

Appendix A

2021 NOP, 2023 NOP, Comment Letters, and Initial Study

2021 NOP and Comment Letters



**Amended Notice of Preparation of an Environmental Impact Report
and Scoping Meeting for the
Downtown Vitalization Specific Plan
Marina, California
Comment Period Extension**

Lead Agency:

City of Marina
Community Development Department
209 Cypress Avenue
Marina, CA 93933

Contact:

Fred Aegerter, Director
Community Development Department

Consulting Firm:

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

Contact:

Megan Jones, MPP
Principal

The City of Marina (City) will serve as the Lead Agency, consistent with Section 15020 and 15021 of the California Environmental Quality Act (CEQA), in preparing an Environmental Impact Report (EIR) for the proposed Downtown Vitalization Specific Plan project (proposed project or DVSP). The City is requesting your input on the scope and content of the environmental issues and alternatives to be evaluated in the EIR. Responsible agencies may need to use the EIR to be prepared by the City when considering permits or other approvals for the project, and trustee agencies should plan to review and comment on the EIR with respect to trust resources within their jurisdiction.

NOTICE IS HEREBY GIVEN that the Notice of Preparation (NOP) issued on May 26, 2021 has been amended to extend the deadline to submit comments to Monday, July 19, 2021.

Project Location: The proposed project is located in the City of Marina, approximately 15 miles north of Monterey and about 65 miles southwest of the San Francisco Bay Area, in Monterey County (see Figure 1). 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 1

Public Review Period: This NOP is available for public review and comment pursuant to California Code of Regulations, Title 14, Section 15082(b). The 30-day public comment period, during which time the City will receive comments on the NOP for the DVSP EIR, begins May 26, 2021 and was extended to end on July 19, 2021. Comments should be sent to the address provided at the end of this notice.

Project Description: The intended purpose of the Specific Plan is 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

Based on existing land use designations and underlying zoning requirements 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. Please see the Project Description in the attached Initial Study for more information.

Initial Study: Based on the conclusions of the Initial Study prepared for the proposed project, the following areas of potentially significant environmental impact are anticipated to require analysis in the EIR:

- Transportation (specifically Vehicles Miles Traveled)
- Utilities and Service Systems (specifically Water Supply)

Potential cumulative impacts and potential for growth inducement will also be addressed; alternatives, including the No Project Alternative, will be evaluated.

Public Scoping Meeting: Pursuant to the public participation goals of CEQA, as set forth in particular in Public Resources Code Section 21083.9, subdivision (a), the City, in its role as Lead Agency, held a public scoping meeting to provide an opportunity for the public and representatives of public agencies to address the scope of the EIR. Due to COVID-19, the Scoping Meeting for the EIR was held virtually on June 9th, 2021 at 6:00 PM. Visit <https://cityofmarina.org/945/Environmental-Review> for the meeting recording, PowerPoint, and other relevant information.

Due to COVID-19, the case file on this project, including copies of the Initial Study, is available for public review by request. Please contact Fred Aegerter at the contact information below for this information. In addition, project specific information including the Initial Study is also be available online at <https://cityofmarina.org/945/Environmental-Review>.

Commenting on the Scope of the EIR: The City welcomes agency and public input regarding environmental factors potentially affected and project alternatives to be considered for evaluation. All written comments will be considered and must be submitted by 5:00 PM on Monday, July 19, 2021, to the City at:

City of Marina
Attn: Fred Aegerter, Community Development Director
209 Cypress Avenue
Marina, California 93933
faegerter@cityofmarina.org
Phone: 831-884-1281



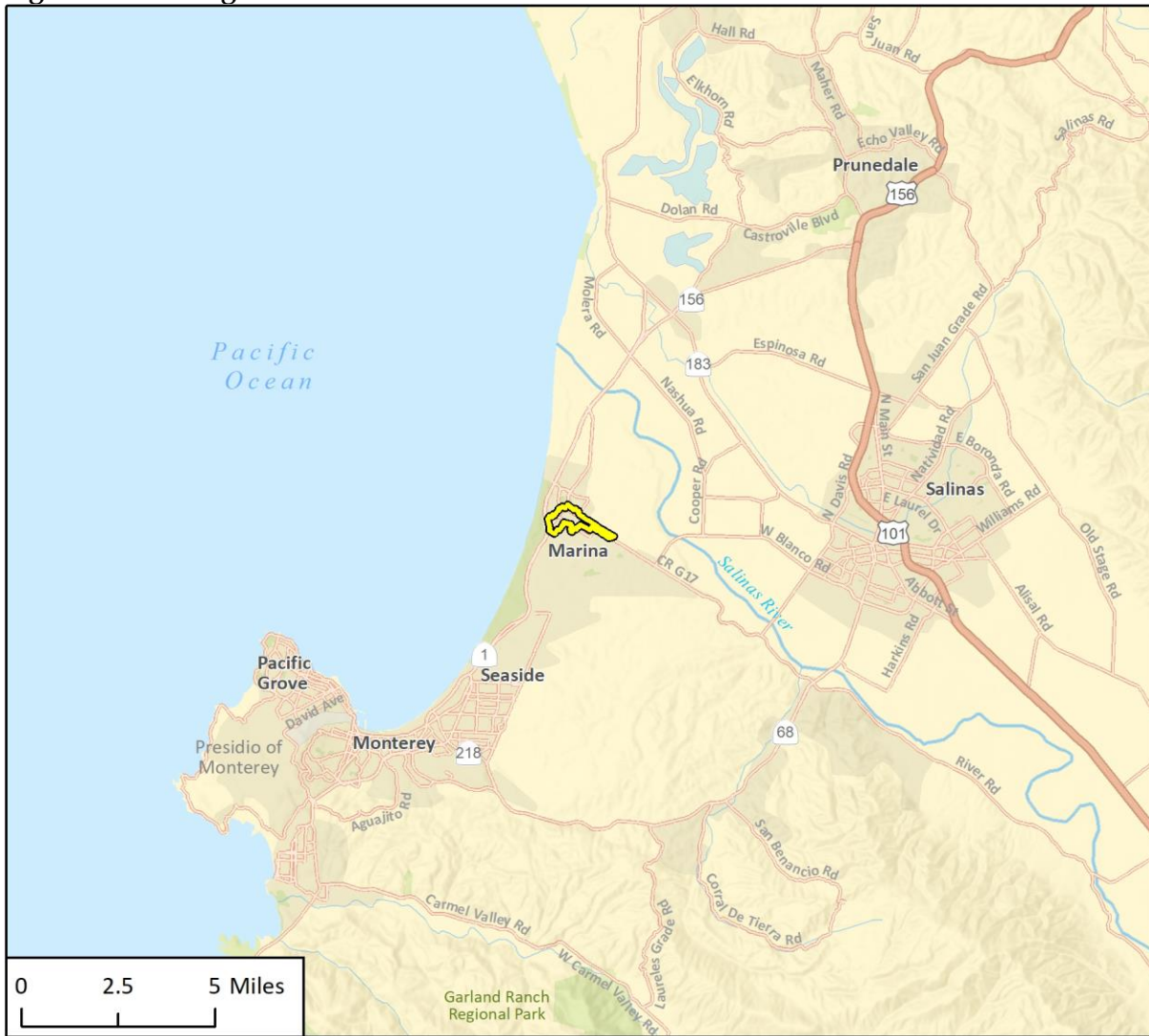
Signature

Fred Aegerter
Printed Name

June 15, 2021
Date

Community Development Director
Title

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2019.

 Specific Plan Area 

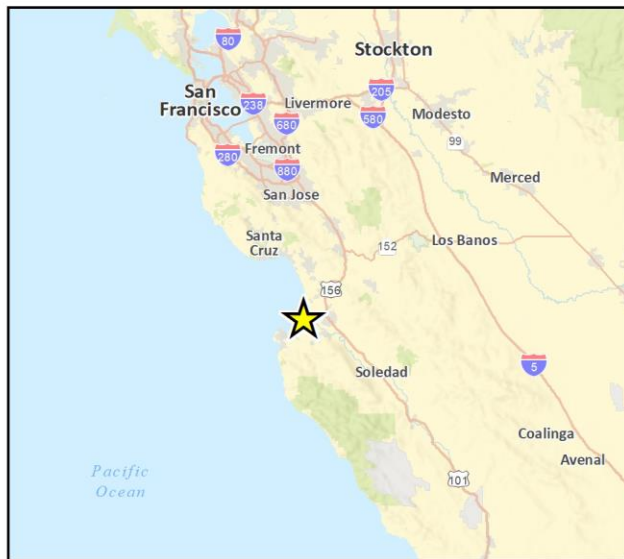


Fig.1 Regional Location

Figure 2 Downtown Vitalization Specific Plan Area



Fig 2 Project Location

Downtown Vitalization Specific Plan Area

To Whom It May Concern:

I was born and raised in Salinas, and decided to buy my first home in 1999. After much consideration, I bought my current home at Peninsula Point Condominiums in Marina on Marina Drive, which encompasses the "Downtown Vitalization Specific Plan Area." From the closing of Fort Ord and the building of CSUMB, I could see that Marina was moving in a direction I wanted to be a part of. After moving to Marina in 1999, I knew I had made the right choice. The reasons are numerous why I enjoy living here. I would like to recognize a few positive changes the leadership of Marina has already made after Fort Ord was transitioned, then I will focus on the primary areas needing to be addressed within your revitalization efforts. Over the years, these are a few of those positive changes in Marina that I have loved: CSUMB built, beautiful banners representing Marina lined along Del Monte Blvd. and Reservation Rd, Farmers Market each Sunday, beautiful homes built on corner of Del Monte and Reservation (in a key location), library, brick pathway on Reservation Rd, whole new configuration of pond area on Reservation near library, circular street add ons in road on Reservation, pretty signage on Reservation by Del Monte with tiles/dolphins, resort, Montage, the Dunes (less Target and Starbucks), movie theater, new hotel, the taking down of the walking overpass on Del Monte, revitalization of sidewalk trail that goes through Marina on Del Monte, over a hundred trails enhanced or opened up for public usage, taking down of many army building structures, and United States flags and State flags lining Del Monte and Reservation on appropriate days.

I thank you for the opportunity to work beside you so to speak in helping revitalize our very special and unique community we call home. As you know, Marina has areas that need to be enhanced, changed completely, taken down, or added to. I am prayerfully optimistic you will truly consider my ideas, as well as all community members input in making your final decisions.

Recently in my travels, I noticed some similar positive features on one of the main streets in Boise, Idaho, nearby Salinas, and Sand Hill Rd. next to Stanford Mall. What all these places had in common was the desire to want to stay there. There was a calmness on these lovely streets, nature (green), beauty, a sense of wanting to linger and not move on. Trees, grass, plants, flowers, dark brown wood chips that looked like rich soil that made plants pop, benches (Salinas has green/great idea), unique lampposts, reconfiguration of parking, no trash on the ground, and beautiful resurfaced roads. I saw happy people walking, sitting, laughing, playing, and most of all staying. Each place, I wanted to stay too, but needed to get back home. Do I want to return to these places? The answer is a resounding yes. All three streets in Boise, Salinas, Palo Alto were main thoroughfares, and were not some hidden streets out of the way to get to. These three places I described were very visible to the public. I was impressed by all three places, and it left a marked positive impression on me.

With always limited funding along with city, county, state, and federal regulations, and an abundance of people to please, it is very hard to cut through the red tape to do what really needs to be done in Marina. I get it. Given all obstacles, you have done a good job since

CSUMB has been built. I know it has not been easy, and there has been some major undertakings to say the least. You have done a little bit here, a little bit there, and a whole lot in other areas. However, unfortunately, we are still known as “the drive thru city” from all my Monterey Peninsula friends, who live in Monterey, P.G, Carmel, and Carmel Valley. They have told me they have no reasons to come over this way, but to see me. My Salinas friends who work or play on the peninsula think of Marina as a town they commute through and not one to take up residence at or play in. We are getting there, but we are definitely not there yet. Thus, this revitalization project. Some of my Salinas friends do like to shop at our Wal Mart, because they feel it is a lot safer, cleaner, and less congested than their Salinas counterpart. I have asked my visiting family and friends who live out of town, state, or country what Marina needs to attract them to stay. The answers have always been similar. I tend to agree with all of them. To start, enhancing the beauty of the main thoroughfare like the ones above described in Boise, Salinas, and Sand Hill Rd. by Stanford Mall. In Marina, the main thoroughfare would be the entrance to Del Monte Blvd. coming from Highway 1 North, then making a right hand turn at Reservation Rd, and heading toward Imjin Parkway. I implore you to consider making this area a retreat, an oasis where people are in awe of the beauty, the green, the road, the lamppost, the trees, the plants, one of a kind art, special water feature(s), and unique wood or steel designs.... Just have the people of the community use their time and talents to not only improve where they live, but be really proud of what they have accomplished for not only themselves and their families, but for anyone visiting Marina. I know grass is a sore subject, but we still need some placed strategically throughout these two streets especially. Put in the dark wood chips that make the plants and flowers pop. Get the community involved by having sign ups for volunteering to have garbage clean ups, planting, donating trees and other plants and flowers, many items can be donated if people know, many people will donate their time and skills. It will help our community bond even more and take pride in our wonderful town. My brother was visiting recently from North Carolina. He did not mince any words with me when it came to how he felt about the areas in question. He said, “There is nothing appealing or attractive to look at. All I see is brown dusty dirt and cars lining your street (which is parallel to Del Monte)! When is the city going to do something? These streets are really an eye sore to look at Noelle. Look over there on Del Monte, it’s ugly.” Ouch! That hurt, but he was exactly right. It is ugly.

Whatever you do, do it with love for the city of Marina. Get those volunteer sign up sheets out to the community. If you want to add retail, please add one of a kind and unique places ONLY. Family owned stores, Peets Coffee (No More Starbucks), In and Out Burger (yes, we can have one in our town too), and a Nordstrom’s Rack. Actually in 1999, the Wal Mart had not taken over the current building it’s in, and I was hoping for Nordstrom’s to take over that building. Yes, Nordstrom’s! People drive down Highway 1 for golf and car shows on the peninsula. Why not be able to stop off in Marina for great shopping? We need to stop selling ourselves short and start incorporating high end places for people to shop. We have REI, but that’s it. Let’s continue to be wise with our decision making. Together we can make our town shine on the peninsula, in the county, and in the state like the gem it truly is. Any questions or concerns, please call me at: (831) 883-3972, or email at: noellegriffin7@yahoo.com.

Sincerely, Noelle L. Griffin

NIRAN S. SOMASUNDARAM
ATTORNEY
REAL ESTATE + ENVIRONMENT
DIRECT DIAL (415) 995-5872
DIRECT FAX (415) 995-3464
E-MAIL nsomasundaram@hansonbridgett.com



June 25, 2021

VIA ELECTRONIC MAIL ONLY

City of Marina
Att: Fred Aegerter
Community Development Director
209 Cypress Avenue
Marina, California 93933
faegerter@cityofmarina.org

Re: Downtown Vitalization Specific Plan Notice of Preparation and Initial Study

Dear Mr. Aegerter:

On behalf of Sierra Pacific Properties Inc., we thank you for the opportunity to provide comments on the Notice of Preparation of an Environmental Impact Report and associated Initial Study for the City of Marina's proposed Downtown Vitalization Specific Plan ("DVSP" or the "Project"). Sierra Pacific Properties Inc. is the owner of the Seacrest Plaza Shopping Center located at the intersection of Reservation Road and Seacrest Avenue in Central Marina. In this letter, we provide recommendations for framing the scope of the Environmental Impact Report in a manner that is consistent with the requirements of the California Environmental Quality Act ("CEQA;" Pub. Resources Code, § 21000 et seq.) and the State CEQA Guidelines ("Guidelines;" Cal. Code Regs., tit. 14, § 15000 et seq.).

These comments are not meant to signal opposition to the City's efforts to plan for a vibrant Downtown Marina. The goals and broad policies reflected in the DVSP, including its attempt to revitalize downtown Marina and to create a pedestrian-friendly downtown district, are laudable. However, the DVSP as proposed includes prohibitions against many currently permitted and conditionally permitted uses which, together with new development standards, will render these uses and their encompassing structures nonconforming. As you might know, Sierra Pacific Properties Inc. has articulated these concerns in the past. (See April 24, 2019 Ltr. from K. Lawson to City of Marina Planning Commission.) The Initial Study ignores the potentially significant environmental effects that will foreseeably result from the prohibition of certain commercial uses in the Core Area. Likewise, the Initial Study ignores environmental effects that will result from re-classifying broad swaths of already existing downtown commercial buildings as non-conforming structures.

In theory, it might be the case that the DVSP envisions that these non-conforming commercial uses will be replaced over time by wholly new developments that will conform to the newly imposed design standards in the DVSP. In practice, local commercial centers and businesses have suffered through a punishing recession and, more recently, a pandemic. The vision of a brand-new Core Area is admirable but inattentive to practical considerations. Local businesses need help, time to adjust, and an opportunity to stabilize, and the DVSP threatens to hamstring

realistic development by preventing existing grocery stores, pharmacies, banks, and other essential commercial institutions from undergoing necessary adjustments, renovations, or expansions. The idea that local businesses will have the capital to redevelop in a complete manner during the pertinent planning horizon is not workable. If indeed the DVSP envisions nearly 8,000 new residents, this influx does not automatically generate the economic wherewithal for businesses to “redo” existing shopping centers and other commercial buildings. The more likely result is that many businesses, including our client, will take a lengthy time to adjust and redevelop according to the DVSP’s vision, and many business are likely not to redevelop at all. Under this reasonably foreseeable scenario, new and old residents would travel outside of the downtown area to fulfill their needs.

In light of these practical considerations, it is especially important for the DVSP’s Initial Study and Environmental Impact Report to “present information in such a manner that the foreseeable impacts of pursuing the project can actually be understood and weighed.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 448; see also Guidelines, § 15063(c) (one of the purposes of an initial study is to explain why environmental effects are significant)). While “perfection” isn’t necessary, an environmental analysis “must be ‘prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences.’” (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 712, quoting Guidelines, § 15151). As we will explain in further detail below, the Initial Study falls short of these standards. It fails to meaningfully or adequately analyze the full scope of potential environmental impacts associated with the DVSP, and many of its conclusions are not supported by evidence. (See *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296 (initial study’s conclusions must be supported by evidence); accord *Citizens Ass’n for Sensible Dev. v. County of Inyo* (1985) 172 Cal.App.3d 151, 171). We therefore respectfully urge the City to revise the scope of its environmental analysis to ensure that all potentially significant environmental effects are adequately disclosed, analyzed, and mitigated.

We want to reiterate: these comments are not meant to signal opposition to the City’s downtown plan. Our client, who provides a “home” for many businesses in the heart of the Core Area, wishes to understand the environmental impacts of a proposed development that envisions 8,000 new residents and more than 3,000 new employees within the City’s limits. The scale of this change is enormous, especially considering the US Census estimated the population of Marina in 2019 was 22,781. The residents alone would constitute a 35 percent increase in the City’s population and we question, respectfully, whether a focused EIR is appropriate in any respect.

Further, we do ask that the City, in moving forward, not only consider the practical environmental implications of its blueprint, but also work more closely with the business community, including Sierra Pacific Properties Inc., to adjust this blueprint to accommodate the practical needs of the commercial sector. Our client would love the opportunity to discuss this issue in more detail with decisionmakers and staff. Our client would also like the opportunity to review and comment on any economic studies that informed the DVSP. The plan refers in a vague manner to some economic reports that might be more than ten years old, and a vetting of this information, in light of the circumstances of the past decade, appears to be warranted.

Overall, the DVSP embodies a new vision and our client supports the City's desire to reinvent the downtown — we simply ask that an on-ramp for this vision be created that accounts for practical realities.

1. The Initial Study Fails to Account for Impacts associated with Displacement of Existing Commercial Businesses

Specific deficiencies in the Initial Study's analysis are set forth in further detail in the subsequent sections below, but many of these deficiencies are the result of a general failure in the environmental analysis: the omission of any discussion or analysis of the environmental impacts that will result from the designation of existing development or businesses as non-conforming, and the eventual but inevitable displacement of those uses to areas outside of downtown Marina. Whenever a structure or use becomes non-conforming, it is a very big deal. Owners of non-conforming uses and structure face strictures on their ability to expand or adjust operations to changing circumstances. Cessations in operations also become concerning, as the operator of a non-conforming use can lose that right to operate if there is a period of activity that lasts for more than 6 months – circumstances that many have faced just in the past year due to COVID-19. Meanwhile, the DVSP will not only render existing uses and structures as non-conforming, but will also disallow the establishment of a number of new commercial uses when compared to the menu of land uses allowed by existing zoning.

While the details of such activities may not be set in stone, such outcomes are the reasonably foreseeable consequence of the DVSP as proposed. The City must evaluate and consider the impacts of the “most probable development patterns” that will result from a project. (See, e.g. *Aptos Council v. County of Santa Cruz* (2017) 10 Cal.App.5th 266, 292-293; *City of Antioch v. City Council* (1986) 187 Cal.App.3d 1325, 1337). Even if the potential impacts are nebulous and not yet sharply defined, because actual development has not yet been proposed, potential impacts of resulting displacement should be analyzed because they are reasonably foreseeable. (*Aptos Council v. County of Santa Cruz* (2017) 10 Cal.App.5th 266, 292-293).

Many direct and indirect impacts occur from the displacement of land uses, and the Initial Study does not contemplate these impacts. Chief among these failures is a severe underestimation of the air quality, greenhouse gas, energy, and traffic impacts of the Project by failing to account for the additional vehicle miles traveled by residents of Marina who will now have to drive outside of the downtown area, either to the periphery of Marina or even to different cities altogether, to access key businesses which are either outright prohibited under the DVSP or rendered non-conforming (thus disallowing expansion and, in some cases, might force their closure).

In order to fully account for the potentially significant environmental impacts of the DVSP, the analysis must include an analysis of the impacts of the DVSP's designation of existing development or businesses as non-conforming, including impacts of increased construction and demolition, and increased vehicle miles traveled. As a foundational issue, the EIR's analysis must account for (1) all commercial uses and structures that would be rendered non-conforming; (2) all commercial and other land uses that are allowed under current zoning, but would be prohibited under the DVSP; and (3) a detailed phasing plan for the introduction of new residential and commercial uses. Modern economic analyses, if not already prepared, must be used to validate the phasing assumptions, as well as the scope and magnitude of all displaced activities.

2. Air Quality

The Initial Study concludes that air quality impacts will be less than significant (with the incorporation of a single mitigation measure regarding construction dust control). However, the Initial Study's methodology includes several assumptions which are not supported by evidence. A more detailed analysis of the Project's air quality effects, accounting for all potential sources of air pollutants and including a health risk assessment, is needed.

a. Construction Emissions Analysis Fails to Account for All Sources of Emissions

The Air Quality analysis uses CalEEMod to estimate construction emissions for the Project. The Initial Study stated that construction activities studied "include demolition of existing structure, site preparation and grading, building construction, installation of wet and dry utilities as needed, construction of roadway improvements, and architectural coating." (Initial Study at p. 31). Appendix AIR to the Initial Study, which contains the CalEEMod calculations supporting the analysis, provides that the assumption is "half of existing residential units and half of existing retail/office space would be demolished and redeveloped." (See Initial Study, Appendix AIR, at p. 2). The City provides no explanation for this assumption. The DVSP would render many existing commercial and residential developments in the Downtown area non-conforming. While neither the DVSP nor the Initial Study has taken steps to quantify the number of existing developments that would be affected, Marina Community Development Director Fred Aegerter has previously estimated that "the plan would result in most of the buildings in the downtown area being non-conforming buildings." (See <https://www.montereyherald.com/2019/03/08/marinas-downtown-vitalization-plan-has-some-wondering-about-the-future/>). The Project must undergo an evidence-based analysis to determine a defensible assumption for the level of demolition that will occur under the Project. Understanding the level of development and construction will, in turn, require a more thorough accounting of how many structures will be rendered non-conforming, and contemporary economic analyses demonstrating what incentives exist for redevelopment and a survey or other reasonable assessment of the business community and its needs.

The Air Quality analysis also "assume[s] that soil material import would be minimal" and therefore "does not account for haul truck trips for soil material and export." (Initial Study at p. 31). The Initial Study justifies this assumption by noting that "buildout of the DVSP would primarily result in redevelopment activities and would not include subterranean parking structures." (Initial Study at p. 31). However, other sections of the Initial Study suggest that construction of the project would necessarily involve large-scale removal of soil from the Project site. Later in the Air Quality section, the Initial Study concedes that "construction activities facilitated by the DVSP may require *substantial* grading and excavation [...]." (Initial Study at p. 36) (emphasis added). Furthermore, in the Geology and Soils section, the Initial Study contemplates "removing, replacing soil with the proper fill selection, and compacting the soil" to address any soil stability-related hazards. The current Air Quality analysis is based on an assumption that is contradicted by other sections of the study. The Project must undergo a full evaluation of potential Air Quality impacts, including those that would occur from haul truck trips for soil material and export.

Finally, the Air Quality analysis fails to undergo any meaningful threshold impacts analysis regarding ozone precursor emissions from construction, specifically VOC and NO_x emissions. As the Initial Study notes, the Project region is in non-attainment for both PM₁₀ and Ozone. The Initial Study Air Quality analysis determines that construction activities will cause a Maximum Daily Emissions level of:

- 180 pounds of VOC per day;
- 230 pounds of NO_x per day; and
- 70 pounds of PM₁₀ per day.

Though the Project area is in non-attainment for all of these pollutants, the Air Quality analysis only compares the PM₁₀ construction emissions to a numerical threshold. The Initial Study justifies this approach by citing to the Monterey Bay Unified Air Pollution Control District's (MBARD) CEQA Air Quality Guidelines, which state that ozone precursor emissions from demolition and construction activities using "typical construction equipment" would not have a significant impact on attainment and maintenance of state or federal ozone ambient air quality standards. (Initial Study at p. 35). However, the Initial Study includes no list of the construction equipment anticipated for the DVSP, but only a vague statement that "demolition and construction activities facilitated by the DVSP are anticipated to use typical construction equipment." (Initial Study at p. 35). Under the MBARD guidelines, use of certain equipment, including grinders or any portable equipment, does not fall under the definition of "typical construction equipment." (See Monterey Bay Unified Air Pollution Control District CEQA Air Quality Guidelines (2008) at p. 5-3). The analysis must at least address whether construction or demolition activities will use such equipment.

Furthermore, the MBARD guidelines are nearly 13 years old, and may not reflect the most up-to-date methodology for determining significant impacts from construction emissions. For instance, the Bay Area Air Quality Management District's CEQA Guidelines, updated in 2017, specifically state that ozone precursor emissions from construction activities involving demolition or non-greenfield development should be analyzed by comparison to a threshold. (See Bay Area Air Quality Management District CEQA Air Quality Guidelines (2017) at pp. 3-1, 3-5).

The Project must undergo further evaluation and analysis to determine whether construction activity emissions, particularly ozone precursor emissions, will have a significant environmental impact.

b. Operational Mobile Emissions Analysis is based on a Flawed Vehicle Miles Traveled Calculation, which Fails to Account for Displacement

The Project's mobile source emissions were calculated using an estimate of "net new Vehicle Miles Traveled (VMT) estimated for residential and office land uses." (Initial Study at p. 31). Retail land uses, and retail-based trips, were not considered in the analysis, under an assumption that any local-serving retail use would reduce trip lengths and generate no new trips, because local-serving retail serves people with "an existing need that was met by the retail located further away and [are] now traveling to the new retail use because it is closer to the person's origin location." (Initial Study, Appendix TRAF-2 at p. 6). This assumption fails to account for mobile source emissions from out-of-area retail employees who will commute to downtown Marina.

Furthermore, the VMT analysis as a whole does not discuss or account for trip generation or longer trips that will result from the displacement of currently existing commercial enterprises in the Project Area. Under the DVSP, a series of businesses that are currently allowed to operate under pre-DVSP zoning will be prohibited (for instance, professional office uses facing Reservation Road, drive-thru or drive-in facilities, and service stations, all of which are currently permitted under the C-1 Retail Business District zone, would be prohibited in the Core Area, per Table 3-6 of the DVSP). Additionally, many businesses that fall into use categories still allowed under the DVSP operate within buildings that would not conform to the development standards of the DVSP, thus rendering the businesses with no prospect of expanding or increasing the footprint of their current operations. For those businesses outright prohibited in an area, such as drive-thru restaurants or banks in the Core Area, residents will have to take longer mileage trips to fulfill an existing need that was previously filled by a business located closer to them. This increase in VMT would be permanent, as no such business could ever move back into the area under the DVSP. Even for those businesses that constitute a permitted use in a non-conforming building, such as a grocery store with a street-abutting parking lot in the Core Area, the inability of the business to expand its operational area will lead to an increase in VMT. While this type of stagnancy is not within the vision of the DVSP, it is a reasonably foreseeable outcome, if not the most practical outcome. As such, to the extent 8,000 new residents create new demand for services, the “paralysis” that will restrict existing business from expanding will cause coveted commercial services to become established elsewhere. As a result, new residents will be forced to take longer mileage trips to fulfill their needs, until such time that a similar business constructs and occupies a conforming building in downtown, if ever.

The VMT analysis in the Initial Study fails to account for the increase in VMT due to displacement of existing businesses and commercial services that currently are allowed under existing zoning but, under the DVSP, would be prohibited. The Project must undergo further evaluation and analysis to determine whether emissions attributable to this increase in VMT will have a significant impact. These additional trips must also be taken into account in the Transportation Section, which the Initial Study already determined will need further analysis in an EIR.

c. Failure to Include a Quantitative Health Risk Assessment for Toxic Air Contaminants

The Initial Study notes that the Project will be located adjacent to numerous sensitive receptors, including residential neighborhoods and schools, and that the Project has the potential for toxic air contaminant (TAC) emissions during demolition and constructions activities. (Initial Study at pp. 39-40). However, the Initial Study declines to evaluate the long-term cancer impacts of such TAC emissions on sensitive receptors, claiming that construction activities will occur “over a relatively short duration.” (Initial Study at p. 40). This is a mischaracterization of the proposed construction and demolition activities. Construction and demolition activities are expected to occur over a period of approximately 20 years (Initial Study at p. 35), exposing sensitive receptors to TAC emissions throughout that time period. The City must conduct a quantitative health risk assessment to determine the long-term cancer impacts of these TAC emissions on nearby sensitive receptors. This analysis must be based on realistic phasing assumptions (as discussed earlier).

Additionally, the Initial Study does not analyze whether any of the proposed commercial or office uses contemplated by the DVSP would create TAC emissions. While residential uses often are

not sources of TACs, non-residential uses are not similarly exempt from such analyses. Existing residents and business owners within and adjacent to the downtown area are entitled to know the health risks associated with the massive scope of development proposed under the DVSP, including the pertinent cancer and non-cancer risks.

The Project must undergo further evaluation and analysis to determine the effects of 20 years of construction-related TAC emissions on sensitive receptors, and to determine whether any of the commercial and office uses contemplated by the DVSP will expose sensitive receptors to further TAC emissions.

3. Aesthetics

“Aesthetic issues, such as public views, ‘are properly studied in an EIR to assess the impacts of a project.’” *Citizens for Responsible & Open Government v. City of Grand Terrace* (2008) 160 Cal.App.4th 1323, 1337–1338. “[T]he CEQA Guidelines essentially establish a rebuttable presumption [that] any substantial, negative aesthetic effect is to be considered a significant environmental impact for CEQA purposes.” (*Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1604; *accord Ocean View Estates Homeowners Assn., Inc. v. Montecito Water Dist.* (2004) 116 Cal.App.4th 396, 401 [“Any substantial negative effect of a project on view and other features of beauty could constitute a significant environmental impact under CEQA.”])).

Here, the scope of environmental analysis proposed by the Initial Study falls short of what is required by CEQA and the Guidelines. A far more expansive analysis of potential aesthetic impacts is necessary to meaningfully inform members of the public and City decisionmakers of the Project’s potentially significant environmental effects.

a. Applicability of SB 743

In 2013, the California Legislature adopted Senate Bill 743 (SB 743) to streamline the review of aesthetic impacts for certain categories of projects. Specifically, aesthetic impacts “of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment.” (Pub. Resources Code, § 21099(d)(1) [unless otherwise indicated, all subsequent statutory references are to the Public Resources Code]). The City has taken the position that the Specific Plan Area “is exempt from findings greater than ‘less than significant’ ” under SB 743 because the Specific Plan Area has been designated as a potential future transit priority area by the Association of Monterey Bay Area Governments (Opportunity Area MA-1). (Initial Study at pp. 17-18).

Although the Specific Plan Area is not currently located within an area that meets the definition of a transit priority area (“current [public transit] headways fall short of 15 minutes at peak periods”), the City asserts that “with development, increased ridership will result in more frequent headways.” (*Id.* at p. 18). To be eligible for SB 743 streamlining, the City must provide substantial evidence that public transit headways at transit stops within the transit priority area will meet or exceed the 15-minute threshold “within the planning horizon included in a Transportation Improvement Program.” § 21099(a)(7). While Monterey-Salinas Transit will be releasing a comprehensive operational plan in 2021, we are not aware of any Transit Improvement Program that would implement 15-minute headways at transit stops in the vicinity of the Specific Area Plan. Indeed, it appears that Monterey-Salinas Transit will be facing

numerous operational challenges caused by the COVID-19 pandemic (including financial shortfalls that may last until the mid-2020s), which will likely make increased headways infeasible. See *Monterey-Salinas Transit 2022-2023 Fiscal Year Budget*, available at <https://mst.org/wp-content/media/Final-Adopted-FY2022-FY2023-Budgets.pdf>. One of the lines that served the Specific Plan Area was recently cancelled (Route 27), and other service reductions may occur in the future. (See *Monterey-Salinas Transit Comprehensive Operational Analysis – Choices Report* (May 27, 2020) at p. 49, available at https://mst.org/wp-content/media/MSTCOA_Choices-Report.pdf).

Moreover, SB 743 only applies to “a residential, mixed-use residential, or employment center project on an infill site within a transit priority area.” (§ 21099(d)(1)). A specific plan is not a “residential, mixed-use, or employment center project.” Here, substantial portions of the Specific Plan Area will be developed as uses that fall outside these categories, including 94.7 acres of “public uses;” 77.9 acres of “retail/services and office/other commercial uses” with no restrictions on floor area ratio to 0.75;¹ and 3.2 acres of “light industrial” uses. (Initial Study at p. 7). The Downtown Vitalization Specific Plan therefore does not qualify for SB 743 streamlining.

b. Adverse Effects on Scenic Vistas

Although the City asserts that the Project falls within the scope of SB 743, it nevertheless discusses certain potential aesthetic impacts “for the sake of full disclosure.” (Initial Study at p. 18). For potential impacts to scenic vistas, the Initial Study concludes that impacts will be less than significant because “no scenic vistas are available or would be blocked or substantially modified as a result of Specific Plan buildout.” *Id.* In the EIR, the City should provide detailed visual simulations to show the extent and severity of potential visual impacts so that the public and City decisionmakers can meaningfully assess whether impacts are less than significant. (See *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831 [lead agencies must show the extent and severity of potential impacts]; see also Guidelines, § 15150 [“An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences.”]).

“Implementation of the proposed Specific Plan could include buildings up to 60 feet high or five stories, whichever is less, in the core zone.” (Initial Study at p. 23). “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.” (*Id.*). Aesthetic impact simulations should provide a comprehensive analysis of how these increased building heights will impact views from scenic vistas in the vicinity of the Specific Plan Area.

¹ Employment centers are exempt projects under SB 743 insofar as they have commercial uses with a FAR below 0.75. The DVSP does not appear to contain any such restrictions, and the General Plan allows for multiple-use commercial developments with a maximum FAR of 0.90. (General Plan, Community Land Use Element, Table 2.4.) Please note the EIR project description must clarify minimum and maximum FARs.

c. Impacts to Scenic Resources, Including but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings

The Initial Study concludes that impacts to scenic resources will be less than significant because “overall scenic quality of views from SR 1 would not be substantially or negatively altered by the project.” (Initial Study at pp. 18-20). The Initial Study completely omits any analysis of potential impacts to scenic resources from other vantage points in the Specific Plan Area or surrounding locations. The EIR should assess potential impacts from a broad range of potential vantage points, and it should assess potential impacts to all potential scenic resources in the vicinity of the Specific Plan Area. For example, this analysis should include an assessment of potential impacts to views of Locke-Paddon Wetland Community Park from within the Specific Area Plan. (See Initial Study at p. 19 [showing view of Locke-Paddon Wetland Community Park]). The EIR should also assess potential obstructions of public views of special status trees within the Specific Plan Area, including the coast live oak trees that were observed to the north of Reservation Road. (See Biological Resources Assessment at pp. 9-10).

d. Degradation of the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings and Potential Conflicts with Zoning and Other Regulations Governing Scenic Quality

Preliminarily, the Initial Study concludes that the Specific Plan Area is “already urbanized” and, therefore, the City’s CEQA analysis “focuses on whether the project would conflict with applicable zoning and other regulations governing scenic quality.” (Initial Study at p. 24). Conflict with land use regulations is more appropriately dealt with in the EIR’s land use section, and there is nothing in CEQA that exempts an aesthetic analysis of changes to an urban area. The project under review here would increase the City’s population by 35 percent, more than double building heights, and situate millions of new square feet into a fairly discrete portion of the City.² Accordingly, the EIR should provide a detailed analysis of the extent to which the visual quality of the area will be affected by the much denser urbanization that is contemplated as part of the Specific Plan Area buildout.

To this end, the EIR should provide visual simulations and other evidence to show how the scale, massing, and architectural features of the various types of proposed development in the Specific Plan Area will be consistent with the Marina Municipal Code, City of Marina Downtown Vision, Downtown Design Guidelines, and the Pedestrian and Bicycle Master Plan. (See Initial Study at p. 20; *see also See Santiago County Water Dist., supra*, 118 Cal.App.3d at p. 831). In doing so, the EIR should provide specific descriptions and illustrations that show how landscaping, streetscapes, building facades, and other design elements will conform to Design Guidelines and the City of Marina Downtown Vision. Special emphasis should be placed on the analysis of changes to the overall character of the existing low-rise community that will result

² The Initial Study asserts that “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.” (Initial Study at p. 24). Respectfully, this statement does not appropriately contemplate the scale of urbanization envisioned under the DVSP, which is not in keeping with applicable plans; if such were the case, the DVSP would not be necessary in the first place.

from the construction of 2,904 new residential units and the addition of up to 1,385,197 square feet of retail and office space.

e. Light and Glare

The Initial Study asserts that “effects on daytime or nighttime views due to new sources of light and glare would be less than significant” because “the Plan Area already makes up a developed downtown area [and] conditions would not be substantially altered from existing conditions.” (Initial Study at pp. 25-26). As noted above, the proposed buildout of the Specific Plan Area will substantially change the character of the existing built environment. The construction of 2,904 new residential units and the addition of up to 1,385,197 square feet of retail and office space will produce many new sources of light and glare. In fact, the Initial Study concedes that the substantial size and scope of the new development will cause “[n]ew sources of nighttime light and daytime glare [to] be introduced and could intensify the effects of illumination and glare over existing levels.” (*Id.* at p. 25). It is imperative that the EIR provide a detailed assessment of these new sources of light and glare and, if necessary, adequately mitigate any significant environmental effects associated with light and glare.

4. Biological Resources

Protection of biological resources is a fundamental policy incorporated in CEQA. Under Section 21001(c) it is the policy of the state to “[p]revent the elimination of fish or wildlife species due to [human] activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” In addition to its analysis of direct effects on biological resources, an EIR must identify and describe the significant indirect environmental impacts that will result from the project. (Guidelines, §15126.2(a)). Both short-term and long-term effects should be included in the analysis. (*Id.*). In other words, a CEQA analysis must “take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.” (Guidelines, Appendix G, emphasis added).

Here, the Initial Study (including the July 2019 Biological Resources Assessment conducted by Rincon Consultants) only assessed direct impacts on biological resources within the Specific Plan Area. There is no analysis of indirect or cumulative impacts to potentially sensitive biological resources at off-site locations. (*Cf.* Initial Study at p. 52 [noting, in passing, the existence of “higher quality chaparral habitat to the north of Reservation Road and within the Fort Ord National Monument”]). A large undeveloped area is located immediately northwest of the Specific Plan area, but there is no discussion of impacts to potentially sensitive resources at that location, nor is there any discussion of potential impacts to resources at the Locke-Paddon Wetland Community Park. This substantial omission should be corrected through the release of a revised initial study or, at the very least, in the EIR. (See *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296 [initial study’s conclusions must be supported by evidence]; accord *Citizens Ass’n for Sensible Dev. v. County of Inyo* (1985) 172 Cal.App.3d 151, 171).

a. Habitat Modification and Effects on Protected Species

The Initial Study discloses that impacts to biological resources would be potentially significant because “construction activity associated with individual projects developed under the Specific Plan could include demolition, grading, vegetation removal, equipment and vehicle staging,

parking.” (Initial Study at p. 46). However, according to the Initial Study, “[i]mplementation of Mitigation Measures BIO-1(a) through BIO-1(h) would reduce these impacts to less than significant level.” (*Id.*).

As noted above, because the Initial Study fails to analyze potential indirect, off-site impacts, it is impossible to determine the full extent of potential impacts associated with habitat modification. Likewise, it is impossible to determine whether Mitigation Measures BIO-1(a) through BIO-1(h) will actually mitigate those indirect, off-site effects to a less than significant level. Further, the Initial Study only defines and classifies vegetation communities and land cover types for a small fraction of the Specific Plan Area. (See Biological Survey at p. 10, Figure 3; see *also* Initial Study at p. 47, Figure 10 [screening for sensitive resources will only occur in a small fraction of the entire Specific Plan Area]). It is quite possible that sensitive species could occur in undeveloped portions of properties in the Specific Plan Area (e.g., in yards, setbacks, or parkways), but there is no classification or survey of potential habitat that evaluates whether sensitive species could potentially occur at those locations. These deficiencies should be remedied in a revised initial study or in the EIR. Moreover, the proposed mitigation measures will need to be revised to ensure that the entirety of the Specific Plan Area is screened for potentially sensitive resources.

b. Adverse Effects on Riparian Habitat or Other Sensitive Natural Communities and Related Effects on Protected Species

Here, the Initial Study’s analysis of potential impacts is limited solely to potential effects on the sandmat manzanita that occurs in the eastern portion of the Specific Plan Area. (Initial Study at pp. 52-53). According to the Initial Study, “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.” (*Id.*). However, this conclusion does not address the severity or extent of direct, indirect, and cumulative impacts associated with the loss of sensitive and protected species that were observed at the sandmat manzanita, including coast live oak (*Quercus agrifolia*). (See Biological Survey at p. 9). Trees cannot migrate to the chaparral to the north, and impacts to any coast live oak at the site should be disclosed and mitigated.

The Initial Study also fails to disclose, analyze, and mitigate potential impacts associated with the loss of willow riparian habitat and other potentially sensitive habitat within the Specific Plan Area. (See Biological Survey at p. 10, Figure 3). Furthermore, as noted above, because the Initial Study fails to analyze potential indirect off-site impacts, it is impossible to determine the full extent of potential impacts associated with impacts to riparian habitat.

c. Adverse Effects on Wetlands and Related Effects on Protected Species

The Initial Study states that “[n]o CDFW or USACE jurisdictional wetlands or waters are present in the Specific Plan Area.” (Initial Study at p. 53). But the Biological Resources Assessment discloses that “[t]he edge of riparian vegetation at Locke-Paddon Park also falls within the Specific Plan and is likely to be jurisdictional under CDFW.” (Biological Resources Assessment at p. 15). This inconsistency should be addressed and clarified in the EIR.

Again, because the Initial Study fails to analyze potential indirect, off-site impacts, it is impossible to determine the full extent of potential impacts associated with impacts to riparian

habitat and sensitive species that may occur at those off site locations. Potential indirect and cumulative impacts to off-site wetlands should be disclosed, analyzed, and mitigated in a revised initial study or in the EIR. (Guidelines, §15126.2(a)).

d. Effects on Wildlife Movement and Nursery Sites

The Initial Study concludes that “[t]here would be no impacts to wildlife movement from development under the Specific Plan.” (Initial Study at p. 54). Again, this analysis fails to consider potential off-site impacts, including potential impacts to species that may migrate through coastal dunes or other coastal areas to the west of the Specific Plan Area. The Initial Study also includes no analysis of potential impacts that could potentially “impede the use of native wildlife nursery sites.” (See Guidelines, Appendix G, § IV(d)).

e. Conflicts with Local Policies Protecting Biological Resources

Here, the Initial Study’s analysis is limited to Project consistency with urban forestry standards. (Initial Study at p. 54). In the EIR, the City should expand this analysis to disclose, analyze, and mitigate direct, indirect, and cumulative impacts that may be subject to other local policies, including policies that protect sensitive biological resources in coastal areas.

5. Cultural Resources

CEQA defines a substantial adverse change in the significance of a historical resource as a significant effect on the environment. (§ 21084.1; Guidelines, § 15064.5(b)). A substantial adverse change means demolition, destruction, relocation, or alteration of the resource or its immediate surroundings resulting in the significance of the resource being materially impaired. (*Id.* at subd. (b)(1)). The significance of a resource is materially impaired when the physical characteristics that convey its historical significance and that justify its designation as a historical resource are demolished or materially altered in an adverse manner. (*Id.* at subd. (b)(2)).

The Initial Study cites “28 cultural resources studies conducted within a 0.5-mile radius of the Plan Area,” 16 of which “included all or portions of the Plan Area.” (Initial Study at pp. 56-59). But none of those studies conducted a systematic, lot-by-lot or building-by-building analysis of all potentially historic structures or sites within the Specific Plan Area. Without this systematic analysis, it will be impossible for members of the public and City decisionmakers to determine the full scope of potential environmental effects. (See Guidelines, § 15150 [“An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences.”]).

The Initial Study discloses that a full inventory of potential sensitive historic resources in the Specific Plan Area will not be conducted until *after* CEQA review is complete. (See Mitigation Measures CR-1 through CR-4). But the Initial Study and the EIR cannot insist the impact will be insignificant and defer the development of specific mitigation measures to some future time. (Guidelines, § 15126.4(a)(1)(B)). Here, the construction of 2,904 new residential units and the addition of up to 1,385,197 square feet of retail and office space could have substantial direct, indirect, and cumulative effects on the historic character of resources that could potentially be

demolished by the new development or resources located in close proximity to new development. These potential impacts should be disclosed, analyzed, and mitigated in the EIR.

Deferring analysis to a later stage is unlawful, as it leaves the public with no real idea as to the severity and extent of environmental impacts. Where, as here, an initial study fails to fully and accurately inform decisionmakers and the public of the environmental consequences of proposed actions, it does not satisfy the basic goals of CEQA and its Guidelines. (See § 21061 [“The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment”]). The evaluation of a proposed project’s environmental impacts is the core purpose of an EIR. (See Guidelines, § 15126.2(a) [“An EIR shall identify and focus on the significant effects of the proposed project on the environment.”]). It is well-established that the City cannot defer its assessment of important environmental impacts until after the project is approved. (*Sundstrom, supra*, 202 Cal.App.3d at pp. 306-07).

6. Energy

a. Failure to Compare to the Project to a Threshold

In evaluating whether the Project would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of resources, the Initial Study quantifies the amount of gasoline and diesel fuel to be used in demolition and construction of the DVSP, the amount of gasoline and diesel fuel to be used by net new VMT, and the kilowatt hours of electricity and British thermal units of natural gas to be used in residential and non-residential buildings. However, there is no comparison of these figures to a threshold. The Initial Study does not provide any comparison to average energy usage for similar developments, or assess the energy demands of the Project in relation to regional energy production or capacity. Without such a comparison, the Initial Study’s conclusion that the Project will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of resources is not supported by evidence. The Project must undergo further evaluation and analysis to determine whether it will result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of resources in a manner that fully complies with *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256.

b. Failure to Account for Increased VMT Due to Displacement

The quantification of gasoline and diesel fuel to be used by automobiles relies on a VMT calculation that fails to account for an increase in VMT due to displacement of existing downtown businesses, as summarized above in the Air Quality section.

Furthermore, the determination that the Project is consistent with Community Goal 1.18 relies on the claim that “the DVSP would create a balanced land/use transportation system that would minimize excessive energy consumption.” (Initial Study at p. 73). In fact, displacement of existing downtown businesses under the DVSP would potentially lead to greater energy consumption by automobiles than would occur without the DVSP. The Project must undergo further evaluation and analysis to determine impacts due to increased automobile energy use from trips generated or lengthened by the displacement of existing downtown businesses.

7. Greenhouse Gas Emissions

a. Reliance on Flawed Emissions Calculations

The Initial Study's methodology to analyze greenhouse gas (GHG) emissions relies on flawed assumptions and calculations elsewhere in the Initial Study, which render its GHG analysis incomplete. When modeling construction emissions, the GHG analysis uses the emissions assumptions from the Air Quality Section, which fail to account for all emissions as discussed in the above Air Quality section. The calculation of GHG emissions from mobile sources uses the VMT calculation used in the Air Quality section, which fails to account for trip length and generation associated with the displacement of existing downtown businesses, as discussed in the above Air Quality section.

The Initial Study's GHG analysis also makes a series of unsupported assumptions about energy usage of the Project. First, the Initial Study assumes that residential unit energy use will produce no GHG emissions due to "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 [...]." (Initial Study at p. 89). The Initial Study makes no effort to quantify the residential dwelling's electrical usage, or demonstrate that it is feasible for building-localized solar photovoltaic systems to provide for all of such a dwelling's projected usage. Furthermore, it is not clear that *all* residential units will be covered by the Project's low-rise solar mandate, including units in multi-story mixed use buildings with residential units above commercial uses.

