**2,137.1015**	**0.0410**	**0.0392**	**2,149.8012**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.96175e+007											0.0000	1,580.5005	1,580.5005	0.0303	0.0290	1,589.8926
General Office Building	8.35734e+006											0.0000	445.9797	445.9797	8.5500e-003	8.1800e-003	448.6299
Regional Shopping Center	2.07297e+006											0.0000	110.6213	110.6213	2.1200e-003	2.0300e-003	111.2787
Total												**0.0000**	**2,137.1015**	**2,137.1015**	**0.0410**	**0.0392**	**2,149.8012**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
General Office Building	8.16845e+006	1,085.0519	0.0556	0.0111	1,089.7537
Regional Shopping Center	8.62424e+006	1,145.5963	0.0587	0.0117	1,150.5605
Total		**2,230.6483**	**0.1143**	**0.0229**	**2,240.3143**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
General Office Building	8.16845e+006	1,085.0519	0.0556	0.0111	1,089.7537
Regional Shopping Center	8.62424e+006	1,145.5963	0.0587	0.0117	1,150.5605
Total		**2,230.6483**	**0.1143**	**0.0229**	**2,240.3143**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	48.9539	48.9539	0.0467	0.0000	50.1213
Unmitigated											0.0000	48.9539	48.9539	0.0467	0.0000	50.1213

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	48.9539	48.9539	0.0467	0.0000	50.1213
Total											**0.0000**	**48.9539**	**48.9539**	**0.0467**	**0.0000**	**50.1213**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	48.9539	48.9539	0.0467	0.0000	50.1213
Total											**0.0000**	**48.9539**	**48.9539**	**0.0467**	**0.0000**	**50.1213**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	395.5763	0.3511	0.2152	468.4968
Unmitigated	469.5267	0.4376	0.2688	560.5692

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	189.207 / 119.283	258.3950	0.2402	0.1475	308.3666
General Office Building	90.7384 / 55.6139	123.1793	0.1152	0.0708	147.1410
Regional Shopping Center	64.789 / 39.7094	87.9524	0.0822	0.0505	105.0616
Total		**469.5267**	**0.4376**	**0.2688**	**560.5692**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	151.366 / 119.283	217.8074	0.1927	0.1181	257.8328
General Office Building	72.5907 / 55.6139	103.7146	0.0924	0.0567	122.9064
Regional Shopping Center	51.8312 / 39.7094	74.0543	0.0660	0.0405	87.7576
Total		**395.5763**	**0.3511**	**0.2152**	**468.4968**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	553.9684	32.7386	0.0000	1,372.4333
Unmitigated	553.9684	32.7386	0.0000	1,372.4333

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	1335.84	271.1635	16.0253	0.0000	671.7960
General Office Building	474.79	96.3781	5.6958	0.0000	238.7726
Regional Shopping Center	918.4	186.4269	11.0175	0.0000	461.8648
Total		**553.9684**	**32.7386**	**0.0000**	**1,372.4333**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	1335.84	271.1635	16.0253	0.0000	671.7960
General Office Building	474.79	96.3781	5.6958	0.0000	238.7726
Regional Shopping Center	918.4	186.4269	11.0175	0.0000	461.8648
Total		**553.9684**	**32.7386**	**0.0000**	**1,372.4333**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: 19-07378, Marina Downtown Vitalization Specific Plan - 2030

Vehicle Population Breakdown*	
600546	Gasoline vehicles
32160	Diesel vehicles
94.9%	Gasoline vehicle %
5.1%	Diesel vehicle %

VMT per Vehicle Type	
35699594	Project VMT (CalEEMod output)
33885023	Gasoline vehicle VMT
1814571	Diesel vehicle VMT

Gasoline Vehicles	
94.9%	Gasoline vehicle %
23.5656	Tons per year mobile NOX emissions (annual output in CalEEMod)
22.37	Gasoline vehicle tons per year NOX emissions
0.5344	Tons per year N2O emissions for gasoline vehicles**
0.4848	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
1.60	grams N2O per gallon of fuel for diesel vehicles**
21.40	Diesel average miles per gallon*
0.07477	grams per mile N2O for diesel vehicles
135673.3	grams per year N2O for diesel vehicles
0.1356733	Metric tons per year N2O emissions for diesel vehicles

CO2e Emissions from N2O	
0.6204	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
184.9	**CO2e emissions per year from N2O emissions from gasoline + diesel vehicles**

Sources
***Vehicle population source:**
Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Air District
Region: Monterey Bay Unified APCD
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2011 Categories
****Methodology source:**
EMFAC2017 Volume III - Technical Documentation
https://www.arb.ca.gov/msei/emfac2011-faq.htm
*****GWP source:**
Intergovernmental Panel on Climate Change (IPCC). 2007.
AR4 Climate Change 2007: The Physical Science Basis.
Contrbution of Working Group I to the Fourth Assessment Report of the
Intergovernmental Panel on Climate Change.

Marina Downtown Vitalization Specific Plan - Proposed - 2040

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	510.53	1000sqft	11.72	510,528.00	0
Apartments Low Rise	2,904.00	Dwelling Unit	181.50	2,904,000.00	7957
Regional Shopping Center	874.67	1000sqft	20.08	874,669.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	97.62	**CH4 Intensity (lb/MWhr)**	0.005	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Linear interpolation of RPS for 2030 and 2045.

Land Use - Land uses based on PD. Pop based on US Census 2019 estimate of 2.74 persons per household in Marina.

Construction Phase - Phase lengths are default. Adjusted start dates so that all phases would be overlapping to estimate worst case impacts.

Trips and VMT -

Demolition - Estimated that half of existing residential units and half of existing retail/office space would be demolished and redeveloped.

Grading - Assumed no substantial import/export required.

Architectural Coating - MBARD Rule 426

Vehicle Trips - Based on traffic study and VMT analysis

Woodstoves -

Area Coating - MBARD Rule 426

Energy Use - Includes 30% reduction in nonresidential electricity use for 2019 Code. 2019 Building Code requires all electricity met by solar on low-rise residential

Water And Wastewater - Reduced indoor water use by 20% for CALGreen. Monterey One Water uses anaerobic digestors only.

Solid Waste -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation - Compliance with CALGreen and DVSP ES Objective 1, Strategy 6

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	100.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	100
tblAreaCoating	Area_EF_Parking	150	100
tblEnergyUse	LightingElect	810.36	0.00
tblEnergyUse	NT24E	3,172.76	0.00

tblEnergyUse	T24E	365.68	0.00
tblEnergyUse	T24E	6.11	4.28
tblEnergyUse	T24E	2.76	1.93
tblLandUse	LandUseSquareFeet	510,530.00	510,528.00
tblLandUse	LandUseSquareFeet	874,670.00	874,669.00
tblLandUse	Population	8,305.00	7,957.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.005
tblProjectCharacteristics	CO2IntensityFactor	641.35	97.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	0.00
tblVehicleTrips	HO_TTP	37.20	0.00
tblVehicleTrips	HS_TL	7.30	0.00
tblVehicleTrips	HS_TTP	18.80	0.00
tblVehicleTrips	HW_TL	10.80	4.94
tblVehicleTrips	HW_TTP	44.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	7.59
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	6.07	6.25
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	6.59	6.81
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	42.70	0.00

tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	7.7347	23.3283	21.2214	0.0588	6.2067	0.7858	6.9925	2.1274	0.7277	2.8551	0.0000	5,347.1588	5,347.1588	0.6744	0.0000	5,364.0197
2022	21.9601	17.5106	21.3413	0.0651	5.1542	0.4444	5.5986	1.4809	0.4129	1.8938	0.0000	5,938.8569	5,938.8569	0.5709	0.0000	5,953.1286
2023	1.8267	9.0062	12.4942	0.0471	3.0893	0.1206	3.2099	0.8321	0.1133	0.9453	0.0000	4,338.8465	4,338.8465	0.2194	0.0000	4,344.3325
2024	1.4373	8.7092	11.7018	0.0463	3.1049	0.1088	3.2137	0.8363	0.1021	0.9384	0.0000	4,264.7761	4,264.7761	0.2122	0.0000	4,270.0800
2025	1.3450	8.3433	10.9066	0.0451	3.0931	0.0962	3.1893	0.8331	0.0902	0.9233	0.0000	4,150.7652	4,150.7652	0.2040	0.0000	4,155.8643
2026	1.2814	8.1708	10.2518	0.0440	3.0931	0.0950	3.1881	0.8331	0.0891	0.9222	0.0000	4,059.1977	4,059.1977	0.1972	0.0000	4,064.1271

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	1.2214	8.0137	9.6821	0.0432	3.0931	0.0935	3.1866	0.8331	0.0877	0.9209	0.0000	3,983.1842	3,983.1842	0.1913	0.0000	3,987.9674
2028	1.1565	7.8506	9.1540	0.0423	3.0813	0.0916	3.1729	0.8299	0.0860	0.9159	0.0000	3,901.3392	3,901.3392	0.1853	0.0000	3,905.9706
2029	1.0968	7.7586	8.7146	0.0418	3.0931	0.0906	3.1837	0.8331	0.0850	0.9181	0.0000	3,857.0868	3,857.0868	0.1809	0.0000	3,861.6097
2030	1.0267	7.0587	8.3044	0.0417	3.0931	0.0397	3.1328	0.8331	0.0383	0.8714	0.0000	3,845.8305	3,845.8305	0.1188	0.0000	3,848.8013
2031	0.9606	6.9609	7.9028	0.0412	3.0931	0.0385	3.1316	0.8331	0.0372	0.8703	0.0000	3,801.0541	3,801.0541	0.1146	0.0000	3,803.9190
2032	0.9064	6.9023	7.5859	0.0410	3.1050	0.0376	3.1425	0.8363	0.0363	0.8726	0.0000	3,777.2162	3,777.2162	0.1114	0.0000	3,780.0004
2033	0.8512	6.7779	7.2379	0.0403	3.0813	0.0363	3.1176	0.8299	0.0351	0.8651	0.0000	3,715.8137	3,715.8137	0.1075	0.0000	3,718.5009
2034	0.8104	6.7166	6.9689	0.0400	3.0813	0.0354	3.1167	0.8299	0.0343	0.8642	0.0000	3,688.0292	3,688.0292	0.1047	0.0000	3,690.6458
2035	0.7654	6.5914	6.7561	0.0399	3.0931	0.0272	3.1203	0.8331	0.0262	0.8593	0.0000	3,678.5973	3,678.5973	0.1017	0.0000	3,681.1400
2036	0.7683	6.6167	6.7820	0.0400	3.1050	0.0273	3.1323	0.8363	0.0263	0.8626	0.0000	3,692.6916	3,692.6916	0.1021	0.0000	3,695.2440
2037	0.7654	6.5914	6.7561	0.0399	3.0931	0.0272	3.1203	0.8331	0.0262	0.8593	0.0000	3,678.5973	3,678.5973	0.1017	0.0000	3,681.1400
2038	0.7654	6.5914	6.7561	0.0399	3.0931	0.0272	3.1203	0.8331	0.0262	0.8593	0.0000	3,678.5973	3,678.5973	0.1017	0.0000	3,681.1400
2039	0.0528	0.4546	0.4659	2.7500e-003	0.2133	1.8800e-003	0.2152	0.0575	1.8000e-003	0.0593	0.0000	253.6964	253.6964	7.0100e-003	0.0000	253.8717
Maximum	**21.9601**	**23.3283**	**21.3413**	**0.0651**	**6.2067**	**0.7858**	**6.9925**	**2.1274**	**0.7277**	**2.8551**	**0.0000**	**5,938.8569**	**5,938.8569**	**0.6744**	**0.0000**	**5,953.1286**

2.1 Overall Construction

Mitigated Construction

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	7.7347	23.3283	21.2214	0.0588	6.2067	0.7858	6.9925	2.1274	0.7277	2.8551	0.0000	5,347.1568	5,347.1568	0.6744	0.0000	5,364.0176
2022	21.9601	17.5106	21.3413	0.0651	5.1542	0.4444	5.5986	1.4809	0.4129	1.8938	0.0000	5,938.8553	5,938.8553	0.5709	0.0000	5,953.1271
2023	1.8267	9.0062	12.4942	0.0471	3.0893	0.1206	3.2099	0.8321	0.1133	0.9453	0.0000	4,338.8462	4,338.8462	0.2194	0.0000	4,344.3322
2024	1.4373	8.7092	11.7018	0.0463	3.1049	0.1088	3.2137	0.8363	0.1021	0.9384	0.0000	4,264.7757	4,264.7757	0.2122	0.0000	4,270.0796
2025	1.3450	8.3433	10.9066	0.0451	3.0931	0.0962	3.1893	0.8331	0.0902	0.9233	0.0000	4,150.7648	4,150.7648	0.2040	0.0000	4,155.8639
2026	1.2814	8.1708	10.2518	0.0440	3.0931	0.0950	3.1881	0.8331	0.0891	0.9222	0.0000	4,059.1973	4,059.1973	0.1972	0.0000	4,064.1267
2027	1.2214	8.0137	9.6821	0.0432	3.0931	0.0935	3.1866	0.8331	0.0877	0.9209	0.0000	3,983.1838	3,983.1838	0.1913	0.0000	3,987.9671
2028	1.1565	7.8506	9.1540	0.0423	3.0813	0.0916	3.1729	0.8299	0.0860	0.9159	0.0000	3,901.3389	3,901.3389	0.1853	0.0000	3,905.9702
2029	1.0968	7.7586	8.7146	0.0418	3.0931	0.0906	3.1837	0.8331	0.0850	0.9181	0.0000	3,857.0864	3,857.0864	0.1809	0.0000	3,861.6093
2030	1.0267	7.0587	8.3043	0.0417	3.0931	0.0397	3.1328	0.8331	0.0383	0.8714	0.0000	3,845.8301	3,845.8301	0.1188	0.0000	3,848.8009
2031	0.9606	6.9609	7.9028	0.0412	3.0931	0.0385	3.1316	0.8331	0.0372	0.8703	0.0000	3,801.0536	3,801.0536	0.1146	0.0000	3,803.9185
2032	0.9064	6.9023	7.5859	0.0410	3.1050	0.0376	3.1425	0.8363	0.0363	0.8726	0.0000	3,777.2158	3,777.2158	0.1114	0.0000	3,780.0000
2033	0.8512	6.7779	7.2379	0.0403	3.0813	0.0363	3.1176	0.8299	0.0351	0.8651	0.0000	3,715.8133	3,715.8133	0.1075	0.0000	3,718.5005
2034	0.8104	6.7166	6.9689	0.0400	3.0813	0.0354	3.1167	0.8299	0.0343	0.8642	0.0000	3,688.0288	3,688.0288	0.1047	0.0000	3,690.6454
2035	0.7654	6.5914	6.7561	0.0399	3.0931	0.0272	3.1203	0.8331	0.0262	0.8593	0.0000	3,678.5969	3,678.5969	0.1017	0.0000	3,681.1396
2036	0.7683	6.6167	6.7820	0.0400	3.1050	0.0273	3.1323	0.8363	0.0263	0.8626	0.0000	3,692.6912	3,692.6912	0.1021	0.0000	3,695.2436
2037	0.7654	6.5914	6.7561	0.0399	3.0931	0.0272	3.1203	0.8331	0.0262	0.8593	0.0000	3,678.5969	3,678.5969	0.1017	0.0000	3,681.1396
2038	0.7654	6.5914	6.7561	0.0399	3.0931	0.0272	3.1203	0.8331	0.0262	0.8593	0.0000	3,678.5969	3,678.5969	0.1017	0.0000	3,681.1396

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2039	0.0528	0.4546	0.4659	2.7500e-003	0.2133	1.8800e-003	0.2152	0.0575	1.8000e-003	0.0593	0.0000	253.6963	253.6963	7.0100e-003	0.0000	253.8717
Maximum	**21.9601**	**23.3283**	**21.3413**	**0.0651**	**6.2067**	**0.7858**	**6.9925**	**2.1274**	**0.7277**	**2.8551**	**0.0000**	**5,938.8553**	**5,938.8553**	**0.6744**	**0.0000**	**5,953.1271**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2021**	**3-31-2021**	2.7898	2.7898
2	**4-1-2021**	**6-30-2021**	7.6955	7.6955
3	**7-1-2021**	**9-30-2021**	8.2494	8.2494
4	**10-1-2021**	**12-31-2021**	12.1897	12.1897
5	**1-1-2022**	**3-31-2022**	10.5058	10.5058
6	**4-1-2022**	**6-30-2022**	9.8129	9.8129
7	**7-1-2022**	**9-30-2022**	9.9207	9.9207
8	**10-1-2022**	**12-31-2022**	9.3676	9.3676
9	**1-1-2023**	**3-31-2023**	2.9242	2.9242
10	**4-1-2023**	**6-30-2023**	2.5916	2.5916
11	**7-1-2023**	**9-30-2023**	2.6201	2.6201
12	**10-1-2023**	**12-31-2023**	2.7079	2.7079
13	**1-1-2024**	**3-31-2024**	2.5603	2.5603
14	**4-1-2024**	**6-30-2024**	2.4812	2.4812
15	**7-1-2024**	**9-30-2024**	2.5085	2.5085
16	**10-1-2024**	**12-31-2024**	2.5884	2.5884

17	**1-1-2025**	**3-31-2025**	2.4254	2.4254
18	**4-1-2025**	**6-30-2025**	2.3799	2.3799
19	**7-1-2025**	**9-30-2025**	2.4061	2.4061
20	**10-1-2025**	**12-31-2025**	2.4793	2.4793
21	**1-1-2026**	**3-31-2026**	2.3643	2.3643
22	**4-1-2026**	**6-30-2026**	2.3238	2.3238
23	**7-1-2026**	**9-30-2026**	2.3493	2.3493
24	**10-1-2026**	**12-31-2026**	2.4169	2.4169
25	**1-1-2027**	**3-31-2027**	2.3081	2.3081
26	**4-1-2027**	**6-30-2027**	2.2721	2.2721
27	**7-1-2027**	**9-30-2027**	2.2971	2.2971
28	**10-1-2027**	**12-31-2027**	2.3594	2.3594
29	**1-1-2028**	**3-31-2028**	2.2828	2.2828
30	**4-1-2028**	**6-30-2028**	2.2261	2.2261
31	**7-1-2028**	**9-30-2028**	2.2506	2.2506
32	**10-1-2028**	**12-31-2028**	2.3079	2.3079
33	**1-1-2029**	**3-31-2029**	2.2090	2.2090
34	**4-1-2029**	**6-30-2029**	2.1818	2.1818
35	**7-1-2029**	**9-30-2029**	2.2057	2.2057
36	**10-1-2029**	**12-31-2029**	2.2581	2.2581
37	**1-1-2030**	**3-31-2030**	2.0166	2.0166
38	**4-1-2030**	**6-30-2030**	1.9919	1.9919
39	**7-1-2030**	**9-30-2030**	2.0138	2.0138
40	**10-1-2030**	**12-31-2030**	2.0614	2.0614
41	**1-1-2031**	**3-31-2031**	1.9734	1.9734
42	**4-1-2031**	**6-30-2031**	1.9529	1.9529
43	**7-1-2031**	**9-30-2031**	1.9743	1.9743

44	**10-1-2031**	**12-31-2031**	2.0172	2.0172
45	**1-1-2032**	**3-31-2032**	1.9572	1.9572
46	**4-1-2032**	**6-30-2032**	1.9190	1.9190
47	**7-1-2032**	**9-30-2032**	1.9400	1.9400
48	**10-1-2032**	**12-31-2032**	1.9787	1.9787
49	**1-1-2033**	**3-31-2033**	1.9039	1.9039
50	**4-1-2033**	**6-30-2033**	1.8903	1.8903
51	**7-1-2033**	**9-30-2033**	1.9110	1.9110
52	**10-1-2033**	**12-31-2033**	1.9462	1.9462
53	**1-1-2034**	**3-31-2034**	1.8769	1.8769
54	**4-1-2034**	**6-30-2034**	1.8658	1.8658
55	**7-1-2034**	**9-30-2034**	1.8863	1.8863
56	**10-1-2034**	**12-31-2034**	1.9186	1.9186
57	**1-1-2035**	**3-31-2035**	1.8263	1.8263
58	**4-1-2035**	**6-30-2035**	1.8170	1.8170
59	**7-1-2035**	**9-30-2035**	1.8369	1.8369
60	**10-1-2035**	**12-31-2035**	1.8669	1.8669
61	**1-1-2036**	**3-31-2036**	1.8466	1.8466
62	**4-1-2036**	**6-30-2036**	1.8170	1.8170
63	**7-1-2036**	**9-30-2036**	1.8369	1.8369
64	**10-1-2036**	**12-31-2036**	1.8669	1.8669
65	**1-1-2037**	**3-31-2037**	1.8263	1.8263
66	**4-1-2037**	**6-30-2037**	1.8170	1.8170
67	**7-1-2037**	**9-30-2037**	1.8369	1.8369
68	**10-1-2037**	**12-31-2037**	1.8669	1.8669
69	**1-1-2038**	**3-31-2038**	1.8263	1.8263
70	**4-1-2038**	**6-30-2038**	1.8170	1.8170

71	**7-1-2038**	**9-30-2038**	1.8369	1.8369
72	**10-1-2038**	**12-31-2038**	1.8669	1.8669
73	**1-1-2039**	**3-31-2039**	0.5276	0.5276
		Highest	12.1897	12.1897

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	20.1040	0.3443	29.8340	1.5800e-003		0.1661	0.1661		0.1661	0.1661	0.0000	48.9539	48.9539	0.0467	0.0000	50.1202
Energy	0.2159	1.8760	1.0102	0.0118		0.1492	0.1492		0.1492	0.1492	0.0000	2,880.6763	2,880.6763	0.0791	0.0468	2,896.5980
Mobile	2.6333	21.7960	26.0271	0.1406	13.4052	0.0600	13.4652	3.5952	0.0559	3.6511	0.0000	13,055.1160	13,055.1160	0.5465	0.0000	13,068.7774
Waste						0.0000	0.0000		0.0000	0.0000	553.9684	0.0000	553.9684	32.7386	0.0000	1,372.4333
Water						0.0000	0.0000		0.0000	0.0000	121.9677	115.8570	237.8246	0.4257	0.2664	327.8631
Total	**22.9532**	**24.0164**	**56.8712**	**0.1540**	**13.4052**	**0.3753**	**13.7805**	**3.5952**	**0.3712**	**3.9665**	**675.9361**	**16,100.6031**	**16,776.5392**	**33.8365**	**0.3132**	**17,715.7920**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	20.1040	0.3443	29.8340	1.5800e-003		0.1661	0.1661		0.1661	0.1661	0.0000	48.9539	48.9539	0.0467	0.0000	50.1202
Energy	0.2159	1.8760	1.0102	0.0118		0.1492	0.1492		0.1492	0.1492	0.0000	2,880.6763	2,880.6763	0.0791	0.0468	2,896.5980
Mobile	2.6333	21.7960	26.0271	0.1406	13.4052	0.0600	13.4652	3.5952	0.0559	3.6511	0.0000	13,055.1160	13,055.1160	0.5465	0.0000	13,068.7774
Waste						0.0000	0.0000		0.0000	0.0000	553.9684	0.0000	553.9684	32.7386	0.0000	1,372.4333
Water						0.0000	0.0000		0.0000	0.0000	97.5742	99.3375	196.9116	0.3409	0.2132	268.9712
Total	**22.9532**	**24.0164**	**56.8712**	**0.1540**	**13.4052**	**0.3753**	**13.7805**	**3.5952**	**0.3712**	**3.9665**	**651.5426**	**16,084.0836**	**16,735.6262**	**33.7517**	**0.2600**	**17,656.9001**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.61**	**0.10**	**0.24**	**0.25**	**16.99**	**0.33**

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	2/24/2022	5	300	
2	Site Preparation	Site Preparation	2/3/2021	10/12/2021	5	180	
3	Grading	Grading	3/2/2021	12/12/2022	5	465	
4	Building Construction	Building Construction	4/1/2021	1/26/2039	5	4650	
5	Paving	Paving	7/1/2021	10/5/2022	5	330	
6	Architectural Coating	Architectural Coating	10/1/2021	1/5/2023	5	330	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1162.5

Acres of Paving: 0

Residential Indoor: 5,880,600; Residential Outdoor: 1,960,200; Non-Residential Indoor: 2,077,796; Non-Residential Outdoor: 692,599; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	7,523.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,534.00	537.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	507.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7216	0.0000	0.7216	0.1093	0.0000	0.1093	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4131	4.1030	2.8142	5.0700e-003		0.2025	0.2025		0.1881	0.1881	0.0000	443.7102	443.7102	0.1249	0.0000	446.8324
Total	**0.4131**	**4.1030**	**2.8142**	**5.0700e-003**	**0.7216**	**0.2025**	**0.9240**	**0.1093**	**0.1881**	**0.2973**	**0.0000**	**443.7102**	**443.7102**	**0.1249**	**0.0000**	**446.8324**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0254	0.8794	0.1605	2.6100e-003	0.0619	3.2800e-003	0.0651	0.0168	3.1400e-003	0.0200	0.0000	250.2257	250.2257	0.0101	0.0000	250.4782
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8600e-003	6.9300e-003	0.0633	1.6000e-004	0.0156	1.3000e-004	0.0157	4.1400e-003	1.2000e-004	4.2600e-003	0.0000	14.0080	14.0080	5.4000e-004	0.0000	14.0215
Total	**0.0333**	**0.8863**	**0.2239**	**2.7700e-003**	**0.0774**	**3.4100e-003**	**0.0808**	**0.0210**	**3.2600e-003**	**0.0242**	**0.0000**	**264.2337**	**264.2337**	**0.0106**	**0.0000**	**264.4997**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7216	0.0000	0.7216	0.1093	0.0000	0.1093	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4131	4.1030	2.8142	5.0700e-003		0.2025	0.2025		0.1881	0.1881	0.0000	443.7097	443.7097	0.1249	0.0000	446.8319
Total	**0.4131**	**4.1030**	**2.8142**	**5.0700e-003**	**0.7216**	**0.2025**	**0.9240**	**0.1093**	**0.1881**	**0.2973**	**0.0000**	**443.7097**	**443.7097**	**0.1249**	**0.0000**	**446.8319**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0254	0.8794	0.1605	2.6100e-003	0.0619	3.2800e-003	0.0651	0.0168	3.1400e-003	0.0200	0.0000	250.2257	250.2257	0.0101	0.0000	250.4782
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8600e-003	6.9300e-003	0.0633	1.6000e-004	0.0156	1.3000e-004	0.0157	4.1400e-003	1.2000e-004	4.2600e-003	0.0000	14.0080	14.0080	5.4000e-004	0.0000	14.0215
Total	**0.0333**	**0.8863**	**0.2239**	**2.7700e-003**	**0.0774**	**3.4100e-003**	**0.0808**	**0.0210**	**3.2600e-003**	**0.0242**	**0.0000**	**264.2337**	**264.2337**	**0.0106**	**0.0000**	**264.4997**

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1078	0.0000	0.1078	0.0163	0.0000	0.0163	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0515	0.5015	0.4016	7.6000e-004		0.0242	0.0242		0.0225	0.0225	0.0000	66.2809	66.2809	0.0186	0.0000	66.7464
Total	**0.0515**	**0.5015**	**0.4016**	**7.6000e-004**	**0.1078**	**0.0242**	**0.1321**	**0.0163**	**0.0225**	**0.0389**	**0.0000**	**66.2809**	**66.2809**	**0.0186**	**0.0000**	**66.7464**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5500e-003	0.1201	0.0229	3.9000e-004	0.0500	4.2000e-004	0.0504	0.0125	4.0000e-004	0.0129	0.0000	36.9250	36.9250	1.4900e-003	0.0000	36.9622
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	9.3000e-004	8.6300e-003	2.0000e-005	2.3300e-003	2.0000e-005	2.3500e-003	6.2000e-004	2.0000e-005	6.4000e-004	0.0000	2.0194	2.0194	7.0000e-005	0.0000	2.0212
Total	**4.6400e-003**	**0.1210**	**0.0315**	**4.1000e-004**	**0.0523**	**4.4000e-004**	**0.0528**	**0.0131**	**4.2000e-004**	**0.0136**	**0.0000**	**38.9444**	**38.9444**	**1.5600e-003**	**0.0000**	**38.9833**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1078	0.0000	0.1078	0.0163	0.0000	0.0163	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0515	0.5015	0.4016	7.6000e-004		0.0242	0.0242		0.0225	0.0225	0.0000	66.2809	66.2809	0.0186	0.0000	66.7463
Total	**0.0515**	**0.5015**	**0.4016**	**7.6000e-004**	**0.1078**	**0.0242**	**0.1321**	**0.0163**	**0.0225**	**0.0389**	**0.0000**	**66.2809**	**66.2809**	**0.0186**	**0.0000**	**66.7463**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5500e-003	0.1201	0.0229	3.9000e-004	0.0500	4.2000e-004	0.0504	0.0125	4.0000e-004	0.0129	0.0000	36.9250	36.9250	1.4900e-003	0.0000	36.9622
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	9.3000e-004	8.6300e-003	2.0000e-005	2.3300e-003	2.0000e-005	2.3500e-003	6.2000e-004	2.0000e-005	6.4000e-004	0.0000	2.0194	2.0194	7.0000e-005	0.0000	2.0212
Total	**4.6400e-003**	**0.1210**	**0.0315**	**4.1000e-004**	**0.0523**	**4.4000e-004**	**0.0528**	**0.0131**	**4.2000e-004**	**0.0136**	**0.0000**	**38.9444**	**38.9444**	**1.5600e-003**	**0.0000**	**38.9833**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6260	0.0000	1.6260	0.8938	0.0000	0.8938	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3499	3.6447	1.9039	3.4200e-003		0.1840	0.1840		0.1693	0.1693	0.0000	300.9215	300.9215	0.0973	0.0000	303.3546
Total	**0.3499**	**3.6447**	**1.9039**	**3.4200e-003**	**1.6260**	**0.1840**	**1.8100**	**0.8938**	**0.1693**	**1.0630**	**0.0000**	**300.9215**	**300.9215**	**0.0973**	**0.0000**	**303.3546**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-003	5.7400e-003	0.0524	1.3000e-004	0.0129	1.1000e-004	0.0130	3.4300e-003	1.0000e-004	3.5300e-003	0.0000	11.5928	11.5928	4.5000e-004	0.0000	11.6040
Total	**6.5000e-003**	**5.7400e-003**	**0.0524**	**1.3000e-004**	**0.0129**	**1.1000e-004**	**0.0130**	**3.4300e-003**	**1.0000e-004**	**3.5300e-003**	**0.0000**	**11.5928**	**11.5928**	**4.5000e-004**	**0.0000**	**11.6040**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6260	0.0000	1.6260	0.8938	0.0000	0.8938	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3499	3.6447	1.9039	3.4200e-003		0.1840	0.1840		0.1693	0.1693	0.0000	300.9211	300.9211	0.0973	0.0000	303.3542
Total	**0.3499**	**3.6447**	**1.9039**	**3.4200e-003**	**1.6260**	**0.1840**	**1.8100**	**0.8938**	**0.1693**	**1.0630**	**0.0000**	**300.9211**	**300.9211**	**0.0973**	**0.0000**	**303.3542**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-003	5.7400e-003	0.0524	1.3000e-004	0.0129	1.1000e-004	0.0130	3.4300e-003	1.0000e-004	3.5300e-003	0.0000	11.5928	11.5928	4.5000e-004	0.0000	11.6040
Total	**6.5000e-003**	**5.7400e-003**	**0.0524**	**1.3000e-004**	**0.0129**	**1.1000e-004**	**0.0130**	**3.4300e-003**	**1.0000e-004**	**3.5300e-003**	**0.0000**	**11.5928**	**11.5928**	**4.5000e-004**	**0.0000**	**11.6040**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2758	0.0000	1.2758	0.4290	0.0000	0.4290	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4589	5.0808	3.3812	6.7900e-003		0.2174	0.2174		0.2000	0.2000	0.0000	596.7201	596.7201	0.1930	0.0000	601.5448
Total	**0.4589**	**5.0808**	**3.3812**	**6.7900e-003**	**1.2758**	**0.2174**	**1.4932**	**0.4290**	**0.2000**	**0.6290**	**0.0000**	**596.7201**	**596.7201**	**0.1930**	**0.0000**	**601.5448**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.7900e-003	7.7500e-003	0.0709	1.7000e-004	0.0174	1.5000e-004	0.0176	4.6300e-003	1.3000e-004	4.7700e-003	0.0000	15.6718	15.6718	6.0000e-004	0.0000	15.6869
Total	**8.7900e-003**	**7.7500e-003**	**0.0709**	**1.7000e-004**	**0.0174**	**1.5000e-004**	**0.0176**	**4.6300e-003**	**1.3000e-004**	**4.7700e-003**	**0.0000**	**15.6718**	**15.6718**	**6.0000e-004**	**0.0000**	**15.6869**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2758	0.0000	1.2758	0.4290	0.0000	0.4290	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4589	5.0808	3.3812	6.7900e-003		0.2174	0.2174		0.2000	0.2000	0.0000	596.7193	596.7193	0.1930	0.0000	601.5441
Total	**0.4589**	**5.0808**	**3.3812**	**6.7900e-003**	**1.2758**	**0.2174**	**1.4932**	**0.4290**	**0.2000**	**0.6290**	**0.0000**	**596.7193**	**596.7193**	**0.1930**	**0.0000**	**601.5441**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.7900e-003	7.7500e-003	0.0709	1.7000e-004	0.0174	1.5000e-004	0.0176	4.6300e-003	1.3000e-004	4.7700e-003	0.0000	15.6718	15.6718	6.0000e-004	0.0000	15.6869
Total	**8.7900e-003**	**7.7500e-003**	**0.0709**	**1.7000e-004**	**0.0174**	**1.5000e-004**	**0.0176**	**4.6300e-003**	**1.3000e-004**	**4.7700e-003**	**0.0000**	**15.6718**	**15.6718**	**6.0000e-004**	**0.0000**	**15.6869**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3571	0.0000	1.3571	0.4737	0.0000	0.4737	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4459	4.7778	3.5721	7.6400e-003		0.2011	0.2011		0.1850	0.1850	0.0000	670.7756	670.7756	0.2169	0.0000	676.1991
Total	**0.4459**	**4.7778**	**3.5721**	**7.6400e-003**	**1.3571**	**0.2011**	**1.5582**	**0.4737**	**0.1850**	**0.6587**	**0.0000**	**670.7756**	**670.7756**	**0.2169**	**0.0000**	**676.1991**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1700e-003	7.8000e-003	0.0726	1.9000e-004	0.0196	1.6000e-004	0.0197	5.2000e-003	1.5000e-004	5.3500e-003	0.0000	16.9833	16.9833	6.0000e-004	0.0000	16.9984
Total	**9.1700e-003**	**7.8000e-003**	**0.0726**	**1.9000e-004**	**0.0196**	**1.6000e-004**	**0.0197**	**5.2000e-003**	**1.5000e-004**	**5.3500e-003**	**0.0000**	**16.9833**	**16.9833**	**6.0000e-004**	**0.0000**	**16.9984**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3571	0.0000	1.3571	0.4737	0.0000	0.4737	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4459	4.7777	3.5721	7.6400e-003		0.2011	0.2011		0.1850	0.1850	0.0000	670.7748	670.7748	0.2169	0.0000	676.1983
Total	**0.4459**	**4.7777**	**3.5721**	**7.6400e-003**	**1.3571**	**0.2011**	**1.5582**	**0.4737**	**0.1850**	**0.6587**	**0.0000**	**670.7748**	**670.7748**	**0.2169**	**0.0000**	**676.1983**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1700e-003	7.8000e-003	0.0726	1.9000e-004	0.0196	1.6000e-004	0.0197	5.2000e-003	1.5000e-004	5.3500e-003	0.0000	16.9833	16.9833	6.0000e-004	0.0000	16.9984
Total	**9.1700e-003**	**7.8000e-003**	**0.0726**	**1.9000e-004**	**0.0196**	**1.6000e-004**	**0.0197**	**5.2000e-003**	**1.5000e-004**	**5.3500e-003**	**0.0000**	**16.9833**	**16.9833**	**6.0000e-004**	**0.0000**	**16.9984**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1872	1.7171	1.6327	2.6500e-003		0.0944	0.0944		0.0888	0.0888	0.0000	228.1627	228.1627	0.0551	0.0000	229.5389
Total	**0.1872**	**1.7171**	**1.6327**	**2.6500e-003**		**0.0944**	**0.0944**		**0.0888**	**0.0888**	**0.0000**	**228.1627**	**228.1627**	**0.0551**	**0.0000**	**229.5389**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1955	6.0333	1.4665	0.0150	0.3489	0.0183	0.3672	0.1008	0.0175	0.1183	0.0000	1,432.6048	1,432.6048	0.0756	0.0000	1,434.4942
Worker	1.0020	0.8838	8.0754	0.0198	1.9857	0.0166	2.0023	0.5280	0.0153	0.5433	0.0000	1,786.1479	1,786.1479	0.0687	0.0000	1,787.8659
Total	**1.1974**	**6.9171**	**9.5419**	**0.0348**	**2.3346**	**0.0349**	**2.3694**	**0.6288**	**0.0328**	**0.6616**	**0.0000**	**3,218.7527**	**3,218.7527**	**0.1443**	**0.0000**	**3,222.3601**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1872	1.7171	1.6327	2.6500e-003		0.0944	0.0944		0.0888	0.0888	0.0000	228.1625	228.1625	0.0551	0.0000	229.5386
Total	**0.1872**	**1.7171**	**1.6327**	**2.6500e-003**		**0.0944**	**0.0944**		**0.0888**	**0.0888**	**0.0000**	**228.1625**	**228.1625**	**0.0551**	**0.0000**	**229.5386**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1955	6.0333	1.4665	0.0150	0.3489	0.0183	0.3672	0.1008	0.0175	0.1183	0.0000	1,432.6048	1,432.6048	0.0756	0.0000	1,434.4942
Worker	1.0020	0.8838	8.0754	0.0198	1.9857	0.0166	2.0023	0.5280	0.0153	0.5433	0.0000	1,786.1479	1,786.1479	0.0687	0.0000	1,787.8659
Total	**1.1974**	**6.9171**	**9.5419**	**0.0348**	**2.3346**	**0.0349**	**2.3694**	**0.6288**	**0.0328**	**0.6616**	**0.0000**	**3,218.7527**	**3,218.7527**	**0.1443**	**0.0000**	**3,222.3601**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2428**	**301.2428**	**0.0722**	**0.0000**	**303.0471**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2369	7.5299	1.7511	0.0197	0.4604	0.0210	0.4815	0.1331	0.0201	0.1532	0.0000	1,873.6411	1,873.6411	0.0971	0.0000	1,876.0691
Worker	1.2282	1.0444	9.7178	0.0252	2.6207	0.0211	2.6418	0.6968	0.0194	0.7163	0.0000	2,274.2434	2,274.2434	0.0810	0.0000	2,276.2684
Total	**1.4650**	**8.5744**	**11.4690**	**0.0449**	**3.0812**	**0.0421**	**3.1233**	**0.8299**	**0.0395**	**0.8694**	**0.0000**	**4,147.8844**	**4,147.8844**	**0.1781**	**0.0000**	**4,152.3375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2425**	**301.2425**	**0.0722**	**0.0000**	**303.0467**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2369	7.5299	1.7511	0.0197	0.4604	0.0210	0.4815	0.1331	0.0201	0.1532	0.0000	1,873.6411	1,873.6411	0.0971	0.0000	1,876.0691
Worker	1.2282	1.0444	9.7178	0.0252	2.6207	0.0211	2.6418	0.6968	0.0194	0.7163	0.0000	2,274.2434	2,274.2434	0.0810	0.0000	2,276.2684
Total	**1.4650**	**8.5744**	**11.4690**	**0.0449**	**3.0812**	**0.0421**	**3.1233**	**0.8299**	**0.0395**	**0.8694**	**0.0000**	**4,147.8844**	**4,147.8844**	**0.1781**	**0.0000**	**4,152.3375**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1779	6.1947	1.4938	0.0193	0.4605	9.0400e-003	0.4695	0.1331	8.6400e-003	0.1417	0.0000	1,840.4143	1,840.4143	0.0753	0.0000	1,842.2956
Worker	1.1423	0.9360	8.8578	0.0242	2.6207	0.0204	2.6412	0.6968	0.0188	0.7157	0.0000	2,189.8348	2,189.8348	0.0723	0.0000	2,191.6411
Total	**1.3203**	**7.1307**	**10.3516**	**0.0436**	**3.0812**	**0.0295**	**3.1107**	**0.8299**	**0.0275**	**0.8574**	**0.0000**	**4,030.2491**	**4,030.2491**	**0.1475**	**0.0000**	**4,033.9366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1779	6.1947	1.4938	0.0193	0.4605	9.0400e-003	0.4695	0.1331	8.6400e-003	0.1417	0.0000	1,840.4143	1,840.4143	0.0753	0.0000	1,842.2956
Worker	1.1423	0.9360	8.8578	0.0242	2.6207	0.0204	2.6412	0.6968	0.0188	0.7157	0.0000	2,189.8348	2,189.8348	0.0723	0.0000	2,191.6411
Total	**1.3203**	**7.1307**	**10.3516**	**0.0436**	**3.0812**	**0.0295**	**3.1107**	**0.8299**	**0.0275**	**0.8574**	**0.0000**	**4,030.2491**	**4,030.2491**	**0.1475**	**0.0000**	**4,033.9366**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1697	6.1003	1.3948	0.0193	0.4640	8.4600e-003	0.4725	0.1341	8.0900e-003	0.1422	0.0000	1,839.4453	1,839.4453	0.0752	0.0000	1,841.3247
Worker	1.0748	0.8477	8.1891	0.0235	2.6409	0.0200	2.6609	0.7022	0.0184	0.7206	0.0000	2,121.6085	2,121.6085	0.0652	0.0000	2,123.2374
Total	**1.2445**	**6.9480**	**9.5839**	**0.0428**	**3.1049**	**0.0284**	**3.1334**	**0.8363**	**0.0265**	**0.8628**	**0.0000**	**3,961.0538**	**3,961.0538**	**0.1403**	**0.0000**	**3,964.5621**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1697	6.1003	1.3948	0.0193	0.4640	8.4600e-003	0.4725	0.1341	8.0900e-003	0.1422	0.0000	1,839.4453	1,839.4453	0.0752	0.0000	1,841.3247
Worker	1.0748	0.8477	8.1891	0.0235	2.6409	0.0200	2.6609	0.7022	0.0184	0.7206	0.0000	2,121.6085	2,121.6085	0.0652	0.0000	2,123.2374
Total	**1.2445**	**6.9480**	**9.5839**	**0.0428**	**3.1049**	**0.0284**	**3.1334**	**0.8363**	**0.0265**	**0.8628**	**0.0000**	**3,961.0538**	**3,961.0538**	**0.1403**	**0.0000**	**3,964.5621**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1609	5.9525	1.2988	0.0191	0.4623	7.8700e-003	0.4701	0.1336	7.5300e-003	0.1411	0.0000	1,818.5048	1,818.5048	0.0743	0.0000	1,820.3621
Worker	1.0056	0.7635	7.5088	0.0225	2.6308	0.0195	2.6503	0.6995	0.0179	0.7175	0.0000	2,029.6055	2,029.6055	0.0585	0.0000	2,031.0687
Total	**1.1665**	**6.7160**	**8.8075**	**0.0415**	**3.0931**	**0.0273**	**3.1204**	**0.8331**	**0.0255**	**0.8586**	**0.0000**	**3,848.1103**	**3,848.1103**	**0.1328**	**0.0000**	**3,851.4308**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1609	5.9525	1.2988	0.0191	0.4623	7.8700e-003	0.4701	0.1336	7.5300e-003	0.1411	0.0000	1,818.5048	1,818.5048	0.0743	0.0000	1,820.3621
Worker	1.0056	0.7635	7.5088	0.0225	2.6308	0.0195	2.6503	0.6995	0.0179	0.7175	0.0000	2,029.6055	2,029.6055	0.0585	0.0000	2,031.0687
Total	**1.1665**	**6.7160**	**8.8075**	**0.0415**	**3.0931**	**0.0273**	**3.1204**	**0.8331**	**0.0255**	**0.8586**	**0.0000**	**3,848.1103**	**3,848.1103**	**0.1328**	**0.0000**	**3,851.4308**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1550	5.8507	1.2366	0.0190	0.4623	7.4600e-003	0.4697	0.1336	7.1300e-003	0.1407	0.0000	1,808.2130	1,808.2130	0.0734	0.0000	1,810.0478
Worker	0.9480	0.6928	6.9161	0.0216	2.6308	0.0187	2.6495	0.6995	0.0172	0.7167	0.0000	1,948.3298	1,948.3298	0.0526	0.0000	1,949.6458
Total	**1.1030**	**6.5435**	**8.1528**	**0.0405**	**3.0931**	**0.0262**	**3.1193**	**0.8331**	**0.0244**	**0.8575**	**0.0000**	**3,756.5428**	**3,756.5428**	**0.1260**	**0.0000**	**3,759.6936**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1550	5.8507	1.2366	0.0190	0.4623	7.4600e-003	0.4697	0.1336	7.1300e-003	0.1407	0.0000	1,808.2130	1,808.2130	0.0734	0.0000	1,810.0478
Worker	0.9480	0.6928	6.9161	0.0216	2.6308	0.0187	2.6495	0.6995	0.0172	0.7167	0.0000	1,948.3298	1,948.3298	0.0526	0.0000	1,949.6458
Total	**1.1030**	**6.5435**	**8.1528**	**0.0405**	**3.0931**	**0.0262**	**3.1193**	**0.8331**	**0.0244**	**0.8575**	**0.0000**	**3,756.5428**	**3,756.5428**	**0.1260**	**0.0000**	**3,759.6936**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1499	5.7573	1.1831	0.0189	0.4623	7.0800e-003	0.4694	0.1336	6.7700e-003	0.1404	0.0000	1,799.2907	1,799.2907	0.0726	0.0000	1,801.1056
Worker	0.8931	0.6291	6.3999	0.0208	2.6308	0.0176	2.6484	0.6995	0.0162	0.7157	0.0000	1,881.2386	1,881.2386	0.0476	0.0000	1,882.4283
Total	**1.0430**	**6.3864**	**7.5830**	**0.0397**	**3.0931**	**0.0247**	**3.1178**	**0.8331**	**0.0230**	**0.8561**	**0.0000**	**3,680.5293**	**3,680.5293**	**0.1202**	**0.0000**	**3,683.5339**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1499	5.7573	1.1831	0.0189	0.4623	7.0800e-003	0.4694	0.1336	6.7700e-003	0.1404	0.0000	1,799.2907	1,799.2907	0.0726	0.0000	1,801.1056
Worker	0.8931	0.6291	6.3999	0.0208	2.6308	0.0176	2.6484	0.6995	0.0162	0.7157	0.0000	1,881.2386	1,881.2386	0.0476	0.0000	1,882.4283
Total	**1.0430**	**6.3864**	**7.5830**	**0.0397**	**3.0931**	**0.0247**	**3.1178**	**0.8331**	**0.0230**	**0.8561**	**0.0000**	**3,680.5293**	**3,680.5293**	**0.1202**	**0.0000**	**3,683.5339**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1451	5.6590	1.1381	0.0187	0.4605	6.7300e-003	0.4673	0.1331	6.4300e-003	0.1395	0.0000	1,785.1380	1,785.1380	0.0713	0.0000	1,786.9207
Worker	0.8337	0.5705	5.9250	0.0201	2.6207	0.0163	2.6371	0.6968	0.0150	0.7119	0.0000	1,814.7060	1,814.7060	0.0431	0.0000	1,815.7827
Total	**0.9788**	**6.2295**	**7.0630**	**0.0388**	**3.0813**	**0.0231**	**3.1043**	**0.8299**	**0.0215**	**0.8514**	**0.0000**	**3,599.8440**	**3,599.8440**	**0.1144**	**0.0000**	**3,602.7035**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1451	5.6590	1.1381	0.0187	0.4605	6.7300e-003	0.4673	0.1331	6.4300e-003	0.1395	0.0000	1,785.1380	1,785.1380	0.0713	0.0000	1,786.9207
Worker	0.8337	0.5705	5.9250	0.0201	2.6207	0.0163	2.6371	0.6968	0.0150	0.7119	0.0000	1,814.7060	1,814.7060	0.0431	0.0000	1,815.7827
Total	**0.9788**	**6.2295**	**7.0630**	**0.0388**	**3.0813**	**0.0231**	**3.1043**	**0.8299**	**0.0215**	**0.8514**	**0.0000**	**3,599.8440**	**3,599.8440**	**0.1144**	**0.0000**	**3,602.7035**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1419	5.6113	1.1061	0.0187	0.4623	6.4600e-003	0.4688	0.1336	6.1800e-003	0.1398	0.0000	1,785.6330	1,785.6330	0.0708	0.0000	1,787.4023
Worker	0.7764	0.5200	5.5094	0.0196	2.6308	0.0153	2.6461	0.6995	0.0140	0.7135	0.0000	1,768.7988	1,768.7988	0.0390	0.0000	1,769.7739
Total	**0.9183**	**6.1313**	**6.6155**	**0.0383**	**3.0931**	**0.0217**	**3.1148**	**0.8331**	**0.0202**	**0.8533**	**0.0000**	**3,554.4319**	**3,554.4319**	**0.1098**	**0.0000**	**3,557.1762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1419	5.6113	1.1061	0.0187	0.4623	6.4600e-003	0.4688	0.1336	6.1800e-003	0.1398	0.0000	1,785.6330	1,785.6330	0.0708	0.0000	1,787.4023
Worker	0.7764	0.5200	5.5094	0.0196	2.6308	0.0153	2.6461	0.6995	0.0140	0.7135	0.0000	1,768.7988	1,768.7988	0.0390	0.0000	1,769.7739
Total	**0.9183**	**6.1313**	**6.6155**	**0.0383**	**3.0931**	**0.0217**	**3.1148**	**0.8331**	**0.0202**	**0.8533**	**0.0000**	**3,554.4319**	**3,554.4319**	**0.1098**	**0.0000**	**3,557.1762**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1389	5.5519	1.0788	0.0187	0.4623	6.2100e-003	0.4685	0.1336	5.9300e-003	0.1396	0.0000	1,780.7808	1,780.7808	0.0699	0.0000	1,782.5270
Worker	0.7169	0.4714	5.1170	0.0190	2.6308	0.0142	2.6450	0.6995	0.0130	0.7126	0.0000	1,722.0161	1,722.0161	0.0352	0.0000	1,722.8966
Total	**0.8559**	**6.0232**	**6.1959**	**0.0377**	**3.0931**	**0.0204**	**3.1135**	**0.8331**	**0.0190**	**0.8521**	**0.0000**	**3,502.7969**	**3,502.7969**	**0.1051**	**0.0000**	**3,505.4236**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1389	5.5519	1.0788	0.0187	0.4623	6.2100e-003	0.4685	0.1336	5.9300e-003	0.1396	0.0000	1,780.7808	1,780.7808	0.0699	0.0000	1,782.5270
Worker	0.7169	0.4714	5.1170	0.0190	2.6308	0.0142	2.6450	0.6995	0.0130	0.7126	0.0000	1,722.0161	1,722.0161	0.0352	0.0000	1,722.8966
Total	**0.8559**	**6.0232**	**6.1959**	**0.0377**	**3.0931**	**0.0204**	**3.1135**	**0.8331**	**0.0190**	**0.8521**	**0.0000**	**3,502.7969**	**3,502.7969**	**0.1051**	**0.0000**	**3,505.4236**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1364	5.5005	1.0555	0.0186	0.4623	5.9800e-003	0.4683	0.1336	5.7100e-003	0.1393	0.0000	1,777.2738	1,777.2738	0.0692	0.0000	1,779.0047
Worker	0.6534	0.4249	4.7389	0.0186	2.6308	0.0132	2.6440	0.6995	0.0122	0.7117	0.0000	1,680.7466	1,680.7466	0.0316	0.0000	1,681.5366
Total	**0.7898**	**5.9254**	**5.7944**	**0.0372**	**3.0931**	**0.0192**	**3.1123**	**0.8331**	**0.0179**	**0.8510**	**0.0000**	**3,458.0204**	**3,458.0204**	**0.1008**	**0.0000**	**3,460.5413**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1364	5.5005	1.0555	0.0186	0.4623	5.9800e-003	0.4683	0.1336	5.7100e-003	0.1393	0.0000	1,777.2738	1,777.2738	0.0692	0.0000	1,779.0047
Worker	0.6534	0.4249	4.7389	0.0186	2.6308	0.0132	2.6440	0.6995	0.0122	0.7117	0.0000	1,680.7466	1,680.7466	0.0316	0.0000	1,681.5366
Total	**0.7898**	**5.9254**	**5.7944**	**0.0372**	**3.0931**	**0.0192**	**3.1123**	**0.8331**	**0.0179**	**0.8510**	**0.0000**	**3,458.0204**	**3,458.0204**	**0.1008**	**0.0000**	**3,460.5413**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1349	5.4765	1.0419	0.0187	0.4641	5.8000e-003	0.4699	0.1341	5.5400e-003	0.1397	0.0000	1,781.9909	1,781.9909	0.0690	0.0000	1,783.7153
Worker	0.6001	0.3863	4.4274	0.0182	2.6409	0.0124	2.6532	0.7022	0.0114	0.7136	0.0000	1,650.8774	1,650.8774	0.0286	0.0000	1,651.5919
Total	**0.7349**	**5.8629**	**5.4693**	**0.0369**	**3.1050**	**0.0182**	**3.1231**	**0.8363**	**0.0169**	**0.8532**	**0.0000**	**3,432.8683**	**3,432.8683**	**0.0976**	**0.0000**	**3,435.3071**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1349	5.4765	1.0419	0.0187	0.4641	5.8000e-003	0.4699	0.1341	5.5400e-003	0.1397	0.0000	1,781.9909	1,781.9909	0.0690	0.0000	1,783.7153
Worker	0.6001	0.3863	4.4274	0.0182	2.6409	0.0124	2.6532	0.7022	0.0114	0.7136	0.0000	1,650.8774	1,650.8774	0.0286	0.0000	1,651.5919
Total	**0.7349**	**5.8629**	**5.4693**	**0.0369**	**3.1050**	**0.0182**	**3.1231**	**0.8363**	**0.0169**	**0.8532**	**0.0000**	**3,432.8683**	**3,432.8683**	**0.0976**	**0.0000**	**3,435.3071**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1323	5.3963	1.0200	0.0185	0.4606	5.5800e-003	0.4661	0.1331	5.3400e-003	0.1384	0.0000	1,767.1932	1,767.1932	0.0681	0.0000	1,768.8944
Worker	0.5488	0.3502	4.1176	0.0177	2.6207	0.0115	2.6322	0.6968	0.0105	0.7074	0.0000	1,606.9012	1,606.9012	0.0257	0.0000	1,607.5444
Total	**0.6811**	**5.7464**	**5.1375**	**0.0363**	**3.0813**	**0.0170**	**3.0983**	**0.8299**	**0.0159**	**0.8458**	**0.0000**	**3,374.0944**	**3,374.0944**	**0.0938**	**0.0000**	**3,376.4389**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1323	5.3963	1.0200	0.0185	0.4606	5.5800e-003	0.4661	0.1331	5.3400e-003	0.1384	0.0000	1,767.1932	1,767.1932	0.0681	0.0000	1,768.8944
Worker	0.5488	0.3502	4.1176	0.0177	2.6207	0.0115	2.6322	0.6968	0.0105	0.7074	0.0000	1,606.9012	1,606.9012	0.0257	0.0000	1,607.5444
Total	**0.6811**	**5.7464**	**5.1375**	**0.0363**	**3.0813**	**0.0170**	**3.0983**	**0.8299**	**0.0159**	**0.8458**	**0.0000**	**3,374.0944**	**3,374.0944**	**0.0938**	**0.0000**	**3,376.4389**

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

3.5 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1308	5.3626	1.0074	0.0185	0.4606	5.4200e-003	0.4660	0.1331	5.1800e-003	0.1383	0.0000	1,766.7532	1,766.7532	0.0677	0.0000	1,768.4448
Worker	0.5094	0.3225	3.8612	0.0174	2.6207	0.0107	2.6315	0.6968	9.8600e-003	0.7067	0.0000	1,579.5567	1,579.5567	0.0233	0.0000	1,580.1389
Total	**0.6402**	**5.6851**	**4.8685**	**0.0360**	**3.0813**	**0.0161**	**3.0974**	**0.8299**	**0.0150**	**0.8450**	**0.0000**	**3,346.3099**	**3,346.3099**	**0.0910**	**0.0000**	**3,348.5837**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

3.5 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1308	5.3626	1.0074	0.0185	0.4606	5.4200e-003	0.4660	0.1331	5.1800e-003	0.1383	0.0000	1,766.7532	1,766.7532	0.0677	0.0000	1,768.4448
Worker	0.5094	0.3225	3.8612	0.0174	2.6207	0.0107	2.6315	0.6968	9.8600e-003	0.7067	0.0000	1,579.5567	1,579.5567	0.0233	0.0000	1,580.1389
Total	**0.6402**	**5.6851**	**4.8685**	**0.0360**	**3.0813**	**0.0161**	**3.0974**	**0.8299**	**0.0150**	**0.8450**	**0.0000**	**3,346.3099**	**3,346.3099**	**0.0910**	**0.0000**	**3,348.5837**

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.5 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1301	5.3551	1.0003	0.0186	0.4623	5.3100e-003	0.4676	0.1336	5.0800e-003	0.1387	0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker	0.4765	0.3018	3.6524	0.0172	2.6308	0.0101	2.6409	0.6995	9.2700e-003	0.7088	0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total	**0.6066**	**5.6569**	**4.6527**	**0.0358**	**3.0931**	**0.0154**	**3.1085**	**0.8331**	**0.0144**	**0.8475**	**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.5 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1301	5.3551	1.0003	0.0186	0.4623	5.3100e-003	0.4676	0.1336	5.0800e-003	0.1387	0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker	0.4765	0.3018	3.6524	0.0172	2.6308	0.0101	2.6409	0.6995	9.2700e-003	0.7088	0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total	**0.6066**	**5.6569**	**4.6527**	**0.0358**	**3.0931**	**0.0154**	**3.1085**	**0.8331**	**0.0144**	**0.8475**	**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3479	344.3479	0.0128	0.0000	344.6686
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3479**	**344.3479**	**0.0128**	**0.0000**	**344.6686**

3.5 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1306	5.3756	1.0042	0.0187	0.4641	5.3300e-003	0.4694	0.1341	5.1000e-003	0.1392	0.0000	1,780.3413	1,780.3413	0.0679	0.0000	1,782.0396
Worker	0.4783	0.3029	3.6664	0.0173	2.6409	0.0101	2.6510	0.7022	9.3100e-003	0.7115	0.0000	1,568.0023	1,568.0023	0.0213	0.0000	1,568.5359
Total	**0.6089**	**5.6786**	**4.6706**	**0.0360**	**3.1050**	**0.0155**	**3.1204**	**0.8363**	**0.0144**	**0.8507**	**0.0000**	**3,348.3436**	**3,348.3436**	**0.0893**	**0.0000**	**3,350.5754**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3475	344.3475	0.0128	0.0000	344.6682
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3475**	**344.3475**	**0.0128**	**0.0000**	**344.6682**

3.5 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1306	5.3756	1.0042	0.0187	0.4641	5.3300e-003	0.4694	0.1341	5.1000e-003	0.1392	0.0000	1,780.3413	1,780.3413	0.0679	0.0000	1,782.0396
Worker	0.4783	0.3029	3.6664	0.0173	2.6409	0.0101	2.6510	0.7022	9.3100e-003	0.7115	0.0000	1,568.0023	1,568.0023	0.0213	0.0000	1,568.5359
Total	**0.6089**	**5.6786**	**4.6706**	**0.0360**	**3.1050**	**0.0155**	**3.1204**	**0.8363**	**0.0144**	**0.8507**	**0.0000**	**3,348.3436**	**3,348.3436**	**0.0893**	**0.0000**	**3,350.5754**

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.5 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1301	5.3551	1.0003	0.0186	0.4623	5.3100e-003	0.4676	0.1336	5.0800e-003	0.1387	0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker	0.4765	0.3018	3.6524	0.0172	2.6308	0.0101	2.6409	0.6995	9.2700e-003	0.7088	0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total	**0.6066**	**5.6569**	**4.6527**	**0.0358**	**3.0931**	**0.0154**	**3.1085**	**0.8331**	**0.0144**	**0.8475**	**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.5 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1301	5.3551	1.0003	0.0186	0.4623	5.3100e-003	0.4676	0.1336	5.0800e-003	0.1387	0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker	0.4765	0.3018	3.6524	0.0172	2.6308	0.0101	2.6409	0.6995	9.2700e-003	0.7088	0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total	**0.6066**	**5.6569**	**4.6527**	**0.0358**	**3.0931**	**0.0154**	**3.1085**	**0.8331**	**0.0144**	**0.8475**	**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.5 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1301	5.3551	1.0003	0.0186	0.4623	5.3100e-003	0.4676	0.1336	5.0800e-003	0.1387	0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker	0.4765	0.3018	3.6524	0.0172	2.6308	0.0101	2.6409	0.6995	9.2700e-003	0.7088	0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total	**0.6066**	**5.6569**	**4.6527**	**0.0358**	**3.0931**	**0.0154**	**3.1085**	**0.8331**	**0.0144**	**0.8475**	**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.5 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1301	5.3551	1.0003	0.0186	0.4623	5.3100e-003	0.4676	0.1336	5.0800e-003	0.1387	0.0000	1,773.5461	1,773.5461	0.0677	0.0000	1,775.2379
Worker	0.4765	0.3018	3.6524	0.0172	2.6308	0.0101	2.6409	0.6995	9.2700e-003	0.7088	0.0000	1,562.0176	1,562.0176	0.0213	0.0000	1,562.5491
Total	**0.6066**	**5.6569**	**4.6527**	**0.0358**	**3.0931**	**0.0154**	**3.1085**	**0.8331**	**0.0144**	**0.8475**	**0.0000**	**3,335.5637**	**3,335.5637**	**0.0889**	**0.0000**	**3,337.7870**

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.0645	0.1451	2.8000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	23.6575	23.6575	8.8000e-004	0.0000	23.6795
Total	**0.0110**	**0.0645**	**0.1451**	**2.8000e-004**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**23.6575**	**23.6575**	**8.8000e-004**	**0.0000**	**23.6795**

3.5 Building Construction - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.9700e-003	0.3693	0.0690	1.2800e-003	0.0319	3.7000e-004	0.0323	9.2200e-003	3.5000e-004	9.5700e-003	0.0000	122.3135	122.3135	4.6700e-003	0.0000	122.4302
Worker	0.0329	0.0208	0.2519	1.1900e-003	0.1814	7.0000e-004	0.1821	0.0482	6.4000e-004	0.0489	0.0000	107.7254	107.7254	1.4700e-003	0.0000	107.7620
Total	**0.0418**	**0.3901**	**0.3209**	**2.4700e-003**	**0.2133**	**1.0700e-003**	**0.2144**	**0.0575**	**9.9000e-004**	**0.0585**	**0.0000**	**230.0389**	**230.0389**	**6.1400e-003**	**0.0000**	**230.1922**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.0645	0.1451	2.8000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	23.6575	23.6575	8.8000e-004	0.0000	23.6795
Total	**0.0110**	**0.0645**	**0.1451**	**2.8000e-004**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**23.6575**	**23.6575**	**8.8000e-004**	**0.0000**	**23.6795**

3.5 Building Construction - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.9700e-003	0.3693	0.0690	1.2800e-003	0.0319	3.7000e-004	0.0323	9.2200e-003	3.5000e-004	9.5700e-003	0.0000	122.3135	122.3135	4.6700e-003	0.0000	122.4302
Worker	0.0329	0.0208	0.2519	1.1900e-003	0.1814	7.0000e-004	0.1821	0.0482	6.4000e-004	0.0489	0.0000	107.7254	107.7254	1.4700e-003	0.0000	107.7620
Total	**0.0418**	**0.3901**	**0.3209**	**2.4700e-003**	**0.2133**	**1.0700e-003**	**0.2144**	**0.0575**	**9.9000e-004**	**0.0585**	**0.0000**	**230.0389**	**230.0389**	**6.1400e-003**	**0.0000**	**230.1922**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0829	0.8527	0.9671	1.5000e-003		0.0447	0.0447		0.0412	0.0412	0.0000	132.1550	132.1550	0.0427	0.0000	133.2235
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0829**	**0.8527**	**0.9671**	**1.5000e-003**		**0.0447**	**0.0447**		**0.0412**	**0.0412**	**0.0000**	**132.1550**	**132.1550**	**0.0427**	**0.0000**	**133.2235**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9700e-003	3.5100e-003	0.0320	8.0000e-005	7.8800e-003	7.0000e-005	7.9400e-003	2.0900e-003	6.0000e-005	2.1500e-003	0.0000	7.0845	7.0845	2.7000e-004	0.0000	7.0913
Total	**3.9700e-003**	**3.5100e-003**	**0.0320**	**8.0000e-005**	**7.8800e-003**	**7.0000e-005**	**7.9400e-003**	**2.0900e-003**	**6.0000e-005**	**2.1500e-003**	**0.0000**	**7.0845**	**7.0845**	**2.7000e-004**	**0.0000**	**7.0913**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0829	0.8527	0.9671	1.5000e-003		0.0447	0.0447		0.0412	0.0412	0.0000	132.1548	132.1548	0.0427	0.0000	133.2234
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0829**	**0.8527**	**0.9671**	**1.5000e-003**		**0.0447**	**0.0447**		**0.0412**	**0.0412**	**0.0000**	**132.1548**	**132.1548**	**0.0427**	**0.0000**	**133.2234**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9700e-003	3.5100e-003	0.0320	8.0000e-005	7.8800e-003	7.0000e-005	7.9400e-003	2.0900e-003	6.0000e-005	2.1500e-003	0.0000	7.0845	7.0845	2.7000e-004	0.0000	7.0913
Total	**3.9700e-003**	**3.5100e-003**	**0.0320**	**8.0000e-005**	**7.8800e-003**	**7.0000e-005**	**7.9400e-003**	**2.0900e-003**	**6.0000e-005**	**2.1500e-003**	**0.0000**	**7.0845**	**7.0845**	**2.7000e-004**	**0.0000**	**7.0913**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1092	1.1014	1.4435	2.2600e-003		0.0562	0.0562		0.0517	0.0517	0.0000	198.2728	198.2728	0.0641	0.0000	199.8760
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1092**	**1.1014**	**1.4435**	**2.2600e-003**		**0.0562**	**0.0562**		**0.0517**	**0.0517**	**0.0000**	**198.2728**	**198.2728**	**0.0641**	**0.0000**	**199.8760**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5400e-003	4.7100e-003	0.0438	1.1000e-004	0.0118	1.0000e-004	0.0119	3.1400e-003	9.0000e-005	3.2300e-003	0.0000	10.2521	10.2521	3.7000e-004	0.0000	10.2612
Total	**5.5400e-003**	**4.7100e-003**	**0.0438**	**1.1000e-004**	**0.0118**	**1.0000e-004**	**0.0119**	**3.1400e-003**	**9.0000e-005**	**3.2300e-003**	**0.0000**	**10.2521**	**10.2521**	**3.7000e-004**	**0.0000**	**10.2612**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1092	1.1014	1.4435	2.2600e-003		0.0562	0.0562		0.0517	0.0517	0.0000	198.2726	198.2726	0.0641	0.0000	199.8757
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1092**	**1.1014**	**1.4435**	**2.2600e-003**		**0.0562**	**0.0562**		**0.0517**	**0.0517**	**0.0000**	**198.2726**	**198.2726**	**0.0641**	**0.0000**	**199.8757**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5400e-003	4.7100e-003	0.0438	1.1000e-004	0.0118	1.0000e-004	0.0119	3.1400e-003	9.0000e-005	3.2300e-003	0.0000	10.2521	10.2521	3.7000e-004	0.0000	10.2612
Total	**5.5400e-003**	**4.7100e-003**	**0.0438**	**1.1000e-004**	**0.0118**	**1.0000e-004**	**0.0119**	**3.1400e-003**	**9.0000e-005**	**3.2300e-003**	**0.0000**	**10.2521**	**10.2521**	**3.7000e-004**	**0.0000**	**10.2612**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.9183					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0504	0.0600	1.0000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003	0.0000	8.4257	8.4257	5.8000e-004	0.0000	8.4402
Total	**4.9255**	**0.0504**	**0.0600**	**1.0000e-004**		**3.1100e-003**	**3.1100e-003**		**3.1100e-003**	**3.1100e-003**	**0.0000**	**8.4257**	**8.4257**	**5.8000e-004**	**0.0000**	**8.4402**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0672	0.0592	0.5413	1.3300e-003	0.1331	1.1100e-003	0.1342	0.0354	1.0200e-003	0.0364	0.0000	119.7282	119.7282	4.6100e-003	0.0000	119.8434
Total	**0.0672**	**0.0592**	**0.5413**	**1.3300e-003**	**0.1331**	**1.1100e-003**	**0.1342**	**0.0354**	**1.0200e-003**	**0.0364**	**0.0000**	**119.7282**	**119.7282**	**4.6100e-003**	**0.0000**	**119.8434**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.9183					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0504	0.0600	1.0000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003	0.0000	8.4257	8.4257	5.8000e-004	0.0000	8.4402
Total	**4.9255**	**0.0504**	**0.0600**	**1.0000e-004**		**3.1100e-003**	**3.1100e-003**		**3.1100e-003**	**3.1100e-003**	**0.0000**	**8.4257**	**8.4257**	**5.8000e-004**	**0.0000**	**8.4402**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0672	0.0592	0.5413	1.3300e-003	0.1331	1.1100e-003	0.1342	0.0354	1.0200e-003	0.0364	0.0000	119.7282	119.7282	4.6100e-003	0.0000	119.8434
Total	**0.0672**	**0.0592**	**0.5413**	**1.3300e-003**	**0.1331**	**1.1100e-003**	**0.1342**	**0.0354**	**1.0200e-003**	**0.0364**	**0.0000**	**119.7282**	**119.7282**	**4.6100e-003**	**0.0000**	**119.8434**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	19.3751					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0266	0.1831	0.2358	3.9000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	33.1923	33.1923	2.1600e-003	0.0000	33.2463
Total	**19.4017**	**0.1831**	**0.2358**	**3.9000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**33.1923**	**33.1923**	**2.1600e-003**	**0.0000**	**33.2463**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2457	0.2090	1.9443	5.0400e-003	0.5244	4.2200e-003	0.5286	0.1394	3.8900e-003	0.1433	0.0000	455.0282	455.0282	0.0162	0.0000	455.4333
Total	**0.2457**	**0.2090**	**1.9443**	**5.0400e-003**	**0.5244**	**4.2200e-003**	**0.5286**	**0.1394**	**3.8900e-003**	**0.1433**	**0.0000**	**455.0282**	**455.0282**	**0.0162**	**0.0000**	**455.4333**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	19.3751					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0266	0.1831	0.2358	3.9000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	33.1923	33.1923	2.1600e-003	0.0000	33.2463
Total	**19.4017**	**0.1831**	**0.2358**	**3.9000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**33.1923**	**33.1923**	**2.1600e-003**	**0.0000**	**33.2463**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2457	0.2090	1.9443	5.0400e-003	0.5244	4.2200e-003	0.5286	0.1394	3.8900e-003	0.1433	0.0000	455.0282	455.0282	0.0162	0.0000	455.4333
Total	**0.2457**	**0.2090**	**1.9443**	**5.0400e-003**	**0.5244**	**4.2200e-003**	**0.5286**	**0.1394**	**3.8900e-003**	**0.1433**	**0.0000**	**455.0282**	**455.0282**	**0.0162**	**0.0000**	**455.4333**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8000e-004	2.6100e-003	3.6200e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.5107	0.5107	3.0000e-005	0.0000	0.5114
Total	**0.2985**	**2.6100e-003**	**3.6200e-003**	**1.0000e-005**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.5107**	**0.5107**	**3.0000e-005**	**0.0000**	**0.5114**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5200e-003	2.8800e-003	0.0273	7.0000e-005	8.0700e-003	6.0000e-005	8.1300e-003	2.1400e-003	6.0000e-005	2.2000e-003	0.0000	6.7406	6.7406	2.2000e-004	0.0000	6.7462
Total	**3.5200e-003**	**2.8800e-003**	**0.0273**	**7.0000e-005**	**8.0700e-003**	**6.0000e-005**	**8.1300e-003**	**2.1400e-003**	**6.0000e-005**	**2.2000e-003**	**0.0000**	**6.7406**	**6.7406**	**2.2000e-004**	**0.0000**	**6.7462**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8000e-004	2.6100e-003	3.6200e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.5107	0.5107	3.0000e-005	0.0000	0.5114
Total	**0.2985**	**2.6100e-003**	**3.6200e-003**	**1.0000e-005**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.5107**	**0.5107**	**3.0000e-005**	**0.0000**	**0.5114**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5200e-003	2.8800e-003	0.0273	7.0000e-005	8.0700e-003	6.0000e-005	8.1300e-003	2.1400e-003	6.0000e-005	2.2000e-003	0.0000	6.7406	6.7406	2.2000e-004	0.0000	6.7462
Total	**3.5200e-003**	**2.8800e-003**	**0.0273**	**7.0000e-005**	**8.0700e-003**	**6.0000e-005**	**8.1300e-003**	**2.1400e-003**	**6.0000e-005**	**2.2000e-003**	**0.0000**	**6.7406**	**6.7406**	**2.2000e-004**	**0.0000**	**6.7462**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.6333	21.7960	26.0271	0.1406	13.4052	0.0600	13.4652	3.5952	0.0559	3.6511	0.0000	13,055.1160	13,055.1160	0.5465	0.0000	13,068.7774
Unmitigated	2.6333	21.7960	26.0271	0.1406	13.4052	0.0600	13.4652	3.5952	0.0559	3.6511	0.0000	13,055.1160	13,055.1160	0.5465	0.0000	13,068.7774

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	19,776.24	22,041.36	18150.00	35,724,959	35,724,959
General Office Building	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	19,776.24	22,041.36	18,150.00	35,724,959	35,724,959

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	4.94	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482
General Office Building	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482
Regional Shopping Center	0.574472	0.023499	0.208360	0.100658	0.009582	0.003700	0.020556	0.046714	0.003193	0.001632	0.006105	0.001047	0.000482

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	743.5748	743.5748	0.0381	7.6200e-003	746.7968
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	743.5748	743.5748	0.0381	7.6200e-003	746.7968
NaturalGas Mitigated	0.2159	1.8760	1.0102	0.0118		0.1492	0.1492		0.1492	0.1492	0.0000	2,137.1015	2,137.1015	0.0410	0.0392	2,149.8012
NaturalGas Unmitigated	0.2159	1.8760	1.0102	0.0118		0.1492	0.1492		0.1492	0.1492	0.0000	2,137.1015	2,137.1015	0.0410	0.0392	2,149.8012

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.96175e+007	0.1597	1.3647	0.5807	8.7100e-003		0.1103	0.1103		0.1103	0.1103	0.0000	1,580.5005	1,580.5005	0.0303	0.0290	1,589.8926
General Office Building	8.35734e+006	0.0451	0.4097	0.3441	2.4600e-003		0.0311	0.0311		0.0311	0.0311	0.0000	445.9797	445.9797	8.5500e-003	8.1800e-003	448.6299
Regional Shopping Center	2.07297e+006	0.0112	0.1016	0.0854	6.1000e-004		7.7200e-003	7.7200e-003		7.7200e-003	7.7200e-003	0.0000	110.6213	110.6213	2.1200e-003	2.0300e-003	111.2787
Total		**0.2159**	**1.8760**	**1.0102**	**0.0118**		**0.1492**	**0.1492**		**0.1492**	**0.1492**	**0.0000**	**2,137.1015**	**2,137.1015**	**0.0410**	**0.0392**	**2,149.8012**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.96175e+007	0.1597	1.3647	0.5807	8.7100e-003		0.1103	0.1103		0.1103	0.1103	0.0000	1,580.5005	1,580.5005	0.0303	0.0290	1,589.8926
General Office Building	8.35734e+006	0.0451	0.4097	0.3441	2.4600e-003		0.0311	0.0311		0.0311	0.0311	0.0000	445.9797	445.9797	8.5500e-003	8.1800e-003	448.6299
Regional Shopping Center	2.07297e+006	0.0112	0.1016	0.0854	6.1000e-004		7.7200e-003	7.7200e-003		7.7200e-003	7.7200e-003	0.0000	110.6213	110.6213	2.1200e-003	2.0300e-003	111.2787
Total		**0.2159**	**1.8760**	**1.0102**	**0.0118**		**0.1492**	**0.1492**		**0.1492**	**0.1492**	**0.0000**	**2,137.1015**	**2,137.1015**	**0.0410**	**0.0392**	**2,149.8012**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
General Office Building	8.16845e+006	361.6963	0.0185	3.7100e-003	363.2636
Regional Shopping Center	8.62424e+006	381.8785	0.0196	3.9100e-003	383.5332
Total		**743.5748**	**0.0381**	**7.6200e-003**	**746.7968**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
General Office Building	8.16845e+006	361.6963	0.0185	3.7100e-003	363.2636
Regional Shopping Center	8.62424e+006	381.8785	0.0196	3.9100e-003	383.5332
Total		**743.5748**	**0.0381**	**7.6200e-003**	**746.7968**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	20.1040	0.3443	29.8340	1.5800e-003		0.1661	0.1661		0.1661	0.1661	0.0000	48.9539	48.9539	0.0467	0.0000	50.1202
Unmitigated	20.1040	0.3443	29.8340	1.5800e-003		0.1661	0.1661		0.1661	0.1661	0.0000	48.9539	48.9539	0.0467	0.0000	50.1202

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.4591					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.7515					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8934	0.3443	29.8340	1.5800e-003		0.1661	0.1661		0.1661	0.1661	0.0000	48.9539	48.9539	0.0467	0.0000	50.1202
Total	**20.1040**	**0.3443**	**29.8340**	**1.5800e-003**		**0.1661**	**0.1661**		**0.1661**	**0.1661**	**0.0000**	**48.9539**	**48.9539**	**0.0467**	**0.0000**	**50.1202**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.4591					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	16.7515					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8934	0.3443	29.8340	1.5800e-003		0.1661	0.1661		0.1661	0.1661	0.0000	48.9539	48.9539	0.0467	0.0000	50.1202
Total	**20.1040**	**0.3443**	**29.8340**	**1.5800e-003**		**0.1661**	**0.1661**		**0.1661**	**0.1661**	**0.0000**	**48.9539**	**48.9539**	**0.0467**	**0.0000**	**50.1202**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	196.9116	0.3409	0.2132	268.9712
Unmitigated	237.8246	0.4257	0.2664	327.8631

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	189.207 / 119.283	130.7617	0.2337	0.1462	180.1803
General Office Building	90.7384 / 55.6139	62.4631	0.1121	0.0701	86.1617
Regional Shopping Center	64.789 / 39.7094	44.5999	0.0800	0.0501	61.5212
Total		**237.8246**	**0.4257**	**0.2664**	**327.8632**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	151.366 / 119.283	108.3067	0.1871	0.1170	147.8575
General Office Building	72.5907 / 55.6139	51.6942	0.0897	0.0561	70.6606
Regional Shopping Center	51.8312 / 39.7094	36.9107	0.0641	0.0401	50.4531
Total		**196.9116**	**0.3409**	**0.2132**	**268.9712**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	553.9684	32.7386	0.0000	1,372.4333
Unmitigated	553.9684	32.7386	0.0000	1,372.4333

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	1335.84	271.1635	16.0253	0.0000	671.7960
General Office Building	474.79	96.3781	5.6958	0.0000	238.7726
Regional Shopping Center	918.4	186.4269	11.0175	0.0000	461.8648
Total		**553.9684**	**32.7386**	**0.0000**	**1,372.4333**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	1335.84	271.1635	16.0253	0.0000	671.7960
General Office Building	474.79	96.3781	5.6958	0.0000	238.7726
Regional Shopping Center	918.4	186.4269	11.0175	0.0000	461.8648
Total		**553.9684**	**32.7386**	**0.0000**	**1,372.4333**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: 19-07378, Marina Downtown Vitalization Specific Plan - 2040

Vehicle Population Breakdown*	
678502	Gasoline vehicles
32834	Diesel vehicles
95.4%	Gasoline vehicle %
4.6%	Diesel vehicle %

VMT per Vehicle Type		
35699594	Project VMT (CalEEMod output)	
34051744	Gasoline vehicle VMT	
1647850	Diesel vehicle VMT	

Gasoline Vehicles	
95.4%	Gasoline vehicle %
21.796	Tons per year mobile NOX emissions (annual output in CalEEMod)
20.79	Gasoline vehicle tons per year NOX emissions
0.5078	Tons per year N2O emissions for gasoline vehicles**
0.4607	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
1.60	grams N2O per gallon of fuel for diesel vehicles**
25.09	Diesel average miles per gallon*
0.06378	grams per mile N2O for diesel vehicles
105096.5	grams per year N2O for diesel vehicles
0.1050965	Metric tons per year N2O emissions for diesel vehicles

CO2e Emissions from N2O	
0.5658	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
168.6	**CO2e emissions per year from N2O emissions from gasoline + diesel vehicles**

Sources
***Vehicle population source:**
Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Air District
Region: Monterey Bay Unified APCD
Calendar Year: 2040
Season: Annual
Vehicle Classification: EMFAC2011 Categories
****Methodology source:**
EMFAC2017 Volume III - Technical Documentation
https://www.arb.ca.gov/msei/emfac2011-faq.htm
*****GWP source:**
Intergovernmental Panel on Climate Change (IPCC). 2007.
AR4 Climate Change 2007: The Physical Science Basis.
Contrbution of Working Group I to the Fourth Assessment Report of the
Intergovernmental Panel on Climate Change.

Appendix TRAF-1

Marina Downtown Traffic Study

Kimley»Horn

MEMORANDUM

From: Frederik Venter, P.E. and Marissa Garcia
Kimley-Horn and Associates

To: Brian McMinn, P.E. & Alexander Barton
City of Marina

Date: February 14, 2019

Re: Marina Downtown Traffic Study

Summary of Findings

The City of Marina is planning to redevelop their Downtown and turn it into a vibrant, fun place to be. The proposed land use redevelopment includes housing, office and retail. A successful Downtown will also comprise multimodal access, slow traveling cars and amenities that promotes daytime and nighttime activity for residents and visitors to the Monterey Bay area. This study evaluates the potential impacts of the proposed Downtown Redevelopment on the transportation infrastructure, including cars, trucks, bicycles and pedestrians.

The existing Reservation Road and Del Monte Boulevard are four-lane facilities and this analysis studies the continued four lane use and the feasibility of a two-lane road diet along Reservation Road and Del Monte Blvd. Narrowing the entire Reservation Road and Del Monte Boulevard to two lanes only, will result in congested travel behavior and a potential shift in traffic to Imjin Parkway. Reservation Road between Crescent Avenue and Del Monte Boulevard carries high traffic volumes, and it is recommended that the roadway be retained as four lanes. Although the level of service, which only analyzes individual intersections, shows that the intersections would operate acceptably, the street system has significant queuing spilling back onto Del Monte Boulevard, Reservation Road, and other side streets.

Seven intersections were considered for the conversion from signal control to roundabout intersection control. Roundabout control could be a feasible alternative to signalized intersections at the studied intersections. Dual lane roundabouts are feasible at some intersections along Del Monte Boulevard and Reservation Road in the Downtown area. A single lane roundabout is sufficient at the future intersection of Del Monte Boulevard and Patton Parkway.

However, mixing signals and roundabouts on a closely spaced grid system in the downtown area will result in traffic congestion even with four lanes and a median. The reason for this is that arrival and departure patterns between roundabouts and signals are not conducive to traffic flow and operations. We thus recommend that dual lane roundabouts be considered only at Del Monte Boulevard and State Route 1 Ramps, Del Monte Boulevard and Reindollar Avenue, Reservation Road and Crescent Avenue, Reservation Road and California Avenue, and Reservation Road and Salinas Avenue. These roundabouts will be used as the “gateway” to the Downtown corridor (see **Figure 5**).

The Downtown Marina area currently provides access to several bicycle and pedestrian facilities; however, these facilities are basic and lack state of the art amenities and features, such as

buffered or protected bike lanes, special markings for the bike lanes and crosswalk striping that promotes safety and increased use. Green colored pavement at the beginning of bicycle facilities, transitional green striping at intersections and right turn pockets are improvements to make cyclists more visible and provide continuity through the corridor. Narrowing of travel lanes should take into consideration the Monterey Salinas Transit (MST) buses that travel to and from the Marina Transit Center. No lanes wider than 11 feet are recommended since wide lanes promote speeding.

Reservation Road has extensive off-street parking facilities and on-street parking is also provided. A couple of options exist for providing parking facilities along Reservation Road; all parking could be off-site, or parking could be provided on the street, but with a diagonal parking configuration, which is more typical in downtowns. A mix of both on-street and off-street parking could also be provided based on the parking needs and Floor Area Ratio (FAR) of adjacent land uses. On-street parking demand along Reservation Road was surveyed. There is higher demand for on-street parking adjacent to residential land uses in the downtown core area, and only moderate demand for on-street parking east of Crescent Ave.

Extensive redevelopment of land-uses in downtown should consider placement of parking behind downtown buildings that will face Del Monte Boulevard and Reservation Road.

Introduction

This memorandum discusses the effect of the implementation of the Downtown Specific Plan to the circulation network due in the City of Marina. The proposed Downtown Plan would include up to 2,904 new multifamily dwelling units, 874,669 square feet of retail land uses, and 284,448 square feet of office land uses.

The Specific Plan area, or Project area, occupies approximately 267 acres generally bounded by the parcels along the north side of Reservation Road, the west side of Del Monte Boulevard, and the south side of Reindollar Avenue, west of Sunset Avenue. The purpose of this study is to identify impacts of the proposed development on the surrounding transportation system and to recommend improved multimodal facilities that is complimentary to Downtown redevelopment.

Reservation Road is a 96 feet wide 4-lane arterial with a posted speed of 35 mph and wide raised or two-way left-turn lane median. There are marked bike lanes and pedestrian facilities on both sides of the street as well as some on-street parking. Surrounding land uses are retail, restaurant, office and residential. Del Monte Boulevard is a 90 feet 4-lane arterial with a posted speed limit of 35 mph. Del Monte Boulevard has pedestrian facilities on both sides of the street. The pedestrian facilities on the west side of Del Monte Boulevard connect to the Monterey Peninsula Recreational Trail (MPRT).

Reservation Road and Del Monte Boulevard does not only serve local Marina traffic, but also regional traffic between Salinas and the Monterey Bay. Imjin Parkway also serves regional travel needs in the Monterey Bay Area, more so than Reservation Road. Traffic conditions along Imjin Parkway determines the extent of diverted travel onto Reservation Road and Del Monte Boulevard.

The Project's location is shown in **Figure 1**.

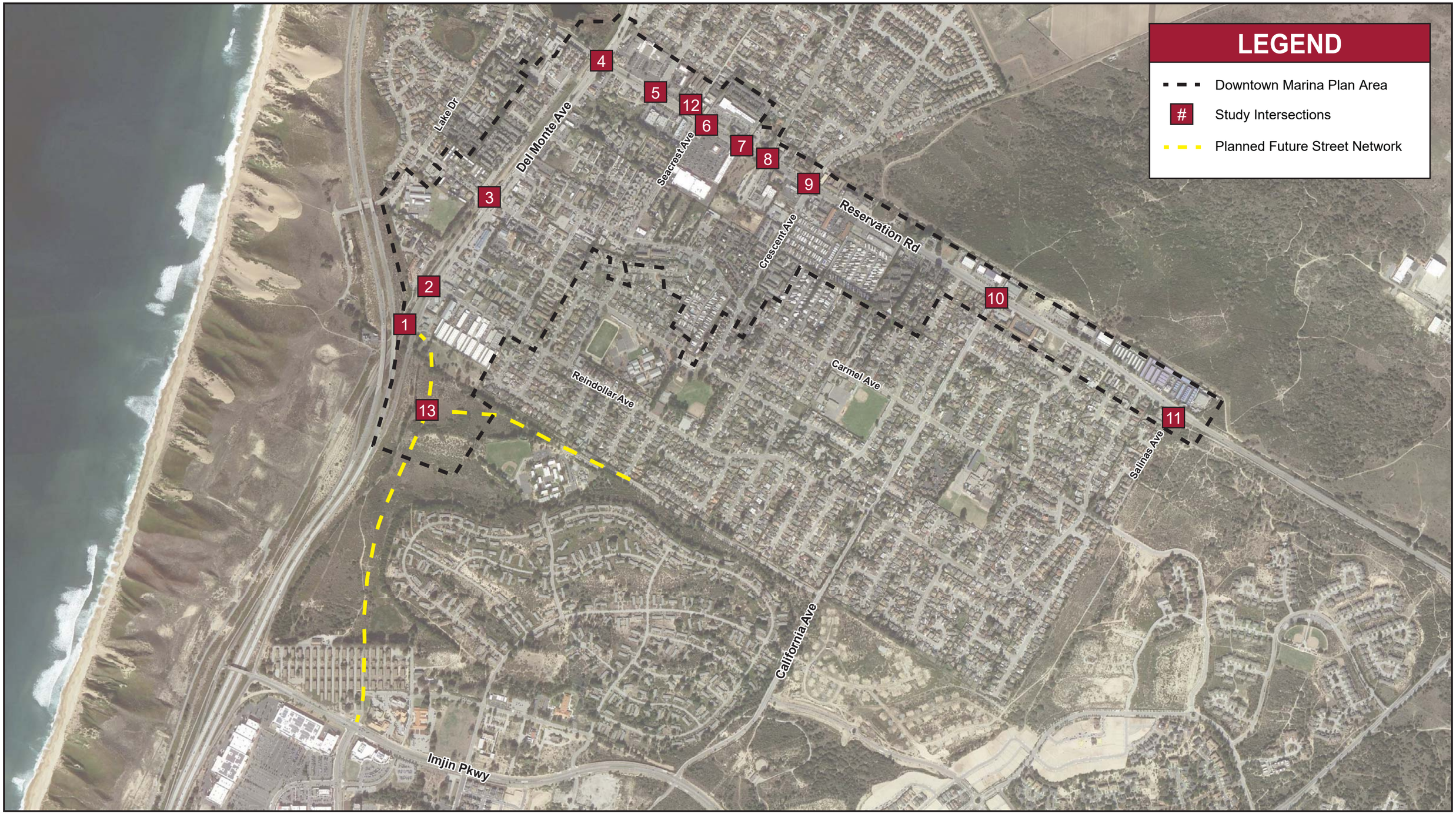

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Figure 1
Vicinity Map
Marina Downtown Study

Project Land Uses

The existing land uses have been categorized as Retail, Office/Light Manufacturing, or Multi-family residential that currently occupy the Project site include the following:

Table 1 – Existing Downtown Land Uses

	Acres	Square Footage	Residential Units
Core	**56.45**	**411,864**	**286**
Retail	--	*375,277*	
Office	--	*36,587*	
Multi-Family Residential	**106.66**	**--**	**1,638**
Transition	**104.00**	**593,894**	**377**
Retail	--	*316,428*	
Office/Light Manufacturing	--	*277,466*	
Total	**267.08**	**1,005,758**	**2,301**

Source: City of Marina, 2018.

Proposed Project Land Uses

The Downtown Specific Plan provides a maximum and minimum range for expected development to give flexibility for future development. The proposed future land uses have been categorized as Retail, Office, or Multi-family residential, the Project site include the following:

Table 2 – Proposed Downtown Specific Plan Land Uses

	Acres	Square Footage	Residential Units	Change in Square Footage	Change in Residential Units
Core	**56.45**	**729,630 - 1,313,334**	**1,497 – 1,658**	**317,766 - 901,470**	**1,211 – 1,372**
Retail	--	*583,704 - 1,050,667*	--	*208,427 - 675,390*	--
Office	--	*145,926 - 262,667*	--	*109,339 - 226,080*	--
Multi-Family Residential	**106.66**	**--**	**1,618 - 1,792**	**--**	**0 - 154**
Transition	**104.00**	**808,216 - 1,077,621**	**1,586 - 1,755**	**70,352 - 199,279**	**1,209 – 1,378**
Retail	--	*386,780 - 515,707*	--	*70,352 - 199,279*	--
Office	--	*421,436 - 561,914*	--	*143,970 - 284,448*	--
Total	**267.08**	**1,537,846 - 2,390,955**	**4,701 – 5,205**	**532,088 - 1,385,197**	**2,400 – 2,904**

Source: City of Marina, 2018.

Proposed Project Trip Generation

The change in land use assumptions from Existing Conditions to the Downtown Land use assumptions for the proposed uses are as follows:

1. Multi-Family (ITE Land Use: Multi-Family Housing (Low-Rise) [220])
2. Retail (ITE Land Use: Shopping Center [820])
3. Office (ITE Land Use: General Office Building [710])

As shown in **Table 3**, proposed conditions trip generation estimates indicate that the proposed land uses will generate approximately 35,520 – 58,740 gross daily trips, 1,753 – 2,495 gross AM peak hour trips, and 2,757 – 4,997 gross PM peak hour trips. After applying the ITE Recommended Internal Capture Reduction Method (NCHRP 851) and incorporating a 10 percent reduction due to Alternative Transportation modes, the total net project trip generation would be 26,640 – 42,880 net daily trips, 1,435 – 2,137 net AM peak hour trips, and 1,874 – 3,303 net PM peak hour trips. The reduction due to Alternative Transportation Modes is based on the 2016 American Community Survey, Commute Characteristics to Work Table (S0801).

Interaction in travel between the land uses within Downtown, within Marina also outside of Marina with the proposed Downtown is more accurately reflected by using the AMABG travel demand model to estimate traffic flows on the street system. Subsequently, the trip generation in the AMBAG model yields a lower trip generation because of the additional interaction. The model also assumes some level of multimodal travel, furthermore it also takes into consideration through traffic and diverts some traffic to Imjin Parkway as volumes increases in Downtown Marina. As such the traffic volumes from the model were used in this analysis.

The AMBAG model inputs increase in housing units and jobs at lesser rate that the Downtown Plan assumes. Therefore, it should be noted that if the upper threshold of residential units and retail/office square footage is built, the level of service at intersections will degrade and the queue lengths will increase. Based on the level of service findings for the future conditions there is sufficient capacity for the full buildout of the Downtown Plan and still meet the level of service threshold set by the City of Marina.

Table 3 - Project Trip Generation

	ITE No.	Project Size			MINIMUM						MAXIMUM					
					Daily	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour			PM Peak Hour		
		Min	Max	Units		Total	In	Out	Total	In	Out		Total	In	Out	Total	In	Out
Trip Generation Rates[1]																		
Multifamily - Multi-Family Housing (Low-Rise)[1]	220	-		DU			23%	77%		63%	37%			23%	77%		63%	37%
Office - General Office Building[2]	710	-		KSF			86%	14%		16%	84%			86%	14%		16%	84%
Retail - Shopping Center[3]	820	-		KSF			62%	38%		48%	52%			62%	38%		48%	52%
Project Trips																		
Core																		
Retail	820	208	675	KSF	9,906	256	159	97	936	449	487	22,035	489	303	186	2,233	1,072	1,161
Office	710	109	226	KSF	1,157	129	111	18	124	60	64	2,341	239	206	33	247	119	128
Multifamily	220	1,211	1,372	DU	9,114	510	117	393	544	343	201	10,331	574	132	442	608	383	225
Sub-Total					*20,177*	*895*	*387*	*508*	*1,604*	*852*	*752*	*34,707*	*1,302*	*641*	*661*	*3,088*	*1,574*	*1,514*
Residential																		
Multifamily	220	0	154	DU	0	0	0	0	0	0	0	1,123	72	17	55	87	55	32
Sub-Total					*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,123*	*72*	*17*	*55*	*87*	*55*	*32*
Transition																		
Retail	820	70	199	KSF	4,733	187	116	71	419	201	218	9,608	251	156	95	905	434	471
Office	710	144	284	KSF	1,511	162	139	23	161	26	135	2,925	294	253	41	307	49	258
Multifamily	220	1,209	1,378	DU	9,099	509	117	392	543	342	201	10,377	576	132	444	610	384	226
Sub-Total					*15,343*	*858*	*372*	*486*	*1,123*	*569*	*554*	*22,910*	*1,121*	*541*	*580*	*1,822*	*867*	*955*
TOTAL																		
Total Retail	820	279	875	KSF	14,639	443	275	168	1,355	650	705	31,643	740	459	281	3,138	1,506	1,632
Total Office	710	253	511	KSF	2,668	291	250	41	285	86	199	5,266	533	459	74	554	168	386
Total Residential	220	2,420	2,904	DU	18,213	1,019	234	785	1,087	685	402	21,831	1,222	281	941	1,305	822	483
New Trips					*35,520*	*1,753*	*759*	*994*	*2,727*	*1,421*	*1,306*	*58,740*	*2,495*	*1,199*	*1,296*	*4,997*	*2,496*	*2,501*
Trip Reduction																		
Internal Capture (NCHRP 851)					-5,328	-158	-79	-79	-644	-322	-322	-9,986	-136	-68	-68	-1,332	-666	-666
Transit Trips (3.1%)[2]					-1,101	-50	-21	-29	-65	-34	-31	-1,821	-68	-32	-36	-109	-54	-55
Non-motorized (Walk, Bike, Tele-commute (6.9%)[2]					-2,451	-110	-47	-63	-144	-76	-68	-4,053	-154	-74	-80	-253	-126	-127
Total Trip Reduction					*-8,880*	*-318*	*-147*	*-171*	*-853*	*-432*	*-421*	*-15,860*	*-358*	*-174*	*-184*	*-1,694*	*-846*	*-848*
NET NEW TRIPS					**26,640**	**1,435**	**612**	**823**	**1,874**	**989**	**885**	**42,880**	**2,137**	**1,025**	**1,112**	**3,303**	**1,650**	**1,653**

Notes:

1. ITE Trip Generation Manual, 10th Edition Trip Generation Equations used for Multi-family, Office and Retail Land Uses
2. Alternative Transportation Mode Share is based on the American Community Survey's 2016 Commute Characteristics for Marina, California

Intersection Operations Evaluation

The following intersections were analyzed as part of this memorandum:

1. Del Monte Boulevard and State Route 1 Ramps
2. Del Monte Boulevard and Reindollar Avenue
3. Del Monte Boulevard and Palm Avenue
4. Del Monte Boulevard and Reservation Road
5. Reservation Road and Vista Del Camino
6. Reservation Road and Seacrest Ave
7. Reservation Road and Shopping Center Driveways
8. Reservation Road and De Forest Road
9. Reservation Road and Crescent Avenue
10. Reservation Road and California Avenue
11. Reservation Road and Salinas Avenue
12. Reservation Road and Eucalyptus Avenue
13. Del Monte Boulevard and Patton Parkway (Future Conditions only)

Operations Methodology

The study intersections were modeled in Synchro 10 software. Roundabout controlled intersections were studied using Sidra 7.0. Highway Capacity Manual (HCM) 6th Edition was used to analyze intersection operations and report intersection delay.

Additionally, queues at the Study Intersections were analyzed in SimTraffic and reported based on an average of ten seedings per run.

The City of Marina recognizes LOS D as the acceptable Level of Service for intersections within its jurisdiction. The intersection of Del Monte Avenue and the State Route 1 Ramps is within the jurisdiction of Caltrans, the anticipated level of service conditions for intersections would be D or worse per the Caltrans State Routes 1 & 183 Corridor System Management Plan.

Weekday intersection turning movement counts were collected for 11 study intersections on September 26, 2018. (Wednesday). These counts included vehicles, bicycles, and pedestrians and represents typical traffic conditions. Volumes for intersections were collected during the AM and PM peak periods of 7:00-9:00 a.m. and 4:00-6:00 p.m., respectively. These traffic counts were taken when local schools were in session and the weather was fair. Existing roadway geometry is shown in **Figure 2**, Existing peak hour turning movements are summarized in **Figure 3**. Intersection volume data sheets for all traffic counts are provided in the **Appendix**.

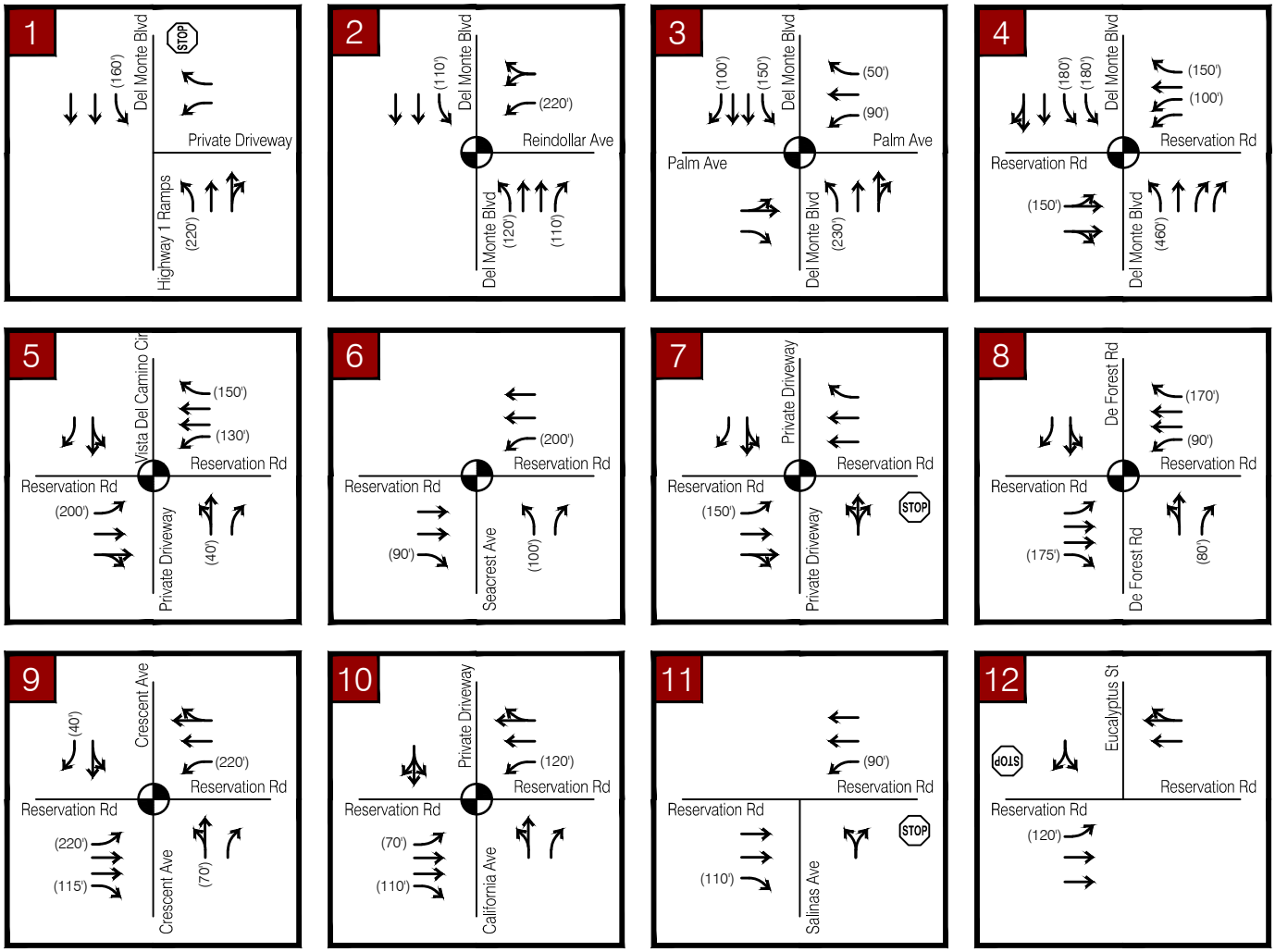

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Figure 2
Existing Conditions - Geometry
Marina Downtown Study

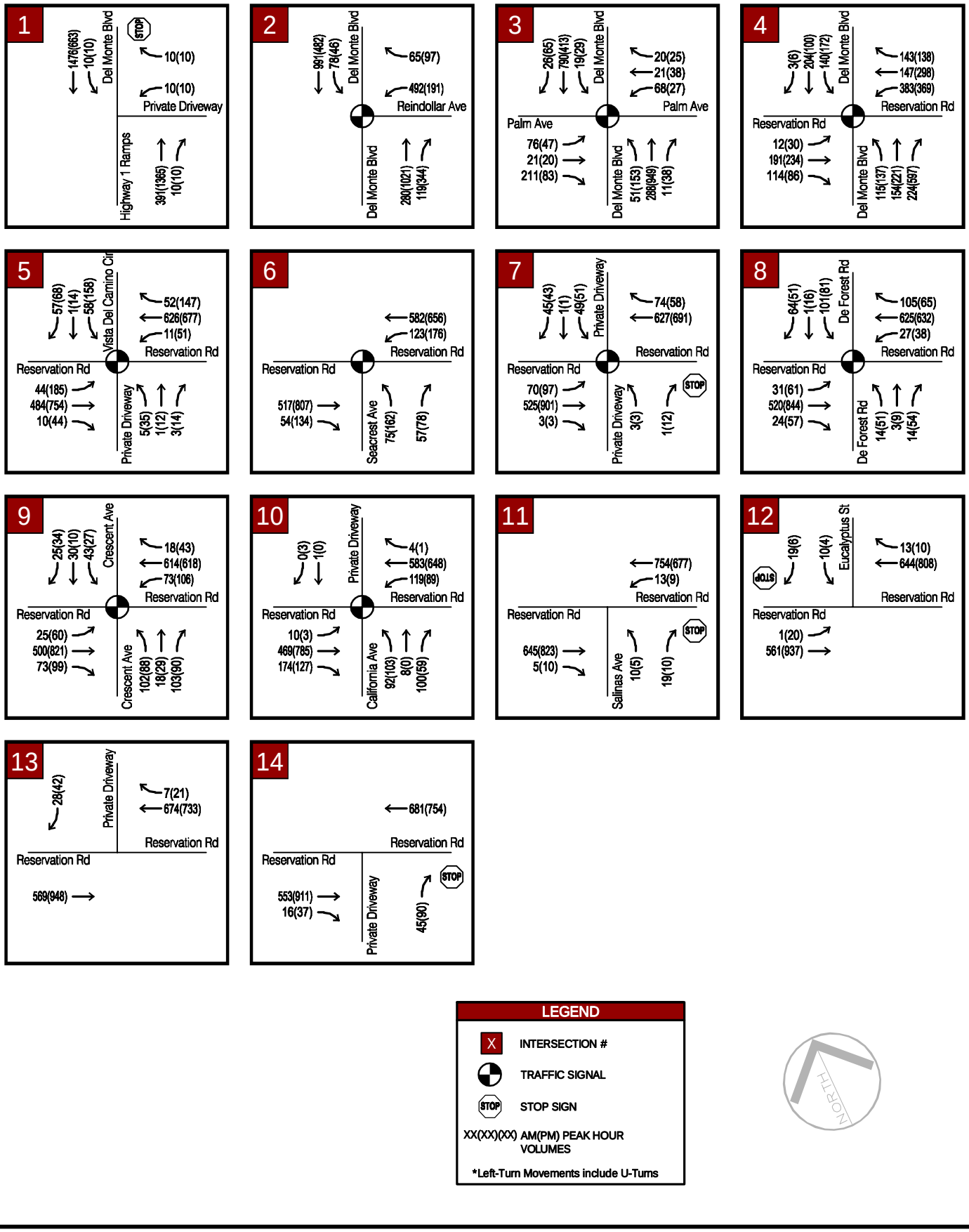

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Figure 3
Existing Conditions - Volumes
Marina Downtown Study

Level of Service (LOS) Operations

Traffic operations were evaluated at the study intersections based on Existing Conditions lane geometry, traffic control, and peak hour traffic volumes. No individual study intersection operates at unacceptable LOS in Existing Conditions. **Table 4** summarizes the Existing Conditions LOS.

Table 4 – Existing Conditions Intersection Level of Service

Intersection	City/ Caltrans[1]	Control[2]		Existing Conditions			
				AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
1 Del Monte Blvd/ SR-1 Ramps	Caltrans	SSSC	Overall	0.2	A	0.3	A
			Worst Approach	*12.9*	*B (WB)*	*22.2*	*C (WB)*
2 Del Monte Blvd/ Reindollar Ave	City	Signal	Overall	10.3	B	10.4	B
3 Del Monte Blvd/ Palm Ave	City	Signal	Overall	18.0	B	16.2	B
4 Del Monte Blvd/ Reservation Rd	City	Signal	Overall	21.9	C	21.9	C
5 Reservation Rd/ Vista Del Camino	City	Signal	Overall	8.6	A	17.2	B
6 Reservation Rd/ Seacrest Ave	City	Signal	Overall	9.6	A	11.8	B
7 Reservation Rd/ Shopping Center	City	Signal	Overall	8.4	A	10.4	B
8 Reservation Rd/ De Forest Rd	City	Signal	Overall	16.6	B	18.0	B
9 Reservation Rd/ Crescent Ave	City	Signal	Overall	29.5	C	31.4	C
10 Reservation Rd/ California Ave	City	Signal	Overall	12.2	A	11.2	B
11 Reservation Rd/ Salinas Ave	City	SSSC	Overall	0.4	A	0.2	A
			Worst Approach	*13.1*	*B (NB)*	*14.6*	*B (NB)*
12 Reservation Rd/ Eucalyptus St	City	SSSC	Overall	0.3	A	0.2	A
			Worst Approach	*12.8*	*B (SB)*	*15.4*	*C (SB)*
13 Del Monte Blvd/ Patton Pkwy	City	RAB	Overall	Does Not Exist			

Note:
1. LOS Standard for Caltrans is LOS C, for the City of Marina is LOS D, Intersections Operating at below the Standard are **highlighted/ bolded**.

2. SSSC = Side Street Stop Control, AWSC = All-Way Stop Control, RAB = Roundabout for SSSC Worst Approach governs LOS.

3. HCM 6th Edition

Queueing Operations

SimTraffic was used to evaluate 95th percentile queues at the study intersections. The results are based on the average results of ten (10) simulation runs. **Table 5** summarizes the queueing results.

Table 5: Existing Conditions 95th Percentile Queue Summary

Intersection		MVMT	Pocket Length (ft)	Queue Length (ft)		# Vehicles	
				AM Peak	PM Peak	AM Peak	PM Peak
2	Del Monte Blvd/ Reindollar Ave	SBL	125	106	75	5	3
		WBL	-	198	108	8	5
		WBL/R	150	**170**	69	**6**	3
3	Del Monte Blvd / Palm Ave	NBL	225	69	174	3	7
		SBL	150	59	55	3	3
		EBL/T	-	100	78	4	4
		WBL	80	75	45	3	2
4	Del Monte Blvd / Reservation Rd	NBL	450	130	155	6	7
		SBL	150	53	96	3	4
		SBL2	150	100	120	5	5
		EBL/T	150	147	**159**	6	**7**
		WBL	100	**141**	**142**	**6**	**6**
		WBL2	590	187	209	8	9
5	Reservation Rd/ Vista Del Camino	NBL/T	-	21	64	1	3
		SBL/T	-	65	152	3	7
		EBL	175	62	164	3	7
		WBL	135	32	89	2	4
6	Reservation Rd/ Seacrest Ave	NBL	100	77	**119**	4	**5**
		WBL	200	116	151	5	7
7	Reservation Rd/ Shopping Center	NBL/T/R	-	15	32	1	2
		SBL/T	-	52	51	3	3
		EBL	145	60	72	3	3
8	Reservation Rd/ De Forest Rd	NBL/T	-	70	64	3	3
		SBL/T	-	83	78	4	4
		EBL	200	50	77	2	4
		WBL	175	51	80	3	4
9	Reservation Rd/ Crescent Ave	NBL/T	75	**102**	**100**	**5**	**4**
		SBL/T	-	93	67	4	3
		EBL	220	58	135	3	6
		WBL	220	98	135	4	6
10	Reservation Rd/ California Ave	NBL/T	-	96	96	4	4
		SBL/T/R	-	11	17	1	1
		EBL	75	39	21	2	1
		WBL	150	123	96	5	4

Note: Assumes 25 feet per vehicle spacing.
Intersections that exceed the pocket length are **bolded**, those that exceed the pocket length by more than one vehicle length are **bolded/highlighted**

The 95th queue length is rarely exceeded and is a representation of the absolute worst-case scenario of queueing at an intersection. Queueing was only studied at signalized intersections at left turn movements or shared left turn-through movements as they typically have greater impact to queueing spillback on the roadway segments.

Intersections # 2, 4, 6, and 9 have queues which exceed turn pocket lengths on one or more of the movements. Those intersections with queues that exceed turn pocket lengths by one or more car lengths are highlighted. The westbound left movement at Reservation Road and Del Monte Boulevard has a 95th percentile queue which exceeds the turn pocket length by two vehicles in the AM and PM peak hour. The shared northbound left and through movement at Reservation Road and Crescent exceeds the turn pocket length by two vehicles in the AM peak hour and one vehicle in the PM peak hour.

Future Conditions Analysis

Future Conditions describes the conditions anticipated in 2040. The Association of Monterey Bay Area Government (AMBAG) Regional Travel Demand Model was used to determine future traffic on Reservation Road and Del Monte Boulevard with the proposed Downtown Plan Redevelopment representing the average trips that would be generated. The 2018 Regional Travel Demand Model incorporates regional growth, traffic congestion, and alternative transportation mode share. The volumes were developed by furnessing the AMBAG Baseline (2015) and Metropolitan Transportation Plan Year (2040) data as well as existing traffic counts. **Figure 4** illustrates future conditions peak hour turning movement counts for the study intersections.

For the Future conditions, the extension of Del Monte Boulevard from the State Route 1 Ramps to Imjin Parkway is assumed to be completed. The same intersection control is assumed for Existing and Future conditions for Intersection #1.

Additional sections analyze a Road Diet Scenario for Reservation Road and Del Monte Boulevard and the conversion of some study intersections to roundabout control.

LOS Operations

Traffic operations were evaluated at the study intersections based on Future Conditions lane geometry, traffic control, and peak hour traffic volumes. The intersection of Del Monte Boulevard and State Route 1 Ramps (Intersection #1) operates at unacceptable levels in the PM Peak in Future Conditions. **Table 6** summarizes the Future Conditions level of service analysis.

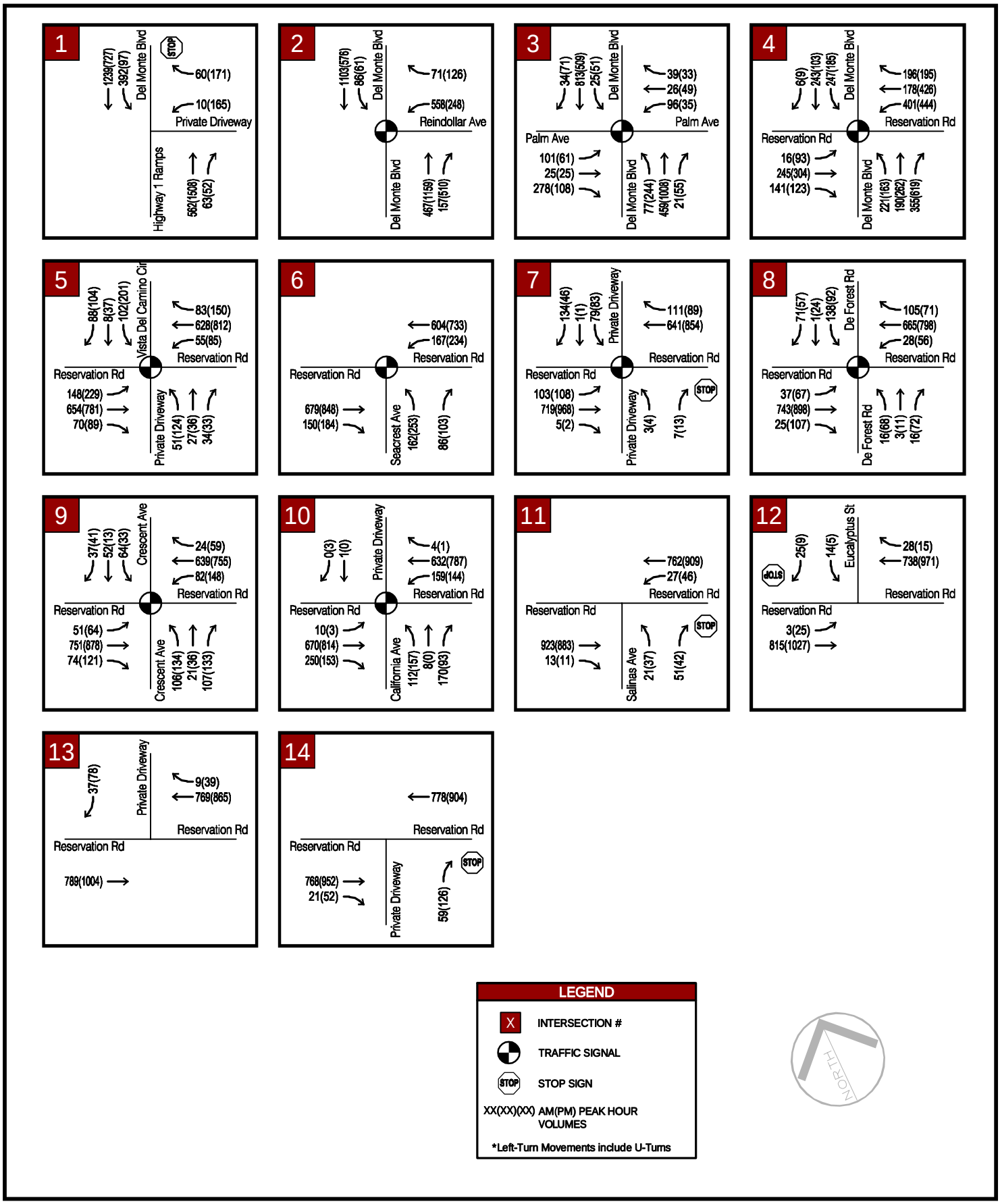

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Figure 4
Future Conditions - Volumes
Marina Downtown Study

Table 6 – Future Conditions Intersection Level of Service on Existing Road Network

Intersection	City/ Caltrans[1]	Control[2]		Future Conditions			
				AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
1 Del Monte Blvd/ SR-1 Ramps	Caltrans	SSSC	Overall	2.7	A	33.2	D
			Worst Approach	*22.2*	*C (WB)*	***263.3***	***F (WB)***
2 Del Monte Blvd/ Reindollar Ave	City	Signal	Overall	11.5	B	12.0	B
3 Del Monte Blvd/ Palm Ave	City	Signal	Overall	22.7	C	19.2	B
4 Del Monte Blvd/ Reservation Rd	City	Signal	Overall	26.1	C	29.9	D
5 Reservation Rd/ Vista Del Camino	City	Signal	Overall	14.5	B	22.7	C
6 Reservation Rd/ Seacrest Ave	City	Signal	Overall	11.8	B	13.5	B
7 Reservation Rd/ Shopping Center	City	Signal	Overall	10.2	B	11.3	B
8 Reservation Rd/ De Forest Rd	City	Signal	Overall	25.5	C	21.4	C
9 Reservation Rd/ Crescent Ave	City	Signal	Overall	31.5	C	34.8	C
10 Reservation Rd/ California Ave	City	Signal	Overall	15.0	B	13.8	B
11 Reservation Rd/ Salinas Ave	City	SSSC	Overall	0.9	A	1.2	A
			Worst Approach	*17.2*	*C (NB)*	*22.5*	*C (NB)*
12 Reservation Rd/ Eucalyptus St	City	SSSC	Overall	0.3	A	0.2	A
			Worst Approach	*14.5*	*B (SB)*	*17.1*	*C (SB)*
13 Del Monte Blvd/ Patton Pkwy	City	RAB	Overall	5.4	A	4.3	A

Note:
1. LOS Standard for Caltrans is LOS C, for the City of Marina is LOS D, Intersections Operating at below the Standard are **highlighted/ bolded**.

2. AWSC = All-Way Stop Control, RAB = Roundabout, SSSC = Side Street Stop Control, for SSSC Worst Approach governs LOS.

3. HCM 6th Edition

Intersection #1 which operates at less than significant levels in Future Conditions, is programmed to become a roundabout with the extension of Del Monte Boulevard to Imjin Parkway. The implementation of a roundabout at this intersection will improve operations to acceptable conditions. The results of this analysis are discussed in the Roundabout Intersection Control section.

Queueing Operations

SimTraffic was used to evaluate 95th percentile queues at the study intersections. The results are based on the average results of ten (10) simulation runs. **Table 7** summarizes the queueing results for Future Conditions.

Table 7: Future Conditions 95th Percentile Queue Summary on Existing Network

Intersection		MVMT	Pocket Length (ft)	Queue Length (ft)		# Vehicles	
				AM Peak	PM Peak	AM Peak	PM Peak
2	Del Monte Blvd/ Reindollar Ave	SBL	125	138	91	6	4
		WBL	-	268	142	11	6
		WBL/R	150	**211**	101	**9**	5
3	Del Monte Blvd/ Palm Ave	NBL	225	104	215	5	9
		SBL	150	104	83	5	4
		EBL/T	-	159	83	7	4
		WBL	80	**96**	58	**4**	3
4	Del Monte Blvd/ Reservation Rd	NBL	450	235	169	6	7
		SBL	150	137	98	5	4
		SBL2	150	**163**	121	**7**	5
		EBL/T	150	**206**	**211**	**9**	**9**
		WBL	100	**148**	**154**	**6**	**7**
		WBL2	590	240	456	10	19
5	Reservation Rd/ Vista Del Camino	NBL/T	-	85	158	4	7
		SBL/T	-	102	258	5	11
		EBL	175	136	**200**	6	**8**
		WBL	135	92	**152**	4	**7**
6	Reservation Rd/ Seacrest Ave	NBL	100	**119**	**142**	**5**	**6**
		WBL	200	150	**201**	6	**9**
7	Reservation Rd/ Shopping Center	NBL/T/R	-	27	34	2	2
		SBL/T	-	70	74	3	3
		EBL	145	74	74	3	3
8	Reservation Rd/ De Forest Rd	NBL/T	-	32	74	2	3
		SBL/T	-	104	98	5	4
		EBL	200	56	73	3	3
		WBL	175	58	127	3	6
9	Reservation Rd/ Crescent Ave	NBL/T	75	**108**	**115**	**5**	**5**
		SBL/T	-	144	91	6	41
		EBL	220	110	183	5	8
		WBL	220	142	216	6	9
10	Reservation Rd/ California Ave	NBL/T	-	116	187	5	8
		SBL/T/R	-	12	17	1	1
		EBL	75	49	24	2	1
		WBL	150	**156**	150	**7**	6

Note: Assumes 25 feet per vehicle spacing.
Intersections that exceed the pocket length are **bolded**, those that exceed the pocket length by more than one vehicle length are **bolded/highlighted**

The 95th queue length is rarely exceeded and is a representation of the absolute worst-case scenario of queueing at an intersection. Queueing was studied at signalized intersections at left turn movements or shared left turn-through movements as they have greater impact to queueing spillback on the roadway segments.