The Initial Study also assumes that 97 percent of the electricity demanded in its analysis (meaning 97 percent of electricity demanded by commercial or office tenants, as the analysis assumes no residential demands from the grid) will be provided by MBCP's carbon free electricity. The claimed basis for this assumption is that "according to MBCP, approximately 97 percent of accounts in their service area maintain their enrollment [...] the remaining 3 percent of accounts opt out and connect to PG&E." (Initial Study at p. 89). However, this 97 percent figure includes *all* current MBCP accounts, including residential. Since the GHG analysis assumes grid usage and associated GHG emissions will come from only commercial and office tenants, the Initial Study should apply the proportion of MBCP's *commercial and office accounts* that opt out and connect to PG&E. This figure may be significantly greater than 3 percent, as commercial and office accounts may demand electric service that they perceive to be more stable and responsive.

The Project must undergo further evaluation and analysis to fully account for all GHG emissions attributable to the DVSP, and determine whether there are potentially significant effects from such emissions.

b. Improper Threshold

As the Initial Study notes, CEQA Guidelines and interpretative GHG case law require a local, project-specific threshold to evaluate GHG effects. (Initial Study at p. 91). While consistency with Statewide reductions goals set forth in documents like CARB's 2017 Scoping Plan can be used as the basis to develop such a threshold, the threshold itself must take into account localized-GHG data and the Project's individual features. (*Ctr. for Biological Diversity v. Dep't of Fish & Wildlife* (2015) 62 Cal.4th 204 as modified on denial of reh'g (Feb. 17, 2016).). A proper

localized threshold should not rely entirely on statewide GHG data or statewide population data to develop the threshold. (*Golden Door Properties, LLC v. Cty. of San Diego* (2018) 27 Cal.App.5th 892).

Though the Initial Study describes its calculated threshold of 3.2 MT of CO₂ per Service Population as a “locally-appropriate” threshold, in reality it is based entirely on state-level emissions and population data. To develop this threshold, the Initial Study looks at *statewide* emissions targets regarding GHG emissions (in MMT CO_{2e}) for particular emission sectors delineated by CARB. (Initial Study at p. 92). The Initial Study then excludes emissions sectors that are not present in Marina, and sums the *statewide* targets of the remaining emissions sectors to get a total of 213,000,000 MT of CO₂, the *statewide* emissions limit for all sectors present in Marina. (*Id.*) Then, the Initial Study divides this sector-limited *statewide* emissions limit by the *statewide* service population of 65,723,654 to derive its threshold of 3.2 MT of CO₂ per Service Population. (Initial Study at p. 93).

This threshold is based entirely on the application of statewide data and numbers. There is no attempt to take into account local or regional GHG data to determine whether Marina or the Monterey region already contribute a larger proportional share of GHGs or have a proportionally higher population density than other state regions, which would require a proportionally larger reduction in GHG emissions to reach state goals. Nor is there an attempt to explain why the use of a statewide service population metric and statewide GHG emissions target numbers are appropriate for a project specifically within Marina. (See *Golden Door Properties, LLC v. Cty. of San Diego* (2018) 27 Cal.App.5th 892).

Without such an analysis, the GHG threshold is not localized or project-specific as required by CEQA Guidelines and well-established GHG case law.

8. Hazards and Hazardous Materials

The Initial Study provides an incomplete summary of all potential hazardous and contaminated sites in (and in the vicinity of) the Specific Plan Area. (See Initial Study at pp. 105-109). It does not identify, for example, potential hazards associated with gas stations on Reservation Road and Del Monte Boulevard. Nor does it discuss the potential presence of certain site-specific contaminants such as lead or asbestos, which will need to be remediated during the redevelopment of properties within the Specific Plan Area.

The Initial Study concludes that potential impacts will be mitigated to a less-than-significant level by implementing project-specific hazardous materials assessments (Mitigation Measure HAZ-1), which will include “measures that ensure the safe transport, use, and disposal of contaminated soil removed from the site.” (Initial Study at p. 108). To ensure that all impacts are adequately mitigated to a less-than-significant level, the EIR should incorporate additional mitigation to prevent the intrusion of potentially hazardous materials into groundwater, soil, and air in the Specific Plan Area. For example, if new development associated with the Specific Plan buildout could foreseeably disturb contaminated sites, then it may be necessary to preemptively remediate contaminants that could potentially infiltrate locations within the Project site or other off-site locations.

Furthermore, CEQA requires that initial studies and EIRs provide accurate and complete information pertaining to the setting of the Project and surrounding area. (*San Joaquin*

Raptor/Wildlife Center v. Stanislaus County (1994) 27 Cal.App.4th 713, 728-29; see also *Friends of the Eel River v. Sonoma County Water Agency* (2003) 108 Cal.App.4th 859, 875 [incomplete description of the Project's environmental setting fails to set the stage for a discussion of significant effects]). Here, the Initial Study provides an incomplete and inadequate description of the history of wildfire hazards in the vicinity of the Specific Plan Area, and the initial study fails to discuss how the effects of climate change might exacerbate such risks. (See also Initial Study Chapter 20).

9. Hydrology and Water Quality

The Initial Study states that “[t]he 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.” (Initial Study at p. 112). The Initial Study then states that such impacts will be studied in the EIR, but no further information is provided. *Id.* It is crucial that the EIR provide a complete and thorough analysis of all potential direct, indirect, and cumulative demands on groundwater supplies, including demands from related projects that share the same groundwater basin. It is also crucial for this analysis to evaluate all future development that is contemplated as part of the Specific Area Plan buildout. (See *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 441).

The Initial Study also concludes that “the Plan Area is developed and consists mostly of impervious surface area” and that the development of new structures “pursuant to the Specific Plan would not substantially alter the amount of impervious surface area.” (Initial Study at p. 112). However, other portions of the Initial Study note that there are substantial portions of the Specific Plan Area that remain undeveloped. (See Biological Resources Assessment at p. 10, Figure 3). The Initial Study does not clarify whether these undeveloped areas consist of impervious or pervious surface, but review of satellite imagery demonstrates a significant portion of the DVSP planning area does consist of pervious surfaces. The conversion of those undeveloped lots (and the redevelopment of existing lots with potentially larger development footprints) through the construction of 2,904 new residential units and the addition of up to 1,385,197 square feet of retail and office space will likely lead to the introduction of a substantial amount of new impervious surfaces relative to baseline conditions. The EIR should provide specific calculations that show the amount of new impervious surfaces that will be introduced to the Specific Plan Area as a result of anticipated new development. Please also see the section below regarding impacts on recreation; any analysis of hydrology should also account for the City's strategy in dealing with potential shortages in open space.

The EIR should also carefully examine the effects of saltwater intrusion into the groundwater table that may occur as a result of climate change, as well as the effects of less-frequent groundwater recharge that will occur as a result of less-frequent precipitation. (See Safi, et al. (2018) *Synergy of climate change and local pressures on saltwater intrusion in coastal urban areas: effective adaptation for policy planning*, Water International, available at <https://www.tandfonline.com/doi/full/10.1080/02508060.2018.1434957>).

10. Noise

The goal of providing Californians with “freedom from excessive noise” is included among CEQA’s basic policies. (§ 21001(b)). Under the definition of the term “environment” in Section 21060.5, noise is included as a physical condition that may be affected by a proposed project.

According to the Initial Study, “[o]perational impacts, including traffic-related exterior and interior noise impacts to DVSP uses and stationary noise from HVAC units, [will] be potentially significant and require mitigation.” (Initial Study at p. 137). “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.” (*Id.*) Both of these conclusions are premised upon the assumption that increased automobile traffic and increased noise from stationary sources (i.e., HVAC units) can be modeled into existing topographic conditions. As it exists today, the Specific Plan area is predominantly occupied by low-rise buildings and undeveloped lots. Under current conditions, noise is more likely to be dispersed as sound waves moves away from a source. Modifying development standards to allow for the construction of five-story buildings, substantially increased massing, and modifications to development standards that allow for increased parcel coverage will substantially change the way in which noise travels through the Specific Plan Area. The EIR will need to account for increased reverberation, echoing, and other site-specific conditions that may lead to more significant effects. Additional mitigation may be necessary to address these conditions.

Furthermore, the Initial Study fails to account for indirect and off-site noise impacts that will occur as a result of increased traffic traveling through streets in the vicinity of the Specific Plan Area. Potential indirect and cumulative impacts to off-site receptors and wetlands should be disclosed, analyzed, and mitigated in a revised initial study or in the EIR. (See Guidelines, §15126.2(a)).

11. Population and Housing

According to the Initial Study, “full buildout of the Specific Plan would result in an estimated 7,957 new residents in the Plan Area.” (Initial Study at p. 143). However, the Initial Study also reveals inconsistencies between the Project and AMBAG’s long-term growth projections. As of 2019, the City was estimated to have a population of 22,535 people. (See Initial Study at p. 2). The buildout of the Specific Plan Area would exceed the AMBAG’s 2025 population projections of 28,515 by 2030 and 29,554 by 2035. (Initial Study at p. 143). The EIR should disclose and analyze the implications of these inconsistencies, including the ability of region-wide infrastructure to accommodate greater-than-expected population growth.

CEQA requires agencies to evaluate the direct, indirect, and cumulative effects of housing displacement. (See Guidelines Appendix G, § XIV(b) [Requiring agencies to answer the question of whether a project will “[d]isplace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere”].) Likewise, CEQA mandates disclosure of a project’s direct and cumulative environmental effects on “human beings, either directly or indirectly.” (§ 21083, subd. (b)(3); Guidelines, § 15065, subd. (a)(4); see also *San Lorenzo Valley Community Advocates for Responsible Education v. San Lorenzo Valley Unified School Dist.* (2006) 139 Cal.App.4th 1356, 1372 [human health is among the many “environmental values” protected by CEQA and the Guidelines].)

The adverse environmental and human health impacts of gentrification and housing displacement are well understood by scholars and urban planners. Introducing 2,904 new homes to the Specific Plan Area will significantly increase rents and the cost of living for existing residents, thereby increasing the risk that existing residents will be priced-out of the City. There is a substantial risk that low-income families and historically disadvantaged community members will be disproportionately impacted by these conditions. However, the DVSP provides no guarantee that existing residents will be given an opportunity to move into new market-rate or affordable housing that will be developed as part of the DVSP, and the Initial Study provides no analysis or mitigation of the short-term and long-term effects of housing displacement. (See Initial Study at p. 144). It is critical for the EIR to analyze and mitigate these impacts.

12. Public Services

a. Police and Fire Services

The Initial Study fails to provide any analysis of whether the Project would require new fire or police facilities in order to maintain acceptable response times. The Marina General Plan Community Land Use Element 2.106 sets forth clear response time standards: “As the population of Marina grows, the police force should be sufficiently staffed and deployed to maintain an average emergency response time of four minutes. Similarly, a maximum response time for fire protection of three to four minutes should be maintained.” Community Land Use Element 2.106 continues: “Where new development would be located beyond a three-to-four-minute response time, consideration should be given to the need for Class A fire-resistant roofing.”

While the analysis of fire services concludes that one new fire station will likely be required to maintain service ratios, it does not analyze where this station would need to be located in order to maintain a maximum response time of three to four minutes, or whether even further infrastructure would be required to comply with the response time standard. The analysis of police service is entirely deferred, stating that “service ratios and response time would be reassessed and adjusted as the population grows in an ongoing process over the course of DVSP buildout.” (Initial Study at p. 146). No attempt is made to assess whether further police resources would be needed to maintain an average response time of four minutes.

Deferring analysis to a later stage is unlawful, as it leaves the public with no real idea as to the severity and extent of environmental impacts. Where, as here, an initial study fails to fully and accurately inform decisionmakers and the public of the environmental consequences of proposed actions, it does not satisfy the basic goals of CEQA and its Guidelines. (See § 21061 [“The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment . . .”]). The evaluation of a proposed project’s environmental impacts is the core purpose of an EIR. (See Guidelines, § 15126.2(a) [“An EIR shall identify and focus on the significant effects of the proposed project on the environment.”]). It is well-established that the City cannot defer its assessment of important environmental impacts until after the project is approved. (*Sundstrom*, supra, 202 Cal.App.3d at pp. 306-07).

The Project must undergo further evaluation and analysis to determine whether further construction or expansion of fire and police facilities would be needed to maintain mandated

response times, and whether such construction or expansion will have potentially significant impacts.

b. Indirect Effects of Increased Demand For School Facilities

The Initial Study, citing California Government Section 65996, concludes that payment of school impact fees will constitute full and complete mitigation for potential impacts to schools caused by developments. However, a Project's indirect impacts on parts of the physical environment that are not school facilities, but that result from increased demand for schools, are not excused from being considered and mitigated. (*Chawanakee Unified Sch. Dist. v. Cty. of Madera* (2011) 196 Cal.App.4th 1016, 1028, as modified on denial of reh'g (July 19, 2011)). Such indirect impacts include impacts on traffic and VMT from new students residing in the residential portions of the Project taking trips to and from school, and any impacts on the surrounding environment from school-related construction to expand existing facilities or develop new facilities. Per the Initial Study, existing public schools in Marina have capacity for only 500 additional students above current enrollment, meaning that full buildout of the DVSP will require expansion of existing schools, construction of new schools, or for students to travel outside of Marina for schooling.

The Project must undergo further evaluation and analysis to determine the indirect effects of the Project exceeding existing Marina public school capacity, including potential effects from additional construction and new or increased VMT.

13. Recreation

As the Initial Study notes, the DVSP does not specify new park sites within the Plan Area. (Initial Study at p. 147). However, the Initial Study fails to account for the effect of the Project on existing parks, or the effects of construction of the known amount of acreage of new parks needed to satisfy City standards. The City of Marina General Plan establishes a standard of 5.3 acres of City park and recreation land for every 1,000 residents, while the Marina Parks and Recreation Master Plan identifies an even higher standard of 10 acres per 1,000 residents. (Initial Study at p. 149). Currently, the existing ratio is 5.3 acres per 1,000 residents. (*Id.*). The current population of Marina is estimated to be 22,535 people, and full buildout of the DVSP projects adding 7,957 new residents. In order to maintain the 5.3 acres per 1,000 residents ratio, the City would need to construct an additional 42 acres of parks. In order to meet the goals of the Marina Parks and Recreation Master Plan, the City would need to construct an additional 185 acres.

The DVSP should include specific provisions for the construction of parks and green spaces in order to adequately serve the Project's new residents. The environmental review of the Project should also study the potential effects of new park construction on the surrounding environment. If the DVSP proceeds without such provisions, then the effect of an increase of nearly 8,000 residents on the City's already strained public park system must be analyzed.

14. Tribal Cultural Resources

As noted above, an EIR must identify and describe the significant indirect environmental impacts that will result from the project. (Guidelines, §15126.2(a)). A CEQA analysis must "take account of the whole action involved, including *off-site* as well as on-site, cumulative as well as

project-level, indirect as well as direct, and construction as well as operational impacts.” (Guidelines, Appendix G, emphasis added). Here, the Initial study analyzes potential impacts within the Specific Plan Area, but it does not mention potential impacts to sensitive resources in off-site areas. The EIR should carefully analyze and mitigate potential indirect Project effects that could disturb tribal cultural resources at off-site locations.

15. Utilities & Service

The Initial Study states that “[t]he project could result in potentially significant impacts related to water supply.” (Initial Study at p. 156). The Initial Study then states that such impacts will be studied in the EIR, but no further information is provided. (*Id.*). It is crucial that the EIR provide a complete and thorough analysis of all potential direct, indirect, and cumulative demands on water supplies, including demands from related projects that share the same groundwater basin and other municipal water sources. It is also crucial for this analysis to evaluate all future development that is contemplated as part of the Specific Area Plan buildout. (See *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 441). A similar cumulative demand analysis is required for other utilities, including wastewater and electricity.

16. Wildfire

As noted above, CEQA requires that initial studies and EIRs provide accurate and complete information pertaining to the setting of the Project and surrounding area. (*San Joaquin Raptor/Wildlife Center, supra*, 27 Cal.App.4th at pp. 728-29). Here, the Initial Study provides an incomplete and inadequate description of the history of wildfire hazards in the vicinity of the Specific Plan Area, and the initial study fails to discuss how the effects of climate change may exacerbate such risks. (See Initial Study at p. 160). Multiple urbanized areas within the State of California have been decimated by wildfires in the past few years, demonstrating that an “urban character” does not exempt a community from risk. Here, the DVSP planning area is located adjacent to significant open space, potentially heightening risks.

Without key contextual information regarding wildfires and associated risks, it is impossible to meaningfully assess the full extent of potential environmental impacts.

* * *

The City, in proposing the DVSP, is contemplating a massive change to the community — 8,000 new residents, more than 3,000 new employees, and associated construction to accommodate these new community members. Sierra Pacific Properties Inc. has been a member of the Marina community for years and appreciates the City’s commitment to innovation. As a member of the business community, however, our client has concerns about the DVSP’s environmental impacts on its tenants and their customers, and concerns that the grandiosity of the DVSP does not account for economic realities facing the downtown commercial sector. To this end, we have concerns that the commercial land use provisions of the DVSP might rest on assumptions and determinations located in economic studies that are many years out of date. Sierra Pacific Properties Inc. welcomes further discussion on these issues.

Thank you again for the opportunity to provide these comments. If you have any questions or would like to arrange a meeting with our client team, please do not hesitate to contact our office.

Very truly yours,

A handwritten signature in black ink that reads "Niran Somasundaram". The signature is written in a cursive style with a large initial 'N'.

Niran S. Somasundaram
Attorney

A handwritten signature in blue ink that reads "Ellis Raskin". The signature is written in a cursive style with a large initial 'E'.

Ellis F. Raskin
Attorney

CC: Sean Marciniak, Hanson Bridgett LLP
Client

LAW OFFICES OF
WILLIAM F. KENNEY, INC.
A PROFESSIONAL CORPORATION
120 NORTH EL CAMINO REAL
SAN MATEO, CALIFORNIA 94401
TELEPHONE (650) 347-3603
FAX (650) 347-3735

June 23, 2021

MR. FRED AEGERTER
Community Development Director
City of Marina
211 Hillcrest Avenue
Marina CA 93933

Re: Marina Specific Plan

Dear Mr. Aegerter,

I am a partner in the entity which owns a 1.5 acre undeveloped piece of property at 435 Reservation Road. It is in the area designated for multi-family use in the City of Marina's Specific Plan.

After review of the Specific Plan, I definitely agree with the following comment:
"Multifamily residential uses near the Core are critical for providing an affordable housing supply and population to support businesses Downtown."

I also believe this use will enhance and contribute to the ability of Cal State University Monterey Bay to expand its educational mission.

It's my hope that the Marina Specific Plan and the Transition Zone as currently defined will be approved next month to benefit the City of Marina and its residents, businesses, and those in the surrounding area.

Sincerely,



WILLIAM F. KENNEY

ANTHONY LOMBARDO & ASSOCIATES

A PROFESSIONAL CORPORATION

ANTHONY L. LOMBARDO
KELLY MCCARTHY SUTHERLAND
JOSEPH M. FENECH
CODY J. PHILLIPS

144 W. GABILAN STREET
SALINAS, CA 93901
(831) 751-2330
FAX (831) 751-2331

July 9, 2021

Fred Aegerter
Community Development Director
City of Marina Planning Services Division
209 Cypress Avenue
Marina, CA 93933

RE: Marina Downtown Vitalization Specific Plan (DVSP)

Dear Mr. Aegerter:

We represent Ms. Anne Rudolph and Mr. Paul Johnson. As you know they are property owners at the south entrance to Marina from Highway One. Ms. Rudolph's property includes Marina Self Storage and Commercial Rentals (224 Reindollar) and Reindollar Crest Commercial Center (218 Reindollar). The property at 224 Reindollar is mixed use with light industrial and self-storage. Reindollar Crest is entirely light industrial. More than 45 local businesses, many which are owned and operated by Marina residents, operate from those addresses. Mr. Johnson's property is undeveloped despite several development proposals which, despite being consistent with the City's General Plan and zoning, the City has indicated would not be approved. We have been asked to represent them in the Downtown Vitalization Specific Plan (DVSP) and the Environmental Impact Report (EIR) process.

We offer these comments in response to the NOP:

Specific Plan vs General Plan Amendment: We question if the DVSP is truly a specific plan or a general plan amendment. Government Code Section 65450 states specific plans are to be "plans for the systematic implementation of the general plan for all or part of the area covered by the general plan." It appears to us the DVSP is an entirely new plan proposing significant change in land use, densities, design standards, traffic patterns and population, not an extension of the existing general plan. The EIR should have a detailed analysis which identifies the changes from the current general plan and explains how those changes are appropriate in the DVSP rather than proposing a full general plan amendment.

Format: It is unclear how the Initial Study (IS) and EIR will be melded. The impression from the meeting was that the IS and EIR will move forward concurrently but as separate documents. It appears to us that a single, integrated document would be more cohesive, internal consistency would be easier to maintain and would be better overall as a decision-making tool.

Use of the current IS to determine environmental impacts: There are several issues with the IS as written:

- The IS has not been publicly circulated so there has been no opportunity for public agencies or the public in general to review and evaluate the City's conclusions.
- The IS relies on outdated information. I have highlighted the IS' bibliography (attached) identifying a number of key reports that are significantly outdated. It is generally accepted that data for such things as biology and noise that is more than two years old is outdated as it does not represent the actual environment purported to be described in the environmental document. (See *Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.4th 310 (court disallowed use of a baseline that was not reflective of current conditions).).
- The IS relies on subsequent studies to conclude there are no significant impacts, particularly on historic resources.
- The appendices, which are essential to the evaluation, are not listed in the bibliography.
- The IS concludes the DVSP will have a significant unavoidable impact on water and water and traffic. There is not even a cursory discussion of traffic or water which would explain how that conclusion was reached.

Baseline:

A complete description of the baseline¹ for the EIR is essential in determining what impacts the DVSP will have and if those impacts will have a significant effect on the environment^{2,3}.

The physical environment of the entire 332 acres needs to be described in substantial detail. The DVSP, over its projected twenty-year life-span, will have a significant effect on the entire 332 acres and potentially the surrounding neighborhoods and other areas of the City. The City staff

¹ "An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant (Guideline Section 15125)"

² "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant (Guideline Section 15382).

³ 15131 b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the disturbance of the religious practices could be used to determine that the construction and use of the road and the resulting noise would be significant effects on the environment. The religious practices would need to be analyzed only to the extent to show that the increase in traffic and noise would conflict with the religious practices. Where an EIR uses economic or social effects to determine that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.

has been clear that the DVSP will render practically all of the DVSP area to be legal non-conforming (LNC). Given that the DVSP will cause most uses and structures to be LNC, the EIR should disclose in its baseline discussion the current City ordinances which regulate LNC structures and uses. There should be a full review of the DVSP area and the uses and structures which will be rendered LNC should be inventoried. That inventory should include age and condition of the properties so that the EIR can then analyze the impact of the City's LNC regulations on those uses. Of particular concern would be the deterioration of the DVSP area due to the LNC limits on maintenance and repair, additions and changes of use.

Changes in Business Paradigms.

The Global Pandemic magnified the changes over the last few years in travel, shopping and business operations. There has been a major reduction in the amount of shopping done in "brick and mortar" stores. Major retailers are routinely closing. Retail stores have been replaced with internet shopping and home delivery of goods, groceries, meals, etc. Work patterns have changed and created a substantial work from home population that is currently resistant to returning to the traditional workplace.

The EIR should examine these trends and discuss the likelihood of the office and retail projected by the DVSP being developed and address their sustainability. This examination is essential in assessing the physical and social impacts of planning for development that does not occur or development that is built but cannot be sustained.

As mentioned in the Baseline discussion, the EIR should examine the impact of the DVSP on the existing environment should the projected uses not occur, not occur in the projected timeline or occur and not be economically sustainable. CEQA mandates the consideration of reasonably foreseeable indirect physical changes in the environment which may be caused by the project together with the "most probable development patterns" of the project (see Guidelines Section 15064; *Aptos Council v. County of Santa Cruz* (2017) 10 Cal.App.5th 266, 293, *as modified on denial of reh'g* (Apr. 25, 2017)). Given the recent uncertainty in the market created by an increase in online retailing compounded by the global pandemic, it is reasonably foreseeable that the DVSP could have an impact on the physical environment of the downtown area.

Economic Viability:

CEQA provides that an economic change which may lead to a physical change may be considered in determining the significance of an impact. As the court in *Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, 1182 provided:

When there is evidence, however, that economic and social effects caused by a project, such as a shopping center, could result in a reasonably foreseeable indirect environmental impact, such as urban decay or deterioration, then the CEQA lead agency is obligated to assess this indirect environmental impact. *Id.*

The DVSP will have a major impact on the economics of the City of Marina that could result in a physical change in the environment. As mentioned above, the future of commercial and retail uses projected in the DVSP by no means bears a certainty of success. The DVSP will require a major, and perhaps unprecedented, investment by the City in its infrastructure both within and outside the DVSP. The economic impact of the DVSP should be examined:

- The DVSP will require a significant investment in the City infrastructure and services. The EIR should analyze the anticipated cost of that infrastructure and the services. The financing plan for the infrastructure and services should be identified.
- The DVSP will require a significant investment by property owners and developers to fund on a proportional basis the cost of their impact on the City's infrastructure and services. That cost should be identified.
- The cost of new development should be estimated and potential tax revenues projected. Will the new development anticipated by the DVSP pay for itself or will other City revenues be required to fill the funding gap?
- Any market studies or modeling which has been done to demonstrate the financial feasibility of the DVSP should be disclosed.

Once the economic impact is quantified, good or bad, the resulting physical changes to the City should be quantified.

Aesthetics:

Per Public Resources Code Section 21001(b), it is the policy of the state to “[t]ake all action necessary to provide the people of this state with ... enjoyment of aesthetic, natural, scenic, and historic environmental qualities.” As further discussed in the CEQA Guidelines Appendix G(I)(C), an agency should consider whether a proposed project would “[s]ubstantially degrade the existing visual character or quality of the site and its surroundings.”

The IS concluded the physical changes will have less than a significant effect to the downtown area's aesthetic qualities. The DVSP will, however, change the entire nature of 332 acres. The change from the current built environment to a downtown area with seven story buildings, 70 unit per acre density, retail and office uses moved to street front, etc. should be fully disclosed and analyzed.

The aesthetic effect the DVSP will have on 332 acres of LNC uses and structures should be disclosed and analyzed particularly in light of the minimal regulatory allowance for maintenance and repair and changes of uses.

Biology:

Additional biological surveys are needed as part of the EIR's analysis of the DVSP's biological impact. The IS identified significant areas throughout the DVSP as “Screening and Assessment”

areas and targets those areas for subsequent surveys. Those surveys should be done now so the full impact of the DVSP on those resources can be disclosed. The EIR should include areas identified as degraded habitat in light of the Bolsa Chica standard which recognizes that degraded habitat is still habitat.

Once those areas are clearly identified, they should be assessed as to their potential for actual development in light of the need to protect the resources rather than remove or relocate the resource.

The EIR should also identify the limits which may be applied to properties, in and outside the DVSP area, surrounding identified resources.

Cultural Resources:

The IS correctly identifies the need for a “Reconnaissance Level” survey of historic resources. It is well established in the CEQA Guidelines and in case law that the analysis of the impact a project may have on a significant resource cannot be deferred (see, *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 735, *as modified on denial of reh'g* (Aug. 8, 2013) [“it is inappropriate to postpone the formulation of mitigation measures.”]). Guidelines Section 15126.4(a)(1)(B) provides that:

Formulation of mitigation measures shall not be deferred until some future time. The specific details of a mitigation measure, however, may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review provided that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure.

The survey in question should be done as part of the EIR so that the decision makers can be fully informed as to the impact the DVSP may have on those protected resources.

CEQA considers any “project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment (15064.5 (b))” and therefore requires an EIR to assess those impacts. The DVSP EIR should disclose which sites or structures are or maybe which are determined to be historically significant so that the EIR will inform decision makers on the impact of the DVSP on those resources.

The DVSP EIR should also disclose that properties with significant historical resources will require a separate EIR for a specific project and may render that project infeasible.

Green Houses Gasses:

A primary, if not the primary contributor, to GHG is traffic. The IS cannot correctly conclude GHG impacts are not significant when the traffic impacts, which are already identified to be significant, are not fully analyzed. The DVSP EIR must further examine the impacts on GHG in concert with the traffic analysis.

Water:

We concur that the impact of the DVSP on the City and region's water resources will be significant. The water impact will require analysis of impacts on a regional basis.

Land Use and Planning:

The DVSP has a strong potential to divide the community. By focusing the City's resources to the DVSP area there is a potential to create a "have and have not" environment between the DVSP and the rest of the City.

The EIR should, in concert with the economic feasibility analysis, examine the resources the City will need to invest in the DVSP and disclose what impact that may have if the DVSP investment results in loss of resources to the balance of the City.

Population and Housing:

The EIR should clearly identify the number of existing housing units in the DVSP area and the number of units which are expected by the DVSP so the difference in the population of the area can be disclosed. That impact of that increased population can then be analyzed against the current baseline condition rather than against an AMBAG projection.

Public Services/Recreation/Utilities:

The DVSP EIR should fully disclose the additional resources, in staffing and capital improvements, that will be required to implement the DVSP and the cost of those improvements. The cost should include initial cost and cumulative long-term costs. The plan for the purchase and maintenance of those resources should be identified. Anticipated DVSP revenue should be identified and how the difference between cost and revenue, if there is a difference, disclosed. The means of bridging the revenue gap and the impact on resources to the rest of the City should be disclosed.

Transportation: We concur traffic will be a significant unavoidable impact.

Alternatives: CEQA requires that the EIR identify and discuss a range of alternatives⁴ to the DVSP as it is currently written. Project alternatives should include a range of options from the currently proposed DVSP to the “no-project” alternative.

CEQA has specific instruction on the discussion of a “No Project” alternative⁵ in the case of a revision to a land use plan. A specific plan is an extension of a general plan. The “No Project” alternative should explain why the current general plan, ordinances and implementation of them cannot achieve the purpose⁶ set forth in the proposed specific plan. This requirement is directly connected to needing a full and complete baseline in the EIR.

Other alternatives need to be presented which, per CEQA Guidelines Section 15126.6(a), would “feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” Those alternatives might include:

- A reduced DVSP area which would allow a concentrated focus on identifying and developing a true “heart of the community” rather than a linear configuration which would be nearly two miles long.
- Inclusion of a complete implementation plan for the DVSP that would be the “rule book” for the DVSP rather than having to use multiple current, and in some cases significantly outdated, regulations.
- Identify “Priority Sites” which would identify those properties considered to be the most critical to a DVSP and the Community with clear direction on the requirements for development of the site so owners and prospective developers will have a clear understanding of what will be approved and the standards for a clear path approval.

⁴ 15126.6 (a) Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

⁵ 15126.6 e (3) (A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the “no project” alternative will be the continuation of the existing plan, policy or operation into the future. Typically, this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.

⁶ DVSP ES-1.1.1 “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.”

CEQA also prescribes that the alternatives discussion be based on the “rule of reason⁷.” Essential in the rule of reason is that the project and the alternatives be feasible⁸. If they are not feasible, there is no point to examine its impacts. Feasibility of the proposed DVSP or any plan that may ultimately be approved is an essential component.

Overriding Considerations⁹:

It is fully anticipated there will be significant unavoidable impacts from the DVSP which cannot be mitigated to an insignificant level. That will require the City to adopt a statement of overriding considerations if it is to approve the DVSP. The discussion of overriding considerations should, per CEQA Guidelines Section 15093, include measurable and quantifiable factors which are clearly identifiable and sustainable in the record so the decision makers can make an informed, supportable decision on the true impact, good or bad, of the DVSP.

We hope you find these comments helpful. If you have any questions or wish to discuss any of our comments, please feel free to call.

Sincerely,



Dale Ellis
Director of Planning and Permit Services
Enclosure

⁷ 15126.6 (f) Rule of reason. The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.

⁸ 15364 “Feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

⁹ 15093 (a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposal project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered “acceptable.”

(b) When the lead agency approves a project, which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

(c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091.

References

Bibliography

Aesthetics

- Adamson, Heather, Director of Planning, Association of Monterey Bay Area Governments, email correspondence with April Durham, Planner, Rincon Consultants, Inc., concerning verification of the Specific Plan Area as a transit priority area, June 19-20, 2017.
- Association of Monterey Bay Area Governments (AMBAG). 2018. 2040 Metropolitan Transportation Plan/Sustainable Communities Plan. Monterey, CA. June 2018.
- California Department of Transportation (Caltrans). 2019. "Route 1." *Officially Designated State Scenic Highways*. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/ (accessed June 11, 2019).
- Fort Ord Reuse Authority (FORA). 2005.** Highway 1 Design Corridor Design Guidelines. Monterey, CA. March 29, 2005.
- _____. 2015. Regional Urban Design Guidelines. **Draft. December 31, 2015.**
- Marina, City of. 2002. Design Guidelines and Standards for Landscape, Site, and Parking Lot Design, Site Lighting, and Signs. Adopted August 21, 2001; amended January 2, 2002.
- _____. 2005a. Marina Downtown Vision. Marina, CA. **July 2005.**
- _____. 2005b. Downtown Design Guidelines. Marina, CA. **July 2005.**
- _____. 2010. Pedestrian and Bicycle Master Plan. Marina, CA. Adopted February **2, 2010.**
- _____. 2015. Marina Municipal Airport Master Plan, Land Use Compatibility. Marina, CA. **September 2015.** *outdated/Updated May 2019*
- Monterey-Salinas Transit (MST). 2019. Marina Transit Exchange Map. <https://mst.org> (accessed June 10, 2019).
- VFRMAP. Marina Municipal Airport Digital Aeronautical Chart. <http://vfrmap.com/?type=vfrc&lat=36.682&lon=-121.762&zoom=10> (accessed Jun 21, 2019).
- ### Agriculture and Forestry Resources
- Department of Conservation. Important Farmland Map. 2016. <https://maps.conservation.ca.gov/DLRP/CIFF/> (accessed May 2020).
- Monterey County. 2010. Monterey County Williamson Act Lands. <https://www.co.monterey.ca.us/home/showdocument?id=46006> (accessed May 2020).

Air Quality

- Bay Area Air Quality Management District (BAAQMD). 2017. *CEQA Air Quality Guidelines*. May 2017. <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines%20May%202011.ashx?la=en> (accessed June 2019).
- California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*.
- _____. 2017. *California's 2017 Climate Change Scoping Plan*. December 14, 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed June 2019).
- _____. 2018. *EMFAC2017 Volume III – Technical Documentation v.1.0.2*. July 20, 2018. <https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf> (accessed May 2020).
- _____. 2019. *EMFAC2017 Web Database*. <https://www.arb.ca.gov/emfac/2017/> (accessed May 2020).
- California Department of Finance. (CDOF). 2020a. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark*. <http://www.dof.ca.gov/Forecasting/Demographics/projections/> (accessed May 2020).
- Duymich, Chris. 2018. *Air Quality Planner II, Monterey Bay Air Resources District*. Personal communication via phone regarding consistency with the air quality management plan with Annaliese Miller, Associate Environmental Planner, Rincon Consultants, Inc. August 2, 2018.
- Monterey Bay Air Resources District (MBARD). 2008. *CEQA Air Quality Guidelines*. February 2008. <https://www.mbard.org/ceqa> (accessed June 2019).
- _____. 2017. *2012-2015 Air Quality Management Plan*. March 15, 2017. <https://www.mbard.org/air-quality-plans> (accessed June 2019).

Biological Resources

- California Burrowing Owl Consortium. 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. April 1993.
- California Department of Fish and Wildlife (CDFW). 2012. *Staff Report on Burrowing Owl Mitigation*. March 7, 2012.
- California Native Plant Society (CNPS). 2019. *Inventory of Rare and Endangered Plants. V.7-08c-Interim 8-22-02*. www.rareplants.cnps.org Accessed May 2019.

Cultural Resources

- Dibblee, Thomas and John A. Minch. 2007. *Geologic Map of the Marina and Salinas Quadrangles*. Dibblee Geology Center, Santa Barbara Museum of Natural History.
- Netronline. 1968. *Historic Aerial Photograph of Marina, California*. <http://historicaerials.com> (accessed May 2020).
- _____. 1998. *Historic Aerial Photograph of Marina, California*. <http://historicaerials.com> (accessed May 2020).
- _____. 2005. *Historic Aerial Photograph of Marina, California*. <http://historicaerials.com> (accessed May 2020).

_____. 2014. Historic Aerial Photograph of Marina, California. <http://historicaerials.com> (accessed May 2020).

United States Geological Survey (USGS). 1913. Monterey Quadrangle Topographic Map. <https://livingatlas.arcgis.com/topoexplorer/index.html> (accessed May 2020).

_____. 1941. Monterey Quadrangle Topographic Map. <https://livingatlas.arcgis.com/topoexplorer/index.html> (accessed May 2020).

University of California, Santa Barbara. 1941. Historic Aerial Photograph of Marina, California. http://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed May 2020).

_____. 1956. Historic Aerial Photograph of Marina, California. http://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed May 2020).

Energy

California Air Resources Board (CARB). 2019. "GHG Current California Emission Inventory Data – 2019 GHG Inventory." <https://ww2.arb.ca.gov/ghg-inventory-data> (accessed May 2020).

California Department of Tax and Fee Administration. 2020a. "Net Taxable Gasoline Gallons." <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm> (accessed May 2020).

_____. 2020b. "Taxable Diesel Gallons 10 Year Report Net of Refunds." <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm> (accessed May 2020).

California Energy Commission (CEC). 2016. Diesel Fuel Data, Facts, and Statistics. https://www.energy.ca.gov/almanac/transportation_data/diesel.html (accessed June 2019).

_____. 2020. "California Energy Consumption Database." <http://www.ecdms.energy.ca.gov/> (accessed May 2020).

Federal Highway Administration (FHWA). 2019. "Motor Fuel Use – 2018 (1)". Last modified: December 2, 2019. <https://www.fhwa.dot.gov/policyinformation/statistics/2017/mf21.cfm> (accessed May 2020).

Marina, City of. City of Marina at Monterey Bay General Plan. August 4, 2010.

United States Energy Information Administration (EIA). 2018. "California - Profile Overview." Last modified: November 15, 2018. <https://www.eia.gov/state/?sid=CA> (accessed June 2019).

Geology and Soils

California Geological Survey (CGS). 2002. California Geomorphic Provinces, Note 36.

_____. 2019a. "Earthquake Zones of Required Investigation." California Department of Conservation. [digital map]. <https://maps.conservation.ca.gov/cgs/EQZApp/app/> (accessed June 26, 2019).

_____. 2019b. "Regulatory Maps: Alquist-Priolo Zones." California Department of Conservation. [digital map]. <https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/> (accessed June 26, 2019).

Dibblee, T.W., and Minch, J.A., 2007, Geologic map of the Marina and Salinas quadrangles, Monterey County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-353, scale 1:24,000

- Dupre, W.R., and Tinsley, J.C., 1980, Maps showing geology and liquifaction potential of northern Monterey and southern Santa Cruz Counties, California: U.S. Geological Survey, Miscellaneous Field Studies Map MF-1199, scale 1:62,500.
- Hoppe, K. A., P. L. Koch, and T. T. Furutani. 2003. Assessing the preservation of biogenic Strontium in fossil bones and tooth enamel. *International Journal of Osteoarchaeology* 13: 20-28
- Marina, City of. City of Marina at Monterey Bay General Plan. **August 4, 2010.**
- _____. **2013.** Local Coastal Program Volume II, Implementation Plan. Certified by the California Coastal Commission, April 1982. Approved and adopted by the Marina City Council, October 1982. Reformatted to include post-certification amendments, November 2013.
- _____. 2019. "Local Coastal Program Update." Community Development, Planning Services. <https://www.cityofmarina.org/888/Local-Coastal-Program-Update> (accessed June 25, 2019).
- Monterey, County of. 2008. "Exhibit 4.4.3, Relative Liquefaction Potential." Draft Environmental Impact Report **Monterey County 2007 General Plan, Monterey, CA. September 2008.** *There is no 2007 GP*
- _____. 2019. "Earthquake." Department of Emergency Services. <https://www.co.monterey.ca.us/government/departments-a-h/administrative-office/office-of-emergency-services/ready-monterey-county/hazard-ready/earthquakes> (accessed June 26, 2019).
- Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.
- University of California Museum of Paleontology (UCMP) Online Database. 2019. UCMP specimen search portal, <http://ucmpdb.berkeley.edu/>.

Greenhouse Gas Emissions

- Association of Environmental Professionals (AEP). 2016. Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California. October 18, 2016.
- Association of Monterey Bay Area Governments (AMBAG). 2018. Metropolitan Transportation Plan and the Sustainable Communities Strategy. <http://www.ambag.org/programs-services/planning/metro-transport-plan/2040-MTP-SCS> (accessed June 2019).
- _____. 2018b. Regional Growth Forecast. June 13, 2018.
- California Air Pollution Control Officers Association (CAPCOA). 2008. CEQA and Climate Change. <http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf> (accessed June 2019).
- _____. 2017. California Emissions Estimator Model User's Guide Version 2016.3.2. November 2017. <http://www.aqmd.gov/caleemod/user's-guide> (accessed May 2020).

- California Air Resources Board (CARB). 2018. EMFAC2017 Volume III – Technical Documentation v.1.0.2. July 20, 2018. <https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf> (accessed May 2020).
- _____. 2020. EMFAC2017 Web Database. <https://arb.ca.gov/emfac/emissions-inventory> (accessed January 2021).
- California Department of Finance. 2020. Report P-1A: Total Population Projections, 2010-2060 California (2019 Baseline). <https://www.dof.ca.gov/Forecasting/Demographics/Projections/> (accessed January 2021).
- California Department of Resources Recycling and Recovery. 2015. AB 341 Report to the Legislature. August 2015. <https://www.calrecycle.ca.gov/calendar/75percent> (accessed June 2019).
- California Energy Commission (CEC). 2010. 2009 Power Content Label – Pacific Gas & Electric. https://www.energy.ca.gov/pcl/labels/2009_labels/PG%20and%20E%202009%20PCL.pdf (accessed June 2019).
- _____. 2018. 2017 Power Content Label – Pacific Gas & Electric. https://www.energy.ca.gov/pcl/labels/2017_labels/PG_and_E_2017_PCL.pdf (accessed June 2019).
- California Environmental Protection Agency (CalEPA). 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. **March 2006**.
- California Public Utilities Commission (CPUC). 2011. California’s Long-Term Energy Efficiency Strategic Plan. January 2011. <https://www.cpuc.ca.gov/general.aspx?id=4125> (accessed June 2019).
- _____. 2019. “Zero Net Energy.” <https://www.cpuc.ca.gov/ZNE/> (accessed June 2019).
- Monterey, County of. 2015. Carmel Canine Sports Center Project Environmental Impact Report (PLN130352). Prepared by Amec Foster Wheeler. **April 2015**. <http://www.co.monterey.ca.us/government/departments-i-z/resource-management-agency-rma-/planning/current-major-projects/carmel-canine-sports-complex/draft-environmental-impact-rep> (accessed June 2019).
- San Luis Obispo Air Pollution Control District (SLOAPCD). 2012. *CEQA Air Quality Handbook*. April 2012. <https://www.slocleanair.org/rules-regulations/land-use-ceqa.php> (accessed June 2019).
- State of California. 2018. California’s Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. <http://www.climateassessment.ca.gov/state/> (accessed April 2019).

Hazards and Hazardous Materials

- Ahtna Environmental, Inc. 2019. Operable Unit Carbon Tetrachloride Plume, Fourth Quarter 2018 Groundwater Monitoring Report, Former Ford Ord, California. March 8, 2019.
- Department of Toxic Substances Control (DTSC). 2019. “EnviroStor.” <https://www.epa.gov/superfund/what-superfund> (accessed June 2019).
- Monterey County Airport Land Use Commission. 2019. Marina Municipal Airport Land Use Compatibility Plan. May 30, 2019.

Monterey County/AECOM. 2015. Monterey County Multi-Jurisdictional Hazard Mitigation Plan. June 2015.

Monterey County, 2014. Monterey County Emergency Operations Plan. March 2014.

State Water Resources Control Board (SWRCB). 2019. "GeoTracker."
<http://geotracker.waterboards.ca.gov/> (accessed June 2019)

United States Environmental Protection Agency. 2019. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Superfund Site database. 2019.
<https://cumulis.epa.gov/supercpad/CurSites/srchsites.cfm> (accessed June 2019).

Hydrology and Water Quality

California Geologic Survey. 2009. "Tsunami Inundation Map for Emergency Planning: Marina Quadrangle."
https://www.conservation.ca.gov/cgs/Documents/Tsunami/Maps/Tsunami_Inundation_Marina_Quad_Monterey.pdf (accessed May 2020).

Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map 06053C0191H. Map revised June 21, 2017.
<https://msc.fema.gov/portal/search?AddressQuery=marina%20ca> (accessed May 2020).

Marina, City of. Marina Municipal Code. Last updated January 22, 2020.
<https://www.codepublishing.com/CA/Marina/> (accessed May 2020).

Land Use and Planning

Adamson, Heather, Director of Planning, Association of Monterey Bay Area Governments, email correspondence with April Durham, Planner, Rincon Consultants, Inc., concerning verification of the Specific Plan area as a transit priority area, June 19-20, 2017.

Association of Monterey Bay Area Governments (AMBAG). 2018. 2040 Metropolitan Transportation Plan/Sustainable Communities Plan. Monterey, CA. June 2018.

Marina, City of. 2010a. City of Marina at Monterey Bay General Plan. **August 4, 2010.**

_____. 2010b. Pedestrian and Bicycle Master Plan. Marina, CA. Adopted **February 2, 2010.**

_____. 2019. "Vision and Mission." City of Marina. <http://cityofmarina.org/381/Vision-Mission> (accessed July 1, 2019).

Monterey-Salinas Transit (MST). 2019. Marina Transit Exchange Map. <https://mst.org> (accessed June 10, 2019).

Mineral Resources

Marina, City of. City of Marina at Monterey Bay General Plan. August 4, 2010.

Noise

- California Department of Transportation (Caltrans). 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2) September. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf
- _____. b *Transportation and Construction Vibration Guidance Manual*. (CT-HWANP-RT-13-069.25.3) September. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf
- Federal Highway Administration (FHWA). 2008. Roadway Construction Noise Model. Available at: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/
- _____. 2018. Noise Measurement Handbook – Final Report. June 1. Available at: <https://www.fhwa.dot.gov/ENVIRONMENT/noise/measurement/handbook.cfm>
- Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf
- Malcolm J. Crocker (Editor). 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.
- Monterey County Airport Land Use Commission. 2019. Marina Municipal Airport Land Use Compatibility Plan. May 30, 2019.

Population and Housing

- U.S. Census Bureau. 2019. "QuickFacts: Marina, CA." <https://www.census.gov/quickfacts/marinacitycalifornia> (accessed May 2020).

Public Services

- Marina, City of. 2000. **Final Environmental Impact** Report on the Draft Marina General Plan. SCH#1999031064. August.
- McCoun, Doug. 2020. Fire Chief, Marina Fire Department (MFD). Meeting with Fred Aegerter, Christine Hopper, and Alec Barton, City of Marina staff to discuss staffing and capacity of the MFD, on September 11, 2020.
- Mejia, Melissa. 2019. Librarian, Marina Public Library. Personal communication with Sean Wils, Planning Intern for Rincon Consultants, regarding population growth accommodated by the Marina Public Library, on June 2019.
- Nieto, Tina. 2020. Police Chief, Marina Police Department (MPD). Meeting with Fred Aegerter, Christine Hopper, and Alec Barton, City of Marina staff to discuss staffing and capacity of the MPD, on September 10, 2020.

Recreation

- Marina, City of. City of Marina at Monterey Bay General Plan. **August 4, 2010**.

Utilities

California Department of Resources Recycling and Recovery (CalRecycle). 2016. "California's 2015 Per Capita Disposal Rate." Last modified: June 21, 2016.

<http://www.calrecycle.ca.gov/lgcentral/goalmeasure/DisposalRate/MostRecent/default.htm>. (Accessed October 2020)

_____. 2019. "Estimated Solid Waste Generation Rates."

<https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates> (accessed May 2020).

_____. 2019. SWIS Facility Detail: Monterey Peninsula Landfill.

<https://www2.calrecycle.ca.gov/swfacilities/Directory/27-AA-0010> (accessed May 2020).

Central Coast Regional Water Quality Control Board. 2014. Adoption of waste discharge requirements (wdr) order no. r3-2014-0013, (national pollutant discharge elimination system [npdes] permit no. ca0048551), Monterey regional water pollution control agency (mrwpca) wastewater treatment plant, Monterey County.

<https://montereynewater.org/docs/about/permits/Adoption%20of%20WDR.pdf> (accessed May 2020).

Monterey One Water (M1W). 2020. "History." https://montereynewater.org/about_history.html (accessed May 2020).

Monterey Regional Waste Management District. 2018. Monterey Peninsula Landfill.

<https://www.mrwmd.org/monterey-peninsula-landfill/> (accessed May 2020).

Wildfire

California Department of Fire Protection and Forestry Management (CAL FIRE). 2007. Very High Fire Hazard Severity Zones in State Responsibility Areas (Monterey County).

https://osfm.fire.ca.gov/media/6726/fhszs_map27.pdf (accessed May 2020).

List of Preparers

Rincon Consultants, Inc. prepared this IS-MND under contract to the City of Marina. Persons involved in data gathering analysis, project management, and quality control are listed below.

Rincon Consultants, Inc.