Intersections # 2, 3, 4, 5, 6, 9 and 10 have queues which exceed turn pocket lengths. Queues that exceed turn pocket lengths by one or more car lengths are highlighted. The following intersections have a movement that exceeds the turn pocket length by more than one vehicle:

- # 2 – Del Monte Boulevard/ Reindollar Avenue – WBL/R, exceeds by 3 vehicles (AM Peak)
- # 4 – Del Monte Boulevard / Reservation Road – EBL/T, exceeds by 3 vehicles (AM & PM Peak)
- # 4 – Del Monte Boulevard / Reservation Road – WBL, exceeds by 2-3 vehicles (AM & PM Peak)
- # 6 – Del Monte Boulevard / Seacrest Avenue – NBL, exceeds by 2 vehicles (PM Peak)
- # 9 – Del Monte Boulevard / Crescent Avenue – NBL/T, exceeds by 2 vehicles (AM & PM Peak)

Reservation Road Diet

The scope of the study included the analysis of a road diet along Reservation Road and Del Monte Boulevard (i.e. converting the current five-lane facility to a three-lane facility). Analysis with the Road Diet option for roundabout control and signal control.

An initial review of volumes on Del Monte Boulevard eliminated the option of road diet on Del Monte Boulevard. The road diet along Reservation Road extend from just east of the intersection with Del Monte Boulevard to just west of the intersection with Crescent Avenue. **Table 8** summarizes the intersection level of service; a road diet is implemented between Del Monte Boulevard and Crescent Avenue.

Table 8 – Road Diet Intersection Level of Service

Intersection	City/ Caltrans[1]	Control[2]		Road Diet Conditions			
				AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
4 Del Monte Blvd/ Reservation Rd	City	Signal	Overall	28.9	C	32.8	C
5 Reservation Rd/ Vista Del Camino	City	Signal	Overall	21.9	C	42.9	D
6 Reservation Rd/ Seacrest Ave	City	Signal	Overall	15.3	B	26.1	C
7 Reservation Rd/ Shopping Center	City	Signal	Overall	13.9	B	19.0	B
8 Reservation Rd/ De Forest Rd	City	Signal	Overall	32.6	C	30.8	C
9 Reservation Rd/ Crescent Ave	City	Signal	Overall	31.4	C	34.5	C
12 Reservation Rd/ Eucalyptus St	City	SSSC	Overall	0.4	A	0.3	A
			Worst Approach	*18.7*	*C (SB)*	*23.4*	*C (SB)*

Note: 1. LOS Standard for Caltrans is LOS C, for the City of Marina is LOS D, Intersections Operating at unacceptable levels are **highlighted/ bolded**.

2. AWSC = All-Way Stop Control, RAB = Roundabout, SSSC = Side Street Stop Control, for SSSC Worst Approach governs LOS.

3. HCM 6th Edition

The level of services of the intersections affected by the road diet lessen but do not reach unacceptable levels per the City of Marina Standard in the AM and PM peak hour.

Table 9 summarizes the queueing results from the Road Diet in the Future Conditions Scenario.

Table 9: Future Conditions 95th Percentile Queue Summary with Road Diet Conditions

Intersection		MVMT	Pocket Length (ft)	Queue Length (ft)		# Vehicles	
				AM Peak	PM Peak	AM Peak	PM Peak
4	Del Monte Blvd/ Reservation Rd	NBL	450	252	**551**	10	**23**
		SBL	150	**175**	**183**	**7**	**8**
		SBL2	150	**184**	**214**	**8**	**9**
		EBL/T	150	**226**	**1,214**	**8**	**49**
		WBL	100	**148**	**150**	**6**	**6**
		WBL2	590	233	258	10	11
5	Reservation Rd/ Vista Del Camino	NBL/T	-	92	196	4	8
		SBL/T	-	116	701	4	29
		EBL	175	137	**248**	6	**10**
		WBL	135	**221**	**157**	**9**	7
6	Reservation Rd/ Seacrest Ave	NBL	100	**129**	**143**	**6**	**6**
		WBL	200	173	**265**	7	**5**
7	Reservation Rd/ Shopping Center	NBL/T/R	-	28	35	2	2
		SBL/T	-	73	78	3	4
		EBL	145	78	80	4	4
8	Reservation Rd/ De Forest Rd	NBL/T	-	34	182	2	8
		SBL/T	-	128	164	6	7
		EBL	200	80	80	4	4
		WBL	175	158	**242**	3	**10**
9	Reservation Rd/ Crescent Ave	NBL/T	75	**110**	**115**	**5**	**5**
		SBL/T	-	164	109	7	5
		EBL	220	124	159	5	7
		WBL	220	**240**	**335**	**10**	**14**

Note: Assumes 25 feet per vehicle spacing.
Intersections that exceed the pocket length are **bolded**, those that exceed the pocket length by more than one vehicle length are **bolded/highlighted**

In the AM peak hour there are queue lengths that exceed turn pocket lengths. During the AM peak hour traffic flows, however in the PM peak hour the analysis shows gridlock in the transportation network. Queues extend onto Del Monte Boulevard/ SR-1 Northbound Off Ramp.

Roundabout Intersection Control

Roundabout intersection control was evaluated for six of the thirteen study intersections, the roundabouts were analyzed using Future Conditions:

- # 1 – Del Monte Boulevard/ SR-1 Ramps Avenue
- # 2 – Del Monte Boulevard/ Reindollar Avenue
- # 4 – Del Monte Boulevard / Reservation Road
- # 8 – Reservation Road / De Forest Road
- # 9 – Reservation Road / Crescent Avenue
- # 10 – Reservation Road / California Avenue
- # 11 – Reservation Road / Salinas Avenue
- # 13 – Del Monte Boulevard / Patton Parkway

Intersections # 8, 9, and 10 were analyzed as both single and dual lane roundabouts, to determine if a Road Diet with roundabouts was feasible along Reservation Road. Intersection #1 and #4 were analyzed as a dual-lane roundabouts and Intersection #13 was analyzed as a single lane roundabout.

Table 10 summarizes the Future Conditions level of service analysis for the proposed roundabout locations.

Table 10 – Future Conditions RAB Analysis, for 1 or 2 Circulating Lanes/Approach Lanes

Intersection	City/ Caltrans[1]	Circulating Lanes	Future Conditions					
			AM Peak Hour			PM Peak Hour		
			Delay	LOS	V/C	Delay	LOS	V/C
1 Del Monte Blvd/ SR-1 Ramps	Caltrans	2	7.4	A	0.557	10.1	B	0.592
2 Del Monte Blvd/ Reindollar Ave	City	2	11.8	B	0.729	9.1	A	0.604
4 Del Monte Blvd/ Reservation Rd	City	2	10.6	B	0.492	13.3	B	0.744
8 Reservation Rd/ De Forest Rd	City	2	6.9	A	0.389	8.1	A	0.478
		1	13.5	B	0.767	24.7	**C**	**0.947**
9 Reservation Rd/ Crescent Ave	City	2	8.1	A	0.433	10.3	B	0.584
		1	17.8	**B**	**0.854**	41.5	**D**	**1.018**
10 Reservation Rd/ California Ave	City	2	7.5	A	0.447	7.8	A	0.441
		1	18.0	**B**	**0.880**	19.4	**B**	**0.869**
11 Reservation Rd/ Salinas Ave	City	2	5.9	A	0.374	6.8	A	0.408
13 Del Monte Blvd/ Patton Pkwy	City	1	5.4	A	0.369	4.3	A	0.241

Note: 1. LOS Standard for Caltrans is LOS C, for the City of Marina is LOS D, Intersections Operating at below the Standard are **highlighted/ bolded**.
2. Intersections with a volume to capacity ratio (V/C) should not exceed 0.800 to ensure sufficient intersection capacity.
2. HCM 6th Edition

In addition to average overall delay and level of service at the intersection, the volume-to-capacity ratio (V/C) was evaluated. The V/C ratio is used to evaluate if the roundabout is operating past the recommended practical capacity. The recommended practical capacity is the condition in which delay, and queue length increase at a higher rate and the variability of delay times increases as a result of increased overflows. To prevent the roundabout from operating past its practical capacity it is recommended that the roundabout be designed with V/C ratios less than 0.80-0.85. In the case of the single lane roundabout at intersections #8, #9, and #10 it is not recommended that a single lane roundabout be implemented. If roundabouts were to be utilized at these locations it is recommended that the roundabouts have two circulating lanes to ensure sufficient operating capacity.

Mixing signals and roundabout on a closely spaced grid system similar to the downtown area will result in traffic congestion even with four lanes and a median. The reason for this is that arrival and departure patterns between roundabouts and signals are not conducive to optimum operations. We thus recommend that roundabouts be considered at the following intersections:

- Del Monte Boulevard and State Route 1 Ramps,
- Del Monte Boulevard and Reindollar Avenue,
- Reservation Road and Crescent Avenue,
- Reservation Road and California Avenue, and
- Reservation Road and Salinas Avenue.

The proposed roundabouts are desirable because they allow for defining entry to the downtown area on all the major roadways; Reservation Road from east and the west, and Del Monte Boulevard from the north and the south. It also has a traffic calming and placemaking effect on downtown center.

Figure 5 shows the proposed roundabout locations on the transportation network, including existing roundabouts.

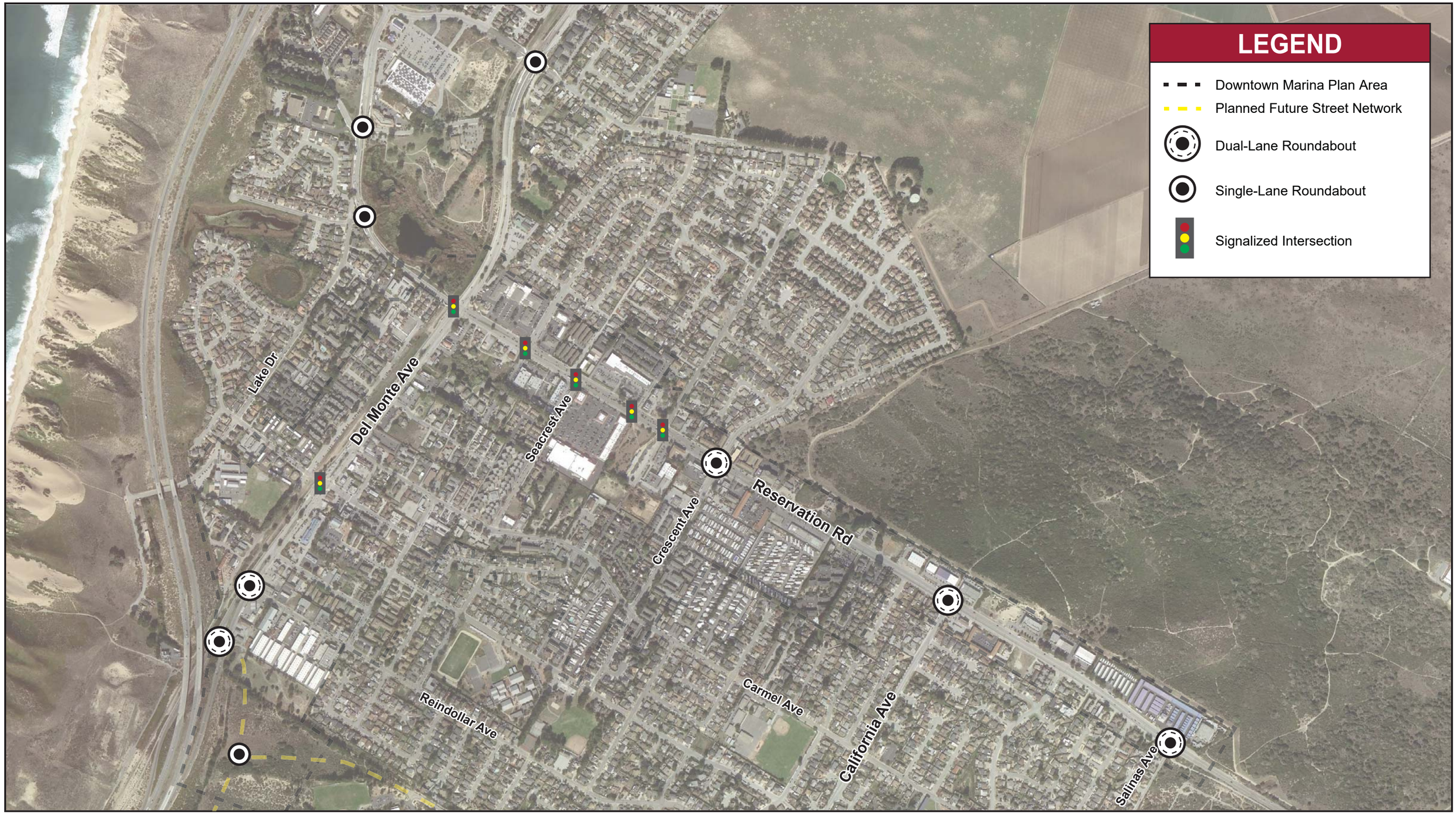

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Figure 5
Recommended Roundabout Locations
Marina Downtown Study

Multi Modal Connectivity Analysis

A review of pedestrian, bicycle and transit facilities on Del Monte Boulevard and Reservation Road. **Figure 6** illustrates the Existing Bicycle and Pedestrian facilities and **Figure 7** illustrates the gaps in existing infrastructure and other planned improvements.

Del Monte Boulevard

Del Monte Boulevard provides access to a Class I recreation path, this path runs along the westside of Del Monte Boulevard and connects to the regional recreation trail the Monterey Peninsula Recreation Trail (MPRT). On the eastside a sidewalk is available of pedestrians just south of the intersection of Reindollar Avenue and has a small gap in continuous sidewalk in front two small business which have extended driveway width. The path of travel for pedestrians is unclear and puts them in conflict with onsite circulation. There are no bicycle facilities in the northbound direction of Del Monte Boulevard.

Potential future bicycle and pedestrian improvements include the addition of bicycle facilities in the northbound direction, widening of the Class I recreation path, and closing the gap in the sidewalk infrastructure with future redevelopment. The extension of Del Monte Boulevard to Imjin Parkway will provide an additional multi-modal connection, there is both potential to extend the sidewalk or make room for a Class I path alongside the new extension.

Reservation Road

Class II bicycle lanes run along Reservation Road from Salinas Avenue to Robin Drive. There are connections to Class I facilities at Locke-Paddon Park and at Salinas Ave. Sidewalks run along both sides of Reservation Road from Del Monte Boulevard to just west of Salinas Avenue. There are several small gaps in the network due to a few extended driveways widths and undeveloped sites along Reservation Road. Most of the gaps in sidewalk infrastructure occur between Crescent and Salinas Avenue.

Potential future bicycle and pedestrian improvements include the addition of buffering along bicycle lanes, transitional green striping at turn pockets or intersections, bicycle facilities in the northbound direction, widening of the Class I recreation path, and closing the gap in the sidewalk infrastructure with future redevelopment. The extension of Del Monte Boulevard to Imjin Parkway will provide an additional multi-modal connection, there is both potential to extend the sidewalk or make room for a Class I path alongside the new extension.

Gaps in the sidewalk network after the Crescent Avenue on North side potential for green transitional striping or buffering.

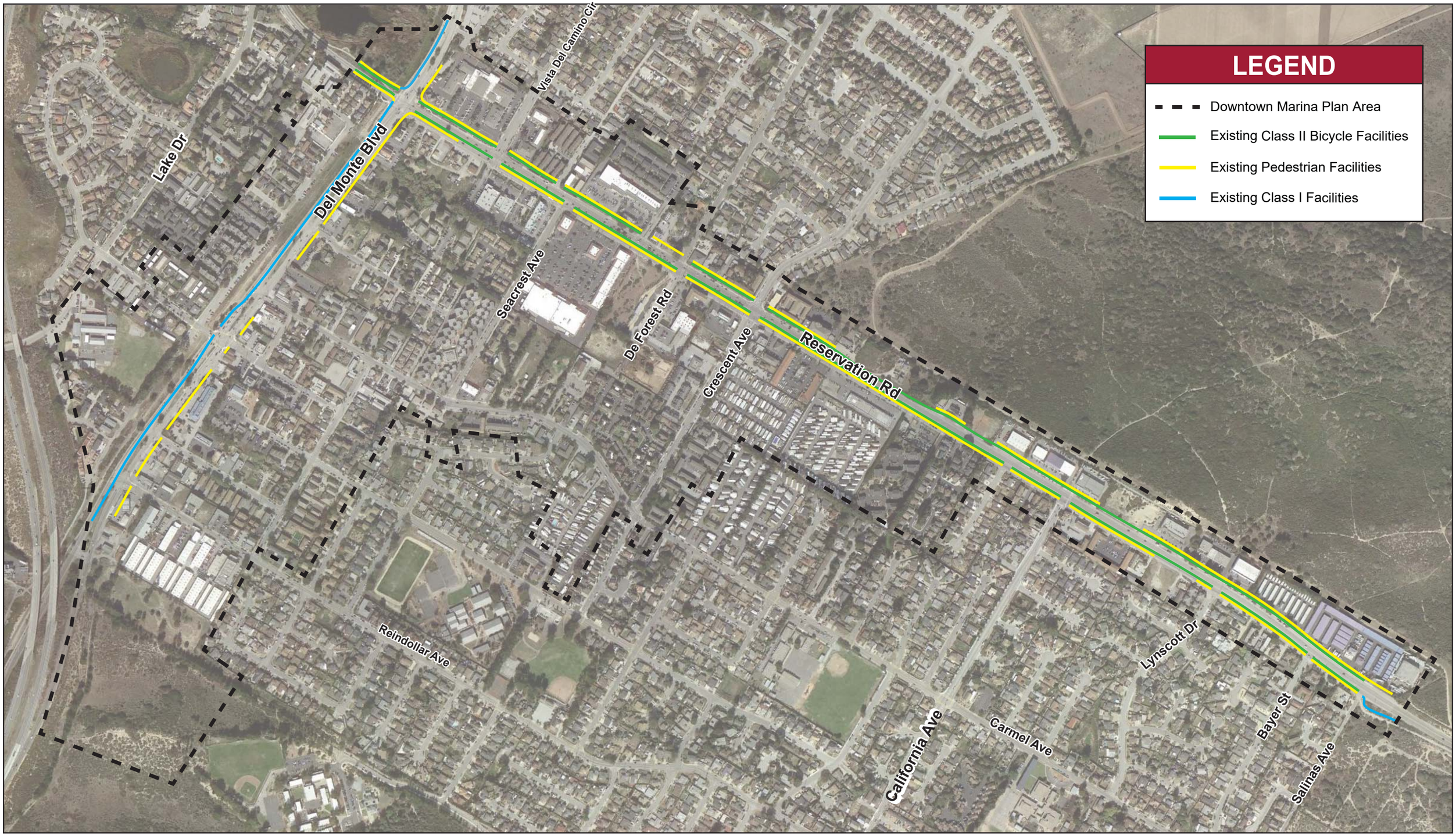

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Figure 6
Existing Pedestrian and Bicycle Facilties
Marina Downtown Study

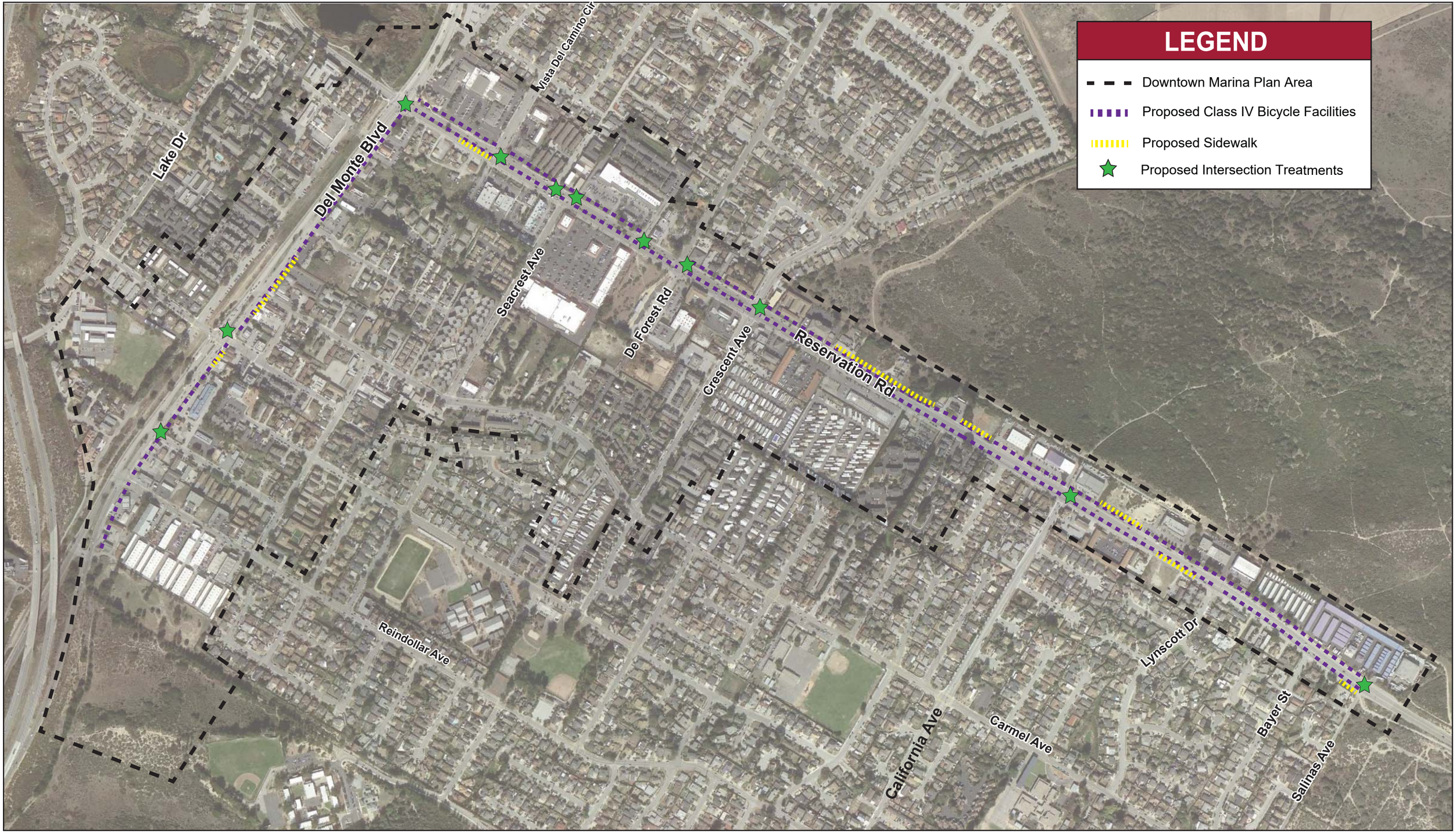

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Figure 7
Proposed Pedestrian and Bicycle Facilties
Marina Downtown Study

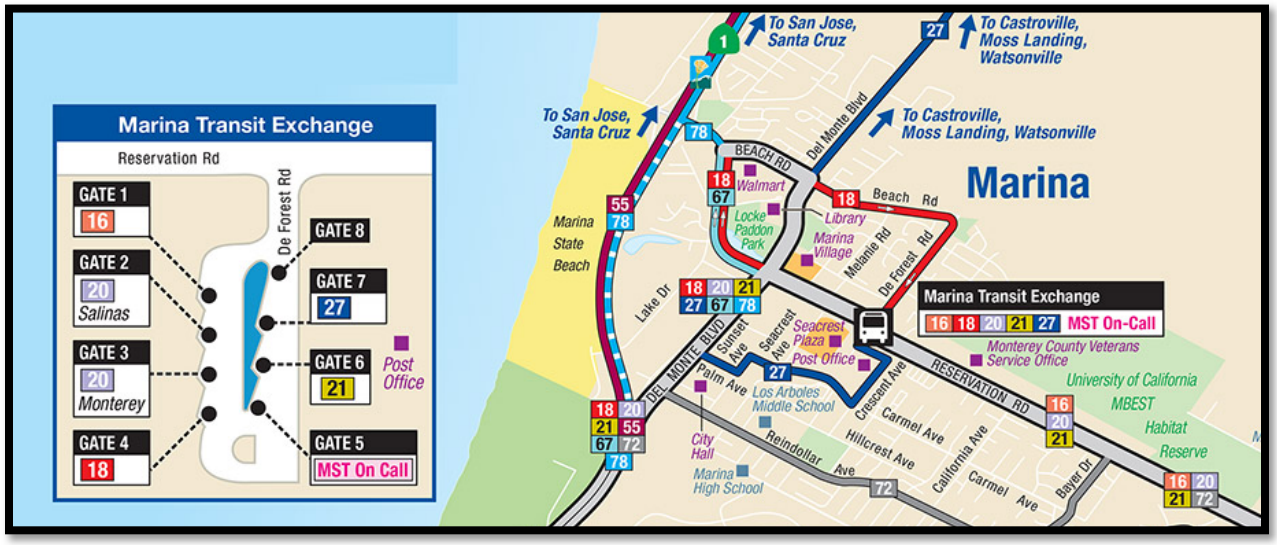
Monterey Salinas Transit

Monterey Salinas Transit (MST) is the local transit agency for Monterey County, MST serves over 130,000 passengers a year. Marina is served by fourteen MST transit line, in addition to the MST On-Call service. The following is a list of transit lines which serve the Reservation Road or Del Monte Boulevard with one or more bus stops:

- 16 – ***Marina – CSUMB*** – Marina Transit Exchange/ Reservation Road
- 18 – ***Monterey – Marina*** – Del Monte Boulevard/ Marina Transit Exchange/ Reservation Road
- 20 – ***Salinas – Monterey*** *via Marina* – Del Monte Boulevard/ Marina Transit Exchange/ Reservation Road
- 21 – ***Pebble Beach – Salinas Express*** – Marina Transit Exchange/ Reservation Road
- 27 – ***Watsonville – Marina*** – Del Monte Boulevard/ Marina Transit Exchange/ Reservation Road
- 67 – ***Presidio – Marina*** – Del Monte Boulevard
- 78 – ***Presidio – Santa Cruz Express*** – Del Monte Boulevard
- ***MST On-Call Service*** - Marina Transit Exchange

Figure 8 illustrates the MST line routes serving the Downtown Area of Marina.

Figure 8 – Marina Downtown MST Transit Lines



Source: Monterey Salinas Transit, 2019

Parking

The following sections discuss parking in the downtown area of Marina including special events and existing on-street parking.

Special Events

The Monterey Bay Peninsula is frequently home to special events, such as Car Week, the Monterey Jazz Festival, PGA Pro Am, and Sea Otter Classic as well as many other smaller regional events. There is at least one major event in Monterey Bay every month, and every weekend in the summer. Marina, along with the rest of the Monterey Peninsula, is part of the event destinations, and should provide tourism-based activities and world class facilities, which it does not have now. In coordination with other Cities and the Monterey Visitors Bureau, pre-planning for event coordination should be considered to ensure Marina's sharing in the events and the benefits they bring to the region. Marina should not merely provide parking, but the downtown should also be a destination. Events that will directly impact downtown Marina parking should be reviewed when more detail on event location and event size have been communicated.

Special Event parking must be managed and no calculation of parking supply for the downtown should be based on special event parking demand.

On-Street Parking

On-Street parking demand was evaluated along Reservation Road to determine the impact to parking if it is converted to an alternative use such as sidewalks, landscaping, or bicycle facilities. Data was collected January 22, 2019. **Figure 9** shows the available on-street parking along Reservation Road.

On Street Parking information was not collected for Del Monte Boulevard as between Reservation Road and the State Route 1 Ramps no on-street parking is available.

Table 11 summarizes the On-Street parking supply for Reservation Road and **Table 12** summarizes the On-Street parking demand and occupancy along Reservation Road.

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Figure 9
On-Street Parking Supply
Marina Downtown Study

Table 11 – Reservation Road On-Street Parking Supply

Segment	Eastbound	Westbound	Total
1. Del Monte Blvd to Vista Del Camino	5		5
2. Vista Del Camino to Seacrest Ave		5	5
3. Seacrest Ave to Shopping Center Dwy		10	10
4. De Forest Rd to Crescent Ave		8	8
5. Crescent Ave to California Ave	47	26	73
6. California Ave to Salinas Ave	36	43	79
TOTAL	**88**	**92**	**180**

Source: Kimley-Horn, 2019

Table 12 – Reservation Road On-Street Parking Demand

Segment	Average Demand				Peak Demand			
	EB	WB	Total	% Occu	EB	WB	Total	% Occu
1. Del Monte Blvd to Vista Del Camino	0		0	0%	0		0	0%
2. Vista Del Camino to Seacrest Ave[1]		4	4	80%		3	3	60%
3. Seacrest Ave to Shopping Center Dwy		0	0	0%		0	0	0%
4. De Forest Rd to Crescent Ave Rd[1]		8	8	80%		10	10	100%
5. Crescent Ave to California Ave	23	9	32	44%	24	11	35	49%
6. California Ave to Salinas Ave	8	12	20	25%	9	10	19	24%
TOTAL	**31**	**33**	**64**	**36%**	**33**	**34**	**67**	**38%**

Source: Kimley-Horn, 2019
Note: Peak Parking Demand occurred after 5:00 PM
1 Adjacent to Residential Land Uses

Due to the number of off-street parking lots, there is low utilization of on-street parking near retail and restaurant land uses. The two segments with highest on-street parking demand are adjacent to Residential land uses. Outside of the current downtown core area, Reservation Road (Segment 5 and 6) has moderate parking demand. This area has a mix of residential, hotel, and light industrial land uses.

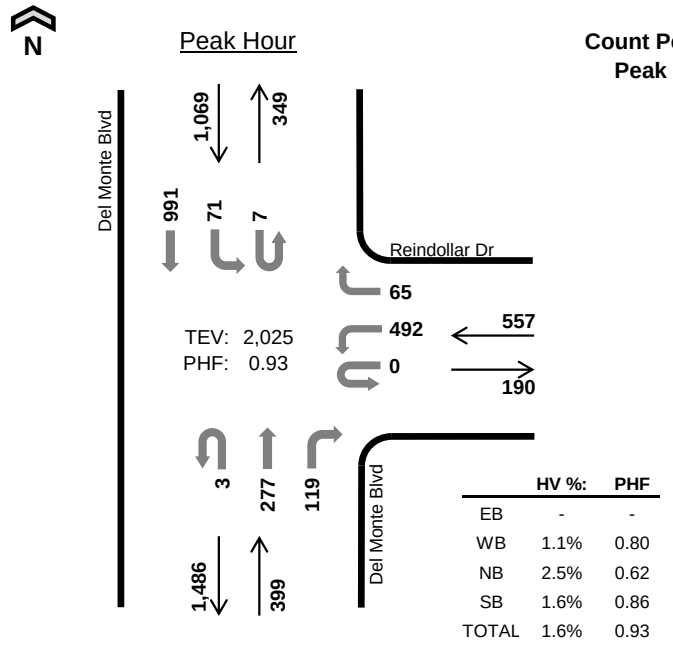
This area is under parked, meaning that there are more parking spaces empty than used. With the implementation of the Downtown plan on-street parking demand will increase, and to prevent parking intrusion from downtown businesses into the residential areas, sufficient off-street parking should be provided and managed. Parking may be provided in the rear of the business so that it does not affect the aesthetics of the downtown plan.

Appendix

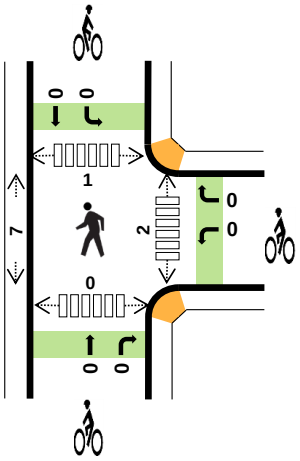
TRAFFIC COUNTS
AM & PM PEAK HOUR

Del Monte Blvd
Reindollar Dr

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	-	-
WB	1.1%	0.80
NB	2.5%	0.62
SB	1.6%	0.86
TOTAL	1.6%	0.93



Two-Hour Count Summaries

Interval Start	0 Eastbound				Reindollar Dr Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**160**	**0**	**14**	**1**	**0**	**40**	**13**	**3**	**18**	**291**	**0**	**540**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**155**	**0**	**9**	**0**	**0**	**59**	**21**	**1**	**13**	**285**	**0**	**543**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**105**	**0**	**19**	**2**	**0**	**70**	**32**	**2**	**27**	**234**	**0**	**491**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**72**	**0**	**23**	**0**	**0**	**108**	**53**	**1**	**13**	**181**	**0**	**451**	**2,025**
8:00 AM	0	0	0	0	0	80	0	14	3	0	104	38	0	14	148	0	401	1,886
8:15 AM	0	0	0	0	0	80	0	21	2	0	81	30	5	7	161	0	387	1,730
8:30 AM	0	0	0	0	0	54	0	11	0	0	99	23	2	14	209	0	412	1,651
8:45 AM	0	0	0	0	0	50	0	13	3	0	87	23	0	13	166	0	355	1,555
Count Total	0	0	0	0	0	756	0	124	11	0	648	233	14	119	1,675	0	3,580	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**492**	**0**	**65**	**3**	**0**	**277**	**119**	**7**	**71**	**991**	**0**	**2,025**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**8**	**2**	**1**	**3**	**13**	**0**	**33**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**1%**	**-**	**2%**	**0%**	**-**	**3%**	**2%**	**14%**	**4%**	**1%**	**-**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	**0**	**1**	**2**	**5**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
7:15 AM	**0**	**3**	**0**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	*2*
7:30 AM	**0**	**1**	**4**	**3**	***8***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**0**	**0**	*3*
7:45 AM	**0**	**1**	**4**	**7**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	***4***
8:00 AM	0	0	2	5	*7*	0	0	0	0	*0*	1	2	3	0	*6*
8:15 AM	0	4	3	4	*11*	0	0	0	0	*0*	2	4	2	0	*8*
8:30 AM	0	0	6	5	*11*	0	0	0	0	*0*	0	3	0	0	*3*
8:45 AM	0	1	3	4	*8*	0	0	0	0	*0*	0	2	1	0	*3*
Count Total	0	11	24	35	*70*	0	0	0	0	*0*	5	18	7	0	*30*
Peak Hr	**0**	**6**	**10**	**17**	***33***	**0**	**0**	**0**	**0**	***0***	**2**	**7**	**1**	**0**	***10***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				Reindollar Dr				Del Monte Blvd				Del Monte Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**5**	**0**	**8**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**5**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**0**	**1**	**0**	**2**	**0**	**8**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**2**	**5**	**0**	**12**	**33**
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	5	0	7	32
8:15 AM	0	0	0	0	0	4	0	0	0	0	1	2	0	0	4	0	11	38
8:30 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	5	0	11	41
8:45 AM	0	0	0	0	0	1	0	0	0	0	2	1	0	0	4	0	8	37
Count Total	0	0	0	0	0	10	0	1	0	0	18	6	1	3	31	0	70	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**8**	**2**	**1**	**3**	**13**	**0**	**33**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	0			Reindollar Dr			Del Monte Blvd			Del Monte Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

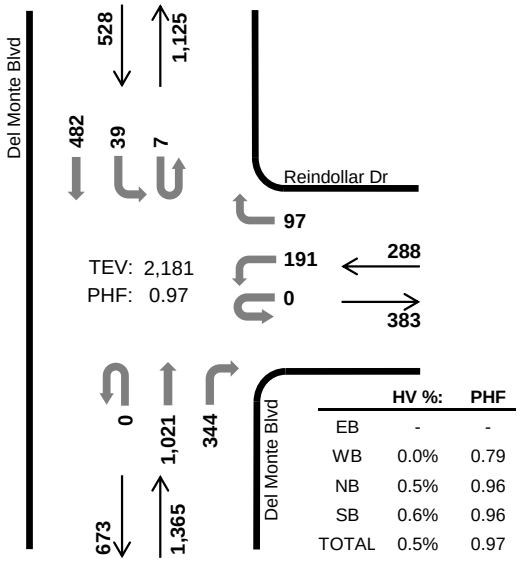
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd
Reindollar Dr

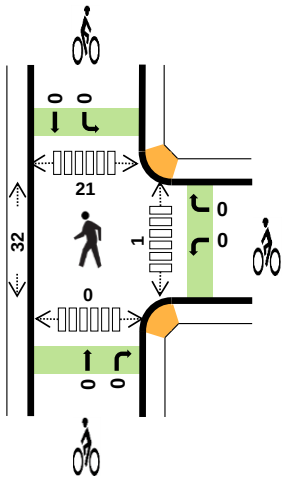
N

Peak Hour

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	-	-
WB	0.0%	0.79
NB	0.5%	0.96
SB	0.6%	0.96
TOTAL	0.5%	0.97



Two-Hour Count Summaries

Interval Start	0 Eastbound				Reindollar Dr Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	30	0	22	2	0	199	66	2	9	132	0	462	0
4:15 PM	0	0	0	0	0	37	0	25	0	0	236	91	1	6	116	0	512	0
4:30 PM	0	0	0	0	0	43	0	21	0	0	227	81	2	11	133	0	518	0
4:45 PM	0	0	0	0	0	42	0	18	2	0	269	79	2	9	116	0	537	2,029
5:00 PM	**0**	**0**	**0**	**0**	**0**	**58**	**0**	**33**	**0**	**0**	**255**	**97**	**3**	**12**	**106**	**0**	**564**	2,131
5:15 PM	**0**	**0**	**0**	**0**	**0**	**45**	**0**	**18**	**0**	**0**	**262**	**92**	**1**	**13**	**118**	**0**	**549**	2,168
5:30 PM	**0**	**0**	**0**	**0**	**0**	**35**	**0**	**27**	**0**	**0**	**260**	**70**	**2**	**7**	**128**	**0**	**529**	2,179
5:45 PM	**0**	**0**	**0**	**0**	**0**	**53**	**0**	**19**	**0**	**0**	**244**	**85**	**1**	**7**	**130**	**0**	**539**	**2,181**
Count Total	0	0	0	0	0	343	0	183	4	0	1,952	661	14	74	979	0	4,210	0
Peak Hour **All**	**0**	**0**	**0**	**0**	**0**	**191**	**0**	**97**	**0**	**0**	**1,021**	**344**	**7**	**39**	**482**	**0**	**2,181**	**0**
Peak Hour **HV**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**3**	**0**	**10**	**0**
Peak Hour **HV%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**1%**	**0%**	**0%**	**0%**	**1%**	**-**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	3	4	*7*	0	0	0	0	*0*	0	2	1	0	*3*
4:15 PM	0	0	5	2	*7*	0	0	0	0	*0*	0	10	0	0	*10*
4:30 PM	0	0	3	1	*4*	0	0	0	0	*0*	0	3	2	0	*5*
4:45 PM	0	2	4	2	*8*	0	0	0	0	*0*	0	3	2	0	*5*
5:00 PM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**0**	*3*
5:15 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**2**	**0**	*4*
5:30 PM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**1**	**6**	**1**	**0**	*8*
5:45 PM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**22**	**17**	**0**	***39***
Count Total	0	2	22	12	*36*	0	0	0	0	*0*	1	50	26	0	*77*
Peak Hr	**0**	**0**	**7**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**32**	**21**	**0**	***54***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				Reindollar Dr				Del Monte Blvd				Del Monte Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	1	3	0	7	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	4	1	0	0	2	0	7	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	4	0
4:45 PM	0	0	0	0	0	2	0	0	0	0	4	0	0	0	2	0	8	26
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	21
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	16
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	14
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**4**	**10**
Count Total	0	0	0	0	0	2	0	0	0	0	18	4	0	1	11	0	36	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**3**	**0**	**10**	**0**

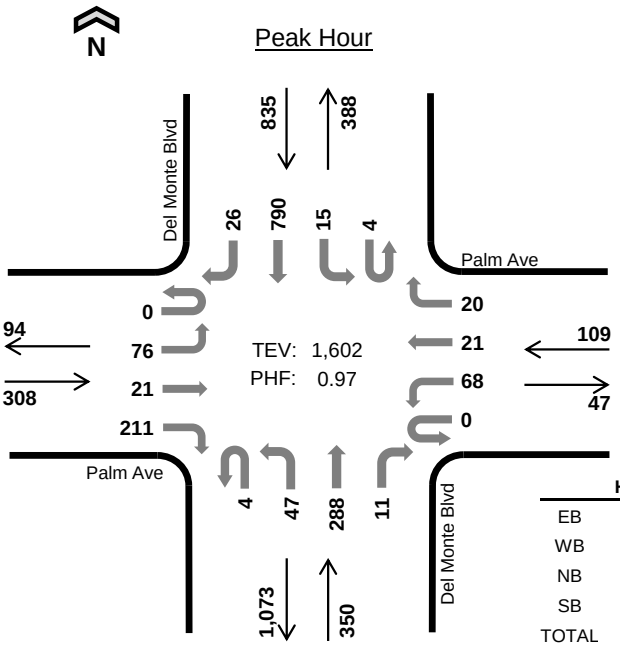
Two-Hour Count Summaries - Bikes

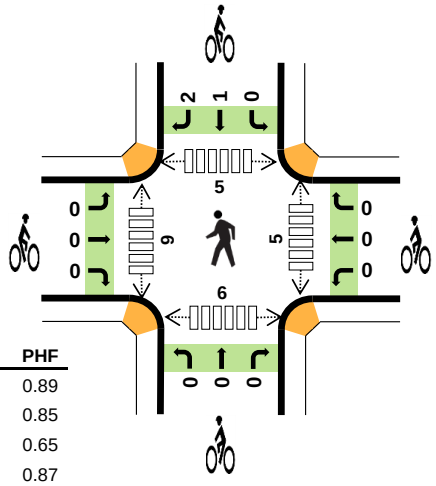
Interval Start	0			Reindollar Dr			Del Monte Blvd			Del Monte Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd
Palm Ave

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM





	HV %:	PHF
EB	0.3%	0.89
WB	1.8%	0.85
NB	3.1%	0.65
SB	1.8%	0.87
TOTAL	1.8%	0.97

Two-Hour Count Summaries

Interval Start	Palm Ave Eastbound				Palm Ave Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**9**	**7**	**60**	**0**	**13**	**2**	**6**	**0**	**8**	**45**	**3**	**1**	**1**	**235**	**2**	**392**	0
7:15 AM	**0**	**20**	**4**	**61**	**0**	**28**	**1**	**3**	**1**	**7**	**54**	**4**	**0**	**5**	**211**	**6**	**405**	0
7:30 AM	**0**	**24**	**5**	**58**	**0**	**15**	**3**	**6**	**1**	**8**	**82**	**2**	**3**	**3**	**196**	**7**	**413**	0
7:45 AM	**0**	**23**	**5**	**32**	**0**	**12**	**15**	**5**	**2**	**24**	**107**	**2**	**0**	**6**	**148**	**11**	**392**	**1,602**
8:00 AM	0	9	12	33	0	7	15	8	1	23	99	3	1	4	111	12	338	1,548
8:15 AM	0	13	9	26	0	16	18	9	4	17	81	5	2	9	149	22	380	1,523
8:30 AM	0	28	4	58	0	11	14	9	2	22	83	3	1	3	153	15	406	1,516
8:45 AM	0	16	3	33	0	9	5	3	6	6	88	5	4	2	134	5	319	1,443
Count Total	0	142	49	361	0	111	73	49	17	115	639	27	12	33	1,337	80	3,045	0
Peak Hour All	**0**	**76**	**21**	**211**	**0**	**68**	**21**	**20**	**4**	**47**	**288**	**11**	**4**	**15**	**790**	**26**	**1,602**	**0**
Peak Hour HV	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**9**	**1**	**0**	**0**	**15**	**0**	**29**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**1%**	**0%**	**5%**	**0%**	**2%**	**3%**	**9%**	**0%**	**0%**	**2%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	**1**	**1**	**2**	**4**	***8***	**0**	**0**	**0**	**1**	***1***	**1**	**0**	**2**	**1**	*4*
7:15 AM	**0**	**0**	**1**	**3**	***4***	**0**	**0**	**0**	**1**	***1***	**1**	**2**	**0**	**1**	*4*
7:30 AM	**0**	**0**	**5**	**4**	***9***	**0**	**0**	**0**	**1**	***1***	**2**	**4**	**0**	**1**	*7*
7:45 AM	**0**	**1**	**3**	**4**	***8***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**3**	**3**	***10***
8:00 AM	0	0	1	4	*5*	0	0	0	0	*0*	1	1	0	2	*4*
8:15 AM	0	0	1	5	*6*	0	0	0	0	*0*	2	3	0	5	*10*
8:30 AM	2	1	7	5	*15*	0	0	0	0	*0*	0	1	3	2	*6*
8:45 AM	2	0	2	3	*7*	0	0	0	0	*0*	1	1	0	3	*5*
Count Total	5	3	22	32	*62*	0	0	0	3	*3*	9	15	8	18	*50*
Peak Hour	**1**	**2**	**11**	**15**	***29***	**0**	**0**	**0**	**3**	***3***	**5**	**9**	**5**	**6**	***25***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Palm Ave Eastbound				Palm Ave Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**0**	**8**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**4**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**4**	**0**	**9**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**8**	**29**
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	26
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	6	28
8:30 AM	0	2	0	0	0	0	1	0	0	2	5	0	0	1	3	1	15	34
8:45 AM	0	0	0	2	0	0	0	0	0	0	1	1	0	1	2	0	7	33
Count Total	0	2	0	3	0	1	1	1	0	3	17	2	0	2	29	1	62	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**9**	**1**	**0**	**0**	**15**	**0**	**29**	**0**

Two-Hour Count Summaries - Bikes

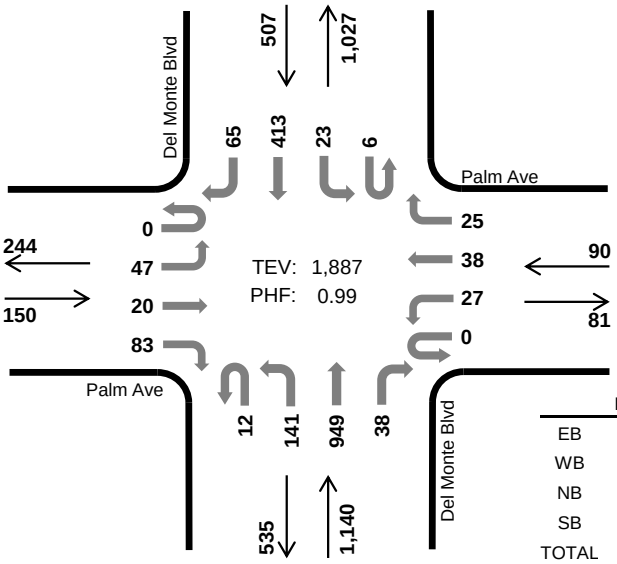
Interval Start	Palm Ave Eastbound			Palm Ave Westbound			Del Monte Blvd Northbound			Del Monte Blvd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	2	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**3**	**0**

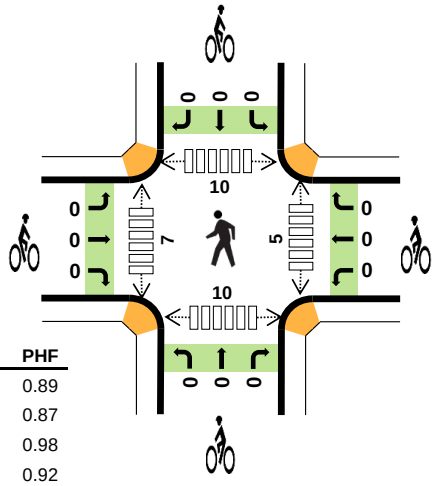
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd
Palm Ave

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.89
WB	2.2%	0.87
NB	0.9%	0.98
SB	1.0%	0.92
TOTAL	0.9%	0.99

Two-Hour Count Summaries

Interval Start	Palm Ave Eastbound				Palm Ave Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	10	3	23	0	10	5	8	1	34	176	9	1	4	115	6	405	0
4:15 PM	0	5	2	17	0	4	6	4	1	48	213	9	1	7	94	11	422	0
4:30 PM	0	6	3	25	0	14	12	5	2	27	210	5	2	4	113	10	438	0
4:45 PM	**0**	**17**	**1**	**24**	**0**	**7**	**7**	**5**	**3**	**26**	**253**	**8**	**1**	**5**	**94**	**11**	**462**	1,727
5:00 PM	**0**	**8**	**10**	**17**	**0**	**4**	**7**	**9**	**4**	**35**	**236**	**11**	**3**	**4**	**102**	**20**	**470**	1,792
5:15 PM	**0**	**11**	**5**	**21**	**0**	**4**	**14**	**8**	**4**	**36**	**235**	**11**	**1**	**5**	**100**	**23**	**478**	1,848
5:30 PM	**0**	**11**	**4**	**21**	**0**	**12**	**10**	**3**	**1**	**44**	**225**	**8**	**1**	**9**	**117**	**11**	**477**	**1,887**
5:45 PM	0	12	2	20	0	7	6	6	1	41	214	9	1	3	112	3	437	1,862
Count Total	0	80	30	168	0	62	67	48	17	291	1,762	70	11	41	847	95	3,589	0
Peak Hour All	**0**	**47**	**20**	**83**	**0**	**27**	**38**	**25**	**12**	**141**	**949**	**38**	**6**	**23**	**413**	**65**	**1,887**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**10**	**0**	**0**	**2**	**3**	**0**	**17**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**3%**	**4%**	**0%**	**0%**	**1%**	**0%**	**0%**	**9%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	3	3	*7*	0	0	0	0	*0*	0	3	1	4	*8*
4:15 PM	0	0	3	2	*5*	0	0	0	0	*0*	0	3	0	3	*6*
4:30 PM	0	0	2	2	*4*	0	0	1	0	*1*	1	3	5	2	*11*
4:45 PM	**0**	**0**	**5**	**2**	***7***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**3**	*6*
5:00 PM	**0**	**1**	**2**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**3**	*6*
5:15 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**3**	**2**	*7*
5:30 PM	**0**	**1**	**2**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**2**	**5**	**4**	**2**	***13***
5:45 PM	0	0	2	3	*5*	0	0	0	0	*0*	3	3	6	4	*16*
Count Total	0	3	20	15	*38*	0	0	1	0	*1*	9	19	22	23	*73*
Peak Hour	**0**	**2**	**10**	**5**	***17***	**0**	**0**	**0**	**0**	***0***	**5**	**7**	**10**	**10**	***32***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Palm Ave Eastbound				Palm Ave Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	0	0	0	3	0	0	0	3	0	7	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	4	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**0**	**7**	23
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	19
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**3**	17
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**4**	**17**
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	15
Count Total	0	0	0	0	0	1	1	1	0	1	19	0	0	3	12	0	38	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**10**	**0**	**0**	**2**	**3**	**0**	**17**	**0**

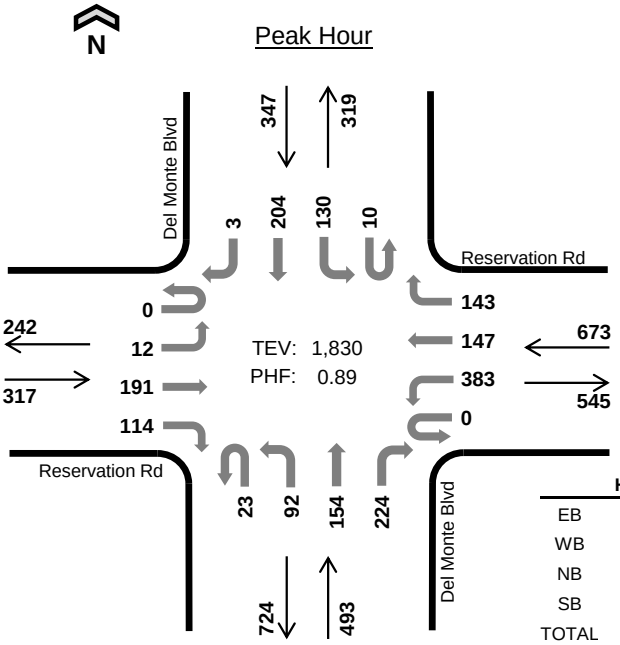
Two-Hour Count Summaries - Bikes

Interval Start	Palm Ave Eastbound			Palm Ave Westbound			Del Monte Blvd Northbound			Del Monte Blvd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

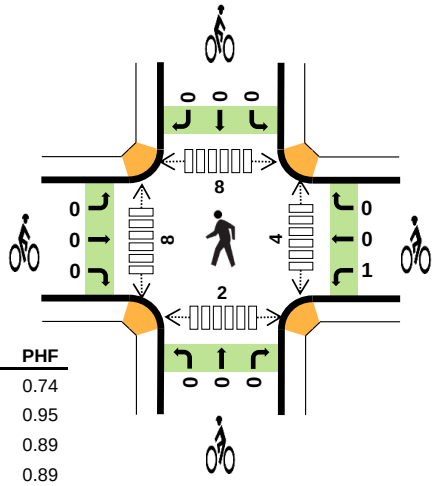
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	3.5%	0.74
WB	3.6%	0.95
NB	1.6%	0.89
SB	3.2%	0.89
TOTAL	3.0%	0.89



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	4	38	16	0	158	24	29	7	19	15	21	0	17	25	0	373	0
7:15 AM	0	1	41	22	0	129	24	17	5	11	23	38	1	29	46	0	387	0
7:30 AM	**0**	**1**	**64**	**31**	**0**	**117**	**21**	**33**	**3**	**20**	**36**	**55**	**0**	**23**	**68**	**1**	**473**	0
7:45 AM	**0**	**8**	**63**	**36**	**0**	**88**	**36**	**48**	**3**	**20**	**50**	**66**	**3**	**39**	**55**	**0**	**515**	1,748
8:00 AM	**0**	**2**	**36**	**20**	**0**	**83**	**36**	**33**	**6**	**19**	**38**	**57**	**4**	**33**	**41**	**1**	**409**	1,784
8:15 AM	**0**	**1**	**28**	**27**	**0**	**95**	**54**	**29**	**11**	**33**	**30**	**46**	**3**	**35**	**40**	**1**	**433**	**1,830**
8:30 AM	0	5	51	20	0	114	38	20	6	17	28	62	3	34	25	0	423	1,780
8:45 AM	0	2	40	14	0	90	30	19	5	13	36	67	1	13	23	2	355	1,620
Count Total	0	24	361	186	0	874	263	228	46	152	256	412	15	223	323	5	3,368	0
Peak Hour All	**0**	**12**	**191**	**114**	**0**	**383**	**147**	**143**	**23**	**92**	**154**	**224**	**10**	**130**	**204**	**3**	**1,830**	**0**
Peak Hour HV	**0**	**0**	**9**	**2**	**0**	**14**	**5**	**5**	**0**	**2**	**0**	**6**	**0**	**6**	**5**	**0**	**54**	**0**
Peak Hour HV%	**-**	**0%**	**5%**	**2%**	**-**	**4%**	**3%**	**3%**	**0%**	**2%**	**0%**	**3%**	**0%**	**5%**	**2%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	7	3	3	*17*	0	0	0	0	*0*	4	2	0	1	*7*
7:15 AM	3	3	0	1	*7*	0	1	0	0	*1*	2	1	1	0	*4*
7:30 AM	**4**	**7**	**2**	**1**	***14***	**0**	**1**	**0**	**0**	***1***	**0**	**4**	**2**	**0**	*6*
7:45 AM	**4**	**4**	**3**	**2**	***13***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**0**	**2**	*6*
8:00 AM	**2**	**8**	**2**	**5**	***17***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**3**	**0**	*7*
8:15 AM	**1**	**5**	**1**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**0**	***3***
8:30 AM	1	6	5	2	*14*	0	0	0	0	*0*	0	6	2	0	*8*
8:45 AM	0	6	3	1	*10*	0	0	0	0	*0*	3	1	3	0	*7*
Count Total	19	46	19	18	*102*	0	2	0	0	*2*	13	18	14	3	*48*
Peak Hour	**11**	**24**	**8**	**11**	***54***	**0**	**1**	**0**	**0**	***1***	**4**	**8**	**8**	**2**	***22***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	1	0	0	4	1	2	0	0	1	2	0	2	1	0	17	0
7:15 AM	0	0	2	1	0	3	0	0	0	0	0	0	0	1	0	0	7	0
7:30 AM	**0**	**0**	**4**	**0**	**0**	**3**	**2**	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**0**	**14**	0
7:45 AM	**0**	**0**	**2**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**2**	**0**	**13**	51
8:00 AM	**0**	**0**	**2**	**0**	**0**	**4**	**2**	**2**	**0**	**1**	**0**	**1**	**0**	**3**	**2**	**0**	**17**	51
8:15 AM	**0**	**0**	**1**	**0**	**0**	**3**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**10**	**54**
8:30 AM	0	0	1	0	0	5	0	1	0	1	0	4	0	1	1	0	14	54
8:45 AM	0	0	0	0	0	5	1	0	0	0	1	2	0	1	0	0	10	51
Count Total	0	3	13	3	0	31	7	8	0	3	2	14	0	11	7	0	102	0
Peak Hour	**0**	**0**	**9**	**2**	**0**	**14**	**5**	**5**	**0**	**2**	**0**	**6**	**0**	**6**	**5**	**0**	**54**	**0**

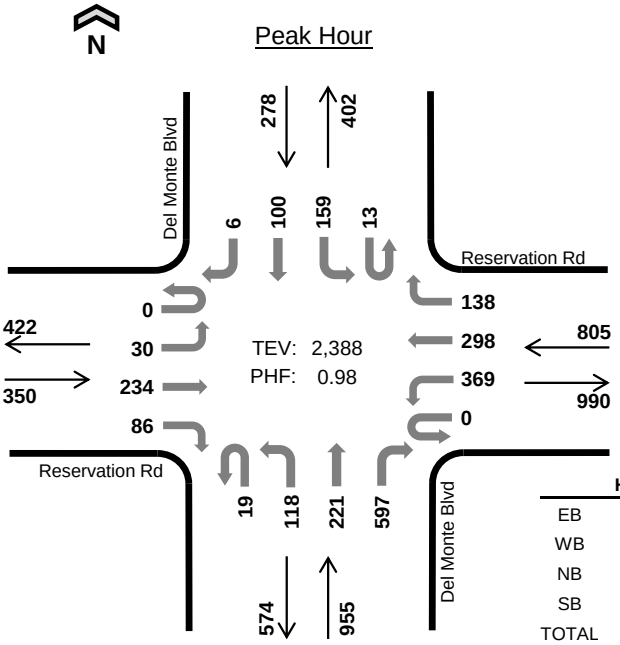
Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Del Monte Blvd Northbound			Del Monte Blvd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	2	0	0	0	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

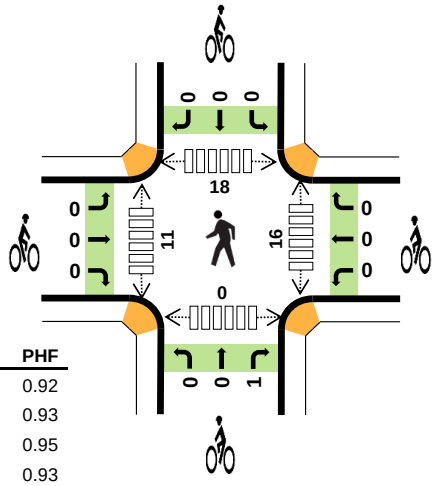
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd
Reservation Rd

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	2.9%	0.92
WB	1.2%	0.93
NB	1.0%	0.95
SB	1.8%	0.93
TOTAL	1.5%	0.98



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	48	27	0	85	62	37	5	23	38	113	3	47	25	2	520	0
4:15 PM	0	2	54	22	0	76	54	30	6	25	35	133	3	36	19	1	496	0
4:30 PM	0	5	74	21	1	98	62	32	4	28	38	137	8	38	24	0	570	0
4:45 PM	**0**	**8**	**58**	**20**	**0**	**81**	**70**	**30**	**4**	**31**	**49**	**167**	**6**	**38**	**29**	**1**	**592**	2,178
5:00 PM	**0**	**5**	**53**	**28**	**0**	**82**	**78**	**35**	**6**	**32**	**68**	**138**	**3**	**36**	**24**	**2**	**590**	2,248
5:15 PM	**0**	**8**	**57**	**18**	**0**	**103**	**75**	**35**	**7**	**29**	**47**	**156**	**3**	**39**	**21**	**1**	**599**	2,351
5:30 PM	**0**	**9**	**66**	**20**	**0**	**103**	**75**	**38**	**2**	**26**	**57**	**136**	**1**	**46**	**26**	**2**	**607**	**2,388**
5:45 PM	0	7	49	21	0	93	86	30	1	28	38	151	10	38	21	1	574	2,370
Count Total	0	49	459	177	1	721	562	267	35	222	370	1,131	37	318	189	10	4,548	0
Peak Hour All	**0**	**30**	**234**	**86**	**0**	**369**	**298**	**138**	**19**	**118**	**221**	**597**	**13**	**159**	**100**	**6**	**2,388**	**0**
Peak Hour HV	**0**	**1**	**7**	**2**	**0**	**4**	**3**	**3**	**0**	**1**	**5**	**4**	**0**	**3**	**2**	**0**	**35**	**0**
Peak Hour HV%	**-**	**3%**	**3%**	**2%**	**-**	**1%**	**1%**	**2%**	**0%**	**1%**	**2%**	**1%**	**0%**	**2%**	**2%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	3	2	2	*9*	0	0	0	0	*0*	7	4	5	1	*17*
4:15 PM	0	3	4	1	*8*	0	0	0	0	*0*	4	3	5	0	*12*
4:30 PM	2	1	1	2	*6*	0	0	1	0	*1*	5	5	6	0	*16*
4:45 PM	**5**	**4**	**5**	**1**	***15***	**0**	**0**	**0**	**0**	***0***	**4**	**2**	**6**	**0**	*12*
5:00 PM	**1**	**3**	**3**	**2**	***9***	**0**	**0**	**1**	**0**	***1***	**1**	**2**	**1**	**0**	*4*
5:15 PM	**2**	**3**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**2**	**0**	*4*
5:30 PM	**2**	**0**	**2**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**9**	**7**	**9**	**0**	***25***
5:45 PM	1	4	3	0	*8*	0	0	0	0	*0*	1	3	7	1	*12*
Count Total	15	21	20	10	*66*	0	0	2	0	*2*	33	26	41	2	*102*
Peak Hour	**10**	**10**	**10**	**5**	***35***	**0**	**0**	**1**	**0**	***1***	**16**	**11**	**18**	**0**	***45***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	2	0	1	1	1	0	1	0	1	0	1	0	1	9	0
4:15 PM	0	0	0	0	0	2	0	1	0	1	1	2	0	1	0	0	8	0
4:30 PM	0	0	2	0	0	0	1	0	0	0	0	1	0	0	2	0	6	0
4:45 PM	**0**	**1**	**3**	**1**	**0**	**2**	**2**	**0**	**0**	**1**	**2**	**2**	**0**	**1**	**0**	**0**	**15**	38
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**2**	**1**	**0**	**1**	**1**	**0**	**9**	38
5:15 PM	**0**	**0**	**1**	**1**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	35
5:30 PM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**1**	**0**	**6**	**35**
5:45 PM	0	0	1	0	0	2	2	0	0	1	0	2	0	0	0	0	8	28
Count Total	0	1	10	4	0	9	7	5	0	4	6	10	0	5	4	1	66	0
Peak Hour	**0**	**1**	**7**	**2**	**0**	**4**	**3**	**3**	**0**	**1**	**5**	**4**	**0**	**3**	**2**	**0**	**35**	**0**

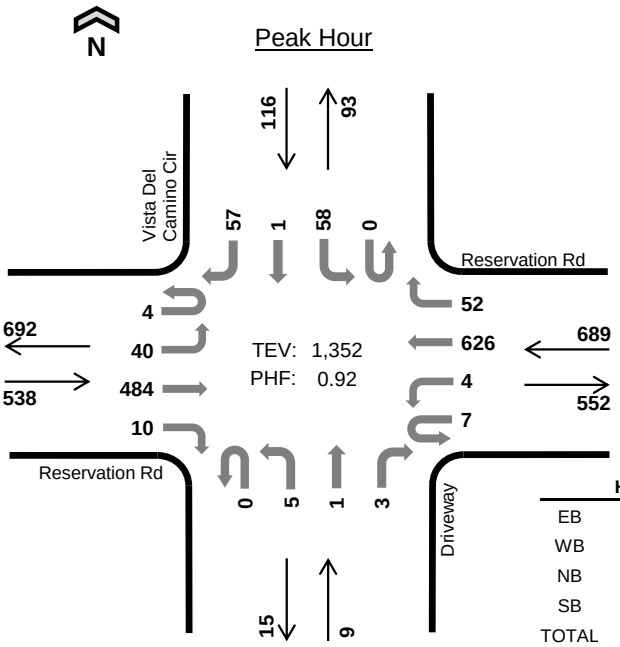
Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Del Monte Blvd Northbound			Del Monte Blvd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	2	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

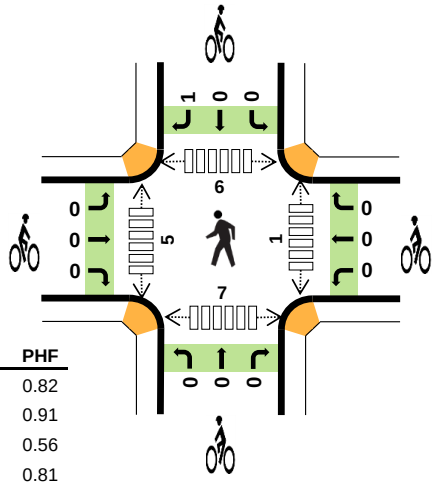
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Vista Del Camino Cir
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	3.9%	0.82
WB	3.5%	0.91
NB	0.0%	0.56
SB	1.7%	0.81
TOTAL	3.5%	0.92



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Vista Del Camino Cir Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	73	0	2	0	183	5	0	0	0	0	0	7	0	21	293	0
7:15 AM	3	3	101	0	1	0	158	6	0	1	0	0	0	6	0	10	289	0
7:30 AM	**1**	**12**	**124**	**2**	**1**	**1**	**161**	**6**	**0**	**1**	**1**	**0**	**0**	**8**	**0**	**19**	**337**	0
7:45 AM	**2**	**11**	**149**	**2**	**2**	**1**	**156**	**14**	**0**	**2**	**0**	**0**	**0**	**16**	**1**	**11**	**367**	1,286
8:00 AM	**1**	**10**	**115**	**1**	**2**	**2**	**136**	**18**	**0**	**1**	**0**	**0**	**0**	**19**	**0**	**17**	**322**	1,315
8:15 AM	**0**	**7**	**96**	**5**	**2**	**0**	**173**	**14**	**0**	**1**	**0**	**3**	**0**	**15**	**0**	**10**	**326**	**1,352**
8:30 AM	4	11	127	4	5	1	142	11	0	5	0	1	0	8	2	14	335	1,350
8:45 AM	2	17	96	2	5	1	124	19	0	2	1	2	0	8	1	12	292	1,275
Count Total	13	73	881	16	20	6	1,233	93	0	13	2	6	0	87	4	114	2,561	0
Peak Hour All	**4**	**40**	**484**	**10**	**7**	**4**	**626**	**52**	**0**	**5**	**1**	**3**	**0**	**58**	**1**	**57**	**1,352**	**0**
Peak Hour HV	**0**	**4**	**17**	**0**	**0**	**1**	**21**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**47**	**0**
Peak Hour HV%	**0%**	**10%**	**4%**	**0%**	**0%**	**25%**	**3%**	**4%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**4%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	5	0	0	*10*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	3	3	0	0	*6*	0	1	0	0	*1*	0	0	0	1	*1*
7:30 AM	**5**	**7**	**0**	**1**	***13***	**0**	**0**	**0**	**1**	***1***	**1**	**2**	**2**	**2**	*7*
7:45 AM	**5**	**3**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**1**	*4*
8:00 AM	**6**	**10**	**0**	**1**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**2**	*3*
8:15 AM	**5**	**4**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**2**	**2**	***5***
8:30 AM	6	4	0	0	*10*	0	0	0	0	*0*	2	1	1	1	*5*
8:45 AM	3	5	0	1	*9*	0	0	0	0	*0*	0	1	2	2	*5*
Count Total	38	41	0	3	*82*	0	1	0	1	*2*	3	7	9	11	*30*
Peak Hour	**21**	**24**	**0**	**2**	***47***	**0**	**0**	**0**	**1**	***1***	**1**	**5**	**6**	**7**	***19***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Vista Del Camino Cir Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	10	0
7:15 AM	0	0	3	0	0	0	2	1	0	0	0	0	0	0	0	0	6	0
7:30 AM	**0**	**1**	**4**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**13**	0
7:45 AM	**0**	**1**	**4**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	37
8:00 AM	**0**	**1**	**5**	**0**	**0**	**1**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**17**	44
8:15 AM	**0**	**1**	**4**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**47**
8:30 AM	0	2	4	0	0	0	4	0	0	0	0	0	0	0	0	0	10	44
8:45 AM	0	0	3	0	0	0	4	1	0	0	0	0	0	1	0	0	9	45
Count Total	0	6	32	0	0	1	36	4	0	0	0	0	0	1	0	2	82	0
Peak Hour	**0**	**4**	**17**	**0**	**0**	**1**	**21**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**47**	**0**

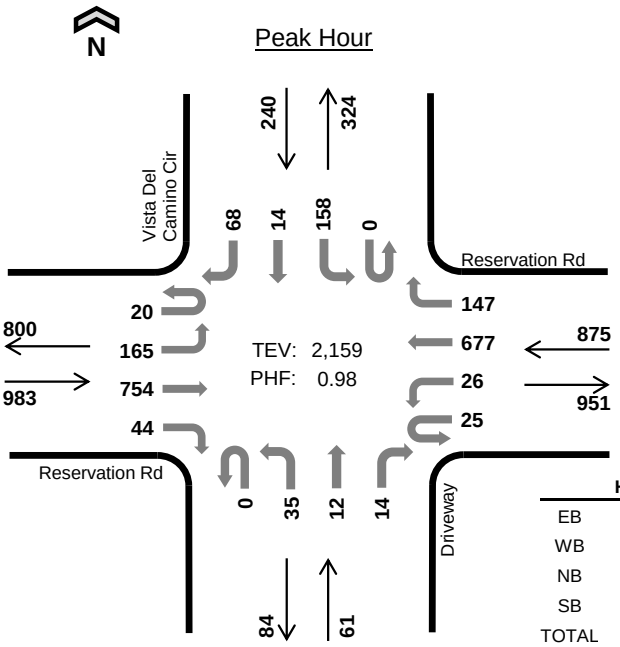
Two-Hour Count Summaries - Bikes

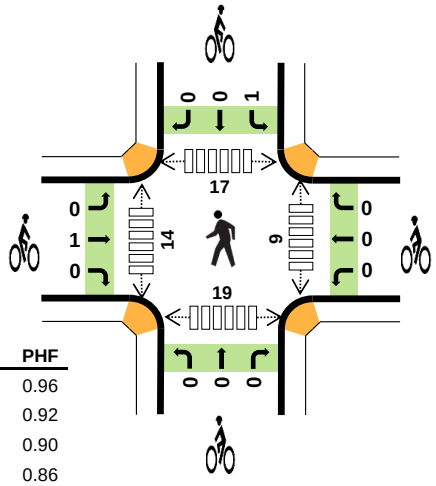
Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Driveway Northbound			Vista Del Camino Cir Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	1	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Vista Del Camino Cir
Reservation Rd

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	1.1%	0.96
WB	1.0%	0.92
NB	0.0%	0.90
SB	0.0%	0.86
TOTAL	0.9%	0.98

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Vista Del Camino Cir Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	7	34	155	6	9	4	152	36	0	6	2	9	0	22	2	18	462	0
4:15 PM	3	41	175	7	6	4	132	32	0	5	0	2	0	33	5	20	465	0
4:30 PM	4	23	208	13	6	0	150	35	0	10	0	4	0	33	2	21	509	0
4:45 PM	3	61	201	4	6	2	151	31	0	6	2	3	0	46	3	10	529	1,965
5:00 PM	**6**	**35**	**186**	**10**	**7**	**6**	**180**	**44**	**0**	**10**	**2**	**5**	**0**	**39**	**4**	**14**	**548**	2,051
5:15 PM	**4**	**41**	**201**	**11**	**3**	**5**	**166**	**36**	**0**	**9**	**3**	**1**	**0**	**31**	**3**	**17**	**531**	2,117
5:30 PM	**5**	**39**	**195**	**12**	**8**	**10**	**158**	**30**	**0**	**7**	**6**	**3**	**0**	**42**	**2**	**18**	**535**	2,143
5:45 PM	**5**	**50**	**172**	**11**	**7**	**5**	**173**	**37**	**0**	**9**	**1**	**5**	**0**	**46**	**5**	**19**	**545**	**2,159**
Count Total	37	324	1,493	74	52	36	1,262	281	0	62	16	32	0	292	26	137	4,124	0
Peak Hour All	**20**	**165**	**754**	**44**	**25**	**26**	**677**	**147**	**0**	**35**	**12**	**14**	**0**	**158**	**14**	**68**	**2,159**	**0**
Peak Hour HV	**0**	**0**	**11**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**
Peak Hour HV%	**0%**	**0%**	**1%**	**0%**	**0%**	**0%**	**1%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	3	0	0	*5*	0	0	1	1	*2*	4	2	2	4	*12*
4:15 PM	3	3	0	1	*7*	0	0	0	0	*0*	7	6	4	5	*22*
4:30 PM	3	3	0	0	*6*	1	0	0	0	*1*	1	1	5	1	*8*
4:45 PM	6	3	0	0	*9*	1	0	0	0	*1*	2	4	5	11	*22*
5:00 PM	**3**	**4**	**0**	**0**	***7***	**1**	**0**	**0**	**0**	***1***	**1**	**3**	**2**	**2**	*8*
5:15 PM	**1**	**1**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**4**	**4**	**5**	**4**	*17*
5:30 PM	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**8**	**4**	*16*
5:45 PM	**3**	**4**	**0**	**0**	***7***	**0**	**0**	**0**	**1**	***1***	**3**	**4**	**2**	**9**	***18***
Count Total	25	21	0	1	*47*	3	0	1	2	*6*	23	27	33	40	*123*
Peak Hour	**11**	**9**	**0**	**0**	***20***	**1**	**0**	**0**	**1**	***2***	**9**	**14**	**17**	**19**	***59***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Vista Del Camino Cir Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	5	0
4:15 PM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	7	0
4:30 PM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	6	0
4:45 PM	0	1	5	0	0	0	3	0	0	0	0	0	0	0	0	0	9	27
5:00 PM	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	29
5:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	24
5:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	22
5:45 PM	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**20**
Count Total	0	1	24	0	0	0	20	1	0	0	0	0	0	0	1	0	47	0
Peak Hour	**0**	**0**	**11**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Driveway Northbound			Vista Del Camino Cir Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	4
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**2**
Count Total	0	3	0	0	0	0	0	1	0	1	1	0	6	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**

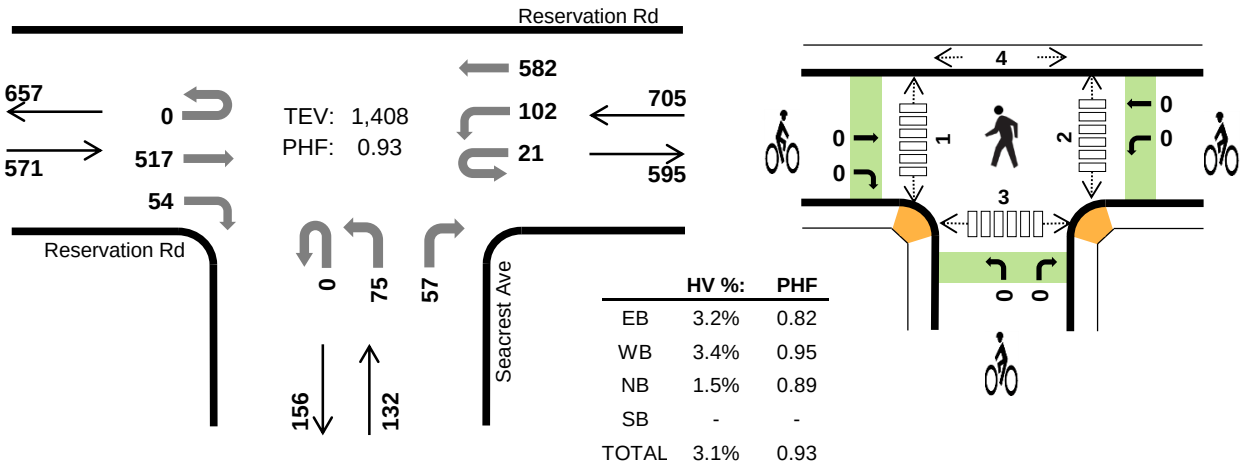
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Seacrest Ave
Reservation Rd

N

Peak Hour

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	3.2%	0.82
WB	3.4%	0.95
NB	1.5%	0.89
SB	-	-
TOTAL	3.1%	0.93

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound				Reservation Rd Westbound				Seacrest Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	74	2	1	11	183	0	0	3	0	10	0	0	0	0	284	0
7:15 AM		0	0	102	6	7	13	149	0	0	9	0	10	0	0	0	0	296	0
7:30 AM		0	0	120	11	3	30	145	0	0	15	0	9	0	0	0	0	333	0
7:45 AM		**0**	**0**	**160**	**14**	**3**	**25**	**146**	**0**	**0**	**20**	**0**	**10**	**0**	**0**	**0**	**0**	**378**	1,291
8:00 AM		**0**	**0**	**123**	**13**	**6**	**23**	**137**	**0**	**0**	**20**	**0**	**11**	**0**	**0**	**0**	**0**	**333**	1,340
8:15 AM		**0**	**0**	**101**	**13**	**5**	**26**	**154**	**0**	**0**	**22**	**0**	**12**	**0**	**0**	**0**	**0**	**333**	1,377
8:30 AM		**0**	**0**	**133**	**14**	**7**	**28**	**145**	**0**	**0**	**13**	**0**	**24**	**0**	**0**	**0**	**0**	**364**	**1,408**
8:45 AM		0	0	90	16	5	14	126	0	0	19	0	16	0	0	0	0	286	1,316
Count Total		0	0	903	89	37	170	1,185	0	0	121	0	102	0	0	0	0	2,607	0
Peak Hour	**All**	**0**	**0**	**517**	**54**	**21**	**102**	**582**	**0**	**0**	**75**	**0**	**57**	**0**	**0**	**0**	**0**	**1,408**	**0**
	HV	**0**	**0**	**18**	**0**	**0**	**3**	**21**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**44**	**0**
	HV%	**-**	**-**	**3%**	**0%**	**0%**	**3%**	**4%**	**-**	**-**	**3%**	**-**	**0%**	**-**	**-**	**-**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	6	0	0	*11*	0	0	0	0	*0*	1	0	1	0	*2*
7:15 AM	2	5	0	0	*7*	0	1	0	0	*1*	0	0	0	1	*1*
7:30 AM	5	7	1	0	*13*	0	0	0	0	*0*	1	1	3	1	*6*
7:45 AM	**5**	**4**	**1**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	*2*
8:00 AM	**5**	**9**	**0**	**0**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	*2*
8:15 AM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**1**	*4*
8:30 AM	**4**	**6**	**1**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**0**	***2***
8:45 AM	4	5	0	0	*9*	0	0	0	0	*0*	4	0	6	3	*13*
Count Total	34	47	3	0	*84*	0	1	0	0	*1*	8	2	14	8	*32*
Peak Hr	**18**	**24**	**2**	**0**	***44***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**4**	**3**	***10***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Seacrest Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	11	0
7:15 AM	0	0	1	1	0	2	3	0	0	0	0	0	0	0	0	0	7	0
7:30 AM	0	0	5	0	0	1	6	0	0	1	0	0	0	0	0	0	13	0
7:45 AM	**0**	**0**	**5**	**0**	**0**	**1**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	41
8:00 AM	**0**	**0**	**5**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	44
8:15 AM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	46
8:30 AM	**0**	**0**	**4**	**0**	**0**	**2**	**4**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**44**
8:45 AM	0	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	9	43
Count Total	0	0	33	1	0	6	41	0	0	3	0	0	0	0	0	0	84	0
Peak Hour	**0**	**0**	**18**	**0**	**0**	**3**	**21**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**44**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Seacrest Ave Northbound			0 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

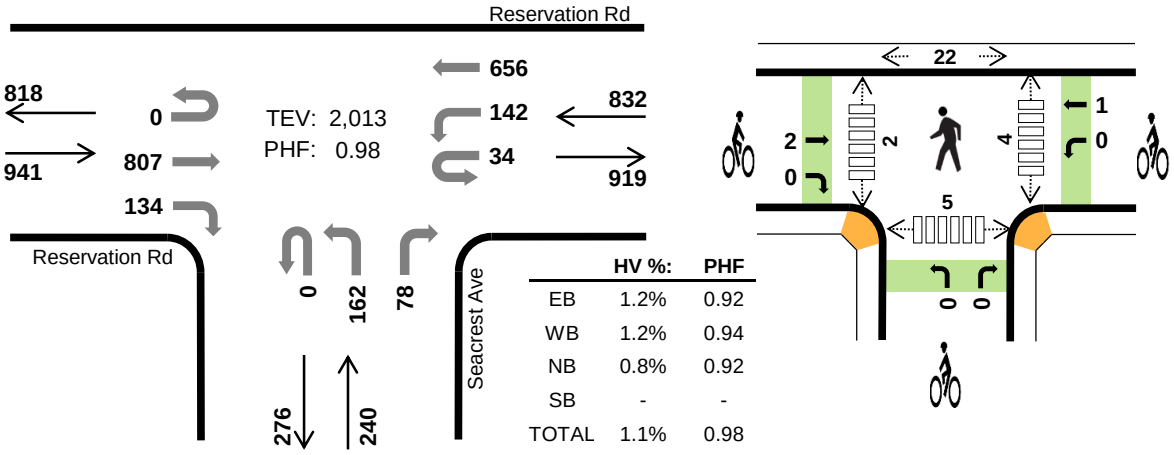
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Seacrest Ave
Reservation Rd

N

Peak Hour

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Seacrest Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	178	27	5	35	149	0	0	36	0	25	0	0	0	0	455	0
4:15 PM	0	0	173	36	10	37	141	0	0	33	0	20	0	0	0	0	450	0
4:30 PM	0	0	221	24	14	33	131	0	0	42	0	18	0	0	0	0	483	0
4:45 PM	0	0	219	33	10	21	157	0	0	26	0	16	0	0	0	0	482	1,870
5:00 PM	**0**	**0**	**192**	**37**	**8**	**26**	**164**	**0**	**0**	**43**	**0**	**22**	**0**	**0**	**0**	**0**	**492**	1,907
5:15 PM	**0**	**0**	**204**	**27**	**6**	**47**	**168**	**0**	**0**	**36**	**0**	**21**	**0**	**0**	**0**	**0**	**509**	1,966
5:30 PM	**0**	**0**	**221**	**34**	**8**	**35**	**154**	**0**	**0**	**44**	**0**	**15**	**0**	**0**	**0**	**0**	**511**	1,994
5:45 PM	**0**	**0**	**190**	**36**	**12**	**34**	**170**	**0**	**0**	**39**	**0**	**20**	**0**	**0**	**0**	**0**	**501**	**2,013**
Count Total	0	0	1,598	254	73	268	1,234	0	0	299	0	157	0	0	0	0	3,883	0
Peak Hour All	**0**	**0**	**807**	**134**	**34**	**142**	**656**	**0**	**0**	**162**	**0**	**78**	**0**	**0**	**0**	**0**	**2,013**	**0**
Peak Hour HV	**0**	**0**	**9**	**2**	**0**	**2**	**8**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**23**	**0**
Peak Hour HV%	**-**	**-**	**1%**	**1%**	**0%**	**1%**	**1%**	**-**	**-**	**1%**	**-**	**1%**	**-**	**-**	**-**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	4	1	0	*7*	0	0	0	0	*0*	4	0	4	1	*9*
4:15 PM	3	2	1	0	*6*	0	0	0	0	*0*	0	1	1	1	*3*
4:30 PM	2	3	0	0	*5*	1	0	0	0	*1*	1	2	8	2	*13*
4:45 PM	7	4	0	0	*11*	1	0	0	0	*1*	0	0	6	4	*10*
5:00 PM	**2**	**3**	**0**	**0**	***5***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**5**	**1**	*7*
5:15 PM	**2**	**3**	**0**	**0**	***5***	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**3**	**2**	*6*
5:30 PM	**4**	**1**	**1**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**6**	**1**	*8*
5:45 PM	**3**	**3**	**1**	**0**	***7***	**1**	**0**	**0**	**0**	***1***	**2**	**1**	**8**	**1**	***12***
Count Total	25	23	4	0	*52*	4	1	0	0	*5*	9	5	41	13	*68*
Peak Hr	**11**	**10**	**2**	**0**	***23***	**2**	**1**	**0**	**0**	***3***	**4**	**2**	**22**	**5**	***33***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Seacrest Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	1	3	0	0	0	0	1	0	0	0	0	7	0
4:15 PM	0	0	3	0	0	0	2	0	0	1	0	0	0	0	0	0	6	0
4:30 PM	0	0	2	0	0	1	2	0	0	0	0	0	0	0	0	0	5	0
4:45 PM	0	0	6	1	0	0	4	0	0	0	0	0	0	0	0	0	11	29
5:00 PM	**0**	**0**	**1**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	27
5:15 PM	**0**	**0**	**2**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	26
5:30 PM	**0**	**0**	**3**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	27
5:45 PM	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**23**
Count Total	0	0	22	3	0	4	19	0	0	2	0	2	0	0	0	0	52	0
Peak Hour	**0**	**0**	**9**	**2**	**0**	**2**	**8**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**23**	**0**

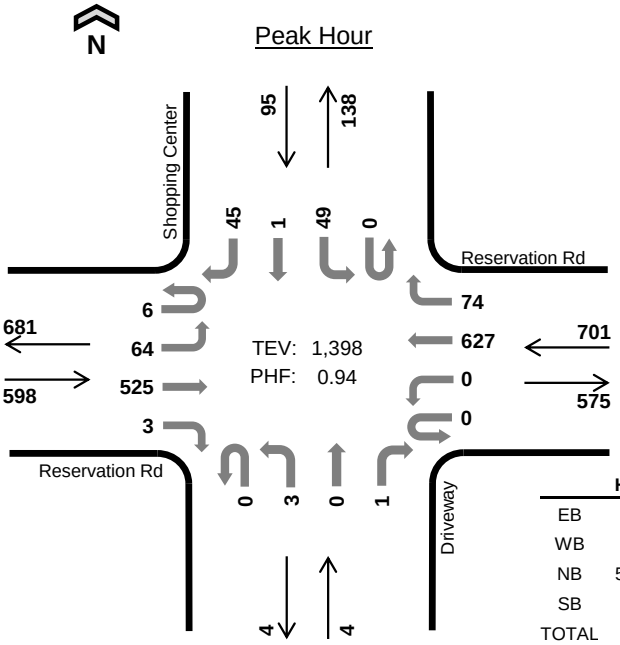
Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Seacrest Ave Northbound			0 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	2
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
Count Total	0	3	1	0	1	0	0	0	0	0	0	0	5	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

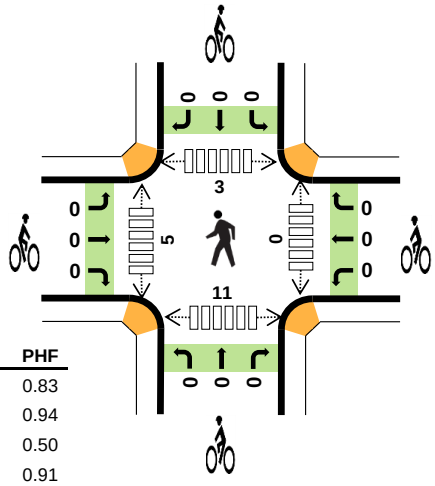
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Shopping Center
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	2.8%	0.83
WB	3.7%	0.94
NB	50.0%	0.50
SB	0.0%	0.91
TOTAL	3.2%	0.94



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Shopping Center Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	1	12	76	0	0	0	182	12	0	0	0	0	0	4	0	11	298	0
7:15 AM	3	13	101	0	0	0	151	12	0	1	0	0	0	14	0	11	306	0
7:30 AM	**1**	**10**	**134**	**0**	**0**	**0**	**161**	**18**	**0**	**1**	**0**	**1**	**0**	**14**	**0**	**12**	**352**	0
7:45 AM	**1**	**17**	**161**	**1**	**0**	**0**	**156**	**14**	**0**	**1**	**0**	**0**	**0**	**13**	**1**	**8**	**373**	1,329
8:00 AM	**1**	**20**	**117**	**1**	**0**	**0**	**146**	**19**	**0**	**1**	**0**	**0**	**0**	**13**	**0**	**11**	**329**	1,360
8:15 AM	**3**	**17**	**113**	**1**	**0**	**0**	**164**	**23**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**14**	**344**	**1,398**
8:30 AM	2	16	127	1	1	0	151	14	0	0	1	0	0	18	0	11	342	1,388
8:45 AM	7	17	92	0	0	0	119	15	0	0	0	0	0	9	1	6	266	1,281
Count Total	19	122	921	4	1	0	1,230	127	0	4	1	1	0	94	2	84	2,610	0
Peak Hour All	**6**	**64**	**525**	**3**	**0**	**0**	**627**	**74**	**0**	**3**	**0**	**1**	**0**	**49**	**1**	**45**	**1,398**	**0**
Peak Hour HV	**0**	**0**	**17**	**0**	**0**	**0**	**26**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**45**	**0**
Peak Hour HV%	**0%**	**0%**	**3%**	**0%**	**-**	**-**	**4%**	**0%**	**-**	**67%**	**-**	**0%**	**-**	**0%**	**0%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	8	0	0	*13*	0	0	0	0	*0*	0	3	1	4	*8*
7:15 AM	1	4	1	0	*6*	0	1	0	0	*1*	0	2	0	2	*4*
7:30 AM	**4**	**7**	**1**	**0**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**2**	*4*
7:45 AM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	*3*
8:00 AM	**6**	**9**	**1**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**2**	**5**	*10*
8:15 AM	**3**	**5**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	***2***
8:30 AM	4	7	0	0	*11*	0	0	0	0	*0*	0	0	1	0	*1*
8:45 AM	4	6	0	0	*10*	0	0	0	0	*0*	0	0	1	7	*8*
Count Total	31	51	3	0	*85*	0	1	0	0	*1*	0	10	6	24	*40*
Peak Hour	**17**	**26**	**2**	**0**	***45***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**3**	**11**	***19***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Shopping Center Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	7	1	0	0	0	0	0	0	0	0	13	0
7:15 AM	0	0	1	0	0	0	4	0	0	1	0	0	0	0	0	0	6	0
7:30 AM	**0**	**0**	**4**	**0**	**0**	**0**	**7**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	0
7:45 AM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	40
8:00 AM	**0**	**0**	**6**	**0**	**0**	**0**	**9**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	43
8:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**45**
8:30 AM	0	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	11	44
8:45 AM	0	0	4	0	0	0	5	1	0	0	0	0	0	0	0	0	10	45
Count Total	0	0	31	0	0	0	49	2	0	3	0	0	0	0	0	0	85	0
Peak Hour	**0**	**0**	**17**	**0**	**0**	**0**	**26**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**45**	**0**

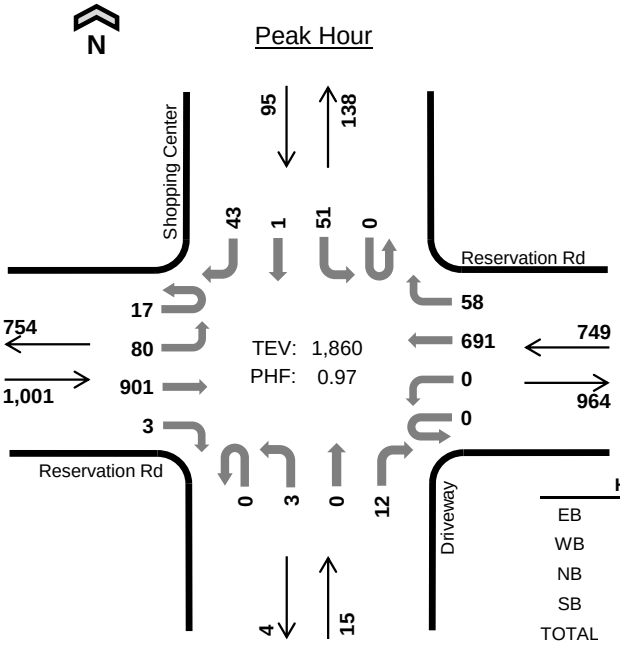
Two-Hour Count Summaries - Bikes

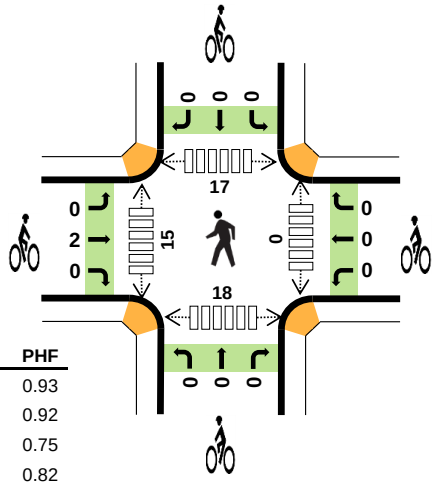
Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Driveway Northbound			Shopping Center Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Shopping Center
Reservation Rd

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	1.3%	0.93
WB	1.5%	0.92
NB	0.0%	0.75
SB	2.1%	0.82
TOTAL	1.4%	0.97

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Shopping Center Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	8	21	177	3	0	0	168	15	0	0	0	1	0	13	0	6	412	0
4:15 PM	6	24	185	2	0	0	157	15	0	0	1	1	0	15	1	5	412	0
4:30 PM	**7**	**19**	**243**	**1**	**0**	**0**	**160**	**11**	**0**	**0**	**0**	**3**	**0**	**11**	**1**	**9**	**465**	0
4:45 PM	**3**	**25**	**228**	**1**	**0**	**0**	**160**	**21**	**0**	**1**	**0**	**3**	**0**	**12**	**0**	**13**	**467**	1,756
5:00 PM	**3**	**22**	**210**	**0**	**0**	**0**	**179**	**14**	**0**	**1**	**0**	**2**	**0**	**13**	**0**	**7**	**451**	1,795
5:15 PM	**4**	**14**	**220**	**1**	**0**	**0**	**192**	**12**	**0**	**1**	**0**	**4**	**0**	**15**	**0**	**14**	**477**	**1,860**
5:30 PM	2	26	222	0	0	0	158	12	0	1	1	2	0	19	0	11	454	1,849
5:45 PM	7	33	196	0	0	0	198	18	0	1	0	1	0	11	1	10	476	1,858
Count Total	40	184	1,681	8	0	0	1,372	118	0	5	2	17	0	109	3	75	3,614	0
Peak Hour All	**17**	**80**	**901**	**3**	**0**	**0**	**691**	**58**	**0**	**3**	**0**	**12**	**0**	**51**	**1**	**43**	**1,860**	**0**
Peak Hour HV	**0**	**1**	**11**	**1**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**26**	**0**
Peak Hour HV%	**0%**	**1%**	**1%**	**33%**	**-**	**-**	**2%**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**2%**	**0%**	**2%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	6	0	0	*9*	0	0	0	0	*0*	0	4	8	5	*17*
4:15 PM	4	3	1	1	*9*	0	0	0	0	*0*	0	1	2	6	*9*
4:30 PM	**3**	**3**	**0**	**0**	***6***	**1**	**0**	**0**	**0**	***1***	**0**	**9**	**2**	**5**	*16*
4:45 PM	**6**	**5**	**0**	**1**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**6**	**5**	*15*
5:00 PM	**2**	**2**	**0**	**1**	***5***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**4**	**5**	*10*
5:15 PM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**5**	**3**	***9***
5:30 PM	4	1	0	0	*5*	0	0	0	0	*0*	0	3	2	5	*10*
5:45 PM	2	3	0	1	*6*	1	0	0	0	*1*	0	8	4	3	*15*
Count Total	26	24	1	4	*55*	3	0	0	0	*3*	0	31	33	37	*101*
Peak Hour	**13**	**11**	**0**	**2**	***26***	**2**	**0**	**0**	**0**	***2***	**0**	**15**	**17**	**18**	***50***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Shopping Center Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	3	0	0	0	5	1	0	0	0	0	0	0	0	0	9	0
4:15 PM	0	1	3	0	0	0	3	0	0	0	1	0	0	0	1	0	9	0
4:30 PM	**0**	**1**	**2**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	0
4:45 PM	**0**	**0**	**5**	**1**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**12**	36
5:00 PM	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	32
5:15 PM	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**26**
5:30 PM	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	5	25
5:45 PM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	1	0	6	19
Count Total	0	2	23	1	0	0	23	1	0	0	1	0	0	1	2	1	55	0
Peak Hour	**0**	**1**	**11**	**1**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**26**	**0**

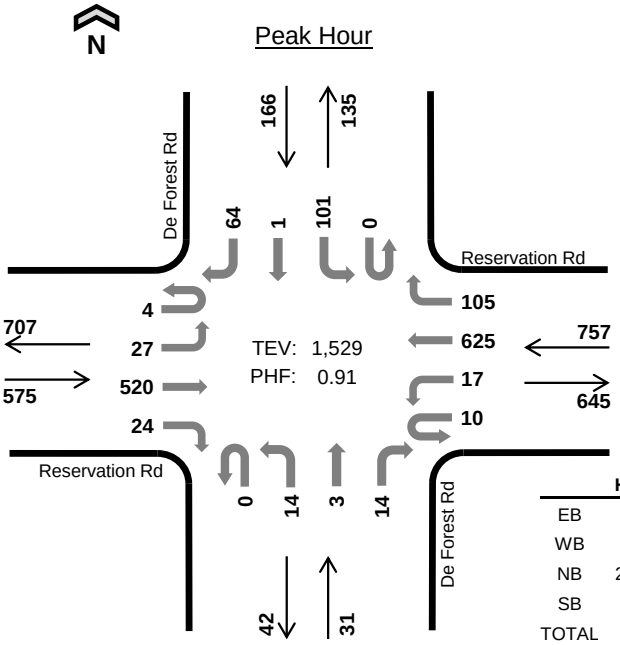
Two-Hour Count Summaries - Bikes

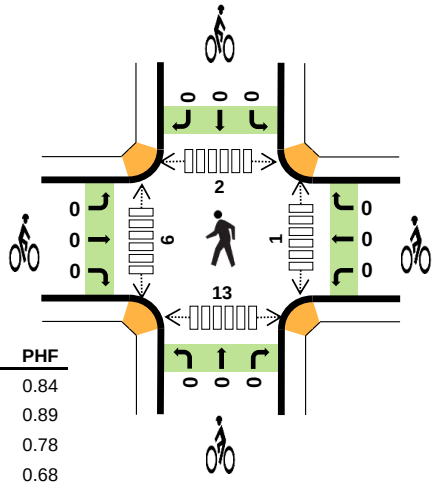
Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Driveway Northbound			Shopping Center Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	2
Count Total	0	3	0	0	0	0	0	0	0	0	0	0	3	0
Peak Hour	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

De Forest Rd
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	3.1%	0.84
WB	2.9%	0.89
NB	25.8%	0.78
SB	0.0%	0.68
TOTAL	3.1%	0.91

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				De Forest Rd Northbound				De Forest Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	72	8	1	4	177	12	0	3	0	3	0	9	1	22	313	0
7:15 AM	2	4	99	10	2	10	137	13	0	7	2	2	0	27	0	15	330	0
7:30 AM	**2**	**7**	**137**	**4**	**3**	**4**	**152**	**27**	**0**	**2**	**1**	**4**	**0**	**38**	**0**	**23**	**404**	0
7:45 AM	**2**	**9**	**154**	**6**	**6**	**6**	**154**	**47**	**0**	**2**	**1**	**2**	**0**	**19**	**0**	**11**	**419**	1,466
8:00 AM	**0**	**6**	**118**	**6**	**0**	**6**	**149**	**20**	**0**	**7**	**0**	**3**	**0**	**24**	**0**	**16**	**355**	1,508
8:15 AM	**0**	**5**	**111**	**8**	**1**	**1**	**170**	**11**	**0**	**3**	**1**	**5**	**0**	**20**	**1**	**14**	**351**	**1,529**
8:30 AM	2	6	133	7	1	10	138	14	0	10	1	3	0	10	2	13	350	1,475
8:45 AM	2	6	79	9	0	4	116	12	0	4	1	10	0	7	1	8	259	1,315
Count Total	10	44	903	58	14	45	1,193	156	0	38	7	32	0	154	5	122	2,781	0
Peak Hour All	**4**	**27**	**520**	**24**	**10**	**17**	**625**	**105**	**0**	**14**	**3**	**14**	**0**	**101**	**1**	**64**	**1,529**	**0**
Peak Hour HV	**0**	**0**	**14**	**4**	**0**	**3**	**17**	**2**	**0**	**5**	**0**	**3**	**0**	**0**	**0**	**0**	**48**	**0**
Peak Hour HV%	**0%**	**0%**	**3%**	**17%**	**0%**	**18%**	**3%**	**2%**	**-**	**36%**	**0%**	**21%**	**-**	**0%**	**0%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	5	2	0	*12*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	1	3	3	0	*7*	0	0	0	1	*1*	1	3	0	10	*14*
7:30 AM	**4**	**5**	**2**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**3**	*4*
7:45 AM	**4**	**6**	**1**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**2**	*4*
8:00 AM	**6**	**7**	**4**	**0**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**2**	**4**	*9*
8:15 AM	**4**	**4**	**1**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**4**	***5***
8:30 AM	4	7	3	0	*14*	0	0	0	0	*0*	0	2	1	3	*6*
8:45 AM	4	5	4	1	*14*	0	0	0	0	*0*	0	2	1	5	*8*
Count Total	32	42	20	1	*95*	0	0	0	1	*1*	2	14	4	31	*51*
Peak Hour	**18**	**22**	**8**	**0**	***48***	**0**	**0**	**0**	**0**	***0***	**1**	**6**	**2**	**13**	***22***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				De Forest Rd Northbound				De Forest Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	2	0	1	4	0	0	2	0	0	0	0	0	0	12	0
7:15 AM	0	0	1	0	0	1	2	0	0	2	0	1	0	0	0	0	7	0
7:30 AM	**0**	**0**	**3**	**1**	**0**	**1**	**4**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**11**	0
7:45 AM	**0**	**0**	**2**	**2**	**0**	**1**	**3**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	41
8:00 AM	**0**	**0**	**6**	**0**	**0**	**1**	**6**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**17**	46
8:15 AM	**0**	**0**	**3**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**9**	**48**
8:30 AM	0	0	3	1	0	3	4	0	0	2	0	1	0	0	0	0	14	51
8:45 AM	0	0	3	1	0	1	4	0	0	1	0	3	0	0	1	0	14	54
Count Total	0	0	24	8	0	9	31	2	0	12	0	8	0	0	1	0	95	0
Peak Hour	**0**	**0**	**14**	**4**	**0**	**3**	**17**	**2**	**0**	**5**	**0**	**3**	**0**	**0**	**0**	**0**	**48**	**0**

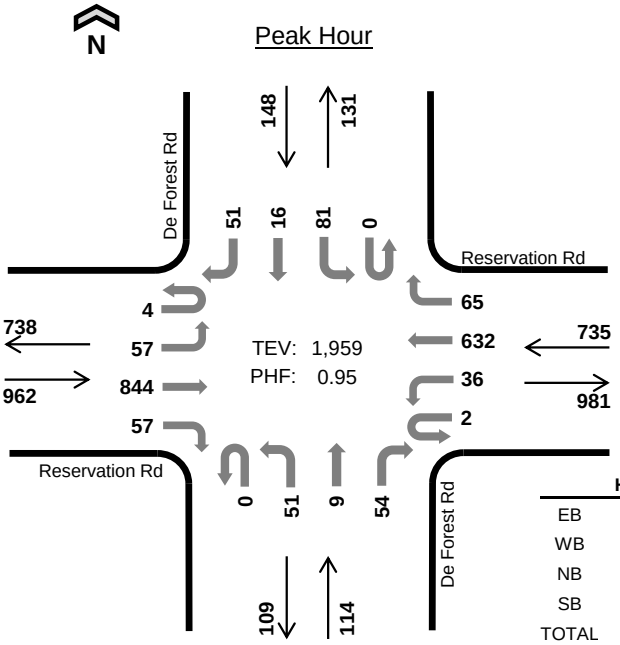
Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			De Forest Rd Northbound			De Forest Rd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

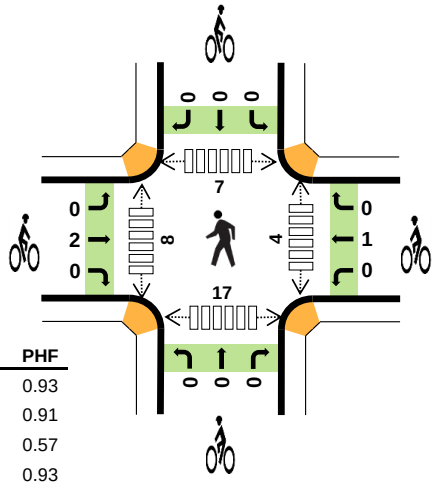
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

De Forest Rd
Reservation Rd

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	1.1%	0.93
WB	1.9%	0.91
NB	7.9%	0.57
SB	1.4%	0.93
TOTAL	1.8%	0.95



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				De Forest Rd Northbound				De Forest Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	9	174	14	0	5	154	12	0	13	1	13	0	11	0	8	414	0
4:15 PM	4	12	165	15	1	12	146	8	0	20	2	13	0	8	2	6	414	0
4:30 PM	**1**	**10**	**230**	**19**	**0**	**13**	**139**	**13**	**0**	**12**	**0**	**7**	**0**	**18**	**5**	**16**	**483**	0
4:45 PM	**0**	**16**	**209**	**20**	**1**	**11**	**154**	**16**	**0**	**20**	**6**	**24**	**0**	**19**	**4**	**14**	**514**	1,825
5:00 PM	**1**	**15**	**199**	**7**	**0**	**5**	**163**	**19**	**0**	**13**	**1**	**11**	**0**	**20**	**4**	**8**	**466**	1,877
5:15 PM	**2**	**16**	**206**	**11**	**1**	**7**	**176**	**17**	**0**	**6**	**2**	**12**	**0**	**24**	**3**	**13**	**496**	**1,959**
5:30 PM	1	17	222	4	1	6	165	15	0	8	1	10	0	16	3	8	477	1,953
5:45 PM	1	17	187	3	2	3	183	16	0	10	0	5	0	10	2	13	452	1,891
Count Total	10	112	1,592	93	6	62	1,280	116	0	102	13	95	0	126	23	86	3,716	0
Peak Hour All	**4**	**57**	**844**	**57**	**2**	**36**	**632**	**65**	**0**	**51**	**9**	**54**	**0**	**81**	**16**	**51**	**1,959**	**0**
Peak Hour HV	**0**	**0**	**9**	**2**	**0**	**6**	**8**	**0**	**0**	**3**	**1**	**5**	**0**	**1**	**1**	**0**	**36**	**0**
Peak Hour HV%	**0%**	**0%**	**1%**	**4%**	**0%**	**17%**	**1%**	**0%**	**-**	**6%**	**11%**	**9%**	**-**	**1%**	**6%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	4	1	1	*9*	0	0	0	0	*0*	0	0	11	3	*14*
4:15 PM	3	3	2	1	*9*	0	0	0	0	*0*	0	1	3	3	*7*
4:30 PM	**3**	**5**	**1**	**0**	***9***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**1**	**3**	*5*
4:45 PM	**5**	**6**	**6**	**1**	***18***	**0**	**0**	**0**	**0**	***0***	**4**	**0**	**2**	**2**	*8*
5:00 PM	**2**	**2**	**0**	**1**	***5***	**1**	**1**	**0**	**0**	***2***	**0**	**7**	**4**	**8**	*19*
5:15 PM	**1**	**1**	**2**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	***4***
5:30 PM	4	1	2	0	*7*	0	0	0	0	*0*	2	1	2	3	*8*
5:45 PM	2	3	2	1	*8*	1	0	0	0	*1*	1	1	2	2	*6*
Count Total	23	25	16	5	*69*	3	1	0	0	*4*	7	11	25	28	*71*
Peak Hour	**11**	**14**	**9**	**2**	***36***	**2**	**1**	**0**	**0**	***3***	**4**	**8**	**7**	**17**	***36***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				De Forest Rd Northbound				De Forest Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	2	0	0	1	3	0	0	0	0	1	0	0	0	1	9	0
4:15 PM	0	0	2	1	0	1	2	0	0	1	0	1	0	1	0	0	9	0
4:30 PM	**0**	**0**	**3**	**0**	**0**	**2**	**3**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**9**	0
4:45 PM	**0**	**0**	**4**	**1**	**0**	**2**	**4**	**0**	**0**	**2**	**1**	**3**	**0**	**0**	**1**	**0**	**18**	45
5:00 PM	**0**	**0**	**1**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	41
5:15 PM	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**36**
5:30 PM	0	0	2	2	0	1	0	0	0	1	0	1	0	0	0	0	7	34
5:45 PM	0	0	1	1	0	1	2	0	0	2	0	0	0	0	1	0	8	24
Count Total	0	1	16	6	0	10	15	0	0	7	1	8	0	2	2	1	69	0
Peak Hour	**0**	**0**	**9**	**2**	**0**	**6**	**8**	**0**	**0**	**3**	**1**	**5**	**0**	**1**	**1**	**0**	**36**	**0**

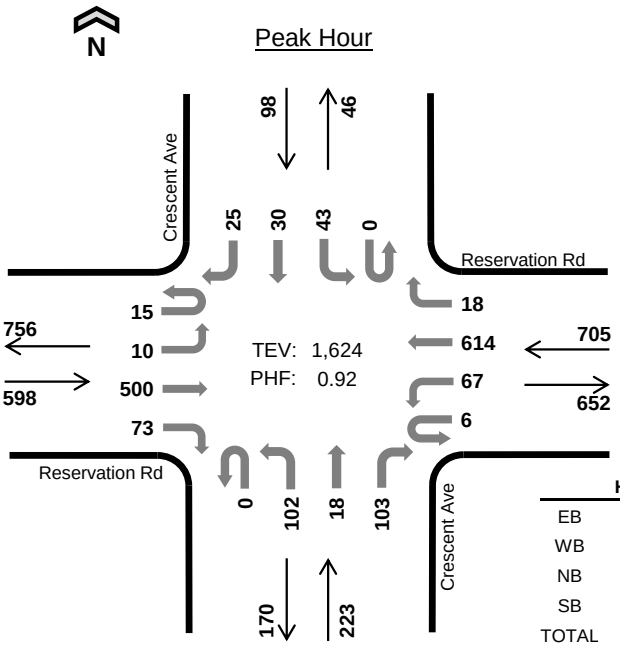
Two-Hour Count Summaries - Bikes

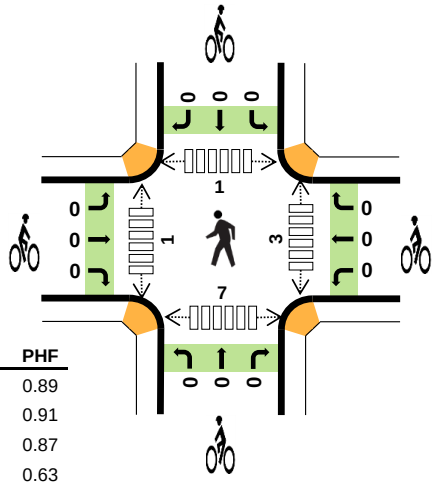
Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			De Forest Rd Northbound			De Forest Rd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	3
Count Total	0	3	0	0	1	0	0	0	0	0	0	0	4	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Crescent Ave
Reservation Rd

Date: 10-02-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	3.0%	0.89
WB	3.3%	0.91
NB	0.9%	0.87
SB	4.1%	0.63
TOTAL	2.9%	0.92

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Crescent Ave Northbound				Crescent Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	1	1	86	7	1	10	140	1	0	9	1	17	0	10	5	19	308	0
7:15 AM	2	4	104	18	0	10	132	1	0	14	3	17	0	15	8	9	337	0
7:30 AM	**1**	**1**	**141**	**20**	**0**	**12**	**155**	**4**	**0**	**21**	**5**	**23**	**0**	**21**	**13**	**5**	**422**	0
7:45 AM	**4**	**1**	**144**	**19**	**4**	**14**	**172**	**4**	**0**	**27**	**5**	**28**	**0**	**6**	**6**	**5**	**439**	1,506
8:00 AM	**4**	**3**	**118**	**21**	**0**	**26**	**145**	**8**	**0**	**21**	**2**	**27**	**0**	**9**	**6**	**8**	**398**	1,596
8:15 AM	**6**	**5**	**97**	**13**	**2**	**15**	**142**	**2**	**0**	**33**	**6**	**25**	**0**	**7**	**5**	**7**	**365**	**1,624**
8:30 AM	3	5	98	9	2	12	134	5	0	21	1	16	0	10	2	7	325	1,527
8:45 AM	1	4	98	15	1	3	144	3	0	14	2	22	0	7	2	7	323	1,411
Count Total	22	24	886	122	10	102	1,164	28	0	160	25	175	0	85	47	67	2,917	0
Peak Hour All	**15**	**10**	**500**	**73**	**6**	**67**	**614**	**18**	**0**	**102**	**18**	**103**	**0**	**43**	**30**	**25**	**1,624**	**0**
Peak Hour HV	**1**	**0**	**13**	**4**	**0**	**1**	**21**	**1**	**0**	**2**	**0**	**0**	**0**	**3**	**1**	**0**	**47**	**0**
Peak Hour HV%	**7%**	**0%**	**3%**	**5%**	**0%**	**1%**	**3%**	**6%**	**-**	**2%**	**0%**	**0%**	**-**	**7%**	**3%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	2	0	0	*5*	0	0	1	0	*1*	0	8	3	2	*13*
7:15 AM	2	7	1	0	*10*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	**7**	**1**	**1**	**2**	***11***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**2**	*5*
7:45 AM	**3**	**9**	**1**	**0**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	*2*
8:00 AM	**5**	**7**	**0**	**1**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
8:15 AM	**3**	**6**	**0**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**3**	***4***
8:30 AM	3	4	1	0	*8*	0	0	0	0	*0*	1	0	0	2	*3*
8:45 AM	6	4	1	1	*12*	0	0	1	0	*1*	0	0	1	2	*3*
Count Total	32	40	5	5	*82*	0	0	2	0	*2*	4	9	5	13	*31*
Peak Hour	**18**	**23**	**2**	**4**	***47***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**1**	**7**	***12***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Crescent Ave Northbound				Crescent Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	5	0
7:15 AM	0	0	2	0	0	0	7	0	0	1	0	0	0	0	0	0	10	0
7:30 AM	**0**	**0**	**4**	**3**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**11**	0
7:45 AM	**0**	**0**	**2**	**1**	**0**	**0**	**8**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	39
8:00 AM	**1**	**0**	**4**	**0**	**0**	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**13**	47
8:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10**	**47**
8:30 AM	0	0	3	0	0	1	3	0	0	0	0	1	0	0	0	0	8	44
8:45 AM	0	0	5	1	0	0	4	0	0	1	0	0	0	1	0	0	12	43
Count Total	1	0	26	5	0	2	37	1	0	4	0	1	0	4	1	0	82	0
Peak Hour	**1**	**0**	**13**	**4**	**0**	**1**	**21**	**1**	**0**	**2**	**0**	**0**	**0**	**3**	**1**	**0**	**47**	**0**

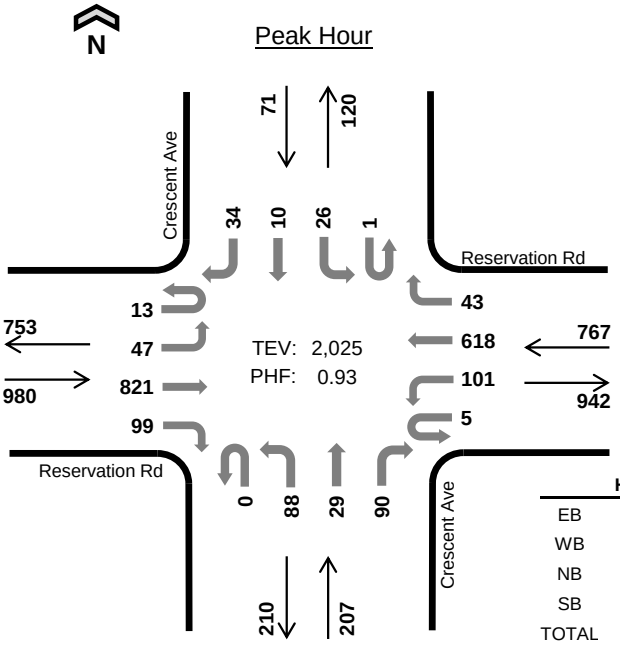
Two-Hour Count Summaries - Bikes

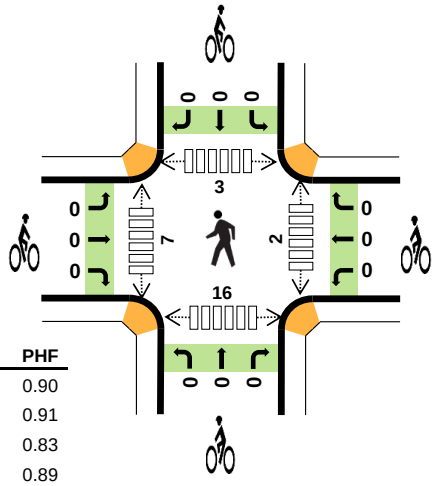
Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Crescent Ave Northbound			Crescent Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Count Total	0	0	0	0	0	0	2	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Crescent Ave
Reservation Rd

Date: 10-02-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	1.5%	0.90
WB	1.2%	0.91
NB	1.4%	0.83
SB	1.4%	0.89
TOTAL	1.4%	0.93

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Crescent Ave Northbound				Crescent Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	6	9	170	17	0	12	155	7	0	19	5	16	0	6	2	8	432	0
4:15 PM	2	9	230	20	0	19	148	5	0	15	7	20	0	7	2	4	488	0
4:30 PM	**4**	**10**	**181**	**22**	**1**	**32**	**160**	**17**	**0**	**19**	**7**	**21**	**0**	**5**	**4**	**8**	**491**	0
4:45 PM	**4**	**12**	**187**	**22**	**0**	**25**	**141**	**7**	**0**	**21**	**3**	**20**	**1**	**5**	**2**	**11**	**461**	1,872
5:00 PM	**3**	**13**	**233**	**24**	**1**	**18**	**143**	**11**	**0**	**22**	**10**	**30**	**0**	**10**	**2**	**8**	**528**	1,968
5:15 PM	**2**	**12**	**220**	**31**	**3**	**26**	**174**	**8**	**0**	**26**	**9**	**19**	**0**	**6**	**2**	**7**	**545**	**2,025**
5:30 PM	3	16	177	23	1	26	169	5	0	20	4	15	0	5	5	3	472	2,006
5:45 PM	2	12	182	23	1	22	137	15	0	15	4	14	0	6	2	10	445	1,990
Count Total	26	93	1,580	182	7	180	1,227	75	0	157	49	155	1	50	21	59	3,862	0
Peak Hour All	**13**	**47**	**821**	**99**	**5**	**101**	**618**	**43**	**0**	**88**	**29**	**90**	**1**	**26**	**10**	**34**	**2,025**	**0**
Peak Hour HV	**1**	**0**	**12**	**2**	**0**	**0**	**9**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1**	**28**	**0**
Peak Hour HV%	**8%**	**0%**	**1%**	**2%**	**0%**	**0%**	**1%**	**0%**	**-**	**2%**	**0%**	**1%**	**0%**	**0%**	**0%**	**3%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	5	2	0	0	*7*	0	0	0	0	*0*	8	3	1	0	*12*
4:15 PM	5	2	0	0	*7*	0	0	0	0	*0*	3	2	3	2	*10*
4:30 PM	**3**	**2**	**1**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**3**	**5**	*12*
4:45 PM	**4**	**3**	**1**	**1**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**4**	*6*
5:00 PM	**5**	**1**	**0**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**7**	*8*
5:15 PM	**3**	**3**	**1**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***
5:30 PM	1	0	0	0	*1*	0	0	0	0	*0*	2	2	0	0	*4*
5:45 PM	2	2	0	0	*4*	0	0	0	0	*0*	2	2	0	0	*4*
Count Total	28	15	3	1	*47*	0	0	0	0	*0*	17	16	7	18	*58*
Peak Hour	**15**	**9**	**3**	**1**	***28***	**0**	**0**	**0**	**0**	***0***	**2**	**7**	**3**	**16**	***28***

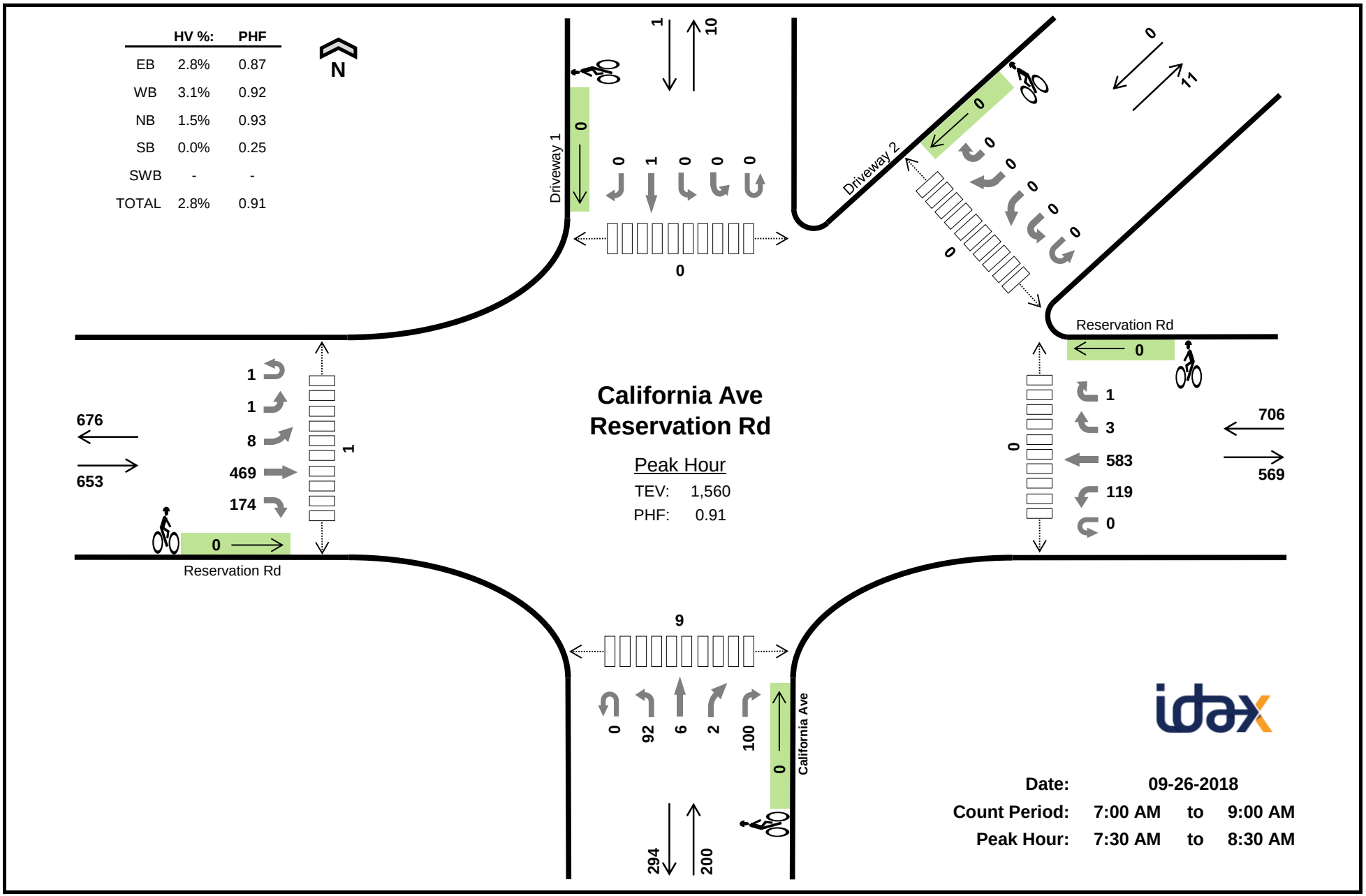
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Crescent Ave Northbound				Crescent Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	5	0	0	0	2	0	0	0	0	0	0	0	0	0	7	0
4:15 PM	0	0	4	1	0	0	2	0	0	0	0	0	0	0	0	0	7	0
4:30 PM	**1**	**0**	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	0
4:45 PM	**0**	**0**	**3**	**1**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	29
5:00 PM	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	28
5:15 PM	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**28**
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23
5:45 PM	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	4	18
Count Total	1	0	23	4	0	0	15	0	0	2	0	1	0	0	0	1	47	0
Peak Hour	**1**	**0**	**12**	**2**	**0**	**0**	**9**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1**	**28**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Crescent Ave Northbound			Crescent Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.