Megan Jones, Principal-in-Charge

Ashley Quackenbush, Project Manager

Hannah Haas, Archaeologist

Steven Treffers, Senior Architectural Historian

David Daitch, Principal Biologist

Samantha Kehr, Associate Biologist

Beth Wilson, Associate Environmental Planner

Annaliese Miller, Associate Environmental Planner

Jorge Mendieta, Associate Environmental Scientist/Paleontologist



CARMEL REALTY COMPANY

ESTABLISHED 1913

BILL MITCHELL
Owner/Broker
DRE# 00479008
OFFICE: 831.624.3355
CELL: 831.277.9932
BILL@CARMEL-REALETY.COM

June 22, 2021

Mr. Fred Aegerter
Community Development Director
211 Hillcrest Ave
Marina, CA 93933

Dear Mr. Aegerter,

I have read the Downtown Vitalization Plan, and I fully support it. I am a co-owner of a vacant parcel at 435 Reservation Road. We have owned this land for **5 years**, and for this entire time period, we have been patiently waiting for the opportunity to develop it. Our goal has always been to build a multi-unit apartment complex that is architecturally attractive and beautifully landscaped. We are prepared to begin that project the minute we have approval.

We have long shared a concern for the serious shortage of appealing housing in Marina. Our property is in the "transition zone" along Reservation Road, and we are especially interested in creating a high-quality apartment project that closely follows the guidelines of this new Plan. We are enthusiastic about this Plan, and are hopeful that it will be finalized and approved soon.

I assume an EIR will ultimately be required for the Plan. Do you have any guidance as to the timing and completion of an EIR?

Respectfully,

Bill Mitchell

Anne Russell Rudolph
Marina Self Storage
Reindollar Crest Commercial Center
218, 224 Reindollar Avenue
Marina, CA 93933
annerussellrudolph@gmail.com

June 29, 2021

VIA US CERTIFIED MAIL and email

City of Marina

Attn: Fred Aegerter, Community Development Director

209 Cypress Avenue

Marina, CA 93933

faegerter@cityofmarina.org

Re: Comments on the Notice of Preparation for the Downtown Vitalization
Specific Plan

Dear Mr. Aegerter,

My family developed Marina Self Storage (224 Reindollar Avenue) almost fifty years ago and we have owned Reindollar Crest Commercial Center (218 Reindollar Avenue) for forty years. Our two properties provide a home for forty-five small businesses, in addition to providing storage for local residents. We support a revitalization plan that makes Marina the best it can be and have been trying to work with the City for the past three years to come up with a plan that provides more flexibility and uses market incentives as a way to create the future for Marina, rather than the current plan that is extremely onerous to existing property owners in the zone.

I was present at the recent Public Scoping Meeting on Zoom and I have read the Initial Study. I have been actively involved in the DVSP since 2018 and have met with you and your staff on several occasions. I have written many letters, and I have attended and spoken at many Planning Commission and City Council meetings. My advisor, Dale Ellis, has done the same.

I am completely perplexed that the proposed scope of your EIR does not include ANY effects from Land Use and Planning. We have been talking about this publicly for more than three years: the DVSP as proposed and written will effectively render the majority of the parcels in the 322 acres Legal Non-Conforming Uses. You were quoted in The Herald newspaper as saying that 141 residences and 29 businesses would be non-conforming, and Christy Hopper, when pressed, told me and Mr. Ellis that she didn't actually know how many would meet that fate. We asked for a list of those non-conforming residences (141) and businesses (29) but none was ever supplied. I suspect the actual number that would be non -onforming is far greater and if studied, will include almost every business and single-family residence in the zone.

I was present at the April 25, 2019, City Council meeting, and Christy Hopper said there would be a workshop with local property owners to discuss the issue of non-conformity. On July 24, 2019, I wrote to your office to ask when the workshop would happen. Alec Barton replied via email: "I apologize for my late reply. Yes, I believe the Council would like to have us back to discuss non-conforming structures/uses and some other issues that arose during public meetings. I don't have a clear answer as to when those discussions will take place." It has been more than two years since that City Council meeting and no workshops, meetings, or out-reach to property owners in the zone have ever happened. The plan has now advanced to the EIR stage without valuable public input even after we had been told that the City would work with us to make that happen.

There will be significant economic hardships for current property owners if the DVSP as proposed is allowed to proceed as written. It is my understanding that CEQA's definition of significant effect of a project includes, "An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." I believe that Land Use and Planning must be included in the scope of the EIR.

I reached out to my neighbors in early 2019 and there are seven of us who believe this issue is of great concern. All of the property owners who answered my letter were unaware of the legal non-conforming issue that would result from the DVSP as written. I suspect and am on the record as stating that I believe most of the property owners in the zone have no idea that their homes and businesses will become legal non-conforming on the day this plan is adopted.

Homeowners whose properties are legal non-conforming will not be allowed to construct Accessory Dwelling Units or add on to their existing homes. In some cases, they will not be allowed to make substantial repairs like new roofs, due to low assessed property values for long-time owners. Commercial businesses will not be allowed to expand or make improvements for the same reason. I believe current owners are unaware of the substantial detrimental consequences they will face. The likely outcome of this would be to create a situation of disrepair and degradation in the zone because many current property owners will not be able to repair, improve, or upgrade their existing structures.

We have attempted on more than one occasion to propose language that would protect existing uses but provide for triggers for future development to come into compliance with the standards of the DVSP. These efforts have been ignored by the City. Nothing has ever happened.

I have included copies of two letters, one from Kristina D. Lawson on behalf of Sierra Pacific Properties, dated April 24, 2019, and the other from Dale Ellis on my behalf, dated April 23, 2019. Both address the reality of the DVSP for existing property owners in a zone that is currently almost entirely built out.

I also question whether the proposed density numbers and office space requirements are realistic going forward. All supplemental reports were prepared pre-pandemic (and some are many years old) and they were aggressive at that time. Downtown businesses have suffered greatly during the pandemic, working from home has become accepted and is desired, and I believe times have changed and those parts of the plan must also be reviewed and included in the scope of the EIR under Land Use and Planning.

I respectfully request that you include Land Use and Planning in the scope of the EIR and that the City of Marina immediately engage with existing property owners to come to a mutually agreeable plan to avoid subjecting the owners to undue hardships because of the City's vision for the future.

Very truly yours,

Marina Self Storage and Reindollar Crest Commercial Center



Anne Russell Rudolph
Managing Partner

Cc: Dale Ellis, Anthony Lombardo & Associate

Attachments:

Letter from Dale Ellis of Anthony Lombardo & Associates, dated April 23, 2019
Letter from Kristina D. Lawson of Hanson Bridgett LLP, dated April 24, 2019

ANTHONY LOMBARDO & ASSOCIATES

A PROFESSIONAL CORPORATION

ANTHONY L. LOMBARDO
KELLY MCCARTHY SUTHERLAND
JENNIFER M. PAVLKY
CODY J. PHILLIPS

144 W. GABILAN STREET
SALINAS, CA 93901
(831) 751-2330
FAX (831) 751-2331

April 23, 2019

Our File No: 4865.001

Hon. Bruce Delgado, Mayor
Members of the City Council
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

RE: Nonconforming Uses and the Downtown Vitalization Specific Plan (DVSP)

Dear Mayor Delgado and Members of the City Council:

Anne Rudolph, her sister, and I spoke during the public comment session on April 16th. We appreciate the attention the Council gave us. It seems our comments may have had some effect since we have now been contacted by Mr. Aegeter to arrange a meeting to discuss our concerns. That meeting is scheduled for April 25th.

After our comments, Councilmember Berkley said that her understanding was that the uses would be "grandfathered" and would be allowed to continue. City Manager Long said that was correct and that was a correct answer. What the answer does not disclose, and which are the crux of our concerns, are the significant risks and limitations on nonconforming uses and structures. According to comments the staff has made practically all uses and structures in the 320-acre DVSP area will become nonconforming ("grandfathered")¹.

In general terms, a nonconforming structure or nonconforming use is any structure or use which was legally established but does not comply with subsequently adopted regulations (MMC 17.04.490 and 17.04.500). Any use which requires a use permit under current or subsequent regulations but does not have one is also nonconforming (MMC 17.52.030). The City's basic rule for nonconforming structures or uses is that they cannot be "enlarged or increased, nor extended to occupy a greater area than that occupied by such use at the time such provision became applicable" (MMC17.52.010).

The limits on nonconforming uses and structures and *related impact* are:

¹ While these comments are focused on the DVSP area, these are Citywide regulations affecting all nonconforming uses.

- To change a nonconforming use to another use of the "same or more restricted nature" requires a use permit. (MMC17.52.060 A). *This would mean, based on the plain language of the municipal code, that every new occupancy in the DVSP would be required to have a use permit. For example, changing an insurance office to a book store will require a use permit because it is a change of one use to a use of the "same or more restricted nature." Not only are use permits expensive and time consuming (for the applicant and the staff), they are a discretionary action with no surety that a change of use, even to one of the "same or more restricted nature" will be allowed.*
- The nonconforming use of a portion of a building may be extended throughout the building provided that in each case a use permit is first secured (17.52.060 B). *If a restaurant which became a nonconforming use under the DVSP occupies a portion of a building is successful and wants to expand into larger portion of the building, they will require a use permit. As with a change of use, use permits are expensive and time consuming with no surety of approval.*
- Ordinary maintenance and repairs may be made to any nonconforming building, provided no structural alterations are made and provided that such work does not exceed twenty-five percent of the assessed value in any one-year period (17.52.060 D). "Structural alterations" mean any change in the supporting members of a building such as bearing walls, columns, beams or girders (17.04.660). *This particular section poses two significant constraints:*
 - *"any change" is extremely broad. The plain language of the ordinance would mean that damaged (water damage, termite damage, age) structural members of a structure of any kind (house, office, church, etc.) cannot be repaired or replaced because it would be a "change".*
 - *The extent of maintenance and repair is limited to 25% of the assessed value. Assessed value is established by the Monterey County Assessor and is limited under state law to an annual increase of approximately 2% unless there is a "qualifying event" such as the sale of the property or a significant improvement to the property. If property has been held for a number of years without a qualifying event or has been used in a 1031 exchange (one-time allowance to move assessed value from one property to another), the assessed value could be substantially below the actual value thereby artificially restricting the amount of allowable maintenance and repair. Additionally, in their recent consideration of the Gisse property, staff agreed that based on case law assessed value is not the appropriate standard but that is not documented as City policy.*
- Nonconforming structures or uses cannot be "enlarged or increased, nor extended to occupy a greater area than that occupied by such use at the time such provision became applicable" (MMC17.52.010). *The DVSP area includes a significant but currently unknown number of detached single-family homes which will be nonconforming uses and probably nonconforming structures. Not only will these homes be limited in their maintenance and repair, no additions will be allowed. And this would apply to any other*

nonconforming structure or use, such as a church, neighborhood store or community facility.

- Any use which was legally established and subsequent regulations require a use permit for that use is a nonconforming use (17.52.030). *The effect of this has not been quantified in any manner.*
- If a nonconforming building is damaged or destroyed by fire, act of God or other means the building may be rebuilt if the damage is not more than 75% of the assessed value. If the damage is more than 75%, a use permit is required to restore or rebuild the building (17.52.040). *This section results in the same issue as maintenance and repair by limiting value to assessed value which as discussed may be significantly less than actual value and brings a use permit into play.*
- If the nonconforming use of a building or land ceases for a period of six months it is presumed to be abandoned unless a use permit is approved by the Planning Commission. *This particular section poses two issues:*
 - *Six months is a short period of time to navigate insurance companies, possible litigation, preparation of plans, and working through the City's planning and building processes.*
 - *If the staff presumes a use to be abandoned a use permit is required to prove otherwise. Again, the use permit brings significant time, cost and unsurety into the picture.*

These are a few real examples of what could be the consequences of the DVSP for every property, structure and use in the DVSP's 320 acres over the next 20-30 years.

We applaud the vision of the DVSP. We know it will bring significant and beneficial changes to the area. But, as we have stated, we are very concerned that the DVSP will significantly limit the use of the area and have a chilling effect on smaller improvements while the area evolves. We ask that the City include language in the DVSP which would protect existing uses and create a "trigger mechanism" as to when property will have to come into compliance with the standards of the DVSP. We suggest:

- A statement in the DVSP that the Plan will not render any use or structure nonconforming. *This would allow a continuation of use under the current regulations until the trigger is pulled.*
- Any property improvement of a property less than 33% of the appraised value of the property is not required to comply with the standards of the DVSP. *This will allow for some interim improvement of the property until conditions are appropriate for full compliance*
- Any property improvement between 33% and 50% of the appraised value of the property will require that the improvement comply with the standards of the DVSP to the extent feasible. *This will provide a range of improvements that begin to bring the property into compliance with the DVSP while recognizing it may not be feasible to do so in some cases.*

Hon. Bruce Delgado, Mayor
Members of the City Council
April 23, 2019
Page | 4

- Any improvement of a property in excess of 50% of the appraised value of the property requires that the property be brought into full compliance with the DVSP. *This will provide a definite point at which property will have to comply with the DVSP.*

We appreciate the Council's attention to our concerns and look forward to working with the City to find a workable solution to our concerns.

Sincerely,



Dale Ellis

cc: Client
Members of the Marina Planning Commission (by email only)
Fred Aegerter (by email only)
Alec Barton (by email only)
Christy Hopper (by email only)
Layne Long (by email only)

KRISTINA D. LAWSON
PARTNER
DIRECT DIAL (925) 746-8474
DIRECT FAX (925) 746-8490
E-MAIL klawson@hansonbridgett.com



April 24, 2019

VIA E-MAIL

kybiala@icloud.com; MRB93933@gmail.com; David.Burnett454@sbcglobal.net;
Tommann524@gmail.com; vjjacobsen@yahoo.com; Brianmm80-marina@yahoo.com;
jdweekley@gmail.com

Chair David Burnett and
Members of the Planning Commission
City of Marina
211 Hillcrest Avenue
Marina, California 9393

Re: April 25, 2019 Agenda Item No. 6b; Proposed Draft Downtown Vitalization Specific Plan

Dear Honorable Chair Burnett and Planning Commissioners:

This office represents Sierra Pacific Properties Inc., the owner of the Seacrest Plaza Shopping Center located at the intersection of Reservation Road and Seacrest Avenue in Central Marina (the "Shopping Center"). The Shopping Center is located within the Downtown Core Area as designated in the proposed Draft Downtown Vitalization Specific Plan dated April 19, 2019 (the "Specific Plan"). On behalf of our client, we reviewed the proposed Specific Plan and submit the following comments in opposition to its further consideration and adoption.

At the outset, we would note that while our client became aware of the City's consideration of the Specific Plan in November 2018, when they contacted City planning staff with questions regarding the Shopping Center. We are informed that numerous other commercial property owners in the area are just now becoming aware of, and seeking to fully understand, the impacts that the proposed Specific Plan will have on their property. This lack of outreach on the City's part is troubling in light of the fact that the Specific Plan proposes a drastic and unrealistic transformation of existing, developed structures, development standards and allowable uses located Downtown.

As discussed in detail below, we have serious concerns relating to the feasibility of the proposed Specific Plan and its impacts on existing uses, as well as the legal adequacy of the process that the City has undertaken to date in working toward its adoption. The Specific Plan proposes prohibitions against currently permitted or conditionally permitted uses, which, together with new development standards, are entirely at odds with the existing structures and uses and will render them nonconforming. As a result, there is little likelihood that the plan will ever be implemented and a strong likelihood that its adoption will only threaten the viability of continuing existing business operations in the Downtown Area.

Hanson Bridgett LLP
1676 N. California Blvd., Suite 620, Walnut Creek, CA 94596

15427477.3

In addition, the new requirements of the proposed Specific Plan cannot be imposed or enforced until the City formally adopts the Specific Plan, and the City cannot approve or adopt the Specific Plan until it completes the required environmental review for purposes of the California Environmental Quality Act, Public Resources Code Section 21000, *et seq.* ("CEQA"). The actions taken by the City to date run afoul of CEQA's mandate that the environmental review process take place at the earliest practicable time possible, and not as a post hoc rationalization for the approval of a project.

In short, the proposed Specific Plan is ill-conceived and the City's preparation and consideration of the plan is procedurally improper. The City should suspend further consideration of the Specific Plan in its current form.

1. The New Development Standards and Land Use Designations Under the Specific Plan Are Irreconcilable With Existing Structures and Uses. The Specific Plan proposes an urban block site layout in the Downtown Core, with building fronts brought to the lot line facing public streets and tangential with the pedestrian right of way, creating a continuous "street wall," and parking located behind or under rows of buildings. (Specific Plan, pp. 2-15, 3-5, 3-16.) The Specific Plan also creates new development standards, including lot dimension requirements, minimum and maximum setback and building height requirements, landscaping, parking, fencing and other site requirements.

Significantly, it is reported that there are 121 single-family dwellings and 29 non-residential structures that would become nonconforming if the Specific Plan is adopted in its present draft. In fact, very few of the blocks in the Core Area currently utilize the layout envisioned under the Specific Plan, and neither of the two existing shopping centers in the Core—the Shopping Center and the Marina Village Shopping Center at Reservation Road and Del Monte Boulevard—employ the contemplated urban block site layout but rather are configured in the exact opposite form with parking lots in front of the buildings. While we understand the City is committed to adopting a specific plan that will upzone property suitable for residential development, the commercial component of the plan is particularly misguided.

In terms of uses, Table 3-6 of the Specific Plan establishes three land use designations—Core, Transition and Multifamily Residential, and within the Core Area, (1) prohibits uses currently permitted under the C-1 Retail Business District zoning regulations, including Professional Office uses facing Reservation Road, (2) prohibits conditionally permitted uses, including drive-in restaurants and service stations and (3) specifically prohibits Accessory Drive-Thru or Drive-In Facilities and Accessory Exterior Vending Machines associated with a business. (Specific Plan, Table 3-6, pp. 3-9, 3-16.) Again, the vision of the Specific Plan bears little resemblance to the actual as-built environment. For example, there are at least five existing drive-thru uses and at least two service station in the Core Area alone.

Under the Specific Plan, existing legal structures and uses will be rendered nonconforming such that, pursuant to Section 17.52.010.A of the zoning regulations, any proposed expansion of a nonconforming structure and any cessation of a nonconforming use for a period of six months will require conformity with the new standards of the Specific Plan. Consequently, the Specific Plan results in uncertainty regarding continuing business operations and the economic viability of Downtown Marina. Given the prevalence of uses that will become nonconforming under the Specific Plan, the unintended but most likely and foreseeable effect of the Specific Plan will be

that property owners will not improve or update their properties to avoid the risk of losing their legal nonconforming status, and future investment in the area will also be stifled.

2. The City's Proposed Preparation of a Focused Environmental Impact Report Following Full Consideration of the Specific Plan by the Planning Commission and City Council Is Improper. The City cannot fully consider and essentially approve the Specific Plan but defer formal adoption until the proper environmental review is conducted. The proper timing for environmental review is at the earliest "practicable" time, to allow for fully informed decisions at a project's formative stages and avoid undue project momentum or post-hoc rationalizations. CEQA Guidelines Section 15004 expressly states that "[b]efore granting any approval of a project subject to CEQA, every Lead Agency...shall consider a final EIR or Negative Declaration or another document authorized by these Guidelines to be used in the place of an EIR or Negative Declaration. (14 Cal.Code Regs., § 15004 [emphasis added].)

CEQA Guidelines Section 15004(b) continues, "EIRs...should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment." (See Pub. Resources Code § 21151 [an agency "shall prepare, or cause to be prepared by contract, and certify the completion of, an environmental impact report on any project that they intend to carry out or approve which may have a significant effect on the environment"].) The CEQA Guidelines further define "approval" as "the decision by a public agency which commits the agency to a definite course of action in regard to a project" and as the agency's "earliest commitment" to the project. (14 Cal.Code Regs., § 15352.) The California Supreme Court has explained:

Considering the timing issue as one of legally proper procedure does not remove all logistical discretion from agencies; it merely sets an outer limit to how long EIR preparation may be delayed. To accord overly deferential review of agencies timing decisions could allow agencies' to evade CEQA's central commands. While an agency may certainly adjust its rules so as to set "[t]he exact date of approval", an agency has no discretion to define approval so as to make its commitment to a project precede the required preparation of an EIR.

(*Save Tara v. City of W. Hollywood* (2008) 45 Cal. 4th 116, 131–32.) It is well-established that a fundamental purpose of an EIR is to provide decision makers with information they can use in deciding whether to approve a proposed project, not to inform them of the environmental effects of projects that they have already approved. (*Laurel Heights Improvement Assn. v. Regents of University of California* (1968) 47 Cal. 3d 376, 394.) Post-approval environmental review amounts to nothing more than a post hoc rationalization to support action already taken. (See *id.*)

Here, staff is requesting that the City essentially commit to approving the draft Specific Plan without the benefit of any information regarding its potential environmental effects. This is both procedurally improper from a timing standpoint and substantively improper in that the City's approval of the Specific Plan fails to take into account an environmental analysis of the proposed plan. The Staff Report prepared for the Joint Public Meeting of the City Council and Planning Commission on March 26, 2019 ("Staff Report") concludes that "the Planning

Commission is **nearing completion of its review** of the draft Plan" and that the "City Council may request final review of the plan and final project description before directing staff to prepare the environmental document..." (Emphasis added.) To the extent that the alternatives presented in the Staff Report for the April 25 Planning Commission hearing includes the option of directing staff to "further refine anticipated residential densities, land uses, and zoning districts in the draft DVSP," we urge the commission to do so.

Finally, we are aware that the City passed three uncodified urgency measures to impose and extend a moratorium on the issuance of development permits within the Downtown Area pending the adoption of the Specific Plan: (1) Ordinance No. 2017-03 Imposing a Temporary Moratorium on the Issuance of All Development Permits in the Downtown Vitalization Area, with exceptions, adopted on August 3, 2017; (2) Ordinance No. 2017-05 Extending for a Period of Ten Months, the Moratorium on the Issuance of All Development Permits in the Downtown Vitalization Area, with exceptions, adopted on September 17, 2017; and Ordinance No. 2018-04 Imposing a Temporary Moratorium on the Issuance of All Development Permits in the Downtown Vitalization Specific Plan Area, with exceptions and exemptions, adopted on June 19, 2018. The most recent measure expired by its terms on April 1, 2019, and cannot be further extended. The City has no legal basis to continue to withhold permits, refuse to process permit and conditional use permit applications, and/or otherwise impose any requirements of the draft Specific Plan.

We respectfully request that this Commission suspend further consideration of the proposed Specific Plan in its current form and provide direction to staff to develop a feasible, alternative scenario, taking into account community and stakeholder input, and to conduct the required, advance environmental review.

We appreciate your time and consideration and look forward to working with the City in this effort. Please do not hesitate to contact me should you have any questions.

Very truly yours,

Kristina D. Lawson

cc: J. Fred Aegerter, Community Development Director (via email Faegerter@cityofmarina.org)
Layne P. Long, City Manager (via email llong@cityofmarina.org)
Marina City Council (via email bdelgado62@gmail.com; frank.oconnell93933@gmail.com;
gmorton@montereyfamilylaw.com; LABerkley@gmail.com; adam@adamformarina.com)

June 17, 2021

City of Marina
Attn: Fred Aegerter, Community Development Director
209 Cypress Avenue
Marina, CA 93933

Via email: faegerter@cityofmarina.org

**SUBJECT: Comments on Initial Study – Mitigated Negative Declaration
for City of Marina’s Downtown Vitalization Specific Plan**

Dear Mr. Aegerter:

The Transportation Agency for Monterey County (TAMC) is the Regional Transportation Planning and Congestion Management Agency for Monterey County. Agency staff has reviewed the Downtown Vitalization Specific Plan and Initial Study for the City of Marina’s Downtown Vitalization Specific Plan and offer the following comments:

1. TAMC supports the Specific Plan’s emphasis on traffic calming and bicycle and pedestrian mobility in the Downtown Core. TAMC’s Complete Streets Guidebook can serve as a resource for implementation of complete streets, available here: <https://www.tamcmonterey.org/complete-streets>
2. TAMC supports the Specific Plan’s strategy to promote accessible bicycle parking and support facilities, including a bike share program. TAMC’s Dockless Shared Mobility resources are available to assist the City with developing a bike share program: <https://www.tamcmonterey.org/dockless-shared-mobility>
3. TAMC encourages the use of Intersections Control Evaluations (ICE analysis) when determining intersection control type (stop signs, traffic signals or roundabouts) for primary intersections. The Agency recommends including ICE analyses in the EIR traffic and circulation technical study for the intersections identified in the Specific Plan as “gateways” to Downtown:
 - Del Monte Boulevard and Reservation Road
 - Del Monte Boulevard and State Route 1 Ramps
 - Reservation Road and California Avenue

TAMC strongly encourages coordination with Monterey-Salinas Transit on intersection improvements along the SURF! Busway and Bus Rapid Transit corridor, including the intersection at Del Monte Boulevard and Palm Avenue.

4. TAMC appreciates the Specific Plan's support for transit-oriented development. Policies directed at transit-oriented development will support implementation of more frequent transit services to the City of Marina.
5. TAMC recommends that the environmental document clarify the approach of incorporating an assumed 10 percent reduction due to Alternative Transportation modes. Consider using more appropriate language that states the goal of implementing successful mitigation measures that support Alternative Transportation modes with documentation supporting the use of a 10 percent reduction directly tied to measures that can be monitored.
6. TAMC recommends a simple analysis be required to allow the Internal Capture Reduction Method to be applied to a mixed-use development. For example, a restaurant could realistically have a 10% internal capture rate if there are an appropriate number of residential units within walking distance of the project site that could reasonably use the restaurant on a regular basis.
7. TAMC recommends that the analysis avoid double counting the vehicle trips reduced by internal capture from vehicle trips reduced by using alternative transportation. That is, most of the internal capture trips are pedestrian trips that should be included in the 10% reduction reflecting alternative transportation modes.
8. TAMC is grateful for the City of Marina's ongoing consideration and coordination with the proposed Fort Ord Regional Trail and Greenway (FORTAG) trail alignment connections to the city.
9. TAMC encourages coordination with Monterey-Salinas Transit to accommodate existing and planned transit connections to the Specific Plan area, including the proposed SURF! Busway and Bus Rapid Transit Project. Monterey-Salinas Transit's *Designing for Transit Guideline Manual* ([linked here](#)) should be used as a resource for transit coordination.
10. TAMC looks forward to providing comments on the draft Environmental Impact Report when it is available for review.

Thank you for the opportunity to comment on the proposed project. If you have any questions, please contact Madilyn Jacobsen of my staff at madilyn@tamcmonterey.org or 831-775-4402.

Sincerely,



Debra L. Hale
Executive Director

CJ Toeniskoetter

From: CJ Toeniskoetter
Sent: Monday, June 21, 2021 5:05 PM
To: Faegerter@cityofmarina.org
Cc: chopper@cityofmarina.org
Subject: Marina Specific Plan

Dear Mr. Aegerter,

I am the Managing Partner of the entity that owns the 1.5 acre undeveloped parcel on Reservation Road known as 435 Reservation Road, Marina, Ca.

I have reviewed the Marina Specific Plan and the Transition Zone as defined covering our parcel and support the Plan's direction and Transition Zoning definition.

Housing and the support that new housing will have on the buildout of the Specific Plan is critically important for Marina.

We hope this Plan will be approved on July 9th to allow us to move forward to support the Plan's success.

My best,
Chuck Toeniskoetter

DEPARTMENT OF TRANSPORTATION

CALTRANS DISTRICT 5
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3329
TTY 711
www.dot.ca.gov/dist05/



Making Conservation
a California Way of Life.

June 30, 2021

MON-1-Var
SCH#2021050568

Fred Aegerter
Community Development Director
City of Marina
209 Cypress Avenue
Marina, CA 93933

Dear Mr. Aegerter:

COMMENTS FOR THE NOTICE OF PREPARATION (NOP) – MARINA DOWNTOWN
VITALIZATION SPECIFIC PLAN, MARINA, CA

The California Department of Transportation (Caltrans), District 5, Development Review, has reviewed the Marina Downtown Vitalization Specific Plan which will establish a direct connection between the City of Marina's General Plan and opportunities for vitalization and enhancement within downtown Marina. Caltrans offers the following comments in response to the NOP:

1. Caltrans supports local development that is consistent with State planning priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety. We accomplish this by working with local jurisdictions to achieve a shared vision of how the transportation system should and can accommodate interregional and local travel and development. Projects that support smart growth principles which include improvements to pedestrian, bicycle, and transit infrastructure (or other key Transportation Demand Strategies) are supported by Caltrans and are consistent with our mission, vision, and goals.
2. As a result of Senate Bill (SB) 743, effective July 2020 Caltrans replaced vehicle level of service (LOS) with vehicle miles traveled (VMT) as the primary metric for identifying transportation impacts from local development. Additionally, the Caltrans Transportation Impact Study Guide (TISG) replaces the Guide for the Preparation of Traffic Impact Studies (Caltrans, 2002) and is for use with local land use projects. The focus now will be on how projects are expected to influence the overall amount of automobile use instead of traffic congestion as

a significant impact. For more information, please visit:
<https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743>.

3. Employing VMT as the metric of transportation impact Statewide will help to promote greenhouse gas (GHG) emission reductions consistent with SB 375 and can be achieved through influencing on-the-ground development. Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting Sustainable Community Strategies developed under SB 375. In addition to any site-specific access or safety concerns with the project, it is likely that the Caltrans correspondence will focus attention on meeting overall VMT reducing goals.
4. Due to COVID-19, Caltrans policy on collecting traffic data has changed until further notice. Traffic analysis conducted for all projects on the State Highway System (SHS) are now required to use traffic data collected before March 13, 2020 to avoid abnormal traffic patterns. Traffic analysis and data usage will need to meet Caltrans standards of sound engineering justification and source documentation of historical traffic data.
5. Please be aware that if any future work is completed in the State's right-of-way it will require an encroachment permit from Caltrans and must be done to our engineering and environmental standards, and at no cost to the State. The conditions of approval and the requirements for the encroachment permit are issued at the sole discretion of the Permits Office, and nothing in this letter shall be implied as limiting those future conditions and requirements. For more information regarding the encroachment permit process, please visit our Encroachment Permit Website at: <https://dot.ca.gov/caltrans-near-me/district-5/district-5-programs/d5-encroachment-permits>.

Thank you for the opportunity to review and comment on the proposed project. If you have any questions, or need further clarification on items discussed above, please contact me at (805) 835-6543 or at Christopher.Bjornstad@dot.ca.gov.

Sincerely,

Christopher Bjornstad

Chris Bjornstad
Associate Transportation Planner
District 5 Development Review



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Ave
Fresno, California 93710
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



July 19, 2021

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

**Subject: Marina Downtown Vitalization Specific Plan (Project)
Notice of Preparation (NOP) of an Environmental Impact Report (EIR)
SCH No. 2021050568**

Dear Mr. Aegerter:

The California Department of Fish and Wildlife (CDFW) received a NOP of an EIR from City of Marina for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Fred Aegerter, Community Development Director
City of Marina
July 19, 2021
Page 2

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code may be required.

PROJECT DESCRIPTION SUMMARY

Proponent: City of Marina

Objective: The objective of the Project is to establish a development framework for land use, circulation, utilities and services, resource protections, design, and implementation through a cogent vision for the future, clearly articulated land uses and development regulations, appropriate design standards and guidelines. This plan is to be use for the next 20 years for development of downtown Marina.

Location: Center of Marina, a total of 322-acres.

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 1

Timeframe: Unspecified.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the City of Marina in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

There are many special-status resources present within and adjacent to the Project area, due to the large area of the plan. These resources may need to be evaluated and addressed prior to any approvals that would allow ground-disturbing activities or land use changes. The NOP and Initial Study (IS) indicates there is potential for significant impacts unless mitigation measures are implemented. These measures are well-defined in the IS for special-status plant species, legless lizard (*Anniella pulchra*), coast horned lizard (*Phrynosoma blainvillii*), burrowing owl (*Athene cunicularia*), Smith's blue butterfly (*Euphilotes enoptes smithi*), and

Fred Aegerter, Community Development Director
City of Marina
July 19, 2021
Page 3

nesting birds. However, CDFW is concerned regarding potential impacts to special-status species including, but not limited to: the State threatened tricolored blackbird (*Agelaius tricolor*), the State species of special concern western pond turtle (*Emys marmorata*), Monterey shrew (*Sorex ornatus salarius*), and special-status bat species.

In order to adequately assess any potential impacts to biological resources, CDFW recommends that focused, protocol-level surveys be conducted by a qualified wildlife biologist/botanist during the appropriate survey period(s) in order to determine whether any special-status species and/or suitable habitat features are present within the Project area. Properly conducted biological surveys, and the information assembled from them, are essential to identify any mitigation, minimization, and avoidance measures and/or the need for additional or protocol-level surveys, especially in the areas not in irrigated agriculture, and to identify any Project-related impacts under CESA and other species of concern.

Additionally, when an EIR is prepared, mitigation measures must be specific and clearly defined and cannot be deferred to a future time. The specifics of mitigation measures may be deferred, provided the lead agency commits to mitigation and establishes performance standards for implementation, when an EIR is prepared. The CEQA document must provide quantifiable and enforceable measures as needed that will reduce impacts to less than significant levels.

CDFW recommends that a qualified biologist conduct a habitat assessment, well in advance of Project implementation at individual sites, to determine if individual project areas or their immediate vicinity contain habitat suitable to support special-status plant or animal species, including, but not limited to, those mentioned above. If suitable habitat is present, CDFW recommends assessing presence/absence of special-status species by conducting surveys following recommended protocols or protocol-equivalent surveys. Recommended protocols vary by species and more information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>).

If State-listed species are detected at a Project site, consultation with CDFW is warranted to discuss how to avoid take, or if avoidance is not feasible, to acquire an Incidental Take Permit (ITP) prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081 subdivision (b). CDFW also recommends consulting with the USFWS on potential impacts to federally listed species including, but not limited to, Smith's blue butterfly host plants (seacliff and seaside buckwheat). Take under FESA is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any ground-disturbing activities.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a data base which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).)

Fred Aegerter, Community Development Director
City of Marina
July 19, 2021
Page 4

Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist City of Marina – Community Development Department in identifying and mitigating Project impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>). Please see the enclosed Mitigation Monitoring and Reporting Program (MMRP) table which corresponds with recommended mitigation measures in this comment letter. Questions regarding this letter or further coordination should be directed to Aimee Braddock, Environmental Scientist at (559) 243-4014 extension 243 or aimee.braddock@wildlife.ca.gov.

Sincerely,

DocuSigned by:

Bob Stafford

5343A684FF02469...

Julie A. Vance
Regional Manager

cc: Office of Planning and Research, State Clearinghouse, Sacramento

ec: Jeff Cann, CDFW

CJ Toeniskoetter

From: Dennis Chambers <dennis-chambers@outlook.com>
Sent: Friday, June 18, 2021 12:40 PM
To: CJ Toeniskoetter

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Mr. Fred Aegerter
Community Development Director
211 Hillcrest Ave, Marina, Ca 93933

Dear Mr. Aegerter, I've reviewed the Downtown Vitalization Specific Plan and concur with the direction of the document. I work in an around Marina and find the lack of housing in Monterey County inexcusable. The "Plan" tackles the Marina portion of the residential problem head on. Without residential, the retail outlets struggle, and small businesses/industries have difficulty finding employees. I'm hoping the vote on this "Plan" goes affirmative.. Dennis Chambers

Dennis Chambers Inc.
License # 475577
Mobile: 408-605-6760
225 Crossroads Blvd. Suite 378
Carmel, CA 93923
dennis-chambers@outlook.com

2023 NOP and Comment Letters



**Notice of Preparation
of an Environmental Impact Report and Scoping Meetings for the
Downtown Vitalization Specific Plan
Marina, California**

Lead Agency:

City of Marina, Community Development Department
211 Hillcrest Avenue
Marina, CA 93933
Attn: Guido Persicone, MUP, AICP
Community Development Department

Consulting Firm:

Rincon Consultants, Inc.
80 Garden Court, Suite 240
Monterey, CA 93940
Attn: Megan Jones, MPP
Managing Principal

NOTICE IS HEREBY GIVEN that the City of Marina (City) will serve as the Lead Agency, consistent with Section 15020 and 15021 of the California Environmental Quality Act (CEQA), in preparing an Environmental Impact Report (EIR) for the proposed Downtown Vitalization Specific Plan project (proposed project or DVSP). The City is requesting your input on the scope and content of the environmental issues and alternatives to be evaluated in the EIR. Responsible agencies may need to use the EIR to be prepared by the City when considering permits or other approvals for the project, and trustee agencies should plan to review and comment on the EIR with respect to trust resources within their jurisdiction.

Project Location: The proposed project is located in the City of Marina, approximately 15 miles north of Monterey and about 65 miles southwest of the San Francisco Bay Area, in Monterey County (see Figure 1). 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 1

Public Review Period: This NOP is available for public review and comment pursuant to California Code of Regulations, Title 14, Section 15082(b). The 30-day public comment period, during which time the City will receive comments on the NOP for the DVSP EIR, begins **October 20, 2023 and ends on November 20, 2023**. Comments should be sent to the address provided at the end of this notice.

Project Description: The intended purpose of the Specific Plan is 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

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 1,385,000 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 approximately 2,390,000 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. More information is provided in the attached Initial Study.

Initial Study: Based on the conclusions of the Initial Study prepared for the proposed project, the following issue areas are anticipated to be analyzed in the EIR:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Noise
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

Potential cumulative impacts and potential for growth inducement will also be addressed; alternatives, including the No Project Alternative, will be evaluated.

Public Scoping Meeting: Pursuant to the public participation goals of CEQA, as set forth in particular in Public Resources Code Section 21083.9, subdivision (a), the City, in its role as Lead Agency, shall hold a public scoping meeting to provide an opportunity for the public and representatives of public agencies to address the scope of the EIR. This meeting shall be held during a regularly scheduled Planning Commission meeting on Thursday, October 26, 2023 at 6:30 PM, located at 211 Hillcrest Avenue, Marina, CA 93922. The meeting may also be attended in person or virtually at <https://us02web.zoom.us/j/84287578704>. For more remote meeting participation information, visit <https://www.cityofmarina.org/958/Access-View-Meetings>.

The case file on this project, including copies of the Initial Study, is available for public review by request. Please contact Guido Persicone at the contact information below for this information. In addition, project specific information including the Initial Study is also available online at: <https://www.cityofmarina.org/945/Environmental-Review>

Commenting on the Scope of the EIR: The City welcomes agency and public input regarding environmental factors potentially affected and project alternatives to be considered for evaluation. All written comments will be considered and must be submitted by **5:00 PM on Monday, November 20, 2023**, to the City at:

City of Marina
Attn: Guido Persicone, Community Development Director
211 Hillcrest Avenue
Marina, California 93933
gpersicone@cityofmarina.org
Phone: 831-884-1289



Signature

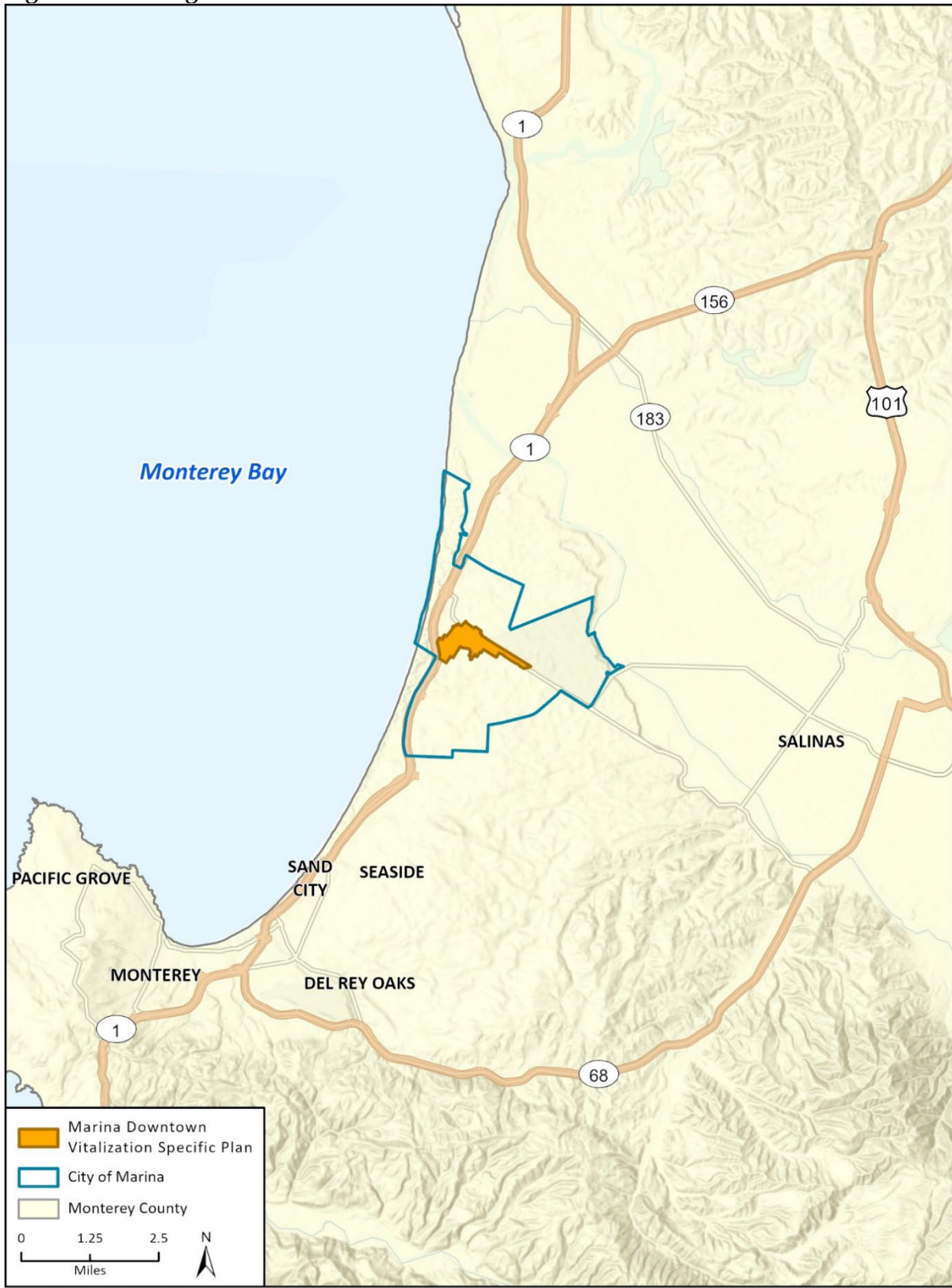
Guido Persicone

10-20-23

Date

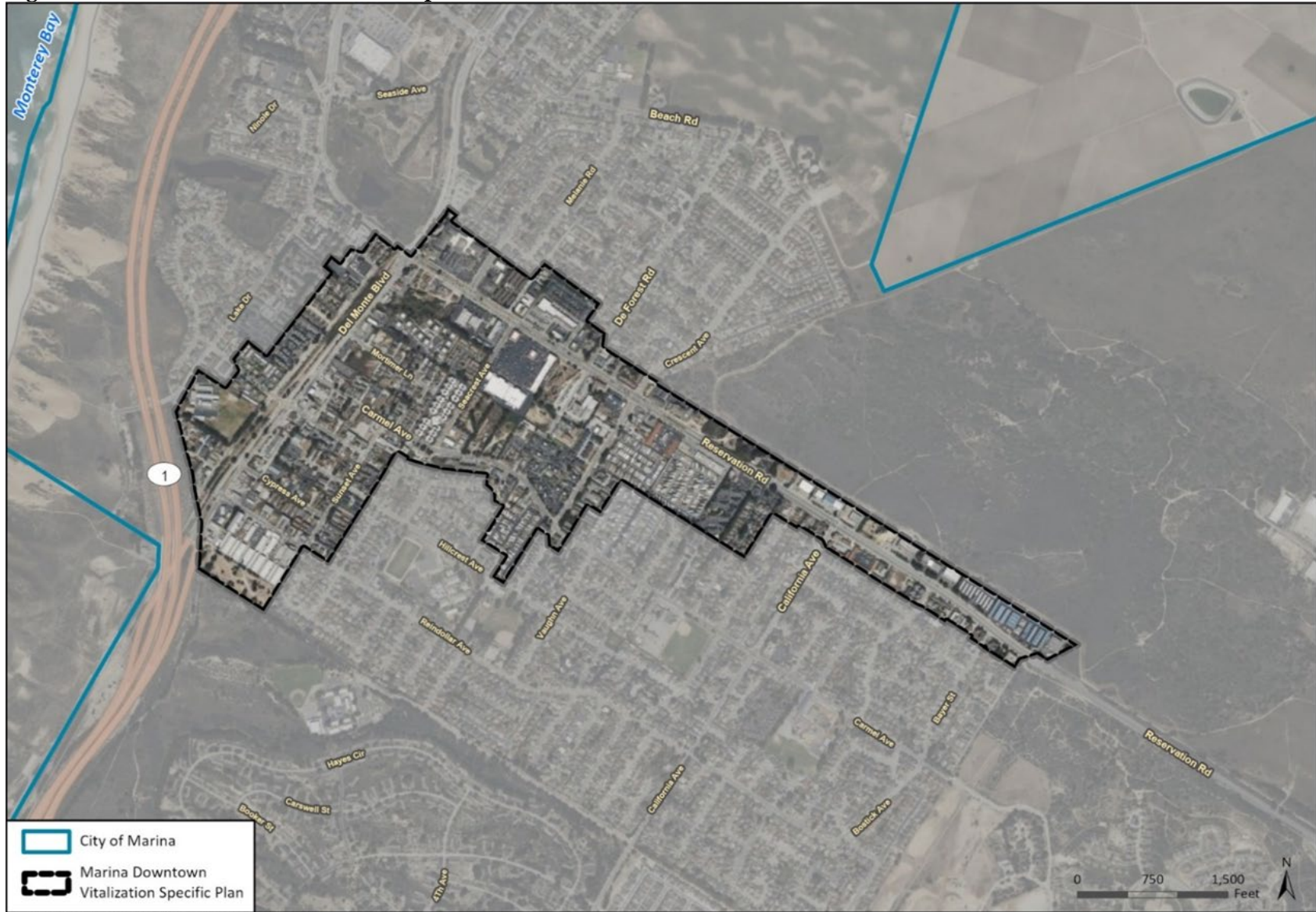
Community Development Director

Figure 1 Regional Location



Imagery provided by Microsoft Bing and its licensors © 2023.
Additional data provided by County of Monterey, 2020.

Figure 2 Downtown Vitalization Specific Plan Area



Imagery provided by Microsoft Bing and its licensors © 2023.

County of Monterey

HOUSING AND COMMUNITY DEVELOPMENT

Craig Spencer, Acting Director



HOUSING | PLANNING | BUILDING | ENGINEERING | ENVIRONMENTAL SERVICES

1441 Schilling Place South, 2nd Floor

Salinas, California 93901-4527

(831)755-5025

www.co.monterey.ca.us

November 20th, 2023

To: City of Marina, Community Development Department

Attn: Guido Persicone, MUP, AICP

Community Development Department

211 Hillcrest Avenue

Marina, CA 93933

Subject: Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and Scoping Meeting for the Downtown Vitalization Specific Plan Marina, CA

Dear Guido Persicone,

The County of Monterey appreciates the opportunity to comment on the City of Marina's Downtown Vitalization Specific Plan NOP.

In reviewing Marina's Downtown Vitalization Specific Plan, there may be potential impacts on County-owned public infrastructure and facilities. The County recommends that the Environmental Impact Report (EIR) evaluate potential impacts on surrounding County-maintained transportation infrastructure. In addition, due to the potential increase in housing units, the County would also recommend that included in the EIR is an analysis of the potential impacts of increased use of County-owned parks, particularly the Former Fort Ord Travel Camp.

Please feel free to contact me with any questions at 831.784.5730 or email pricet1@co.monterey.ca.us.

Sincerely,

Taylor Price, Associate Planner

Housing and Community Development

cc: County of Monterey Clearinghouse File REF230037
Melanie Beretti, AICP, Acting Chief of Planning



NATIVE AMERICAN HERITAGE COMMISSION

October 24, 2023

Guido Persicone
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Re: 2023100567, Downtown Vitalization Specific Plan Project, Monterey County

Dear Mr. Persicone:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

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

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.[AB 52](#)

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki,
Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Vacant

EXECUTIVE SECRETARY
**Raymond C.
Hitchcock**
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

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

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:

Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- a. A brief description of the project.
- b. The lead agency contact information.
- c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1 (b)).

- a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- a. Alternatives to the project.
- b. Recommended mitigation measures.
- c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- a. Type of environmental review necessary.
- b. Significance of the tribal cultural resources.
- c. Significance of the project's impacts on tribal cultural resources.
- d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
- b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

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

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
- b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
- c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

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

SB 18

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

Some of SB 18's provisions include:

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

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

NAHC Recommendations for Cultural Resources Assessments

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

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
 - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
 - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, § 15064.5(f) (CEQA Guidelines § 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code § 7050.5, Public Resources Code § 5097.98, and Cal. Code Regs., tit. 14, § 15064.5, subdivisions (d) and (e) (CEQA Guidelines § 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:
Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

cc: State Clearinghouse



November 20, 2023

Guido Persicone
Community Development Director
City of Marina
211 Hillcrest Avenue
Marina, California 93933

RE: Notice of Preparation of an Environmental Impact Report and Scoping Meetings for the Downtown Vitalization Specific Plan Marina, California

Dear Mr. Persicone:

Monterey-Salinas Transit District (MST) provides public transportation throughout Monterey County and operates an extensive bus network and transit hub (Marina Transit Exchange) in the City of Marina. MST is happy to see the City of Marina advancing the Downtown Vitalization Specific Plan and looks forward to being a community asset that will support the development and growth of a vibrant, people-focused downtown.