HV %: PHF
EB 2.8% 0.87
WB 3.1% 0.92
NB 1.5% 0.93
SB 0.0% 0.25
SWB - -
TOTAL 2.8% 0.91
N
California Ave
Reservation Rd
Peak Hour
TEV: 1,560
PHF: 0.91
Driveway 1
Driveway 2
Reservation Rd
Reservation Rd
California Ave
676
653
706
569
Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound					Reservation Rd Westbound					California Ave Northbound					Driveway 1 Southbound					Driveway 2 Southwestbound					15-min Total	Rolling One Hour
		UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
7:00 AM		0	0	0	83	17	0	24	145	0	1	0	6	1	2	15	0	0	1	0	0	0	0	0	0	0	295	0
7:15 AM		0	0	2	106	31	0	24	124	2	3	0	11	0	0	17	0	0	0	0	0	0	0	0	0	0	320	0
7:30 AM		**0**	**1**	**1**	**120**	**66**	**0**	**39**	**147**	**0**	**1**	**0**	**26**	**2**	**0**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**428**	0
7:45 AM		**1**	**0**	**4**	**127**	**49**	**0**	**40**	**151**	**1**	**0**	**0**	**26**	**1**	**1**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**427**	1,470
8:00 AM		**0**	**0**	**2**	**122**	**32**	**0**	**24**	**144**	**2**	**0**	**0**	**20**	**2**	**1**	**27**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**377**	1,552
8:15 AM		**0**	**0**	**1**	**100**	**27**	**0**	**16**	**141**	**0**	**0**	**0**	**20**	**1**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**328**	**1,560**
8:30 AM		0	0	0	138	20	0	21	129	0	2	0	14	0	0	15	0	0	0	0	0	0	0	0	0	0	339	1,471
8:45 AM		0	0	2	73	24	0	8	104	0	0	0	10	0	0	12	0	0	0	0	0	0	0	0	1	0	234	1,278
Count Total		1	1	12	869	266	0	196	1,085	5	7	0	133	7	4	159	0	0	1	1	0	0	0	0	1	0	2,748	0
Peak Hour	**All**	**1**	**1**	**8**	**469**	**174**	**0**	**119**	**583**	**3**	**1**	**0**	**92**	**6**	**2**	**100**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1,560**	**0**
	HV	**0**	**0**	**0**	**15**	**3**	**0**	**3**	**19**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**43**	**0**
	HV%	**0%**	**0%**	**0%**	**3%**	**2%**	**-**	**3%**	**3%**	**0%**	**0%**	**-**	**1%**	**0%**	**0%**	**2%**	**-**	**-**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

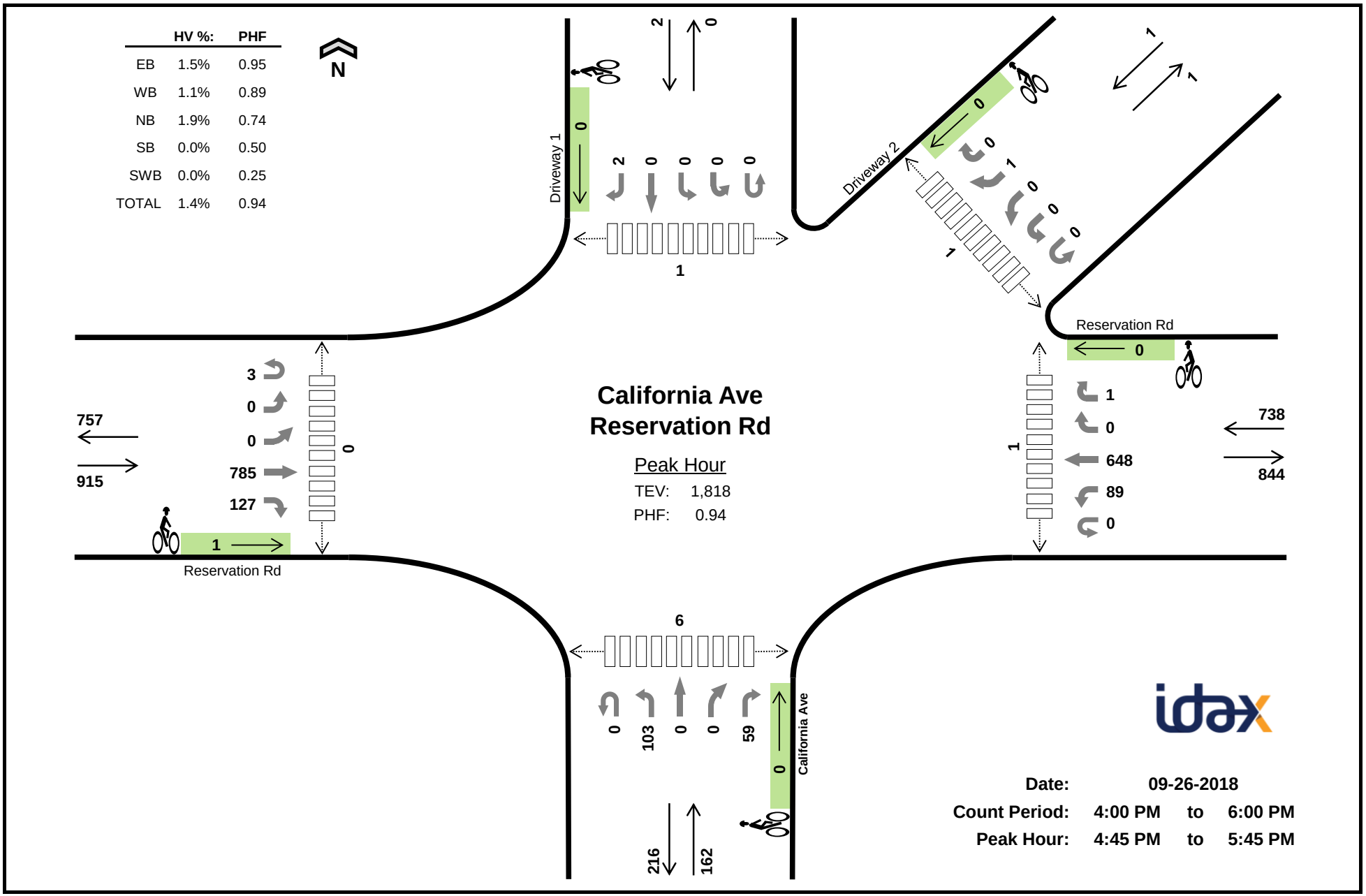
Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	SWB	Total	EB	WB	NB	SB	SWB	Total	East	West	North	South	Northeast	Total
7:00 AM	3	5	0	0	0	*8*	0	0	0	0	0	*0*	0	0	0	1	0	*1*
7:15 AM	2	2	0	0	0	*4*	0	0	0	0	0	*0*	0	0	0	0	0	*0*
7:30 AM	**4**	**5**	**3**	**0**	**0**	***12***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	**0**	***3***
7:45 AM	**3**	**6**	**0**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	**0**	***2***
8:00 AM	**6**	**6**	**0**	**0**	**0**	***12***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	**0**	***3***
8:15 AM	**5**	**5**	**0**	**0**	**0**	***10***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	**0**	***2***
8:30 AM	2	4	1	0	0	*7*	0	0	0	0	0	*0*	0	0	0	0	0	*0*
8:45 AM	3	3	0	0	0	*6*	0	0	0	0	0	*0*	0	0	0	0	0	*0*
Count Total	28	36	4	0	0	*68*	0	0	0	0	0	*0*	0	1	0	10	0	*11*
Peak Hr	**18**	**22**	**3**	**0**	**0**	***43***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**9**	**0**	*10*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	3	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
7:15 AM	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
7:30 AM	**0**	**0**	**0**	**3**	**1**	**0**	**2**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	0
7:45 AM	**0**	**0**	**0**	**2**	**1**	**0**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	33
8:00 AM	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	37
8:15 AM	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**43**
8:30 AM	0	0	0	2	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	38
8:45 AM	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	35
Count Total	0	0	0	25	3	0	5	31	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	68	0
Peak Hour	**0**	**0**	**0**	**15**	**3**	**0**	**3**	**19**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	43	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	**0**


HV %: PHF
EB 1.5% 0.95
WB 1.1% 0.89
NB 1.9% 0.74
SB 0.0% 0.50
SWB 0.0% 0.25
TOTAL 1.4% 0.94
N
Driveway 1
Driveway 2
Reservation Rd
California Ave
Reservation Rd
California Ave
Reservation Rd
Peak Hour
TEV: 1,818
PHF: 0.94
757
915
3
0
0
785
127
1
738
844
1
0
648
89
0
216
162
0
103
0
0
59
Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound					Reservation Rd Westbound					California Ave Northbound					Driveway 1 Southbound					Driveway 2 Southwestbound					15-min Total	Rolling One Hour
		UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
4:00 PM		0	0	1	145	38	0	11	126	0	0	0	27	0	1	17	0	0	1	2	1	0	0	0	0	0	370	0
4:15 PM		0	0	0	151	25	0	18	116	0	0	0	20	0	0	16	0	0	2	2	0	0	0	0	0	0	350	0
4:30 PM		0	0	0	168	31	0	22	152	0	1	0	33	0	0	28	0	0	0	3	0	0	0	0	0	0	438	0
4:45 PM		**1**	**0**	**0**	**203**	**34**	**0**	**16**	**147**	**0**	**1**	**0**	**22**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**440**	1,598
5:00 PM		**1**	**0**	**0**	**194**	**26**	**0**	**13**	**147**	**0**	**0**	**0**	**36**	**0**	**0**	**19**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**437**	1,665
5:15 PM		**0**	**0**	**0**	**187**	**27**	**0**	**32**	**176**	**0**	**0**	**0**	**23**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**458**	1,773
5:30 PM		**1**	**0**	**0**	**201**	**40**	**0**	**28**	**178**	**0**	**0**	**0**	**22**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**483**	**1,818**
5:45 PM		0	0	0	139	41	1	22	160	0	0	0	39	0	0	19	0	0	0	0	0	0	0	0	0	0	421	1,799
Count Total		3	0	1	1,388	262	1	162	1,202	0	2	0	222	0	1	139	0	0	3	7	3	0	0	0	1	0	3,397	0
Peak Hour	**All**	**3**	**0**	**0**	**785**	**127**	**0**	**89**	**648**	**0**	**1**	**0**	**103**	**0**	**0**	**59**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**1,818**	**0**
	HV	**0**	**0**	**0**	**13**	**1**	**0**	**0**	**8**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**0**
	HV%	**0%**	**-**	**-**	**2%**	**1%**	**-**	**0%**	**1%**	**-**	**0%**	**-**	**3%**	**-**	**-**	**0%**	**-**	**-**	**-**	**-**	**0%**	**-**	**-**	**-**	**0%**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	SWB	Total	EB	WB	NB	SB	SWB	Total	East	West	North	South	Northeast	Total
4:00 PM	4	3	1	1	0	*9*	0	0	0	0	0	*0*	0	0	0	2	0	*2*
4:15 PM	3	3	2	0	0	*8*	0	0	0	0	0	*0*	0	0	0	0	0	*0*
4:30 PM	2	3	0	0	0	*5*	1	0	0	0	0	*1*	0	0	0	1	0	*1*
4:45 PM	**4**	**4**	**1**	**0**	**0**	***9***	**1**	**0**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**2**	**0**	***2***
5:00 PM	**5**	**3**	**0**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	**0**	***2***
5:15 PM	**2**	**0**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	**0**	***2***
5:30 PM	**3**	**1**	**1**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**0**	**1**	***3***
5:45 PM	3	3	0	0	0	*6*	0	0	0	0	0	*0*	0	0	0	3	0	*3*
Count Total	26	20	6	1	0	*53*	2	0	0	0	0	*2*	1	0	1	12	1	*15*
Peak Hr	**14**	**8**	**3**	**0**	**0**	***25***	**1**	**0**	**0**	**0**	**0**	***1***	**1**	**0**	**1**	**6**	**1**	*9*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	4	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	9	0
4:15 PM	0	0	0	3	0	0	0	3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	8	0
4:30 PM	0	0	0	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
4:45 PM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	31
5:00 PM	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	30
5:15 PM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	25
5:30 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**25**
5:45 PM	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	22
Count Total	0	0	0	24	2	0	2	18	0	0	0	4	0	0	2	0	0	0	0	1	0	0	0	0	0	53	0
Peak Hour	**0**	**0**	**0**	**13**	**1**	**0**	**0**	**8**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	25	**0**

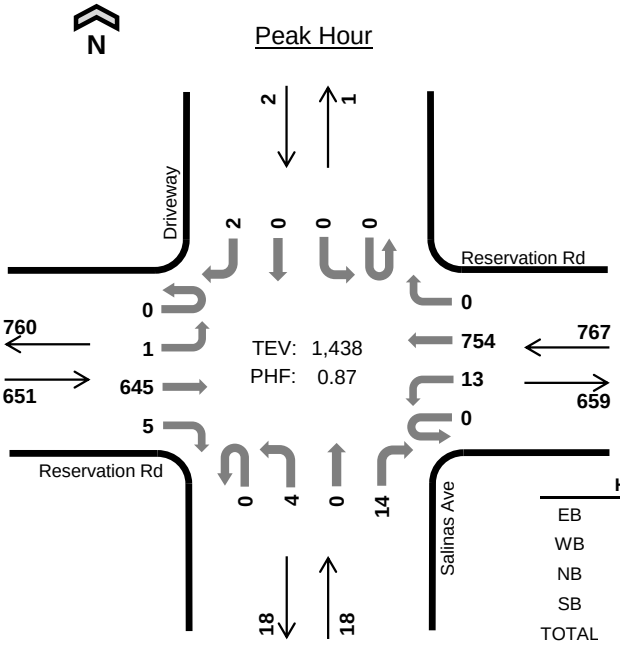
Two-Hour Count Summaries - Bikes

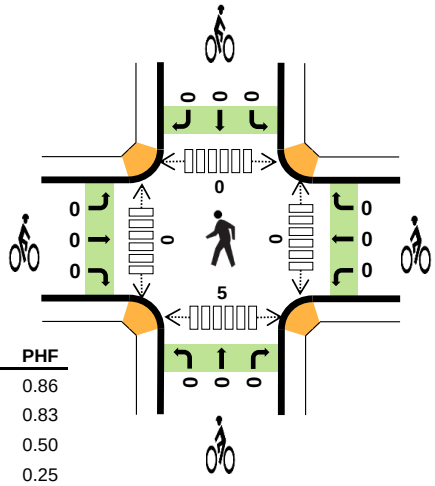
Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1	**0**

Salinas Ave
Reservation Rd

Date: 10-02-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM

Peak Hour





	HV %:	PHF
EB	1.7%	0.86
WB	2.6%	0.83
NB	0.0%	0.50
SB	0.0%	0.25
TOTAL	2.2%	0.87

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Salinas Ave Northbound				Driveway Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	120	2	0	1	149	0	0	2	0	2	0	0	0	0	277	0
7:15 AM	**0**	**0**	**145**	**2**	**0**	**2**	**155**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**307**	0
7:30 AM	**0**	**0**	**189**	**1**	**0**	**4**	**214**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**412**	0
7:45 AM	**0**	**0**	**158**	**1**	**0**	**4**	**227**	**0**	**0**	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**399**	1,395
8:00 AM	**0**	**1**	**153**	**1**	**0**	**3**	**158**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**320**	**1,438**
8:15 AM	0	0	112	1	1	2	155	0	0	1	0	2	0	0	0	0	274	1,405
8:30 AM	0	0	122	0	0	0	135	0	0	1	0	0	0	0	0	0	258	1,251
8:45 AM	0	0	79	0	0	0	111	0	0	2	0	1	0	0	0	0	193	1,045
Count Total	0	2	1,078	8	1	16	1,304	0	0	10	0	19	0	0	0	2	2,440	0
Peak Hour All	**0**	**1**	**645**	**5**	**0**	**13**	**754**	**0**	**0**	**4**	**0**	**14**	**0**	**0**	**0**	**2**	**1,438**	**0**
Peak Hour HV	**0**	**0**	**10**	**1**	**0**	**1**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**0**
Peak Hour HV%	**-**	**0%**	**2%**	**20%**	**-**	**8%**	**3%**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	3	0	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	**4**	**7**	**0**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	*2*
7:30 AM	**3**	**2**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**1**	**5**	**0**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
8:00 AM	**3**	**6**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
8:15 AM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
8:30 AM	6	3	0	0	*9*	0	0	0	0	*0*	0	0	0	2	*2*
8:45 AM	2	2	2	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	23	30	2	0	*55*	0	0	0	0	*0*	0	0	0	8	*8*
Peak Hour	**11**	**20**	**0**	**0**	***31***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**5**	***5***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Salinas Ave Northbound				Driveway Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	0	0	1	2	0	0	0	0	0	0	0	0	0	7	0
7:15 AM	**0**	**0**	**3**	**1**	**0**	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	0
7:30 AM	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	29
8:00 AM	**0**	**0**	**3**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**31**
8:15 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	22
8:30 AM	0	0	6	0	0	0	3	0	0	0	0	0	0	0	0	0	9	26
8:45 AM	0	0	2	0	0	0	2	0	0	2	0	0	0	0	0	0	6	26
Count Total	0	0	22	1	0	2	28	0	0	2	0	0	0	0	0	0	55	0
Peak Hour	**0**	**0**	**10**	**1**	**0**	**1**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**0**

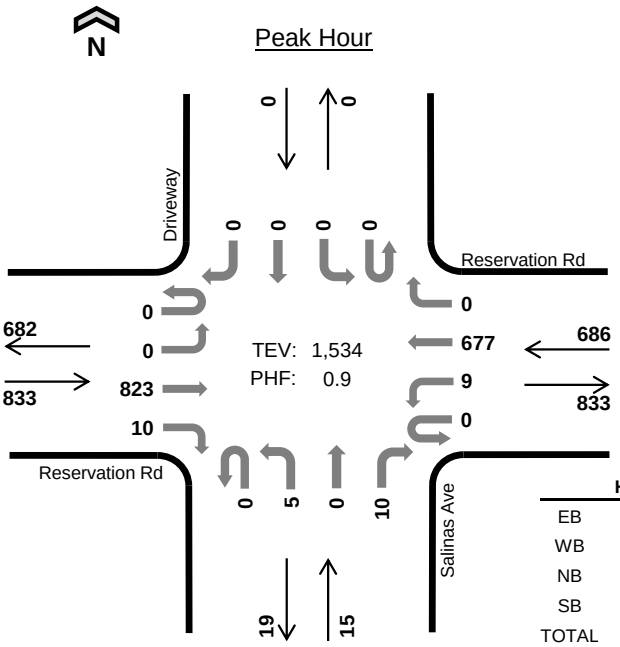
Two-Hour Count Summaries - Bikes

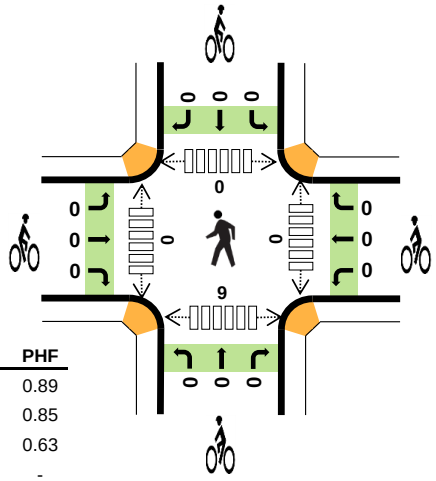
Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Salinas Ave Northbound			Driveway Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Salinas Ave
Reservation Rd

Date: 10-02-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	1.2%	0.89
WB	0.9%	0.85
NB	0.0%	0.63
SB	-	-
TOTAL	1.0%	0.90

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Salinas Ave Northbound				Driveway Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	178	0	0	0	141	0	0	0	0	3	0	0	0	0	322	0
4:15 PM	0	0	186	2	0	0	144	0	0	0	0	1	0	0	0	4	337	0
4:30 PM	0	0	176	1	0	0	166	0	0	1	0	3	0	0	0	0	347	0
4:45 PM	**0**	**0**	**196**	**2**	**0**	**1**	**140**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**342**	1,348
5:00 PM	**0**	**0**	**230**	**3**	**0**	**2**	**148**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**387**	1,413
5:15 PM	**0**	**0**	**216**	**3**	**0**	**5**	**196**	**0**	**0**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**426**	1,502
5:30 PM	**0**	**0**	**181**	**2**	**0**	**1**	**193**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**379**	**1,534**
5:45 PM	1	0	147	2	0	5	165	0	0	0	0	4	0	0	0	0	324	1,516
Count Total	1	0	1,510	15	0	14	1,293	0	0	6	0	21	0	0	0	4	2,864	0
Peak Hour All	**0**	**0**	**823**	**10**	**0**	**9**	**677**	**0**	**0**	**5**	**0**	**10**	**0**	**0**	**0**	**0**	**1,534**	**0**
Peak Hour HV	**0**	**0**	**10**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**
Peak Hour HV%	**-**	**-**	**1%**	**0%**	**-**	**0%**	**1%**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	2	0	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	2	2	0	0	*4*	0	0	0	0	*0*	0	0	0	3	*3*
4:30 PM	2	3	0	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	**1**	**1**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	*4*
5:00 PM	**5**	**2**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**3**	**1**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	*4*
5:30 PM	**1**	**2**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
5:45 PM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	6	0	*6*
Count Total	19	14	0	0	*33*	0	0	0	0	*0*	0	0	6	12	*18*
Peak Hour	**10**	**6**	**0**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**9**	***9***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Salinas Ave Northbound				Driveway Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	6	0
4:15 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
4:30 PM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	17
5:00 PM	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	18
5:15 PM	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	18
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**16**
5:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	16
Count Total	0	0	19	0	0	0	14	0	0	0	0	0	0	0	0	0	33	0
Peak Hour	**0**	**0**	**10**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**

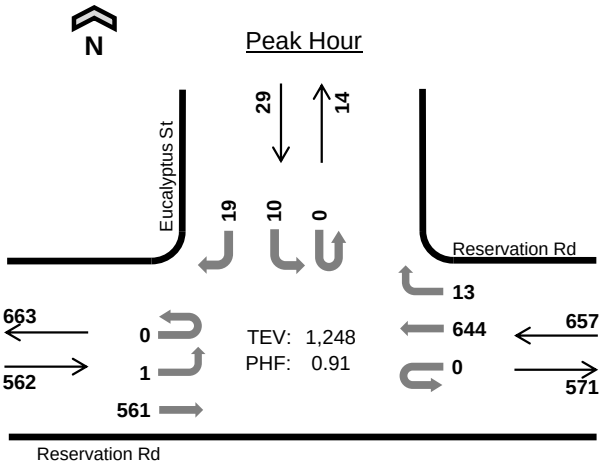
Two-Hour Count Summaries - Bikes

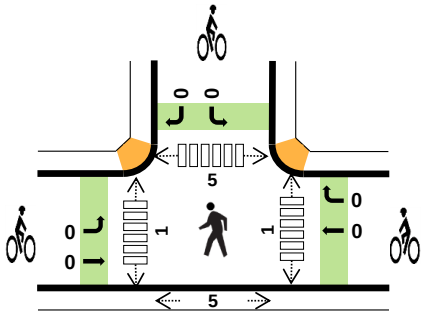
Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Salinas Ave Northbound			Driveway Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Eucalyptus St
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	3.2%	0.82
WB	3.5%	0.93
NB	-	-
SB	0.0%	0.73
TOTAL	3.3%	0.91

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound				Reservation Rd Westbound				0 Northbound				Eucalyptus St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	75	0	0	0	186	0	0	0	0	0	0	1	0	5	267	0
7:15 AM		0	1	106	0	0	0	157	1	0	0	0	0	0	2	0	4	271	0
7:30 AM		0	0	129	0	0	0	159	1	0	0	0	0	0	2	0	1	292	0
7:45 AM		**0**	**0**	**172**	**0**	**0**	**0**	**164**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**3**	**343**	1,173
8:00 AM		**0**	**0**	**135**	**0**	**0**	**0**	**152**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**296**	1,202
8:15 AM		**0**	**0**	**110**	**0**	**0**	**0**	**171**	**5**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**6**	**296**	1,227
8:30 AM		**0**	**1**	**144**	**0**	**0**	**0**	**157**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**7**	**313**	**1,248**
8:45 AM		0	3	104	0	0	0	143	2	0	0	0	0	0	2	0	0	254	1,159
Count Total		0	5	975	0	0	0	1,289	17	0	0	0	0	0	17	0	29	2,332	0
Peak Hour	**All**	**0**	**1**	**561**	**0**	**0**	**0**	**644**	**13**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**19**	**1,248**	**0**
	HV	**0**	**0**	**18**	**0**	**0**	**0**	**23**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**41**	**0**
	HV%	**-**	**0%**	**3%**	**-**	**-**	**-**	**4%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	6	0	0	*11*	0	0	0	0	*0*	0	0	1	0	*1*
7:15 AM	2	3	0	0	*5*	0	1	0	0	*1*	0	0	0	1	*1*
7:30 AM	5	7	0	0	*12*	0	0	0	0	*0*	1	0	3	1	*5*
7:45 AM	**5**	**4**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**1**	**2**	*5*
8:00 AM	**5**	**9**	**0**	**0**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
8:15 AM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**2**	*4*
8:30 AM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	***2***
8:45 AM	4	5	0	0	*9*	0	0	0	0	*0*	0	0	5	2	*7*
Count Total	34	44	0	0	*78*	0	1	0	0	*1*	2	1	14	9	*26*
Peak Hr	**18**	**23**	**0**	**0**	***41***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**5**	**5**	***12***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				0				Eucalyptus St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	11	0
7:15 AM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0
7:30 AM	0	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	12	0
7:45 AM	**0**	**0**	**5**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	37
8:00 AM	**0**	**0**	**5**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	40
8:15 AM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	44
8:30 AM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**41**
8:45 AM	0	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	9	41
Count Total	0	0	34	0	0	0	44	0	0	0	0	0	0	0	0	0	78	0
Peak Hour	**0**	**0**	**18**	**0**	**0**	**0**	**23**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**41**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd			Reservation Rd			0			Eucalyptus St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

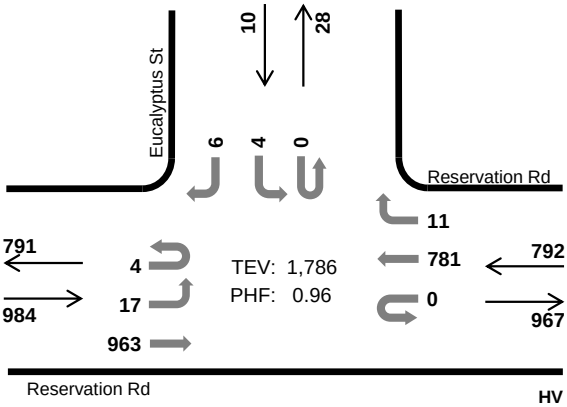
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

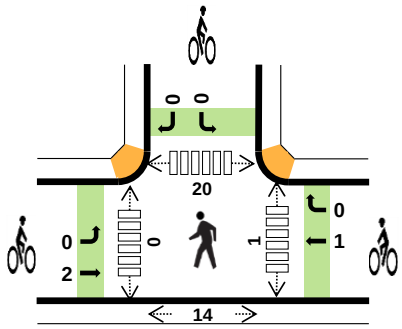
Eucalyptus St
Reservation Rd

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

N

Peak Hour





	HV %:	PHF
EB	1.5%	0.94
WB	1.1%	0.96
NB	-	-
SB	0.0%	0.63
TOTAL	1.3%	0.96

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound				Reservation Rd Westbound				0 Northbound				Eucalyptus St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	5	203	0	0	0	180	5	0	0	0	0	0	2	0	3	398	0
4:15 PM		0	2	205	0	0	0	171	3	0	0	0	0	0	4	0	3	388	0
4:30 PM		0	2	243	0	0	0	170	3	0	0	0	0	0	2	0	2	422	0
4:45 PM		**1**	**3**	**250**	**0**	**0**	**0**	**181**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**440**	1,648
5:00 PM		**0**	**3**	**229**	**0**	**0**	**0**	**204**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**441**	1,691
5:15 PM		**3**	**4**	**230**	**0**	**0**	**0**	**203**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**442**	1,745
5:30 PM		**0**	**7**	**254**	**0**	**0**	**0**	**193**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**463**	**1,786**
5:45 PM		1	2	224	0	0	0	208	1	0	0	0	0	0	2	0	1	439	1,785
Count Total		5	28	1,838	0	0	0	1,510	23	0	0	0	0	0	14	0	15	3,433	0
Peak Hour	**All**	**4**	**17**	**963**	**0**	**0**	**0**	**781**	**11**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**6**	**1,786**	**0**
	HV	**0**	**0**	**15**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**
	HV%	**0%**	**0%**	**2%**	**-**	**-**	**-**	**1%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	2	3	0	0	*5*	0	0	0	0	*0*	0	0	6	3	*9*
4:15 PM	3	3	0	0	*6*	0	0	0	0	*0*	1	1	4	2	*8*
4:30 PM	2	2	0	0	*4*	1	0	0	0	*1*	2	0	10	2	*14*
4:45 PM	**7**	**4**	**0**	**0**	***11***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**5**	**5**	*10*
5:00 PM	**2**	**3**	**0**	**0**	***5***	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**4**	**3**	*8*
5:15 PM	**2**	**2**	**0**	**0**	***4***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**2**	**5**	*7*
5:30 PM	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**9**	**1**	***10***
5:45 PM	3	4	0	0	*7*	1	0	0	0	*1*	1	1	5	3	*10*
Count Total	25	21	0	0	*46*	4	1	0	0	*5*	5	2	45	24	*76*
Peak Hr	**15**	**9**	**0**	**0**	***24***	**2**	**1**	**0**	**0**	***3***	**1**	**0**	**20**	**14**	***35***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				0				Eucalyptus St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0
4:15 PM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	6	0
4:30 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
4:45 PM	**0**	**0**	**7**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	26
5:00 PM	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	26
5:15 PM	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	24
5:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**24**
5:45 PM	0	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	7	20
Count Total	0	0	25	0	0	0	21	0	0	0	0	0	0	0	0	0	46	0
Peak Hour	**0**	**0**	**15**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd			Reservation Rd			0			Eucalyptus St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	3
Count Total	0	4	0	0	1	0	0	0	0	0	0	0	5	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

SYNCHRO LEVEL OF SERVICE REPORTS

EXISTING CONDITIONS

AM & PM PEAK HOUR

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	10	10	0	391	10	10	1476
Future Vol, veh/h	10	10	0	391	10	10	1476
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	225	-	-	150	-
Veh in Median Storage, #	2	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	11	11	0	420	11	11	1587

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	1242	216	1587	0	0	431	0
Stage 1	426	-	-	-	-	-	-
Stage 2	816	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	167	789	138	-	-	1125	-
Stage 1	627	-	-	-	-	-	-
Stage 2	395	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	165	789	138	-	-	1125	-
Mov Cap-2 Maneuver	336	-	-	-	-	-	-
Stage 1	621	-	-	-	-	-	-
Stage 2	395	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBU	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	138	-	-	336	789	1125	-
HCM Lane V/C Ratio	-	-	-	0.032	0.014	0.01	-
HCM Control Delay (s)	0	-	-	16.1	9.6	8.2	-
HCM Lane LOS	A	-	-	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	492	65	0	280	119	78	991
Future Volume (veh/h)	492	65	0	280	119	78	991
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
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1870	1900		1870	1870	1870	1870
Adj Flow Rate, veh/h	594	0		301	128	84	1066
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0		2	2	2	2
Cap, veh/h	935	423		1084	482	138	1686
Arrive On Green	0.26	0.00		0.31	0.31	0.08	0.47
Sat Flow, veh/h	3563	1610		3647	1580	1781	3647
Grp Volume(v), veh/h	594	0		301	128	84	1066
Grp Sat Flow(s),veh/h/ln	1781	1610		1777	1580	1781	1777
Q Serve(g_s), s	5.6	0.0		2.4	2.3	1.7	8.6
Cycle Q Clear(g_c), s	5.6	0.0		2.4	2.3	1.7	8.6
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	935	423		1084	482	138	1686
V/C Ratio(X)	0.64	0.00		0.28	0.27	0.61	0.63
Avail Cap(c_a), veh/h	2811	1271		2804	1247	1406	2804
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	12.4	0.0		10.0	10.0	17.0	7.5
Incr Delay (d2), s/veh	0.7	0.0		0.1	0.3	4.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0		0.7	0.7	0.7	1.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	13.1	0.0		10.2	10.3	21.3	7.9
LnGrp LOS	B	A		B	B	C	A
Approach Vol, veh/h	594			429			1150
Approach Delay, s/veh	13.1			10.2			8.9
Approach LOS	B			B			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.4	16.6				23.0		15.0
Change Period (Y+Rc), s	3.5	5.0				5.0		5.0
Max Green Setting (Gmax), s	30.0	30.0				30.0		30.0
Max Q Clear Time (g_c+I1), s	3.7	4.4				10.6		7.6
Green Ext Time (p_c), s	0.2	2.3				7.5		2.3

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	21	211	68	21	20	51	288	11	19	790	26
Future Volume (veh/h)	76	21	211	68	21	20	51	288	11	19	790	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	22	218	70	22	21	53	297	11	20	814	27
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	325	92	359	144	151	123	70	1401	52	34	1354	580
Arrive On Green	0.23	0.23	0.23	0.08	0.08	0.08	0.04	0.40	0.40	0.02	0.38	0.38
Sat Flow, veh/h	1404	396	1552	1781	1870	1520	1781	3492	129	1781	3554	1523
Grp Volume(v), veh/h	100	0	218	70	22	21	53	151	157	20	814	27
Grp Sat Flow(s),veh/h/ln	1800	0	1552	1781	1870	1520	1781	1777	1844	1781	1777	1523
Q Serve(g_s), s	2.7	0.0	7.5	2.2	0.7	0.8	1.8	3.3	3.3	0.7	11.0	0.7
Cycle Q Clear(g_c), s	2.7	0.0	7.5	2.2	0.7	0.8	1.8	3.3	3.3	0.7	11.0	0.7
Prop In Lane	0.78		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	417	0	359	144	151	123	70	713	740	34	1354	580
V/C Ratio(X)	0.24	0.00	0.61	0.49	0.15	0.17	0.76	0.21	0.21	0.59	0.60	0.05
Avail Cap(c_a), veh/h	1354	0	1168	596	625	508	596	713	740	447	1783	764
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	20.5	26.3	25.6	25.6	28.5	11.7	11.7	29.1	14.9	11.7
Incr Delay (d2), s/veh	1.1	0.0	5.9	2.5	0.4	0.7	6.2	0.7	0.7	6.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	3.1	1.0	0.3	0.3	0.8	1.3	1.3	0.3	3.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	0.0	26.4	28.8	26.0	26.3	34.7	12.4	12.4	35.2	15.0	11.7
LnGrp LOS	B	A	C	C	C	C	C	B	B	D	B	B
Approach Vol, veh/h		318			113			361			861	
Approach Delay, s/veh		24.3			27.8			15.7			15.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	28.5		17.9	5.8	27.3		8.8
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	15.0	24.0		45.0	20.0	30.0		20.0
Max Q Clear Time (g_c+I1), s	2.7	5.3		9.5	3.8	13.0		4.2
Green Ext Time (p_c), s	0.0	0.5		4.2	0.0	2.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	191	114	383	147	143	115	154	224	140	204	3
Future Volume (veh/h)	12	191	114	383	147	143	115	154	224	140	204	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	215	128	430	165	161	129	173	252	157	229	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	20	333	204	698	378	310	172	496	726	330	947	12
Arrive On Green	0.16	0.16	0.16	0.20	0.20	0.20	0.10	0.27	0.27	0.10	0.26	0.26
Sat Flow, veh/h	124	2068	1268	3456	1870	1538	1781	1870	2737	3456	3590	47
Grp Volume(v), veh/h	195	0	161	430	165	161	129	173	252	157	113	119
Grp Sat Flow(s),veh/h/ln	1864	0	1596	1728	1870	1538	1781	1870	1369	1728	1777	1860
Q Serve(g_s), s	5.7	0.0	5.4	6.6	4.5	5.4	4.1	4.3	4.3	2.5	2.9	2.9
Cycle Q Clear(g_c), s	5.7	0.0	5.4	6.6	4.5	5.4	4.1	4.3	4.3	2.5	2.9	2.9
Prop In Lane	0.07		0.79	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	300	0	257	698	378	310	172	496	726	330	469	491
V/C Ratio(X)	0.65	0.00	0.63	0.62	0.44	0.52	0.75	0.35	0.35	0.48	0.24	0.24
Avail Cap(c_a), veh/h	645	0	552	1792	970	798	924	970	1420	1195	1229	1286
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	0.0	22.6	21.0	20.2	20.6	25.4	17.2	17.2	24.8	16.7	16.7
Incr Delay (d2), s/veh	2.4	0.0	2.5	0.9	0.8	1.3	6.4	0.4	0.3	1.1	0.3	0.3
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(50%),veh/ln	2.5	0.0	2.1	2.5	1.9	1.9	1.9	1.7	1.2	1.0	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	25.1	21.9	21.0	21.9	31.8	17.6	17.5	25.9	17.0	17.0
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		356			756			554			389	
Approach Delay, s/veh		25.1			21.7			20.9			20.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	19.3		13.3	9.6	19.3		15.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	30.0		20.0	30.0	40.0		30.0
Max Q Clear Time (g_c+I1), s	4.5	6.3		7.7	6.1	4.9		8.6
Green Ext Time (p_c), s	0.4	2.0		1.7	0.3	1.3		3.1

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	484	10	11	626	52	5	1	3	58	1	57
Future Volume (veh/h)	44	484	10	11	626	52	5	1	3	58	1	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.98	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	526	11	12	680	0	5	1	3	63	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1956	41	55	1533		348	57	266	385	5	
Arrive On Green	0.15	0.55	0.55	0.03	0.43	0.00	0.17	0.17	0.17	0.17	0.17	0.00
Sat Flow, veh/h	1781	3558	74	1781	3554	1585	1202	335	1552	1346	29	1585
Grp Volume(v), veh/h	48	262	275	12	680	0	6	0	3	64	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1856	1781	1777	1585	1536	0	1552	1375	0	1585
Q Serve(g_s), s	1.1	3.6	3.6	0.3	6.2	0.0	0.0	0.0	0.1	1.8	0.0	0.0
Cycle Q Clear(g_c), s	1.1	3.6	3.6	0.3	6.2	0.0	0.1	0.0	0.1	1.9	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.83		1.00	0.98		1.00
Lane Grp Cap(c), veh/h	266	977	1020	55	1533		406	0	266	390	0	
V/C Ratio(X)	0.18	0.27	0.27	0.22	0.44		0.01	0.00	0.01	0.16	0.00	
Avail Cap(c_a), veh/h	615	1897	1982	423	1571		1098	0	1004	946	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)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.2	5.5	5.5	21.9	9.3	0.0	16.0	0.0	15.9	16.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.1	2.0	0.2	0.0	0.0	0.0	0.0	0.2	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(50%),veh/ln	0.4	0.9	1.0	0.1	1.9	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.6	5.7	5.7	23.9	9.5	0.0	16.0	0.0	16.0	17.0	0.0	0.0
LnGrp LOS	B	A	A	C	A		B	A	B	B	A	
Approach Vol, veh/h		585			692	A		9			64	A
Approach Delay, s/veh		6.6			9.7			16.0			17.0	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	11.9	4.9	29.5		11.9	10.4	24.0
Change Period (Y+Rc), s	4.0	3.5	4.0		4.0	3.5	4.0
Max Green Setting (Gmax), s	30.0	11.0	49.5		26.5	16.0	20.5
Max Q Clear Time (g_c+I1), s	2.1	2.3	5.6		3.9	3.1	8.2
Green Ext Time (p_c), s	0.0	0.0	3.6		0.3	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	517	54	123	582	75	57
Future Volume (veh/h)	517	54	123	582	75	57
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	556	58	132	626	81	61
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1412	629	296	2283	304	270
Arrive On Green	0.40	0.40	0.17	0.64	0.17	0.17
Sat Flow, veh/h	3647	1583	1781	3647	1781	1585
Grp Volume(v), veh/h	556	58	132	626	81	61
Grp Sat Flow(s),veh/h/ln	1777	1583	1781	1777	1781	1585
Q Serve(g_s), s	5.7	1.2	3.4	3.9	2.0	1.7
Cycle Q Clear(g_c), s	5.7	1.2	3.4	3.9	2.0	1.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1412	629	296	2283	304	270
V/C Ratio(X)	0.39	0.09	0.45	0.27	0.27	0.23
Avail Cap(c_a), veh/h	2100	935	1018	2283	1053	937
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	10.9	9.6	19.1	3.9	18.3	18.2
Incr Delay (d2), s/veh	0.2	0.1	1.0	0.1	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.3	1.4	0.8	0.8	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	9.6	20.1	4.0	18.8	18.6
LnGrp LOS	B	A	C	A	B	B
Approach Vol, veh/h	614			758	142	
Approach Delay, s/veh	11.0			6.8	18.7	
Approach LOS	B			A	B	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	13.6	12.4	24.7		37.1
Change Period (Y+Rc), s	5.0	4.0	4.5		4.5
Max Green Setting (Gmax), s	30.0	29.0	30.0		30.0
Max Q Clear Time (g_c+I1), s	4.0	5.4	7.7		5.9
Green Ext Time (p_c), s	0.4	0.3	4.0		4.5

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	525	3	0	627	74	3	0	1	49	1	45
Future Volume (veh/h)	70	525	3	0	627	74	3	0	1	49	1	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.98	0.98		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	559	3	0	667	79	3	0	1	52	1	48
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	119	2150	12	0	1600	711	331	19	71	450	7	329
Arrive On Green	0.07	0.59	0.59	0.00	0.45	0.45	0.21	0.00	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3624	19	0	3647	1580	919	92	337	1400	34	1568
Grp Volume(v), veh/h	74	274	288	0	667	79	4	0	0	53	0	48
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	0	1777	1580	1349	0	0	1435	0	1568
Q Serve(g_s), s	1.9	3.4	3.4	0.0	5.8	1.3	0.0	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.9	3.4	3.4	0.0	5.8	1.3	1.1	0.0	0.0	1.1	0.0	1.1
Prop In Lane	1.00		0.01	0.00		1.00	0.75		0.25	0.98		1.00
Lane Grp Cap(c), veh/h	119	1054	1107	0	1600	711	421	0	0	457	0	329
V/C Ratio(X)	0.62	0.26	0.26	0.00	0.42	0.11	0.01	0.00	0.00	0.12	0.00	0.15
Avail Cap(c_a), veh/h	603	1164	1223	0	2329	1035	736	0	0	1077	0	1027
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	4.5	4.5	0.0	8.5	7.3	14.3	0.0	0.0	14.7	0.0	14.7
Incr Delay (d2), s/veh	5.3	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.8	0.8	0.0	1.7	0.4	0.0	0.0	0.0	0.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	4.6	4.6	0.0	8.7	7.4	14.3	0.0	0.0	14.8	0.0	14.9
LnGrp LOS	C	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		636			746			4			101	
Approach Delay, s/veh		7.1			8.6			14.3			14.9	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2	4	6	7	8
Phs Duration (G+Y+Rc), s	13.6	32.2	13.6	6.5	25.6
Change Period (Y+Rc), s	4.0	5.0	4.0	3.5	5.0
Max Green Setting (Gmax), s	20.0	30.0	30.0	15.5	30.0
Max Q Clear Time (g_c+I1), s	3.1	5.4	3.1	3.9	7.8
Green Ext Time (p_c), s	0.0	3.5	0.4	0.1	5.0

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	520	24	27	625	105	14	3	14	101	1	64
Future Volume (veh/h)	31	520	24	27	625	105	14	3	14	101	1	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	571	26	30	687	115	15	3	15	111	1	70
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	1155	490	71	1141	498	135	16	660	153	1	665
Arrive On Green	0.04	0.33	0.33	0.04	0.32	0.32	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1781	3554	1506	1781	3554	1550	17	38	1564	33	2	1576
Grp Volume(v), veh/h	34	571	26	30	687	115	18	0	15	112	0	70
Grp Sat Flow(s),veh/h/ln	1781	1777	1506	1781	1777	1550	54	0	1564	35	0	1576
Q Serve(g_s), s	1.0	6.7	0.6	0.8	8.4	2.8	0.3	0.0	0.3	0.5	0.0	1.4
Cycle Q Clear(g_c), s	1.0	6.7	0.6	0.8	8.4	2.8	21.8	0.0	0.3	21.8	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	0.83		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	79	1155	490	71	1141	498	151	0	660	153	0	665
V/C Ratio(X)	0.43	0.49	0.05	0.42	0.60	0.23	0.12	0.00	0.02	0.73	0.00	0.11
Avail Cap(c_a), veh/h	689	1685	714	689	1650	720	156	0	666	159	0	671
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	0.00	1.00
Uniform Delay (d), s/veh	24.1	14.0	12.0	24.2	14.8	12.9	13.1	0.0	8.7	25.7	0.0	9.0
Incr Delay (d2), s/veh	3.7	0.3	0.0	3.9	0.5	0.2	0.3	0.0	0.0	15.2	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.4	0.2	0.4	3.0	0.9	0.1	0.0	0.1	1.9	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	14.4	12.0	28.1	15.3	13.1	13.4	0.0	8.7	40.9	0.0	9.1
LnGrp LOS	C	B	B	C	B	B	B	A	A	D	A	A
Approach Vol, veh/h		631			832			33			182	
Approach Delay, s/veh		15.0			15.4			11.3			28.6	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	25.9	5.6	20.4		25.9	5.8	20.2
Change Period (Y+Rc), s	4.0	3.5	3.5		4.0	3.5	3.5
Max Green Setting (Gmax), s	22.0	20.0	24.5		22.0	20.0	24.0
Max Q Clear Time (g_c+I1), s	23.8	2.8	8.7		23.8	3.0	10.4
Green Ext Time (p_c), s	0.0	0.0	3.6		0.0	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	500	73	73	614	18	102	18	103	43	30	25
Future Volume (veh/h)	25	500	73	73	614	18	102	18	103	43	30	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	543	79	79	667	20	111	20	112	47	33	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	824	361	105	924	28	386	70	398	244	171	360
Arrive On Green	0.03	0.23	0.23	0.06	0.26	0.26	0.25	0.25	0.25	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1558	1781	3520	106	1520	274	1566	1067	750	1577
Grp Volume(v), veh/h	27	543	79	79	336	351	131	0	112	80	0	27
Grp Sat Flow(s),veh/h/ln	1781	1777	1558	1781	1777	1849	1794	0	1566	1817	0	1577
Q Serve(g_s), s	1.2	11.3	3.3	3.6	14.0	14.1	4.8	0.0	4.7	2.9	0.0	1.1
Cycle Q Clear(g_c), s	1.2	11.3	3.3	3.6	14.0	14.1	4.8	0.0	4.7	2.9	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.06	0.85		1.00	0.59		1.00
Lane Grp Cap(c), veh/h	50	824	361	105	467	486	456	0	398	415	0	360
V/C Ratio(X)	0.54	0.66	0.22	0.75	0.72	0.72	0.29	0.00	0.28	0.19	0.00	0.07
Avail Cap(c_a), veh/h	874	1744	764	874	872	907	881	0	769	892	0	774
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	0.00	1.00
Uniform Delay (d), s/veh	39.1	28.4	25.3	37.8	27.3	27.3	24.5	0.0	24.4	25.4	0.0	24.7
Incr Delay (d2), s/veh	8.8	0.9	0.3	10.4	2.1	2.0	0.3	0.0	0.4	0.2	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	1.2	1.8	6.0	6.2	2.0	0.0	1.7	1.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	29.3	25.6	48.1	29.5	29.4	24.8	0.0	24.8	25.6	0.0	24.8
LnGrp LOS	D	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		649			766			243			107	
Approach Delay, s/veh		29.6			31.4			24.8			25.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.7	8.3	23.9	23.6	5.8	26.4
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	40.0	40.0	40.0	40.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	6.8	5.6	13.3	4.9	3.2	16.1
Green Ext Time (p_c), s	1.2	0.2	4.2	0.5	0.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	469	174	119	583	4	92	8	100	0	1	0
Future Volume (veh/h)	10	469	174	119	583	4	92	8	100	0	1	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	515	191	131	641	4	101	9	110	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	1464	645	177	1800	11	201	18	189	0	10	0
Arrive On Green	0.01	0.41	0.41	0.10	0.50	0.50	0.12	0.12	0.12	0.00	0.01	0.00
Sat Flow, veh/h	1781	3554	1566	1781	3620	23	1642	146	1546	0	1870	0
Grp Volume(v), veh/h	11	515	191	131	315	330	110	0	110	0	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1566	1781	1777	1866	1788	0	1546	0	1870	0
Q Serve(g_s), s	0.3	4.8	4.0	3.5	5.2	5.3	2.8	0.0	3.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	4.8	4.0	3.5	5.2	5.3	2.8	0.0	3.3	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.92		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	25	1464	645	177	884	928	219	0	189	0	10	0
V/C Ratio(X)	0.43	0.35	0.30	0.74	0.36	0.36	0.50	0.00	0.58	0.00	0.10	0.00
Avail Cap(c_a), veh/h	972	2196	968	1339	1098	1153	1326	0	1147	0	1117	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	23.7	9.8	9.6	21.2	7.5	7.5	19.9	0.0	20.1	0.0	24.0	0.0
Incr Delay (d2), s/veh	11.3	0.1	0.3	5.9	0.2	0.2	1.8	0.0	2.8	0.0	4.1	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(50%),veh/ln	0.2	1.5	1.1	1.6	1.6	1.6	1.2	0.0	1.2	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	10.0	9.8	27.2	7.7	7.7	21.7	0.0	22.9	0.0	28.1	0.0
LnGrp LOS	D	A	A	C	A	A	C	A	C	A	C	A
Approach Vol, veh/h		717			776			220			1	
Approach Delay, s/veh		10.3			11.0			22.3			28.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	29.1		9.9	8.3	25.0		5.3
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		5.0
Max Green Setting (Gmax), s	20.5	30.0		36.0	36.5	30.0		29.0
Max Q Clear Time (g_c+I1), s	2.3	7.3		5.3	5.5	6.8		2.0
Green Ext Time (p_c), s	0.0	4.1		1.0	0.4	4.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	645	5	13	754	10	19
Future Vol, veh/h	645	5	13	754	10	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	701	5	14	820	11	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	706	0	1139	351
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	438	-
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	-	-	888	-	195	645
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	888	-	192	645
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	618	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	477	-	-	888	-
HCM Lane V/C Ratio	0.066	-	-	0.016	-
HCM Control Delay (s)	13.1	-	-	9.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	561	644	13	10	19
Future Vol, veh/h	1	561	644	13	10	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	616	708	14	11	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	722	0	-	0	1025	361
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	310	-
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	876	-	-	-	231	636
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	717	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	231	636
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	717	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	876	-	-	-	494
HCM Lane V/C Ratio	0.001	-	-	-	0.065
HCM Control Delay (s)	9.1	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	10	10	0	1365	10	10	663
Future Vol, veh/h	10	10	0	1365	10	10	663
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	225	-	-	150	-
Veh in Median Storage, #	2	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	11	11	0	1468	11	11	713

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	1853	740	713	0	0	1479	0
Stage 1	1474	-	-	-	-	-	-
Stage 2	379	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	66	359	507	-	-	451	-
Stage 1	177	-	-	-	-	-	-
Stage 2	662	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	64	359	507	-	-	451	-
Mov Cap-2 Maneuver	161	-	-	-	-	-	-
Stage 1	173	-	-	-	-	-	-
Stage 2	662	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	507	-	-	161	359	451	-
HCM Lane V/C Ratio	-	-	-	0.067	0.03	0.024	-
HCM Control Delay (s)	0	-	-	29	15.3	13.2	-
HCM Lane LOS	A	-	-	D	C	B	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0.1	-

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	191	97	0	1021	344	46	482
Future Volume (veh/h)	191	97	0	1021	344	46	482
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
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1870	1900		1870	1870	1870	1870
Adj Flow Rate, veh/h	154	158		1098	370	49	518
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0		2	2	2	2
Cap, veh/h	368	333		1633	728	89	2073
Arrive On Green	0.21	0.21		0.46	0.46	0.05	0.58
Sat Flow, veh/h	1781	1610		3647	1583	1781	3647
Grp Volume(v), veh/h	154	158		1098	370	49	518
Grp Sat Flow(s),veh/h/ln	1781	1610		1777	1583	1781	1777
Q Serve(g_s), s	3.6	4.1		11.5	7.8	1.3	3.4
Cycle Q Clear(g_c), s	3.6	4.1		11.5	7.8	1.3	3.4
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	368	333		1633	728	89	2073
V/C Ratio(X)	0.42	0.47		0.67	0.51	0.55	0.25
Avail Cap(c_a), veh/h	1123	1015		2240	998	1123	2240
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	16.4	16.6		10.1	9.1	22.1	4.8
Incr Delay (d2), s/veh	0.8	1.1		0.5	0.6	5.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.5		3.3	2.3	0.6	0.7
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	17.2	17.7		10.5	9.6	27.3	4.9
LnGrp LOS	B	B		B	A	C	A
Approach Vol, veh/h	312			1468			567
Approach Delay, s/veh	17.4			10.3			6.8
Approach LOS	B			B			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.9	26.9				32.8		14.8
Change Period (Y+Rc), s	3.5	5.0				5.0		5.0
Max Green Setting (Gmax), s	30.0	30.0				30.0		30.0
Max Q Clear Time (g_c+I1), s	3.3	13.5				5.4		6.1
Green Ext Time (p_c), s	0.1	8.4				3.5		1.0

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	20	83	27	38	25	153	949	38	29	413	65
Future Volume (veh/h)	47	20	83	27	38	25	153	949	38	29	413	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.94	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	20	84	27	38	25	155	959	38	29	417	66
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	72	203	142	149	120	205	1589	63	47	1307	569
Arrive On Green	0.13	0.13	0.13	0.08	0.08	0.08	0.12	0.46	0.46	0.03	0.37	0.37
Sat Flow, veh/h	1268	539	1524	1781	1870	1496	1781	3481	138	1781	3554	1548
Grp Volume(v), veh/h	67	0	84	27	38	25	155	489	508	29	417	66
Grp Sat Flow(s),veh/h/ln	1807	0	1524	1781	1870	1496	1781	1777	1842	1781	1777	1548
Q Serve(g_s), s	1.8	0.0	2.7	0.7	1.0	0.8	4.4	10.9	10.9	0.8	4.4	1.5
Cycle Q Clear(g_c), s	1.8	0.0	2.7	0.7	1.0	0.8	4.4	10.9	10.9	0.8	4.4	1.5
Prop In Lane	0.70		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	240	0	203	142	149	120	205	811	841	47	1307	569
V/C Ratio(X)	0.28	0.00	0.41	0.19	0.25	0.21	0.76	0.60	0.60	0.62	0.32	0.12
Avail Cap(c_a), veh/h	1547	0	1305	678	712	569	678	811	841	508	2028	884
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	20.9	22.6	22.7	22.6	22.5	10.7	10.7	25.3	11.9	11.0
Incr Delay (d2), s/veh	2.3	0.0	4.9	0.6	0.9	0.9	5.6	3.3	3.2	12.6	0.1	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.2	0.3	0.5	0.3	2.0	4.0	4.1	0.5	1.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	25.8	23.2	23.6	23.5	28.2	14.0	13.9	38.0	12.0	11.1
LnGrp LOS	C	A	C	C	C	C	C	B	B	D	B	B
Approach Vol, veh/h		151			90			1152			512	
Approach Delay, s/veh		24.4			23.5			15.9			13.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	28.5		11.0	9.5	23.8		8.2
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	15.0	24.0		45.0	20.0	30.0		20.0
Max Q Clear Time (g_c+I1), s	2.8	12.9		4.7	6.4	6.4		3.0
Green Ext Time (p_c), s	0.0	4.7		2.0	0.3	2.9		0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	234	86	369	298	138	137	221	597	172	100	6
Future Volume (veh/h)	30	234	86	369	298	138	137	221	597	172	100	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.97	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	239	88	377	304	141	140	226	609	176	102	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	354	135	802	434	354	184	545	1439	297	932	54
Arrive On Green	0.15	0.15	0.15	0.23	0.23	0.23	0.10	0.29	0.29	0.09	0.27	0.27
Sat Flow, veh/h	297	2323	884	3456	1870	1524	1781	1870	2713	3456	3399	198
Grp Volume(v), veh/h	194	0	164	377	304	141	140	226	609	176	53	55
Grp Sat Flow(s),veh/h/ln	1856	0	1648	1728	1870	1524	1781	1870	1357	1728	1777	1819
Q Serve(g_s), s	6.7	0.0	6.3	6.3	10.0	5.3	5.1	6.5	9.3	3.3	1.5	1.5
Cycle Q Clear(g_c), s	6.7	0.0	6.3	6.3	10.0	5.3	5.1	6.5	9.3	3.3	1.5	1.5
Prop In Lane	0.16		0.54	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	283	0	251	802	434	354	184	545	1439	297	487	499
V/C Ratio(X)	0.69	0.00	0.65	0.47	0.70	0.40	0.76	0.41	0.42	0.59	0.11	0.11
Avail Cap(c_a), veh/h	552	0	490	1542	835	680	795	835	1858	1028	1057	1083
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	26.8	22.2	23.7	21.8	29.3	19.2	9.8	29.6	18.2	18.3
Incr Delay (d2), s/veh	2.9	0.0	2.9	0.4	2.1	0.7	6.4	0.5	0.2	1.9	0.1	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	2.6	2.5	4.4	1.8	2.4	2.7	4.0	1.4	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	0.0	29.7	22.7	25.7	22.6	35.7	19.7	10.0	31.5	18.3	18.4
LnGrp LOS	C	A	C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		358			822			975			284	
Approach Delay, s/veh		29.8			23.8			16.0			26.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.8	23.6		14.2	10.9	22.4		19.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	30.0		20.0	30.0	40.0		30.0
Max Q Clear Time (g_c+I1), s	5.3	11.3		8.7	7.1	3.5		12.0
Green Ext Time (p_c), s	0.5	3.8		1.6	0.3	0.6		3.6

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	754	44	51	677	147	35	12	14	158	14	68
Future Volume (veh/h)	185	754	44	51	677	147	35	12	14	158	14	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	0.97		0.96	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	769	45	52	691	0	36	12	14	161	14	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	406	1526	89	169	1121		412	124	420	431	33	
Arrive On Green	0.23	0.45	0.45	0.09	0.32	0.00	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	1781	3398	199	1781	3554	1585	1138	451	1528	1171	120	1585
Grp Volume(v), veh/h	189	402	412	52	691	0	48	0	14	175	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1820	1781	1777	1585	1589	0	1528	1292	0	1585
Q Serve(g_s), s	5.8	10.2	10.2	1.7	10.5	0.0	0.0	0.0	0.4	6.6	0.0	0.0
Cycle Q Clear(g_c), s	5.8	10.2	10.2	1.7	10.5	0.0	1.3	0.0	0.4	7.9	0.0	0.0
Prop In Lane	1.00		0.11	1.00		1.00	0.75		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	406	798	817	169	1121		536	0	420	464	0	
V/C Ratio(X)	0.47	0.50	0.50	0.31	0.62		0.09	0.00	0.03	0.38	0.00	
Avail Cap(c_a), veh/h	450	1388	1422	309	1149		826	0	723	660	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)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.1	12.4	12.4	26.8	18.4	0.0	17.1	0.0	16.8	19.9	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.5	0.5	1.0	1.0	0.0	0.1	0.0	0.0	0.5	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(50%),veh/ln	2.4	3.6	3.7	0.7	4.1	0.0	0.5	0.0	0.1	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	12.9	12.9	27.8	19.4	0.0	17.2	0.0	16.8	20.4	0.0	0.0
LnGrp LOS	C	B	B	C	B		B	A	B	C	A	
Approach Vol, veh/h		1003			743	A		62			175	A
Approach Delay, s/veh		14.6			20.0			17.1			20.4	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	21.4	9.5	32.5	21.4	18.0	24.0
Change Period (Y+Rc), s	4.0	3.5	4.0	4.0	3.5	4.0
Max Green Setting (Gmax), s	30.0	11.0	49.5	26.5	16.0	20.5
Max Q Clear Time (g_c+I1), s	3.3	3.7	12.2	9.9	7.8	12.5
Green Ext Time (p_c), s	0.3	0.0	6.0	0.9	0.3	2.9