MST has reviewed the Notice of Preparation (NOP) and Initial Study (IS) of an Environmental Impact Report (EIR) for the Downtown Vitalization Specific Plan and would like to make the following comments for your consideration:

Transportation

It is crucial that the City's Downtown Vitalization Specific Plan area transform into a vibrant downtown that is pedestrian friendly and less dependent on single-occupant vehicles. MST recommends that the Specific Plan's EIR prioritize and create incentives for public transit and active transportation to mitigate the potentially significant impacts related to transportation.

MST's Existing and Future Services

The City of Marina is served by the Marina Transit Exchange, located in the center of the Specific Plan area along Reservation Road. MST operates four (4) existing routes in the Specific Plan area:

1. Line 17 Sand City - Marina via Gen Jim Moore
2. Line 18 Sand City - Marina via Monterey Road
3. Line 20 Monterey - Salinas
4. Line 61 Salinas - VA DOD Clinic

MST recommends that the EIR include a map of MST's routes and bus stops under the transportation chapter.

[Advocating and delivering quality public transportation as a leader within our community and industry.](#)

Transit District Members Monterey County • Carmel-by-the-Sea • Del Rey Oaks • Gonzales • Greenfield • King City • Marina • Monterey
Pacific Grove • Salinas • Sand City • Seaside • Soledad **Administrative Offices** 19 Upper Ragsdale Drive, Suite 200 Monterey, CA 93940

PH 1-888-MST-BUS1 (1-888-678-2871) • FAX (831) 899-3954 • WEB mst.org

The SURF! Busway and Bus Rapid Transit is part of MST's vision for connecting communities, creating opportunity, and being kind to our planet. The SURF! project plans for 15-minute service throughout weekdays with Zero Emission Buses (ZEBs). Marina Transit Exchange includes a new mobility hub in the Specific Plan area with bicycle and mobility amenities. The SURF! project will provide direct connections to businesses, education, housing, and job opportunities in the Specific Plan area, supporting a more walkable downtown. Construction is expected to begin in 2024 for a 2027 public debut.

Recommended Mitigation

MST encourages the City of Marina to consider pedestrian and bicycle infrastructure improvements along major corridors of the Specific Plan to enhance pedestrian safety. MST recommends installing high visibility crosswalks throughout the Specific Plan area and leading pedestrian interval phasing in the signalized intersections of Reservation Road and Del Monte Boulevard. Sidewalks also play a crucial role in providing safe access and circulation for all, especially transit passengers. MST recommends that all sidewalks in the Specific Plan area have a minimum width of 6-feet to meet the proper dimensions required by the Americans with Disabilities Act (ADA).

Transportation Demand Management (TDM) strategies help reduce automobile dependency and encourage public transit ridership and promote active modes of transportation. Examples of TDM strategies and programs are outlined in MST's Transit-Oriented Development Planning Study, which identifies opportunities to increase TOD by enhancing multimodal connections along the SURF! Project.

Examples of TDM measures include priced parking and regulation, free or reduced bus passes, vanpools, and bicycle parking and infrastructure, etc. MST offers a Group Discount Program that offers 31 Day MST Go Passes at a substantially reduced price. Downtown developments, residential or commercial, can participate in this discount program to incentivize the use of transit. MST has also partnered with Commute with Enterprise to provide vanpooling options for commuters in Monterey County. Enterprise provides the vehicle to each group comprised of a minimum of four (4) individuals. Vanpools can also receive \$450 monthly subsidy per vehicle from MST if they complete monthly ridership reports. MST recommends that the Project's EIR include MST's resources (stated above) to mitigate transportation impacts and incentivize transit use/vanpooling.

MST's Suggested Edits

MST submits the following comments pertaining to page 101 of the IS document: Page 101 - Please note that this statement should be edited as follows:

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~~, 17, 18, 20, and 61 ~~27~~, among others (MST ~~2019~~ 2023).

Closing

As the Specific Plan moves forward, we ask that the City of Marina continue to collaborate with MST to ensure that high-quality public transit is available in the City's downtown and for its residents. If you have any questions about the above comments, please do not hesitate to contact me at epatel@mst.org or 831-264-9288.

Sincerely,



Emma Patel
Planning Manager

November 16, 2023

City of Marina

Attn: Guido Persicone, Community Development Director

211 Hillcrest Avenue

Marina, CA 93933

Via email: gpersicone@cityofmarina.org

SUBJECT: Comments on Notice of Preparation of an Environmental Impact Report for the Downtown Vitalization Specific Plan in the City of Marina.

Dear Mr. Persicone:

The Transportation Agency for Monterey County (TAMC) is the Regional Transportation Planning and Congestion Management Agency for Monterey County. Agency staff reviewed the Notice of Preparation of an Environmental Impact Report (EIR) for the Downtown Vitalization Specific Plan and offers the following comments for your consideration:

1. TAMC supports the goals and policies listed in the Marina Downtown Specific Vitalization Plan – Mobility Chapter. The Mobility Chapter describes the city’s desire to envision a downtown that promotes an overall environment that encourages walking, bicycling, and other forms of alternative transportation. The Transportation Agency recommends for the Specific Plan to include language that would promote the connection to nearby regional bike paths such as improving connections to the Monterey Bay Scenic Trail and the Fort Ord Regional Trail and Greenway (FORTAG). FORTAG is near Downtown Marina through its proposed trail segment on California Avenue.

TAMC looks forward to providing comments on the environmental impact report. If you have any questions, please contact Aaron Hernandez of my staff at 831-775-4412 or aaron@tamcmonterey.org.

Sincerely,



Todd A. Muck

Executive Director



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



November 27, 2023

Guido Persicone, Community Development Director
Community Development Department, City of Marina
211 Hillcrest Avenue,
Marina, Monterey, California 93933
831-884-1281
gpersicone@cityofmarina.org

**Subject: Downtown Vitalization Specific Plan (Plan)
Notice of Preparation (NOP)
SCH No.: 2023100567**

Dear Guido Persicone:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) to prepare a Draft Environmental Impact Report (DEIR) from the City of Marina's Community Development Department (City of Marina) for the City of Marina Downtown Vitalization Specific Plan (Plan) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Plan that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Plan that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code. While the comment period may have ended, CDFW would appreciate it if you will still consider our comments.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & Game Code, Section 711.7, subd. (a) & 1802; Pub. Resources Code, Section 21070; CEQA Guidelines Section 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., Section 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing

Conserving California's Wildlife Since 1870

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 2

specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, Section 21069; CEQA Guidelines, Section 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, future projects tiered from this Plan may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & Game Code, Section 1600 et seq.). Likewise, to the extent implementation of future projects tiered from this Plan may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & Game Code, Section 2050 et seq.), related authorization as provided by the Fish and Game Code may be required.

PLAN DESCRIPTION SUMMARY

Proponent: City of Marina

Objective: The purpose of the Specific Plan is 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. 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 1,385,000 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 approximately 2,390,000 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.

Location: The Plan area is Downtown Marina located in the City of Marina. 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. 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 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.

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 3

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

Timeframe: Unspecified

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist the City of Marina in adequately identifying and/or mitigating the Plan's significant, or potentially significant, direct, indirect, and cumulative impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document for this Plan.

The NOP indicates that the DEIR for the Plan will consider potential environmental effects of the proposed Plan to determine the level of significance of the environmental effects and will analyze these potential effects to the detail necessary to make a determination on the level of significance. The DEIR will also identify and evaluate alternatives to the proposed Plan. When a DEIR is prepared, the specifics of mitigation measures may be deferred, provided the lead agency commits to mitigation and establishes performance standards for implementation.

To adequately assess any potential impact to biological resources, focused biological surveys should be conducted by a qualified biologist and/or botanist during the appropriate survey period(s) in order to determine whether any special-status species may be present within the vicinity of the planning area for all future projects tiered from this Plan. Properly conducted biological surveys, and the information assembled from them, are essential to identify necessary avoidance, minimization, and mitigation measures and/or the need for additional or protocol-level surveys, and to identify any project-related impacts under CESA and to other species of concern.

Special-Status Species

Based on aerial imagery and species occurrence records from the California Natural Diversity Database (CNDDDB) (CDFW 2023), the proposed Plan area is known to and/or has the potential to support special-status species, and these resources need to be evaluated and addressed prior to any approvals that would allow ground-disturbing activities. CDFW is concerned regarding potential impacts to special status species

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 4

including, but not limited to, the State endangered Seaside bird's-beak (*Cordylanthus rigidus ssp. littoralis*); the State threatened and federally endangered Monterey gilia (*Gilia tenuiflora ssp. arenaria*); the State threatened tricolored blackbird (*Agelaius tricolor*); the State candidate listed endangered Crotch's bumble bee (*Bombus crotchii*) and western bumble bee (*Bombus occidentalis*); and the State species of special concern burrowing owl (*Athene cunicularia*), coast horned lizard (*Phrynosoma blainvillii*), Monterey shrew (*Sorex ornatus salarii*), and Northern California legless lizard (*Anniella pulchra*).

Special Status Plants

Plants listed pursuant to the federal Endangered Species Act, CESA, and the Native Plant Protection Act (NPPA), as well as other special status plants identified by the California Native Plant Society Rare Plant Ranking System may occur in many locations within the Plan. State listed species with the potential to occur include but are not limited to the State endangered Seaside bird's-beak and State threatened and federally endangered Monterey gilia.

The revised initial study on page 40 states that, "no Federal or State listed plants were observed within the Specific Plan area." However, the field reconnaissance survey did not survey for special status plants during the appropriate bloom period. As such, CDFW recommends that a qualified botanist conduct a habitat assessment for any projects tiered from this Plan well in advance of project implementation to determine if the project area or its vicinity contains suitable habitat for special-status plant species. If suitable habitat is present, CDFW recommends that individual project sites be surveyed for special-status plants by a qualified botanist following the "Protocols for surveying and evaluating impacts to special status native plant populations and sensitive natural communities" (California Department of Fish and Wildlife 2018). This protocol, which is intended to maximize detectability, includes identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period.

If special-status plants are detected, CDFW recommends special-status plant species be avoided whenever possible by delineating and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then consultation with CDFW is warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species.

If a State-listed or NPPA rare plant species, such as the State endangered Monterey gilia, is identified during botanical surveys conducted as part of a project tiered from this Plan, consultation with CDFW is warranted to determine if the project can avoid take of that species. If take cannot be avoided, take authorization would need to occur through

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 5

issuance of an ITP pursuant to Fish and Game section 2081 subdivision (b) or California Code of Regulations, title 14, section 786.9, subdivision (b).

Crotch's Bumble Bee and Western Bumble Bee

The NOP states on page C-10, that the planning area has a low potential for these species due to lack of sightings recorded on CNDDDB. CDFW does not concur with this conclusion due to the CNDDDB being a positive occurrence database only, which can be reliable for determining presence of a species but unreliable as a primary source for concluding absence. For all future projects tiered from this Plan, CDFW recommends conducting a habitat assessment for Crotch's bumble bee (CBB) and Western bumble bee (WBB). If suitable habitat is present, CDFW recommends conducting protocol surveys following the "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species" (CDFW 2023). This survey protocol recommends conducting three onsite surveys during biological studies to document the presence or absence of this species. "Each survey should ideally be spaced 2-4 weeks apart during the Colony Active Period to ensure that they cover a range of dates and account for variability in resource use by the candidate species and floral resource phenology within the site" (CDFW 2023).

If CBB or WBB needs to be captured or handled as part of the survey effort, please note that a 2081(a) Memorandum of Understanding (MOU) with CDFW will be needed (CDFW 2023). If CBB or WBB is found at any point during surveys or during the construction of a project, consultation with CDFW is warranted to determine if the project can avoid take. If take cannot be avoided, take authorization is warranted prior to initiating or continuing with ground-disturbing activities to comply with CESA. Take authorization would occur through issuance of an Incidental Take Permit (ITP) by CDFW, pursuant to Fish and Game section 2081 subdivision (b).

Cumulative Impacts

Given that the Plan serves primarily as a planning tool and that future project-level CEQA documents are expected to be tiered from it, CDFW recommends that a cumulative impact analysis be conducted for all potential biological resources that will either be significantly or potentially significantly impacted by implementation of the this Plan, including those whose impacts are determined to be less than significant with mitigation incorporated or for those resources that are rare or in poor or declining health and will be impacted by the any future project, even if those impacts are expected to be relatively small (i.e. less than significant). CDFW recommends cumulative impacts be analyzed using an acceptable methodology to evaluate the impacts of past, present, and reasonably foreseeable future projects on resources and be focused specifically on the resource, not the project. An appropriate resource study area identified and utilized

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 6

for this analysis is advised. CDFW staff is available for consultation in support of cumulative impacts analyses as a trustee and responsible agency under CEQA.

California Endangered Species Act

Reasonably foreseeable future projects tiered from this Plan may be subject to CDFW's regulatory authority pursuant to CESA. In the event that species listed under CESA are detected during surveys for these projects, consultation with CDFW is warranted to discuss how to implement the project and avoid "take," or if avoidance is not feasible, to acquire a State ITP, pursuant to Fish and Game Code section 2081 subdivision (b), prior to any ground disturbing activities. In addition, CDFW advises that mitigation measures for the CESA listed species be fully addressed in the CEQA document prepared for any future project tiered from this Plan.

CDFW also recommends that the DEIR for this Plan include the CESA recommendations above and advises that projects tiered from this Plan retain a qualified biologist to determine if potential impacts to CESA listed species may require the need to obtain a 2081 ITP.

Lake and Stream Alteration

Reasonably foreseeable future projects tiered from this Plan may be subject to CDFW's regulatory authority pursuant to Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires project proponents to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake; or (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial in nature. For additional information on notification requirements, please contact our staff in the Lake and Streambed Alteration (LSA) Program at (559) 243-4593, or R4LSA@wildlife.ca.gov.

CDFW therefore recommends that the DEIR for this Plan include information related to these requirements of Fish and Game code and advise that projects tiered from this Plan retain a qualified biologist to determine if potential impacts to streams may require the need to obtain a 1600 LSA Agreement.

Nesting birds

CDFW recommends that all projects tiered from this Plan occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February 15 through September 15), each future

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 7

project applicant is responsible for ensuring that implementation of their project does not result in a violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes.

To evaluate future project-related impacts on nesting birds, CDFW recommends that a qualified biologist conduct an assessment of nesting habitat during biological surveys in support of each project's CEQA document, and then conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around each future project site to identify nests and determine their status. A sufficient area means any area potentially affected by a project. In addition to direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends having a qualified biologist continuously monitor nests to detect behavioral changes resulting from each future project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction areas would be concealed from a nest site by topography. CDFW recommends that a qualified biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

CEQA Alternatives Analysis

CDFW recommends that the information and results obtained from the cumulative impacts analysis conducted as part of this Plan's DEIR be used to develop and modify the Plan's alternatives to avoid and minimize impacts to biological resources to the maximum extent possible. Please note that for all future projects tiered from this Plan, when efforts to avoid and minimize have been exhausted, remaining impacts to sensitive biological resources may need to be mitigated to reduce impacts to a less than significant level, if feasible.

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 8

CNDDDB

Please note that the CNDDDB is populated by and records voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDDB but where there is suitable habitat and features capable of supporting species. A lack of an occurrence record in the CNDDDB does not mean a species is not present. All project's tiered from this Plan should adequately assess any potential project-related impacts to biological resources by ensuring biological surveys are conducted by a qualified wildlife biologist during the appropriate survey period(s) and using the appropriate protocol survey methodology as warranted in order to determine whether or not any special status species are present at or near the project area.

Federally Listed Species

CDFW recommends projects tiered from this Plan consult with the USFWS on potential impacts to federally listed species including, but not limited to Monterey gilia and Monterey spineflower (*Chorizanthe pungens var. pungens*) depending on the location of the project. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any ground disturbing activities.

Environmental Data

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, Section 21003, subd. (e).) Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

Filing Fees

The Plan, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 9

operative, vested, and final. (Cal. Code Regs, tit. 14, Section 753.5; Fish & G. Code, Section 711.4; Pub. Resources Code, Section 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist the City of Marina's Community Development Department in identifying and mitigating this Plan's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>). Please see the enclosed Mitigation Monitoring and Reporting Program (MMRP) table which corresponds with recommended mitigation measures in this comment letter. Questions regarding this letter or further coordination should be directed to Evelyn Barajas-Perez, Environmental Scientist, at (805) 503-5738 or evelyn.barajas-perez@wildlife.ca.gov.

Sincerely,

DocuSigned by:

Bob Stafford

5343A684FF02469...

Bob Stafford for Julie A. Vance
Regional Manager

ec: California Department of Fish and Wildlife
CESA R4CESA@wildlife.ca.gov
LSA R4LSA@wildlife.ca.gov

State Clearinghouse
Governor's Office of Planning and Research
State.Clearinghouse@opr.ca.gov

U.S. Fish and Wildlife Service
FWS steve_henry@fws.gov

Guido Persicone, Community Development Director
Community Development Department, City of Monterey
Page 10

REFERENCES

California Department of Fish and Wildlife. 2018. Protocols for surveying and evaluating impacts to special status native plant populations and sensitive natural communities. California Department of Fish and Wildlife, Sacramento, California, USA.

California Department of Fish and Wildlife. 2023. Survey considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species. California Department of Fish and Wildlife, Sacramento, California, USA.

Initial Study



Downtown Vitalization Specific Plan

Revised Initial Study

prepared by

City of Marina

Community Development Department

211 Hillcrest Avenue

Marina, California 93933

Contact: Guido Persicone, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.

80 Garden Road, Suite 240

Monterey, California 93940

October 2023



RINCON CONSULTANTS, INC.

Environmental Scientists | Planners | Engineers

rinconconsultants.com

Table of Contents

Initial Study.....	1
1. Project Title.....	1
2. Lead Agency/Sponsor Name and Address.....	1
3. Contact Person and Phone Number.....	1
4. Introduction.....	1
5. Project Location.....	2
6. Setting and Surrounding Land Uses.....	2
7. Project Characteristics.....	9
8. Project Description.....	10
9. Other Public Agencies Whose Approval is Required.....	16
Environmental Factors Potentially Affected.....	19
Environmental Checklist.....	21
1 Aesthetics.....	21
2 Agriculture and Forestry Resources.....	31
3 Air Quality.....	33
4 Biological Resources.....	41
5 Cultural Resources.....	49
6 Energy.....	59
7 Geology and Soils.....	65
8 Greenhouse Gas Emissions.....	73
9 Hazards and Hazardous Materials.....	91
10 Hydrology and Water Quality.....	95
11 Land Use and Planning.....	99
12 Mineral Resources.....	105
13 Noise.....	107
14 Population and Housing.....	119
15 Public Services.....	121
16 Recreation.....	125
17 Transportation.....	127
18 Tribal Cultural Resources.....	129
19 Utilities and Service Systems.....	131
20 Wildfire.....	135
21 Mandatory Findings of Significance.....	137
References.....	139
Bibliography.....	139
List of Preparers.....	147

Tables

Table 1	Existing Land Uses by Acreage in the Plan Area	3
Table 2	Existing and Maximum Land Use Buildout Projections	12
Table 3	Air Quality Thresholds of Significance	35
Table 4	Previous Cultural Resource Studies within 0.5-Mile of the Plan Area	51
Table 5	Previously Recorded Resources within 0.5-Miles of the Plan Area	54
Table 6	Construction Energy Usage.....	60
Table 7	Consistency with Marina General Plan Energy-Related Goals and Policies.....	63
Table 8	Residential and Office VMT Estimates ¹	78
Table 9	Pacific Gas & Electric Energy Intensity Factors	79
Table 10	Estimated Construction Emissions of Greenhouse Gases	81
Table 11	Combined Annual Emissions of Greenhouse Gases	82
Table 12	2022 Scoping Plan Consistency for GHG Emissions	83
Table 13	AMBAG 2045 MTP/SCS Consistency for GHG Emissions	85
Table 14	Marina General Plan Policy Consistency for GHG Emissions	87
Table 15	Specific Plan Land Use Densities.....	100
Table 16	Goals and Policies Comparison	102
Table 17	Project Vicinity Sound Level Monitoring Results	111
Table 18	City of Marina Allowable Noise Standards Measured in Ldn (dBA).....	113
Table 19	City of Marina Noise Standards for Stationary Sources.....	113
Table 20	Typical Construction Equipment Noise Levels.....	114
Table 21	Baseline and Future Traffic Volumes	115
Table 22	HVAC Noise Data.....	116
Table 23	Marina Population Projections	119
Table 24	Marina School Enrollment and Capacity.....	123

Figures

Figure 1	Regional Location.....	4
Figure 2	Downtown Vitalization Specific Plan Area	5
Figure 3	Existing General Plan Land Use Designations	6
Figure 4	Site Photographs.....	7
Figure 5	DVSP Zones	15
Figure 6	View of Locke-Paddon Wetland Community Park from Del Monte Boulevard.....	23
Figure 7	Site Photographs.....	25

Figure 8 Site Photographs.....26

Figure 9 Vegetation Communities and Land Cover Types43

Figure 10 Overview of Dates of Construction, by Decade56

Figure 11 Soil Types in the Specific Plan Area.....67

Figure 12 Faults in the Specific Plan Area68

Figure 13 Noise Measurement Locations110

Appendices

Appendix A City of Marina Downtown Vitalization Specific Plan

Appendix B Biological Resources Assessment

Appendix C Noise Analysis Data

Appendix D CalEEMod Modeling Outputs

Appendix E Marina Downtown Traffic Study

Appendix F Senate Bill 743 Analysis

Appendix G Energy Calculations

This page intentionally left blank.

Initial Study

1. Project Title

Downtown Vitalization Specific Plan

2. Lead Agency/Sponsor Name and Address

City of Marina
Community Development Department
209 Cypress Avenue
Marina, California 93933
831-884-1220

3. Contact Person and Phone Number

Guido Persicone
Community Development Director
gpersicone@cityofmarina.org
831-884-1289

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 established in the City of Marina General Plan, as well as the relevant 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 21,457 people (California Department of Finance 2022). 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.

Existing Land Use

Most land uses in Marina are residential (39 percent by area) or commercial (24 percent). Table 1 summarizes existing land uses by area in the DVSP area.

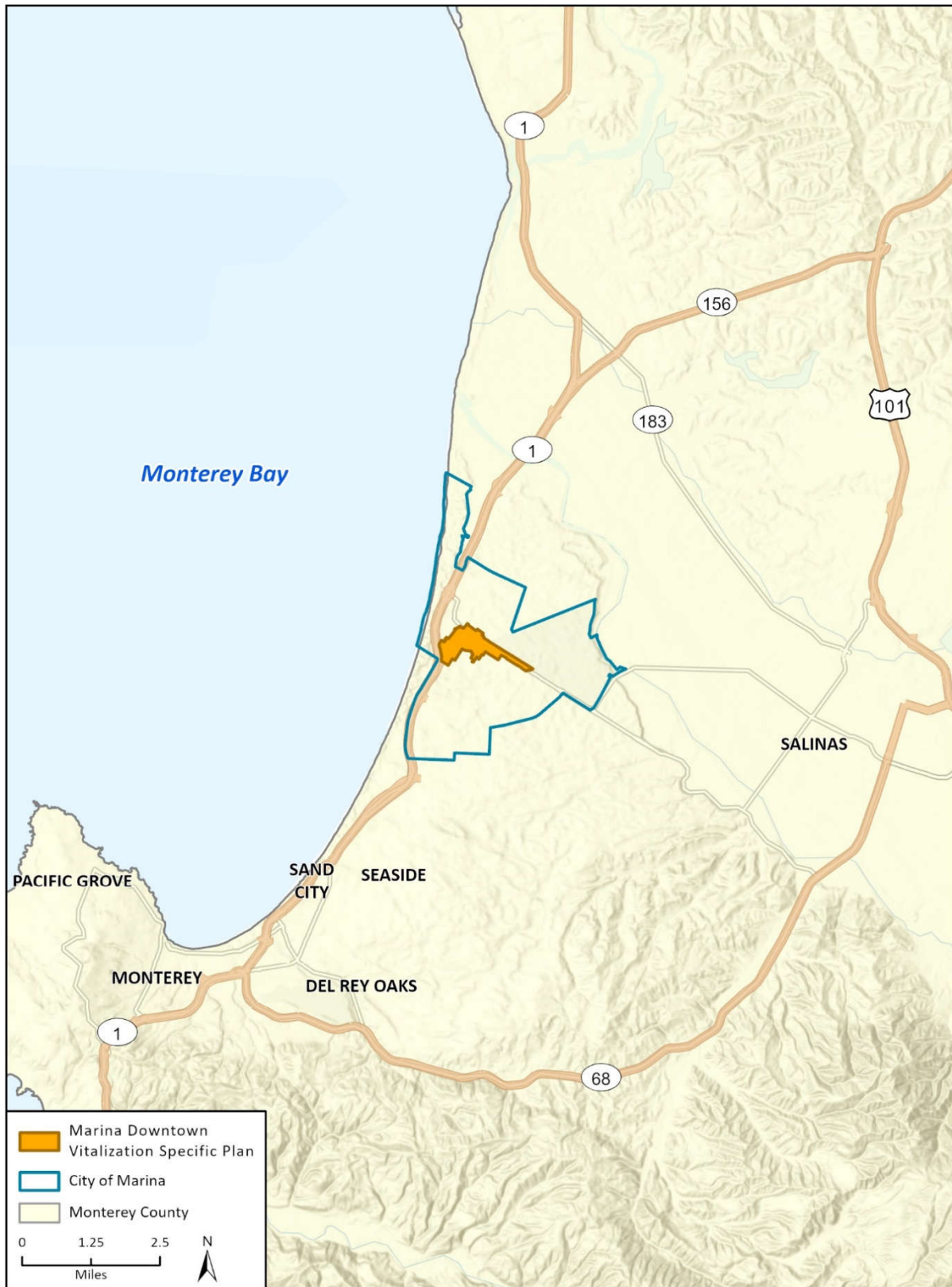
Table 1 Existing Land Uses by Acreage in the Plan Area

Land Use	Acres	Percent of Plan Area
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%

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.

Figure 1 Regional Location



Imagery provided by Microsoft Bing and its licensors © 2023.
Additional data provided by County of Monterey, 2020.

Figure 2 Downtown Vitalization Specific Plan Area

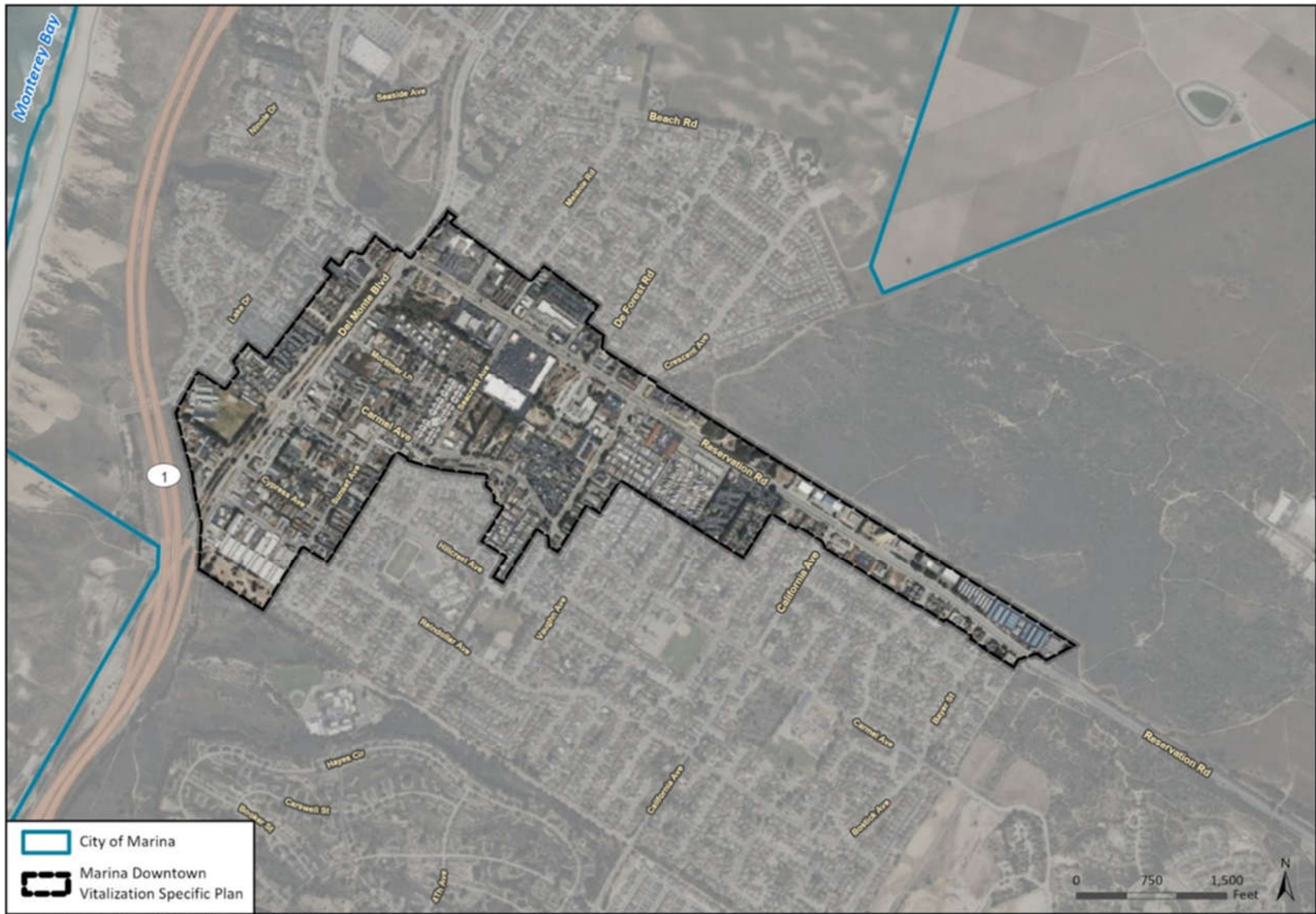
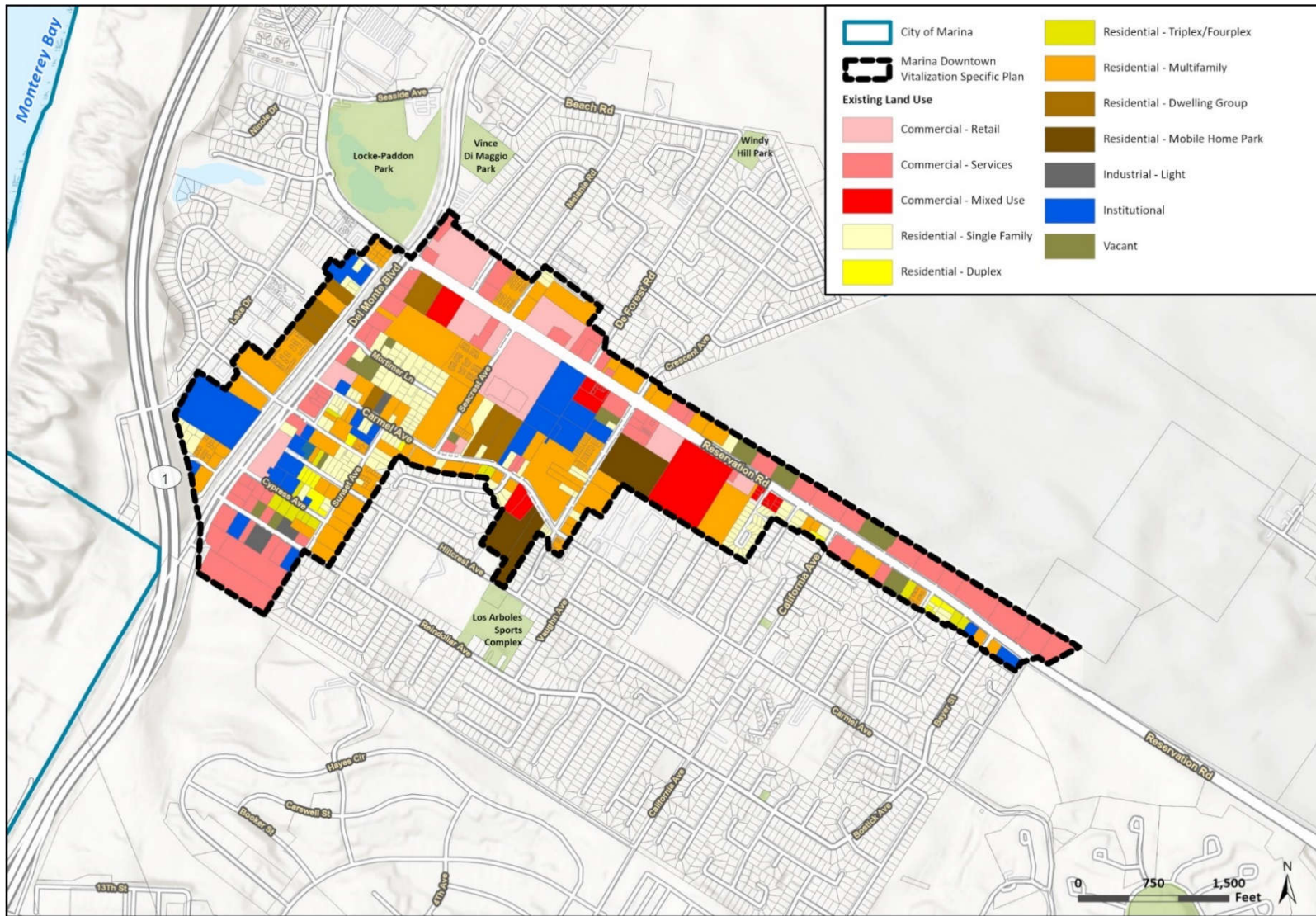


Figure 3 Existing General Plan Land Use Designations



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022.

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

Existing development in the Specific Plan area includes approximately 1,005,000 square feet of commercial uses and 2,301 dwelling units. Two-thirds of commercial uses are office-related, representing 16 percent of the total DVSP area. Approximately half of residential uses in the DVSP are multifamily, representing 22 percent of total land use, with the other half consisting of attached and detached single family homes. Remaining land uses in the DVSP area are split between institutional and civic uses, mixed uses, and light industrial. Approximately 2 percent of the DVSP area is vacant lots.

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-4, Multiple-Family Residential District
- SP, Specific Plan District
- SP/MST, Specific Plan/Industrial/Special Treatment District
- ST, Special Treatment District
- Affordable Housing Overlay

Mobility

Vehicle Network

Streets in the DVSP area reflect a focus on automobiles with wide travel lanes. Major roadways in the DVSP area include Del Monte Boulevard and Reservation Road, both four-lane arterial roadways, and California Avenue and Reindollar Avenue, both two-lane collector streets. Due to the limited amount of public right-of-way and dispersed roadway network within the Downtown area, vehicular transportation is the primary mode of transportation in the Plan area.

Pedestrian and Bicycle Network

While most collector and arterial roadways within the DVSP area have sidewalks, sidewalks along Del Monte Boulevard, Reservation Road, Reindollar Avenue, and Carmel Avenue are incomplete. Additionally, many sidewalks are too narrow to accommodate simultaneous pedestrian use or have obstructions that partially block pedestrian use.

The bicycle network in the Downtown area includes Class I (paths designated for the exclusive use of bicycle and pedestrian traffic) and Class II (striped bicycle lanes along a street) bikeways. The Monterey Bay Coastal Recreation Trail, accessible via the Downtown area, is a Class I bike path that extends 19 miles along the coast from Castroville to Pacific Grove. There are Class II bike lanes along Reservation Road, Crescent Avenue, and California Avenue. As noted in the DVSP and the City's

Pedestrian and Bicycle Master Plan, the bicycle network in Marina is limited and is not adequate to encourage drivers to use bicycles when commuting.

Transit

Marina and the Downtown area are served by Monterey-Salinas Transit (MST), with the existing MST facility along Reservation Road in the Downtown area known as the Marina Transit Exchange. MST routes currently serving Downtown Marina include:

- Sand City - Marina via Gen Jim Moore (Line 17)
- Sand City - Marina via Monterey Road (Line 18)
- Monterey - Salinas (Line 20)
- Salinas - VA DOD Clinic (Line 61)

MST is also developing a bus rapid transit system within the Monterey Branch Line railroad right-of-way, called SURF!. The SURF! Project would include a station within the DVSP area at the corner of Del Monte Boulevard and Palm Avenue, and is planned to open in 2027.

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. A Notice of Preparation accompanied by an Initial Study was prepared and circulated for public review in May 2021, but neither the DVSP nor the EIR were released for public review. The project is now proceeding with this revised Initial Study circulated with another Notice of Preparation.

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.

Downtown Vitalization Specific Plan Goals

The goals of the DVSP include:

- **Land Use and Development**—A community with a safe, walkable, and vibrant Downtown, that attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails.
- **Community Identity**—A Downtown that complements Marina’s 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.
- **Cultural Diversity**—a Downtown where people of all incomes, ages, abilities, races, and cultures feel like they belong.
- **Housing Affordability**—A variety of affordable, high-quality housing options for people to live in Downtown.
- **Environment and Sustainability**—Development in Downtown that employs green building technology, employs net zero building principles, and is designed to create more comfortable indoor and outdoor environments.
- **Economic Vitality**—An environment that attracts and sustains economic activity through innovation, business and social opportunities.
- **Mobility**—A Downtown with safe and efficient pedestrian and vehicular circulation that encourages people to gather, walk, bike, or use public transportation.
- **Public Facilities and Infrastructure**—Ensure that there are adequate public services and public utilities are provided for future development, and enhance the Downtown by planning for future public facilities.

8. Project Description

Intent

The DVSP is intended to guide the future development and ultimate transformation of the City’s 320-acre Downtown. The purpose of the DVSP is to create a unique and identifiable Downtown core for Marina that is vibrant and pedestrian oriented, and the plan will be an aspirational policy

document and regulatory tool used by the city of the next 20 years. In particular, the Specific Plan aims to reinvigorate the Downtown Marina economy and sense of place 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:

- **Executive Summary.** An overview of the Specific Plan.
- **Chapter 1 (Introduction).** Project background and the Specific Plan’s vision and guiding principles.
- **Chapter 2 (Setting and Existing Conditions).** A summary of Marina’s history and a description of existing conditions.
- **Chapter 3 (Downtown Vision).** Establishes the desired identity of Downtown Marina, considers opportunities and includes goals and policies associated with the identity of Downtown.
- **Chapter 4 (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 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 (Implementation).** A summary of guidance to facilitate desired development and implement a comprehensive vision for Downtown.
- **Appendix A: Development Code.** A set of procedures for the consistent promotion of high quality, well-designed development to be appropriately located throughout Downtown Marina.
- **Appendix B: Design Guidelines.** A set of design guidelines to provide additional direction for achieving the intended result of the policies of the Specific Plan and the Design Standards established in Appendix A.

Buildout

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 1,385,000 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 approximately 2,390,000 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 2 shows the existing and maximum buildout projections.

Table 2 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.

Placemaking Framework

The Specific Plan is intended to create a framework for the development of a vibrant Downtown Marina. The following goals outline the desired future conditions of the Specific Plan area:

- **Vibrant, Mixed Use Downtown.** The primary goal of the Specific Plan is to promote 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.
- **Transit-oriented Development.** By promoting high-density, mixed-use business and residential neighborhood centers, transit-oriented development is designed to be served by transit and be more walkable.
- **Housing Affordability.** The Specific Plan would encourage the development of multifamily housing which will both contribute to a lively neighborhood through residential development and support the City’s share of the Monterey Bay Area’s Regional Housing Need.
- **Economic Vitality.** The ultimate goal for Downtown Marina is to have a diversified economic climate that attracts offices and a variety of retail shops, restaurants, entertainment, and mixed uses.
- **Sustainability.** The Specific Plan seeks to establish and reinforce a compact development pattern with the intent to reduce the vehicle miles traveled by Marina residents.
- **Parks and Urban Forest.** The Specific Plan looks to facilitate the development of stormwater retention areas for recreational use, develop mini-parks within vacant land, and incentivize publicly-accessible private open space within Downtown.
- **Gateways, Wayfinding, and Signage.** The Specific Plan aims to make Downtown readily identifiable to residents and visitors by establishing gateways at key locations.
- **Public Art.** As Downtown develops, the Specific Plan intends to make public art a consideration for inclusion in public spaces with input from residents.

Land Use Designations and Intent

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, land use designations were established to allow for increased densities throughout the Downtown area. Districts include the Core, which would allow for residential densities of up to 70 units per acre; the Transition district and Mixed-Use Node, which would allow for up to 50 units per acre; and the Multifamily Residential district which would allow for up to 35 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 designated as Multifamily Residential, 377

(approximately 16 percent) are located in areas that would be designated as Transition or Mixed-Use, and 286 (approximately 13 percent) are located in areas that would be designated as 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 district is generally 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 intent of the Core district would be to permit and encourage higher density commercial and mixed-use development via a mix of different land use types, including office, retail, and service commercial uses along with multifamily residential uses. The Core is intended to become a vital economic center served by a variety of transportation modes, and compact development around the Marina Transit Exchange would be a guiding concept of this district.

Transition

The Transition district 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 intent of the Transition district would be to permit and encourage commercial, multifamily residential, and mixed-use development at about half the density of projects in the Core district. The Transition district would serve 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. The Transition district would encompass two prominent gateways to the city (east Reservation Road and the confluence of SR 1 and Del Monte Boulevard). It is intended that land uses would be visually interesting, with screened parking located behind or two the side of buildings and landscaped building setbacks.

Multifamily Residential

The Multifamily Residential district 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 intent of the Multifamily Residential district would be 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 would be proposed within the Multifamily Residential district.

Mixed-use Node

The Land Use Plan of the DVSP calls for the creation of a mixed-use node at the intersection of Reservation Road and California Avenue. This node, surrounded by the lower-intensity Transition district, 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, similar to the types of development envisioned in the Core district. The mixed-use node would contribute to a vibrant, urban atmosphere.

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

Design Guidelines

The DVSP would include a Development Code (Appendix A of the DVSP) and Design Guidelines (Appendix B of the DVSP) that provide objective design and development standards, intended to make the requirements that apply to certain eligible residential projects more predictable and easier to interpret. The purpose of the code and design guidelines is for development applications to know beforehand what requirements apply to a proposed development. The design and development standards outlined in the DVSP address design and planning characteristics, including:

- Building Location and Orientation
- Building Articulation, Massing, and Scale
- Architectural Elements
- Materials and Color
- Utility and Service Areas
- Circulation and Access
- Parking

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 the creation of smaller, more walkable blocks with mid-block crossings to increase access.

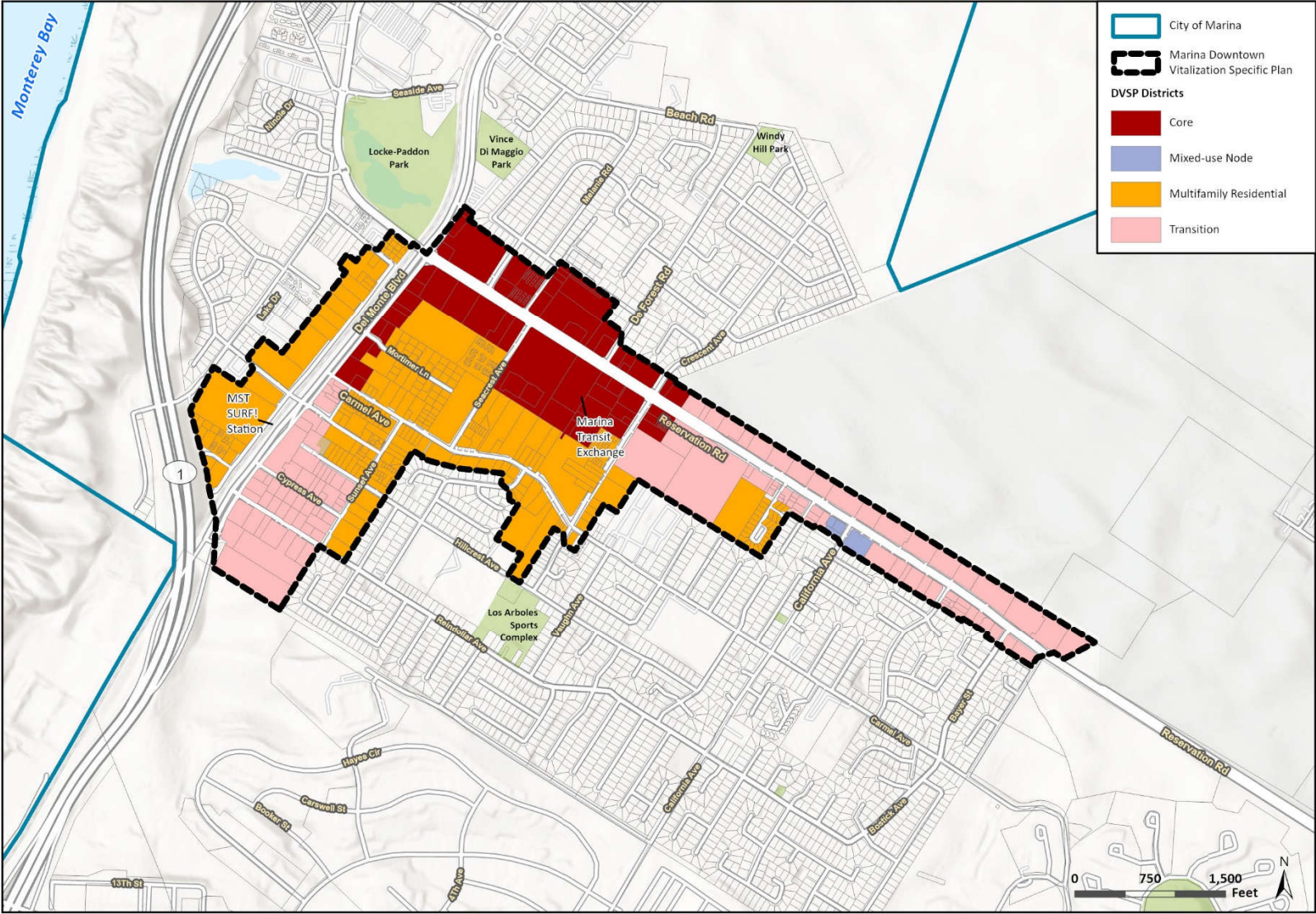
Wastewater

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).

Figure 5 DVSP Zones



Imagery provided by Esri and its licensors © 2023.
Additional data provided by the City of Marina, 2023.

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.

Gas/Electricity

Pacific Gas and Electric Company would provide natural gas service and electricity transmission, while Central Coast Community Energy (3CE) would supply electricity to the development in the Specific Plan area.

Mobility

The Specific Plan would strive to create a pedestrian-friendly Downtown core and would promote an active, engaged, human-oriented streetscape where the automobile is one of many modes to travel around Downtown. The DVSP calls for an investment in traffic calming measures, active transportation facilities and amenities, a holistic approach to parking management, and improved public transit service in Downtown. The DVSP would make several traffic improvements in the Downtown area, including clustering traffic signals in the Core district and constructing roundabouts at major intersections; implementation of protected bike lanes on Reservation Road; filling in gaps along incomplete sidewalks; narrowing vehicle travel lanes; and other improvements. The DVSP would also implement traffic calming measures to reduce vehicle speeds to promote a pedestrian-oriented environment.

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
- Zoning Map and Code 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.

This page intentionally left blank.

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.

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

This page intentionally left blank.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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] 2022). 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 2022, 4-10; AMBAG 2022, Appendix I Figure 16).

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 is served by MST routes 17, 18, 20, and 61 (MST 2023). Del Monte Boulevard is an arterial roadway that creates an eastern boundary for the Specific Plan area. The planned SURF! Project, as described in the *Project Description*, would include a station within the DVSP area at the corner of Del Monte Boulevard and Palm Avenue Although rapid transit does not currently

exist for the Plan area, it is reasonable to assume that with development, increased ridership will result in more frequent headways. The planned SURF! Project, once constructed, would further increase ridership and headways in the Plan area. 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 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 eligible to be designated as a 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 eligible to be designated as a 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.

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



Buildout of the 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).

Public views from roadways in the Plan area are of adjacent structures, parking lots, and minimal landscaping. Development in the Downtown area is currently 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). While these planning documents and design guidelines would still apply, future development in the Downtown area facilitated by the DVSP would be subject to the DVSP's Design Guidelines. The guidelines provide suggestions for exterior architectural designs, such as materials, awnings, and windows; parking locations; gateways and wayfinding signs; street furnishings, public art, and design of public spaces; and landscaping and tree planting.

The design guidelines established by the Specific Plan support establishing a character for the Plan area in keeping with Chapter 17.56 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.

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

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 districts: Core, Multifamily Residential, and Transition. The Core district would be located at the intersection of Del Monte Boulevard and Reservation Road and would provide higher densities of commercial, retail and office development. The Multifamily Residential district would be 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 Boulevard, as well as adjacent to Ocean Terrace south of Reservation Road. The Transition district 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 would be 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 district. 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 17.62 et seq., including the tree removal permit process specified in Section 17.62.060.

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 Marina Municipal Code and Zoning Ordinance, the DVSP design guidelines, 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 DVSP Design Guidelines would encourage the use of lighting that both provides safety and protects nighttime views. The Design Guidelines state that lamps shall be directed down and shall be shielded to provide sufficient light while not generating excessive glare. Additionally, streetlight poles shall be no taller than 15 feet on local streets and 25 feet on arterial roads. 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 17.46.130 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 DVSP Design Guidelines and 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

This page intentionally left blank.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 PM₁₀ (particulate matter measuring 10 microns in diameter or less) standard and nonattainment-transitional for the state one-hour and eight-hour ozone standards. The NCCAB is in attainment or unclassified for all other federal and state standards (MBARD 2017).