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	807	134	176	656	162	78
Future Volume (veh/h)	807	134	176	656	162	78
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	823	137	180	669	165	80
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1379	596	312	2268	326	290
Arrive On Green	0.39	0.39	0.17	0.64	0.18	0.18
Sat Flow, veh/h	3647	1536	1781	3647	1781	1585
Grp Volume(v), veh/h	823	137	180	669	165	80
Grp Sat Flow(s),veh/h/ln	1777	1536	1781	1777	1781	1585
Q Serve(g_s), s	9.8	3.2	4.9	4.5	4.4	2.3
Cycle Q Clear(g_c), s	9.8	3.2	4.9	4.5	4.4	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1379	596	312	2268	326	290
V/C Ratio(X)	0.60	0.23	0.58	0.29	0.51	0.28
Avail Cap(c_a), veh/h	2005	867	972	2268	1005	894
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	13.0	10.9	20.1	4.3	19.6	18.7
Incr Delay (d2), s/veh	0.4	0.2	1.7	0.1	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	1.0	2.0	1.0	1.8	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.4	11.1	21.8	4.4	20.8	19.2
LnGrp LOS	B	B	C	A	C	B
Approach Vol, veh/h	960			849	245	
Approach Delay, s/veh	13.0			8.1	20.3	
Approach LOS	B			A	C	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	14.7	13.3	25.1		38.4
Change Period (Y+Rc), s	5.0	4.0	4.5		4.5
Max Green Setting (Gmax), s	30.0	29.0	30.0		30.0
Max Q Clear Time (g_c+I1), s	6.4	6.9	11.8		6.5
Green Ext Time (p_c), s	0.7	0.5	6.1		4.8

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	901	3	0	691	58	3	0	12	51	1	43
Future Volume (veh/h)	97	901	3	0	691	58	3	0	12	51	1	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.97		0.96	0.96		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	929	3	0	712	60	3	0	12	53	1	44
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	131	2051	7	0	1506	658	125	38	322	489	8	402
Arrive On Green	0.07	0.56	0.56	0.00	0.42	0.42	0.26	0.00	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3633	12	0	3647	1553	161	144	1221	1338	30	1527
Grp Volume(v), veh/h	100	454	478	0	712	60	15	0	0	54	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1868	0	1777	1553	1527	0	0	1368	0	1527
Q Serve(g_s), s	2.9	7.8	7.8	0.0	7.5	1.2	0.0	0.0	0.0	1.1	0.0	1.1
Cycle Q Clear(g_c), s	2.9	7.8	7.8	0.0	7.5	1.2	0.4	0.0	0.0	1.5	0.0	1.1
Prop In Lane	1.00		0.01	0.00		1.00	0.20		0.80	0.98		1.00
Lane Grp Cap(c), veh/h	131	1003	1054	0	1506	658	485	0	0	497	0	402
V/C Ratio(X)	0.76	0.45	0.45	0.00	0.47	0.09	0.03	0.00	0.00	0.11	0.00	0.11
Avail Cap(c_a), veh/h	528	1019	1071	0	2039	891	661	0	0	918	0	876
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	6.7	6.7	0.0	10.9	9.0	14.3	0.0	0.0	14.7	0.0	14.6
Incr Delay (d2), s/veh	8.7	0.3	0.3	0.0	0.2	0.1	0.0	0.0	0.0	0.1	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.2	2.3	0.0	2.5	0.4	0.1	0.0	0.0	0.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	7.0	7.0	0.0	11.1	9.1	14.4	0.0	0.0	14.8	0.0	14.7
LnGrp LOS	C	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h		1032			772			15			98	
Approach Delay, s/veh		9.4			10.9			14.4			14.8	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	2	4	6	7	8
Phs Duration (G+Y+Rc), s	17.8	34.5	17.8	7.4	27.2
Change Period (Y+Rc), s	4.0	5.0	4.0	3.5	5.0
Max Green Setting (Gmax), s	20.0	30.0	30.0	15.5	30.0
Max Q Clear Time (g_c+I1), s	2.4	9.8	3.5	4.9	9.5
Green Ext Time (p_c), s	0.0	6.1	0.4	0.2	5.2

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	844	57	38	632	65	51	9	54	81	16	51
Future Volume (veh/h)	61	844	57	38	632	65	51	9	54	81	16	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.95	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	888	60	40	665	68	54	9	57	85	17	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	1284	541	88	1220	517	119	11	611	118	13	615
Arrive On Green	0.07	0.36	0.36	0.05	0.34	0.34	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1781	3554	1496	1781	3554	1504	0	28	1555	0	34	1567
Grp Volume(v), veh/h	64	888	60	40	665	68	63	0	57	102	0	54
Grp Sat Flow(s),veh/h/ln	1781	1777	1496	1781	1777	1504	28	0	1555	34	0	1567
Q Serve(g_s), s	1.9	11.9	1.5	1.2	8.5	1.7	0.0	0.0	1.3	0.0	0.0	1.2
Cycle Q Clear(g_c), s	1.9	11.9	1.5	1.2	8.5	1.7	22.0	0.0	1.3	22.0	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.83		1.00
Lane Grp Cap(c), veh/h	120	1284	541	88	1220	517	130	0	611	131	0	615
V/C Ratio(X)	0.53	0.69	0.11	0.45	0.54	0.13	0.48	0.00	0.09	0.78	0.00	0.09
Avail Cap(c_a), veh/h	636	1554	654	636	1522	644	130	0	611	131	0	615
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	0.00	1.00
Uniform Delay (d), s/veh	25.3	15.2	11.9	25.9	14.9	12.6	24.2	0.0	10.7	25.2	0.0	10.7
Incr Delay (d2), s/veh	3.6	1.0	0.1	3.6	0.4	0.1	2.8	0.0	0.1	25.0	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.4	0.5	0.6	3.1	0.5	0.9	0.0	0.4	2.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	16.3	12.0	29.5	15.2	12.8	26.9	0.0	10.8	50.2	0.0	10.8
LnGrp LOS	C	B	B	C	B	B	C	A	B	D	A	B
Approach Vol, veh/h		1012			773			120			156	
Approach Delay, s/veh		16.8			15.8			19.2			36.5	
Approach LOS		B			B			B			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.0	6.3	23.7	26.0	7.3	22.7
Change Period (Y+Rc), s	4.0	3.5	3.5	4.0	3.5	3.5
Max Green Setting (Gmax), s	22.0	20.0	24.5	22.0	20.0	24.0
Max Q Clear Time (g_c+I1), s	24.0	3.2	13.9	24.0	3.9	10.5
Green Ext Time (p_c), s	0.0	0.1	4.7	0.0	0.1	4.0

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	821	99	106	618	43	88	29	90	27	10	34
Future Volume (veh/h)	60	821	99	106	618	43	88	29	90	27	10	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	883	106	114	665	46	95	31	97	29	11	37
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	1111	487	147	1169	81	300	98	344	248	94	298
Arrive On Green	0.05	0.31	0.31	0.08	0.35	0.35	0.22	0.22	0.22	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1557	1781	3368	233	1359	443	1559	1309	496	1574
Grp Volume(v), veh/h	65	883	106	114	351	360	126	0	97	40	0	37
Grp Sat Flow(s),veh/h/ln	1781	1777	1557	1781	1777	1824	1802	0	1559	1805	0	1574
Q Serve(g_s), s	3.4	21.6	4.8	6.0	15.3	15.3	5.6	0.0	4.9	1.7	0.0	1.9
Cycle Q Clear(g_c), s	3.4	21.6	4.8	6.0	15.3	15.3	5.6	0.0	4.9	1.7	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.13	0.75		1.00	0.72		1.00
Lane Grp Cap(c), veh/h	86	1111	487	147	617	633	398	0	344	342	0	298
V/C Ratio(X)	0.76	0.79	0.22	0.77	0.57	0.57	0.32	0.00	0.28	0.12	0.00	0.12
Avail Cap(c_a), veh/h	749	1495	655	749	747	767	758	0	656	759	0	662
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	0.00	1.00
Uniform Delay (d), s/veh	44.7	29.9	24.1	42.7	25.3	25.3	31.0	0.0	30.8	32.0	0.0	32.0
Incr Delay (d2), s/veh	12.7	2.2	0.2	8.4	0.8	0.8	0.5	0.0	0.4	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.3	1.8	2.9	6.4	6.6	2.4	0.0	1.9	0.8	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	32.1	24.3	51.1	26.1	26.1	31.5	0.0	31.2	32.1	0.0	32.2
LnGrp LOS	E	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1054			825			223			77	
Approach Delay, s/veh		32.9			29.5			31.4			32.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.0	11.4	34.7	23.0	8.1	38.0
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	40.0	40.0	40.0	40.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	7.6	8.0	23.6	3.9	5.4	17.3
Green Ext Time (p_c), s	1.1	0.3	6.1	0.3	0.2	4.6

Intersection Summary	
HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	785	127	89	648	1	103	0	59	0	0	3
Future Volume (veh/h)	3	785	127	89	648	1	103	0	59	0	0	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	835	135	95	689	1	110	0	63	0	0	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1519	659	135	1817	3	190	0	166	0	0	25
Arrive On Green	0.00	0.43	0.43	0.08	0.50	0.50	0.11	0.00	0.11	0.00	0.00	0.02
Sat Flow, veh/h	1781	3554	1541	1781	3641	5	1781	0	1554	0	0	1572
Grp Volume(v), veh/h	3	835	135	95	336	354	110	0	63	0	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1541	1781	1777	1869	1781	0	1554	0	0	1572
Q Serve(g_s), s	0.1	8.2	2.6	2.4	5.5	5.5	2.8	0.0	1.8	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	8.2	2.6	2.4	5.5	5.5	2.8	0.0	1.8	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	7	1519	659	135	887	933	190	0	166	0	0	25
V/C Ratio(X)	0.41	0.55	0.20	0.70	0.38	0.38	0.58	0.00	0.38	0.00	0.00	0.12
Avail Cap(c_a), veh/h	1009	2278	988	1389	1139	1198	1370	0	1195	0	0	974
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	23.2	10.0	8.4	21.1	7.2	7.2	19.9	0.0	19.5	0.0	0.0	22.7
Incr Delay (d2), s/veh	33.3	0.3	0.2	6.5	0.3	0.3	2.8	0.0	1.4	0.0	0.0	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(50%),veh/ln	0.1	2.6	0.7	1.2	1.6	1.6	1.2	0.0	0.6	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	10.3	8.6	27.6	7.5	7.5	22.7	0.0	20.9	0.0	0.0	24.7
LnGrp LOS	E	B	A	C	A	A	C	A	C	A	A	C
Approach Vol, veh/h		973			785			173			3	
Approach Delay, s/veh		10.2			9.9			22.0			24.7	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.7	28.4		9.0	7.0	25.0		5.8				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	26.5	30.0		36.0	36.5	30.0		29.0				
Max Q Clear Time (g_c+I1), s	2.1	7.5		4.8	4.4	10.2		2.1				
Green Ext Time (p_c), s	0.0	4.4		0.8	0.2	6.4		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	823	10	9	677	5	10
Future Vol, veh/h	823	10	9	677	5	10
Conflicting Peds, #/hr	0	9	9	0	9	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	914	11	10	752	6	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	934	0	1328	475
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	405	-
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	-	-	729	-	146	536
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	723	-	141	527
Mov Cap-2 Maneuver	-	-	-	-	257	-
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	390	-	-	723	-
HCM Lane V/C Ratio	0.043	-	-	0.014	-
HCM Control Delay (s)	14.6	-	-	10	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	937	808	10	4	6
Future Vol, veh/h	20	937	808	10	4	6
Conflicting Peds, #/hr	20	0	0	21	21	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	976	842	10	4	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	873	0	-	0	1419	467
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	551	-
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	768	-	-	-	128	542
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	541	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	753	-	-	-	120	521
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	530	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	753	-	-	-	357
HCM Lane V/C Ratio	0.028	-	-	-	0.029
HCM Control Delay (s)	9.9	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

SIMTRAFFIC QUEUEING REPORTS

EXISTING CONDITIONS

AM & PM PEAK HOUR

Intersection: 1: SR-1 Ramps/Del Monte Blvd & Driveway

Movement	WB	WB	SB
Directions Served	L	R	L
Maximum Queue (ft)	32	30	31
Average Queue (ft)	7	8	4
95th Queue (ft)	26	28	20
Link Distance (ft)	148	148	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Del Monte Blvd & Reindollar Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	241	175	121	92	68	147	259	263
Average Queue (ft)	123	70	64	35	31	52	105	125
95th Queue (ft)	198	170	107	77	56	106	200	217
Link Distance (ft)	856		471	471			1066	1066
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150			125	125		
Storage Blk Time (%)	2	0	0	0	0	0	3	
Queuing Penalty (veh)	8	1	0	0	0	1	3	

Intersection: 3: Del Monte Blvd & Palm Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	147	123	88	64	47	81	139	127	97	290	295	113
Average Queue (ft)	46	59	39	18	13	34	57	48	16	141	145	18
95th Queue (ft)	100	105	75	50	39	69	114	100	59	234	245	81
Link Distance (ft)	744			828			1066	1066		1812	1812	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		100	80		50	225			150			100
Storage Blk Time (%)	1	1	1	3	0					7	18	0
Queuing Penalty (veh)	1	1	1	2	0					1	5	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	R	R	L	L
Maximum Queue (ft)	169	271	124	246	173	148	161	160	80	82	71	116
Average Queue (ft)	65	123	82	105	68	44	71	73	39	37	22	54
95th Queue (ft)	147	222	141	187	135	100	130	134	65	70	53	100
Link Distance (ft)		973		622	622			1812	1812			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		100			125	450			450	150	150
Storage Blk Time (%)	0	5	3	7	1	0						0
Queuing Penalty (veh)	0	6	5	14	2	0						0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	124	84
Average Queue (ft)	51	16
95th Queue (ft)	102	49
Link Distance (ft)	571	571
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	75	121	133	46	203	183	50	32	29	78	32
Average Queue (ft)	30	44	58	8	89	70	3	4	2	31	1
95th Queue (ft)	62	93	112	32	172	147	36	21	14	65	18
Link Distance (ft)		622	622		375	375		283		591	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	175			135			135		50		100
Storage Blk Time (%)					2	1	0	0		0	0
Queuing Penalty (veh)					0	1	0	0		0	0

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	118	116	52	152	177	181	96	60
Average Queue (ft)	65	68	16	64	51	57	40	24
95th Queue (ft)	114	120	44	116	128	141	77	50
Link Distance (ft)	39	39	39		261	261		724
Upstream Blk Time (%)	14	17	1		0	0		
Queuing Penalty (veh)	27	32	2		0	0		
Storage Bay Dist (ft)				200			100	
Storage Blk Time (%)					0		0	0
Queuing Penalty (veh)					0		0	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	R
Maximum Queue (ft)	68	90	92	209	207	100	33	66	50
Average Queue (ft)	32	38	49	88	84	32	2	23	18
95th Queue (ft)	60	88	98	188	189	90	15	52	40
Link Distance (ft)		73	73	220	220		474	485	
Upstream Blk Time (%)	0	1	3	0	0				
Queuing Penalty (veh)	0	4	10	1	1				
Storage Bay Dist (ft)	145					75			150
Storage Blk Time (%)	0	1			7	0			
Queuing Penalty (veh)	1	1			5	0			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	67	127	153	24	68	190	210	123	37	26	115	74
Average Queue (ft)	20	44	59	5	18	73	75	21	8	5	41	25
95th Queue (ft)	50	100	121	19	51	157	169	70	29	20	83	62
Link Distance (ft)		220	220			490	490		409		830	
Upstream Blk Time (%)			0									
Queuing Penalty (veh)			0									
Storage Bay Dist (ft)	200			175	175			175		200		50
Storage Blk Time (%)			0			0	1	0			6	1
Queuing Penalty (veh)			0			0	1	0			4	1

Intersection: 9: Crescent Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LT	R
Maximum Queue (ft)	82	217	247	125	143	254	276	98	166	125	73
Average Queue (ft)	21	101	122	43	45	111	132	59	41	47	18
95th Queue (ft)	58	176	208	120	98	206	237	102	105	93	57
Link Distance (ft)		490	490			562	562		681	808	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	220			100	220			75			50
Storage Blk Time (%)		0	14	0	0	1		9	0	15	0
Queuing Penalty (veh)		0	10	0	0	0		9	0	4	0

Intersection: 10: California Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	61	207	245	125	151	193	170	116	72	21
Average Queue (ft)	10	80	91	61	66	65	72	52	28	1
95th Queue (ft)	39	170	193	129	123	144	144	96	54	11
Link Distance (ft)		1635	1635			2271	2271	1450		183
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	75			100	150				150	
Storage Blk Time (%)	0	10	6	0	0	1		0		
Queuing Penalty (veh)	0	1	11	1	1	1		0		

Intersection: 11: Salinas Ave & Reservation Rd

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	35	37
Average Queue (ft)	6	15
95th Queue (ft)	26	34
Link Distance (ft)		445
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	EB	SB
Directions Served	L	T	T	LR
Maximum Queue (ft)	6	60	67	62
Average Queue (ft)	0	5	8	21
95th Queue (ft)	4	30	40	50
Link Distance (ft)		375	375	1022
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Reservation Rd & Driveway 1

Movement	EB	EB	WB	SB
Directions Served	T	T	T	R
Maximum Queue (ft)	34	70	6	52
Average Queue (ft)	1	6	0	17
95th Queue (ft)	20	37	5	44
Link Distance (ft)	261	261	46	179
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 14: Driveway 2 & Reservation Rd

Movement	EB	EB	WB	NB
Directions Served	T	TR	T	R
Maximum Queue (ft)	45	57	3	53
Average Queue (ft)	4	10	0	23
95th Queue (ft)	24	43	3	48
Link Distance (ft)	46	46	73	240
Upstream Blk Time (%)	0	1		
Queuing Penalty (veh)	1	4		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 186

Intersection: 1: SR-1 Ramps/Del Monte Blvd & Driveway

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	44	30	4	44
Average Queue (ft)	12	8	0	8
95th Queue (ft)	39	28	3	31
Link Distance (ft)	148	148	557	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Del Monte Blvd & Reindollar Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	130	104	275	282	150	95	156	164
Average Queue (ft)	61	29	145	125	77	35	45	65
95th Queue (ft)	108	69	237	229	148	75	116	134
Link Distance (ft)	856		471	471			1066	1066
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150			125	125		
Storage Blk Time (%)	0	0	9	4	0	0	0	
Queuing Penalty (veh)	0	0	0	14	1	0	0	

Intersection: 3: Del Monte Blvd & Palm Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	103	88	56	91	70	233	326	321	78	171	187	125
Average Queue (ft)	37	31	17	29	19	89	147	158	21	70	80	25
95th Queue (ft)	78	63	45	69	53	174	273	282	55	139	155	85
Link Distance (ft)	744			828			1066	1066		1812	1812	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		100	80		50	225			150			100
Storage Blk Time (%)	0	0	0	5	0	0	2			1	5	0
Queuing Penalty (veh)	0	0	0	3	0	0	4			0	3	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	R	R	L	L
Maximum Queue (ft)	174	237	124	272	368	150	176	236	154	163	139	148
Average Queue (ft)	84	122	81	110	154	70	90	117	73	77	42	65
95th Queue (ft)	159	200	142	209	292	163	155	200	131	139	96	120
Link Distance (ft)		973		622	622			1812	1812			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		100			125	450			450	150	150
Storage Blk Time (%)	0	4	2	11	15	0					0	0
Queuing Penalty (veh)	1	6	4	20	21	0					0	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	87	58
Average Queue (ft)	27	10
95th Queue (ft)	66	37
Link Distance (ft)	571	571
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	181	219	240	127	246	275	159	75	48	193	124
Average Queue (ft)	98	102	135	37	114	134	42	27	12	87	13
95th Queue (ft)	164	185	217	89	207	237	152	64	38	152	74
Link Distance (ft)		622	622		375	375		283		591	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	175			135			135		50		100
Storage Blk Time (%)	1	1		0	5	8	0	4	0	7	0
Queuing Penalty (veh)	2	1		0	2	11	0	1	0	5	0

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	124	122	77	177	176	212	122	178
Average Queue (ft)	97	96	31	90	65	86	73	38
95th Queue (ft)	137	133	66	151	139	175	119	101
Link Distance (ft)	39	39	39		261	261		724
Upstream Blk Time (%)	30	31	4			0		
Queuing Penalty (veh)	95	98	12			0		
Storage Bay Dist (ft)				200			100	
Storage Blk Time (%)				0	0		4	0
Queuing Penalty (veh)				0	0		3	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	R
Maximum Queue (ft)	72	108	108	218	226	100	40	60	47
Average Queue (ft)	43	69	73	113	112	34	9	23	15
95th Queue (ft)	72	115	113	207	206	96	32	51	37
Link Distance (ft)		73	73	220	220		474	485	
Upstream Blk Time (%)	1	9	12	1	1				
Queuing Penalty (veh)	0	44	59	2	2				
Storage Bay Dist (ft)	145					75			150
Storage Blk Time (%)	1	9			14	0			
Queuing Penalty (veh)	4	9			8	1			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	99	216	219	99	114	230	243	141	78	63	104	73
Average Queue (ft)	35	87	103	13	28	87	97	21	29	20	40	24
95th Queue (ft)	77	170	192	58	80	188	196	84	64	46	78	59
Link Distance (ft)		220	220			490	490		409		830	
Upstream Blk Time (%)	0	0	0									
Queuing Penalty (veh)	0	1	1									
Storage Bay Dist (ft)	200			175	175			175		200		50
Storage Blk Time (%)	0	0	1	0		1	1	0			7	1
Queuing Penalty (veh)	0	0	1	0		0	1	0			4	1

Intersection: 9: Crescent Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LT	R
Maximum Queue (ft)	230	392	413	125	178	253	281	98	182	83	69
Average Queue (ft)	54	185	207	60	65	126	149	57	43	29	24
95th Queue (ft)	135	325	354	149	135	220	247	100	112	67	57
Link Distance (ft)		490	490			562	562		681	808	
Upstream Blk Time (%)			0								
Queuing Penalty (veh)			0								
Storage Bay Dist (ft)	220			100	220			75			50
Storage Blk Time (%)		5	29	0	0	0		10	0	7	1
Queuing Penalty (veh)		3	28	0	0	1		9	1	2	0

Intersection: 10: California Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	40	327	356	125	128	151	155	112	65	29
Average Queue (ft)	3	116	135	55	48	59	63	53	22	3
95th Queue (ft)	21	248	278	133	96	122	130	96	49	17
Link Distance (ft)		1635	1635			2271	2271	1450		183
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	75			100	150				150	
Storage Blk Time (%)		13	11	0	0	0		0		
Queuing Penalty (veh)		0	14	0	0	0		0		

Intersection: 11: Salinas Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	T	T	R	L	T	T	LR
Maximum Queue (ft)	68	91	8	33	58	45	42
Average Queue (ft)	6	9	0	5	7	3	9
95th Queue (ft)	35	46	5	23	36	22	30
Link Distance (ft)	2271	2271			1110	1110	445
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			100	150			
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	88	214	228	54	53	39
Average Queue (ft)	12	61	84	12	15	9
95th Queue (ft)	50	158	186	43	48	32
Link Distance (ft)		375	375	39	39	1022
Upstream Blk Time (%)				1	1	
Queuing Penalty (veh)				3	4	
Storage Bay Dist (ft)	125					
Storage Blk Time (%)		2				
Queuing Penalty (veh)		0				

Intersection: 13: Reservation Rd & Driveway 1

Movement	EB	EB	WB	SB
Directions Served	T	T	TR	R
Maximum Queue (ft)	150	156	5	59
Average Queue (ft)	28	37	0	26
95th Queue (ft)	101	114	5	50
Link Distance (ft)	261	261	46	179
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 14: Driveway 2 & Reservation Rd

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	T	T	R
Maximum Queue (ft)	64	73	8	15	100
Average Queue (ft)	24	33	1	0	43
95th Queue (ft)	65	77	9	2	80
Link Distance (ft)	46	46	73	73	240
Upstream Blk Time (%)	5	7		0	
Queuing Penalty (veh)	23	35		0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 570

SYNCHRO LEVEL OF SERVICE REPORTS

FUTURE CONDITIONS

AM & PM PEAK HOUR

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	10	60	0	562	63	392	1239
Future Vol, veh/h	10	60	0	562	63	392	1239
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	225	-	-	150	-
Veh in Median Storage, #	2	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	11	65	0	604	68	422	1332

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	2148	336	1332	0	0	672	0
Stage 1	638	-	-	-	-	-	-
Stage 2	1510	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	41	660	203	-	-	915	-
Stage 1	488	-	-	-	-	-	-
Stage 2	169	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	22	660	203	-	-	915	-
Mov Cap-2 Maneuver	53	-	-	-	-	-	-
Stage 1	263	-	-	-	-	-	-
Stage 2	169	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	2.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	203	-	-	53	660	915	-
HCM Lane V/C Ratio	-	-	-	0.203	0.098	0.461	-
HCM Control Delay (s)	0	-	-	89.5	11	12.2	-
HCM Lane LOS	A	-	-	F	B	B	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.3	2.5	-

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	558	71	0	467	157	86	1103
Future Volume (veh/h)	558	71	0	467	157	86	1103
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
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1870	1900		1870	1870	1870	1870
Adj Flow Rate, veh/h	671	0		502	169	92	1186
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0		2	2	2	2
Cap, veh/h	982	444		1169	520	139	1738
Arrive On Green	0.28	0.00		0.33	0.33	0.08	0.49
Sat Flow, veh/h	3563	1610		3647	1580	1781	3647
Grp Volume(v), veh/h	671	0		502	169	92	1186
Grp Sat Flow(s),veh/h/ln	1781	1610		1777	1580	1781	1777
Q Serve(g_s), s	7.1	0.0		4.7	3.4	2.1	10.9
Cycle Q Clear(g_c), s	7.1	0.0		4.7	3.4	2.1	10.9
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	982	444		1169	520	139	1738
V/C Ratio(X)	0.68	0.00		0.43	0.33	0.66	0.68
Avail Cap(c_a), veh/h	2514	1136		2507	1115	1257	2507
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	13.7	0.0		11.1	10.7	19.1	8.3
Incr Delay (d2), s/veh	0.8	0.0		0.3	0.4	5.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0		1.4	1.0	1.0	2.7
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	14.6	0.0		11.4	11.1	24.4	8.8
LnGrp LOS	B	A		B	B	C	A
Approach Vol, veh/h	671			671			1278
Approach Delay, s/veh	14.6			11.3			9.9
Approach LOS	B			B			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.8	19.0				25.8		16.7
Change Period (Y+Rc), s	3.5	5.0				5.0		5.0
Max Green Setting (Gmax), s	30.0	30.0				30.0		30.0
Max Q Clear Time (g_c+I1), s	4.1	6.7				12.9		9.1
Green Ext Time (p_c), s	0.2	3.9				7.9		2.6

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	25	278	96	26	39	77	459	21	25	813	34
Future Volume (veh/h)	101	25	278	96	26	39	77	459	21	25	813	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	26	287	99	27	40	79	473	22	26	838	35
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	100	432	177	185	152	104	1244	58	41	1155	493
Arrive On Green	0.28	0.28	0.28	0.10	0.10	0.10	0.06	0.36	0.36	0.02	0.32	0.32
Sat Flow, veh/h	1439	360	1558	1781	1870	1532	1781	3454	160	1781	3554	1518
Grp Volume(v), veh/h	130	0	287	99	27	40	79	243	252	26	838	35
Grp Sat Flow(s),veh/h/ln	1798	0	1558	1781	1870	1532	1781	1777	1837	1781	1777	1518
Q Serve(g_s), s	3.8	0.0	10.9	3.5	0.9	1.6	2.9	6.7	6.8	1.0	13.9	1.1
Cycle Q Clear(g_c), s	3.8	0.0	10.9	3.5	0.9	1.6	2.9	6.7	6.8	1.0	13.9	1.1
Prop In Lane	0.80		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	499	0	432	177	185	152	104	640	662	41	1155	493
V/C Ratio(X)	0.26	0.00	0.66	0.56	0.15	0.26	0.76	0.38	0.38	0.64	0.73	0.07
Avail Cap(c_a), veh/h	1215	0	1052	535	561	460	535	640	662	401	1600	684
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	21.3	28.6	27.4	27.8	30.9	15.8	15.8	32.3	19.9	15.5
Incr Delay (d2), s/veh	1.0	0.0	6.2	2.8	0.4	0.9	10.9	1.7	1.7	15.3	1.0	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	4.5	1.6	0.4	0.6	1.5	2.8	2.9	0.6	5.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	0.0	27.5	31.4	27.8	28.7	41.9	17.5	17.5	47.5	20.9	15.6
LnGrp LOS	B	A	C	C	C	C	D	B	B	D	C	B
Approach Vol, veh/h		417			166			574			899	
Approach Delay, s/veh		25.1			30.2			20.8			21.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	28.5		22.5	7.4	26.2		10.6
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	15.0	24.0		45.0	20.0	30.0		20.0
Max Q Clear Time (g_c+I1), s	3.0	8.8		12.9	4.9	15.9		5.5
Green Ext Time (p_c), s	0.0	2.5		5.6	0.1	5.0		0.4

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	245	141	401	178	196	221	190	355	247	243	6
Future Volume (veh/h)	16	245	141	401	178	196	221	190	355	247	243	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	275	158	451	200	220	248	213	399	278	273	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	373	224	721	390	321	302	516	1338	397	782	20
Arrive On Green	0.18	0.18	0.18	0.21	0.21	0.21	0.17	0.28	0.28	0.11	0.22	0.22
Sat Flow, veh/h	135	2082	1251	3456	1870	1539	1781	1870	2739	3456	3536	90
Grp Volume(v), veh/h	248	0	203	451	200	220	248	213	399	278	137	143
Grp Sat Flow(s),veh/h/ln	1864	0	1605	1728	1870	1539	1781	1870	1370	1728	1777	1850
Q Serve(g_s), s	9.1	0.0	8.6	8.6	6.8	9.5	9.7	6.7	6.4	5.6	4.7	4.7
Cycle Q Clear(g_c), s	9.1	0.0	8.6	8.6	6.8	9.5	9.7	6.7	6.4	5.6	4.7	4.7
Prop In Lane	0.07		0.78	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	334	0	287	721	390	321	302	516	1338	397	393	409
V/C Ratio(X)	0.74	0.00	0.70	0.63	0.51	0.68	0.82	0.41	0.30	0.70	0.35	0.35
Avail Cap(c_a), veh/h	516	0	444	1435	776	639	739	776	1719	956	983	1024
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	27.9	26.0	25.3	26.4	28.9	21.4	11.2	30.8	23.8	23.8
Incr Delay (d2), s/veh	3.3	0.0	3.2	0.9	1.0	2.6	5.5	0.5	0.1	2.2	0.5	0.5
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(50%),veh/ln	4.2	0.0	3.4	3.5	3.0	3.6	4.4	2.8	2.7	2.3	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	31.0	26.9	26.4	29.0	34.4	21.9	11.4	33.0	24.3	24.3
LnGrp LOS	C	A	C	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		451			871			860			558	
Approach Delay, s/veh		31.2			27.3			20.6			28.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	23.9		16.9	16.3	20.0		19.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	30.0	40.0		30.0				
Max Q Clear Time (g_c+I1), s	11.6	8.7		11.1	11.7	6.7		11.5				
Green Ext Time (p_c), s	0.7	2.8		1.8	0.6	1.6		3.5				

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	654	70	55	628	83	51	27	34	102	8	88
Future Volume (veh/h)	148	654	70	55	628	83	51	27	34	102	8	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.98	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	711	76	60	683	0	55	29	37	111	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	430	1561	167	191	1239		311	144	327	334	23	
Arrive On Green	0.24	0.48	0.48	0.11	0.35	0.00	0.21	0.21	0.21	0.21	0.21	0.00
Sat Flow, veh/h	1781	3234	345	1781	3554	1585	990	685	1558	1019	108	1585
Grp Volume(v), veh/h	161	390	397	60	683	0	84	0	37	120	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1803	1781	1777	1585	1675	0	1558	1127	0	1585
Q Serve(g_s), s	4.3	8.4	8.4	1.8	8.9	0.0	0.0	0.0	1.1	4.4	0.0	0.0
Cycle Q Clear(g_c), s	4.3	8.4	8.4	1.8	8.9	0.0	2.2	0.0	1.1	6.6	0.0	0.0
Prop In Lane	1.00		0.19	1.00		1.00	0.65		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	430	857	870	191	1239		455	0	327	357	0	
V/C Ratio(X)	0.37	0.46	0.46	0.31	0.55		0.18	0.00	0.11	0.34	0.00	
Avail Cap(c_a), veh/h	497	1533	1555	341	1270		933	0	814	697	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)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.2	9.8	9.8	23.7	15.1	0.0	18.8	0.0	18.4	21.3	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.4	0.4	0.9	0.5	0.0	0.2	0.0	0.2	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.8	2.8	0.8	3.3	0.0	0.9	0.0	0.4	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	10.2	10.2	24.6	15.6	0.0	19.0	0.0	18.5	21.9	0.0	0.0
LnGrp LOS	B	B	B	C	B		B	A	B	C	A	
Approach Vol, veh/h		948			743	A		121			120	A
Approach Delay, s/veh		11.7			16.3			18.8			21.9	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	16.0	9.7	31.7	16.0	17.3	24.0
Change Period (Y+Rc), s	4.0	3.5	4.0	4.0	3.5	4.0
Max Green Setting (Gmax), s	30.0	11.0	49.5	26.5	16.0	20.5
Max Q Clear Time (g_c+I1), s	4.2	3.8	10.4	8.6	6.3	10.9
Green Ext Time (p_c), s	0.6	0.1	5.8	0.6	0.3	3.2

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	679	150	167	604	162	86
Future Volume (veh/h)	679	150	167	604	162	86
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	730	161	180	649	174	92
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1359	605	313	2254	331	294
Arrive On Green	0.38	0.38	0.18	0.63	0.19	0.19
Sat Flow, veh/h	3647	1583	1781	3647	1781	1585
Grp Volume(v), veh/h	730	161	180	649	174	92
Grp Sat Flow(s),veh/h/ln	1777	1583	1781	1777	1781	1585
Q Serve(g_s), s	8.4	3.7	4.9	4.3	4.7	2.6
Cycle Q Clear(g_c), s	8.4	3.7	4.9	4.3	4.7	2.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1359	605	313	2254	331	294
V/C Ratio(X)	0.54	0.27	0.57	0.29	0.53	0.31
Avail Cap(c_a), veh/h	2021	900	979	2254	1013	901
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	12.7	11.2	19.9	4.3	19.4	18.6
Incr Delay (d2), s/veh	0.3	0.2	1.7	0.1	1.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	1.1	2.0	1.0	1.9	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.0	11.4	21.6	4.4	20.7	19.2
LnGrp LOS	B	B	C	A	C	B
Approach Vol, veh/h	891			829	266	
Approach Delay, s/veh	12.7			8.1	20.2	
Approach LOS	B			A	C	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	14.8	13.3	24.7		38.0
Change Period (Y+Rc), s	5.0	4.0	4.5		4.5
Max Green Setting (Gmax), s	30.0	29.0	30.0		30.0
Max Q Clear Time (g_c+I1), s	6.7	6.9	10.4		6.3
Green Ext Time (p_c), s	0.8	0.5	5.6		4.7

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	719	5	0	641	111	3	0	7	79	1	134
Future Volume (veh/h)	103	719	5	0	641	111	3	0	7	79	1	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.98	0.98		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	765	5	0	682	118	3	0	7	84	1	143
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	145	2086	14	0	1505	669	163	41	253	475	5	375
Arrive On Green	0.08	0.58	0.58	0.00	0.42	0.42	0.24	0.00	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3619	24	0	3647	1579	281	172	1057	1372	20	1569
Grp Volume(v), veh/h	110	376	394	0	682	118	10	0	0	85	0	143
Grp Sat Flow(s),veh/h/ln	1781	1777	1866	0	1777	1579	1510	0	0	1392	0	1569
Q Serve(g_s), s	2.9	5.5	5.5	0.0	6.7	2.3	0.0	0.0	0.0	2.1	0.0	3.7
Cycle Q Clear(g_c), s	2.9	5.5	5.5	0.0	6.7	2.3	0.2	0.0	0.0	2.4	0.0	3.7
Prop In Lane	1.00		0.01	0.00		1.00	0.30		0.70	0.99		1.00
Lane Grp Cap(c), veh/h	145	1024	1076	0	1505	669	457	0	0	479	0	375
V/C Ratio(X)	0.76	0.37	0.37	0.00	0.45	0.18	0.02	0.00	0.00	0.18	0.00	0.38
Avail Cap(c_a), veh/h	566	1093	1148	0	2186	972	704	0	0	1001	0	965
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	5.5	5.5	0.0	10.0	8.8	14.2	0.0	0.0	15.0	0.0	15.5
Incr Delay (d2), s/veh	7.9	0.2	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.4	1.5	0.0	2.1	0.7	0.1	0.0	0.0	0.7	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	5.8	5.8	0.0	10.2	8.9	14.2	0.0	0.0	15.2	0.0	16.2
LnGrp LOS	C	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h		880			800			10			228	
Approach Delay, s/veh		8.8			10.0			14.2			15.8	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	2	4	6	7	8
Phs Duration (G+Y+Rc), s	15.6	33.1	15.6	7.5	25.6
Change Period (Y+Rc), s	4.0	5.0	4.0	3.5	5.0
Max Green Setting (Gmax), s	20.0	30.0	30.0	15.5	30.0
Max Q Clear Time (g_c+I1), s	2.2	7.5	5.7	4.9	8.7
Green Ext Time (p_c), s	0.0	5.0	0.9	0.2	5.2

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	743	25	28	665	105	16	3	16	138	1	71
Future Volume (veh/h)	37	743	25	28	665	105	16	3	16	138	1	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	816	27	31	731	115	18	3	18	152	1	78
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1228	521	74	1193	521	124	12	639	133	0	644
Arrive On Green	0.05	0.35	0.35	0.04	0.34	0.34	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1781	3554	1509	1781	3554	1552	0	28	1563	0	1	1576
Grp Volume(v), veh/h	41	816	27	31	731	115	21	0	18	153	0	78
Grp Sat Flow(s),veh/h/ln	1781	1777	1509	1781	1777	1552	28	0	1563	1	0	1576
Q Serve(g_s), s	1.2	10.5	0.6	0.9	9.3	2.9	0.0	0.0	0.4	0.0	0.0	1.7
Cycle Q Clear(g_c), s	1.2	10.5	0.6	0.9	9.3	2.9	22.0	0.0	0.4	22.0	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	91	1228	521	74	1193	521	136	0	639	134	0	644
V/C Ratio(X)	0.45	0.66	0.05	0.42	0.61	0.22	0.15	0.00	0.03	1.14	0.00	0.12
Avail Cap(c_a), veh/h	662	1618	687	662	1585	692	136	0	639	134	0	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	15.0	11.7	25.2	14.9	12.8	14.9	0.0	9.5	26.8	0.0	9.9
Incr Delay (d2), s/veh	3.5	0.6	0.0	3.8	0.5	0.2	0.5	0.0	0.0	121.5	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.8	0.2	0.4	3.3	0.9	0.1	0.0	0.1	6.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	15.6	11.8	28.9	15.5	13.0	15.4	0.0	9.5	148.3	0.0	10.0
LnGrp LOS	C	B	B	C	B	B	B	A	A	F	A	A
Approach Vol, veh/h		884			877			39			231	
Approach Delay, s/veh		16.1			15.6			12.7			101.6	
Approach LOS		B			B			B			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.0	5.7	22.1	26.0	6.2	21.6
Change Period (Y+Rc), s	4.0	3.5	3.5	4.0	3.5	3.5
Max Green Setting (Gmax), s	22.0	20.0	24.5	22.0	20.0	24.0
Max Q Clear Time (g_c+I1), s	24.0	2.9	12.5	24.0	3.2	11.3
Green Ext Time (p_c), s	0.0	0.0	4.5	0.0	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	751	74	82	639	24	106	21	107	64	52	37
Future Volume (veh/h)	51	751	74	82	639	24	106	21	107	64	52	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	816	80	89	695	26	115	23	116	70	57	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1047	461	117	1116	42	335	67	351	217	177	341
Arrive On Green	0.04	0.29	0.29	0.07	0.32	0.32	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3554	1564	1781	3491	131	1496	299	1564	1003	817	1576
Grp Volume(v), veh/h	55	816	80	89	354	367	138	0	116	127	0	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1844	1796	0	1564	1820	0	1576
Q Serve(g_s), s	2.8	19.5	3.5	4.6	15.7	15.7	6.0	0.0	5.8	5.5	0.0	1.9
Cycle Q Clear(g_c), s	2.8	19.5	3.5	4.6	15.7	15.7	6.0	0.0	5.8	5.5	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.07	0.83		1.00	0.55		1.00
Lane Grp Cap(c), veh/h	73	1047	461	117	568	590	403	0	351	394	0	341
V/C Ratio(X)	0.76	0.78	0.17	0.76	0.62	0.62	0.34	0.00	0.33	0.32	0.00	0.12
Avail Cap(c_a), veh/h	767	1529	673	767	765	794	773	0	673	783	0	678
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	0.00	1.00
Uniform Delay (d), s/veh	44.1	30.0	24.4	42.7	26.9	26.9	30.3	0.0	30.2	30.7	0.0	29.3
Incr Delay (d2), s/veh	14.7	1.6	0.2	9.6	1.1	1.1	0.5	0.0	0.5	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.3	1.3	2.3	6.7	6.9	2.6	0.0	2.2	2.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	31.6	24.5	52.3	28.0	27.9	30.8	0.0	30.8	31.2	0.0	29.4
LnGrp LOS	E	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		951			810			254			167	
Approach Delay, s/veh		32.6			30.6			30.8			30.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.8	9.6	32.4	25.1	7.3	34.7
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	40.0	40.0	40.0	40.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	8.0	6.6	21.5	7.5	4.8	17.7
Green Ext Time (p_c), s	1.2	0.2	5.8	0.9	0.1	4.6

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	670	250	159	632	4	112	8	170	0	1	0
Future Volume (veh/h)	10	670	250	159	632	4	112	8	170	0	1	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	736	275	175	695	4	123	9	187	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	1307	575	233	1755	10	290	21	271	0	10	0
Arrive On Green	0.01	0.37	0.37	0.13	0.48	0.48	0.17	0.17	0.17	0.00	0.01	0.00
Sat Flow, veh/h	1781	3554	1564	1781	3622	21	1665	122	1558	0	1870	0
Grp Volume(v), veh/h	11	736	275	175	341	358	132	0	187	0	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1866	1787	0	1558	0	1870	0
Q Serve(g_s), s	0.3	9.0	7.3	5.1	6.7	6.7	3.6	0.0	6.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	9.0	7.3	5.1	6.7	6.7	3.6	0.0	6.1	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.93		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	25	1307	575	233	861	904	311	0	271	0	10	0
V/C Ratio(X)	0.44	0.56	0.48	0.75	0.40	0.40	0.42	0.00	0.69	0.00	0.10	0.00
Avail Cap(c_a), veh/h	868	1961	863	1196	981	1030	1183	0	1032	0	998	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	26.6	13.7	13.2	22.8	8.9	8.9	20.0	0.0	21.1	0.0	26.9	0.0
Incr Delay (d2), s/veh	11.6	0.4	0.6	4.9	0.3	0.3	0.9	0.0	3.1	0.0	4.1	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(50%),veh/ln	0.2	3.2	2.3	2.3	2.1	2.2	1.4	0.0	2.3	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	14.1	13.8	27.7	9.2	9.2	20.9	0.0	24.2	0.0	31.0	0.0
LnGrp LOS	D	B	B	C	A	A	C	A	C	A	C	A
Approach Vol, veh/h		1022			874			319			1	
Approach Delay, s/veh		14.3			12.9			22.8			31.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	31.3		13.5	10.6	25.0		5.3
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		5.0
Max Green Setting (Gmax), s	26.5	30.0		36.0	36.5	30.0		29.0
Max Q Clear Time (g_c+I1), s	2.3	8.7		8.1	7.1	11.0		2.0
Green Ext Time (p_c), s	0.0	4.4		1.4	0.5	6.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	923	13	27	762	21	51
Future Vol, veh/h	923	13	27	762	21	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	-	100	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1003	14	29	828	23	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1017	0	1475	502
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	472	-
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	-	-	678	-	117	515
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	594	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	678	-	112	515
Mov Cap-2 Maneuver	-	-	-	-	224	-
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	594	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	17.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	373	-	-	678	-
HCM Lane V/C Ratio	0.21	-	-	0.043	-
HCM Control Delay (s)	17.2	-	-	10.6	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	815	738	28	14	25
Future Vol, veh/h	3	815	738	28	14	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	896	811	31	15	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	842	0	-	0	1281	421
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	454	-
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	789	-	-	-	157	581
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	606	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	789	-	-	-	156	581
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	789	-	-	-	421
HCM Lane V/C Ratio	0.004	-	-	-	0.102
HCM Control Delay (s)	9.6	-	-	-	14.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	33.2

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	165	171	0	1508	52	97	727
Future Vol, veh/h	165	171	0	1508	52	97	727
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	225	-	-	150	-
Veh in Median Storage, #	2	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	177	184	0	1622	56	104	782

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	2249	839	782	0	0	1678	0
Stage 1	1650	-	-	-	-	-	-
Stage 2	599	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	~ 35	309	458	-	-	378	-
Stage 1	~ 142	-	-	-	-	-	-
Stage 2	511	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	~ 25	309	458	-	-	378	-
Mov Cap-2 Maneuver	~ 95	-	-	-	-	-	-
Stage 1	~ 103	-	-	-	-	-	-
Stage 2	511	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	263.3	0	2.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBU	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	458	-	-	95	309	378	-
HCM Lane V/C Ratio	-	-	-	1.868	0.595	0.276	-
HCM Control Delay (s)	0	-	-	$ 502.6	32.4	18.1	-
HCM Lane LOS	A	-	-	F	D	C	-
HCM 95th %tile Q(veh)	0	-	-	14.8	3.6	1.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	248	126	0	1159	510	61	576
Future Volume (veh/h)	248	126	0	1159	510	61	576
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
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1870	1900		1870	1870	1870	1870
Adj Flow Rate, veh/h	201	206		1246	548	66	619
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0		2	2	2	2
Cap, veh/h	344	311		1730	771	106	2181
Arrive On Green	0.19	0.19		0.49	0.49	0.06	0.61
Sat Flow, veh/h	1781	1610		3647	1583	1781	3647
Grp Volume(v), veh/h	201	206		1246	548	66	619
Grp Sat Flow(s),veh/h/ln	1781	1610		1777	1583	1781	1777
Q Serve(g_s), s	5.3	6.1		14.3	14.0	1.9	4.2
Cycle Q Clear(g_c), s	5.3	6.1		14.3	14.0	1.9	4.2
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	344	311		1730	771	106	2181
V/C Ratio(X)	0.58	0.66		0.72	0.71	0.63	0.28
Avail Cap(c_a), veh/h	1034	934		2062	919	1034	2181
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	19.0	19.3		10.5	10.4	23.8	4.7
Incr Delay (d2), s/veh	1.6	2.4		1.0	2.1	5.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.3		4.3	4.4	0.9	0.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	20.6	21.7		11.5	12.5	29.7	4.7
LnGrp LOS	C	C		B	B	C	A
Approach Vol, veh/h	407			1794			685
Approach Delay, s/veh	21.2			11.8			7.1
Approach LOS	C			B			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.6	30.2				36.7		15.0
Change Period (Y+Rc), s	3.5	5.0				5.0		5.0
Max Green Setting (Gmax), s	30.0	30.0				30.0		30.0
Max Q Clear Time (g_c+I1), s	3.9	16.3				6.2		8.1
Green Ext Time (p_c), s	0.1	8.8				4.2		1.3

Intersection Summary		
HCM 6th Ctrl Delay		12.0
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	25	108	35	49	33	244	1008	55	51	509	71
Future Volume (veh/h)	61	25	108	35	49	33	244	1008	55	51	509	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	25	109	35	49	33	246	1018	56	52	514	72
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	81	241	149	156	125	302	1477	81	71	1073	465
Arrive On Green	0.16	0.16	0.16	0.08	0.08	0.08	0.17	0.43	0.43	0.04	0.30	0.30
Sat Flow, veh/h	1287	519	1534	1781	1870	1500	1781	3421	188	1781	3554	1540
Grp Volume(v), veh/h	87	0	109	35	49	33	246	529	545	52	514	72
Grp Sat Flow(s),veh/h/ln	1806	0	1534	1781	1870	1500	1781	1777	1832	1781	1777	1540
Q Serve(g_s), s	2.4	0.0	3.6	1.0	1.4	1.1	7.4	13.4	13.4	1.6	6.6	1.9
Cycle Q Clear(g_c), s	2.4	0.0	3.6	1.0	1.4	1.1	7.4	13.4	13.4	1.6	6.6	1.9
Prop In Lane	0.71		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	283	0	241	149	156	125	302	767	791	71	1073	465
V/C Ratio(X)	0.31	0.00	0.45	0.24	0.31	0.26	0.81	0.69	0.69	0.73	0.48	0.15
Avail Cap(c_a), veh/h	1462	0	1242	641	673	540	641	767	791	481	1918	832
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	21.3	23.8	24.0	23.9	22.2	12.8	12.8	26.4	15.8	14.2
Incr Delay (d2), s/veh	2.2	0.0	4.8	0.8	1.1	1.1	2.0	5.0	4.9	5.4	0.1	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.5	0.4	0.6	0.4	2.9	5.3	5.5	0.7	2.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	0.0	26.0	24.6	25.1	25.0	24.3	17.8	17.6	31.8	16.0	14.3
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		196			117			1320			638	
Approach Delay, s/veh		24.7			24.9			18.9			17.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	28.5		12.7	12.9	21.3		8.6
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	15.0	24.0		45.0	20.0	30.0		20.0
Max Q Clear Time (g_c+I1), s	3.6	15.4		5.6	9.4	8.6		3.4
Green Ext Time (p_c), s	0.0	1.8		2.6	0.3	1.2		0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	304	123	444	426	195	163	262	619	185	103	9
Future Volume (veh/h)	93	304	123	444	426	195	163	262	619	185	103	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	310	126	453	435	199	166	267	632	189	105	9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	387	165	975	528	433	207	492	1499	279	750	63
Arrive On Green	0.19	0.19	0.19	0.28	0.28	0.28	0.12	0.26	0.26	0.08	0.23	0.23
Sat Flow, veh/h	606	2034	866	3456	1870	1534	1781	1870	2705	3456	3293	277
Grp Volume(v), veh/h	289	0	242	453	435	199	166	267	632	189	56	58
Grp Sat Flow(s),veh/h/ln	1840	0	1666	1728	1870	1534	1781	1870	1352	1728	1777	1794
Q Serve(g_s), s	13.1	0.0	12.0	9.4	18.9	9.3	7.9	10.7	12.1	4.6	2.2	2.3
Cycle Q Clear(g_c), s	13.1	0.0	12.0	9.4	18.9	9.3	7.9	10.7	12.1	4.6	2.2	2.3
Prop In Lane	0.33		0.52	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	350	0	317	975	528	433	207	492	1499	279	405	409
V/C Ratio(X)	0.83	0.00	0.77	0.46	0.82	0.46	0.80	0.54	0.42	0.68	0.14	0.14
Avail Cap(c_a), veh/h	423	0	383	1191	645	529	614	645	1719	794	817	824
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	33.4	25.8	29.2	25.8	37.5	27.6	11.7	38.9	26.8	26.8
Incr Delay (d2), s/veh	10.7	0.0	7.4	0.3	7.2	0.8	7.0	0.9	0.2	2.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	5.4	3.8	9.2	3.4	3.7	4.7	6.1	2.0	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	40.8	26.2	36.4	26.5	44.5	28.5	11.9	41.8	27.0	27.0
LnGrp LOS	D	A	D	C	D	C	D	C	B	D	C	C
Approach Vol, veh/h		531			1087			1065			303	
Approach Delay, s/veh		42.9			30.3			21.2			36.2	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	26.9		20.5	14.1	23.8		28.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	30.0	40.0		30.0				
Max Q Clear Time (g_c+I1), s	10.6	14.1		15.1	9.9	4.3		20.9				
Green Ext Time (p_c), s	0.5	4.0		1.4	0.4	0.6		3.6				

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	781	89	85	812	150	124	36	33	201	37	104
Future Volume (veh/h)	229	781	89	85	812	150	124	36	33	201	37	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	0.98		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	797	91	87	829	0	127	37	34	205	38	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	385	1244	142	210	1037		475	127	498	385	57	
Arrive On Green	0.22	0.39	0.39	0.12	0.29	0.00	0.32	0.32	0.32	0.32	0.32	0.00
Sat Flow, veh/h	1781	3189	364	1781	3554	1585	1178	392	1537	890	176	1585
Grp Volume(v), veh/h	234	444	444	87	829	0	164	0	34	243	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1781	1777	1585	1571	0	1537	1066	0	1585
Q Serve(g_s), s	8.1	13.9	13.9	3.1	14.8	0.0	0.0	0.0	1.0	10.8	0.0	0.0
Cycle Q Clear(g_c), s	8.1	13.9	13.9	3.1	14.8	0.0	5.1	0.0	1.0	16.0	0.0	0.0
Prop In Lane	1.00		0.20	1.00		1.00	0.77		1.00	0.84		1.00
Lane Grp Cap(c), veh/h	385	693	693	210	1037		602	0	498	442	0	
V/C Ratio(X)	0.61	0.64	0.64	0.41	0.80		0.27	0.00	0.07	0.55	0.00	
Avail Cap(c_a), veh/h	416	1284	1283	286	1063		766	0	673	528	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)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.2	17.0	17.0	28.0	22.4	0.0	17.4	0.0	16.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	2.2	1.0	1.0	1.3	4.3	0.0	0.2	0.0	0.1	1.1	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(50%),veh/ln	3.5	5.3	5.3	1.3	6.4	0.0	1.9	0.0	0.4	3.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	18.0	18.0	29.3	26.7	0.0	17.6	0.0	16.1	24.3	0.0	0.0
LnGrp LOS	C	B	B	C	C		B	A	B	C	A	
Approach Vol, veh/h		1122			916	A		198			243	A
Approach Delay, s/veh		19.7			27.0			17.3			24.3	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.2	11.6	30.7	26.2	18.3	24.0
Change Period (Y+Rc), s	4.0	3.5	4.0	4.0	3.5	4.0
Max Green Setting (Gmax), s	30.0	11.0	49.5	26.5	16.0	20.5
Max Q Clear Time (g_c+I1), s	7.1	5.1	15.9	18.0	10.1	16.8
Green Ext Time (p_c), s	1.1	0.1	6.7	0.9	0.3	1.9

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	848	184	234	733	253	103
Future Volume (veh/h)	848	184	234	733	253	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	865	188	239	748	258	105
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1350	583	319	2247	344	306
Arrive On Green	0.38	0.38	0.18	0.63	0.19	0.19
Sat Flow, veh/h	3647	1536	1781	3647	1781	1585
Grp Volume(v), veh/h	865	188	239	748	258	105
Grp Sat Flow(s),veh/h/ln	1777	1536	1781	1777	1781	1585
Q Serve(g_s), s	10.8	4.7	6.9	5.3	7.4	3.1
Cycle Q Clear(g_c), s	10.8	4.7	6.9	5.3	7.4	3.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1350	583	319	2247	344	306
V/C Ratio(X)	0.64	0.32	0.75	0.33	0.75	0.34
Avail Cap(c_a), veh/h	1961	848	950	2247	983	875
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	13.8	11.9	21.2	4.7	20.7	19.0
Incr Delay (d2), s/veh	0.5	0.3	3.5	0.1	3.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	1.4	2.9	1.3	3.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.3	12.2	24.7	4.7	24.0	19.6
LnGrp LOS	B	B	C	A	C	B
Approach Vol, veh/h	1053			987	363	
Approach Delay, s/veh	14.0			9.6	22.7	
Approach LOS	B			A	C	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	15.5	13.7	25.1		38.9
Change Period (Y+Rc), s	5.0	4.0	4.5		4.5
Max Green Setting (Gmax), s	30.0	29.0	30.0		30.0
Max Q Clear Time (g_c+I1), s	9.4	8.9	12.8		7.3
Green Ext Time (p_c), s	1.1	0.6	6.4		5.4

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	968	2	0	854	89	4	0	13	83	1	46
Future Volume (veh/h)	108	968	2	0	854	89	4	0	13	83	1	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.97		0.96	0.96		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	998	2	0	880	92	4	0	13	86	1	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	146	2046	4	0	1475	644	140	39	313	497	5	412
Arrive On Green	0.08	0.56	0.56	0.00	0.42	0.42	0.27	0.00	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3638	7	0	3647	1553	213	145	1162	1348	19	1529
Grp Volume(v), veh/h	111	487	513	0	880	92	17	0	0	87	0	47
Grp Sat Flow(s),veh/h/ln	1781	1777	1869	0	1777	1553	1519	0	0	1366	0	1529
Q Serve(g_s), s	3.3	8.8	8.8	0.0	10.3	2.0	0.0	0.0	0.0	2.1	0.0	1.2
Cycle Q Clear(g_c), s	3.3	8.8	8.8	0.0	10.3	2.0	0.4	0.0	0.0	2.6	0.0	1.2
Prop In Lane	1.00		0.00	0.00		1.00	0.24		0.76	0.99		1.00
Lane Grp Cap(c), veh/h	146	999	1051	0	1475	644	492	0	0	502	0	412
V/C Ratio(X)	0.76	0.49	0.49	0.00	0.60	0.14	0.03	0.00	0.00	0.17	0.00	0.11
Avail Cap(c_a), veh/h	516	999	1051	0	1992	870	646	0	0	897	0	857
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	7.1	7.1	0.0	12.2	9.7	14.4	0.0	0.0	15.2	0.0	14.7
Incr Delay (d2), s/veh	7.8	0.4	0.4	0.0	0.4	0.1	0.0	0.0	0.0	0.2	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.5	2.7	0.0	3.5	0.6	0.1	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	7.4	7.4	0.0	12.6	9.8	14.5	0.0	0.0	15.3	0.0	14.9
LnGrp LOS	C	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h		1111			972			17			134	
Approach Delay, s/veh		9.9			12.3			14.5			15.2	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	2	4	6	7	8
Phs Duration (G+Y+Rc), s	18.4	35.1	18.4	7.9	27.2
Change Period (Y+Rc), s	4.0	5.0	4.0	3.5	5.0
Max Green Setting (Gmax), s	20.0	30.0	30.0	15.5	30.0
Max Q Clear Time (g_c+I1), s	2.4	10.8	4.6	5.3	12.3
Green Ext Time (p_c), s	0.0	6.5	0.6	0.2	6.3

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	898	107	56	798	71	68	11	72	92	24	57
Future Volume (veh/h)	67	898	107	56	798	71	68	11	72	92	24	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.95	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	945	113	59	840	75	72	12	76	97	25	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	1302	548	113	1277	541	116	11	591	112	17	595
Arrive On Green	0.07	0.37	0.37	0.06	0.36	0.36	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1781	3554	1497	1781	3554	1506	0	28	1554	0	44	1566
Grp Volume(v), veh/h	71	945	113	59	840	75	84	0	76	122	0	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1497	1781	1777	1506	28	0	1554	44	0	1566
Q Serve(g_s), s	2.2	13.3	3.0	1.9	11.5	1.9	0.0	0.0	1.8	0.0	0.0	1.4
Cycle Q Clear(g_c), s	2.2	13.3	3.0	1.9	11.5	1.9	22.0	0.0	1.8	22.0	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.80		1.00
Lane Grp Cap(c), veh/h	126	1302	548	113	1277	541	126	0	591	128	0	595
V/C Ratio(X)	0.56	0.73	0.21	0.52	0.66	0.14	0.67	0.00	0.13	0.95	0.00	0.10
Avail Cap(c_a), veh/h	616	1504	634	616	1474	625	126	0	591	128	0	595
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	0.00	1.00
Uniform Delay (d), s/veh	26.0	15.8	12.6	26.2	15.6	12.5	26.1	0.0	11.7	26.0	0.0	11.6
Incr Delay (d2), s/veh	3.9	1.5	0.2	3.7	0.9	0.1	12.4	0.0	0.1	64.2	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.0	0.9	0.9	4.2	0.6	1.5	0.0	0.6	3.9	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	17.3	12.8	29.9	16.4	12.6	38.6	0.0	11.8	90.1	0.0	11.6
LnGrp LOS	C	B	B	C	B	B	D	A	B	F	A	B
Approach Vol, veh/h		1129			974			160			182	
Approach Delay, s/veh		17.7			17.0			25.8			64.3	
Approach LOS		B			B			C			E	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	26.0	7.2	24.7		26.0	7.6	24.3
Change Period (Y+Rc), s	4.0	3.5	3.5		4.0	3.5	3.5
Max Green Setting (Gmax), s	22.0	20.0	24.5		22.0	20.0	24.0
Max Q Clear Time (g_c+I1), s	24.0	3.9	15.3		24.0	4.2	13.5
Green Ext Time (p_c), s	0.0	0.1	4.6		0.0	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	878	121	148	755	59	134	36	133	33	13	41
Future Volume (veh/h)	64	878	121	148	755	59	134	36	133	33	13	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	944	130	159	812	63	144	39	143	35	14	44
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1139	499	195	1266	98	290	78	319	240	96	292
Arrive On Green	0.05	0.32	0.32	0.11	0.38	0.38	0.20	0.20	0.20	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1558	1781	3337	259	1416	384	1557	1290	516	1573
Grp Volume(v), veh/h	69	944	130	159	432	443	183	0	143	49	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1558	1781	1777	1819	1800	0	1557	1806	0	1573
Q Serve(g_s), s	3.9	25.4	6.4	9.0	20.6	20.6	9.3	0.0	8.3	2.3	0.0	2.4
Cycle Q Clear(g_c), s	3.9	25.4	6.4	9.0	20.6	20.6	9.3	0.0	8.3	2.3	0.0	2.4
Prop In Lane	1.00		1.00	1.00		0.14	0.79		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	91	1139	499	195	674	690	368	0	319	336	0	292
V/C Ratio(X)	0.76	0.83	0.26	0.81	0.64	0.64	0.50	0.00	0.45	0.15	0.00	0.15
Avail Cap(c_a), veh/h	690	1377	603	690	688	705	697	0	603	700	0	609
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	0.00	1.00
Uniform Delay (d), s/veh	48.4	32.5	26.0	44.9	26.3	26.3	36.4	0.0	36.0	35.2	0.0	35.2
Incr Delay (d2), s/veh	12.1	3.7	0.3	7.9	2.0	1.9	1.0	0.0	1.0	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	11.3	2.4	4.4	8.9	9.1	4.2	0.0	3.2	1.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	36.2	26.3	52.9	28.3	28.2	37.4	0.0	37.0	35.4	0.0	35.4
LnGrp LOS	E	D	C	D	C	C	D	A	D	D	A	D
Approach Vol, veh/h		1143			1034			326			93	
Approach Delay, s/veh		36.5			32.0			37.2			35.4	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.1	14.8	38.1	24.2	8.8	44.2
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	40.0	40.0	40.0	40.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	11.3	11.0	27.4	4.4	5.9	22.6
Green Ext Time (p_c), s	1.6	0.4	5.7	0.4	0.2	5.4