Air Quality Management

Because the NCCAB is designated as nonattainment for the state ozone and PM₁₀ 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 programs. The 2015 AQMP only addresses attainment of the state eight-hour ozone standard because in 2012, the United States Environmental Protection Agency (USEPA) designated the NCCAB

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.

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).

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; or²
- 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.

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; PM₁₀ = 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; SO₂ = 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 PM₁₀ 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 PM₁₀ 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

² 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).

Carbon Monoxide

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 (California Air Resources Board [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.

Toxic Air Contaminants

A toxic air contaminant (TAC) is an air pollutant that may cause or contribute to an increase in mortality or serious illness or which may pose a present or potential hazard to human health. TACs may result in long-term health effects such as cancer, birth defects, neurological damage, asthma, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation, runny nose, throat pain, and headaches. TACs are considered either carcinogenic or non-carcinogenic based on the nature of the health effects associated with exposure. For carcinogenic TACs, potential health impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Non-carcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

TACs include both organic and inorganic chemical substances. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as DPM; however, TACs may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities.

In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels. The Children's Environmental Health Protection Act, California Senate Bill (SB) 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air quality monitoring network, and develop any additional air toxic control measures needed to protect children's health.

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 district. The DVSP also includes a Mixed-Use Node 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 7,696 new residents. The current population of Monterey County is estimated at 433,716 (California Department of Finance 2022). 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 F), 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 444,695 persons (433,716 + 7,696 + 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).³ 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. 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?*

The project would facilitate an increase in buildout and population within the DVSP area. The operation of new development and increased vehicle traffic within the DVSP area could result in potentially significant impacts related to criteria pollutant emissions exceeding MBARD thresholds. Checklist item b will be analyzed in detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

- 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 Lone Olson Elementary School.

³ 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.

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 E 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 B. 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.

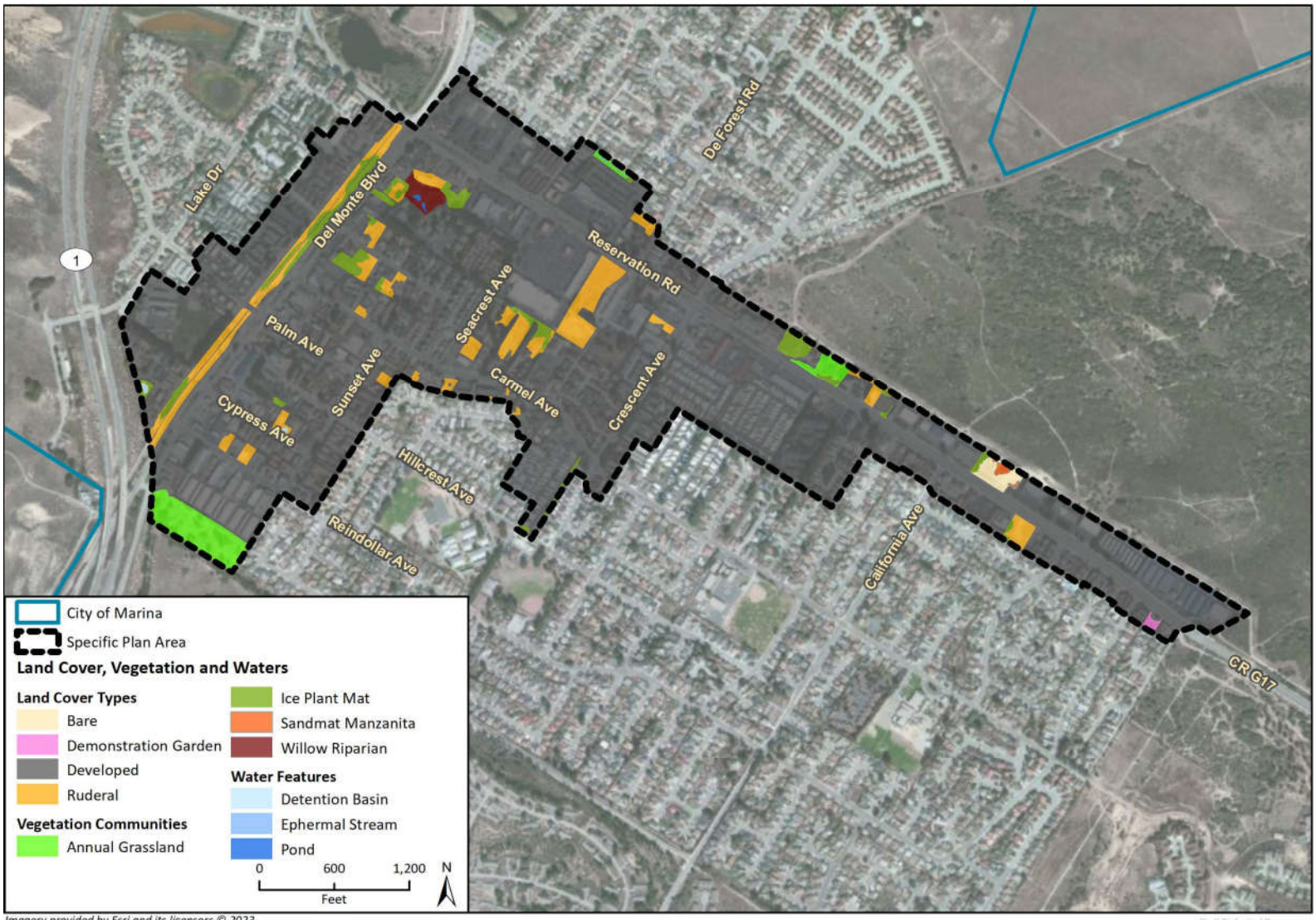
The majority of the Plan area is developed, including paved roads, sidewalks, parking lots, buildings, and basketball courts. Vegetation in this land cover type consists of primarily non-native ornamental plantings in lawns, park strips, parking lots, commercial parks, baseball fields, etc. Tree species 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 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 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?*

As described above under *Special Status Species*, there are 11 special status plant species and seven special status animal species that could potentially occur within the DVSP area. Development facilitated by the DVSP could result in direct or indirect substantial adverse effects to these species, which would potentially be significant under CEQA without mitigation. Checklist item (a) will be analyzed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

- 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 9. 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?*

As described above under *Potentially Jurisdictional Features*, there are potentially jurisdictional stormwater features and one potentially jurisdictional pond within the DVSP area. Development facilitated by the DVSP could result in substantial adverse effects to these features, and impacts to waters of the state or waters of the U.S. could be potentially significant and could require regulatory permitting. Checklist item c will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

- 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

This page intentionally left blank.

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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

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:

Downtown Vitalization Specific Plan

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, and received the results of an updated records search of the NWIC on August 10, 2022. Both records searches were completed for the DVSP Area and a 0.5-mile radius buffer. The searches were 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 29 cultural resources studies conducted within a 0.5-mile radius of the Plan area (Table 4). Of these 29 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 4 Previous Cultural Resource Studies within 0.5-Mile of the Plan Area

Report Number	Author	Year	Title	Relationship to Plan Area
S-003345	T. Weber and A. Peak	1976	<i>Monterey Peninsula Regional Wastewater Treatment System Expansion Project</i>	Within
S-003345a	A. Peak	1976	<i>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)</i>	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	<i>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</i>	Outside
S-003418	Unknown	1978	<i>Cultural Resource Assessment of the Proposed Effluent Disposal System, Fort Ord, Monterey County, California</i>	Within
S-014001	A. Runnings and G. Breschini	1992	<i>Preliminary Cultural Resources Reconnaissance for the MPWMD Desalinization Pipeline, Monterey County, California</i>	Within
S-022657	I. Sawyer, L. Pfeiffer, K. Rasmussen, and J. Berryman	2000	<i>Phase 1 Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project</i>	Within
S-028253	A. Kirk	2004	<i>Crescent Avenue Widening Project, City of Marina, Monterey County, California</i>	Within
S-028506	M. Doane	2004	<i>Negative Archaeological Survey Report for the Crescent Avenue Widening Project Between Reservation Road and Carmel Avenue in Marina, Monterey County, California</i>	Within
S-032596	R. Milliken, J. King, and P. Mikkelsen	2006	<i>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</i>	Within
S-033677	M. Doane and T. Haversat	1999	<i>Preliminary Archaeological Reconnaissance of the Marina Coast Water District Recycled Water Pipeline Project, Monterey County, California</i>	Outside
S-033677a	M. Doane and T. Haversat	2006	<i>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</i>	Outside

City of Marina
Downtown Vitalization Specific Plan

Report Number	Author	Year	Title	Relationship to Plan Area
S-033677b	M. Doane and G. Breshini	2007	<i>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)</i>	Outside
S-033677c	M. Doane and G. Breshini	2006	<i>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</i>	Within
S-033677d	M. Doane and G. Breshini	2007	<i>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</i>	Outside
S-033677e	M. Doane and G. Breshini	2007	<i>Preliminary Archaeological Reconnaissance for the Marina Coast Water District Well 34 Project, In Marina, Monterey County, California</i>	Outside
S-035072	M. Doane and G. Breshini	2008	<i>Preliminary Archaeological Reconnaissance for APN 032-201-004, Marina, Monterey County, California</i>	Within
S-037725	A. Ruby	2010	<i>Archaeological Survey Report for the Monterey Light Rail Transit Project</i>	Within
S-040329	H. Haas, K. Hunt, and R. Ramirez	2012	<i>Phase I Cultural Resources Survey for the Reservation Road Bikeways and Pathways Reconstruction Project Marina, Monterey County, California</i>	Outside
S-045010	A. Pilling	1949	<i>Tulare Indians at Monterey: Ethnographic notes collected by A.R. Pilling</i>	Within
S-045823	M. Doane and G. Breshini	2014	<i>Phase I Archaeology Survey for the Proposed Monterey Peninsula Groundwater Replenishment Project, Northern Monterey County, California</i>	Within
S-047264	Michael A. Way	2011	<i>Cultural Resources Analysis, Marina Post Office Property, Crescent Avenue, Marina, Monterey County, California 93933, EBI Project No. 61114596</i>	Outside
S-047264a	C. Roland-Nawi	2015	<i>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</i>	Within
S-047264b	T. Szymanis	2015	<i>RE: HUD-Funded HOME Project; Section 106 Consultation</i>	Outside

Report Number	Author	Year	Title	Relationship to Plan Area
S-048927	D. Crull	1997	<i>The Economy and Archaeology of Europeanmade Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California and Washington</i>	Within
S-049322	H. Koenig	2017	<i>Cultural Resources Survey Report, Monterey Peninsula Water Supply Project, Monterey County, California</i>	Outside
S-049322a	P. Michel and J. Polanco	2017	<i>NOAA_2017_0403_001, Section 106 Consultation for the Monterey Peninsula Water Supply Project, Monterey County, California</i>	Outside
S-049762	G. Breshini	2017	<i>Preliminary Archaeological Assessment of Assessor's Parcel 032-171-018, Marina, Monterey County, California</i>	Within
S-053052	H. Koenig	2018	<i>Cultural Resources Survey and Assessment, Monterey Bay Opportunistic Beach Nourishment Program</i>	Outside

Source: NWIC 2019, 2022

The NWIC records search conducted for this effort identified 10 previously recorded cultural resources within a 0.5-mile radius of the Plan area; these are listed in Table 5. 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 in 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 5 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-27-001325	CA-MNT-001288H	Historic-period Site	Marina Beach #2	1984 (Lynn Furnis and Carlys Gilbert); 2016 (Brittney Biasi and Rae Schwaderer)	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 August 23, 2022, Rincon contacted the Native American Heritage Commission (NAHC) and requested a search of the Sacred Lands File (SLF) for the DVSP area. The NAHC emailed a response on October 4, 2022 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.

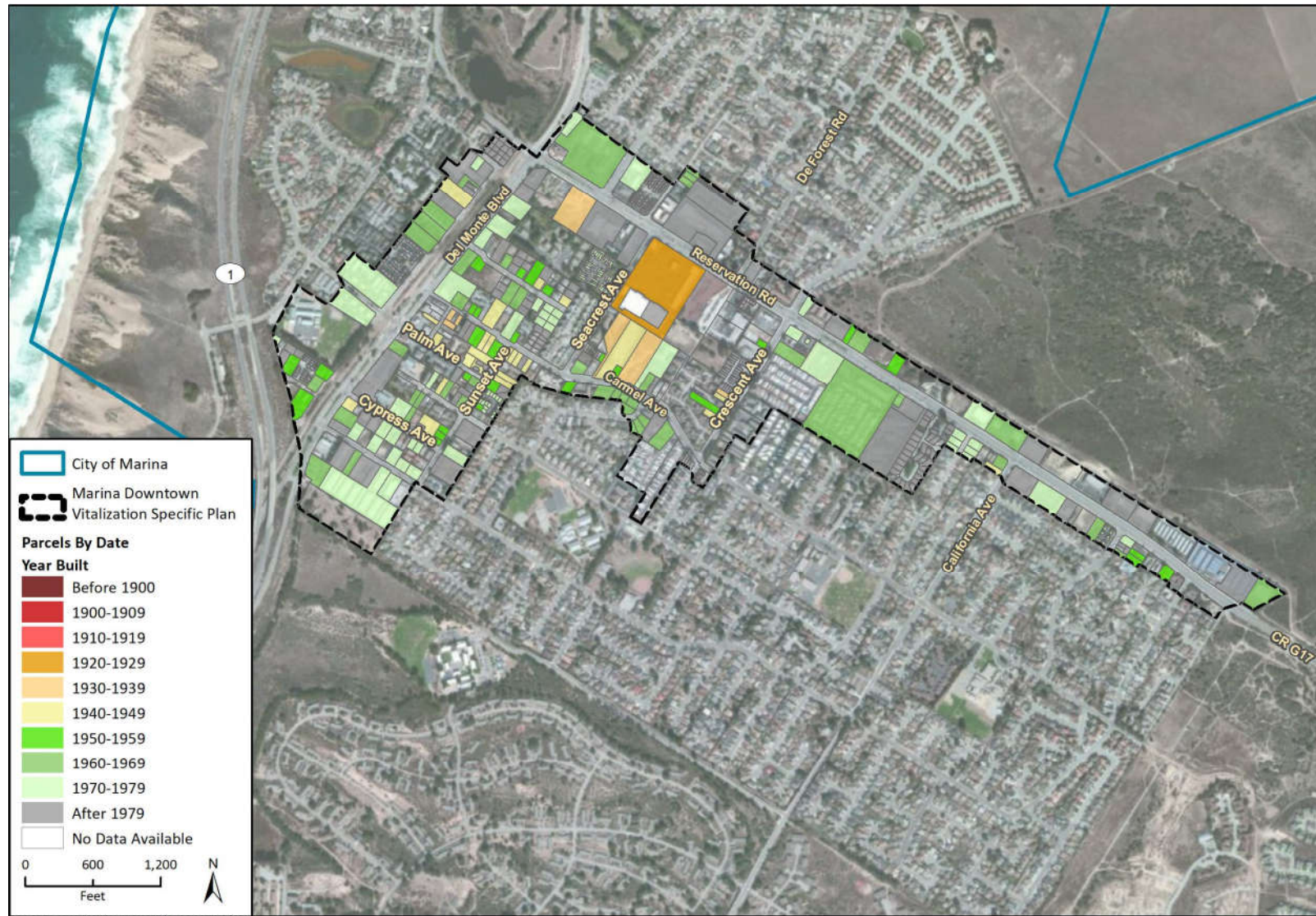
Developmental History of the Specific Plan Area

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 10, 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.

Figure 10 Overview of Dates of Construction, by Decade



- 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 could have a significant impact on historical resources, if such activities would cause a substantial adverse change in the significance of a historical resource. Impacts would be potentially significant. Checklist item a will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

- 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. This impact could result in potentially significant impacts. Checklist item b will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

- 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

This page intentionally left blank.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

California is one of the lowest per capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2020). According to the California Energy Commission (CEC), California consumed 279,510 gigawatt-hours (GWh) of electricity and 12,331 million U.S. therms of natural gas in 2020 (CEC 2020a; 2020b). In addition, Californians consume approximately 18.8 billion gallons of motor vehicle fuels per year (Federal Highway Administration 2021). The single largest end-use sector for energy consumption in California is transportation (34.0 percent), followed by industry (24.6 percent), residential (21.8 percent), and commercial (19.6 percent) (EIA 2020).

Most of California's electricity is generated in-state with approximately 34 percent imported from the northwest and southwest regions of the country in 2021. In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass (CEC 2021). 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.

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 a measure that addresses energy resources, which 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 6 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 4,797,974 gallons of gasoline and 3,747,763 gallons of diesel fuel, or 1,004,441 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 6 Construction Energy Usage

Source	Fuel Consumption (Gallons)	
	Gasoline	Diesel
Construction Equipment & Hauling Trips	–	3,747,763
Construction Worker Vehicle Trips	4,797,974	–

Source: Appendix G

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 2022 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 G 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. 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 promote an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” 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 several 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 27,058,914 kWh, or 92,325 MMBtu of electricity per year for lighting and large appliances, and approximately 94,566 MMBtu of natural gas per year for heating and cooking (see Appendix D for CalEEMod results). Construction of the proposed residential and non-residential buildings would comply with the 2022 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, Goal LU-5 of the DVSP intends support innovation in design and employ green building technology and “net zero” building principles. 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, Central Coast Community Energy, 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

Downtown Vitalization Specific Plan

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

Table 7 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 7 Consistency with Marina General Plan Energy-Related Goals and Policies

Marina General Plan Goal/Policy	Discussion
<p>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:</p> <p>6. A balanced land use/transportation system which minimizes traffic congestion, noise, excessive energy consumption, and air pollution.</p>	<p>Consistent. Policy LU-1.7 included in the DVSP Land Use and Development Chapter aims to “encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area.” 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 promote an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” 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 Marina Transit Exchange, which houses stops for several bus routes. Therefore, the DVSP would create a balanced land use/transportation system that would minimize excessive energy consumption.</p>
<p>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:</p> <p>10. New housing shall be built to development and construction standards that conserve water and energy.</p>	<p>Consistent. The DVSP Land Use and Development Chapter includes Goal LU-5, Environment and Sustainability, which promotes “a Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.” This goal is supported by Policy 5.2, which states “In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.” This goal and policy are also 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 2022 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.</p>

Source: City of Marina 2010

NO IMPACT

This page intentionally left blank.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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 11).

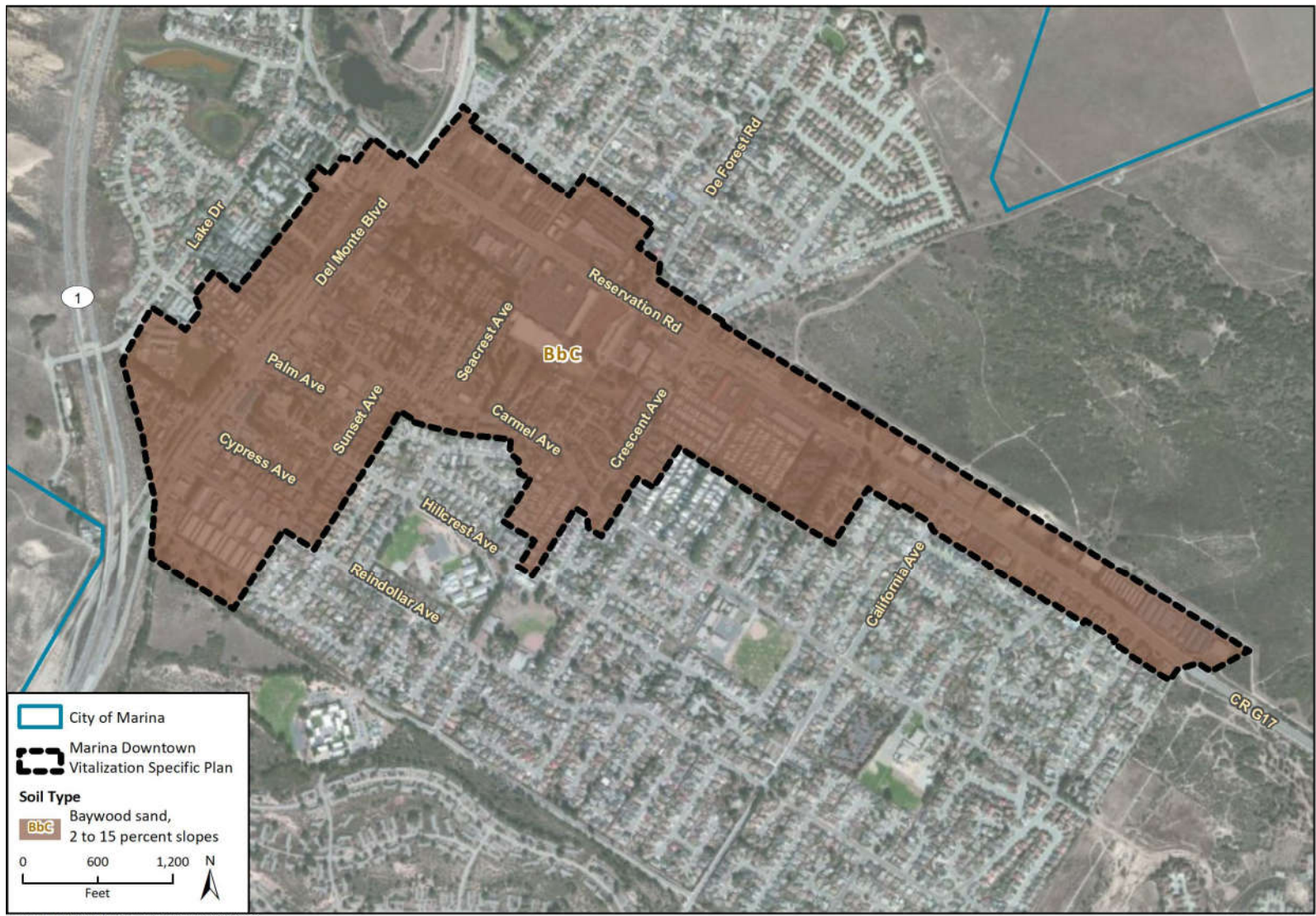
Marina is situated in the central portion of the California Coast Ranges. A large, northwest trending, fault-bounded elongate of prism of granitic and metamorphic basement rocks underlie the City and are known collectively as the Salinian Block. Overlying the granitic and metamorphic basement rocks is 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 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 12). 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.

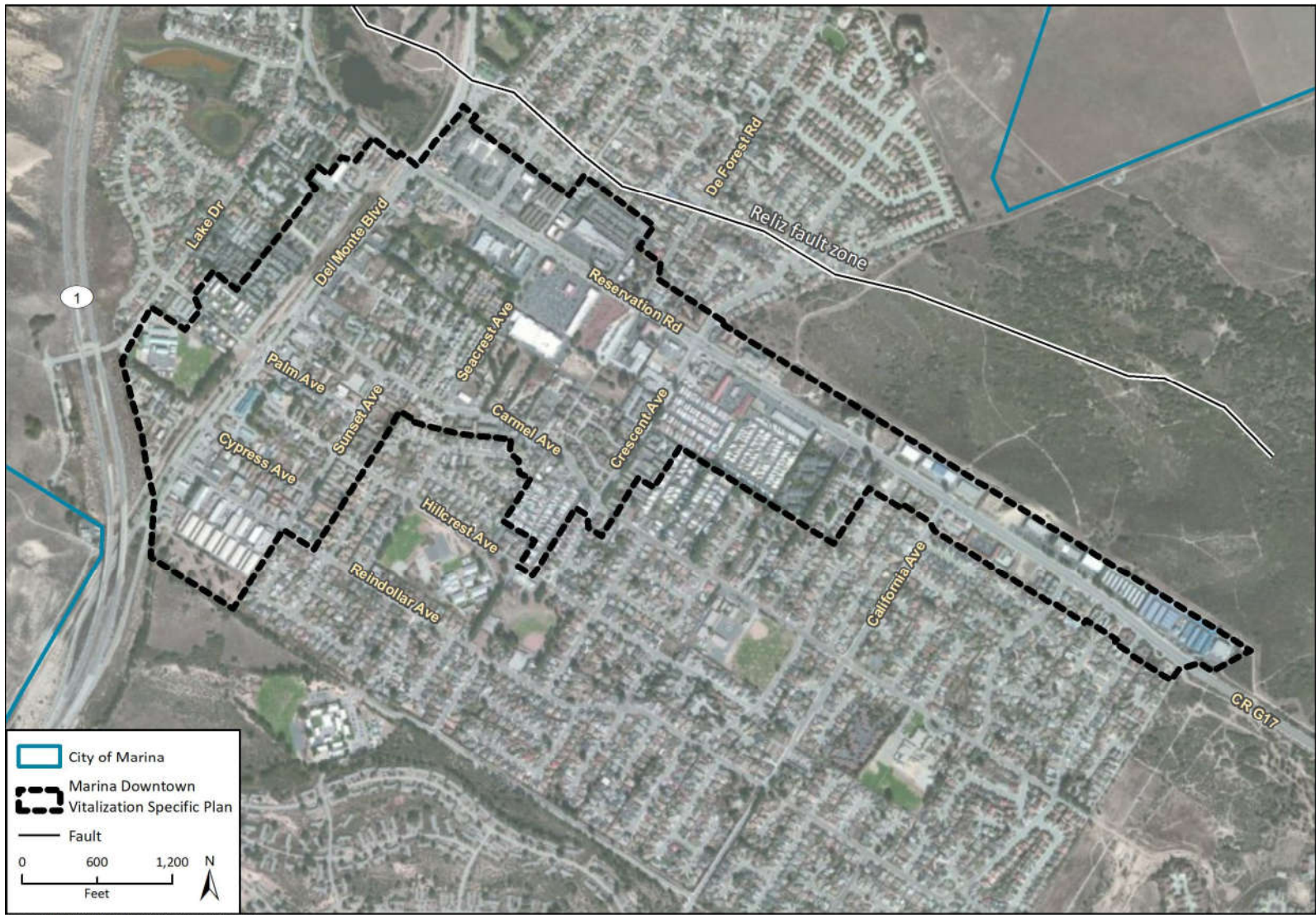
Figure 11 Soil Types in the Specific Plan Area



Imagery provided by Esri and its licensors © 2023.
 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_20230330

Figure 12 Faults in the Specific Plan Area



Imagery provided by Esri and its licensors © 2023.
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 9 Fault Zones_20230310

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 12, 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 12, 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 2022 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 2022 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 11). 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 (United States Department of Agriculture 2014).

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?*

Ground disturbing activities associated with development facilitated by the Specific Plan could directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. Impacts could be potentially significant and checklist item (f) will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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.

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 (CO₂), methane (CH₄), nitrous oxide (N₂O), 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, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Anthropogenic GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆.

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. 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.

Regulatory Setting

California Global Warming Solutions Act of 2006 (Assembly Bill 32, and Senate Bill 32, and Assembly Bill 1279)

The “California Global Warming Solutions Act of 2006,” (Assembly Bill [AB] 32), outlines California’s major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 million metric tons (MMT) of carbon dioxide equivalents (CO₂e), which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2009). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan’s approval.

The CARB approved the 2013 Scoping Plan update in May 2014 (CARB 2014). The update defined the CARB’s climate change priorities for the next five years, set the groundwork to reach post-2020 statewide goals, and highlighted California’s progress toward meeting the “near-term” 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the state’s longer term GHG reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the state to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 and SB 100 (discussed later). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six MT CO₂e by 2030 and two MT CO₂e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses

(city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

AB 1279, “The California Climate Crisis Act,” was passed on September 16, 2022 and declares the State would achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states that the State would reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The 2022 Scoping Plan lays out a path to achieve AB 1279 targets (CARB 2022). The actions and outcomes in the 2022 Scoping Plan would achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

Methodology and Significance Thresholds

Significance Thresholds

Based on Appendix G of the CEQA Guidelines, impacts related to GHG emissions from the proposed project would be significant if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. As a result, the issue of climate change typically involves an analysis of whether a project’s contribution towards an impact would be 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]).

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, including the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies or suggested by other experts, as long as any threshold chosen is supported by substantial evidence (see *CEQA Guidelines* Section 15064.7[c]). The *CEQA Guidelines* also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA’s requirements for cumulative impact analysis (see *CEQA Guidelines* Section 15130[f]). As a note, the *CEQA Guidelines* were amended in response to SB 97. In particular, the *CEQA Guidelines* were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Pursuant to *CEQA Guidelines* Section 15064(h)(3), a project’s incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem in the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a “water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of GHG emissions (*CEQA Guidelines* Section 15064(h)(3)).” Therefore, a lead agency can make a finding of less-than-significant for GHG emissions if a project complies with adopted programs, plans, policies, and/or other regulatory strategies to reduce GHG emissions.

Neither the City of Marina, MBARD, Monterey County, nor any other State or applicable regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the project. Therefore, the project’s potential impacts related to GHG emissions will be determined by evaluating the project’s consistency with plans and policies adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. GHG emissions associated with the proposed project are estimated below for informational purposes only.

In the absence of a CEQA-qualified greenhouse gas reduction plan, the state recommends determining whether a proposed residential or mixed-use residential development would align with the 2022 Scoping Plan by assessing if the project is consistent with all the key project attributes identified in Table 3 of Appendix D of the 2022 Scoping Plan. Attributes identified by Table 3 of Appendix D of the 2022 Scoping Plan and the project’s consistency with these attributes are shown in Table 12. According to the 2022 Scoping Plan “Projects that have all the key project attributes should accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals” (CARB 2022a). The 2022 Scoping Plan states that “Lead agencies may determine, with adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State’s climate goals” (CARB 2022).

Methodology

GHG emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod) version 2022.1.9 CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The input data and subsequent construction and operation emission estimates for the proposed project are summarized below and detailed in Appendix D.

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. Construction equipment that would generate GHG emissions 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 D. 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”⁴ in CalEEMod by including the use of low-VOC flat paint (50 grams per liter [g/L]).

Air districts such as SLOAPCD (San Luis Obispo Air Pollution Control District; the air district immediately adjacent to the MBARD to the south) 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

Operational emissions were estimated for the net increase in development under the DVSP, which is summarized in Table 2. 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 using the forecast net new vehicle miles

⁴ 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.

traveled (VMT) estimates for residential and office land uses provided in the SB 743 Analysis prepared by Kimley Horn (Appendix F). As shown in Table 8, based on the SB 743 analysis, the proposed project would result in approximately 89,037 net new daily VMT, or 32,498,505 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.

Table 8 Residential and Office VMT Estimates¹

Metric	Existing Conditions	Existing plus Project Conditions	Net Change
Residential VMT			
Dwelling Units ¹	4,707	7,611	+2,904
Number of Residents ²	12,474	20,169	+7,272
Daily VMT per Capita ¹	12.7	11.7	-1.0
Total Daily VMT ³	158,414	235,979	+77,565
Office VMT			
Employment ¹	1,364	2,897	+1,533
Daily VMT per Employee ¹	8.5	8.0	-0.5
Total Daily VMT ⁴	11,594	23,176	+11,582
Summary			
Total Daily VMT (Residential + Office)	170,008	259,155	89,147

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 F)

² Assumes an average of 2.65 persons per household in Marina (DOF 2022)

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

⁴ Calculated by multiplying employment by daily VMT per employee

As discussed in the *Project Description*, the DVSP has a planning horizon of approximately 20 years. 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 (California Energy Commission 2022). 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) in compliance with Section 110.10 of the 2022 Building Energy Efficiency Standards. 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).⁵ 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.

Central Coast Community Energy (3CE), 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 3CE and connect to Pacific Gas and Electric (PG&E), which does not provide carbon-free electricity to all customers. According to 3CE, approximately 97 percent of accounts in their service area maintain their enrollment in 3CE; the remaining 3 percent of accounts opt out and connect to PG&E (3CE 2022). Because 3CE procures a greater percentage of its electricity from renewable sources, electricity generated by 3CE 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 3CE 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 D based on the emission calculation methodology used in CalEEMod (CAPCOA 2017, Appendix A).

3CE's energy intensity factor for CO₂ (i.e., the amount of CO₂ per megawatt-hour [MWh]) is approximately 2 pounds per MWh (3CE 2023). Due to a lack of available data, it was conservatively assumed that the energy intensity factors for CH₄ and N₂O would be the same as those for PG&E in 2040, which are further detailed below and in Table 9.⁶ Because 3CE 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 CO₂, CH₄, and N₂O per MWh) for 2040 are based on the CalEEMod default factors and the regulatory requirements of the RPS. PG&E energy intensity factors that include this reduction are shown in Table 9.

Table 9 Pacific Gas & Electric Energy Intensity Factors

Greenhouse Gas	Energy Intensity Factor (lbs./MWh) ¹
Carbon dioxide (CO ₂)	203.93
Methane (CH ₄)	0.033
Nitrous oxide (N ₂ O)	0.004

Source: CalEEMod Version 2022.1

The amount of water used and the amount of wastewater generated by a project results in 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 CH₄ and N₂O. Development facilitated by the DVSP would be subject to 2022 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

⁵ 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).

⁶ This assumption is conservative because 3CE currently has a greater percentage of renewables procurement than is assumed for PG&E in 2034; therefore, its energy intensity factors for CH₄ and N₂O are likely lower.

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 digester processes with no facultative lagoons or septic tanks (Monterey One Water 2022). 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 not included in the GHG emissions modeling because the timing and mechanisms of implementation are uncertain at this time.

For mobile sources, CO₂ and CH₄ 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 E and Appendix F, respectively). 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.

Impact Analysis

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

Construction Emissions

Construction of individual projects facilitated by the DVSP would generate temporary GHG emissions primarily from operation of construction equipment on site, as well as from vehicles transporting construction workers to and from project sites and heavy-duty trucks transporting building materials and soil. As shown in Table 10, construction associated with the proposed project would generate 61,206 MT of CO₂e. Amortized over a 30-year period, construction associated with the project would generate 2,448 MT of CO₂e per year. GHG emissions are cumulative; therefore, total annual emissions include the amortized construction emissions added to operational emissions, which are discussed under “*Operational Emissions*,” below, for informational purposes only.

Table 10 Estimated Construction Emissions of Greenhouse Gases

Year	Annual Emissions (MT of CO₂e/year)
2024	4,603
2025	5,474
2026	4,081
2027	4,007
2028	3,949
2029	3,867
2030	3,795
2031	3,725
2032	3,671
2033	3,597
2034	3,539
2035	3,483
2036	3,423
2037	3,367
2038	3,326
2039	3,290
2040	9
Total Construction Emissions	61,206
Amortized over 25 years	2,448

MT of CO₂e = metric tons of carbon dioxide equivalent
 See Appendix D for CalEEMod results.

Operational Emissions

Operation of development facilitated by the project would generate GHG emissions associated with area sources (e.g., landscape maintenance), energy and water usage, vehicle trips, and wastewater and solid waste generation and removal. The annual operational GHG emissions are combined with the amortized construction emissions to determine overall project GHG emissions.

Annual operational emissions resulting from the project, including reductions from project design features are summarized in Table 11. The project would generate approximately 24,134 MT of CO₂e per year. As previously stated, this is provided for informational purposes only and is not used in the environmental impact analysis.

Table 11 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Project Emissions (MT of CO ₂ e) ¹
Construction	2,448
Area	78
Energy	7,560
Solid Waste	941
Water	413
Mobile	12,694
Total Project Emissions	24,134

See Appendix D for CalEEMod results.
¹ Provided for informational purposes only.

As detailed under threshold (b) below, the project would not conflict with local and State GHG reduction plans, and therefore, emissions would be less than significant. Quantified project emissions are provided only for informational purposes.

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 2022 Scoping Plan, AMBAG 2045 MTP-SCS, and Marina General Plan are discussed in the subsections below.

2022 Scoping Plan

There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal State plan and policy is AB 32, the California Global Warming Solutions Act of 2006, as well as SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030.

The 2022 Scoping Plan identifies plans and regulations and strategies that are to be implemented at the State and project level that will reduce GHG emissions consistent with State policies with a target of 85 percent below 1990 levels by 2045 which is the equivalent of carbon neutrality by 2045. As described above in the *Methodology* section, the state recommends determining whether a proposed residential or mixed-use residential development would align with the 2022 Scoping Plan by assessing if the project is consistent with all the key project attributes identified in Table 3 of Appendix D of the 2022 Scoping Plan. The project’s consistency with attributes identified in Table 3 of Appendix D of the 2022 Scoping Plan is shown below in Table 12. As discussed therein, the DVSP would not consistent with these attributes and accordingly would be consistent with the 2022 Scoping Plan.

Table 12 2022 Scoping Plan Consistency for GHG Emissions

Key Project Attribute	Consistency
Transportation Electrification	
Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard of the California Green Building Standards Code at the time of project approval.	Consistent. Development facilitated by the DVSP would be required to comply with the provision of EV charging infrastructure pursuant to the California Green Building Code. Therefore, the DVSP would be consistent with this policy.
VMT Reduction	
Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently serviced by existing utilities and essential public services (e.g., transit, streets, water, sewer)	Consistent. The DVSP would facilitate primarily redevelopment in the already built-out Downtown area, and would facilitate infill development on underutilized lands in the Downtown area. Additionally, the Downtown area is presently served by existing water, sewer, transit, and other public services. Therefore, the DVSP would be consistent with this policy.
Does not result in the loss or conversion of natural and working lands	Consistent. As discussed in Section 2, <i>Agriculture and Forestry Resources</i> , there are no agricultural or forestry uses in the Downtown area. Marina’s downtown area is built-out and does not contain natural or working lands, and the project would not result in the loss or conversion of natural and working lands. Therefore, the DVSP would be consistent with this policy.
Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), or Is in proximity to existing transit stops (within a half mile,) or Satisfies more detailed and stringent criteria specified in the region’s SCS	Consistent. The DVSP would facilitate transit-oriented development in the Core zone near the MST Marina Transit Exchange, which is centrally located in the Specific Plan area and is served by MST routes 17, 18, 20, and 61. Therefore, the DVSP would be consistent with this policy.
Reduces parking requirements by: <ul style="list-style-type: none"> ▪ Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or ▪ Providing residential parking supply at a ratio of less than one parking space per dwelling unit; or ▪ For multi-family development, requiring parking costs to be unbundled from costs to rent or own a residential unit 	Consistent. The DVSP would facilitate higher-density residential, commercial, and mixed-use development within the City’s Downtown area, thereby reducing the need for trips and parking. In addition, the DVSP includes parking development standards which will be reviewed for consistency by the City on a project-by-project basis.
At least 20 percent of units included are affordable to lower-income residents	Consistent. The DVSP does not propose specific development, and it would be speculative to determine if development facilitated by the DVSP would include affordable housing. However, Marina Municipal Code Section 17.48.030 includes inclusionary housing requirements which any development under the DVSP would be required to be consistent with. In addition, Goal LU-4 of the DVSP is to provide a variety of affordable, high-quality housing options for people to live in Downtown, and it is a primary goal of the DVSP to provide affordable housing in Marina. While a percentage of affordable units cannot be determined at this time, the goals of the DVSP do not conflict with this policy.

Key Project Attribute	Consistency
Results in no net loss of existing affordable units	Consistent. As discussed further in Section 14, <i>Population and Housing</i> , implementation of the DVSP would involve demolition of some existing housing in order to develop new units. However, new housing added to the Plan area would support a greater number of residents and would provide a greater number of affordable units. Therefore, there would be no net loss of existing affordable units and the DVSP would be consistent with this policy.
Building Decarbonization	
Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking	Consistent. The DVSP does not propose specific development, and it would be speculative to determine if development facilitated by the DVSP would eliminate natural gas. However, Policies LU-5.1, -5.2, -5.3, and -5.6 of the DVSP require consistency with Title 24 requirements and encourage decarbonization and energy efficiency. Projects will be reviewed by the City to encourage these policies, while use of all electrical appliances cannot be confirmed at this time, the goals of the DVSP do not conflict with this policy.

AMBAG MTP/SCS and Marina General Plan

In June 2022, AMBAG adopted the 2045 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 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 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 13, while consistency with goals contained in the Marina General Plan are shown in Table 14. 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 13 AMBAG 2045 MTP/SCS Consistency for GHG Emissions

Policy	Consistency
<p>Access and Mobility. Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region</p>	<p>Consistent DVSP Policy LU-1.7 aims to “encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area.” 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 promote an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” 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 district of the DVSP is to create transit oriented development, particularly around the Marina Transit Exchange, which houses stops for several 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.</p>
<p>Environment. Promote environmental sustainability and protect the natural environment.</p>	<p>Consistent DVSP Goal LU-5, Environment and Sustainability, promotes “a Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.” This goal is supported by Policy 5.2, which states “In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.” Furthermore, construction of the proposed residential and non-residential buildings would comply with the 2022 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.</p>

Policy	Consistency
<p>Healthy Communities. Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.</p>	<p>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 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 Downtown to work, shop, and recreate.” 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.</p>
<p>System Preservation and Safety. Preserve and ensure a sustainable and safe regional transportation system.</p>	<p>Consistent The overarching goal of the Mobility Chapter of the DVSP is to promote an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” 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.</p>

Source: AMBAG 2022

Table 14 Marina General Plan Policy Consistency for GHG Emissions

Marina General Plan Policy	Discussion
<p>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:</p> <p>6. A balanced land use/transportation system which minimizes traffic congestion, noise, excessive energy consumption, and air pollution.</p>	<p>Consistent DVSP Policy LU-1.7 aims to “encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area.” 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 promote an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” 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 district of the DVSP is to create transit oriented development, particularly around the Marina Transit Exchange, which houses stops for several 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.</p>
<p>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.</p>	<p>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).</p>
<p>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:</p> <p>10. New housing shall be built to development and construction standards that conserve water and energy.</p>	<p>Consistent DVSP Goal LU-5, Environment and Sustainability, promotes “a Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.” This goal is supported by Policy 5.2, which states “In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.” Furthermore, construction of the proposed</p>

Marina General Plan Policy	Discussion
	<p>buildings would comply with the applicable 2022 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.</p>
<p>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.</p> <p>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.</p>	<p>Consistent DVSP Policy LU-1.7 aims to “encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area.” 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 district of the DVSP is to create transit oriented development, particularly around the Marina Transit Exchange, which houses stops for several 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.</p>
<p>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.</p>	<p>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.</p>

Marina General Plan Policy	Discussion
<p>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.</p> <p>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.</p> <p>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.</p>	<p>Consistent DVSP Policy LU-1.7 aims to “encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area.” 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.</p>
<p>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.</p> <p>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.</p> <p>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.</p> <p>Transportation Policy 3.34.1 (Pedestrian Network Map): The City of Marina shall implement the Pedestrian Network Map shown in Figure 3-3.</p> <p>Transportation Policy 3.34.2 (Bicycle Network Map): The City of Marina shall implement the Bicycle Network Map shown in Figure 3-4.</p> <p>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.</p> <p>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</p>	<p>Consistent The overarching goal of the Mobility Chapter of the DVSP is to promote an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” 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. 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.</p>

Marina General Plan Policy	Discussion
<p>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.</p> <p>Transportation Policy 3.38: Whenever existing roadways are improved or when new roadways are approved or constructed, sidewalks should be included.</p> <p>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.</p>	
<p>Community Infrastructure Policy 3.3.12: Minimize the consumption of water for urban purposes and make maximum possible use of recycled water.</p> <p>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:</p> <ol style="list-style-type: none"> 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. 	<p>Consistent DVSP Goal LU-5, Environment and Sustainability, promotes “a Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.” This goal is supported by Policy 5.2, which states “In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.” Furthermore, construction of the proposed buildings would comply with the applicable 2022 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.</p>
<p>Community Infrastructure Policy 3.3.15: Promote reductions in the generation of non-recyclable solid waste.</p>	<p>Consistent Strategies in the Public Facilities and Infrastructure 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.</p>

Source: City of Marina 2010

LESS THAN SIGNIFICANT IMPACT

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Downtown Vitalization Specific Plan

- 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?*

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 could increase the potential for exposure to subsurface contamination hazards. Impacts could be potentially significant and checklist items c and d will be analyzed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

- 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 7, 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

This page intentionally left blank.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 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, of Marina Municipal Code. Chapter 8.46 requires elimination of illegal discharges, protection of watercourses, and includes BMP guidance for construction sites and permitted activities. 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. The DVSP would include Goal PF-1 and associated Policies PF-1.1 through PF-1.4, which

would aim to ensure that there is adequate water service, wastewater service, and stormwater and drainage facilities in the Downtown area. Furthermore, the Specific Plan includes design guidelines to increase percolation and prevent water pollution, including requirements for the use of permeable materials and requirements for street trees and planted park strips (“Sidewalk and Plazas” Design Guideline). 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 Department of Conservation, the Plan area is not within a tsunami inundation zone (DOC 2023). 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

This page intentionally left blank.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 planning horizon of approximately 20 years, 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 15 shows the existing and proposed densities under the Specific Plan, with their percentage increase.

Table 15 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 16 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 2045 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 2045. 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 2022). 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 2022, Appendix I Figure 16). 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 bus rapid transit service via the SURF! project.

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 16 Goals and Policies Comparison

Marina General Plan	Specific Plan	Comparison	Consistency
Primary Policies (GP)	Primary Goals		
<p>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.</p>	<p>The Specific Plan area encompasses 322 acres in central Marina. This is about 5% of the total acreage of the city (6,086 acres).</p>	<p>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).</p>	<p>Consistent</p>
Community and Land Use Policies (GP)	Land Use Goals		
<p>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.</p> <p>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.</p>	<p><i>Land Use and Development Goals:</i> LU-1: Land Use and Development. 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. <i>Policy LU-1.3:</i> Implement objective design and development standards that emphasize pedestrian orientation and scale, move parking areas to the rear of buildings, active streetscapes, and common open spaces to enhance the appearance of and contribute positively to the visual character of the Core District. <i>Policy LU-5.1:</i> Encourage compact, high-density urban form by allowing developments with a variety of uses at the ground floor as well as on upper stories of buildings in the Core, and Transition districts that serve the local community and reduce car dependence for daily needs.</p>	<p>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.</p>	<p>Consistent</p>

Marina General Plan	Specific Plan	Comparison	Consistency
<p>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)</p>	<p>LU-5: Environment and Sustainability. A Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments. <i>Policy LU-5.2:</i> In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.</p>	<p>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.</p>	<p>Consistent</p>
<p>Throughout the General Plan Land Use Element, alternative forms of transportation are encouraged, including pedestrian and transit.</p>	<p><i>Land Use and Development Goal:</i> LU-1: Land Use and Development. 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. <i>Policy LU-5.1:</i> Encourage compact, high-density urban form by allowing developments with a variety of uses at the ground floor as well as on upper stories of buildings in the Core, and Transition districts that serve the local community and reduce car dependence for daily needs.</p>	<p>The strategies in the Specific Plan meet and exceed the General Plan’s encouragement for pedestrian and transit-oriented development.</p>	<p>Consistent</p>

Sources: Marina General Plan (2010) and Marina Downtown Vitalization Specific Plan (2023) (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

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *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 are 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

This page intentionally left blank.

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.

Baseline 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).

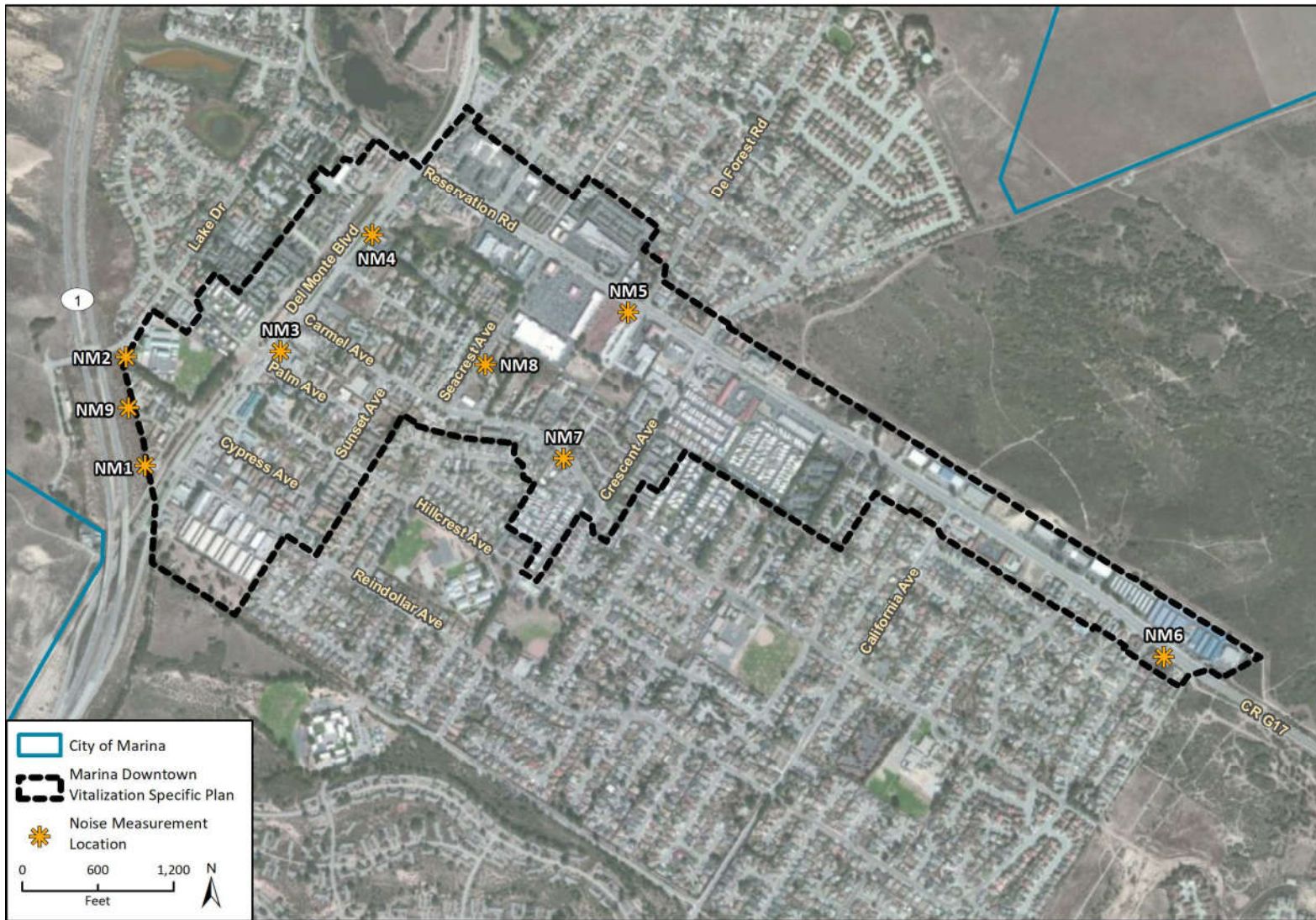
SENSITIVE NOISE RECEIVERS

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 13 shows the noise measurement locations, Table 17 summarizes the results of the noise measurements. Detailed sound level measurement data are included in Appendix C.

Figure 13 Noise Measurement Locations



Imagery provided by Esri and its licensors © 2023.

Fig 6 Noise Measurement Locations

Table 17 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 15 for Noise Measurement Locations.

Detailed sound level measurement data are included in Appendix C.

During the site measures, the types of vehicles were also counted (automobiles, medium trucks, and heavy trucks), as can be seen in Appendix C. 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 19).

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 18 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 18 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 18 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 18 herein).

Table 18 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 19 City of Marina Noise Standards for Stationary Sources

Duration	Maximum Allowable Noise (dBA)	
	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 20. 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 20 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 C 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

Baseline 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 Marina Downtown Traffic Study (Appendix E). The PM peak hour trip rates were used due to generally higher traffic volumes in that timeframe. Table 21 shows the peak hour traffic volumes under baseline 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 21 Baseline and Future Traffic Volumes

Roadway	Segment	Traffic Counts (Peak Hour PM Trips)		
		MPH	Baseline (2019) ^{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 22; more detailed data can be found in Appendix C. Modeling for these HVAC units was performed in Trane Acoustics Program (TAP).

Table 22 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 C

- 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 of development facilitated by the DVSP would involve the use of heavy construction equipment adjacent to existing development and noise sensitive receivers. Construction noise could therefore result in potentially significant noise impacts. Checklist item a will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

- 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

This page intentionally left blank.

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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 California Department of Finance (2022), there is an average of 2.65 persons per household in Marina. Therefore, full buildout of the Specific Plan would result in an estimated 7,696 new residents in the Plan area.

The City of Marina has a population of 21,457. Population growth estimates for the City of Marina by AMBAG (2022) are shown below in Table 23. The planning horizon for the Specific Plan is 2040, and the AMBAG population estimate for the City in 2040 is 28,433. AMBAG periodically updates population forecasts, having done so most recently in 2022. A draft of the Downtown Vitalization Specific Plan was completed in 2010. AMBAG’s most recent population estimates, prepared in 2022, 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 2022. Specific Plan buildout would be accounted for in future updated AMBAG projections.

Table 23 Marina Population Projections

2020	2025	2030	2035	2040
22,321	23,723	25,126	26,713	28,433

Source: AMBAG 2022

Downtown Vitalization Specific Plan

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 IMPACT

- 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 to 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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. MFD operates two fire stations, one located within the Plan area at 211 Hillcrest Avenue and one located within the Marina Municipal Airport.

The MFD maintains three Type 1 engines and 17 uniformed staff members, which include three firefighters, six engineers, six captains, one division chief, and one fire chief. In addition, there are seven reserves. MFD currently staffs one engine company with three people at the Hillcrest Station and one squad with two people at the Airport Station (Selai Lesu 2023). MFD’s service area boundaries are limited to the Marina city limits. In 2022, MFD received 3,033 calls for service (MFD 2022).

According to MFD staff, providing service for the City upon full buildout of the DVSP would require three additional firefighters, two division chiefs, another fire station, ladder truck and engine company. Neither the current station on Hillcrest Avenue nor the station at the Marina Municipal Airport would meet the needs of a full buildout of the DVSP. Station location studies performed by

MFD show that, to serve the Plan area at full buildout, the Hillcrest Station may need to be moved north near the intersection of Del Monte Boulevard and Beach Road. MFD would also need an additional station in the southern portion of the city to accommodate for growth not facilitated by the DVSP and due to the relocation of the Hillcrest Station (Lesu 2023). 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).

Specific locations for new MFD fire station(s) have not been determined; however, the DVSP includes Program PF-3, which would aim to identify the timing, location, and funding source for a new fire station to support growth within the Specific Plan area. 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. As of 2020, the MPD staffs 29 sworn officers and eight non-sworn personnel. Based on the 2022 population estimate for the City of 21,457 (see Section 14, *Population and Housing*), the ratio of residents to police personnel is approximately 580 to 1. The project could result in an estimated maximum of 7,696 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), Lone 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 24 displays 2021-2022 student enrollment and existing capacity levels for these schools.

Table 24 Marina School Enrollment and Capacity

School Name	Public/Private	Grades	Classrooms	2021-2022 Enrollment	Capacity
J.C. Crumpton Elementary	Public	K-5	23	527	481
Marina Vista Elementary	Public	K-5	23	473	495
Lone Olson Elementary	Public	K-5	20	409	441
Los Arboles Middle	Public	6-8	27	390	668
Marina High	Public	9-12	32	672	800
Total		K-12	145	2,471	2,885

Source: Diffenbaugh 2019, California Department of Education 2022

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 7,696 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 (including Monterey County facilities such as but not limited to the Former Fort Ord Travel Camp) 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 and additional impacts are not anticipated. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 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 would result in an increase in vehicle trips and vehicle miles travelled in the Specific Plan area. The anticipated increase in vehicle miles traveled could conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). The Specific Plan also includes goals and policies related to the provision of transit, bicycle, and pedestrian facilities, which could conflict with existing programs, plans, or ordinances addressing the circulation system. Therefore, the DVSP could result in potentially significant impacts related to transportation. This issue area will be analyzed in detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

This page intentionally left blank.

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. | ■ | □ | □ | □ |

- 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?*

Ground disturbance associated with projects facilitated by the Specific Plan has the potential to significantly impact tribal cultural resources. Checklist items a and b will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

This page intentionally left blank.

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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?*

The DVSP would facilitate buildout in the downtown area, which would result in an increase in population and accordingly an increase in water demand. Checklist item a, as it pertains to water

supply, will be addressed in the EIR. Other components of this item and checklist item c 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 3CE; 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 approximately 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 7,696 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 769,600 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 approximately 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 would result in an increase in development and population in the DVSP area, which would generate additional demands for water supply. Therefore, the DVSP 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 ReGen Monterey (formerly the Monterey Regional Waste Management District).. Solid waste is delivered to the Monterey Peninsula Landfill (MPL), approximately 2.5 miles north of the Plan area. To comply with CALGreen, ReGen Monterey must divert at least 65 percent of its solid waste from landfills. In addition, Assembly Bill 341 (AB 341) sets a statewide 75 percent recycling goal by 2020, and Senate Bill 1383 requires 75 percent of organic waste to be diverted from landfills by 2025. 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 ReGen Monterey. 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 ReGen Monterey 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 7,696 new residents within the Plan area. Therefore, solid waste generation by new residents would total an estimated 36,171 pounds per day, or 18.1 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 uses⁷ (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 99,927 pounds, or 50 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 organic waste and 65 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

⁷ CalRecycle provides various estimates for solid waste generation, based on different project-based analyses. The estimate provided herein is a selected mid-range estimate.

This page intentionally left blank.

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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- 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?*

Downtown Vitalization Specific Plan

- 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 nearest VHFHSZ is approximately 3.7 miles southeast of the Plan area along Reservation Road, outside of Marina city limits.

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:

- | | | | | |
|--|---|---|---|---|
| <p>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?</p> | ■ | □ | □ | □ |
| <p>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)?</p> | ■ | □ | □ | □ |
| <p>c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p> | ■ | □ | □ | □ |

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?*

The DVSP would facilitate development in the downtown area, which contains habitat for special status species and known cultural resources. Development facilitated by the DVSP could result in substantial adverse impacts to these resources. Impacts could be potentially significant, and checklist item a will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

Downtown Vitalization Specific Plan

- 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)?*

Because the DVSP would be built out over several years, development facilitated by the DVSP would occur concurrently with other development projects in Marina and in the region. Accordingly, impacts associated with the DVSP could result in a considerable contribution to cumulative impacts. Cumulative impacts could be potentially significant and will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

- 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 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. However, as discussed in Section 1, *Air Quality*, the project would result in potentially significant impacts. Impacts to human beings as they relate to air quality will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

References

Bibliography

Project Description

California Department of Finance. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State. <https://dof.ca.gov/forecasting/demographics/estimates/> (accessed February 2023).

Aesthetics

Adamson, Heather, Director of Planning, Association of Monterey Bay Area Governments, email correspondence with April Durham, Planner, Rincon Consultants, Inc., concerning verification of the Specific Plan area as a transit priority area, June 19-20, 2017.

Association of Monterey Bay Area Governments (AMBAG). 2022. 2045 Metropolitan Transportation Plan/Sustainable Communities Plan. Monterey, CA. June 2022. <https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy> (accessed February 2023).

California Department of Transportation (Caltrans). 2019. California State Scenic Highway System Map. <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacao> (accessed February 2023).

Marina, City of. 2002. Design Guidelines and Standards for Landscape, Site, and Parking Lot Design, Site Lighting, and Signs. Adopted August 21, 2001; amended January 2, 2002.

_____. 2005a. Marina Downtown Vision. Marina, CA. July 2005.

_____. 2005b. Downtown Design Guidelines. Marina, CA. July 2005.

_____. 2010. Pedestrian and Bicycle Master Plan. Marina, CA. Adopted February 2, 2010.

_____. 2015. Marina Municipal Airport Master Plan, Land Use Compatibility. Marina, CA. September 2015.

Monterey-Salinas Transit (MST). 2023. Monterey Peninsula System Map. <https://mst.org/maps-schedules/system-maps/monterey-peninsula/> (accessed February 2023).

Agriculture and Forestry Resources

Department of Conservation. Important Farmland Map. 2016. <https://maps.conservation.ca.gov/DLRP/CIFF/> (accessed February 2023).

Monterey County. 2010. Monterey County Williamson Act Lands. <https://www.co.monterey.ca.us/home/showdocument?id=46006> (accessed February 2023).

Air Quality

- Bay Area Air Quality Management District (BAAQMD). 2017. *CEQA Air Quality Guidelines*. May 2017. <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines%20May%202011.ashx?la=en> (accessed June 2019).
- California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*.
- _____. 2017. *California's 2017 Climate Change Scoping Plan*. December 14, 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed June 2019).
- California Department of Finance. (CDOF). 2020a. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark*. <http://www.dof.ca.gov/Forecasting/Demographics/projections/> (accessed May 2020).
- Duymich, Chris. 2018. *Air Quality Planner II*, Monterey Bay Air Resources District. Personal communication via phone regarding consistency with the air quality management plan with Annaliese Miller, Associate Environmental Planner, Rincon Consultants, Inc. August 2, 2018.
- Monterey Bay Air Resources District (MBARD). 2008. *CEQA Air Quality Guidelines*. February 2008. <https://www.mbard.org/ceqa> (accessed June 2019).
- _____. 2017. *2012-2015 Air Quality Management Plan*. March 15, 2017. <https://www.mbard.org/air-quality-plans> (accessed February 2023).

Biological Resources

- California Burrowing Owl Consortium. 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. April 1993.
- California Department of Fish and Wildlife (CDFW). 2012. *Staff Report on Burrowing Owl Mitigation*. March 7, 2012.
- California Native Plant Society (CNPS). 2019. *Inventory of Rare and Endangered Plants*. V.7-08c-Interim 8-22-02. www.rareplants.cnps.org Accessed May 2019.

Cultural Resources

- Dibblee, Thomas and John A. Minch. 2007. *Geologic Map of the Marina and Salinas Quadrangles*. Dibblee Geology Center, Santa Barbara Museum of Natural History.
- Netronline. 1968. *Historic Aerial Photograph of Marina, California*. <http://historicaerials.com> (accessed May 2020).
- _____. 1998. *Historic Aerial Photograph of Marina, California*. <http://historicaerials.com> (accessed May 2020).
- _____. 2005. *Historic Aerial Photograph of Marina, California*. <http://historicaerials.com> (accessed May 2020).
- _____. 2014. *Historic Aerial Photograph of Marina, California*. <http://historicaerials.com> (accessed May 2020).

- United States Geological Survey (USGS). 1913. Monterey Quadrangle Topographic Map.
<https://livingatlas.arcgis.com/topoexplorer/index.html> (accessed May 2020).
- _____. 1941. Monterey Quadrangle Topographic Map.
<https://livingatlas.arcgis.com/topoexplorer/index.html> (accessed May 2020).
- University of California, Santa Barbara. 1941. Historic Aerial Photograph of Marina, California.
http://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed May 2020).
- _____. 1956. Historic Aerial Photograph of Marina, California.
http://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed May 2020).

Energy

- California Department of Tax and Fee Administration. 2020a. "Net Taxable Gasoline Gallons."
<https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm> (accessed February 2023).
- _____. 2020b. "Taxable Diesel Gallons 10 Year Report Net of Refunds."
<https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm> (accessed February 2023).
- California Energy Commission (CEC). 2016. Diesel Fuel Data, Facts, and Statistics.
https://www.energy.ca.gov/almanac/transportation_data/diesel.html (accessed June 2019).
- _____. 2020. "California Energy Consumption Database." <http://www.ecdms.energy.ca.gov/>
 (accessed February 2023).
- Federal Highway Administration (FHWA). 2021. "Motor Fuel Use – 2018 (1)".
<https://www.fhwa.dot.gov/policyinformation/statistics/2021/mf21.cfm> (accessed February 2023).
- Marina, City of. City of Marina at Monterey Bay General Plan. August 4, 2010.
- United States Energy Information Administration (EIA). 2020. "California - Profile Overview."
<https://www.eia.gov/state/?sid=CA> (accessed February 2023).

Geology and Soils

- California Geological Survey (CGS). 2002. California Geomorphic Provinces, Note 36.
- _____. 2019a. "Earthquake Zones of Required Investigation." California Department of Conservation. [digital map]. <https://maps.conservation.ca.gov/cgs/EQZApp/app/> (accessed February 2023).
- _____. 2019b. "Regulatory Maps: Alquist-Priolo Zones." California Department of Conservation. [digital map].
<https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/> (accessed June 26, 2019).
- Dibblee, T.W., and Minch, J.A., 2007, Geologic map of the Marina and Salinas quadrangles, Monterey County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-353, scale 1:24,000
- Dupre, W.R., and Tinsley, J.C., 1980, Maps showing geology and liquifaction potential of northern Monterey and southern Santa Cruz Counties, California: U.S. Geological Survey, Miscellaneous Field Studies Map MF-1199, scale 1:62,500.

Hoppe, K. A., P. L. Koch, and T. T. Furutani. 2003. Assessing the preservation of biogenic Strontium in fossil bones and tooth enamel. *International Journal of Osteoarchaeology* 13: 20-28

Marina, City of. City of Marina at Monterey Bay General Plan. August 4, 2010.

_____. 2013. Local Coastal Program Volume II, Implementation Plan. Certified by the California Coastal Commission, April 1982. Approved and adopted by the Marina City Council, October 1982. Reformatted to include post-certification amendments, November 2013.

_____. 2019. "Local Coastal Program Update." Community Development, Planning Services. <https://www.cityofmarina.org/888/Local-Coastal-Program-Update> (accessed June 25, 2019).

Monterey, County of. 2008. "Exhibit 4.4.3, Relative Liquefaction Potential." Draft Environmental Impact Report Monterey County 2007 General Plan. Monterey, CA. September 2008.

_____. 2019. "Earthquake." Department of Emergency Services. <https://www.co.monterey.ca.us/government/departments-a-h/administrative-office/office-of-emergency-services/ready-monterey-county/hazard-ready/earthquakes> (accessed June 26, 2019).

Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.

United States Department of Agriculture. 2014. Baywood Series. https://soilseries.sc.egov.usda.gov/OSD_Docs/B/BAYWOOD.html (accessed February 2023).

University of California Museum of Paleontology (UCMP) Online Database. 2019. UCMP specimen search portal, <http://ucmpdb.berkeley.edu/>.

Greenhouse Gas Emissions

Association of Environmental Professionals (AEP). 2016. Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California. October 18, 2016.

Association of Monterey Bay Area Governments (AMBAG). 2022. 2045 Metropolitan Transportation Plan and the Sustainable Communities Strategy. https://www.ambag.org/sites/default/files/2022-12/REVISED_AMBAG_MTP-SCS_Final_EntireDocument_PDFA_Updated121522.pdf (accessed February 2023).

_____. 2018b. Regional Growth Forecast. June 13, 2018.

California Air Pollution Control Officers Association (CAPCOA). 2008. CEQA and Climate Change. <http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf> (accessed June 2019).

_____. 2009. Climate Change Scoping Plan. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf (accessed February 2023).

_____. 2014. First Update to the Climate Change Scoping Plan. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf (accessed February 2023).

- _____. 2017. California Emissions Estimator Model User's Guide Version 2016.3.2. November 2017. <http://www.aqmd.gov/caleemod/user-s-guide> (accessed May 2020).
- _____. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. <https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp.pdf> (accessed February 2023).
- California Department of Finance. 2020. Report P-1A: Total Population Projections, 2010-2060 California (2019 Baseline). <https://www.dof.ca.gov/Forecasting/Demographics/Projections/> (accessed January 2021).
- California Department of Resources Recycling and Recovery. 2015. AB 341 Report to the Legislature. August 2015. <https://www.calrecycle.ca.gov/calendar/75percent> (accessed June 2019).
- California Energy Commission (CEC). 2010. 2009 Power Content Label – Pacific Gas & Electric. https://www.energy.ca.gov/pcl/labels/2009_labels/Pg%20and%20E%202009%20PCL.pdf (accessed June 2019).
- _____. 2018. 2017 Power Content Label – Pacific Gas & Electric. https://www.energy.ca.gov/pcl/labels/2017_labels/Pg_and_E_2017_PCL.pdf (accessed June 2019).
- _____. 2022. Building Energy Efficiency Standards for Residential and Nonresidential Buildings. https://www.energy.ca.gov/sites/default/files/2022-12/CEC-400-2022-010_CMF.pdf (accessed April 2023).
- California Environmental Protection Agency (CalEPA). 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. March 2006.
- California Public Utilities Commission (CPUC). 2011. California's Long-Term Energy Efficiency Strategic Plan. January 2011. <https://www.cpuc.ca.gov/general.aspx?id=4125> (accessed June 2019).
- _____. 2019. "Zero Net Energy." <https://www.cpuc.ca.gov/ZNE/> (accessed June 2019).
- Central Coast Community Energy (3CE). 2022. FAQ. <https://3cenergy.org/faqs/> (accessed February 2023).
- _____. 2023. Clean Energy. <https://3cenergy.org/about-us/understanding-clean-energy/> (accessed February 2023).
- Intergovernmental Panel on Climate Change. 2022. Summary for Policymakers. https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf (accessed February 2023).
- Monterey, County of. 2015. Carmel Canine Sports Center Project Environmental Impact Report (PLN130352). Prepared by Amec Foster Wheeler. April 2015. <http://www.co.monterey.ca.us/government/departments-i-z/resource-management-agency-rma-/planning/current-major-projects/carmel-canine-sports-complex/draft-environmental-impact-rep> (accessed June 2019).
- Monterey One Water. 2022. Treatment Process. <https://www.montereyonewater.org/256/Treatment> (accessed February 2023).
- San Luis Obispo Air Pollution Control District (SLOAPCD). 2012. *CEQA Air Quality Handbook*. April 2012. <https://www.slocleanair.org/rules-regulations/land-use-ceqa.php> (accessed June 2019).

State of California. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. <http://www.climateassessment.ca.gov/state/> (accessed April 2019).

Hazards and Hazardous Materials

Ahtna Environmental, Inc. 2019. Operable Unit Carbon Tetrachloride Plume, Fourth Quarter 2018 Groundwater Monitoring Report, Former Ford Ord, California. March 8, 2019.

Department of Toxic Substances Control (DTSC). 2023. "EnviroStor." https://www.envirostor.dtsc.ca.gov/public/map/?global_id=60002757 (accessed February 2023).

Monterey County Airport Land Use Commission. 2019. Marina Municipal Airport Land Use Compatibility Plan. May 30, 2019.

Monterey County/AECOM. 2015. Monterey County Multi-Jurisdictional Hazard Mitigation Plan. June 2015.

Monterey County, 2014. Monterey County Emergency Operations Plan. March 2014.

State Water Resources Control Board (SWRCB). 2023. "GeoTracker." <http://geotracker.waterboards.ca.gov/> (accessed February 2023)

United States Environmental Protection Agency. 2019. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Superfund Site database. 2019. <https://cumulis.epa.gov/supercpad/CurSites/srchsites.cfm> (accessed June 2019).

Hydrology and Water Quality

California Department of Conservation. 2023. California Tsunami Maps and Data. <https://www.conservation.ca.gov/cgs/tsunami/maps> (accessed February 2023).

Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map 06053C0191H. Map revised June 21, 2017. <https://msc.fema.gov/portal/search?AddressQuery=marina%20ca> (accessed May 2020).

Marina, City of. Marina Municipal Code. Last updated January 22, 2020. <https://www.codepublishing.com/CA/Marina/> (accessed May 2020).

Land Use and Planning

Adamson, Heather, Director of Planning, Association of Monterey Bay Area Governments, email correspondence with April Durham, Planner, Rincon Consultants, Inc., concerning verification of the Specific Plan area as a transit priority area, June 19-20, 2017.

Association of Monterey Bay Area Governments (AMBAG). 2018. 2040 Metropolitan Transportation Plan/Sustainable Communities Plan. Monterey, CA. June 2018.

Marina, City of. 2010a. City of Marina at Monterey Bay General Plan. August 4, 2010.

_____. 2010b. Pedestrian and Bicycle Master Plan. Marina, CA. Adopted February 2, 2010.

_____. 2019. "Vision and Mission." City of Marina. <http://cityofmarina.org/381/Vision-Mission> (accessed July 1, 2019).

Monterey-Salinas Transit (MST). 2019. Marina Transit Exchange Map. <https://mst.org> (accessed June 10, 2019).

Mineral Resources

Marina, City of. City of Marina at Monterey Bay General Plan. August 4, 2010.

Noise

California Department of Transportation (Caltrans). 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2) September. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf

_____. 2013b. *Transportation and Construction Vibration Guidance Manual*. (CT-HWANP-RT-13-069.25.3) September. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf

Federal Highway Administration (FHWA). 2008. Roadway Construction Noise Model. Available at: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/

_____. 2018. Noise Measurement Handbook – Final Report. June 1. Available at: <https://www.fhwa.dot.gov/ENVIRONMENT/noise/measurement/handbook.cfm>

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Malcolm J. Crocker (Editor). 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.

Monterey County Airport Land Use Commission. 2019. Marina Municipal Airport Land Use Compatibility Plan. May 30, 2019.

Population and Housing

Association of Monterey Bay Area Governments. 2022. Appendix A: Regional Growth Forecast. https://www.ambag.org/sites/default/files/2022-12/REVISED_PDFAAppendix%20A_2022%20RGF.pdf (accessed February 2023).

California Department of Finance. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State. <https://dof.ca.gov/forecasting/demographics/estimates/> (accessed February 2023).

Public Services

Lesu, Selai. Marina Fire Department. Personal communication with Kayleigh Limbach, Environmental Planner, regarding staffing and capacity of Marina Fire Department. February 22, 2023.

Marina, City of. 2000. Final Environmental Impact Report on the Draft Marina General Plan. SCH#1999031064. August.

Marina Fire Department. 2022. Breakdown by Major Incident Types for Date Range, 2022. <https://cityofmarina.org/DocumentCenter/View/13063/2022-Major-Incident-Types-for-Date-Range?bidId=> (accessed February 2023).

Mejia, Melissa. 2019. Librarian, Marina Public Library. Personal communication with Sean Wils, Planning Intern for Rincon Consultants, regarding population growth accommodated by the Marina Public Library, on June 2019.

Nieto, Tina. 2020. Police Chief, Marina Police Department (MPD). Meeting with Fred Aegerter, Christine Hopper, and Alec Barton, City of Marina staff to discuss staffing and capacity of the MPD, on September 10, 2020.

Recreation

Marina, City of. City of Marina at Monterey Bay General Plan. August 4, 2010.

Utilities

California Department of Resources Recycling and Recovery (CalRecycle). 2016. "California's 2015 Per Capita Disposal Rate." Last modified: June 21, 2016.
<http://www.calrecycle.ca.gov/Igcentral/goalmeasure/DisposalRate/MostRecent/default.htm>. (Accessed October 2020)

_____. 2019. "Estimated Solid Waste Generation Rates."
<https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates> (accessed May 2020).

_____. 2019. SWIS Facility Detail: Monterey Peninsula Landfill.
<https://www2.calrecycle.ca.gov/swfacilities/Directory/27-AA-0010> (accessed May 2020).

Central Coast Regional Water Quality Control Board. 2014. Adoption of waste discharge requirements (wdr) order no. r3-2014-0013, (national pollutant discharge elimination system [npdes] permit no. ca0048551), Monterey regional water pollution control agency (mrwpca) wastewater treatment plant, Monterey County.
<https://montereyonewater.org/docs/about/permits/Adoption%20of%20WDR.pdf> (accessed May 2020).

Monterey One Water (M1W). 2020. "History." https://montereyonewater.org/about_history.html (accessed May 2020).

Regen Monterey. 2018. Monterey Peninsula Landfill. <https://www.mrwmd.org/monterey-peninsula-landfill/> (accessed May 2020).

Wildfire

California Department of Fire Protection and Forestry Management (CAL FIRE). 2007. Very High Fire Hazard Severity Zones in State Responsibility Areas (Monterey County).
https://osfm.fire.ca.gov/media/6726/fhszs_map27.pdf (accessed May 2020).

List of Preparers

Rincon Consultants, Inc. prepared this IS-MND under contract to the City of Marina. Persons involved in data gathering analysis, project management, and quality control are listed below.

Rincon Consultants, Inc.

Megan Jones, Principal-in-Charge
Ashley Quackenbush, Project Manager
Kayleigh Limbach, Environmental Planner
David Brodeur, Environmental Planner
Hannah Haas, Archaeologist
Steven Treffers, Senior Architectural Historian
David Daitch, Principal Biologist
Samantha Kehr, Associate Biologist
Beth Wilson, Associate Environmental Planner
Annaliese Miller, Associate Environmental Planner
Jorge Mendieta, Associate Environmental Scientist/Paleontologist
Keelie Rocker, GIS Analyst

This page intentionally left blank.

Appendix A

City of Marina Downtown Vitalization Specific Plan

Downtown Vitalization Specific Plan



ACKNOWLEDGEMENTS

City Council

Bruce Delgado, Mayor
Cristina Medina Dirksen
Brian McCarthy
Kathy Y. Biala
Liesbeth Visscher

Planning Commission

Richard St. John
Nancy Amadeo
Glenn Woodson
Surinder Rana
Audra Wilson
Hyunsoo Hur

Lead City Staff

Layne Long, City Manager
Matt Mogensen, Assistant City Manager
Guido Persicone, Community Development Director
Brian McMinn, Public Works Director

Downtown Ad Hoc Committee

Dawn Alva	Safwat Malek
Nancy Amadeo	Horace Mercurio
Kathy Biala	Gail Morton
Lisa Berkley	Grace Silva-Santella
Alex Eschenbaum	Ken Stratton
Steve Emerson	Mike Tate
Ron Lebda	Adam Urrutia

Table of Contents

Specific Plan Organization	1
1 Introduction	1
1.1 Purpose and Intent.....	1
1.2 Project Background and Community Engagement	2
1.2.1 Community Engagement.....	4
1.3 Opportunities and Constraints.....	6
2 Setting and Existing Conditions	8
2.1 Marina’s History	8
2.2 Regional Context	13
2.3 Demographics.....	16
2.4 Economics.....	18
2.5 Land Use.....	18
2.5.1 Existing Land Uses.....	19
2.6 Mobility	22
2.6.1 Existing Vehicle Network.....	22
2.6.2 Connectivity	23
2.6.3 Pedestrian and Bicycle Network	26
2.6.4 Parking.....	28
2.6.5 Transit Facilities.....	28
2.6.6 Regional Mobility Framework.....	28
2.6.7 Monterey Peninsula Light Rail Transit and SURF! Bus Rapid Transit System	29
3 Downtown Vision	30
3.1 Plan Goals.....	31
4 Land Use and Development	33
4.1 Land Use Plan	33
4.1.1 Land Use Designations and Intent	33
4.1.2 Development Potential	35
4.1.3 Objective Design and Development Standards	36
4.2 Placemaking Framework	37
4.2.1 Vibrant, Mixed-Use Downtown	37
4.2.2 Transit-oriented Development	39
4.2.3 Housing Affordability	41



4.2.4	Economic Vitality.....	41
4.2.5	Sustainability.....	41
4.2.6	Parks and the Urban Forest	42
4.2.7	Gateways, Wayfinding, and Signage	43
4.2.8	Public Art.....	46
4.3	Land Use and Development Goals, Policies and Programs	50
5	Mobility	53
5.1	Technical Studies.....	53
5.2	Traffic Calming and Complete Streets.....	56
5.3	Active Transportation.....	58
5.4	Pedestrian, Bicycle, and Roadway Improvements	60
5.5	Parking.....	63
5.6	Transit.....	64
5.7	Mobility Goals, Policies, and Programs	64
6	Public Facilities and Infrastructure.....	66
6.1	Potable Water	66
6.1.1	Water Infrastructure Improvements	67
6.2	Wastewater	69
6.2.1	Wastewater Infrastructure Improvements.....	69
6.3	Storm Drainage.....	71
6.3.1	Storm Drainage Infrastructure Improvements	71
6.4	Solid Waste.....	73
6.5	Dry Utilities.....	73
6.6	Public Services and Community Facilities	73
6.6.1	Fire Services	73
6.6.2	Police Services.....	74
6.6.3	Schools	76
6.6.4	Libraries.....	78
6.6.5	Civic Administrative Buildings	78
6.7	Public Facilities Goals, Policies, Programs	79
7	Implementation.....	80
7.1	Purpose and Intent.....	80
7.2	Regulatory Authority	80
7.3	Relationship to City Plans and Other Related Documents	80



7.3.1 Relationship to the General Plan80

7.3.2 Relationship to the Zoning Code and Specific Plan Area Zoning81

7.4 Conceptual Phasing81

7.5 Financing and Maintenance of Public Improvements.....82

7.5.1 Local Funding Sources.....82

7.5.2 State and Federal Funding Sources.....84

7.6 Specific Plan Administration.....85

7.6.1 Specific Plan Adoption and Administration85

7.6.2 Legal Nonconforming Uses and Structures.....86

7.7 Implementation Matrix87



This page intentionally left blank.



Specific Plan Organization

The Downtown Vitalization Specific Plan (DVSP) has been organized as follows:

Specific Plan

Chapter 1 Introduction contains project background, a review of community engagement efforts, and considers opportunities and constraints present in the Downtown.

Chapter 2 Setting and Existing Conditions contains an overview of background conditions such as Marina’s history, regional context, economic context, existing land use, and existing transportation network and facilities.

Chapter 3 Downtown Vision puts forth a desired vision of Downtown Marina (Downtown) that will result with the implementation of the Specific Plan and enumerates the Specific Plan’s main goals.

Chapter 4 Land Use 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” areas, with the core being more urban in design and transitional moving towards suburban. The land use districts identified in this plan are intended to function as implementing zoning in accordance with Appendix A (Development Code).

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 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 improvement of water, sewer, and storm drainage infrastructure and solid waste disposal facilities.

Chapter 7 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.

Development Code and Design Guidelines

The Downtown Vitalization Specific Plan (DVSP) relies on Appendix A (Development Code) and Appendix B (Design Guidelines) to guide buildout of the community.

Appendix A Development Code sets forth objective design and development standards for the consistent promotion of high-quality, well-designed development throughout the Downtown. Adopted by Ordinance, these standards are composed of written statements and graphic illustrations that establish standards for permitted uses and development standards (property line setbacks, building height, etc.) and design standards that are required of all proposed developments in the Downtown.

Appendix B Design Guidelines are adopted by Resolution and provide design guidance for various community attributes that influence appearance of the public realm. This includes additional design guidance for new development as well as guidance for public rights of way and civic spaces.



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



1 Introduction

What is a Specific Plan?

A Specific Plan is a policy and 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 defined area by customizing the planning process and land use regulations to that area. This Specific Plan includes goals, policies, and programs to guide decision-making and implementation of recommended improvements, as well as design and development standards and guidelines to provide direction to private development in the area.

1.1 Purpose and Intent

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 extensive citizen participation and input guided by City staff.

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 outdoor dining, public art, gathering spaces, 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,
- Tailored 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 and Pedestrian and Bicycle Master Plan.

The purpose of the Downtown Vitalization Specific Plan (hereafter “Specific Plan”) is to create a unique and identifiable Downtown core for Marina that is vibrant and pedestrian oriented. This Specific Plan will be an aspirational policy document and regulatory tool used by the City of Marina to guide development in the Downtown for the next 20 years. While the City’s General Plan is the primary guide for growth and development within Marina, this Specific Plan focuses on the Downtown area in more detail, establishing a development framework for land use, circulation, utilities and services, resource protection, design, and implementation. The guiding question for this document is “What do we want Downtown Marina to look like in the future?”

The word “revitalization” suggests returning life or vibrancy to an area in decline. Some communities utilize redevelopment agencies and area-specific revitalization

In the case of Marina, the word “vitalization” is used in place of “revitalization” to suggest an area that never fully developed as a traditional downtown.



plans to reinvigorate struggling neighborhoods. In the case of Marina, the word “vitalization” is used in place of “revitalization” to suggest an area that never fully developed as a traditional downtown. Marina’s relatively recent incorporation, coupled with its history as a housing and services center for people stationed or working at Fort Ord, reflects a young city without the urban form of density and mixed use characteristics of a traditional downtown (**Figure 1-1**). Thus, the Downtown Vitalization Specific Plan aims to bring life and vitality to the proposed Downtown area through identifying goals, policies, and programs that will lead to desired development patterns. This plan will be considered successful when people know where the Downtown Core of Marina is—and want to be there.



Figure 1-1. Marina Plumbing and Friendly Food Market, late 1960s; suburban development typical to Marina then and now.

1.2 Project Background and Community Engagement

Even before its incorporation in 1975, Marina was making plans for a vibrant Downtown. In 1962, a Monterey County policy document known as the Marina Master Plan initiated the concept and vision of a central business district in Marina.

Since incorporation in 1975, the City has facilitated a number of surveys, public workshops, and studies in an effort to vitalize Marina’s existing commercial areas. In 1978, the City’s first General Plan—Marina 2000—reaffirmed the concept of a central business district. An update of the General Plan in 1982 identified the need for additional commercial land in Marina, established the goal of developing “viable community retail and service commercial centers”, and designated portions of the land in the Specific Plan area as “Community Commercial” and “Multifamily Residential”.

The push for a vibrant Downtown was reinforced multiple times since the City’s incorporation including the establishment of a Redevelopment Project Area in 1986, a 1990 report by the City Council (acting as the Redevelopment Agency Board), and a 1998 study that found substantial retail leakage in Marina, with residents going to neighboring cities to procure goods and services.

Vitalization of Marina’s commercial core was identified by the Marina City Council in 2001 as a critical strategic issue. A Plan of Action was completed and approved by the City Council in August of the same year. The Council recognized that the creation of an attractive pedestrian-friendly and visitor-serving commercial district was key to establishing Marina’s identity and image.

Vitalization was to be facilitated through the establishment of a Downtown encompassing the Reservation Road corridor from the intersection at Del Monte Boulevard to De Forest Road, including

the Marina Post Office and Monterey Salinas Transit (MST) Exchange. The boundaries of Downtown were determined by the 2002 Ad Hoc Marina Downtown Committee, which was comprised of 37 Marina residents, planning commissioners, and business and property owners. The Committee called for the City to complete a strategic development plan and form a Strategic Downtown Committee to implement the goals of the report (Revitalizing Marina’s Retail Commercial Areas, 2002). Public outreach continued through 2003.

The future [Downtown] should be strategically located, anchored by existing or planned community retail, civic, and public transit uses that are within walking distance of higher density residential. (The Report of the Ad Hoc Marina Downtown Committee—Revitalizing Marina’s Retail Commercial Areas (2002)).

In August 2005, the City Council adopted the Marina Downtown Vision and Downtown Design Guidelines for developing a vital Downtown core. Ultimately, it was determined that in order to fulfill the City’s Downtown Vision and Downtown Design Guidelines, future development within the Downtown should be guided by a Specific Plan, which would include land uses, goals, policies, and programs for implementation. The Downtown Vitalization Specific Plan was initiated in 2006. The stated goal of the plan was to “transform Central Marina and its two major corridors, Reservation Road and Del Monte Boulevard, into a unique, vibrant, and pedestrian-friendly Downtown with diverse shopping venues and increased housing opportunities” (City Newsletter, March 2011).

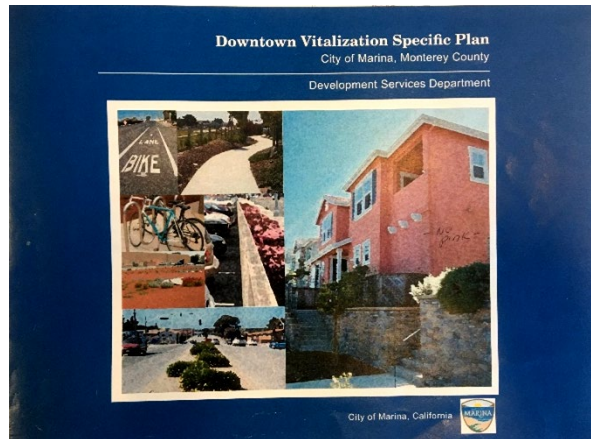


Figure 1-2. 2010 Downtown Vitalization Specific Plan draft.

Later in 2006, the City conducted a traffic feasibility study in the Downtown. A major discussion point centered on reducing the number of through lanes on Reservation Road to two and installing roundabouts at key intersections. Discussion about transportation, land use intensity, and possible locations for a new civic center and parks continued for several years.

In September 2007, Planning Staff presented the traffic feasibility study to the City Council as well as a Retail Sales Leakage Analysis, which included a preliminary recommendation of supportable retail and select services for Downtown, and a Proposed Land Use Concept. Together, these analyses and concepts were central to formulating the recommendations of the Specific Plan. Around this same time, Monterey—Salinas Transit adopted a specific plan which called for a larger presence in the form of a transit center and more consistent service in Downtown Marina.

An early draft of the Downtown Vitalization Specific Plan was presented publicly in March 2011 (Figure 1-2). The project 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 Specific Plan.



Figure 1-3. Ad Hoc Committee members participate in a streetscape study (left) and discussion group (right).

1.2.1 Community Engagement

Community involvement has been a critical part of the Specific Plan process. Over the course of a year, the Ad Hoc Committee met at least once monthly for the purposes of establishing a vision for the Downtown, identifying overarching goals and policies concerning development, creating a list of appropriate zones and land uses, and developing design standards and guidelines (**Figure 1-3**). Ad Hoc Committee members included elected and appointed officials, business owners, residents, and other interested parties. The Ad Hoc Committee developed an areawide vision for the Downtown, discussed land use alternatives, and reviewed development standards, design guidelines, and implementation programs. Community input was received at public hearings before the Planning Commission and City Council. The views and recommendations expressed during meetings of the Ad Hoc Committee, Planning Commission, and City Council, in addition to previous guiding documents (General Plan, Downtown Vision Plan, Downtown Design Guidelines, Pedestrian and Bicycle Master Plan), have been utilized during preparation of the Specific Plan.

A community open house for the Specific Plan was held in December 2018. At the open house, staff presented a draft version of the plan for people to review. Over 100 people attended and provided input (**Figure 1-4**).

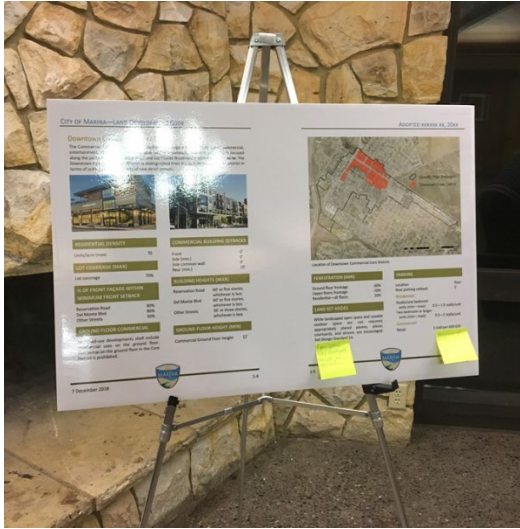


Figure 1-4. Community members meet to discuss the Downtown Vitalization Specific Plan at an open house (right). An informational display at the open house (left).

Table 1-1 summarizes the dates and topics of various meetings of the Ad Hoc Committee, Planning Commission, and City Council with regards to the Downtown Vitalization Specific Plan. Public comment was welcomed at each of these meetings.

Table 1-1. Public meetings held during the development of the Downtown Vitalization Specific Plan

Date	Location	Topic
Ad Hoc Committee		
11/28/2017	Airport Conference Room	Previous planning efforts in the Downtown; strengths, weaknesses, threats, and opportunities analysis
1/3/2018	Airport Conference Room	Visual preference survey; map exercise
1/29/2018	Airport Conference Room	Community outreach strategy
2/20/2018	Airport Conference Room	Vision and goal statements
3/10/2018	Downtown Marina	Walk through Downtown to assess conditions
3/19/2018	Airport Conference Room	Findings from community walkabout
4/30/2018	Airport Conference Room	Street right-of-way cross section exercise; Downtown traffic study results
5/21/2018	Airport Conference Room	Street right-of-way cross section exercise
6/25/2018	Airport Conference Room	Bike lanes; street right-of-way presentations; districts and land uses
7/16/2018	Airport Conference Room	Districts and zoning; land use matrix
8/13/2018	Airport Conference Room	Design standards and guidelines
8/27/2018	Airport Conference Room	Design standards and guidelines; Del Monte Blvd extension
9/24/2018	Airport Conference Room	Development, parking, and landscaping standards
11/5/2018	Airport Conference Room	Review of draft Specific Plan
11/19/2018	Airport Conference Room	Review of draft Specific Plan
Public Open House		
12/10/2018	Vince DiMaggio Park	Open house for public to provide comment on draft of Specific Plan

Design Review Board		
12/19/2018	City Council Chambers	Introduce plan; schedule
1/16/2019	City Council Chambers	Onsite design standards; development standards
Planning Commission		
12/13/2018	City Council Chambers	Introduce plan; schedule
1/24/2019	City Council Chambers	Community identity; land use and development; economics
2/9/2019	City Council Chambers	Mobility; public facilities and infrastructure; environment
2/28/2019	City Council Chambers	Development standards; zoning
3/14/2019	City Council Chambers	Design standards and guidelines; Specific Plan appendix
4/25/2019	City Council Chambers	Baseline conditions, project description
City Council		
3/26/2019	City Council Chambers	Introduce plan; schedule (joint meeting with Planning Commission)
4/17/2019	City Council Chambers	Approval of funding for EIR, WSA, and water/sewer modeling

1.3 Opportunities and Constraints

Members of the Ad Hoc Committee identified strengths, weaknesses, opportunities, and threats associated with the Downtown (**Figure 1-5**). Committee members felt that downtown already attracts unique businesses and exhibits strong business retention. They said they enjoy the local activities hosted Downtown like the well-established farmers market and the Labor Day parade, as well as the attractive street banners in the area. In addition, they felt that Downtown is 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.

Threats to the development and sustainability of a diverse, inclusive Downtown include a regional lack of affordable housing, the disconnected street network in the Downtown area, and the limited connectivity between existing development in Downtown and new development at the former Fort Ord. The auto-oriented design of Marina’s Downtown was identified as a major weakness. The commercial portion of the Downtown is focused on Reservation Road and Del Monte Boulevard as they form the backbone of the City’s indeterminate Downtown. 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 the possibility of vehicular and pedestrian connectivity throughout the Downtown area. Many buildings in the Downtown area need refurbishment. Most of the architecture reflects suburban commercial design from the mid-20th Century to the present. There are no parks, no clearly defined business district, and few places to gather and meet. Large parking lots fronting Reservation Road and Del Monte Boulevard create a suburban environment incompatible with a traditional Downtown.

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.



STRENGTHS

Diverse/welcoming community
Centrally located in the Bay
Downtown is safe, generally clean
Established farmers market
Attractive banners
Strong business retention
Unique businesses
Budding tourist economy
Municipal airport
Higher education institutions
MST Transit Center

Gateways/medians on major roads
Wide ROWs on arterial roads
Key areas primed for redevelopment
Regional trail system improvements
Underutilized land for redevelopment
Urban growth boundary

WEAKNESSES

Poorly designed downtown
Auto oriented/not walkable
Blight
Large parking lots fronting streets
No parks downtown
No business district
Lack of spaces to gather/meet
Commuter traffic
Poor imageability/sense of place
Lack of mixed uses
City seen as unfriendly to business

Lack of affordable housing
Limited connectivity via street grid
Disjointedness of Central, South Marina
Online retail competition

OPPORTUNITIES

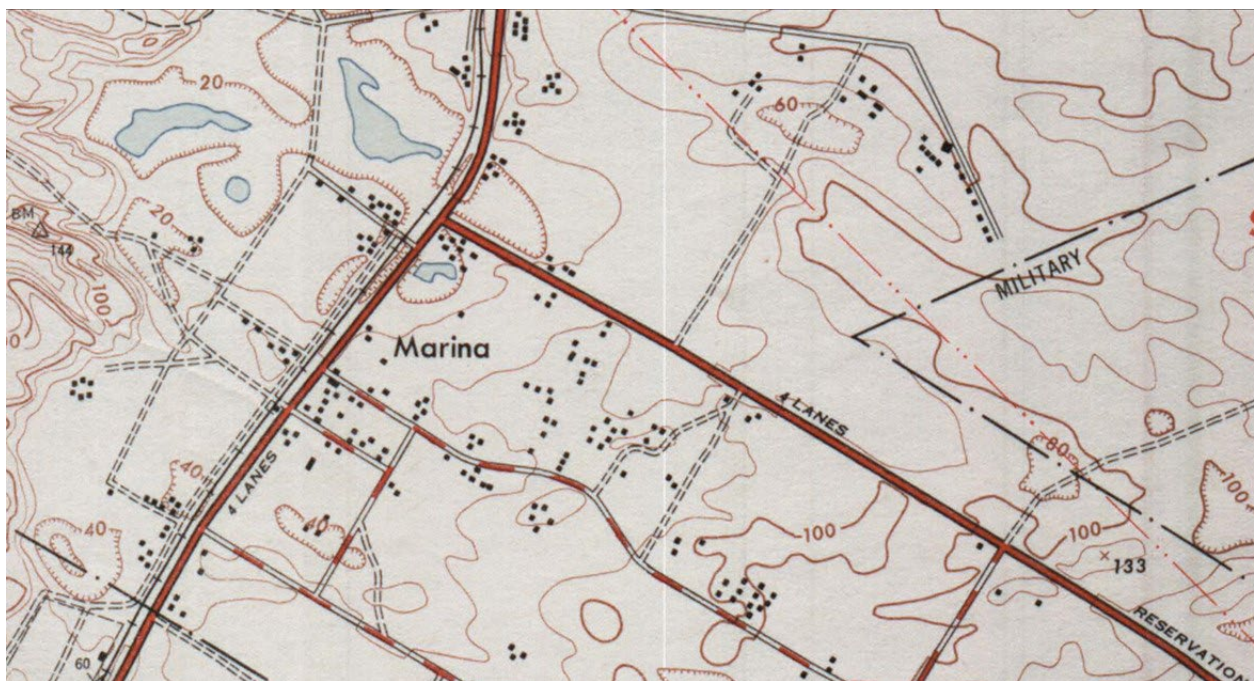
THREATS

Figure 1-5.

2 Setting and Existing Conditions

2.1 Marina's History

Starting around the 6th Century CE, the Ohlone people inhabited California's Central Coast and established fixed villages throughout the region, including the village of Wacharon in the area between present-day Marina and Moss Landing. Much of the area in what is today incorporated Marina was used by various ranching operations in the 19th Century. After a brief stint as Bardin, then Locke-Paddon Colonies, then Paddonville, the area including Downtown and much of the rest of the city was formally named Marina in 1918. Marina became an early flag stop on the Southern Pacific Railroad for visitors from San Francisco. As the town developed, land was set aside for a school, church, and other necessary civic buildings. Marina's first post office was established in the Downtown in April 1919, housed in connection with a general store and gasoline pump. **Figure 2-1** compares the urban form of Marina between 1948 and 1983. shows the evolution of one of Marina's prominent businesses, Mortimer's, from 1948 to the present day.