Intersection Summary	
HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	814	153	144	787	1	157	0	93	0	0	3
Future Volume (veh/h)	3	814	153	144	787	1	157	0	93	0	0	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	866	163	153	837	1	167	0	99	0	0	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1364	591	206	1803	2	265	0	232	0	0	25
Arrive On Green	0.00	0.38	0.38	0.12	0.50	0.50	0.15	0.00	0.15	0.00	0.00	0.02
Sat Flow, veh/h	1781	3554	1540	1781	3642	4	1781	0	1563	0	0	1570
Grp Volume(v), veh/h	3	866	163	153	408	430	167	0	99	0	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1540	1781	1777	1870	1781	0	1563	0	0	1570
Q Serve(g_s), s	0.1	10.3	3.8	4.3	7.9	7.9	4.6	0.0	3.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	10.3	3.8	4.3	7.9	7.9	4.6	0.0	3.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	7	1364	591	206	880	926	265	0	232	0	0	25
V/C Ratio(X)	0.41	0.63	0.28	0.74	0.46	0.46	0.63	0.00	0.43	0.00	0.00	0.12
Avail Cap(c_a), veh/h	906	2046	886	1248	1023	1076	1231	0	1080	0	0	874
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	13.1	11.1	22.3	8.6	8.6	20.8	0.0	20.2	0.0	0.0	25.3
Incr Delay (d2), s/veh	33.4	0.5	0.3	5.3	0.4	0.4	2.5	0.0	1.2	0.0	0.0	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(50%),veh/ln	0.1	3.6	1.1	2.0	2.4	2.6	1.9	0.0	1.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	13.6	11.3	27.6	9.0	9.0	23.3	0.0	21.4	0.0	0.0	27.3
LnGrp LOS	E	B	B	C	A	A	C	A	C	A	A	C
Approach Vol, veh/h		1032			991			266			3	
Approach Delay, s/veh		13.4			11.9			22.6			27.3	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	3.7	30.8		11.8	9.5	25.0		5.8
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		5.0
Max Green Setting (Gmax), s	26.5	30.0		36.0	36.5	30.0		29.0
Max Q Clear Time (g_c+I1), s	2.1	9.9		6.6	6.3	12.3		2.1
Green Ext Time (p_c), s	0.0	5.3		1.3	0.4	6.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	883	11	46	909	37	42
Future Vol, veh/h	883	11	46	909	37	42
Conflicting Peds, #/hr	0	9	9	0	9	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	981	12	51	1010	41	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1002	0	1606	509
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	616	-
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	-	-	687	-	96	509
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	681	-	87	500
Mov Cap-2 Maneuver	-	-	-	-	199	-
Stage 1	-	-	-	-	293	-
Stage 2	-	-	-	-	496	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	22.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	293	-	-	681	-
HCM Lane V/C Ratio	0.3	-	-	0.075	-
HCM Control Delay (s)	22.5	-	-	10.7	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	1027	971	15	5	9
Future Vol, veh/h	25	1027	971	15	5	9
Conflicting Peds, #/hr	20	0	0	21	21	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1070	1011	16	5	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1048	0	-	0	1648	555
Stage 1	-	-	-	-	1040	-
Stage 2	-	-	-	-	608	-
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	660	-	-	-	90	475
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	647	-	-	-	83	457
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	496	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	647	-	-	-	311
HCM Lane V/C Ratio	0.04	-	-	-	0.047
HCM Control Delay (s)	10.8	-	-	-	17.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

SIMTRAFFIC QUEUEING REPORTS

FUTURE CONDITIONS

AM & PM PEAK HOUR

Intersection: 1: SR-1 Ramps & Del Monte Blvd

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	79	50	4	39	174	349	299
Average Queue (ft)	25	27	0	5	116	46	23
95th Queue (ft)	77	50	2	24	187	230	170
Link Distance (ft)	309	309	545	545		487	487
Upstream Blk Time (%)						0	0
Queuing Penalty (veh)						0	0
Storage Bay Dist (ft)					150		
Storage Blk Time (%)					10	0	
Queuing Penalty (veh)					61	0	

Intersection: 2: Del Monte Blvd & Reindollar Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	332	175	187	167	99	150	335	325
Average Queue (ft)	166	108	102	70	40	67	156	163
95th Queue (ft)	268	211	162	138	76	138	291	287
Link Distance (ft)	856		487	487			1066	1066
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150			125	125		
Storage Blk Time (%)	8	1	2	0	0	0	9	
Queuing Penalty (veh)	28	2	0	1	0	2	8	

Intersection: 3: Del Monte Blvd & Palm Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	210	125	100	108	67	137	205	199	174	336	336	125
Average Queue (ft)	72	78	56	21	25	52	101	95	30	193	192	29
95th Queue (ft)	159	129	96	67	57	104	176	170	104	300	301	105
Link Distance (ft)	744			828			1066	1066		1812	1812	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		100	80		50	225			150			100
Storage Blk Time (%)	2	3	5	2	1	0	0		0	18	28	0
Queuing Penalty (veh)	5	4	3	3	1	0	0		0	4	10	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	R	R	L	L
Maximum Queue (ft)	174	441	124	305	273	149	271	205	101	109	157	169
Average Queue (ft)	114	189	95	130	92	66	145	99	48	48	66	97
95th Queue (ft)	206	347	148	240	195	140	235	176	86	91	137	163
Link Distance (ft)		973		622	622			1812	1812			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		100			125	450			450	150	150
Storage Blk Time (%)	1	18	7	14	4	0					0	2
Queuing Penalty (veh)	3	25	14	29	8	1					0	2

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	202	124
Average Queue (ft)	70	39
95th Queue (ft)	146	95
Link Distance (ft)	571	571
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	167	210	251	129	251	231	159	101	72	125	82
Average Queue (ft)	77	82	117	36	107	102	16	45	22	56	6
95th Queue (ft)	136	158	203	92	196	191	91	85	57	102	42
Link Distance (ft)		622	622		375	375		283		591	
Upstream Blk Time (%)					0						
Queuing Penalty (veh)					0						
Storage Bay Dist (ft)	175			135			135		50		100
Storage Blk Time (%)	0	0		0	4	3	0	10	0	2	0
Queuing Penalty (veh)	0	0		0	2	3	0	3	0	1	0

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	122	118	87	178	179	184	123	161
Average Queue (ft)	89	88	34	88	62	65	74	37
95th Queue (ft)	133	131	70	150	139	146	119	84
Link Distance (ft)	39	39	39		261	261		724
Upstream Blk Time (%)	25	25	5		0			
Queuing Penalty (veh)	69	70	12		0			
Storage Bay Dist (ft)				200			100	
Storage Blk Time (%)				0	0		4	0
Queuing Penalty (veh)				0	0		3	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	R
Maximum Queue (ft)	72	113	101	217	230	100	31	80	82
Average Queue (ft)	44	62	66	111	108	47	7	35	33
95th Queue (ft)	74	112	108	207	214	109	27	70	65
Link Distance (ft)		73	73	220	220		474	485	
Upstream Blk Time (%)	1	6	8	1	1				
Queuing Penalty (veh)	0	23	31	2	4				
Storage Bay Dist (ft)	145					75			150
Storage Blk Time (%)	1	6			11	0			
Queuing Penalty (veh)	3	6			12	1			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	67	186	192	57	93	251	277	176	42	30	134	73
Average Queue (ft)	24	74	89	4	19	92	96	30	9	7	51	29
95th Queue (ft)	56	151	169	17	58	198	211	107	32	24	104	66
Link Distance (ft)		220	220			490	490		409		830	
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	200			175	175			175		200		50
Storage Blk Time (%)		0	0			1	1	0			11	1
Queuing Penalty (veh)		0	0			0	1	0			8	2

Intersection: 9: Crescent Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	B34	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	T	LT	R	LT	R
Maximum Queue (ft)	166	310	348	125	195	296	338	2	98	188	181	74
Average Queue (ft)	43	173	202	53	62	138	166	0	65	57	77	29
95th Queue (ft)	110	285	313	144	142	250	282	2	108	138	144	76
Link Distance (ft)		490	490			562	562	1635		681	808	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220			100	220				75			50
Storage Blk Time (%)		3	30	0	0	1			13	1	28	1
Queuing Penalty (veh)		2	22	0	0	1			14	1	10	1

Intersection: 10: California Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	79	334	378	125	170	226	205	148	132	24
Average Queue (ft)	13	134	161	88	89	84	87	62	46	1
95th Queue (ft)	49	268	318	157	156	174	175	116	90	12
Link Distance (ft)		1635	1635			2271	2271	1450		183
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	75			100	150				150	
Storage Blk Time (%)	0	19	15	1	2	1		0	0	
Queuing Penalty (veh)	0	2	38	4	5	2		0	0	

Intersection: 11: Salinas Ave & Reservation Rd

Movement	EB	WB	NB
Directions Served	R	L	LR
Maximum Queue (ft)	2	52	75
Average Queue (ft)	0	12	27
95th Queue (ft)	2	40	55
Link Distance (ft)			445
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100	150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	EB	WB	SB
Directions Served	L	T	T	TR	LR
Maximum Queue (ft)	28	133	164	9	78
Average Queue (ft)	2	26	37	0	30
95th Queue (ft)	15	88	116	8	65
Link Distance (ft)		375	375	39	1022
Upstream Blk Time (%)				0	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)	125				
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 13: Reservation Rd & Driveway 1

Movement	EB	EB	WB	WB	SB
Directions Served	T	T	T	TR	R
Maximum Queue (ft)	91	108	3	2	65
Average Queue (ft)	12	16	0	0	24
95th Queue (ft)	55	66	3	2	51
Link Distance (ft)	261	261	46	46	179
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 14: Driveway 2 & Reservation Rd

Movement	EB	EB	WB	NB
Directions Served	T	TR	T	R
Maximum Queue (ft)	61	70	8	84
Average Queue (ft)	17	26	0	31
95th Queue (ft)	54	68	6	63
Link Distance (ft)	46	46	73	240
Upstream Blk Time (%)	2	5		
Queuing Penalty (veh)	9	18		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 607

Intersection: 1: SR-1 Ramps & Del Monte Blvd

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	296	292	6	19	170	244	223
Average Queue (ft)	278	179	0	1	100	71	59
95th Queue (ft)	304	397	4	9	190	306	280
Link Distance (ft)	280	280	552	552		479	479
Upstream Blk Time (%)	93	58				2	0
Queuing Penalty (veh)	0	0				6	0
Storage Bay Dist (ft)					150		
Storage Blk Time (%)					22	0	
Queuing Penalty (veh)					80	0	

Intersection: 2: Del Monte Blvd & Reindollar Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	165	144	297	277	150	114	189	195
Average Queue (ft)	80	42	165	144	103	44	62	82
95th Queue (ft)	142	101	260	250	171	91	147	164
Link Distance (ft)	856		479	479			1066	1066
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150			125	125		
Storage Blk Time (%)	1	0	13	5	2	0	2	
Queuing Penalty (veh)	1	0	0	26	10	0	1	

Intersection: 3: Del Monte Blvd & Palm Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	104	101	81	101	71	234	362	349	123	234	236	125
Average Queue (ft)	44	36	23	35	25	119	162	172	35	104	114	38
95th Queue (ft)	83	73	58	75	60	215	286	299	83	192	206	113
Link Distance (ft)	744			828			1066	1066		1812	1812	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		100	80		50	225			150			100
Storage Blk Time (%)	0	0	0	7	1	0	3			3	11	0
Queuing Penalty (veh)	0	0	0	5	1	2	7			2	8	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	R	R	L	L
Maximum Queue (ft)	174	573	125	512	602	150	204	249	161	164	129	149
Average Queue (ft)	156	290	98	197	356	110	98	132	76	82	46	66
95th Queue (ft)	211	552	154	456	651	199	169	226	130	138	98	121
Link Distance (ft)		973		622	622			1812	1812			
Upstream Blk Time (%)				0	2							
Queuing Penalty (veh)				0	13							
Storage Bay Dist (ft)	150		100			125	450			450	150	150
Storage Blk Time (%)	16	32	8	18	42	1					0	0
Queuing Penalty (veh)	44	77	17	39	82	3					0	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	109	75
Average Queue (ft)	29	13
95th Queue (ft)	78	44
Link Distance (ft)	571	571
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	198	275	319	160	387	399	160	204	75	314	125
Average Queue (ft)	125	128	165	71	180	223	82	85	28	134	52
95th Queue (ft)	200	236	272	152	348	399	210	158	73	258	147
Link Distance (ft)		622	622		375	375		283		591	
Upstream Blk Time (%)					2	4				0	
Queuing Penalty (veh)					8	19				0	
Storage Bay Dist (ft)	175			135			135		50		100
Storage Blk Time (%)	4	1		0	13	24	0	28	1	19	0
Queuing Penalty (veh)	17	2		1	11	36	1	9	1	20	1

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	128	125	90	218	255	264	124	256
Average Queue (ft)	106	103	42	120	96	123	101	84
95th Queue (ft)	134	130	79	201	207	236	142	211
Link Distance (ft)	39	39	39		261	261		724
Upstream Blk Time (%)	42	43	6		0	0		
Queuing Penalty (veh)	143	147	22		1	2		
Storage Bay Dist (ft)				200			100	
Storage Blk Time (%)				1	1		16	0
Queuing Penalty (veh)				4	1		17	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	R
Maximum Queue (ft)	72	111	104	237	239	100	38	96	57
Average Queue (ft)	47	73	77	150	154	45	11	36	18
95th Queue (ft)	74	119	110	257	263	110	34	74	41
Link Distance (ft)		73	73	220	220		474	485	
Upstream Blk Time (%)	1	11	14	2	3				
Queuing Penalty (veh)	0	58	76	10	13				
Storage Bay Dist (ft)	145					75			150
Storage Blk Time (%)	1	11			19	0			
Queuing Penalty (veh)	6	12			17	1			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	88	216	232	199	190	300	319	200	94	67	124	72
Average Queue (ft)	37	104	123	35	46	128	145	38	37	24	51	27
95th Queue (ft)	73	199	223	120	127	245	274	137	74	52	98	65
Link Distance (ft)		220	220			490	490		409		830	
Upstream Blk Time (%)		0	1									
Queuing Penalty (veh)		2	3									
Storage Bay Dist (ft)	200			175	175			175		200		50
Storage Blk Time (%)		1	3	0	0	3	5	0			12	2
Queuing Penalty (veh)		0	3	0	0	2	3	0			7	3

Intersection: 9: Crescent Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	B34	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	T	LT	R	LT	R
Maximum Queue (ft)	244	429	454	125	243	379	404	6	99	269	125	74
Average Queue (ft)	70	248	272	73	112	176	204	0	80	89	41	28
95th Queue (ft)	183	404	426	163	216	313	339	6	115	211	91	67
Link Distance (ft)		490	490			562	562	1635		681	808	
Upstream Blk Time (%)		0	0			0						
Queuing Penalty (veh)		0	0			0						
Storage Bay Dist (ft)	220			100	220				75			50
Storage Blk Time (%)	0	12	39	0	0	4			23	2	13	1
Queuing Penalty (veh)	0	8	47	0	1	5			30	3	5	1

Intersection: 10: California Ave & Reservation Rd

Movement	EB	EB	EB	EB	B34	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	T	R	T	L	T	TR	LT	R	LTR	
Maximum Queue (ft)	44	360	391	125	5	168	252	224	189	114	30	
Average Queue (ft)	4	164	188	69	0	83	95	95	77	31	3	
95th Queue (ft)	24	320	359	150	5	150	201	187	145	71	17	
Link Distance (ft)		1635	1635		562		2271	2271	1450		183	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	75			100		150				150		
Storage Blk Time (%)		21	18	0		1	2		1			
Queuing Penalty (veh)		1	28	1		3	3		1			

Intersection: 11: Salinas Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB					
Directions Served	T	T	R	L	T	T	LR					
Maximum Queue (ft)	106	99	18	51	61	60	111					
Average Queue (ft)	8	10	1	19	11	5	40					
95th Queue (ft)	50	52	13	49	42	28	88					
Link Distance (ft)	2271	2271			1110	1110	445					
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			100	150								
Storage Blk Time (%)		0										
Queuing Penalty (veh)		0										

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	116	283	305	62	83	60
Average Queue (ft)	16	97	129	13	19	16
95th Queue (ft)	60	216	259	47	67	49
Link Distance (ft)		375	375	39	39	1022
Upstream Blk Time (%)		0		1	3	
Queuing Penalty (veh)		0		5	16	
Storage Bay Dist (ft)	125					
Storage Blk Time (%)		5				
Queuing Penalty (veh)		1				

Intersection: 13: Reservation Rd & Driveway 1

Movement	EB	EB	WB	WB	SB
Directions Served	T	T	T	TR	R
Maximum Queue (ft)	185	185	14	16	82
Average Queue (ft)	43	54	1	1	35
95th Queue (ft)	137	152	10	11	61
Link Distance (ft)	261	261	46	46	179
Upstream Blk Time (%)			0	0	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 14: Driveway 2 & Reservation Rd

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	T	T	R
Maximum Queue (ft)	60	79	8	11	145
Average Queue (ft)	29	40	0	0	60
95th Queue (ft)	70	79	10	8	115
Link Distance (ft)	46	46	73	73	240
Upstream Blk Time (%)	7	9	0	0	0
Queuing Penalty (veh)	33	48	0	0	0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 1343

SIDRA LEVEL OF SERVICE REPORTS

FUTURE CONDITIONS

AM & PM PEAK HOUR

MOVEMENT SUMMARY

Site: 101 [Del Monte/Hwy1 - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Highway 1 On/Off Ramp											
8	T1	604	3.0	0.319	6.6	LOS A	1.7	44.5	0.59	0.51	34.4
18	R2	68	3.0	0.319	6.5	LOS A	1.6	41.3	0.57	0.49	33.4
Approach		672	3.0	0.319	6.6	LOS A	1.7	44.5	0.59	0.51	34.3
East: Del Monte Blvd											
1	L2	11	3.0	0.013	4.3	LOS A	0.1	1.4	0.57	0.40	32.9
16	R2	65	3.0	0.071	4.6	LOS A	0.3	7.4	0.55	0.46	34.2
Approach		75	3.0	0.071	4.6	LOS A	0.3	7.4	0.55	0.45	34.0
North: Del Monte Blvd											
7	L2	422	3.0	0.557	7.9	LOS A	5.7	145.0	0.14	0.03	32.6
4	T1	1332	3.0	0.557	7.9	LOS A	5.7	145.0	0.13	0.03	33.3
Approach		1754	3.0	0.557	7.9	LOS A	5.7	145.0	0.13	0.03	33.2
All Vehicles		2501	3.0	0.557	7.4	LOS A	5.7	145.0	0.27	0.17	33.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Del Monte/Hwy1 - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Highway 1 On/Off Ramp											
8	T1	1622	3.0	0.583	8.9	LOS A	5.5	141.3	0.47	0.25	33.3
18	R2	56	3.0	0.583	8.8	LOS A	5.1	129.3	0.45	0.24	32.3
Approach		1677	3.0	0.583	8.9	LOS A	5.5	141.3	0.47	0.25	33.3
East: Del Monte Blvd											
1	L2	177	3.0	0.592	31.0	LOS C	2.9	73.1	0.91	1.06	24.0
16	R2	184	3.0	0.519	23.2	LOS C	2.3	58.8	0.88	0.98	26.6
Approach		361	3.0	0.592	27.0	LOS C	2.9	73.1	0.89	1.02	25.2
North: Del Monte Blvd											
7	L2	104	3.0	0.331	5.7	LOS A	2.1	53.0	0.44	0.27	34.3
4	T1	782	3.0	0.331	5.7	LOS A	2.1	53.0	0.42	0.26	34.6
Approach		886	3.0	0.331	5.7	LOS A	2.1	53.0	0.42	0.26	34.6
All Vehicles		2925	3.0	0.592	10.1	LOS B	5.5	141.3	0.50	0.35	32.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 102 [Del Monte/Reindollar - AM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3u	U	11	2.0	0.245	4.5	LOS A	1.5	37.4	0.29	0.14	36.5
8	T1	534	3.0	0.245	4.5	LOS A	1.5	37.4	0.28	0.13	35.4
18	R2	169	3.0	0.245	4.5	LOS A	1.3	33.9	0.26	0.12	34.3
Approach		714	3.0	0.245	4.5	LOS A	1.5	37.4	0.27	0.13	35.2
East: Reindollar Ave											
1	L2	600	3.0	0.362	7.9	LOS A	1.9	49.3	0.67	0.63	31.6
16	R2	76	3.0	0.362	7.7	LOS A	1.8	46.2	0.64	0.61	30.9
Approach		676	3.0	0.362	7.8	LOS A	1.9	49.3	0.66	0.63	31.5
North: Del Monte Blvd											
7	L2	92	3.0	0.729	18.4	LOS B	7.4	189.0	0.92	1.10	29.0
4	T1	1186	3.0	0.729	17.9	LOS B	7.4	189.0	0.90	1.07	29.3
Approach		1278	3.0	0.729	18.0	LOS B	7.4	189.0	0.90	1.08	29.3
All Vehicles		2669	3.0	0.729	11.8	LOS B	7.4	189.0	0.67	0.71	31.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 102 [Del Monte/Reindollar - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3u	U	11	2.0	0.604	9.1	LOS A	6.3	160.7	0.41	0.18	34.1
8	T1	1246	3.0	0.604	9.1	LOS A	6.3	160.7	0.40	0.18	33.1
18	R2	548	3.0	0.604	9.0	LOS A	5.7	146.3	0.37	0.17	32.1
Approach		1805	3.0	0.604	9.0	LOS A	6.3	160.7	0.39	0.18	32.8
East: Reindollar Ave											
1	L2	267	3.0	0.431	16.0	LOS B	2.0	52.3	0.81	0.89	28.6
16	R2	135	3.0	0.431	14.8	LOS B	2.0	50.4	0.79	0.86	28.9
Approach		402	3.0	0.431	15.6	LOS B	2.0	52.3	0.80	0.88	28.7
North: Del Monte Blvd											
7	L2	66	3.0	0.282	5.6	LOS A	1.6	40.8	0.51	0.37	34.5
4	T1	619	3.0	0.282	5.5	LOS A	1.6	40.8	0.48	0.35	34.7
Approach		685	3.0	0.282	5.5	LOS A	1.6	40.8	0.49	0.35	34.7
All Vehicles		2892	3.0	0.604	9.1	LOS A	6.3	160.7	0.47	0.32	32.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 104 [Del Monte/Reservation - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3	L2	248	3.0	0.492	10.0	LOS A	3.0	78.0	0.72	0.76	31.6
8	T1	213	3.0	0.492	10.0	LOS A	3.0	78.0	0.72	0.76	31.5
18	R2	399	3.0	0.451	9.6	LOS A	2.8	70.8	0.74	0.76	31.8
Approach		861	3.0	0.492	9.8	LOS A	3.0	78.0	0.73	0.76	31.6
East: Reservation Road											
1	L2	451	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	30.5
6	T1	200	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	32.5
16	R2	220	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	31.5
Approach		871	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	31.2
North: Del Monte Blvd											
7	L2	278	3.0	0.440	12.3	LOS B	2.4	61.0	0.79	0.85	29.6
4	T1	273	3.0	0.404	10.7	LOS B	2.0	50.9	0.74	0.78	32.4
14	R2	7	3.0	0.404	10.7	LOS B	2.0	50.9	0.74	0.78	31.5
Approach		557	3.0	0.440	11.5	LOS B	2.4	61.0	0.76	0.81	30.9
West: Reservation Road											
5	L2	18	3.0	0.377	12.0	LOS B	1.8	46.9	0.78	0.82	31.7
2	T1	275	3.0	0.377	11.7	LOS B	1.8	46.9	0.77	0.81	31.8
12	R2	158	3.0	0.377	11.0	LOS B	1.7	44.7	0.74	0.78	31.2
Approach		452	3.0	0.377	11.5	LOS B	1.8	46.9	0.76	0.80	31.6
All Vehicles		2740	3.0	0.492	10.6	LOS B	3.0	78.0	0.72	0.75	31.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 104 [Del Monte/Reservation - PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3	L2	166	3.0	0.502	10.8	LOS B	3.3	85.4	0.77	0.83	31.5
8	T1	267	3.0	0.502	10.8	LOS B	3.3	85.4	0.77	0.83	31.5
18	R2	632	3.0	0.688	15.5	LOS B	6.1	155.2	0.85	0.98	29.3
Approach		1065	3.0	0.688	13.6	LOS B	6.1	155.2	0.82	0.92	30.2
East: Reservation Road											
1	L2	453	3.0	0.532	11.6	LOS B	3.2	83.0	0.70	0.76	29.9
6	T1	435	3.0	0.744	19.1	LOS B	6.9	176.6	0.86	1.01	28.9
16	R2	199	3.0	0.744	19.1	LOS B	6.9	176.6	0.86	1.01	28.1
Approach		1087	3.0	0.744	16.0	LOS B	6.9	176.6	0.79	0.90	29.2
North: Del Monte Blvd											
7	L2	189	3.0	0.315	10.3	LOS B	1.3	34.2	0.73	0.74	30.4
4	T1	105	3.0	0.213	9.6	LOS A	0.9	22.6	0.73	0.73	33.0
14	R2	9	3.0	0.213	9.6	LOS A	0.9	22.6	0.73	0.73	32.0
Approach		303	3.0	0.315	10.0	LOS B	1.3	34.2	0.73	0.74	31.3
West: Reservation Road											
5	L2	95	3.0	0.346	9.2	LOS A	1.7	44.0	0.73	0.74	32.3
2	T1	310	3.0	0.346	8.9	LOS A	1.7	44.0	0.71	0.72	32.7
12	R2	126	3.0	0.346	8.6	LOS A	1.6	41.5	0.69	0.70	32.3
Approach		531	3.0	0.346	8.9	LOS A	1.7	44.0	0.71	0.72	32.6
All Vehicles		2986	3.0	0.744	13.3	LOS B	6.9	176.6	0.78	0.86	30.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 108 [Reservation/De Forest - AM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: De Forest Rd											
3	L2	18	3.0	0.067	7.1	LOS A	0.2	5.6	0.60	0.60	33.0
8	T1	3	3.0	0.067	7.1	LOS A	0.2	5.6	0.60	0.60	32.9
18	R2	18	3.0	0.067	7.1	LOS A	0.2	5.6	0.60	0.60	32.0
Approach		38	3.0	0.067	7.1	LOS A	0.2	5.6	0.60	0.60	32.5
East: Reservation Rd											
1	L2	31	3.0	0.339	5.9	LOS A	2.3	58.6	0.28	0.12	34.7
6	T1	731	3.0	0.339	5.9	LOS A	2.3	58.6	0.25	0.11	34.7
16	R2	115	3.0	0.339	5.9	LOS A	1.8	46.4	0.22	0.10	33.7
Approach		877	3.0	0.339	5.9	LOS A	2.3	58.6	0.25	0.11	34.5
North: De Forest Rd											
7	L2	152	3.0	0.331	9.4	LOS A	1.3	33.9	0.64	0.65	31.5
4	T1	1	3.0	0.331	9.4	LOS A	1.3	33.9	0.64	0.65	31.4
14	R2	78	3.0	0.331	9.4	LOS A	1.3	33.9	0.64	0.65	30.6
Approach		231	3.0	0.331	9.4	LOS A	1.3	33.9	0.64	0.65	31.2
West: Reservation Rd											
5	L2	41	3.0	0.389	7.3	LOS A	2.5	65.2	0.51	0.34	33.9
2	T1	816	3.0	0.389	7.1	LOS A	2.5	65.2	0.46	0.31	34.0
12	R2	27	3.0	0.389	7.0	LOS A	2.1	53.1	0.41	0.28	33.1
Approach		885	3.0	0.389	7.1	LOS A	2.5	65.2	0.46	0.31	34.0
All Vehicles		2031	3.0	0.389	6.9	LOS A	2.5	65.2	0.39	0.27	33.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 108 [Reservation/De Forest - PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: De Forest Rd											
3	L2	72	3.0	0.303	11.3	LOS B	1.1	28.4	0.70	0.72	31.1
8	T1	12	3.0	0.303	11.3	LOS B	1.1	28.4	0.70	0.72	31.0
18	R2	76	3.0	0.303	11.3	LOS B	1.1	28.4	0.70	0.72	30.2
Approach		159	3.0	0.303	11.3	LOS B	1.1	28.4	0.70	0.72	30.7
East: Reservation Rd											
1	L2	59	3.0	0.415	7.4	LOS A	2.9	73.4	0.48	0.31	33.8
6	T1	840	3.0	0.415	7.3	LOS A	2.9	73.4	0.44	0.28	33.9
16	R2	75	3.0	0.415	7.2	LOS A	2.3	59.6	0.39	0.25	33.0
Approach		974	3.0	0.415	7.3	LOS A	2.9	73.4	0.44	0.28	33.8
North: De Forest Rd											
7	L2	87	3.0	0.232	9.1	LOS A	0.8	20.9	0.64	0.64	31.7
4	T1	1	3.0	0.232	9.1	LOS A	0.8	20.9	0.64	0.64	31.6
14	R2	48	3.0	0.232	9.1	LOS A	0.8	20.9	0.64	0.64	30.7
Approach		137	3.0	0.232	9.1	LOS A	0.8	20.9	0.64	0.64	31.3
West: Reservation Rd											
5	L2	71	3.0	0.478	8.3	LOS A	3.6	92.0	0.51	0.33	33.3
2	T1	945	3.0	0.478	8.2	LOS A	3.6	92.0	0.47	0.30	33.4
12	R2	113	3.0	0.478	8.1	LOS A	2.9	75.0	0.42	0.27	32.6
Approach		1128	3.0	0.478	8.2	LOS A	3.6	92.0	0.46	0.30	33.3
All Vehicles		2398	3.0	0.478	8.1	LOS A	3.6	92.0	0.48	0.34	33.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 109 [Reservation/Crescent - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Crescent Ave											
3	L2	115	3.0	0.415	12.0	LOS B	1.8	46.2	0.70	0.75	30.8
8	T1	23	3.0	0.415	12.0	LOS B	1.8	46.2	0.70	0.75	30.7
18	R2	116	3.0	0.415	12.0	LOS B	1.8	46.2	0.70	0.75	29.9
Approach		254	3.0	0.415	12.0	LOS B	1.8	46.2	0.70	0.75	30.4
East: Reservation Rd											
1	L2	89	3.0	0.360	6.9	LOS A	2.3	58.0	0.50	0.34	33.7
6	T1	695	3.0	0.360	6.8	LOS A	2.3	58.0	0.45	0.31	34.1
16	R2	26	3.0	0.360	6.7	LOS A	1.8	47.3	0.41	0.28	33.3
Approach		810	3.0	0.360	6.8	LOS A	2.3	58.0	0.45	0.31	34.0
North: Crescent Ave											
7	L2	70	3.0	0.261	9.0	LOS A	1.0	24.5	0.64	0.64	32.3
4	T1	57	3.0	0.261	9.0	LOS A	1.0	24.5	0.64	0.64	32.2
14	R2	40	3.0	0.261	9.0	LOS A	1.0	24.5	0.64	0.64	31.3
Approach		166	3.0	0.261	9.0	LOS A	1.0	24.5	0.64	0.64	32.0
West: Reservation Rd											
5	L2	55	3.0	0.433	8.1	LOS A	2.9	74.3	0.57	0.41	33.4
2	T1	816	3.0	0.433	7.9	LOS A	2.9	74.3	0.52	0.38	33.6
12	R2	80	3.0	0.433	7.8	LOS A	2.4	61.2	0.47	0.34	32.8
Approach		952	3.0	0.433	7.9	LOS A	2.9	74.3	0.51	0.38	33.5
All Vehicles		2183	3.0	0.433	8.1	LOS A	2.9	74.3	0.52	0.42	33.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 109 [Reservation/Crescent - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Crescent Ave											
3	L2	144	3.0	0.584	18.0	LOS B	3.0	76.6	0.78	0.88	28.6
8	T1	39	3.0	0.584	18.0	LOS B	3.0	76.6	0.78	0.88	28.5
18	R2	143	3.0	0.584	18.0	LOS B	3.0	76.6	0.78	0.88	27.8
Approach		326	3.0	0.584	18.0	LOS B	3.0	76.6	0.78	0.88	28.2
East: Reservation Rd											
1	L2	159	3.0	0.489	9.3	LOS A	3.4	86.6	0.64	0.50	32.4
6	T1	812	3.0	0.489	9.0	LOS A	3.4	86.6	0.58	0.45	32.9
16	R2	63	3.0	0.489	8.9	LOS A	2.8	72.3	0.53	0.42	32.3
Approach		1034	3.0	0.489	9.1	LOS A	3.4	86.6	0.58	0.46	32.7
North: Crescent Ave											
7	L2	35	3.0	0.178	9.2	LOS A	0.6	15.4	0.67	0.67	32.2
4	T1	14	3.0	0.178	9.2	LOS A	0.6	15.4	0.67	0.67	32.1
14	R2	44	3.0	0.178	9.2	LOS A	0.6	15.4	0.67	0.67	31.3
Approach		94	3.0	0.178	9.2	LOS A	0.6	15.4	0.67	0.67	31.7
West: Reservation Rd											
5	L2	69	3.0	0.517	9.5	LOS A	3.8	98.3	0.62	0.45	32.8
2	T1	944	3.0	0.517	9.3	LOS A	3.8	98.3	0.57	0.42	32.9
12	R2	130	3.0	0.517	9.1	LOS A	3.2	81.6	0.51	0.38	32.1
Approach		1143	3.0	0.517	9.3	LOS A	3.8	98.3	0.56	0.41	32.8
All Vehicles		2597	3.0	0.584	10.3	LOS B	3.8	98.3	0.60	0.50	32.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 110 [Reservation/California - AM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: California Ave											
3	L2	123	3.0	0.233	9.4	LOS A	1.0	26.3	0.71	0.71	30.9
8	T1	9	3.0	0.233	9.4	LOS A	1.0	26.3	0.71	0.71	30.8
18	R2	187	3.0	0.271	8.5	LOS A	1.1	27.1	0.63	0.63	32.3
Approach		319	3.0	0.271	8.9	LOS A	1.1	27.1	0.67	0.67	31.7
East: Reservation Rd											
1	L2	175	3.0	0.368	6.7	LOS A	2.4	62.1	0.44	0.27	33.3
6	T1	695	3.0	0.368	6.6	LOS A	2.4	62.1	0.39	0.24	34.0
16	R2	4	3.0	0.368	6.6	LOS A	2.0	50.1	0.36	0.22	33.4
Approach		874	3.0	0.368	6.6	LOS A	2.4	62.1	0.40	0.25	33.9
North: Driveway											
7	L2	1	3.0	0.006	6.3	LOS A	0.0	0.5	0.59	0.47	33.7
4	T1	1	3.0	0.006	6.3	LOS A	0.0	0.5	0.59	0.47	33.6
14	R2	1	3.0	0.006	6.3	LOS A	0.0	0.5	0.59	0.47	32.7
Approach		3	3.0	0.006	6.3	LOS A	0.0	0.5	0.59	0.47	33.3
West: Reservation Rd											
5	L2	11	3.0	0.447	8.0	LOS A	3.1	80.4	0.53	0.36	33.7
2	T1	736	3.0	0.447	7.9	LOS A	3.1	80.4	0.50	0.34	33.7
12	R2	275	3.0	0.447	7.8	LOS A	2.6	65.8	0.44	0.30	32.7
Approach		1022	3.0	0.447	7.9	LOS A	3.1	80.4	0.48	0.33	33.4
All Vehicles		2218	3.0	0.447	7.5	LOS A	3.1	80.4	0.48	0.34	33.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 110 [Reservation/California - PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: California Ave											
3	L2	167	3.0	0.273	9.4	LOS A	1.0	26.5	0.66	0.66	30.8
8	T1	1	3.0	0.273	9.4	LOS A	1.0	26.5	0.66	0.66	30.7
18	R2	99	3.0	0.202	10.2	LOS B	0.8	21.6	0.73	0.73	31.5
Approach		267	3.0	0.273	9.7	LOS A	1.0	26.5	0.68	0.68	31.0
East: Reservation Rd											
1	L2	153	3.0	0.417	7.6	LOS A	2.8	72.7	0.51	0.34	33.2
6	T1	805	3.0	0.417	7.4	LOS A	2.8	72.7	0.45	0.30	33.7
16	R2	1	3.0	0.417	7.3	LOS A	2.3	59.3	0.41	0.28	33.0
Approach		960	3.0	0.417	7.4	LOS A	2.8	72.7	0.46	0.31	33.6
North: Driveway											
7	L2	1	3.0	0.010	7.1	LOS A	0.0	0.8	0.63	0.55	33.7
4	T1	1	3.0	0.010	7.1	LOS A	0.0	0.8	0.63	0.55	33.6
14	R2	3	3.0	0.010	7.1	LOS A	0.0	0.8	0.63	0.55	32.6
Approach		5	3.0	0.010	7.1	LOS A	0.0	0.8	0.63	0.55	33.0
West: Reservation Rd											
5	L2	3	3.0	0.441	7.8	LOS A	3.1	80.3	0.50	0.32	33.9
2	T1	866	3.0	0.441	7.7	LOS A	3.1	80.3	0.46	0.30	33.8
12	R2	163	3.0	0.441	7.6	LOS A	2.6	65.3	0.41	0.26	32.8
Approach		1032	3.0	0.441	7.7	LOS A	3.1	80.3	0.45	0.29	33.7
All Vehicles		2264	3.0	0.441	7.8	LOS A	3.1	80.3	0.48	0.35	33.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 111 [Reservation/Salinas - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Salinas Ave											
3	L2	23	3.0	0.137	8.0	LOS A	0.5	11.7	0.62	0.62	33.0
18	R2	55	3.0	0.137	8.0	LOS A	0.5	11.7	0.62	0.62	32.0
Approach		78	3.0	0.137	8.0	LOS A	0.5	11.7	0.62	0.62	32.3
East: Reservation Rd											
1	L2	29	3.0	0.313	5.4	LOS A	1.7	43.2	0.12	0.04	35.0
6	T1	828	3.0	0.313	5.4	LOS A	1.7	43.2	0.12	0.04	35.0
Approach		858	3.0	0.313	5.4	LOS A	1.7	43.2	0.12	0.04	35.0
West: Reservation Rd											
2	T1	1003	3.0	0.374	6.1	LOS A	2.2	56.0	0.15	0.05	34.7
12	R2	14	3.0	0.374	6.1	LOS A	2.2	56.0	0.15	0.05	33.6
Approach		1017	3.0	0.374	6.1	LOS A	2.2	56.0	0.15	0.05	34.7
All Vehicles		1953	3.0	0.374	5.9	LOS A	2.2	56.0	0.16	0.07	34.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 111 [Reservation/Salinas - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Salinas Ave											
3	L2	100	3.0	0.336	10.8	LOS B	1.3	33.6	0.67	0.70	31.3
18	R2	100	3.0	0.336	10.8	LOS B	1.3	33.6	0.67	0.70	30.3
Approach		200	3.0	0.336	10.8	LOS B	1.3	33.6	0.67	0.70	30.8
East: Reservation Rd											
1	L2	50	3.0	0.408	6.8	LOS A	2.4	61.2	0.32	0.17	34.2
6	T1	988	3.0	0.408	6.8	LOS A	2.4	61.2	0.32	0.17	34.2
Approach		1038	3.0	0.408	6.8	LOS A	2.4	61.2	0.32	0.17	34.2
West: Reservation Rd											
2	T1	960	3.0	0.364	6.1	LOS A	2.1	53.1	0.21	0.08	34.7
12	R2	12	3.0	0.364	6.1	LOS A	2.1	53.1	0.21	0.08	33.6
Approach		972	3.0	0.364	6.1	LOS A	2.1	53.1	0.21	0.08	34.7
All Vehicles		2210	3.0	0.408	6.8	LOS A	2.4	61.2	0.30	0.18	34.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 113 [Del Monte/Patton Pkwy - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
8	T1	43	3.0	0.044	3.1	LOS A	0.2	4.9	0.19	0.07	36.3
18	R2	14	3.0	0.044	3.1	LOS A	0.2	4.9	0.19	0.07	35.2
Approach		58	3.0	0.044	3.1	LOS A	0.2	4.9	0.19	0.07	36.0
East: Patton Pkwy											
1	L2	41	3.0	0.061	3.2	LOS A	0.3	6.9	0.15	0.05	34.7
16	R2	40	3.0	0.061	3.2	LOS A	0.3	6.9	0.15	0.05	33.6
Approach		82	3.0	0.061	3.2	LOS A	0.3	6.9	0.15	0.05	34.2
North: Del Monte Blvd											
7	L2	70	3.0	0.369	6.1	LOS A	2.3	59.6	0.20	0.08	34.3
4	T1	425	3.0	0.369	6.1	LOS A	2.3	59.6	0.20	0.08	34.3
Approach		495	3.0	0.369	6.1	LOS A	2.3	59.6	0.20	0.08	34.3
All Vehicles		634	3.0	0.369	5.4	LOS A	2.3	59.6	0.19	0.07	34.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 113 [Del Monte/Patton Pkwy - PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
8	T1	266	3.0	0.241	4.7	LOS A	1.3	33.1	0.14	0.05	35.4
18	R2	60	3.0	0.241	4.7	LOS A	1.3	33.1	0.14	0.05	34.3
Approach		326	3.0	0.241	4.7	LOS A	1.3	33.1	0.14	0.05	35.2
East: Patton Pkwy											
1	L2	20	3.0	0.111	4.4	LOS A	0.5	12.4	0.41	0.28	35.0
16	R2	99	3.0	0.111	4.4	LOS A	0.5	12.4	0.41	0.28	33.9
Approach		118	3.0	0.111	4.4	LOS A	0.5	12.4	0.41	0.28	34.1
North: Del Monte Blvd											
7	L2	30	3.0	0.118	3.6	LOS A	0.6	14.2	0.10	0.02	35.5
4	T1	132	3.0	0.118	3.6	LOS A	0.6	14.2	0.10	0.02	35.4
Approach		162	3.0	0.118	3.6	LOS A	0.6	14.2	0.10	0.02	35.5
All Vehicles		607	3.0	0.241	4.3	LOS A	1.3	33.1	0.18	0.09	35.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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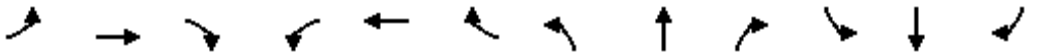
SYNCHRO LEVEL OF SERVICE REPORTS

ROAD DIET CONDITIONS

AM & PM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	245	141	401	178	196	221	190	355	247	243	6
Future Volume (veh/h)	16	245	141	401	178	196	221	190	355	247	243	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	275	158	451	200	220	248	213	399	278	273	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	384	231	598	323	268	295	540	791	391	835	21
Arrive On Green	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.29	0.29	0.11	0.24	0.24
Sat Flow, veh/h	135	2083	1251	3456	1870	1552	1781	1870	2741	3456	3537	90
Grp Volume(v), veh/h	248	0	203	451	200	220	248	213	399	278	137	143
Grp Sat Flow(s),veh/h/ln	1864	0	1606	1728	1870	1552	1781	1870	1371	1728	1777	1850
Q Serve(g_s), s	8.3	0.0	7.8	8.2	6.6	9.1	9.0	6.1	8.1	5.2	4.2	4.3
Cycle Q Clear(g_c), s	8.3	0.0	7.8	8.2	6.6	9.1	9.0	6.1	8.1	5.2	4.2	4.3
Prop In Lane	0.07		0.78	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	344	0	296	598	323	268	295	540	791	391	420	437
V/C Ratio(X)	0.72	0.00	0.68	0.75	0.62	0.82	0.84	0.39	0.50	0.71	0.33	0.33
Avail Cap(c_a), veh/h	561	0	483	624	338	280	349	845	1238	624	776	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	25.3	26.1	25.4	26.5	26.9	19.0	19.7	28.4	21.0	21.0
Incr Delay (d2), s/veh	2.9	0.0	2.8	5.0	3.2	16.7	14.7	0.5	0.5	2.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	3.1	3.6	3.1	4.4	4.7	2.5	2.4	2.1	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	0.0	28.1	31.1	28.6	43.2	41.5	19.4	20.2	30.8	21.4	21.4
LnGrp LOS	C	A	C	C	C	D	D	B	C	C	C	C
Approach Vol, veh/h		451			871			860			558	
Approach Delay, s/veh		28.2			33.6			26.1			26.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	23.2		16.3	15.0	19.7		15.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	30.0		20.0	13.0	29.0		12.0				
Max Q Clear Time (g_c+I1), s	7.2	10.1		10.3	11.0	6.3		11.1				
Green Ext Time (p_c), s	0.4	2.8		1.9	0.1	1.5		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		28.9	
HCM 6th LOS		C	

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	654	70	55	628	83	51	27	34	102	8	88
Future Volume (veh/h)	148	654	70	55	628	83	51	27	34	102	8	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	711	76	60	683	0	55	29	37	111	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	376	878	94	178	782		289	135	309	302	21	
Arrive On Green	0.21	0.53	0.53	0.10	0.42	0.00	0.20	0.20	0.20	0.20	0.20	0.00
Sat Flow, veh/h	1781	1659	177	1781	1870	1585	998	671	1538	995	103	1585
Grp Volume(v), veh/h	161	0	787	60	683	0	84	0	37	120	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1836	1781	1870	1585	1669	0	1538	1098	0	1585
Q Serve(g_s), s	5.3	0.0	23.9	2.1	22.6	0.0	0.0	0.0	1.3	5.4	0.0	0.0
Cycle Q Clear(g_c), s	5.3	0.0	23.9	2.1	22.6	0.0	2.6	0.0	1.3	8.0	0.0	0.0
Prop In Lane	1.00		0.10	1.00		1.00	0.65		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	376	0	971	178	782		424	0	309	323	0	
V/C Ratio(X)	0.43	0.00	0.81	0.34	0.87		0.20	0.00	0.12	0.37	0.00	
Avail Cap(c_a), veh/h	421	0	1113	290	995		713	0	602	578	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)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.1	0.0	13.1	28.4	18.0	0.0	22.6	0.0	22.1	25.8	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	4.1	1.1	7.2	0.0	0.2	0.0	0.2	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	9.3	0.9	10.2	0.0	1.1	0.0	0.5	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	0.0	17.2	29.5	25.2	0.0	22.9	0.0	22.3	26.5	0.0	0.0
LnGrp LOS	C	A	B	C	C		C	A	C	C	A	
Approach Vol, veh/h		948			743	A		121			120	A
Approach Delay, s/veh		18.4			25.6			22.7			26.5	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.6	10.3	39.8	17.6	17.8	32.3
Change Period (Y+Rc), s	4.0	3.5	4.0	4.0	3.5	4.0
Max Green Setting (Gmax), s	26.5	11.0	41.0	26.5	16.0	36.0
Max Q Clear Time (g_c+I1), s	4.6	4.1	25.9	10.0	7.3	24.6
Green Ext Time (p_c), s	0.5	0.0	5.2	0.6	0.3	3.6

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	679	150	167	604	162	86
Future Volume (veh/h)	679	150	167	604	162	86
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	730	161	180	649	174	92
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	867	734	277	1279	287	256
Arrive On Green	0.46	0.46	0.16	0.68	0.16	0.16
Sat Flow, veh/h	1870	1583	1781	1870	1781	1585
Grp Volume(v), veh/h	730	161	180	649	174	92
Grp Sat Flow(s),veh/h/ln	1870	1583	1781	1870	1781	1585
Q Serve(g_s), s	21.1	3.7	5.8	10.3	5.6	3.2
Cycle Q Clear(g_c), s	21.1	3.7	5.8	10.3	5.6	3.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	867	734	277	1279	287	256
V/C Ratio(X)	0.84	0.22	0.65	0.51	0.61	0.36
Avail Cap(c_a), veh/h	1204	1019	290	1631	784	698
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	14.5	9.8	24.3	4.7	23.9	22.9
Incr Delay (d2), s/veh	4.0	0.1	4.7	0.3	2.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	1.2	2.7	2.6	2.4	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.5	10.0	29.1	5.0	26.0	23.8
LnGrp LOS	B	A	C	A	C	C
Approach Vol, veh/h	891			829	266	
Approach Delay, s/veh	17.0			10.2	25.2	
Approach LOS	B			B	C	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	14.9	13.5	32.9		46.5
Change Period (Y+Rc), s	5.0	4.0	4.5		4.5
Max Green Setting (Gmax), s	27.0	10.0	39.5		53.5
Max Q Clear Time (g_c+I1), s	7.6	7.8	23.1		12.3
Green Ext Time (p_c), s	0.8	0.1	5.3		5.2

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	719	5	0	641	111	3	0	7	79	1	134
Future Volume (veh/h)	103	719	5	0	641	111	3	0	7	79	1	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.97	0.97		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	765	5	0	682	118	3	0	7	84	1	143
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	141	1094	7	0	825	697	157	39	243	456	5	362
Arrive On Green	0.08	0.59	0.59	0.00	0.44	0.44	0.23	0.00	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	1856	12	0	1870	1580	279	169	1045	1353	20	1558
Grp Volume(v), veh/h	110	0	770	0	682	118	10	0	0	85	0	143
Grp Sat Flow(s),veh/h/ln	1781	0	1868	0	1870	1580	1493	0	0	1373	0	1558
Q Serve(g_s), s	3.1	0.0	14.6	0.0	16.2	2.3	0.0	0.0	0.0	2.3	0.0	3.9
Cycle Q Clear(g_c), s	3.1	0.0	14.6	0.0	16.2	2.3	0.2	0.0	0.0	2.5	0.0	3.9
Prop In Lane	1.00		0.01	0.00		1.00	0.30		0.70	0.99		1.00
Lane Grp Cap(c), veh/h	141	0	1101	0	825	697	439	0	0	461	0	362
V/C Ratio(X)	0.78	0.00	0.70	0.00	0.83	0.17	0.02	0.00	0.00	0.18	0.00	0.39
Avail Cap(c_a), veh/h	211	0	1385	0	1035	874	770	0	0	778	0	724
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	7.2	0.0	12.4	8.5	15.0	0.0	0.0	15.8	0.0	16.4
Incr Delay (d2), s/veh	10.2	0.0	1.1	0.0	4.6	0.1	0.0	0.0	0.0	0.2	0.0	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(50%),veh/ln	1.6	0.0	4.1	0.0	6.4	0.7	0.1	0.0	0.0	0.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	0.0	8.4	0.0	17.0	8.6	15.0	0.0	0.0	16.0	0.0	17.1
LnGrp LOS	C	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h		880			800			10			228	
Approach Delay, s/veh		11.5			15.8			15.0			16.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	4	6	7	8
Phs Duration (G+Y+Rc), s	15.8	34.8	15.8	7.5	27.3
Change Period (Y+Rc), s	4.0	5.0	4.0	3.5	5.0
Max Green Setting (Gmax), s	23.5	37.5	23.5	6.0	28.0
Max Q Clear Time (g_c+I1), s	2.2	16.6	5.9	5.1	18.2
Green Ext Time (p_c), s	0.0	5.8	0.8	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	743	25	28	665	105	16	3	16	138	1	71
Future Volume (veh/h)	37	743	25	28	665	105	16	3	16	138	1	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	816	27	31	731	115	18	3	18	152	1	78
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	908	739	72	891	744	115	11	435	124	0	444
Arrive On Green	0.05	0.49	0.49	0.04	0.48	0.48	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	1870	1522	1781	1870	1562	0	38	1532	0	1	1563
Grp Volume(v), veh/h	41	816	27	31	731	115	21	0	18	153	0	78
Grp Sat Flow(s),veh/h/ln	1781	1870	1522	1781	1870	1562	38	0	1532	1	0	1563
Q Serve(g_s), s	1.3	23.1	0.5	1.0	19.5	2.4	0.0	0.0	0.5	0.0	0.0	2.2
Cycle Q Clear(g_c), s	1.3	23.1	0.5	1.0	19.5	2.4	16.5	0.0	0.5	16.5	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	89	908	739	72	891	744	126	0	435	124	0	444
V/C Ratio(X)	0.46	0.90	0.04	0.43	0.82	0.15	0.17	0.00	0.04	1.23	0.00	0.18
Avail Cap(c_a), veh/h	184	1015	826	184	1015	847	126	0	435	124	0	444
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	0.00	1.00
Uniform Delay (d), s/veh	26.8	13.6	7.8	27.2	13.1	8.6	20.7	0.0	15.0	29.0	0.0	15.7
Incr Delay (d2), s/veh	3.7	10.0	0.0	4.0	4.9	0.1	0.6	0.0	0.0	156.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	10.3	0.2	0.5	7.9	0.7	0.3	0.0	0.2	7.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	23.6	7.8	31.1	18.0	8.7	21.3	0.0	15.1	185.5	0.0	15.8
LnGrp LOS	C	C	A	C	B	A	C	A	B	F	A	B
Approach Vol, veh/h		884			877			39			231	
Approach Delay, s/veh		23.4			17.2			18.4			128.2	
Approach LOS		C			B			B			F	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	20.5	5.9	31.7		20.5	6.4	31.2
Change Period (Y+Rc), s	4.0	3.5	3.5		4.0	3.5	3.5
Max Green Setting (Gmax), s	16.5	6.0	31.5		16.5	6.0	31.5
Max Q Clear Time (g_c+I1), s	18.5	3.0	25.1		18.5	3.3	21.5
Green Ext Time (p_c), s	0.0	0.0	3.1		0.0	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	751	74	82	639	24	106	21	107	64	52	37
Future Volume (veh/h)	51	751	74	82	639	24	106	21	107	64	52	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	816	80	89	695	26	115	23	116	70	57	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	1078	474	114	1140	43	332	66	347	215	175	337
Arrive On Green	0.04	0.30	0.30	0.06	0.33	0.33	0.22	0.22	0.22	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1564	1781	3491	131	1496	299	1564	1003	817	1576
Grp Volume(v), veh/h	55	816	80	89	354	367	138	0	116	127	0	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1844	1796	0	1564	1820	0	1576
Q Serve(g_s), s	2.9	19.5	3.5	4.6	15.7	15.7	6.1	0.0	5.9	5.5	0.0	1.9
Cycle Q Clear(g_c), s	2.9	19.5	3.5	4.6	15.7	15.7	6.1	0.0	5.9	5.5	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.07	0.83		1.00	0.55		1.00
Lane Grp Cap(c), veh/h	72	1078	474	114	580	603	398	0	347	390	0	337
V/C Ratio(X)	0.76	0.76	0.17	0.78	0.61	0.61	0.35	0.00	0.33	0.33	0.00	0.12
Avail Cap(c_a), veh/h	161	2042	899	161	1021	1060	516	0	449	523	0	453
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	0.00	1.00
Uniform Delay (d), s/veh	44.6	29.6	24.0	43.3	26.6	26.6	30.8	0.0	30.7	31.2	0.0	29.8
Incr Delay (d2), s/veh	15.1	1.1	0.2	14.7	1.0	1.0	0.5	0.0	0.6	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	8.3	1.3	2.5	6.7	6.9	2.7	0.0	2.2	2.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	30.7	24.2	58.1	27.6	27.6	31.3	0.0	31.3	31.7	0.0	29.9
LnGrp LOS	E	C	C	E	C	C	C	A	C	C	A	C
Approach Vol, veh/h		951			810			254			167	
Approach Delay, s/veh		31.8			31.0			31.3			31.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.8	9.5	33.5	25.1	7.3	35.7
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	27.0	8.5	54.0	27.0	8.5	54.0
Max Q Clear Time (g_c+I1), s	8.1	6.6	21.5	7.5	4.9	17.7
Green Ext Time (p_c), s	1.1	0.0	7.0	0.7	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

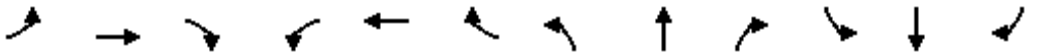
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	815	738	28	14	25
Future Vol, veh/h	3	815	738	28	14	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	896	811	31	15	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	842	0	-	0	1729	827
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	902	-
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	794	-	-	-	97	371
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	396	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	794	-	-	-	97	371
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	396	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	794	-	-	-	305
HCM Lane V/C Ratio	0.004	-	-	-	0.141
HCM Control Delay (s)	9.6	-	-	-	18.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	304	123	444	426	195	163	262	619	185	103	9
Future Volume (veh/h)	93	304	123	444	426	195	163	262	619	185	103	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	310	126	453	435	199	166	267	632	189	105	9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	413	176	1001	542	450	193	390	1367	224	744	63
Arrive On Green	0.20	0.20	0.20	0.29	0.29	0.29	0.11	0.21	0.21	0.13	0.23	0.23
Sat Flow, veh/h	606	2036	867	3456	1870	1555	1781	1870	2683	1781	3293	277
Grp Volume(v), veh/h	288	0	243	453	435	199	166	267	632	189	56	58
Grp Sat Flow(s),veh/h/ln	1840	0	1668	1728	1870	1555	1781	1870	1341	1781	1777	1794
Q Serve(g_s), s	13.7	0.0	12.5	9.9	19.9	9.6	8.4	12.2	14.3	9.6	2.3	2.4
Cycle Q Clear(g_c), s	13.7	0.0	12.5	9.9	19.9	9.6	8.4	12.2	14.3	9.6	2.3	2.4
Prop In Lane	0.33		0.52	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	373	0	338	1001	542	450	193	390	1367	224	401	405
V/C Ratio(X)	0.77	0.00	0.72	0.45	0.80	0.44	0.86	0.68	0.46	0.84	0.14	0.14
Avail Cap(c_a), veh/h	639	0	579	1424	771	641	193	507	1535	270	559	564
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	34.3	26.8	30.3	26.7	40.4	33.7	15.2	39.4	28.5	28.6
Incr Delay (d2), s/veh	3.4	0.0	2.9	0.3	4.1	0.7	30.1	2.5	0.2	18.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	5.2	4.0	9.3	3.6	5.2	5.6	7.1	5.2	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	0.0	37.2	27.1	34.4	27.4	70.5	36.2	15.4	57.6	28.7	28.7
LnGrp LOS	D	A	D	C	C	C	E	D	B	E	C	C
Approach Vol, veh/h		531			1087			1065			303	
Approach Delay, s/veh		37.7			30.1			29.2			46.7	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.6	23.2		22.7	14.0	24.8		30.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	14.0	25.0		32.0	10.0	29.0		38.0				
Max Q Clear Time (g_c+I1), s	11.6	16.3		15.7	10.4	4.4		21.9				
Green Ext Time (p_c), s	0.1	3.0		3.0	0.0	0.5		4.8				

Intersection Summary		
HCM 6th Ctrl Delay		32.8
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	781	89	85	812	150	124	36	33	201	37	104
Future Volume (veh/h)	229	781	89	85	812	150	124	36	33	201	37	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		0.94	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	797	91	87	829	0	127	37	34	205	38	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	263	876	100	151	882		398	109	412	288	42	
Arrive On Green	0.15	0.53	0.53	0.08	0.47	0.00	0.28	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	1781	1638	187	1781	1870	1585	1230	394	1490	825	153	1585
Grp Volume(v), veh/h	234	0	888	87	829	0	164	0	34	243	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1825	1781	1870	1585	1625	0	1490	978	0	1585
Q Serve(g_s), s	14.2	0.0	48.5	5.2	46.3	0.0	0.0	0.0	1.9	18.9	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	48.5	5.2	46.3	0.0	8.8	0.0	1.9	27.7	0.0	0.0
Prop In Lane	1.00		0.10	1.00		1.00	0.77		1.00	0.84		1.00
Lane Grp Cap(c), veh/h	263	0	976	151	882		507	0	412	331	0	
V/C Ratio(X)	0.89	0.00	0.91	0.58	0.94		0.32	0.00	0.08	0.74	0.00	
Avail Cap(c_a), veh/h	284	0	1036	180	953		568	0	474	389	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)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	46.0	0.0	23.2	48.4	27.6	0.0	32.0	0.0	29.5	43.1	0.0	0.0
Incr Delay (d2), s/veh	26.1	0.0	11.3	3.5	16.0	0.0	0.4	0.0	0.1	5.9	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(50%),veh/ln	8.1	0.0	22.7	2.4	23.7	0.0	3.6	0.0	0.7	7.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.0	0.0	34.5	51.9	43.6	0.0	32.3	0.0	29.6	49.1	0.0	0.0
LnGrp LOS	E	A	C	D	D		C	A	C	D	A	
Approach Vol, veh/h		1122			916	A		198			243	A
Approach Delay, s/veh		42.3			44.4			31.8			49.1	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	34.4	12.8	62.8	34.4	19.8	55.8
Change Period (Y+Rc), s	4.0	3.5	4.0	4.0	3.5	4.0
Max Green Setting (Gmax), s	35.0	11.1	62.4	35.0	17.5	56.0
Max Q Clear Time (g_c+I1), s	10.8	7.2	50.5	29.7	16.2	48.3
Green Ext Time (p_c), s	1.1	0.1	5.3	0.6	0.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	848	184	234	733	253	103
Future Volume (veh/h)	848	184	234	733	253	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	865	188	239	748	258	105
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	929	765	260	1301	318	283
Arrive On Green	0.50	0.50	0.15	0.70	0.18	0.18
Sat Flow, veh/h	1870	1540	1781	1870	1781	1585
Grp Volume(v), veh/h	865	188	239	748	258	105
Grp Sat Flow(s),veh/h/ln	1870	1540	1781	1870	1781	1585
Q Serve(g_s), s	32.7	5.3	10.0	15.3	10.5	4.4
Cycle Q Clear(g_c), s	32.7	5.3	10.0	15.3	10.5	4.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	929	765	260	1301	318	283
V/C Ratio(X)	0.93	0.25	0.92	0.57	0.81	0.37
Avail Cap(c_a), veh/h	979	806	260	1351	614	546
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	17.8	10.9	31.8	5.8	29.8	27.3
Incr Delay (d2), s/veh	14.5	0.2	35.4	0.6	5.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	1.7	6.7	4.5	4.8	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.3	11.0	67.2	6.4	34.8	28.1
LnGrp LOS	C	B	E	A	C	C
Approach Vol, veh/h	1053			987	363	
Approach Delay, s/veh	28.5			21.1	32.8	
Approach LOS	C			C	C	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	18.5	15.0	42.0		57.0
Change Period (Y+Rc), s	5.0	4.0	4.5		4.5
Max Green Setting (Gmax), s	26.0	11.0	39.5		54.5
Max Q Clear Time (g_c+I1), s	12.5	12.0	34.7		17.3
Green Ext Time (p_c), s	1.0	0.0	2.8		6.4