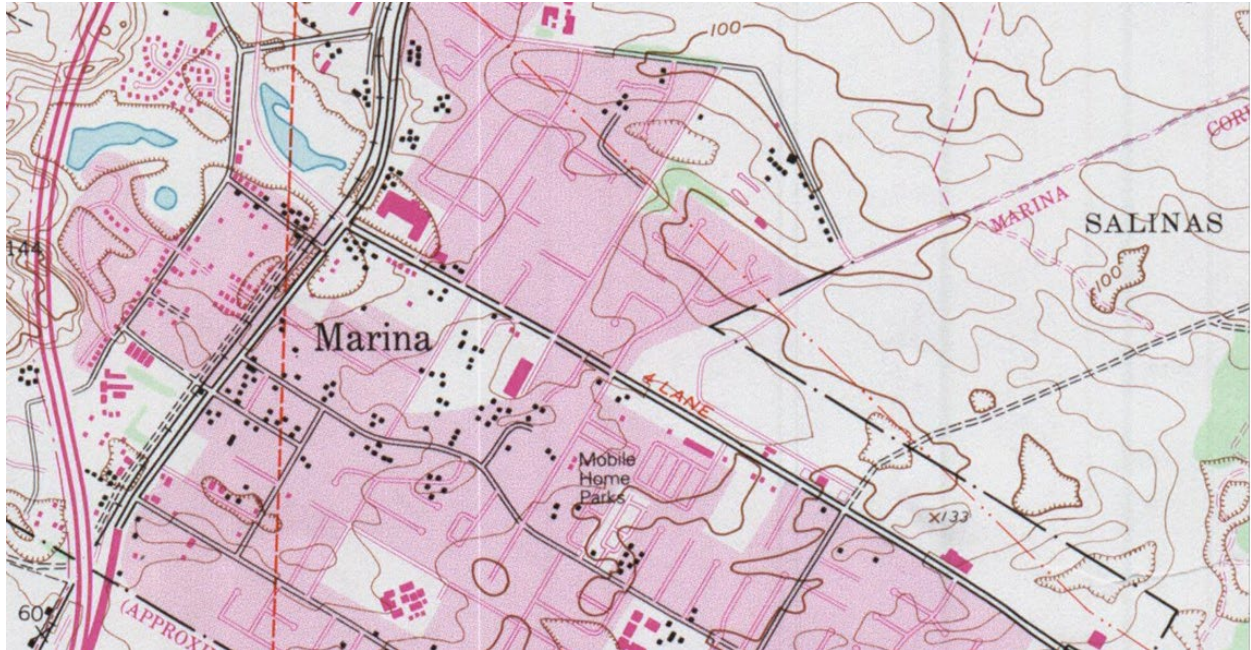


Figure 2-1 Downtown Marina in 1948 (above) and 1983 (below).

Source: United States Geological Survey

Marina continued to grow as Camp Clayton, Camp Gigling, and finally Fort Ord brought thousands of soldiers and their families to the region (**Figure 2-2**). Between the 1930s and 1950s, new schools, churches, businesses, a community center, and hundreds of homes were constructed, many within the Downtown area. Del Monte Boulevard was the City's primary commercial corridor.



Figure 2-2. Mortimer's through the years (top to bottom): 1948, 1950s, 1994, 2018.

In 1986, the City established a Redevelopment Project Area in the central commercial core of Marina along Reservation Road and Del Monte Boulevard. That same year, the Seacrest Shopping Plaza—Marina’s first major retail grocery store in over 20 years—was completed. Seacrest Plaza increased retail tax revenue and jobs, but the shopping center was auto-oriented and eliminated opportunities for some street connections in the Downtown, reinforcing the large-block pattern in Marina.

Fort Ord (Figure 2-3) was downsized and then fully decommissioned in 1994. The closure of the fort had an immediate effect on the demographics and economy of Marina. The City’s population fell by 9,000 and nearly 23,000 jobs in the region were lost, greatly impacting the development Downtown.

By the late 1990s and early 2000s, interest in the Downtown was surging. Residents participated on committees aimed at downtown vitalization, and Monterey-Salinas Transit proposed designs for a major transit facility in Marina.



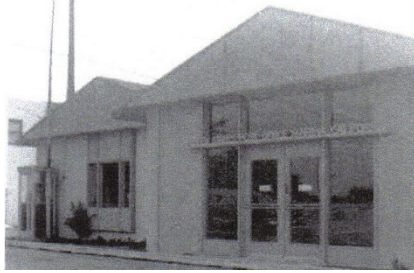
Figure 2-3. Fort Ord as it appeared in 1941.

Source: Wikimedia Commons.



Historic images of Downtown Marina (clockwise, from top left): Pavia's Italian Dinner (1994; near Reservation Rd. and Ocean Terrace), Church of Christ (Cypress Ave.), Marina Grange (Carmel Ave.), Marina's first grocery store (early 1940s), Marina Post Office, Southern Pacific Flag Stop 117, Marina Fire Department (1964), Marina's first subdivision (centered around Vista del Camino), Pavia's Club House (Source: City of Marina collection).





2.2 Regional Context

Marina is situated in northwestern Monterey County along State Route 1 adjacent to the Monterey Bay, approximately eight miles north of the City of Monterey (**Map 2-1**). The City's 2017 population of 22,145 makes Marina the fifth largest city in Monterey County (behind Salinas, Seaside, Monterey, and Soledad), but it is expected to surpass Monterey and Soledad in population by 2045 (AMBAG, 2018).

Marina is unique in the Monterey Bay region, as it is entirely built upon the ancient sand dune soils at the southeast edge of the Bay. Its character is strongly influenced by this geography—from its climate and its rolling, low elevation topography, to its vegetation and landscaping dominated by Monterey Cypress and other coastal vegetation. Open views of ocean, dunes, and maritime chaparral help define Marina as a place rooted in the ecology of the Monterey Bay region.

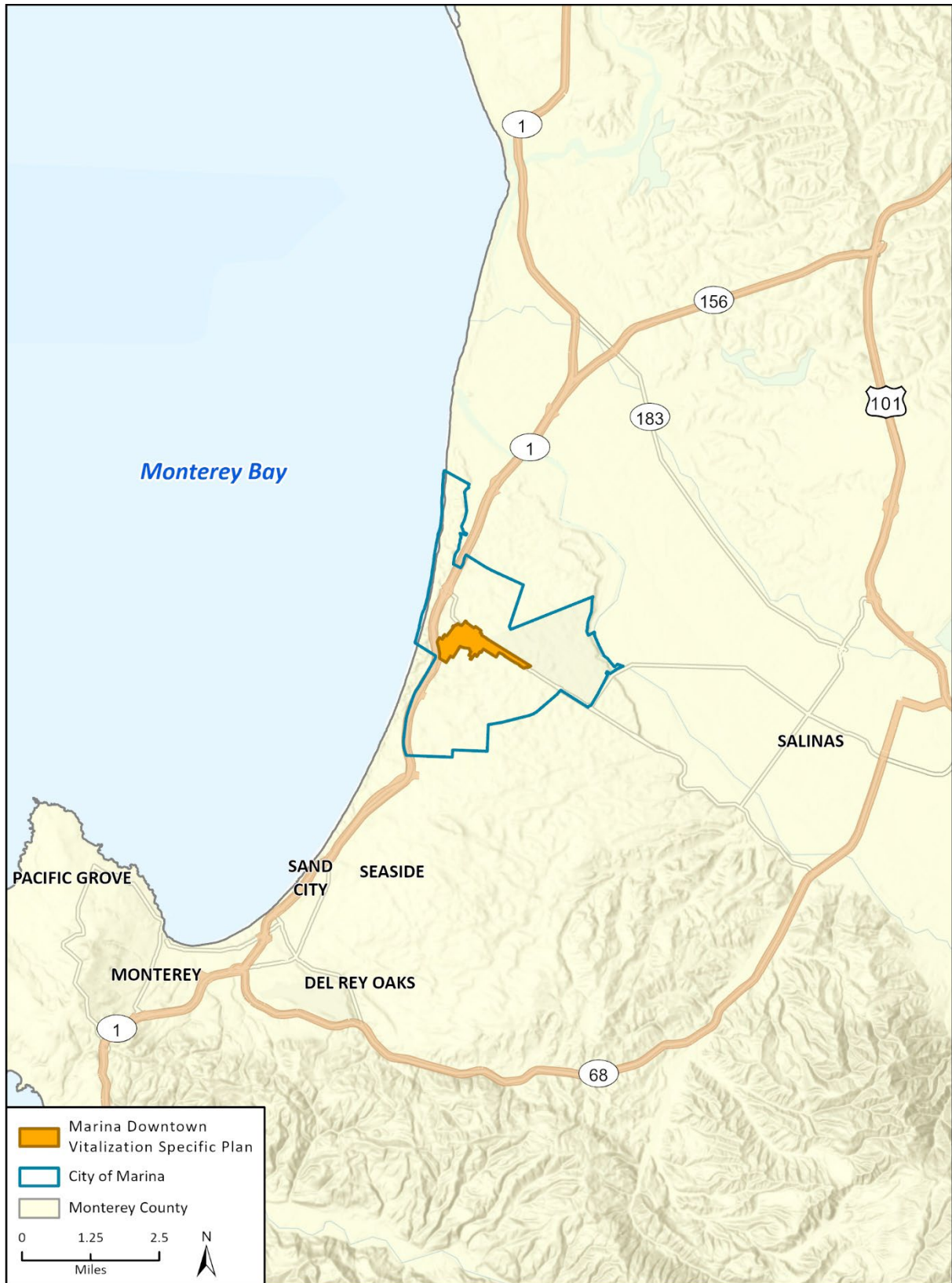
The City of Marina encompasses 6,086 acres and extends for five miles along the Pacific Ocean, from the City of Seaside on the south to the Salinas River on the north, and inland for four miles along the river to the municipal airfield.

The Specific Plan area is shown in **Map 2-2**. Downtown is centrally located in the City of Marina and encompasses approximately 320 acres. Downtown is generally bounded:

- To the north by the northern property line of parcels along the north side of Reservation Road;
- To the west by the properties generally west of Del Monte Boulevard;
- To the south by Reindollar Avenue, then east along Sunset Avenue to Carmel Avenue, hence east on Crescent Avenue and north along Crescent to the southerly property line of the El Rancho Shopping Center and abutting commercial properties along Reservation Road; and
- To the east by Salinas Avenue and the Monterey Peninsula Movers parcel at 503 Reservation Road.

Arterial roads in the Downtown are Reservation Road and Del Monte Boulevard. Public facilities include the Marina City Hall and Community Center, Police and Fire Station, Community Development and Public Works facilities, and the Marina Child Development Center. Locke-Paddon Park, the City of Marina's primary open space, is located immediately northwest of the Downtown.

A brief overview of Marina's history, demographics, natural setting, and economic climate helps to explain the factors that led to the creation of the Downtown Vitalization Specific Plan.



Imagery provided by Microsoft Bing and its licensors © 2023.
Additional data provided by County of Monterey, 2020.

Map 2-1. Regional Context.



Map 2-2. Specific Plan area.

2.3 Demographics

Although the French were the early settlers of Marina, with names such as Barbier, Lievre, and Teulier, the City's name is Spanish, and the current population mix is represented by people from almost every country. The stationing of American G.I.s at Fort Ord after World War II contributed to the ethnic diversity of Marina and established a large Asian-American community in the city. Prominent ethnic groups include Filipino, German, Korean, Vietnamese, Japanese, Chinese, Hawaiian, Guamanian, Puerto Rican, Mexican, and Samoan, along with others representing various Pacific islands including Okinawa and the Marianas.

In 1970, five years before Marina was incorporated as a charter city, the population was 8,343. In 1980, there were 20,647 people living in Marina, representing a growth rate of 147% over the course of a decade. The city continued to grow through the mid-1990s. At its peak, around 27,000 people lived in Marina.

The population declined following the closure of Fort Ord in 1994. Between 2000 and 2010, Marina lost 21% of its population, bottoming out at 19,718 residents. For the past several years, the city has enjoyed slow but sustained growth, reaching 22,246 residents in 2021. Projections indicate Marina will continue to grow, reaching a forecasted population of 30,510 by 2040 (AMBAG 2018).

Marina's population is aging. The median age was 26.7 in 1990 and 32.3 in 2000. The 2021 American Community Survey estimates the median age in Marina was 34.9, consistent with the median age of Monterey County (34.9) but higher than the neighboring City of Salinas (31.3). Approximately 14 percent of Marina's residents were 65 or older in 2021 compared to 11% in 2010 and 8% in 2000.

Table 2-1. Demographic profile of the City of Marina

	1990 Census	2000 Census	2010 Census	2021 ACS
Total population	26,436	25,101	19,718	22,246
Median age (years)	26.7	32.3	34	34.9
Under 18 years	7,674 (29.0%)	5,356 (21.3%)	4,773 (24.2%)	5,448 (24.4%)
65 years and older	1,165 (4.4%)	1,978 (7.9%)	2,244 (11.4%)	3,247 (14.6%)
Total housing units	8,261	8,537	7,200	8,051
Occupied units	7,908	6,745	6,845	7,676
Vacant units	353	1,792	355	375
Owner-occupied	2,728 (34.5%)	3,088 (45.8%)	2,963 (43%)	3,153 (41.1%)
Renter-occupied	5,180 (65.5%)	3,657 (54.2%)	3,882 (57%)	4,523 (58.9%)
Average household size	3.05	2.79	2.75	2.72
Average family size	3.30	3.25	3.26	3.32
White	13,263 (50.2%)	9,500 (37.8%)	7,112 (36.1%)	11,003 (49.5%)
Black or African American	4,797 (18.1%)	3,494 (13.9%)	1,413 (7.2%)	1,500 (6.7%)
American Indian	194 (0.7%)	125 (0.5%)	60 (0.3%)	29 (0.1%)
Asian	5,374 (20.3%)	3,976 (15.8%)	3,826 (19.4%)	3,583 (16.1%)
Pacific Islander		505 (2.0%)	507 (2.6%)	441 (2.0%)
Some other race	40 (0.2%)	265 (1.1%)	46 (0.2%)	2,603 (11.7%)
Two or more races	NA	1,414 (5.6%)	1,382 (7.0%)	3,087 (13.9%)
Hispanic or Latino (any race)	2,768 (10.5%)	5,822 (23.2%)	5,372 (27.2%)	6,286 (28.3%)

A significant subset of Marina’s aging population are veterans. Approximately 9% of Marina residents are veterans, double the rate of Monterey County. Seven percent of Marina’s population under the age of 65 has a disability, compared to approximately 6 percent in Monterey County.

Though the City is aging, there is a growing student population living in Marina. Since 1995, California State University—Monterey Bay (CSUMB) has operated on former Fort Ord lands straddling Marina and Seaside. In 2015, there were an estimated 1,020 CSUMB students living in Marina. The student population is expected to increase to more than 6,300 by 2040, an increase of 518%. Students will account for 21% of Marina’s population in 2040 compared to roughly 5% of the City’s total population today.

While student population will be concentrated on and around the CSUMB campus, an increasing number of students are expected to take advantage of living accommodations in Downtown. The City therefore needs to be conscious of two major population groups—residents over the age of 65 who seek to age in place and students—as it works to create a Downtown that accommodates individuals and families of all ages and abilities.

The City should also be conscious of the various ethnic minorities that make up the population of Marina. The City’s rich diversity is reflected in a variety of stores and restaurants—Chinese, El Salvadoran, Filipino, German, Hawaiian, Korean, Mexican, Thai, and Vietnamese—within the Downtown. According to the ACS, 49 percent of Marina’s population identifies as white. Sixteen percent identify as Asian, while 7 percent identify as Black or African American, 2% as Pacific Islander, and less than 1% as American Indian. Approximately 26 percent identify as some other race or two or more races. Approximately 28 percent identify as Hispanic or Latino.



Figure 2-4. California State University—Monterey Bay.



Figure 2-5. The Asian Filipino Market, one of many diverse businesses in Downtown Marina. *Source: Asian Filipino Market*

The median household income in Marina is \$78,795, lower than the countywide median household income of \$82,013. The proportion of people renting their homes in Marina has been on the rise since the turn of the century. It is important to create opportunities for homeownership in and around Downtown by encouraging a variety of housing options, including condominiums as well as affordable rental options.

2.4 Economics

Marina is a mid-sized coastal city that traditionally provided support services to people stationed at or working in the former Fort Ord. The city historically provided housing for working class families with jobs on the Peninsula, but Marina was greatly affected by the closure of Fort Ord in 1994. Though services remain an important part of the local economy, there are still opportunities to develop the city's economic base in Downtown.

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. 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.

Over the course of the development of the Specific Plan, the City has commissioned multiple economic studies and analyses to better understand the market conditions influencing Downtown and Marina more broadly. The various economic conditions analyses revealed the following key findings:

- The Downtown District is largely built out and has relatively few vacant or underutilized lots;
- Significant changes to the development pattern of Downtown would require substantial redevelopment of sites to achieve the Plan's development targets; and,

Economic development goals and strategies included:

- Maintain and grow existing businesses in the city;
- Attract new businesses and startups to the City's existing and developing commercial areas with a focus on sustainable industries;
- Develop destination related activities and facilities;
- Support regional efforts that increase the availability of a skilled workforce for Marina's businesses.
- Capitalize on the opportunity to provide necessary goods in services within Marina to limit retail "leakage" including general retail merchandise; clothing, apparel, and shoes, restaurants, including casual dining, fast casual, and quick service concepts, and building materials and supplies.
- Help facilitate the reuse of vacant shops and restaurants in the Downtown;
- Host 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.

2.5 Land Use

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 Marina is generally suburban in nature, dominated by a mixture of single-story retail commercial and office buildings, single-family homes, and one- to two-story multifamily residential units. The existing retail and office commercial uses are located primarily along Reservation Road and Del Monte Boulevard and are predominantly oriented in a strip mall configuration with the buildings behind large surface parking lots.

Marina's suburban character is influenced by its historic function as a housing and services center for the former Fort Ord military installation. A pattern of mixed-density housing and strip-retail center commercial development signifies a community that is highway-oriented. Buildings date primarily from the postwar era, with significant shopping centers dating from the late 1950s (**Figure 2-6**).



Figure 2-6. Marina Village Shopping Center, late 1960s.

2.5.1 Existing Land Uses

The Specific Plan area covers approximately 320 acres in Central Marina. While the downtowns of many cities benefit from mixed land uses that promote pedestrian activity and efficient use of space, single uses dominate most parcels in Downtown Marina (**Map 2-3**).

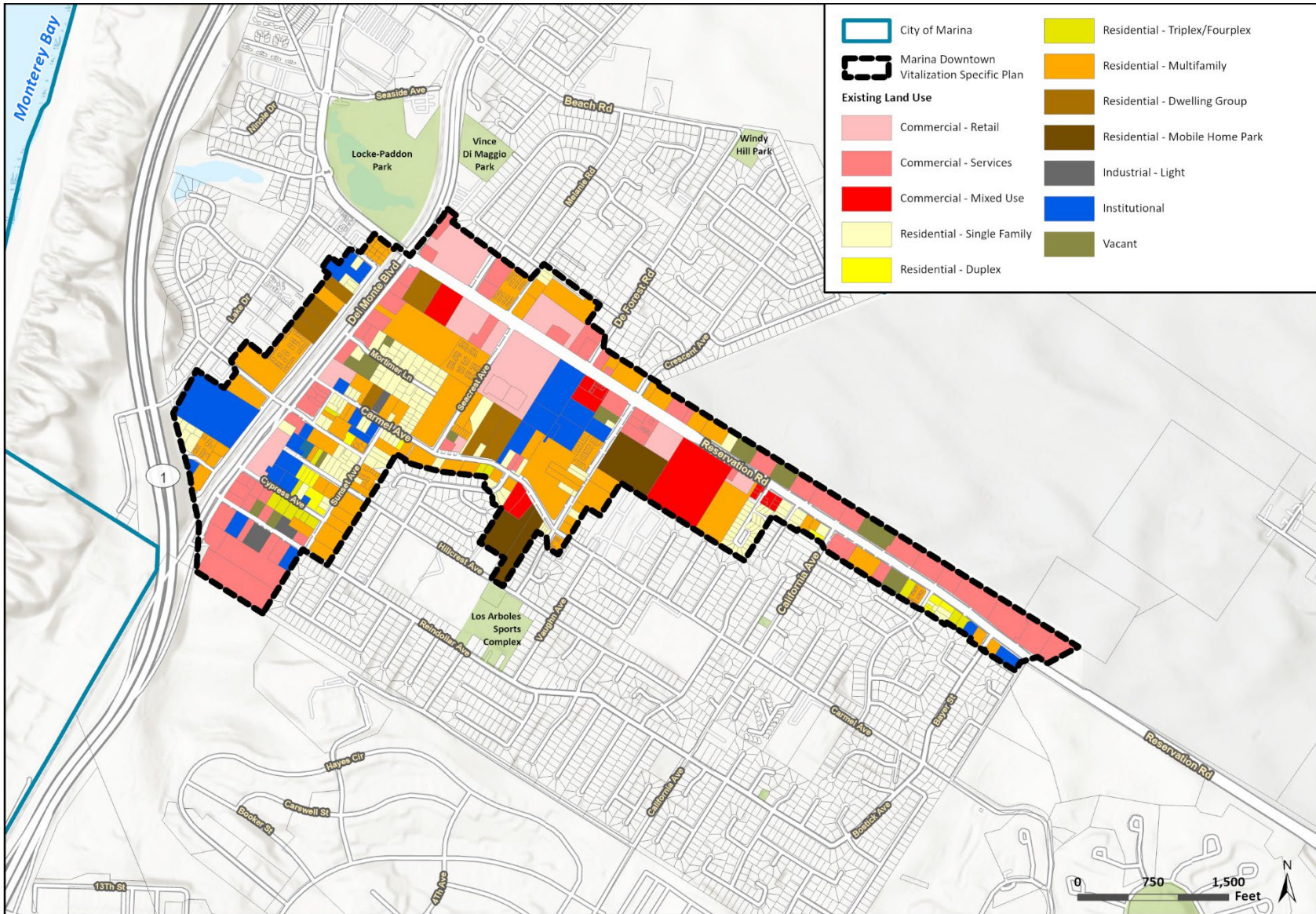
A majority of land in this area is devoted to residential (39 percent) and commercial uses (24 percent) **Table 2-2** summarizes the distribution of existing land uses in the Specific Plan area. Multifamily uses alone represent more than half of all residential land use in the Specific Plan area (and 22 percent of total land use). Eight percent of total land area is devoted to single-family homes, with 3 percent each to dwelling groups and mobile home parks. Duplexes, triplexes, and fourplexes together make up just over 2 percent of total land area. There are currently a total of approximately 2,300 housing units and 1 million square feet of commercial space in the Specific Plan area.

Two-thirds of commercial uses are office-related, representing 16 percent of total land area. Retail and visitor-serving uses take up 8 percent of the total land area. Remaining land uses are split between institutional and civic (9 percent), mixed (2 percent), and light industrial (1 percent). There are no recreational uses in Downtown. Vacant lots, which comprise 2 percent of land area, could provide an opportunity for the development of parks and other recreational facilities.

Table 2-2. Existing 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%





Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022.

Map 2-3. Existing land uses in Downtown Marina.

2.6 Mobility

Street conditions in the Downtown reflect a mid-20th Century focus on the automobile at the expense of other forms of transportation (**Figure 2-7**). Travel lanes are wide, right turn lanes are prevalent, and curb radii are typically large, allowing drivers to make sweeping turns without stopping. There are significant gaps in the sidewalk network and where they are present, sidewalks are often narrow and poorly maintained. 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 high-speed vehicular traffic. These issues make walking to destinations in the Specific Plan area more dangerous and unpleasant for pedestrians.



Figure 2-7. Typical portion of Del Monte Blvd with wide travel lanes for automobiles and missing sidewalks.

2.6.1 Existing Vehicle Network

The existing network of roadways throughout Downtown Marina is shown in **Table 2-3**. The network comprises expressways, arterials, collectors, and local streets, as defined below, and shown in **Map 2-4**.

Table 2-3. Roadway Classifications within the Downtown Vitalization Specific Plan area

Classification	Roadway
Four-Lane Expressway	<ul style="list-style-type: none"> Del Monte Boulevard (near Highway 1 interchange)
Four-Lane Arterial	<ul style="list-style-type: none"> Del Monte Boulevard Reservation Road
Two-Lane Collector	<ul style="list-style-type: none"> California Avenue Carmel Avenue Crescent Avenue De Forest Road Palm Avenue Reindollar Avenue Salinas Avenue Seacrest Avenue Sunset Avenue Vista Del Camino

Classification	Roadway
Local Street	<ul style="list-style-type: none"> • 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

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.

Arterial: Arterials are major thoroughfares that provide efficient connections to major destination points and to primary gateways in and out of the city (**Figure 2-8**). 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.



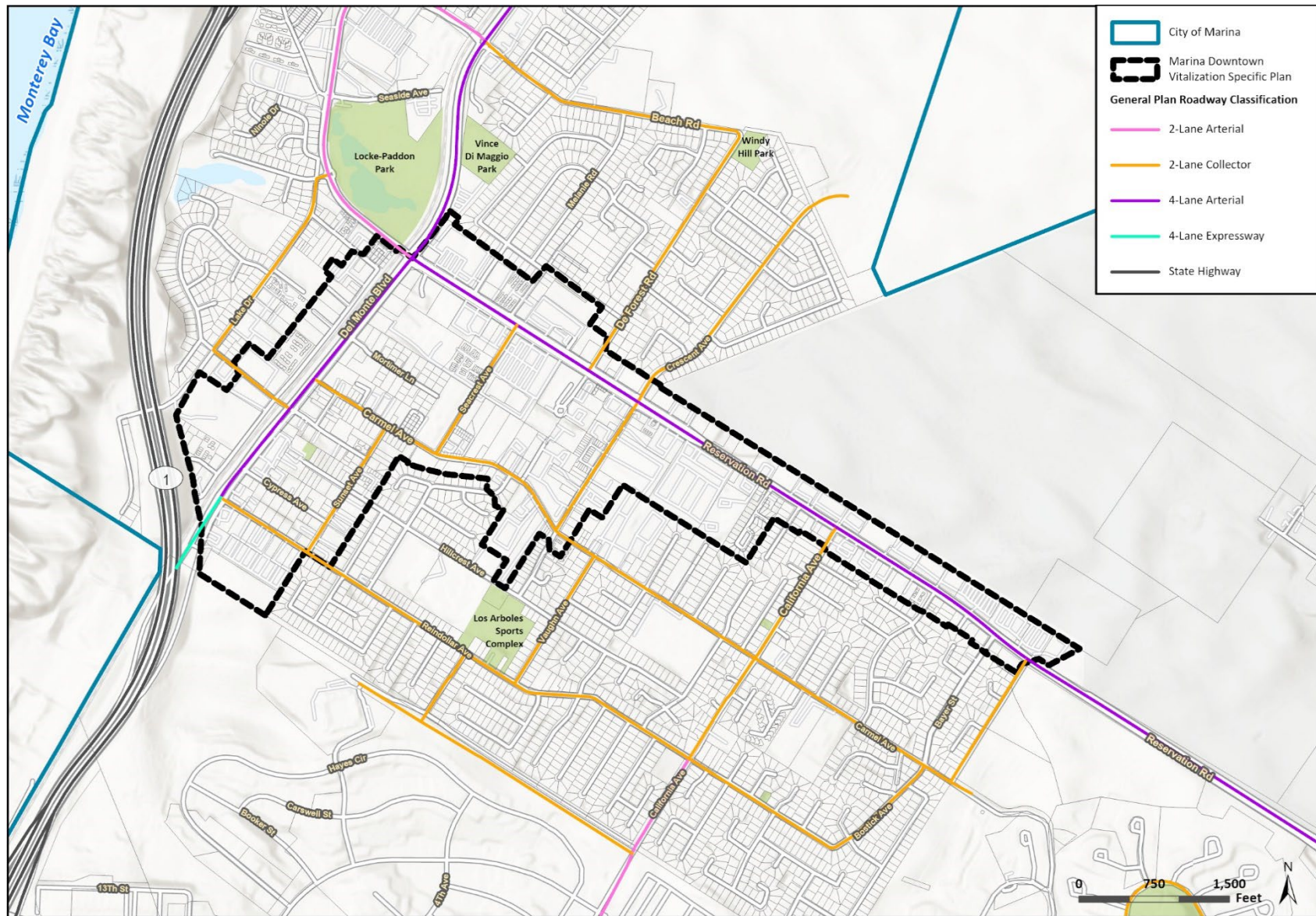
Figure 2-8. Reservation Road functions as an arterial street.

Collector: 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.

2.6.2 Connectivity

Typically, a downtown consists of a well-connected street grid that comprises around 30 – 35 percent of the total land area and this connectivity makes the area more walkable and bikeable. The public right-of-way in the Specific Plan area encompasses 62 acres, or 20 percent of the total land area. This is an unusually small percentage of land for a downtown area. Problems associated with limited connectivity of the street grid include traffic congestion, speeding, and increased pollution. Residents of communities with a low connectivity street network often drive more because fewer destinations are accessible within comfortable walking or biking distance.



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022.

Map 2-4. Roadway Classifications.

The number of three- and four-way intersections in a given area (known as intersection density) is one way to quantify the connectivity of a street network. When compared to other communities in the Monterey Bay region, the number of intersections in Downtown Marina is dwarfed by the number of intersections in the downtown areas of other cities. **Table 2-4** compares the intersection density of Downtown Marina with other Central Coast communities. The street grids of Marina and other cities in the region are compared in **Figure 2-9**. In a 160-acre portion of Downtown, Marina has only nine intersections, compared to 25 in Seaside, 29 in Salinas, 31 in Monterey, and 80 in Pacific Grove.

Table 2-4. Number of three- and four-way intersections in a 160-acre portion of downtown.

City	Number of Intersections	City	Number of Intersections
Marina	9	Paso Robles	22
Carmel-by-the-Sea	39	Salinas	29
Gilroy	24	San Juan Bautista	27
Gonzales	24	San Luis Obispo	29
Greenfield	19	Santa Cruz	28
Hollister	39	Santa Maria	21
King City	22	Seaside	25
Monterey	31	Soledad	22
Pacific Grove	80	Watsonville	22

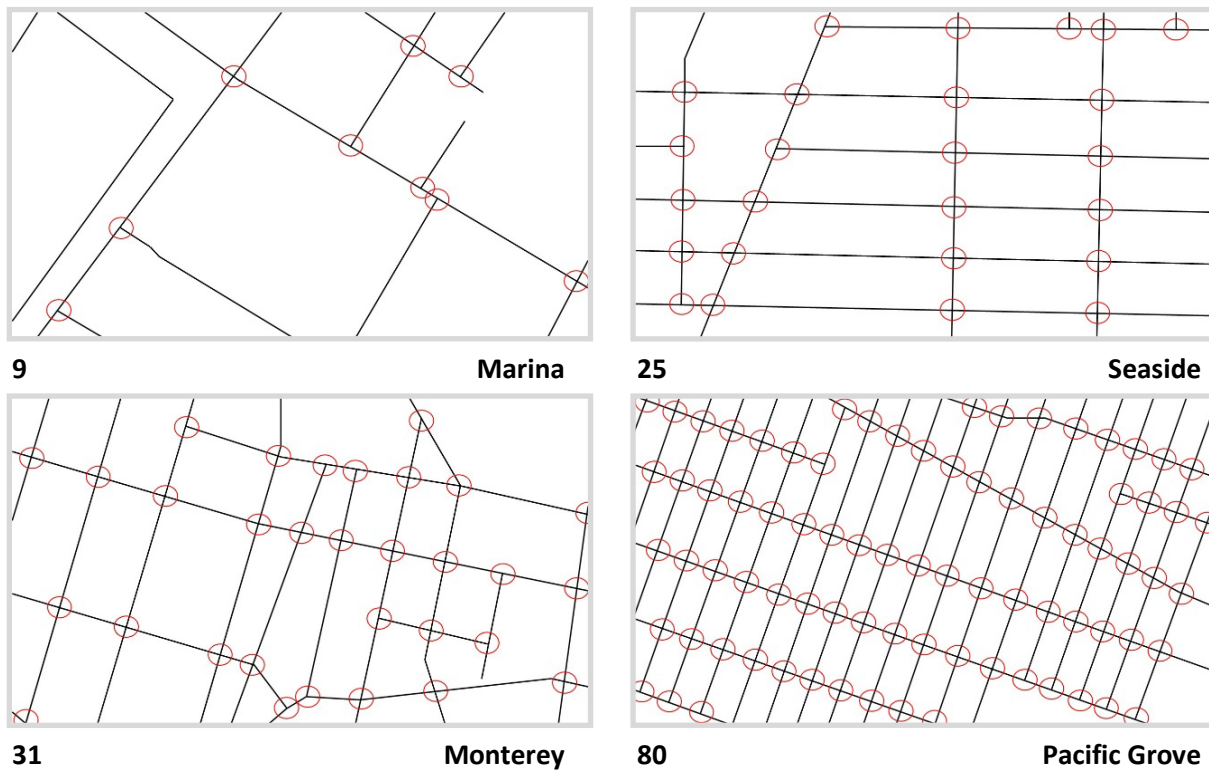


Figure 2-9. Number of three- and four-way intersections in regional downtowns.

2.6.3 Pedestrian and Bicycle Network

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, sidewalks along Del Monte Boulevard, Carmel Avenue, Reindollar Avenue, Reservation Road, and Seacrest Avenue are incomplete. In addition, many sidewalks are not wide enough for simultaneous pedestrian use or have obstructions that partially block pedestrian flow. **Map 2-5** shows existing pedestrian and bicycle infrastructure in the Specific Plan area.

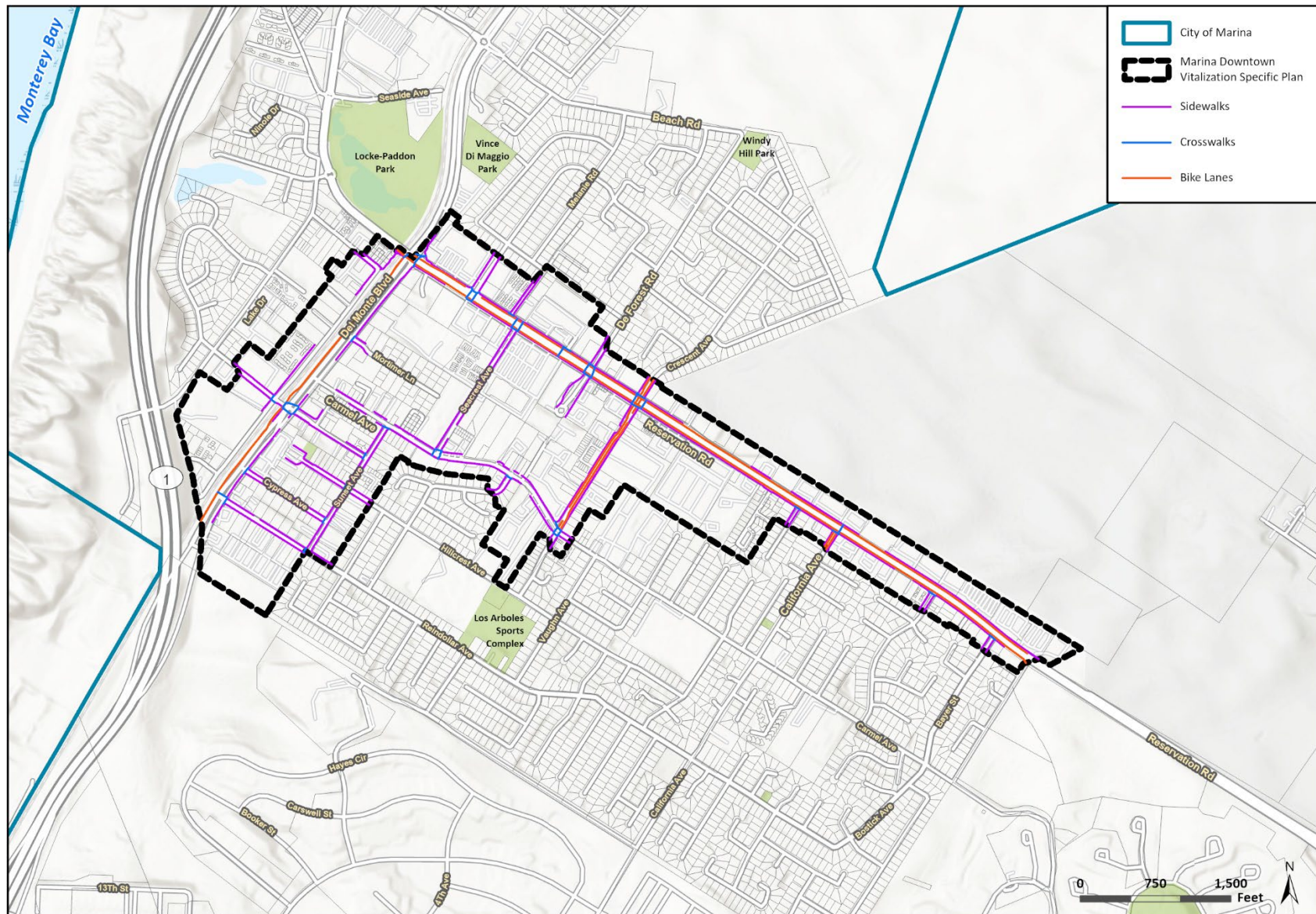
The bicycle network in Downtown Marina includes Class I and Class II bikeways. Class I bikeways are generally referred to as bicycle paths and provide a completely separated right-of-way for the exclusive use of bicycle and pedestrian traffic. Class II bikeways, commonly called bicycle lanes, provide a striped lane for one-way bike travel on a street or highway.



Figure 2-10. Monterey Bay Coastal Bike Path.

There is one Class I bikeway within Downtown: the Monterey Bay Coastal Bike Path (**Figure 2-10**), which currently extends 19 miles from Castroville to Pacific Grove. There are Class II bikeways along Reservation Road, Crescent Avenue, and California 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. The existing bicycle path network is not adequate to meaningfully encourage drivers to use bicycles when commuting within the city or Downtown.



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022.

Map 2-5. Network of sidewalks, street crossings, and bike lanes in Downtown Marina.

2.6.4 Parking

The Specific Plan area has nearly 8,000 parking spaces. As shown in **Table 2-5**, 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.

In September of 2022, Kimley Horn conducted a parking occupancy study in the Seacrest and Marina Square shopping centers. The study found that peak weekday parking demand was roughly 50% of the provided parking supply. In addition, assuming a realistic percentage of trips are made from within the Specific Plan area and via alternative transportation, the study estimated that buildout of the Specific Plan would result in a total peak parking demand of 6,764 - 8,880 spaces.

Table 2-5. Parking spaces in the Downtown Vitalization Specific Plan area

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

2.6.5 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 (**Figure 2-11**). The Transit Exchange was constructed in accordance with the Marina Transit Center Specific Plan (October 2006) which, in addition to guiding the development of the Transit Exchange itself, looks to facilitate the development of a small-scale, transit and community-oriented mixed-use center in Downtown Marina.

MST routes currently serving Downtown Marina include:

- Sand City - Marina via Gen Jim Moore (Line 17)
- Sand City - Marina via Monterey Road (Line 18)
- Monterey – Salinas (Line 20)
- Salinas - VA DOD Clinic (Line 61)



Figure 2-11. Monterey-Salinas Transit Exchange.

2.6.6 Regional Mobility Framework

In June of 2022, the Association of Monterey Bay Area Governments (AMBAG) published Moving Forward: Monterey Bay 2045 (**Figure 2-12**) the region’s Governments Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). The MTP/SCS was completed through collaboration with AMBAG staff, Transportation Agency for Monterey County (TAMC) staff, and staff from local

jurisdictions in the Monterey Bay Area. The plan focuses on two key areas: 1) improved mobility, accessibility, and coordinated transportation, and 2) a land use strategy that houses the region’s future population while preserving the most important agricultural lands and natural areas. These strategies aim to reduce vehicle miles traveled (VMT) and greenhouse gas emissions (GHG) through improved coordination between regional transportation and local land use planning. By drawing attention to these regional goals, the MTP/SCS highlights the value of coordination and resource sharing among Monterey Bay Area localities.

The following goals for the MTP/SCS were adopted by the AMBAG Board of Directors:

- Access and Mobility – Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region.
- Economic Vitality – Raise the region’s standard of living by enhancing the performance of the transportation system.
- Environment – Promote environmental sustainability and protect the natural environment.
- Healthy Communities – Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.
- Social Equity – Provide an equitable level of transportation services to all segments of the population.
- System Preservation and Safety – Preserve and ensure a sustainable and safe regional transportation system.

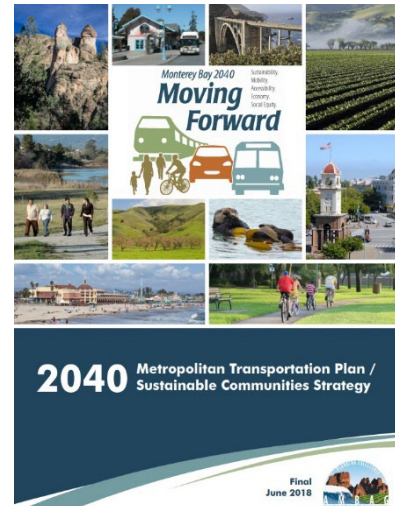


Figure 2-12. Metropolitan Transportation Plan / 2045 Sustainable Communities Strategy

2.6.7 Monterey Peninsula Light Rail Transit and SURF! Bus Rapid Transit System

TAMC completed an environmental review for a proposed fixed guideway service to and from the Monterey Peninsula. The project would have provided light rail transit service using the existing Monterey Branch Line alignment, which was purchased by TAMC in 2003 for \$9.3 million. The 16-mile corridor extends between Monterey and Castroville on the publicly owned tracks adjacent to Highway 1. A planned first phase of the project would have run between Monterey and Marina with key stations in Monterey, Seaside, Sand City, and Marina/CSUMB, and connecting bus service to Pacific Grove and Carmel to the south and Salinas to the east. Later phases were to extend service to the proposed commuter rail station in Castroville and to increase the frequency of trains. Rail service was to begin by 2015 with two light rail stations Downtown, both on the west side of Del Monte Boulevard at Reservation Road and Palm Avenue although funding for this project has not yet been secured.

While the construction of a light rail system is still the long-term goal for TAMC, MST is working to develop a bus rapid transit system utilizing the existing Monterey Branch Line right of way. MST SURF! is estimated to cost \$50 million to complete as opposed to the Monterey Peninsula Light Rail project’s \$145 million estimate. TAMC is providing \$15 million in project support through Monterey County’s Transportation Safety & Investment Plan (Measure X) funds approved by Monterey County voters in 2016. The SURF! Project is slated to open to the public in 2027 and includes a station within the Specific Plan area at the corner of Del Monte Boulevard and Palm Avenue.

3 Downtown Vision

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.

The Marina Downtown Vision was adopted by the City Council in July 2005. The Vision was intended to supplement the General Plan by encouraging development in the Downtown area. The Vision provides direction for the physical design of Downtown Marina and calls for new development that meets or exceeds the City’s policies and standards. Issues addressed include community identity, fiscal health, infrastructure, safety and security, services, design, and sources of funding. The underlying intent of the Vision has been incorporated into the Downtown Vitalization Specific Plan and will be implemented by the various goals, policies, and design standards included in this plan.

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.



Pedestrian right-of-way with outdoor dining.

The long-term viability of the vision hinges on attracting a regional customer base, including tourists and shoppers from neighboring communities, fostering a vibrant community within downtown by providing much needed housing, and establishing a clear identity for Downtown. This is to be achieved through the implementation of the policies and programs discussed throughout the Specific Plan.

The Downtown Ad Hoc Committee called for a “strategically located” town center, anchored by retail, civic, and public transit uses within walking distance of high-density residential uses. Development was to be pedestrian focused and family friendly with opportunities for social interaction placed throughout the Downtown. Reservation Road was highlighted as the preferred location for the highest intensity

retail activity and high intensity residential densities, and traffic calming was identified as crucial for improving pedestrian access along Reservation Road.

The Downtown Vitalization Specific Plan incorporates many of the objectives of AMBAG’s 2045 MTP/SCS by designing for and encouraging walkability, encouraging higher-density development near transit facilities, and promoting sustainable design and construction practices.

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

3.1 Plan Goals

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. 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. The Goals of the Specific Plan include:

Land Use and Development—A community with a safe, walkable, and vibrant downtown, that attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails.

Community Identity—A Downtown that complements Marina’s 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.

Cultural Diversity—A Downtown where people of all incomes, ages, abilities, races, and cultures feel like they belong.

Housing Affordability—A variety of affordable, high-quality housing options for people to live in Downtown.

Environment and Sustainability—Development in Downtown that employs green building technology, employs net zero building principles, and is designed to create more comfortable indoor and outdoor environments.

Economic Vitality—An environment that attracts and sustains economic activity through innovation, business, and social opportunities.

Mobility—A Downtown with safe and efficient pedestrian and vehicular circulation that encourages people to gather, walk, bike, or use public transportation.

Public Facilities and Infrastructure— Ensure that there are adequate public services and public utilities are provided for future development, and enhance the Downtown by planning for future public facilities.

The Specific Plan can be viewed as a springboard to a better Downtown. Change will not be immediate, but implementing the goals, policies, programs, and development standards in the Specific Plan can ensure future development will coalesce into an attractive and functional Downtown. Since planning is an active process, this document should not be seen as unchangeable.



Built environment.
Source: Google Earth, 2022

4 Land Use and Development

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, parks, and residential uses 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 creating a land use policy framework that will guide development within the plan area to create a thriving downtown over the next approximately 20 years.

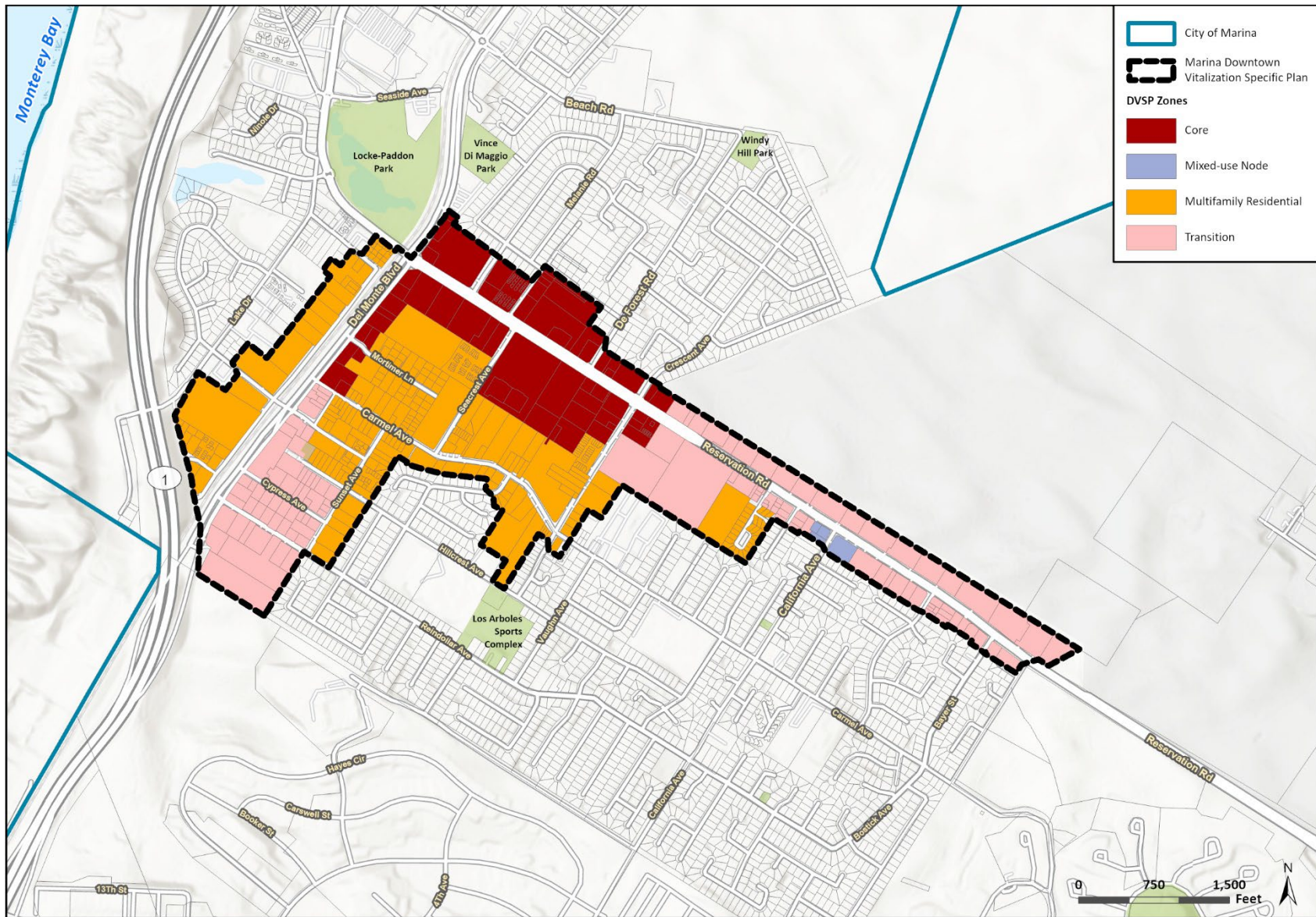
This chapter discusses land use designations and development potential, as well as policies and programs to develop a unique identity and sense of place in the public realm. The land use policies discussed in this chapter, along with design and development standards and permitted uses in **Appendix A: Development Code** and **Appendix B: Design Guidelines**, form a complete set of policies that will steer future land development and redevelopment within the Downtown. The following land use policies are intended to create and reinforce the desired urban image of Downtown and improve the overall aesthetic appearance and functionality of the street network. When implemented with standards in the Development Code, these policies and standards create predictability and therefore incentive for private investment in Downtown.