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	968	2	0	854	89	4	0	13	83	1	46
Future Volume (veh/h)	108	968	2	0	854	89	4	0	13	83	1	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.94		0.93	0.93		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	998	2	0	880	92	4	0	13	86	1	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	142	1222	2	0	987	823	109	29	248	386	4	325
Arrive On Green	0.08	0.66	0.66	0.00	0.53	0.53	0.22	0.00	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	1866	4	0	1870	1560	214	130	1119	1301	18	1470
Grp Volume(v), veh/h	111	0	1000	0	880	92	17	0	0	87	0	47
Grp Sat Flow(s),veh/h/ln	1781	0	1869	0	1870	1560	1463	0	0	1319	0	1470
Q Serve(g_s), s	4.5	0.0	28.9	0.0	30.6	2.2	0.0	0.0	0.0	3.2	0.0	1.9
Cycle Q Clear(g_c), s	4.5	0.0	28.9	0.0	30.6	2.2	0.6	0.0	0.0	3.9	0.0	1.9
Prop In Lane	1.00		0.00	0.00		1.00	0.24		0.76	0.99		1.00
Lane Grp Cap(c), veh/h	142	0	1225	0	987	823	385	0	0	390	0	325
V/C Ratio(X)	0.78	0.00	0.82	0.00	0.89	0.11	0.04	0.00	0.00	0.22	0.00	0.14
Avail Cap(c_a), veh/h	183	0	1463	0	1182	985	538	0	0	532	0	485
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	9.3	0.0	15.3	8.6	22.3	0.0	0.0	23.5	0.0	22.8
Incr Delay (d2), s/veh	15.1	0.0	3.2	0.0	7.8	0.1	0.0	0.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	9.9	0.0	13.3	0.7	0.2	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	0.0	12.5	0.0	23.1	8.7	22.4	0.0	0.0	23.8	0.0	23.0
LnGrp LOS	D	A	B	A	C	A	C	A	A	C	A	C
Approach Vol, veh/h		1111			972			17			134	
Approach Delay, s/veh		16.0			21.8			22.4			23.5	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	2	4	6	7	8
Phs Duration (G+Y+Rc), s	20.1	52.7	20.1	9.3	43.4
Change Period (Y+Rc), s	4.0	5.0	4.0	3.5	5.0
Max Green Setting (Gmax), s	24.0	57.0	24.0	7.5	46.0
Max Q Clear Time (g_c+I1), s	2.6	30.9	5.9	6.5	32.6
Green Ext Time (p_c), s	0.0	9.5	0.5	0.0	5.8

Intersection Summary	
HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	898	107	56	798	71	68	11	72	92	24	57
Future Volume (veh/h)	67	898	107	56	798	71	68	11	72	92	24	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	945	113	59	840	75	72	12	76	97	25	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	1026	832	104	1016	827	95	9	354	92	14	362
Arrive On Green	0.06	0.55	0.55	0.06	0.54	0.54	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	1870	1516	1781	1870	1522	0	38	1501	0	58	1535
Grp Volume(v), veh/h	71	945	113	59	840	75	84	0	76	122	0	60
Grp Sat Flow(s),veh/h/ln	1781	1870	1516	1781	1870	1522	38	0	1501	58	0	1535
Q Serve(g_s), s	2.7	32.3	2.5	2.3	26.1	1.7	0.0	0.0	2.9	0.0	0.0	2.2
Cycle Q Clear(g_c), s	2.7	32.3	2.5	2.3	26.1	1.7	16.5	0.0	2.9	16.5	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.80		1.00
Lane Grp Cap(c), veh/h	114	1026	832	104	1016	827	104	0	354	106	0	362
V/C Ratio(X)	0.62	0.92	0.14	0.57	0.83	0.09	0.80	0.00	0.21	1.15	0.00	0.17
Avail Cap(c_a), veh/h	153	1108	898	153	1108	902	104	0	354	106	0	362
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	0.00	1.00
Uniform Delay (d), s/veh	31.9	14.4	7.7	32.1	13.3	7.7	33.3	0.0	21.5	32.9	0.0	21.3
Incr Delay (d2), s/veh	5.4	11.8	0.1	4.8	4.9	0.0	35.2	0.0	0.3	133.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	14.6	0.7	1.1	10.5	0.5	2.4	0.0	1.0	5.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	26.2	7.8	36.9	18.2	7.7	68.5	0.0	21.8	166.4	0.0	21.5
LnGrp LOS	D	C	A	D	B	A	E	A	C	F	A	C
Approach Vol, veh/h		1129			974			160			182	
Approach Delay, s/veh		25.0			18.5			46.3			118.6	
Approach LOS		C			B			D			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	20.5	7.6	41.9	20.5	8.0	41.5
Change Period (Y+Rc), s	4.0	3.5	3.5	4.0	3.5	3.5
Max Green Setting (Gmax), s	16.5	6.0	41.5	16.5	6.0	41.5
Max Q Clear Time (g_c+I1), s	18.5	4.3	34.3	18.5	4.7	28.1
Green Ext Time (p_c), s	0.0	0.0	4.2	0.0	0.0	5.5

Intersection Summary	
HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	878	121	148	755	59	134	36	133	33	13	41
Future Volume (veh/h)	64	878	121	148	755	59	134	36	133	33	13	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	944	130	159	812	63	144	39	143	35	14	44
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1183	519	191	1349	105	277	75	305	231	92	282
Arrive On Green	0.05	0.33	0.33	0.11	0.40	0.40	0.20	0.20	0.20	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1559	1781	3337	259	1416	384	1556	1290	516	1572
Grp Volume(v), veh/h	69	944	130	159	432	443	183	0	143	49	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1559	1781	1777	1819	1800	0	1556	1806	0	1572
Q Serve(g_s), s	4.1	26.1	6.6	9.5	20.7	20.7	9.8	0.0	8.8	2.5	0.0	2.6
Cycle Q Clear(g_c), s	4.1	26.1	6.6	9.5	20.7	20.7	9.8	0.0	8.8	2.5	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.14	0.79		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	89	1183	519	191	718	736	352	0	305	324	0	282
V/C Ratio(X)	0.78	0.80	0.25	0.83	0.60	0.60	0.52	0.00	0.47	0.15	0.00	0.16
Avail Cap(c_a), veh/h	110	1718	754	319	1068	1093	462	0	400	451	0	392
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	0.00	1.00
Uniform Delay (d), s/veh	50.8	32.8	26.3	47.3	25.4	25.4	38.9	0.0	38.5	37.5	0.0	37.5
Incr Delay (d2), s/veh	23.9	1.7	0.3	9.0	0.8	0.8	1.2	0.0	1.1	0.2	0.0	0.3
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(50%),veh/ln	2.4	11.3	2.5	4.7	8.7	9.0	4.4	0.0	3.4	1.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.7	34.5	26.5	56.3	26.2	26.2	40.1	0.0	39.6	37.7	0.0	37.7
LnGrp LOS	E	C	C	E	C	C	D	A	D	D	A	D
Approach Vol, veh/h		1143			1034			326			93	
Approach Delay, s/veh		36.0			30.8			39.9			37.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.2	16.6	41.0	24.4	8.9	48.7
Change Period (Y+Rc), s	5.0	5.0	* 5	5.0	3.5	5.0
Max Green Setting (Gmax), s	27.8	19.4	* 52	27.0	6.7	65.0
Max Q Clear Time (g_c+I1), s	11.8	11.5	28.1	4.6	6.1	22.7
Green Ext Time (p_c), s	1.4	0.2	7.9	0.3	0.0	6.8

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	1027	971	15	5	9
Future Vol, veh/h	25	1027	971	15	5	9
Conflicting Peds, #/hr	20	0	0	21	21	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1070	1011	16	5	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1048	0	-	0	2183	1060
Stage 1	-	-	-	-	1040	-
Stage 2	-	-	-	-	1143	-
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	664	-	-	-	50	272
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	304	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	651	-	-	-	46	261
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	298	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	23.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	651	-	-	-	210
HCM Lane V/C Ratio	0.04	-	-	-	0.069
HCM Control Delay (s)	10.8	-	-	-	23.4
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

SIMTRAFFIC QUEUEING REPORTS

ROAD DIET CONDITIONS

AM & PM PEAK HOUR

Intersection: 4: Del Monte Ave & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	B39	NB	NB	NB	NB	SB
Directions Served	LT	TR	L	L	T	R	T	L	T	R	R	L
Maximum Queue (ft)	256	227	125	275	261	150	24	277	176	208	160	161
Average Queue (ft)	128	76	101	139	110	74	1	147	86	107	35	116
95th Queue (ft)	226	177	148	233	207	146	30	252	148	184	109	175
Link Distance (ft)	973	973		288	288		278		1813	1813		
Upstream Blk Time (%)				0	0							
Queuing Penalty (veh)				1	2							
Storage Bay Dist (ft)			100			125		450			450	150
Storage Blk Time (%)			11	23	7	0						15
Queuing Penalty (veh)			21	46	14	0						18

Intersection: 4: Del Monte Ave & Reservation Rd

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	172	374	296
Average Queue (ft)	101	110	65
95th Queue (ft)	193	326	249
Link Distance (ft)		571	571
Upstream Blk Time (%)		1	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)	150		
Storage Blk Time (%)	15	0	
Queuing Penalty (veh)	18	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	B39	B39	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	T	R	LT	R	LT	R
Maximum Queue (ft)	200	364	222	34	160	437	160	113	73	133	100
Average Queue (ft)	118	238	50	1	50	231	47	47	28	60	14
95th Queue (ft)	221	390	215	30	137	398	165	92	67	116	68
Link Distance (ft)		278	288	288		374		295		603	
Upstream Blk Time (%)		11	1	0		2					
Queuing Penalty (veh)		97	5	0		16					
Storage Bay Dist (ft)	175				135		135		50		100
Storage Blk Time (%)	0	19			0	20	0	12	3	4	0
Queuing Penalty (veh)	3	29			0	27	0	4	2	3	0

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (ft)	132	76	208	260	123	180
Average Queue (ft)	108	28	100	121	81	49
95th Queue (ft)	129	65	173	231	129	123
Link Distance (ft)	39	39		260		736
Upstream Blk Time (%)	43	3		0		
Queuing Penalty (veh)	179	13		3		
Storage Bay Dist (ft)			200		100	
Storage Blk Time (%)			0	2	6	0
Queuing Penalty (veh)			3	3	5	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	T	R	LTR	LT	R
Maximum Queue (ft)	73	116	235	100	35	88	98
Average Queue (ft)	47	88	200	56	7	36	40
95th Queue (ft)	78	112	280	123	28	73	77
Link Distance (ft)		73	221		486	497	
Upstream Blk Time (%)	1	27	10				
Queuing Penalty (veh)	0	220	78				
Storage Bay Dist (ft)	145			75			150
Storage Blk Time (%)	1	27	33	0			0
Queuing Penalty (veh)	8	28	37	1			0

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	B40	B40	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	T	T	LT	R	LT	R
Maximum Queue (ft)	127	237	61	200	310	86	299	146	44	34	150	75
Average Queue (ft)	27	152	8	46	229	22	90	12	11	8	65	38
95th Queue (ft)	80	253	48	158	360	58	272	89	34	27	128	80
Link Distance (ft)		221			216	216	219	219	421		842	
Upstream Blk Time (%)	0	1		0	23		4	0				
Queuing Penalty (veh)	0	11		0	90		16	1				
Storage Bay Dist (ft)	200		175	175						200		50
Storage Blk Time (%)		6	0	0	27						17	5
Queuing Penalty (veh)		4	0	0	8						12	7

Intersection: 9: Cresent Ave & Reservation Rd

Movement	EB	EB	EB	EB	B40	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	T	L	T	TR	LT	R	LT	R
Maximum Queue (ft)	185	282	267	125	100	245	434	411	98	298	193	75
Average Queue (ft)	48	174	173	54	7	99	233	161	68	80	86	30
95th Queue (ft)	124	267	257	144	51	240	399	341	110	232	164	78
Link Distance (ft)		219	219		216		562	562		681	809	
Upstream Blk Time (%)	0	2	2				0	0				
Queuing Penalty (veh)	0	9	10				0	0				
Storage Bay Dist (ft)	220			100		220			75			50
Storage Blk Time (%)	0	2	26	0		0	14		20	1	34	1
Queuing Penalty (veh)	0	1	19	0		0	11		22	1	13	1

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	51	381	69	314
Average Queue (ft)	3	217	5	126
95th Queue (ft)	26	423	36	361
Link Distance (ft)		374	39	1034
Upstream Blk Time (%)		3	1	
Queuing Penalty (veh)		20	6	
Storage Bay Dist (ft)	125			
Storage Blk Time (%)		21		
Queuing Penalty (veh)		1		

Zone Summary

Zone wide Queuing Penalty: 1148

Intersection: 4: Del Monte Ave & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	B39	NB	NB	NB	NB	SB
Directions Served	LT	TR	L	L	T	R	T	L	T	R	R	L
Maximum Queue (ft)	957	949	125	305	366	150	200	475	1837	1843	475	162
Average Queue (ft)	759	732	100	149	251	106	27	256	1260	1298	417	145
95th Queue (ft)	1214	1217	150	258	397	196	138	551	2335	2336	622	183
Link Distance (ft)	973	973		288	288		278		1813	1813		
Upstream Blk Time (%)	42	39		1	10		1		18	20		
Queuing Penalty (veh)	0	0		5	51		9		99	111		
Storage Bay Dist (ft)			100			125		450			450	150
Storage Blk Time (%)			9	21	29	0		0	43	73	31	73
Queuing Penalty (veh)			20	47	57	1		0	69	226	97	37

Intersection: 4: Del Monte Ave & Reservation Rd

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	175	603	571
Average Queue (ft)	152	423	220
95th Queue (ft)	214	803	626
Link Distance (ft)		571	571
Upstream Blk Time (%)		62	7
Queuing Penalty (veh)		0	0
Storage Bay Dist (ft)	150		
Storage Blk Time (%)	66	0	
Queuing Penalty (veh)	34	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	B39	B39	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	T	R	LT	R	LT	R
Maximum Queue (ft)	200	380	357	286	160	474	160	231	75	597	125
Average Queue (ft)	182	351	305	22	77	396	72	111	34	393	91
95th Queue (ft)	248	381	393	150	164	546	200	196	83	701	178
Link Distance (ft)		278	288	288		374		295		603	
Upstream Blk Time (%)		64	36	1		21		0		20	
Queuing Penalty (veh)		708	199	8		207		0		0	
Storage Bay Dist (ft)	175				135		135		50		100
Storage Blk Time (%)	9	62			1	37	0	42	6	72	1
Queuing Penalty (veh)	80	142			13	87	1	14	10	75	1

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (ft)	130	78	225	287	125	484
Average Queue (ft)	111	27	168	219	112	169
95th Queue (ft)	119	65	265	331	143	399
Link Distance (ft)	39	39		260		736
Upstream Blk Time (%)	55	3		10		
Queuing Penalty (veh)	286	13		97		
Storage Bay Dist (ft)			200		100	
Storage Blk Time (%)			6	18	32	1
Queuing Penalty (veh)			41	43	33	2

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	T	R	LTR	LT	R
Maximum Queue (ft)	73	118	237	100	40	96	72
Average Queue (ft)	45	90	227	52	11	38	22
95th Queue (ft)	80	105	245	123	35	78	53
Link Distance (ft)		73	221		486	497	
Upstream Blk Time (%)	1	33	27				
Queuing Penalty (veh)	0	350	250				
Storage Bay Dist (ft)	145			75			150
Storage Blk Time (%)	1	33	51	0			
Queuing Penalty (veh)	11	35	46	1			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	B40	B40	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	T	T	LT	R	LT	R
Maximum Queue (ft)	110	237	199	200	323	56	322	271	218	136	218	75
Average Queue (ft)	35	161	37	95	291	14	272	82	74	37	76	41
95th Queue (ft)	80	256	143	242	311	39	369	259	182	102	164	86
Link Distance (ft)		221			216	216	219	219	421		842	
Upstream Blk Time (%)	0	2		0	67		35	4	0			
Queuing Penalty (veh)	0	19		0	314		165	19	0			
Storage Bay Dist (ft)	200		175	175						200		50
Storage Blk Time (%)		6	0	0	68				3	0	24	14
Queuing Penalty (veh)		10	0	0	38				2	0	14	17

Intersection: 9: Cresent Ave & Reservation Rd

Movement	EB	EB	EB	EB	B40	WB	WB	WB	B34	B34	NB	NB
Directions Served	L	T	T	R	T	L	T	TR	T	T	LT	R
Maximum Queue (ft)	205	292	280	125	276	245	658	652	1643	1646	100	725
Average Queue (ft)	65	205	190	62	49	185	573	540	845	827	93	535
95th Queue (ft)	159	314	275	151	189	335	786	798	1913	1916	115	943
Link Distance (ft)		219	219		216		562	562	1635	1635		681
Upstream Blk Time (%)	0	8	7		2		71	44	12	11		57
Queuing Penalty (veh)	0	40	35		17		337	207	54	50		0
Storage Bay Dist (ft)	220			100		220					75	
Storage Blk Time (%)	0	8	32	0		1	74				79	3
Queuing Penalty (veh)	0	5	39	0		3	109				106	6

Intersection: 9: Cresent Ave & Reservation Rd

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	152	75
Average Queue (ft)	47	32
95th Queue (ft)	109	73
Link Distance (ft)	809	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	16	6
Queuing Penalty (veh)	6	3

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	149	395	128	194
Average Queue (ft)	34	378	71	73
95th Queue (ft)	121	429	137	189
Link Distance (ft)		374	39	1034
Upstream Blk Time (%)		22	20	
Queuing Penalty (veh)		220	200	
Storage Bay Dist (ft)	125			
Storage Blk Time (%)	0	61		
Queuing Penalty (veh)	0	16		

Zone Summary

Zone wide Queuing Penalty: 5667

SIDRA LEVEL OF SERVICE REPORTS

ROAD DIET CONDITIONS

AM & PM PEAK HOUR

MOVEMENT SUMMARY

Site: 104 [Del Monte/Reservation - AM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3	L2	248	3.0	0.492	10.0	LOS A	3.0	78.0	0.72	0.76	31.6
8	T1	213	3.0	0.492	10.0	LOS A	3.0	78.0	0.72	0.76	31.5
18	R2	399	3.0	0.451	9.6	LOS A	2.8	70.8	0.74	0.76	31.8
Approach		861	3.0	0.492	9.8	LOS A	3.0	78.0	0.73	0.76	31.6
East: Reservation Road											
1	L2	451	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	30.5
6	T1	200	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	32.5
16	R2	220	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	31.5
Approach		871	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	31.2
North: Del Monte Blvd											
7	L2	278	3.0	0.440	12.3	LOS B	2.4	61.0	0.79	0.85	29.6
4	T1	273	3.0	0.404	10.7	LOS B	2.0	50.9	0.74	0.78	32.4
14	R2	7	3.0	0.404	10.7	LOS B	2.0	50.9	0.74	0.78	31.5
Approach		557	3.0	0.440	11.5	LOS B	2.4	61.0	0.76	0.81	30.9
West: Reservation Road											
5	L2	18	3.0	0.466	12.9	LOS B	2.4	61.4	0.77	0.84	31.4
2	T1	275	3.0	0.466	12.9	LOS B	2.4	61.4	0.77	0.84	31.3
12	R2	158	3.0	0.279	10.2	LOS B	1.2	30.8	0.75	0.75	31.5
Approach		452	3.0	0.466	12.0	LOS B	2.4	61.4	0.76	0.81	31.4
All Vehicles		2740	3.0	0.492	10.7	LOS B	3.0	78.0	0.72	0.75	31.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 104 [Del Monte/Reservation - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3	L2	166	3.0	0.502	10.8	LOS B	3.3	85.4	0.77	0.83	31.5
8	T1	267	3.0	0.502	10.8	LOS B	3.3	85.4	0.77	0.83	31.5
18	R2	632	3.0	0.688	15.5	LOS B	6.1	155.2	0.85	0.98	29.3
Approach		1065	3.0	0.688	13.6	LOS B	6.1	155.2	0.82	0.92	30.2
East: Reservation Road											
1	L2	453	3.0	0.532	11.6	LOS B	3.2	83.0	0.70	0.76	29.9
6	T1	435	3.0	0.744	19.1	LOS B	6.9	176.6	0.86	1.01	28.9
16	R2	199	3.0	0.744	19.1	LOS B	6.9	176.6	0.86	1.01	28.1
Approach		1087	3.0	0.744	16.0	LOS B	6.9	176.6	0.79	0.90	29.2
North: Del Monte Blvd											
7	L2	189	3.0	0.315	10.3	LOS B	1.3	34.2	0.73	0.74	30.4
4	T1	105	3.0	0.213	9.6	LOS A	0.9	22.6	0.73	0.73	33.0
14	R2	9	3.0	0.213	9.6	LOS A	0.9	22.6	0.73	0.73	32.0
Approach		303	3.0	0.315	10.0	LOS B	1.3	34.2	0.73	0.74	31.3
West: Reservation Road											
5	L2	95	3.0	0.453	10.5	LOS B	2.5	63.9	0.74	0.78	32.0
2	T1	310	3.0	0.453	10.1	LOS B	2.5	63.9	0.73	0.77	32.1
12	R2	126	3.0	0.230	7.5	LOS A	1.0	26.8	0.69	0.69	32.8
Approach		531	3.0	0.453	9.5	LOS A	2.5	63.9	0.72	0.75	32.3
All Vehicles		2986	3.0	0.744	13.4	LOS B	6.9	176.6	0.78	0.87	30.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 108 [Reservation/De Forest - AM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: De Forest Rd											
3	L2	18	3.0	0.079	8.5	LOS A	0.3	7.5	0.67	0.67	32.4
8	T1	3	3.0	0.079	8.5	LOS A	0.3	7.5	0.67	0.67	32.3
18	R2	18	3.0	0.079	8.5	LOS A	0.3	7.5	0.67	0.67	31.4
Approach		38	3.0	0.079	8.5	LOS A	0.3	7.5	0.67	0.67	31.9
East: Reservation Rd											
1	L2	31	3.0	0.669	11.5	LOS B	7.2	184.4	0.44	0.21	32.1
6	T1	731	3.0	0.669	11.5	LOS B	7.2	184.4	0.44	0.21	32.0
16	R2	115	3.0	0.669	11.5	LOS B	7.2	184.4	0.44	0.21	31.1
Approach		877	3.0	0.669	11.5	LOS B	7.2	184.4	0.44	0.21	31.9
North: De Forest Rd											
7	L2	152	3.0	0.374	11.2	LOS B	1.8	45.4	0.72	0.75	30.8
4	T1	1	3.0	0.374	11.2	LOS B	1.8	45.4	0.72	0.75	30.7
14	R2	78	3.0	0.374	11.2	LOS B	1.8	45.4	0.72	0.75	29.9
Approach		231	3.0	0.374	11.2	LOS B	1.8	45.4	0.72	0.75	30.4
West: Reservation Rd											
5	L2	41	3.0	0.767	16.4	LOS B	10.0	255.9	0.82	0.64	30.0
2	T1	816	3.0	0.767	16.4	LOS B	10.0	255.9	0.82	0.64	29.9
12	R2	27	3.0	0.767	16.4	LOS B	10.0	255.9	0.82	0.64	29.1
Approach		885	3.0	0.767	16.4	LOS B	10.0	255.9	0.82	0.64	29.9
All Vehicles		2031	3.0	0.767	13.5	LOS B	10.0	255.9	0.64	0.47	30.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 108 [Reservation/De Forest - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: De Forest Rd											
3	L2	72	3.0	0.362	14.6	LOS B	1.5	39.5	0.77	0.82	29.8
8	T1	12	3.0	0.362	14.6	LOS B	1.5	39.5	0.77	0.82	29.7
18	R2	76	3.0	0.362	14.6	LOS B	1.5	39.5	0.77	0.82	29.0
Approach		159	3.0	0.362	14.6	LOS B	1.5	39.5	0.77	0.82	29.4
East: Reservation Rd											
1	L2	59	3.0	0.818	19.0	LOS B	12.7	325.8	0.89	0.65	28.9
6	T1	840	3.0	0.818	19.0	LOS B	12.7	325.8	0.89	0.65	28.9
16	R2	75	3.0	0.818	19.0	LOS B	12.7	325.8	0.89	0.65	28.2
Approach		974	3.0	0.818	19.0	LOS B	12.7	325.8	0.89	0.65	28.8
North: De Forest Rd											
7	L2	87	3.0	0.271	11.1	LOS B	1.1	27.7	0.72	0.72	30.8
4	T1	1	3.0	0.271	11.1	LOS B	1.1	27.7	0.72	0.72	30.7
14	R2	48	3.0	0.271	11.1	LOS B	1.1	27.7	0.72	0.72	29.9
Approach		137	3.0	0.271	11.1	LOS B	1.1	27.7	0.72	0.72	30.5
West: Reservation Rd											
5	L2	71	3.0	0.942	32.7	LOS C	28.2	723.0	1.00	0.87	24.7
2	T1	945	3.0	0.942	32.7	LOS C	28.2	723.0	1.00	0.87	24.6
12	R2	113	3.0	0.942	32.7	LOS C	28.2	723.0	1.00	0.87	24.1
Approach		1128	3.0	0.942	32.7	LOS C	28.2	723.0	1.00	0.87	24.6
All Vehicles		2398	3.0	0.942	24.7	LOS C	28.2	723.0	0.92	0.77	26.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 109 [Reservation/Crescent - AM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Crescent Ave											
3	L2	115	3.0	0.489	15.8	LOS B	2.5	64.5	0.78	0.86	29.3
8	T1	23	3.0	0.489	15.8	LOS B	2.5	64.5	0.78	0.86	29.3
18	R2	116	3.0	0.489	15.8	LOS B	2.5	64.5	0.78	0.86	28.5
Approach		254	3.0	0.489	15.8	LOS B	2.5	64.5	0.78	0.86	28.9
East: Reservation Rd											
1	L2	89	3.0	0.710	14.0	LOS B	7.7	195.9	0.74	0.58	30.8
6	T1	695	3.0	0.710	14.0	LOS B	7.7	195.9	0.74	0.58	30.7
16	R2	26	3.0	0.710	14.0	LOS B	7.7	195.9	0.74	0.58	29.9
Approach		810	3.0	0.710	14.0	LOS B	7.7	195.9	0.74	0.58	30.7
North: Crescent Ave											
7	L2	70	3.0	0.306	11.0	LOS B	1.3	33.0	0.72	0.73	31.3
4	T1	57	3.0	0.306	11.0	LOS B	1.3	33.0	0.72	0.73	31.3
14	R2	40	3.0	0.306	11.0	LOS B	1.3	33.0	0.72	0.73	30.4
Approach		166	3.0	0.306	11.0	LOS B	1.3	33.0	0.72	0.73	31.1
West: Reservation Rd											
5	L2	55	3.0	0.854	22.8	LOS C	15.5	397.7	1.00	0.92	27.6
2	T1	816	3.0	0.854	22.8	LOS C	15.5	397.7	1.00	0.92	27.6
12	R2	80	3.0	0.854	22.8	LOS C	15.5	397.7	1.00	0.92	26.9
Approach		952	3.0	0.854	22.8	LOS C	15.5	397.7	1.00	0.92	27.5
All Vehicles		2183	3.0	0.854	17.8	LOS B	15.5	397.7	0.86	0.77	29.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 109 [Reservation/Crescent - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Crescent Ave											
3	L2	144	3.0	0.688	26.2	LOS C	4.4	112.5	0.85	1.04	25.9
8	T1	39	3.0	0.688	26.2	LOS C	4.4	112.5	0.85	1.04	25.8
18	R2	143	3.0	0.688	26.2	LOS C	4.4	112.5	0.85	1.04	25.3
Approach		326	3.0	0.688	26.2	LOS C	4.4	112.5	0.85	1.04	25.6
East: Reservation Rd											
1	L2	159	3.0	0.963	38.7	LOS D	29.2	747.0	1.00	1.26	23.1
6	T1	812	3.0	0.963	38.7	LOS D	29.2	747.0	1.00	1.26	23.0
16	R2	63	3.0	0.963	38.7	LOS D	29.2	747.0	1.00	1.26	22.6
Approach		1034	3.0	0.963	38.7	LOS D	29.2	747.0	1.00	1.26	23.0
North: Crescent Ave											
7	L2	35	3.0	0.216	11.7	LOS B	0.8	20.7	0.74	0.74	31.1
4	T1	14	3.0	0.216	11.7	LOS B	0.8	20.7	0.74	0.74	31.1
14	R2	44	3.0	0.216	11.7	LOS B	0.8	20.7	0.74	0.74	30.2
Approach		94	3.0	0.216	11.7	LOS B	0.8	20.7	0.74	0.74	30.7
West: Reservation Rd											
5	L2	69	3.0	1.018	50.8	LOS F	46.9	1199.6	1.00	1.42	20.6
2	T1	944	3.0	1.018	50.8	LOS F	46.9	1199.6	1.00	1.42	20.6
12	R2	130	3.0	1.018	50.8	LOS F	46.9	1199.6	1.00	1.42	20.2
Approach		1143	3.0	1.018	50.8	LOS D	46.9	1199.6	1.00	1.42	20.6
All Vehicles		2597	3.0	1.018	41.5	LOS D	46.9	1199.6	0.97	1.29	22.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 110 [Reservation/California - AM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: California Ave											
3	L2	123	3.0	0.190	7.4	LOS A	0.7	18.5	0.61	0.61	31.8
8	T1	9	3.0	0.190	7.4	LOS A	0.7	18.5	0.61	0.61	31.7
18	R2	187	3.0	0.269	8.4	LOS A	1.1	27.4	0.64	0.64	32.3
Approach		319	3.0	0.269	8.0	LOS A	1.1	27.4	0.63	0.63	32.1
East: Reservation Rd											
1	L2	175	3.0	0.718	13.7	LOS B	6.4	165.1	0.60	0.40	30.7
6	T1	695	3.0	0.718	13.7	LOS B	6.4	165.1	0.60	0.40	30.7
16	R2	4	3.0	0.718	13.7	LOS B	6.4	165.1	0.60	0.40	29.9
Approach		874	3.0	0.718	13.7	LOS B	6.4	165.1	0.60	0.40	30.7
North: Driveway											
7	L2	1	3.0	0.007	7.4	LOS A	0.0	0.6	0.66	0.53	33.2
4	T1	1	3.0	0.007	7.4	LOS A	0.0	0.6	0.66	0.53	33.1
14	R2	1	3.0	0.007	7.4	LOS A	0.0	0.6	0.66	0.53	32.2
Approach		3	3.0	0.007	7.4	LOS A	0.0	0.6	0.66	0.53	32.8
West: Reservation Rd											
5	L2	11	3.0	0.880	24.8	LOS C	18.4	470.9	1.00	0.85	27.0
2	T1	736	3.0	0.880	24.8	LOS C	18.4	470.9	1.00	0.85	27.0
12	R2	275	3.0	0.880	24.8	LOS C	18.4	470.9	1.00	0.85	26.3
Approach		1022	3.0	0.880	24.8	LOS C	18.4	470.9	1.00	0.85	26.8
All Vehicles		2218	3.0	0.880	18.0	LOS B	18.4	470.9	0.79	0.64	28.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 110 [Reservation/California - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: California Ave											
3	L2	167	3.0	0.272	9.3	LOS A	1.0	26.8	0.66	0.66	30.8
8	T1	1	3.0	0.272	9.3	LOS A	1.0	26.8	0.66	0.66	30.7
18	R2	99	3.0	0.160	7.7	LOS A	0.6	15.0	0.63	0.63	32.6
Approach		267	3.0	0.272	8.7	LOS A	1.0	26.8	0.65	0.65	31.4
East: Reservation Rd											
1	L2	153	3.0	0.809	18.4	LOS B	10.6	271.4	0.79	0.61	29.0
6	T1	805	3.0	0.809	18.4	LOS B	10.6	271.4	0.79	0.61	28.9
16	R2	1	3.0	0.809	18.4	LOS B	10.6	271.4	0.79	0.61	28.2
Approach		960	3.0	0.809	18.4	LOS B	10.6	271.4	0.79	0.61	28.9
North: Driveway											
7	L2	1	3.0	0.012	8.6	LOS A	0.0	1.1	0.70	0.62	33.0
4	T1	1	3.0	0.012	8.6	LOS A	0.0	1.1	0.70	0.62	32.9
14	R2	3	3.0	0.012	8.6	LOS A	0.0	1.1	0.70	0.62	31.9
Approach		5	3.0	0.012	8.6	LOS A	0.0	1.1	0.70	0.62	32.3
West: Reservation Rd											
5	L2	3	3.0	0.869	23.2	LOS C	17.1	437.6	1.00	0.78	27.6
2	T1	866	3.0	0.869	23.2	LOS C	17.1	437.6	1.00	0.78	27.5
12	R2	163	3.0	0.869	23.2	LOS C	17.1	437.6	1.00	0.78	26.8
Approach		1032	3.0	0.869	23.2	LOS C	17.1	437.6	1.00	0.78	27.4
All Vehicles		2264	3.0	0.869	19.4	LOS B	17.1	437.6	0.87	0.69	28.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

PARKING DATA COLLECTION SHEET

PARKING DATA COLLECTION SUMMARY

LOCATION: Downtown Marina/ Reservation Rd
DATE: January 22, 2019
TIME: 10:00 AM - 5:00 PM (Sundown)
TEAM: KS

Segment	Supply			10:00 AM Count			12:00 PM Count			3:00 PM Count			5:00 PM Count		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
1. Del Monte Blvd to Vista Del Camino	5		5	1		1	0		0	0		0	0		0
2. Vista Del Camino to Seacrest Ave		5	5		5	5		3	3		3	3		3	3
3. Seacrest Ave to Shopping Center Dwy		10	10		1	1		0	0		0	0		0	0
4. De Forest Rd to Crescent Ave		8	8		8	8		7	7		8	8		10	10
5. Crescent Ave to California Ave	47	26	73	25	7	32	22	9	31	21	10	31	24	11	35
6. California Ave to Salinas Ave	36	43	79	7	12	19	7	12	19	8	12	20	9	10	19
TOTAL	**88**	**92**	**180**	**33**	**33**	**66**	**29**	**31**	**60**	**29**	**33**	**62**	**33**	**34**	**67**

Segment	Supply			Average			Peak (5:00 PM)		
	EB	WB	Total	EB	WB	Total	EB	WB	Total
1. Del Monte Blvd to Vista Del Camino	5		5	0		0	0		0
2. Vista Del Camino to Seacrest Ave		5	5		4	4		3	3
3. Seacrest Ave to Shopping Center Dwy		10	10		0	0		0	0
4. De Forest Rd to Crescent Ave		8	8		8	8		10	10
5. Crescent Ave to California Ave	47	26	73	23	9	32	24	11	35
6. California Ave to Salinas Ave	36	43	79	8	12	20	9	10	19
TOTAL	**88**	**92**	**180**	**31**	**33**	**64**	**33**	**34**	**67**

Appendix TRAF-2

Senate Bill 743 Analysis

Kimley»Horn

Memorandum

To: Christine Hopper, City of Marina

From: Michael Schmitt, AICP CTP, PTP, RSP_1
Chris Gregerson, P.E., T.E., PTOE, PTP

Re: DRAFT SB 743 Analysis
City of Marina Downtown Specific Plan

Date: January 7, 2021

This memorandum documents SB 743 compliant analysis completed for the proposed Downtown Marina Specific Plan in the City of Marina, CA. The proposed Downtown Specific Plan is expected to consist of multi-family residential, office buildings, and retail uses. With the passage of SB 743, Vehicle Miles Travelled (VMT) has become an important indicator for determining if new development will result in a "significant transportation impact" under the California Environmental Quality Act (CEQA). This memorandum summarizes the VMT analysis and resultant findings for the proposed Downtown Specific Plan.

Methodology and Assumptions

Based on the land use information provided, for the purposes of SB 743 analysis and the determination of transportation related significant impacts, the following land uses were analyzed:

- Residential
- Office
- Retail

For residential and office, the Association of Monterey Bay Area Governments Regional Travel Demand Model (AMBAG TDM) was used as the principle tool to determine VMT. The AMBAG TDM contains a base year of 2015 and future year of 2040, both of which were used to determine the VMT impact of the proposed residential and office land uses. Based on the nature of the land use descriptions provided, retail was analyzed qualitatively.

The City of Marina currently has draft VMT thresholds and analysis guidelines that were used as the basis of the analysis contained herein.

Project Land Use Model Input Conversion

In order to represent the land uses in the Downtown Specific Plan in the AMBAG TDM, the land uses needed to be converted into households, population, and jobs. While it is understood that the proposed Downtown Specific Plan does not have a set number of residential units or the size of the total non-residential land uses, in order to be conservative, the maximum amount of each of the three land use types were assumed as a part of this analysis. Therefore, for this analysis it is assumed that the Downtown Specific Plan is comprised of 2,904 multi-family residential units, 511,000 square-feet of office uses, and 875,000 square-feet of retail uses.

In order to convert the non-residential land uses to the number of employees input into the model, the ratio of daily trip generation rates listed in the *Trip Generation Handbook, 10th Edition* published by the Institute of Transportation Engineers (ITE) between 1,000 square-feet and employees was used. The

number of daily trips produced by the size of each of the land use codes for office and retail was used to back calculate the number of employees based on each land use's equation for the number of trips that are produced by each employee.

While the AMBAG TDM uses dwelling units as its input, there is no differentiation between single-family and multi-family residential in terms of trip generation and distribution. However, the AMBAG TDM is a hybrid model as its processes follow the traditional four-step model (trip generation, trip distribution, mode choice, and trip assignment), but it also contains a population synthesis step based on socioeconomic data collected throughout the AMBAG region to produce individuals living in each household that contain their own trip making characteristics. Therefore, the population synthesis step was completed for the proposed Downtown Specific Plan to develop the population for the project. It should be noted that the AMBAG TDM provides the population synthesis process for changes in land use in the future, but not for changes in land use for the base year. However, a process was developed to use the future population synthesis step with the base model. This methodology is described in detail in the Base Year Population Synthesis section of this memorandum.

The proposed Downtown Specific Plan land uses were distributed throughout the Traffic Analysis Zones (TAZs) that represent the Specific Plan area based on the growth between the base year and future year for those zones. In order to maintain a conservative analysis, TAZs identified as having negative growth were revised to maintain the same number of households and jobs as existed in the base year of the model. It was assumed that all land uses analyzed as a part of the Downtown Specific Plan were in addition to land uses that currently exist rather than a reuse of existing buildings. Note that the growth between the base year and future year for the TAZs representing the Downtown Specific Plan were assumed to be a part of the project and the change in land uses is much smaller between 2040 No Project and 2040 Plus Project compared to 2015 No Project and 2015 Plus Project. The 2040 MTP version of the AMBAG TDM was used to represent 2040 No Project Conditions. The land use totals for the proposed Downtown Specific Plan input into the model are summarized in Exhibit 1 below.

Exhibit 1 – AMBAG TDM Land Use Inputs by Scenario

Scenario	Households	Office Employment	Retail Employment
2015 Existing (No Project)	4,707	1,364	854
2015 Plus Project	7,611	2,897	2,604
Delta (Project Land Use)	**2,904**	**1,533**	**1,750**
2040 MTP (No Project)	6,695	2,884	1,006
2040 Plus Project	7,611	2,897	2,604
Delta	**916**	**13**	**1,598**

Base Year Population Synthesis

As noted above, the AMBAG TDM process is not intended to be used for the Base Year scenario, but for the purposes of this analysis its use was required for Existing plus Project Conditions. Therefore, the process was modified slightly for use in analyzing the proposed Downtown Specific Plan. The AMBAG TDM Population Synthesis process uses the distribution of households by vehicle ownership (0, 1, 2, 3, or 4+), household size (1, 2, 3, or 4+), household income (eight categories), and the number of households without children or elderly people (under 18 or over 65, respectively). The households are distributed into these categories based on socioeconomic data collected throughout the region and grouped by TAZ.

In order to use the results of the Base Year version of the Population Synthesis process for the Existing plus Project Conditions, factors were developed on a TAZ by TAZ basis that were applied to the calculated

VMT per Capita values for each TAZ. These factors were developed by running two separate base year model runs with identical land use inputs, but with one model run where the Population Synthesis process was completed. The outputs of both model runs were then used to calculate VMT per Capita for each TAZ using the process outlined in the Analysis section of this memorandum. The factor for each TAZ was calculated by taking the inverse of the percent difference between the VMT per Capita for each model run on a TAZ by TAZ basis. For example, if the VMT per Capita was 12.0 without the Population Synthesis process being completed, but 12.4 when the Population Synthesis process was completed, the factor to get back to the original calculated VMT per Capita would be 96.67% (12.4 – 12.0 = 0.4, 0.4/12.0 = 0.033, 1- 0.033 = 0.9667 or 96.67%). The calculated factors were applied to all TAZs in the model for the Existing Plus Project scenario prior to evaluating the transportation impact.

Analysis

The following sections detail the analysis completed:

Residential and Office Land Uses

The VMT for the residential land uses was computed by combining the production VMT for all Home-Based trip purposes. VMT for non-residential land uses was computed from the attraction Home-Based Work VMT. The external VMT for residential land uses was determined by multiplying the calibrated external trip distance by TAZ determined using big data (Teralytics) by the total internal-external (I-X) Home-Based trips for that TAZ. The external VMT for non-residential land uses was determined by multiplying the calibrated external trip distance by TAZ determined previously by the total internal-external (I-X) Home-Based Work trips for that TAZ.

To determine the share of the non-residential VMT for the office land uses, the total number of trips attracted to each TAZ were calculated by multiplying the model's underlying trip generation rate for the Home-Based Work trip purpose by employment type. The office land use share of the total VMT was then calculated by dividing the number of trips by office employment by the total number of Home-Based Work Trips calculated using the trip generation rates. The VMT for the office land uses was calculated by multiplying the office land use share by the total Home-Based Work VMT (including External VMT).

Residential and office VMT per Capita and VMT per Employee, respectively, for each TAZ were computed by dividing the residential and office VMT by TAZ by the total population or total office employees. A VMT per Capita and VMT per Employee weighted average was calculated for the TAZs comprising proposed Downtown Specific Plan based on population and employment, respectively.

Exhibit 2 summarizes the VMT per Capita and VMT per Employee for the proposed Downtown Specific Plan by scenario. As shown in

Exhibit 2, For Existing No Project and Existing Plus Project scenarios, the residential land uses result in a VMT per Capita below the City's draft threshold, but a VMT per Employee slightly above the City's draft threshold. A scenario was run where only the proposed Downtown Specific Plan's office and retail employees were added to the model to avoid completing the Population Synthesis and factoring process. This scenario resulted in similar outcomes at the other Existing scenarios.

For the 2040 No Project and 2040 Plus Project scenarios, the analysis resulted in similar outcomes. For both the 2040 No Project and 2040 Plus Project scenarios, both the residential and office land uses exceed the City's draft thresholds.

Exhibit 2 – Vehicle Miles Traveled (VMT) by Land Use and Scenario

Scenario	VMT/Capita (Residential)	VMT/Employee (Office)
Calculated VMT per Capita or VMT per Employee by Scenario		
Draft City Threshold	**10.9**	**6.6**
2015 Existing (No Project)	12.7	8.5
2015 Plus Project	11.7	8.0
2015 Plus Project (EMP Only)	11.8	8.1
2040 MTP (No Project)	13.8	8.8
2040 Plus Project	12.8	7.2
Over Threshold?		
2015 Existing (No Project)	**Yes**	**Yes**
2015 Plus Project	**Yes**	**Yes**
2015 Plus Project (EMP Only)	**Yes**	**Yes**
2040 MTP (No Project)	**Yes**	**Yes**
2040 Plus Project	**Yes**	**Yes**

Retail Land Uses

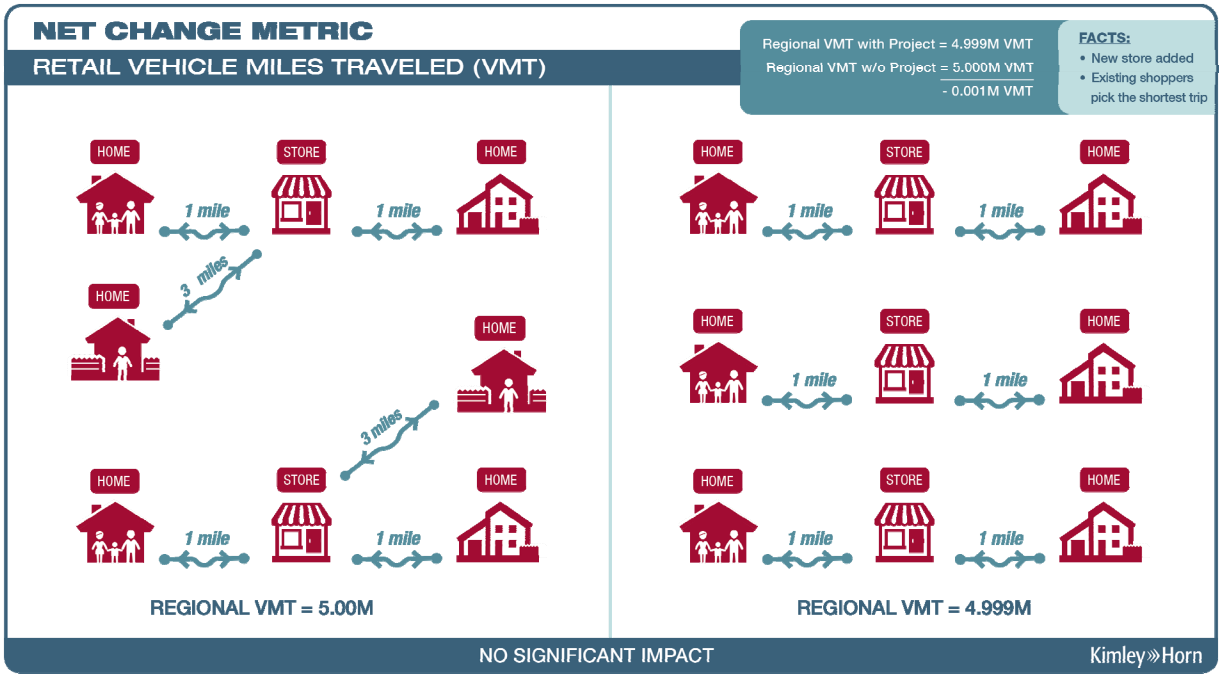
As described previously, the retail land uses were analyzed qualitatively. Page 4 and 7 of the Draft City of Marina SB 743 Implementation Guidelines[1] specifically addresses some of the key issues surrounding how a local serving retail store should be evaluated in terms of its VMT impact. As described, the threshold for significance is "a net increase." This means that if a proposed retail use results in additional VMT, it would result in a finding of significance.

Local serving retail primarily serves pre-existing needs (i.e. they do not generate new trips because they meet existing demand). Because of this, local-serving retail uses can be presumed to reduce trip lengths when a new store is proposed. Essentially, the assumption is that someone will travel to a newly constructed local serving store because of a its proximity, rather than the proposed retail store fulfilling an unmet need (i.e. the person had an existing need that was met by the retail located further away and is now traveling to the new retail use because it is closer to the person's origin location). This results in a trip on the roadway network becoming shorter, rather than a new trip being added to the roadway network, which would result in an impact to the overall transportation system. Conversely, residential and office land uses often drive new trips given that they introduce new participants to the transportation system. The Draft City of Marina SB 743 Implementation Guidelines provides for a general threshold of 50,000 square-feet as an indicator as to whether a retail store can be considered local serving or not. Based on the understanding that no single store within the estimated 875,000 square feet of retail uses will exceed 50,000 square feet, it is presumed that the proposed retail uses will not result in a net increase in VMT and would therefore not result in a significant impact.

Exhibit 3 has been provided to visually demonstrate the basis of this finding. Note that the numbers provided are for illustrative purposes as the analysis technique used is qualitative.

[1] *Draft City of Marina SB 743 Implementation Guidelines, December 16, 2020*

Exhibit 3 – Illustration of the VMT Reducing Effect of Local Serving Retail



If regional serving retail is ultimately determined to be part of the project, those sites will need to be evaluated on their own merits as detailed project descriptions become available in the future.

Findings

Based on the results of this analysis, the following findings are made:

- The residential land uses do exceed the threshold of significance for the Project scenarios. **The project is determined to have a significant transportation impact for residential development.**
- The office land uses do exceed the threshold for the Existing Plus Project scenario and the 2040 plus Project scenario. **As a result, the project is determined for office land uses to have a significant transportation impact.**
- The proposed project's retail stores are assumed to be smaller than 50,000 square feet per store, per the Draft City of Marina SB 743 Implementation Guidelines, **they are presumed to not have a significant impact.**

VMT Reducing Design Principles, Policies, and Improvements

Given the lack of specifics that are available for this specific level plan, it is not possible to fully account for the effect of specific design principles, policies, and improvements that will reduce VMT as part of this analysis. However, these approaches are still important considerations in evaluating the results of this VMT analysis and as appropriate they should be accounted for in subsequent VMT evaluations within the Downtown Specific Plan area.

VMT Reducing Design Principles

Design elements of the project that are VMT reducing, may reduce project VMT. The following are considerations consistent with the Downtown Specific Plan:

- Compactness of design/Transit Oriented Development,
- A range of housing options,
- Mixed uses,
- Walkable community, and
- A variety of transportation options, and
- The preservation of open space.

Transit Oriented Development

The Marina Transit Station, which is also planned to accommodate the new SURF BRT project, is within walking distance from Downtown. Bus stops will be at the station and also on Del Monte Boulevard at Palm Avenue.

Mixed-Use Specific Principles

Mixed-Use combines two or more types of land uses into a building or set of buildings that are physically or functionally integrated. Mixed-Use, as planned for the Downtown, seeks to promote smart growth principles including:

- Diversity and appropriate mix of uses
- Pedestrian Orientation
- Community Focal Point
- Excellence in Design
- Coordination of development strategies
- Sustainability

The plan includes guidance for specific use types (commercial, residential, etc.) and based on location (downtown, mixed-use/commercial areas, etc.) that contribute to favorable conditions for active transportation through denser development. As the AMBAG Model does not include specific functionality to reflect the impact of many of the design principles outlined and the exact nature, location, and timing of these VMT reducing considerations is not known, the additional impact of these design features will need to be evaluated at the individual project-level rather than at the programmatic level. However, it should be noted that these considerations will have a material impact on development project analysis although it will vary on the location and design features selected.

VMT Reducing Policies and Improvements

This section discusses the establishment of a framework for a programmatic approach to policies and improvements that respond to the need for feasible Vehicle Miles Travelled (VMT) mitigation within the Downtown Specific Pan Plan area. Identified VMT mitigation opportunities include:

1. Transportation Demand Measures
2. Implementation of Marina's SB 375 Measures
3. Transit and Multimodal Improvements
4. Establishment of a VMT Bank/Exchange

Transportation Demand Measures

VMT mitigation often relies heavily on Transportation Demand Measures (TDMs). These measures generally represent two basic approaches: policy and infrastructure. The California Air Pollution Control Officers Association (CAPCOA) guide for Quantifying Greenhouse Gas Mitigation Measures, last updated in 2010, is one of the primary bases for estimating mitigation effects in California. Although this resource is invaluable, care needs to be taken in terms of its application given that some TDMs have limited sample sizes and many of the measures are based on experiences in highly urbanized areas. Depending on the selected TDMs, it can be challenging from the standpoint of mitigation monitoring and are often unpopular with project applicants because they may need to be managed and paid for in perpetuity. These limitations have led jurisdictions to increasingly consider programmatic approaches to VMT mitigation.

As part of the Marina's development of its SB 743 Guidance, a review of TDM measures was undertaken for the purpose of identifying TDMs that are both appropriate to the City and setting reasonable maximums for their resultant VMT reductions. Future project level analyses should rely on the City's current TDM options and associated maximum reductions as provided for in its SB 743 Guidance. Although, many of the TDM options may be appropriate to individual project implementation, many of the identified TDMs may be better suited to a programmatic approach where they are implemented across the entire Downtown Specific Plan area. The following TDMs have been identified as the potential basis for a programmatic approach to TDM implementation within the Downtown Specific Plan Area:

- Reduce Parking Supply
- Transit Stops
- Mandatory Travel Behavior Change Program
- Promotions & Marketing
- Emergency Ride Home (ERH) Program
- Bike Share
- Implement on-street and on-site Pedestrian facilities
- Implement/Improve on-street and on-site Bicycle facilities
- Traffic Calming Improvements

Implementation of the City of Marina SB 375 Measures

Pursuant to Senate Bill (SB) 375, AMBAG prepared a Sustainable Communities Strategy (SCS) that was incorporated into the Regional Transportation Plan (RTP). SB 375 requires that the RTP include an SCS, which outlines growth strategies that better integrate land use and transportation planning and help reduce the state's greenhouse gas emissions from cars and light trucks. There are two mutually important facets to the SB 375 legislation: reducing VMT and encouraging more compact, complete, and efficient communities for the future. As identified in the AMBAG RTP/SCS, the region is projected to meet or exceed these targets, and significantly lower greenhouse gas emissions by 2040. The AMBAG RTP/SCS has also identified several strategies to achieve these goals. The strategies focus on integrating land use planning and transportation improvements. Some of the key strategies identified in the RTP/SCS that would apply to the Downtown Specific Plan are mentioned below:

Land Use Strategies

- Improve job-housing balance in the region
- Focus new growth around transit

Transportation Strategies

- Improve transit network
- Promote and improve active transportation
- Promote shared mobility

Multimodal Improvements

In terms of transit, the AMBAG model currently includes the Marina Transit Station located within the Downtown Specific Plan Area. MST is currently planning the implementation of the SURF BRT service that will connect Marina to Monterey, a primary commute route. It is reasonable to assume that at a minimum of a 4% mitigation effect would result if a supporting transit infrastructure, as are being planned along this route. It is likely the potential impact of transit may be higher given that Highway 1 and Highway 68 is not planned to be improved in the future and growth will continue to occur as shown in the AMBAG model.

Participation in a VMT Bank

Programmatic approaches that rely on collectively funding larger infrastructure projects appear to hold great promise for VMT mitigation as they allow a project to obtain an amount of mitigation commensurate with their impact, include only a single payment without the complexity of ongoing management, and do not require on-going mitigation monitoring. Programmatic approaches can also provide a public benefit in terms of funding transportation improvements that would not otherwise be constructed, resulting in improvements to congestion, GHG emissions, increased transportation choices, and additional opportunities for active transportation.

Under a VMT Banking framework, multiple VMT reducing projects are grouped together and their associated VMT reductions are monetized in the form of credits. These credits are then purchased for the purposes of mitigating VMT in excess of determined impact thresholds. The underlying projects may be either regionally or locally beneficial to the area in which the project is located.

The City will most likely develop a VMT Banking program or similar, however it is early in development so there is insufficient detail to estimate the impact on VMT mitigation of such a program. However, the implementation of a VMT Bank could provide meaningful opportunities for development projects that might otherwise not have the ability to mitigate their impact.

VMT Mitigation

As discussed previously, given the lack of specifics that are available for this downtown level plan, it is not possible to fully account for the effect of specific design principles, policies and improvements that will reduce VMT as part of this analysis. Although many of the VMT reducing design principles, policies, and improvements that are described in the prior section may ultimately mitigate and/or potentially reduce the VMT impacts outlined in this evaluation, necessary details to assure implementation and appropriately evaluate their effect are not yet available.

It is important to note that the approaches to VMT reduction described in the prior section are supportive of existing City policies and guidelines. However, the VMT reducing approaches cited in the prior section will require further planning and development as well as committed funding sources including those from participants in the development community (many of which many not be identified yet as large areas of land may be further subdivided into specific projects and developments). As such, it is reasonable to assume that the findings of this analysis reflect a worst-case scenario given the guidance within the City of Marina SB 743 Guidance.

Conclusion

Based on the results of this analysis, the following findings are made:

- The residential land uses do exceed the threshold of significance for the Project scenarios. **The project is determined to have a significant transportation impact for residential development.**
- The office land uses do exceed the threshold for the Existing Plus Project scenario and the 2040 plus Project scenario. **As a result, the project is determined for office land uses to have a significant transportation impact.**
- The proposed project's retail stores are assumed to be smaller than 50,000 square feet per store, per the Draft City of Marina SB 743 Implementation Guidelines, **they are presumed to not have a significant impact.**

Note that specific development projects may perform better or worse than the overall impacts determined by this programmatic level analysis. However, in the aggregate it is likely that this VMT analysis represents a worst-case scenario given that it does not fully represent the effect of planned VMT reducing design principles or the effect that targeted mitigation measures may ultimately have on development projects.

Appendix ENG

Energy Calculations

Marina DVSP

Last Updated: January 22, 2021

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Concrete/Industrial Saw	1	8	81	0.73	Demo	8,339.35
Excavators	3	8	158	0.38	Demo	22,850.31
Dozers	2	8	247	0.40	Demo	25,067.85
Dozers	3	8	247	0.40	Site Prep	22,561.06
Tractors/Loaders/Backhoes	4	8	97	0.37	Site Prep	12,148.12
Excavators	2	8	158	0.38	Grading	23,611.99
Graders	1	8	187	0.41	Grading	15,076.04
Dozers	1	8	247	0.40	Grading	19,427.58
Scrapers	2	8	367	0.48	Grading	69,278.61
Tractors/Loaders/Backhoes	2	8	97	0.37	Grading	15,691.32
Cranes	1	7	231	0.29	Building Construction	115,260.33
Forklifts	3	8	89	0.20	Building Construction	116,733.95
Generator Sets	1	8	84	0.74	Building Construction	135,883.57
Tractors/Loaders/Backhoes	3	7	97	0.37	Building Construction	205,948.53
Welders	1	8	46	0.45	Building Construction	45,250.80
Air Compressors	1	6	78	0.48	Arch Coating	4,356.26
Pavers	2	8	130	0.42	Paving	15,238.61
Paving Equipment	2	8	132	0.36	Paving	13,262.62
Rollers	2	8	80	0.38	Paving	9,432.36
					Total Fuel Used	**895,419.27 (Gallons)**

Construction Phase	Days of Operation
Demolition	300
Site Preparation	180
Grading	465
Building Construction	4650
Paving	330
Architectural Coating	330

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition	24.0	15	10.8	2,025.00
Site Preparation	24.0	18	10.8	1,458.00
Grading	24.0	20	10.8	4,185.00
Building Construction	24.0	2,534	10.8	5,302,395.00
Paving	24.0	15	10.8	2,227.50
Architectural Coating	24.0	507	10.8	75,289.50
			Total	**5,387,580.00**

VENDOR TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition	7.4	-	7.3	-
Site Preparation	7.4	-	7.3	-
Grading	7.4	-	7.3	-
Building Construction	7.4	537	7.3	2,463,306.08
Paving	7.4	-	7.3	-
Architectural Coating	7.4	-	7.3	-
			Total	**2,463,306.08**

HAULING TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Hauling Trips	7.4	7,523	20.0	20,332.43
			Total	**20,332.43**

Total Gasoline Consumption (gallons)	**5,387,580.00**
Total Diesel Consumption (gallons)	**3,379,057.78**

Sources:

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b* . July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf.

Marina DVSP

Last Updated: January 22, 2021

Populate one of the following tables (Leave the other blank):

Annual VMT		OR	Daily Vehicle Trips	
Annual VMT:	35,699,555		Daily Vehicle Trips:	
			Average Trip Distance:	

Fleet Class	Fleet Mix
Light Duty Auto (LDA)	0.574472
Light Duty Truck 1 (LDT1)	0.023499
Light Duty Truck 2 (LDT2)	0.208360
Medium Duty Vehicle (MDV)	0.100658
Light Heavy Duty 1 (LHD1)	0.009582
Light Heavy Duty 2 (LHD2)	0.003700
Medium Heavy Duty (MHD)	0.020556
Heavy Heavy Duty (HHD)	0.046714
Other Bus (OBUS)	0.003193
Urban Bus (UBUS)	0.001632
School Bus (SBUS)	0.001047
Motorhome (MH)	0.000482
Motorcycle (MCY)	0.006105

Fuel Economy (MPG)	
Passenger Vehicles	24.0
Light-Med Duty Trucks	17.4
Heavy Trucks/Other	7.4
Motorcycles	43.9

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	*57.45%*	*Gasoline*	20,508,395	0.00	854,516.45
Light-Medium Duty Trucks	*33.25%*	*Gasoline*	11,870,709	0.00	682,224.65
Heavy Trucks/Other	*8.69%*	*Diesel*	3,102,506	0.00	419,257.50
Motorcycle	*0.61%*	*Gasoline*	217,946	0.00	4,964.60

Total Gasoline Consumption (gallons)	**1,541,705.70**
Total Diesel Consumption (gallons)	**419,257.50**