4.1 Land Use Plan

The Specific Plan calls for up to 2,904 additional residential units in the Downtown area. Currently, there are roughly 2,300 residential units in Downtown, so this Plan would more than double the residential capacity of the area. The Specific Plan also allows for the development of an additional 530,000 to 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.

4.1.1 Land Use Designations and Intent

The Specific Plan establishes the following land use designations to implement the Land Use Plan. The land use designations shown in (**Map 4-1**) are intended to function as implementing zoning in accordance with **Appendix A: Development Code**. Appendix A includes a Land Use Matrix which lists uses permitted in each district as well as development standards (property line setbacks, building heights, etc.) and other objective design standards.



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022.

Map 4-1. Land Use Plan

Core District

The intent of the Core district is to permit and encourage higher intensity commercial and mixed-use development. 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. This type of compact development around high-quality transit systems, also known as transit-oriented development, is envisioned around the Monterey Salinas Transit Center and will be a guiding concept of this district.

Mixed-use Node District

The Land Use Plan calls for the creation of a mixed-use node at the intersection of Reservation Road and California Avenue. This node, surrounded by the lower-intensity Transition district, 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 similar to the types of development expected in the Core district. The mixed-use node is strategically located at a gateway into the Downtown Core to help ensure a vibrant, urban atmosphere is associated with Downtown Marina.

Transition District

The intent of the Transition district is to permit and encourage commercial, multifamily residential, and mixed-use developments at a slightly reduced density compared to 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 Highway 1 and Del Monte Boulevard), land uses should be inviting and visually interesting. Parking is screened and located behind or to the side of buildings, and building setbacks are landscaped with appropriate materials.

Multifamily Residential District

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 in Downtown. An additional 154 residential units are proposed in the Multifamily Residential district.

4.1.2 *Development Potential*

The amount of development that can reasonably be expected under the Plan is referred to as “buildout.” Buildout is expected to occur over the approximately 20-year planning horizon. **Table 4-1** details the potential residential units and commercial square footage that could result from buildout of the Specific Plan. This total represents the maximum development that could be expected in 2040 if the Specific Plan is implemented according to the land use designations described above.

Table 4-1. Anticipated new development by zone in the Downtown Specific Plan area

Land Use	Acres	Commercial Square Footage		Residential Units	
		Minimum	Maximum	Residential Density	Maximum Units
Core and Mixed-use Node District	56.4	317,766	901,470	70	1,372
Retail	-	208,427	675,390	-	-
Office	-	109,339	226,080	-	-
Transition District	104.0	214,322	483,727	50	1,378
Retail	-	70,352	199,279	-	-
Office	-	143,970	284,448	-	-
Multifamily Residential District	106.7	-	-	35	154
Total	267.08	532,088	1,385,197	-	2,904

4.1.3 Objective Design and Development Standards

Objective design and development standards are a key implementation strategy of the Specific Plan. Objective design standards are intended to make the requirements that apply to development projects more predictable and easier to interpret for all stakeholders, including decision makers, City staff, applicants, and members of the public. The purpose of objective design standards is to inform applicants beforehand what requirements apply to a proposed development and to enable the applicant to design a compliant project prior to submittal.

Government Code Sections 65913.4 and 66300(a)(7) defines Objective design standards as standards that:

involve no personal or subjective judgment by a public official and are uniformly verifiable by reference to an external and uniform benchmark or criterion available and knowable by both the development applicant or proponent and the public official before submittal.

In the case of Marina, the standards are intended to foster a more traditional downtown built environment as opposed to the suburban development pattern seen in Marina today (Figure 4-1). This will involve requiring that buildings in new developments are oriented toward the street and built closer to the sidewalk instead of behind large parking areas.

Objective design and development standards allow for streamlined approval of certain proposed projects while still requiring these projects to further the functional and aesthetic goals of the Specific Plan. The design and development standards detailed in **Appendix A: Development Code** address characteristics of architectural design and site planning including:

- Building Location and Orientation
- Building Articulation, Massing, and Scale
- Architectural Elements
- Materials and Color
- Utility and Service Areas
- Circulation and Access

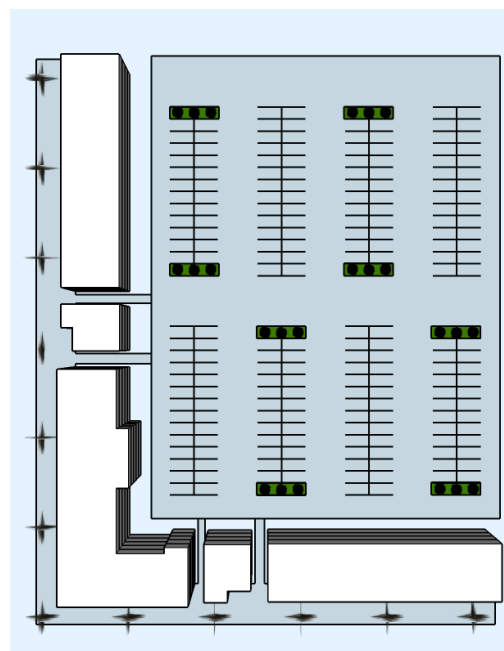


Figure 4-1. Traditional Downtown site layout with buildings brought to the edge of the sidewalk and parking in the rear.

4.2 Placemaking Framework

The following goals and policies outline the desired future conditions of the Specific Plan area and create a framework for the development of a vibrant Downtown Marina.

4.2.1 Vibrant, Mixed-Use Downtown

The primary goal of the Specific Plan is to promote 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. The Specific Plan looks to establish Downtown Marina as a vital destination center that accommodates a mix of commercial, retail, dining, entertainment, parks, and residential uses.

The Specific Plan envisions the Core District to include mixed-use buildings built to the property line (**Figure 4-4**) with doors and windows that face wide sidewalks with shade trees and pedestrian amenities. Development standards will require new development to provide features like lighting, public art, seating, and landscaping along building frontages to enhance the streetscape and create a pedestrian oriented, urban atmosphere. The Core will feature a mix of high density housing and neighborhood-oriented businesses in a walkable, pedestrian-scaled environment (**Figure 4-2** and **Figure 4-3**). Paseos can be situated to provide pedestrian connections to residences, offices, retail, and restaurants on deeper lots as well as increase connectivity between Marina’s large, disconnected blocks. Parking facilities are to be located to the rear of buildings and accessed via side streets to minimize the number of driveways crossing the sidewalk and create an urban “street-wall.” Parking is located behind buildings, and shared parking agreements (including providing parking in structures) are encouraged.

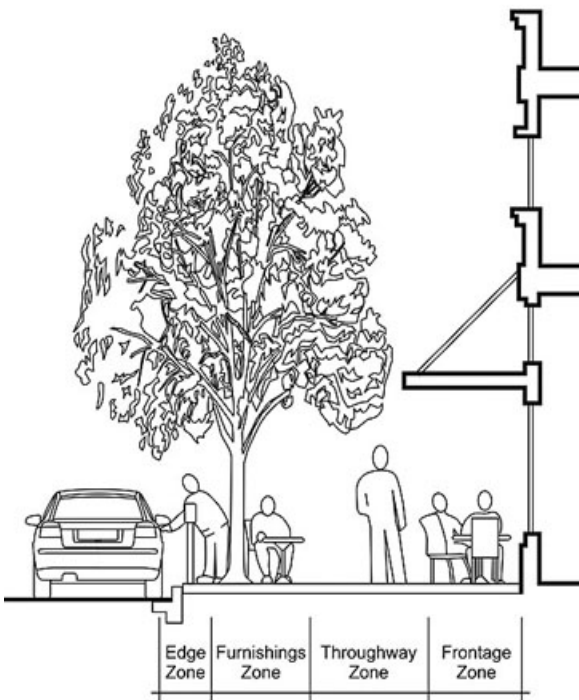


Figure 4-2. Pedestrian portion of the right-of-way.
Source: Urban Review St. Louis



Figure 4-3. Pedestrian right-of-way with outdoor dining next to building (top) or street (bottom).

The Transition and Multifamily Residential districts will be characterized by a “transitional” urban form (**Figure 4-5**) featuring buildings with doors and windows facing the street with larger setbacks than those found in the Core district. Parking will be located behind or to the side of buildings and accessed from the primary street frontage or side streets where possible. Setback areas will be well landscaped with native plants and trees creating a pleasant parkway environment for drivers, pedestrians, businesses, and residents. Commercial uses are encouraged on Reservation Road and Del Monte Boulevard to maximize visibility. Multifamily development is encouraged in the Transition District and may be designed in connection with a mixed-use project with commercial space on the street facing portion of the first floor or as an exclusively residential development. The Multifamily Residential district is reserved exclusively for residential development.

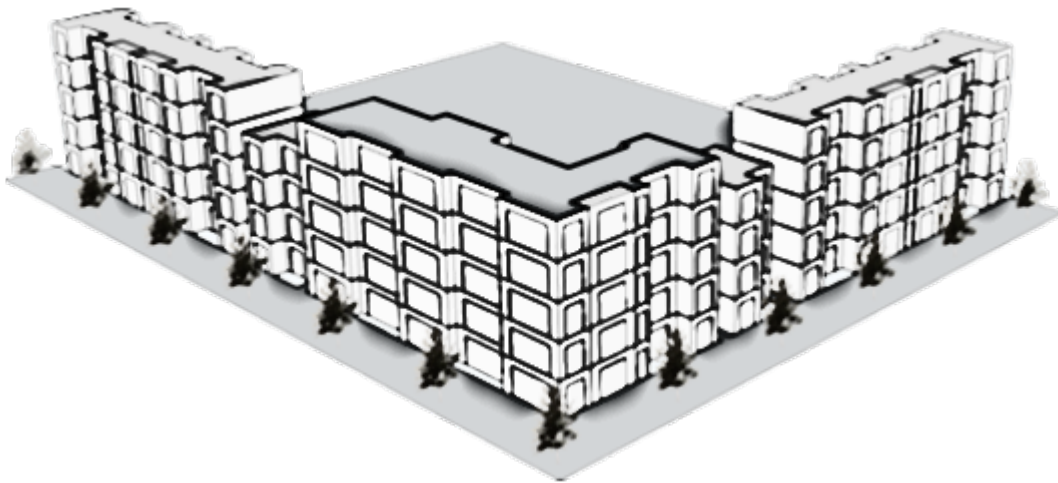


Figure 4-4. Urban block site layout.

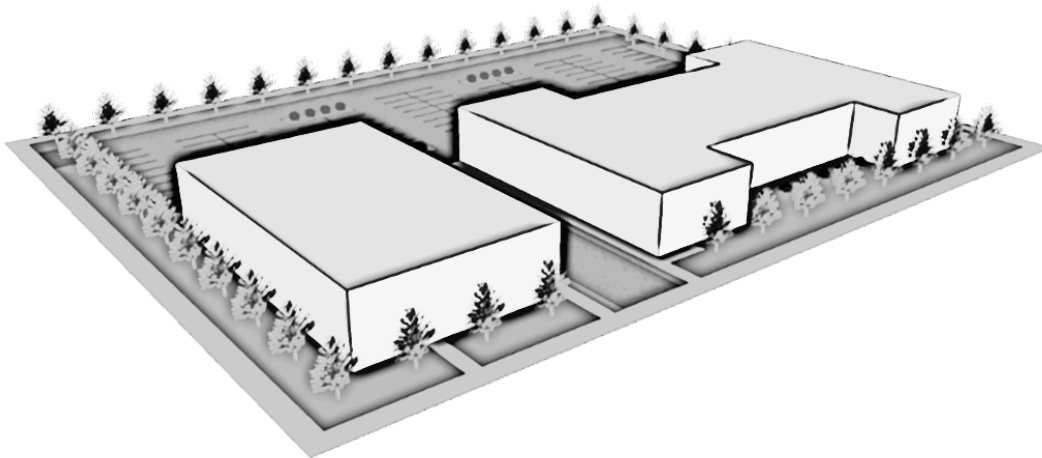


Figure 4-5. Transitional block site layout.

While there are several large parcels along Reservation Road which could be redeveloped, the typically small lot size under many different owners is a potential constraint to development in the Specific Plan area. Consolidation of contiguous lots under separate private ownership would allow more cohesive redevelopment envisioned for the Specific Plan area.

Marina is one of the most diverse small cities in the United States. 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. **Appendix B: Design Guidelines** provides guidance to property owners and developers for creating culturally inclusive spaces.

4.2.2 *Transit-oriented Development*

Transit-oriented development (TOD) is a planning approach that calls for high-density, mixed-use business and residential neighborhood centers to be clustered around transit stations and corridors (**Figure 4-6**). As the name implies, transit-oriented development is designed to be served by transit rather than or in addition to the automobile. Networks of streets and multi-use paths provide a walkable and bikeable environment that is conducive to living, working, and shopping in the same area. There are many benefits associated with TOD, including:

- Reducing vehicle miles traveled;
- Decreasing air pollution;
- Constraining sprawl and conserving open space;
- Lowering infrastructure costs;
- Promoting jobs-housing balance;
- Providing new housing;
- Creating vibrant new public spaces; and,
- Reducing the amount of land dedicated to parking.

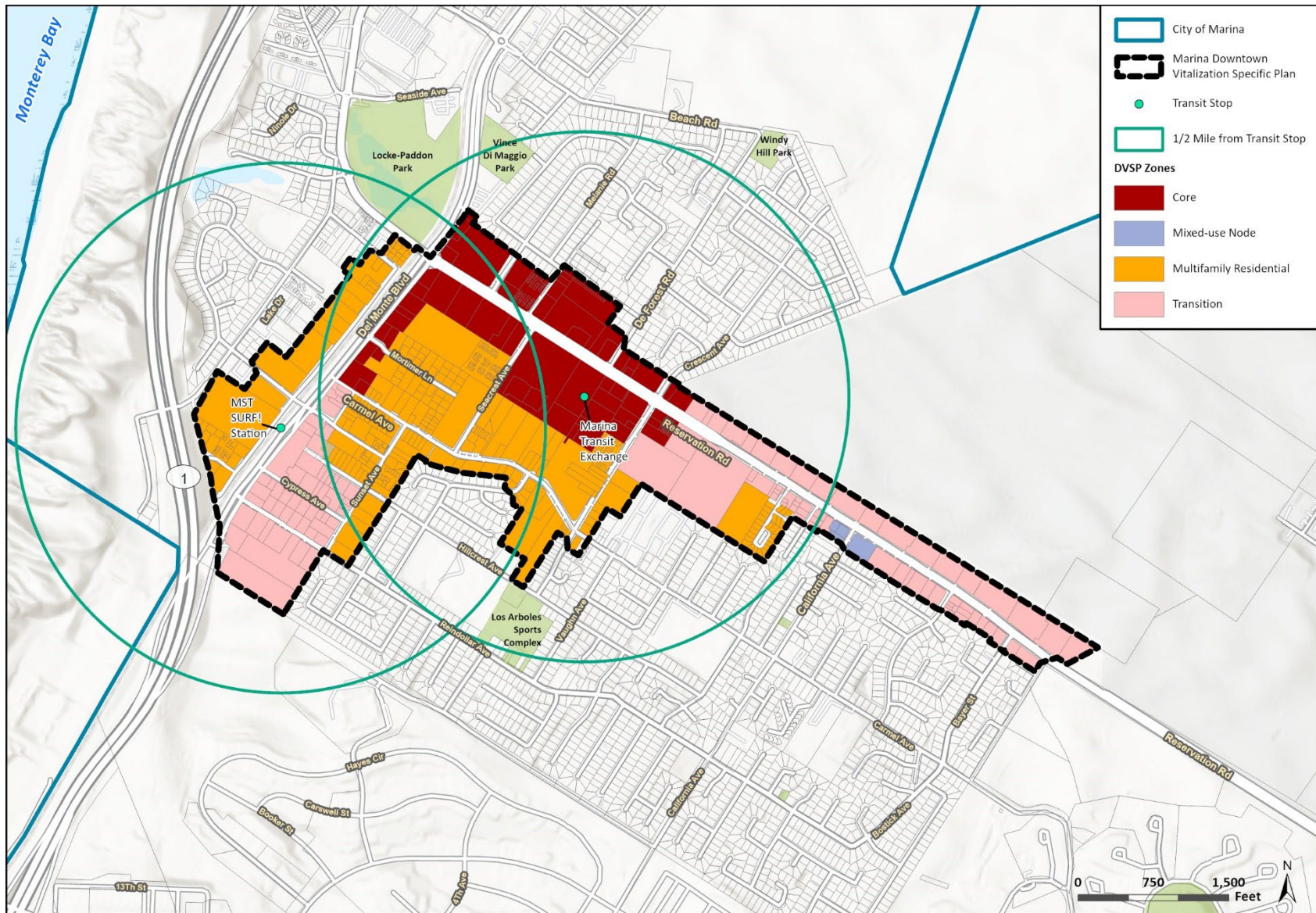


Figure 4-6. Transit-oriented development in Minneapolis.
Source: Metropolitan Council

TOD is appropriate within one-half mile of transit stops, with the highest intensity and mix of land uses concentrated within one-quarter mile or adjacent to a transit stop. Land use intensities and densities decrease away from the Core area to ensure compatibility with existing peripheral neighborhoods.

California Assembly Bill 2097 approved by the State Assembly and Governor in September of 2022 eliminates parking mandates for homes and commercial buildings near transit, or neighborhoods with low rates of car use. The bill prohibits a public agency from imposing any minimum automobile parking requirement on most residential, commercial, or other development projects that are located within half a mile of public transit.

As shown in **Map 4-2**, the majority properties within the Specific Plan area are located within a half mile of public transit from the proposed MST SURF! bus rapid transit project and/or the Marina Transit Exchange. The proposed SURF! project would provide high quality BRT stops at the intersection of Del Monte Boulevard and Palm Avenue and MST Transit Exchange along Reservation Road.



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2023.

Map 4-2. Network of sidewalks, street crossings, and bike lanes in Downtown Marina.



4.2.3 *Housing Affordability*

The production of affordable housing is a primary goal of the Specific Plan. State legislation, namely Senate Bill (SB) 35 and SB 330, requires multifamily projects to be reviewed against objective standards. The standards provided in **Appendix A: Development Code** are structured to provide an objective framework for the design and development of multifamily projects which can be implemented without a discretionary process. In accordance with the laws, objective standards are the only basis a local agency may use to deny or reduce the density of certain eligible projects. Housing developers may take advantage of the legislation that streamlines approval if affordability requirements and specific criteria are met.

The Specific Plan looks to further the vision for Downtown by encouraging the development of multifamily housing which will both contribute to a lively neighborhood through residential and mixed-use development and fulfill the City's share of the Monterey Bay Area's regional housing need.

4.2.4 *Economic Vitality*

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. The Specific Plan will establish a set of requirements and guidelines designed to guide the City toward its vision for a thriving economic future.

4.2.5 *Sustainability*

The California State General Plan Guidelines address sustainable development emphasizing the importance of addressing urban sprawl through compact, multiple use, transit-oriented infill development. On June 16, 2020, the City Council of the City of Marina adopted Resolution 2020-75, submitting to the voters at the November 3, 2020 General Municipal Election a Measure approving a General Plan Amendment extending the expiration date of the operative provisions of the 2000 Marina Urban Growth Boundary Initiative to December 31, 2040. The growth boundary is intended to discourage development in current open space areas north of the city limits and along its coast, and to encourage efficient development in Central Marina and within Marina's portion of former Fort Ord.

In combination with the urban growth boundary, General Plan policies emphasize the need to fully utilize the land within existing urbanized areas to accommodate Marina's fair share of the future population and employment growth. This Specific Plan seeks to establish and reinforce a compact development pattern with the intent of reducing the number of vehicle miles traveled by Marina's residents and enabling walking and biking for transportation.

In addition to establishing a sustainable development pattern, the city can further reduce the impacts of development on the environment through the implementation of a variety of green building practices, environmentally aware landscaping, and the availability of pedestrian amenities. Title 24 of the California Building Standards Code sets minimum requirements for energy and water efficiency for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. The goals and policies described below are intended to guide new development in the Specific Plan area through the implementation of green building practices and smart growth policies.

4.2.6 Parks and the Urban Forest

Parks located within or near Downtown create opportunities for people to meet, recreate, and share ideas. Public open spaces like parks and plazas help make Downtown a destination by allowing visitors to linger and enjoy the neighborhood. While there is an abundance of existing and planned park and recreational space citywide, there remains a need to provide neighborhood-serving park and recreation facilities for under-served neighborhoods in the Specific Plan area. The General Plan has established a standard of 1.8 acres of playground and/or neighborhood park space per 1,000 residents within 1,200 – 1,500 feet of housing units served in addition to private common open space provided on the site of new residential development.

While there are no parks located within the Specific Plan area, Locke-Paddon Park (**Figure 4-7**), Vince DiMaggio Park, and the Los Arboles Sports Complex are located nearby. To increase the amount of recreational space available to current and future residents in the area, the Specific Plan looks to facilitate the improvement of stormwater retention areas for recreational use, encourage the acquisition of vacant land for the development of mini-parks, and incentivize the provision of publicly accessible private open space within Downtown.



Figure 4-7. Locke-Paddon Park.

Source: Pinterest

A healthy urban forest is associated with numerous benefits to a downtown environment. Among many other benefits, street trees help create safer streets by reducing speeds and providing a buffer between motorists and pedestrians, while reducing air pollution and road noise. Trees reduce urban heat islands for a more comfortable pedestrian experience and provide vital habitat for insects and birds including the City's native raptor population.

In 1995, a Tree Committee was established to develop an ordinance to help preserve the City's urban forest. The Tree Removal, Preservation and Protection ordinance governs actions relating to existing trees in public spaces and on private property, but it does not set forth standards or guidance on the expansion of the city's urban forest.

The majority of trees in public spaces in the Specific Plan area are located in street medians along Reservation and Del Monte, with limited street tree plantings in the pedestrian portion of the right-of-

way in the park strip. The trees in the medians are typically not indigenous to the area and are sporadically located. 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. The Specific Plan looks to guide the selection of trees suitable for Marina’s climate, require new developments to contribute to the urban forest, and properly maintain trees to preserve comfortable pedestrian mobility and visibility for drivers in passing cars. A list of trees ideally suited for Marina’s climate is included in **Appendix B: Design Guidelines**.



Figure 4-8. Arbutus marina on California Avenue.

4.2.7 Gateways, Wayfinding, and Signage

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 generally consistent as they serve the role of ‘branding’ the community.

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,



Figure 4-9. Commercial blade signs.
Source: Under Consideration, Rite Lite Signs, Flickr

articulate visual identity, and assist in wayfinding.” A concept for a gateway sign (**Figure 4-10**) is included alongside wayfinding signs in **Appendix B: Design Guidelines**.

The Specific Plan calls for the installation of gateway signage at the three entries to Downtown Marina at 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 (**Map 4-3**).

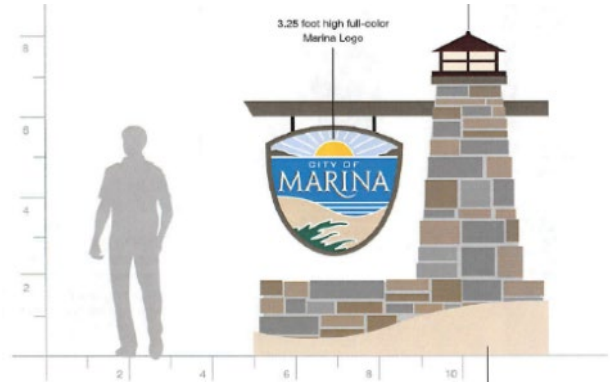


Figure 4-10. Example of gateway sign that could be used at key locations in Marina.

Civic signage plays a role in helping people understand the location of various uses and events occurring in the community (**Figure 4-11**), 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.

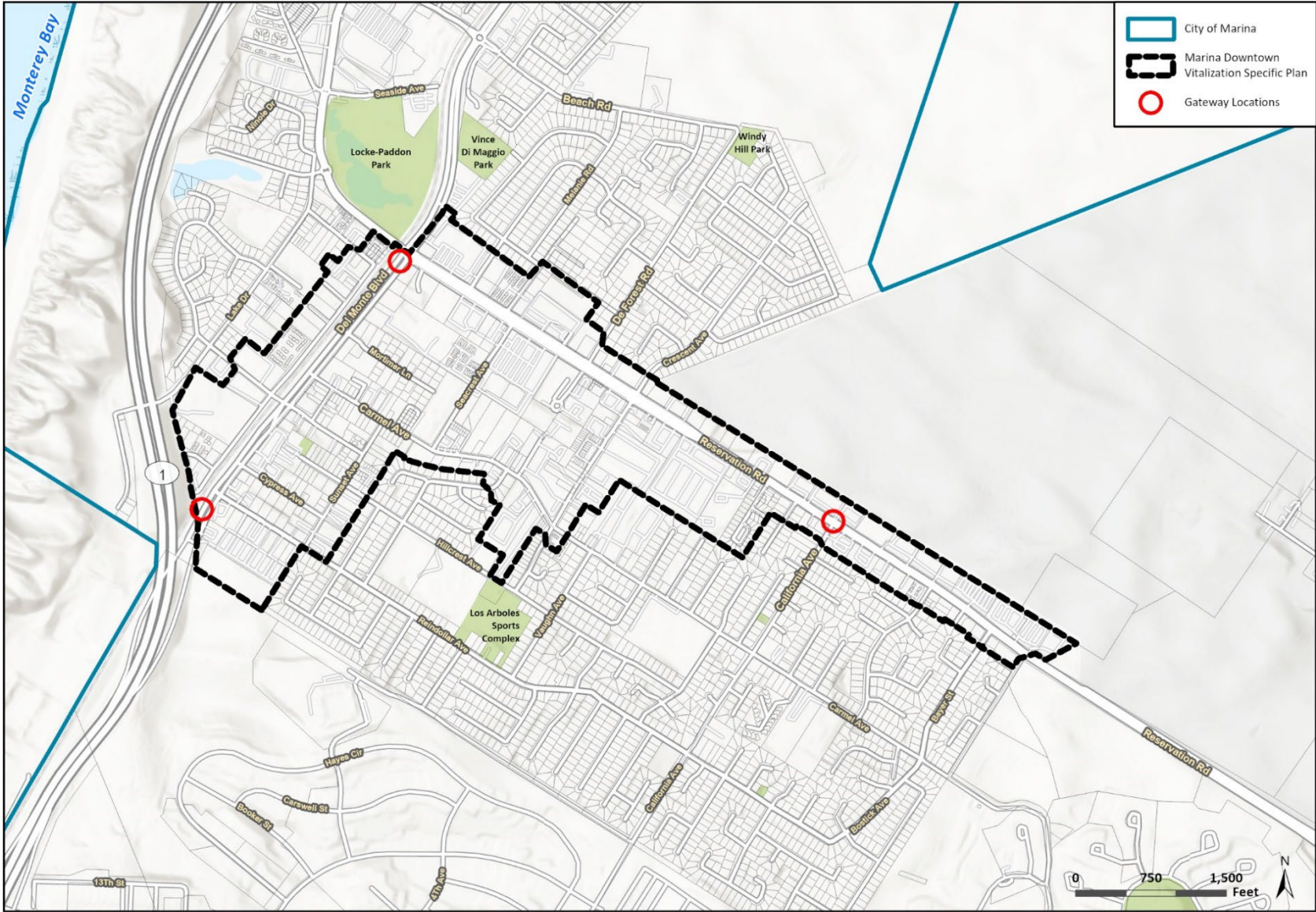
Public entryway and directional signs are essential to allowing visitors and new members of the community to navigate their way to their desired destinations. Public information signage should be oriented to both vehicular and pedestrian traffic. Currently, public information signage in Downtown is provided 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 Core district should be located on the building façade itself and designed to address both its pedestrian and vehicular audiences (**Figure 4-9**). Commercial signage in the Transition zones may include signage attached to buildings as well as freestanding signage where space for such signage is available. Freestanding signage should be located within the front setback of the building but, for safety, should not obscure drivers’ view of pedestrians.



Figure 4-11. Wayfinding and directional signs.

Source: Rite Lite Signs



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022.

Map 4-3. Gateways to Downtown Marina.

4.2.8 Public Art

The inclusion of Public Art in Downtown is an important opportunity for placemaking, but 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 fiberglass dolphins were sculpted by local artist Charles Fischer and are currently on public 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 (**Figure 4-12**). The intent of the project was to include a symbol representative of Marina that would help brand the City.



Figure 4-12. Existing public art in Marina includes this sculpture of a dolphin at Marina City Hall.

As 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. It will be important to include residents of Marina in the creation and placement of public art that adds value to the community. This Specific Plan seeks to reinforce the City’s General Plan and specifically Policy 3.34.7 to work with the local arts community to encourage the inclusion of public art within the City’s rights-of-way and other public spaces (**Figure 4-14** and **Figure 4-15**).

The City can encourage developers and landscapers to consider the multicultural nature of the community as they design projects in Downtown Marina (**Appendix B: Design Guidelines**). The following pages include examples of the types of public art installations encouraged in the Specific Plan area.



Figure 4-13. Bicycle rack including the City’s logo illustrates how street furniture can be developed to help identify the community.



Figure 4-14. These musical swings in Montreal create beautiful sound when in use (top).



Figure 4-15. 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).



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.



4.3 Land Use and Development Goals, Policies and Programs

Goal LU-1	Land Use and Development —A community with a safe, walkable, and vibrant Downtown, that attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks and trails.
Goal LU-2	Community Identity —A Downtown that complements Marina’s natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of the community where people gather for social, cultural, educational, and recreational experiences.
Goal LU-3	Cultural Diversity —a downtown where people of all incomes, ages, abilities, races, and cultures feel like they belong.
Goal LU-4	Housing Affordability —A variety of affordable, high-quality housing options for people to live Downtown.
Goal LU-5	Environment and Sustainability —A Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.
Goal LU-6:	Economic Vitality —An environment that attracts businesses and supports economic activity through innovation and business and social opportunities.
Policy LU-1.1	Make Downtown a destination by retaining and attracting a wide range of uses. Encourage the development of civic, entertainment, office, live-work units, and retail uses, as well as educational facilities, major employers, and medical centers. <i>See Program 1 below.</i>
Policy LU-1.2	As City administrative buildings are expanded, ensure civic facilities remain within or near Downtown.
Policy LU-1.3	Implement objective design and development standards that emphasize pedestrian orientation and scale, move parking areas to the rear of buildings, active streetscapes, and common open spaces to enhance the appearance of and contribute positively to the visual character of Downtown.
Policy LU-1.4	Ensure that new development is required to minimize the number of driveways that could interfere with the pedestrian right-of-way in the Core district.
Policy LU-1.5	Prohibit drive-thru facilities in the Core district.
Policy LU-1.6	Allow a wider variety of uses in the Transition District. Allow retail, service, and hospitality businesses that serve citywide or regional populations, in addition to 100 percent residential projects, or a mix thereof.
Policy LU-1.7	Encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area. <i>See Program 2 below.</i>
Policy LU-2.1	Encourage proposed developments to include design elements that reflect the cultural diversity of Marina.
Policy LU-2.2	Explore opportunities to create more neighborhood serving parks and public spaces Downtown. This can include the reuse and improvement of stormwater retention areas, the acquisition of vacant land for the development of mini-parks, improving access to existing parks, and incentivizing the provision of publicly accessible private open space in the Specific Plan area.



Policy LU-2.3	Require new development to contribute to the urban forest by planting and maintaining street trees from the City's approved list of species along the public right of way adjacent to the site to create a comfortable and verdant pedestrian environment.
Policy LU-2.4	Ensure proper pruning practices are maintained to open the canopy of the tree, show branch structure, and allow for building visibility.
Policy LU-2.5	Make Downtown readily identifiable to residents and visitors by establishing gateways at key locations. Include such features as landforms, landscaping, vegetation, signage, and public art to define entry points and introduce Downtown to citizens and visitors.
Policy LU-2.6	Ensure consistent branding and signage through use of city logos, slogans, and other materials to direct motorists to parking and destinations as well as create an identity and sense of place Downtown.
Policy LU-2.7	Use public art to create opportunities for people to connect with others and to express the City's history and cultural heritage. <i>See Program 10 below.</i>
Policy LU-3.1	Encourage investment in and development of businesses that represent the City's local identity, including minority owned businesses. <i>See Program 3 below.</i>
Policy LU-3.2	Establish a cultural district or districts within downtown with marketing, public spaces, and streetscape elements.
Policy LU-4.1	Promote housing development as a priority in all districts to address community housing need.
Policy LU-4.2	Utilize State law and City ordinances to ensure that housing is provided to a mix of income levels within Downtown.
Policy LU-5.1	Encourage compact, high-density urban form by allowing developments with a variety of uses at the ground floor as well as on upper stories of buildings in the Core, Mixed-use Node, and Transition districts that serve the local community and reduce car dependence for daily needs.
Policy LU-5.2	In addition to meeting the requirements set by title 24 of the California building code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.
Policy LU-5.3	Encourage the use of high-quality, durable materials appropriate for coastal Monterey County and compliment the natural setting of Marina. Consider fog, wind, drought, salt air, and sandy soils in all landscaping decisions. Consider the local environment in all decisions related to landscaping, building, and public spaces.
Policy LU-5.4	Ensure both public and private projects effectively manage stormwater runoff through the implementation of Low Impact Development (LID) principles and minimize impervious surfaces wherever possible
Policy LU-5.5	Encourage development to use locally available and recycled materials in construction wherever possible.
Policy LU-5.6	Encourage development to reduce its carbon footprint through meaningful energy conservation measures and the use renewable energy to opt-in to Monterey Bay Community Choice Power, Marina's local Community Choice Energy program.

Policy LU-6.1	Promote economic development through land use planning, targeted circulation and infrastructure improvements, and expanded resource availability.
Policy LU-6.2	Encourage new retail to locate along corridors with high pedestrian and vehicle traffic volumes and good visibility, where it has the best opportunity to thrive.
Program LU-1	The City should pursue funding through public sources such as the California Arts Council, or other private sources, and explore opportunities for entertainment and activities venues such as a new auditorium.
Program LU-2	Study the potential for a lot consolidation program to incentivize lot consolidation that encourages redevelopment. Incentives may include reduced development fees, administrative review, decreased parking ratios, etc.
Program LU-3	Develop a business investment program to support minority owned stores and businesses in Downtown.
Program LU-4	Create outreach material for the non-profit and for-profit development community to learn about the streamlining benefits of the Specific Plan.
Program LU-5	Dedicate a page on the City's website to show community members how their properties can be redeveloped to accommodate multifamily housing throughout Downtown. Provide example housing developments of duplexes, triplexes, and multiplexes that meet the design intent and standards outlined in the Specific Plan.
Program LU-6	Dedicate a webpage on the City's website to encourage transparency in the housing development process, including how the City is meeting its local housing obligations under state requirements.
Program LU-7	Develop and maintain a business retention and expansion program.
Program LU-8	Establish a list of "shovel-ready" sites in consultation with property owners and provide the list to interested developers and businesses seeking sites in the city.
Program LU-9	Make Downtown readily identifiable to residents and visitors by establishing gateways at key locations. Include such features as landscaping, vegetation, signage, and public art to define entry points and introduce Downtown to citizens and visitors.
Program LU-10	Develop a public art master plan to celebrate the culture and heritage of Marina.



5 Mobility

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 Downtown to work, shop, and recreate.

The negative impacts of automobiles are well documented and include air pollution, noise, and traffic congestion. Wide roads can encourage speeding which makes walking and biking unpleasant and unsafe. Automobiles require large amounts of land dedicated to parking, which limits opportunities for development of parks, shops, and housing. Lastly, reliance on personal vehicles contributes tons of greenhouse gases 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 traffic calming measures, active transportation facilities and amenities, a holistic approach to parking management, and improved public transit service in Downtown.

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.

5.1 Technical Studies

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.

The traffic analysis assumed that 2,904 residential units will be added to the Specific Plan area in addition to 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 consultant 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 Specific Plan area. The analysis concluded that mixing signals and roundabouts on a closely spaced grid system 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. The analysis recommended instead to cluster traffic signals in the Core district and utilize roundabouts at major intersections in the Transition areas approaching the Core, as shown in **Map 5-1**. **Table 5-1** includes a list of intersections proposed to receive or maintain roundabouts or signalized intersection treatments.

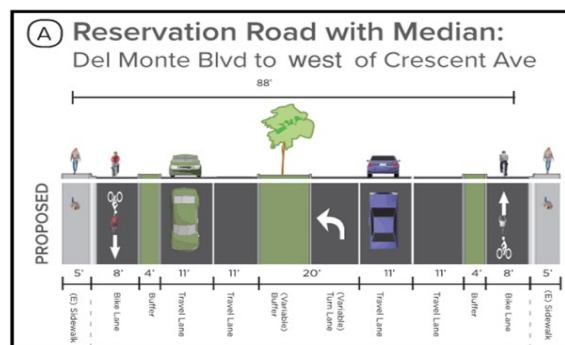


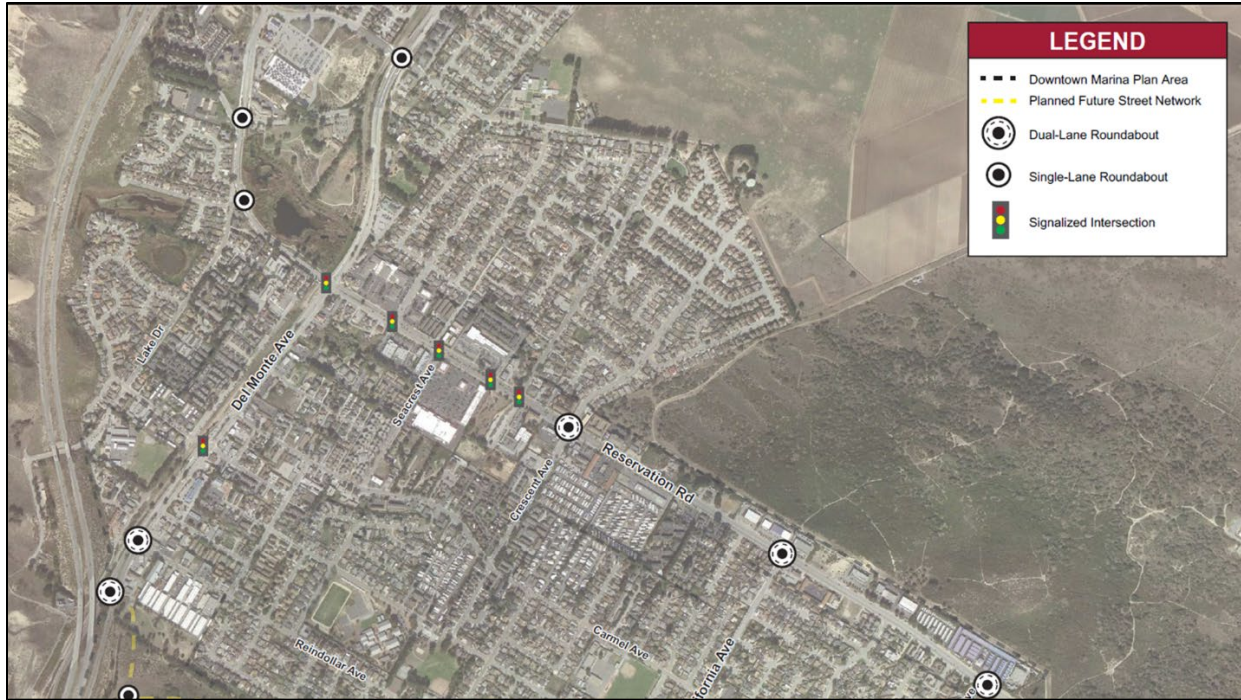
Figure 5-1. Concept cross section of Reservation Road.

The analysis resulted in several other 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 grant (**Figure 5-1**);
- 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.

Table 5-1. Major intersections in the Specific Plan area

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



Map 5-1. Location of roundabouts and signalized intersections in Downtown Marina.

These improvements are expected to affect mobility in a significant way. Protected bike 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 Specific Plan area, these bike lanes could help promote compact development Downtown.

The planned extension of Del Monte Boulevard south to 2nd Avenue (**Figure 5-2**) will help bridge a geographical gap between Downtown Marina and the Dunes project on the former site of Fort Ord. This vital connection will reduce the need to get on Highway 1 for trips within the city. It also presents an opportunity for further gateway enhancements, as discussed in **Chapter 4: Land Use and Development**.

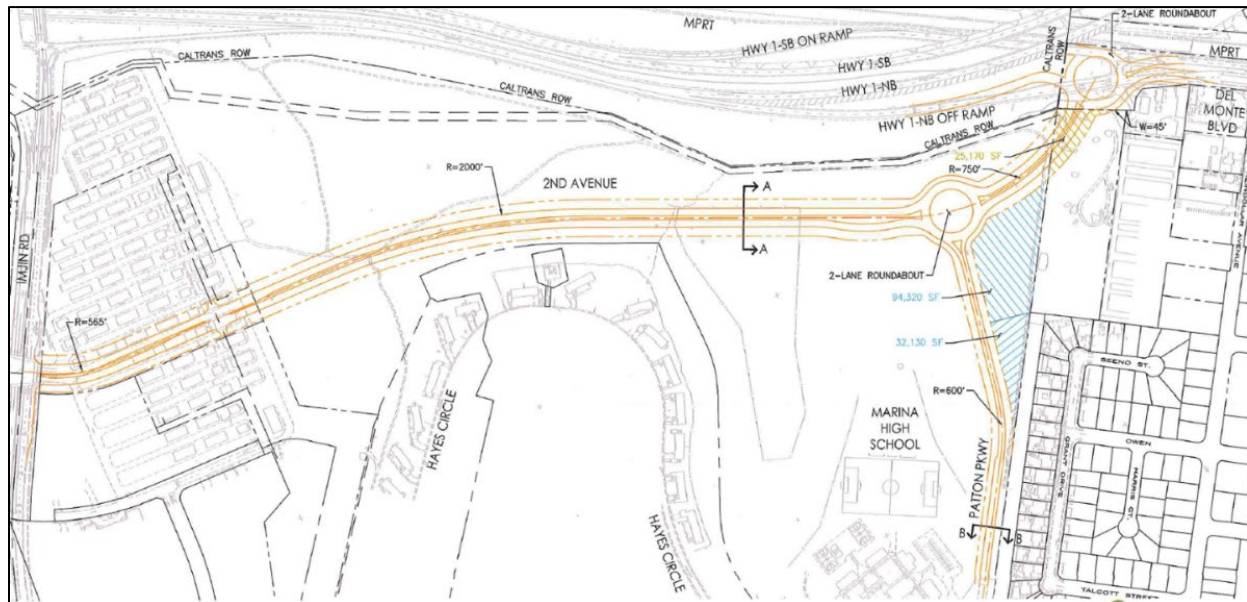


Figure 5-2. Illustrated concept of Del Monte Boulevard extension.

5.2 Traffic Calming and Complete Streets

To establish an environment that is safe and inviting to pedestrians and cyclists, it is important to integrate specific traffic calming measures aimed at reducing traffic speeds and increasing pedestrian connectivity. Traffic calming is a major part of what Smart Growth America refers to as Complete Streets. Complete Streets is an approach to planning, designing, and building streets that enables safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. **(Figure 5-3).** Table 5-2 includes a list of common traffic calming measures including bulbouts, landscaped medians, street trees, accent paving, and with building frontage create an urban street environment that encourages drivers to slow down.



Figure 5-3. Complete street concept.

Source: Crandall Arambula Urban Design

Table 5-2. Traffic Calming Measures

Traffic Calming Device	Description
Road Width Reduction /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 while crossing wide streets.
Curb Extensions/Neckdowns/ Bulbouts	Curb extensions at intersections that reduce the roadway width from curb to curb thereby reducing pedestrian crossing distance and slowing traffic.
Speed Tables/Raised Crosswalks	Ramped surface above roadway requiring drivers to slow while crossing pedestrian areas.
Reduced Corner Radii	The radius of street corners affects traffic turning speeds. A tighter radius forces drivers to reduce speed to safely make the turn.
Rumble Strips	Low bumps across road make noise when driven over
Roundabouts	Medium to large traffic circles requiring traffic to slow while navigating an intersection.
Pavement Treatments/Pavement Textures	Pavement treatments such as cobbles or bricks and markings to designate pedestrian oriented areas.

Traffic Calming Device	Description
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
Reduced Speed Limits	Reduction of posted speed limits and enforcement of posted speed limits.
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 dedicated turn lanes can improve pedestrian safety by encouraging drivers to stop completely before making a turn.

Narrower Travel Lanes

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 lane widths. Narrower travel lanes require more attention from drivers and are often used in downtown environments where there is a higher degree of potential conflicts with pedestrians and cyclists. Narrower lanes also have the benefit of reducing pedestrian crossing distances, thereby limiting the amount of time pedestrians share in a space with vehicles. Finally, narrowing vehicular lanes frees up space for other uses such as parking, bike lanes, medians, and widened sidewalks.

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 (**Figure 5-4**). Bulbouts should be incorporated at key intersections leading into and throughout Downtown. These curb extensions will be designed in conjunction with on-street parking as they create protected pockets along the road to allow for parallel parking. On-street parking consequently also narrows the perceived width of the road and serve as a traffic calming feature.



Figure 5-4. Bulbout.

Source: SF Streetsblog

Accent Paving

Accent paving—unit pavers or colored concrete—should be used to draw attention to pedestrian crossings (**Figure 5-5**). The change in texture makes motorists aware, through both visual and audible queues, that they are entering a pedestrian oriented space which in turn can slow the speed of traffic. Refer to **Appendix B: Design Guidelines** for more on accent paving and pedestrian crossings.



Figure 5-5. Accent paving at crosswalk.

Source: Main Street Beverly (blog)

Medians

Medians can help improve the overall appearance of streets and help slow traffic (**Figure 5-6**). 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 pedestrians crossing the road.



Figure 5-6.
Landscaped median.
Source: Downtown
Brooklyn Partnership

Street Trees

Street trees offer an aesthetic alternative to the open speedway feeling of a treeless road (**Figure 5-7**). When planted in park strips, sidewalk tree-wells and medians, trees have a traffic calming effect as they create a visually enclosed street scene and separate pedestrians from vehicular traffic. Trees should be pruned regularly to ensure branches do not infringe on the pedestrian or bicycle right-of-way. **Appendix B: Design Guidelines**, includes a list of trees appropriate for Downtown.

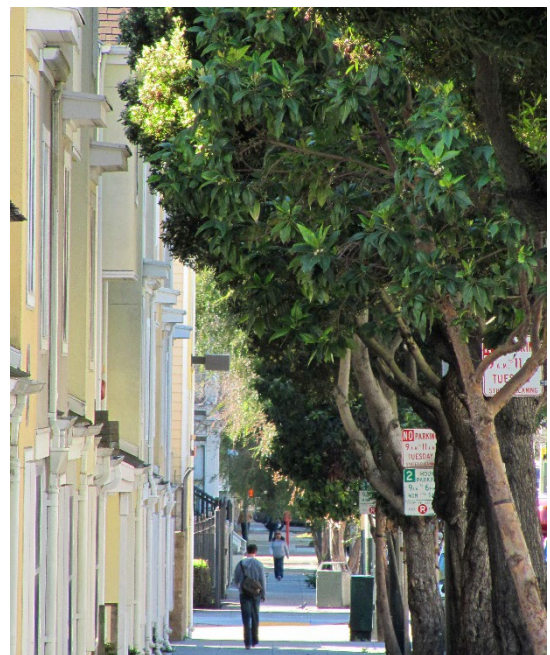


Figure 5-7. Street trees.
Source: Friends of the Urban Forest

5.3 Active Transportation

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. To promote walking and biking in Downtown, the City should work toward a robust network of sidewalks and bikeways, facilitate walking and biking through the provision of streetscape amenities, and promote micro-mobility (bike and scooter sharing) services in the Specific Plan area and Central Marina more broadly.

Pedestrian and Bike Network

The Specific Plan looks to implement policies detailed in the City's 2010 Pedestrian and Bicycle Master Plan (PBMP). The PBMP identifies several goals and strategies relevant to the development of pedestrian and bicycle facilities Downtown including:

- Sidewalks should be installed on both sides of all streets;
- Sidewalks should provide direct connections between destinations, including homes, schools, shopping areas, public services, workplaces, parks, and transit facilities;
- Larger sidewalks should be used along arterial streets Downtown, in locations where large concentrations of pedestrians are expected and within one-half mile of a transit center;

- 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) and should incorporate pedestrian activated signals.
- 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 designed to maximize bicycle travel through effective connections.

Pedestrian and Bike Amenities

In addition to creating a safe and complete pedestrian and bicycle network, amenities aimed at pedestrians and cyclists can help people feel safer and more comfortable while walking or biking to various destinations. Where possible, amenities should be co-located to encourage easy access and potentially reduce costs.

Seating areas should be considered wherever extra sidewalk width allows them (**Figure 5-8**). Seating space can be included on walls, in alcoves, and along other edges. Similarly, planters add color and beauty to the streetscape. The use of local stone, masonry, and other building materials complementing area buildings and monuments should be considered.

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. Wave, grid, and spiral racks should be avoided.

In conjunction with Monterey-Salinas Transit, the City should work to install attractive bus stops that include shelters, benches, trash receptacles, and appropriate lighting (**Figure 5-9**). 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 5-8. Street furniture.
Source: Blueton Limited



Figure 5-9. Bus shelter for Monterey-Salinas Transit in Monterey.
Source: Monterey Herald

Micro-mobility

In addition to personal bicycles, bike- and scooter-sharing programs can serve important roles in Downtown (**Figure 5-10**). They could provide people with easy connections to transit stops and facilities, help people accomplish short trips to various destinations without use of the automobile, and provide a low-cost alternative to ridesharing or carpooling within Downtown.

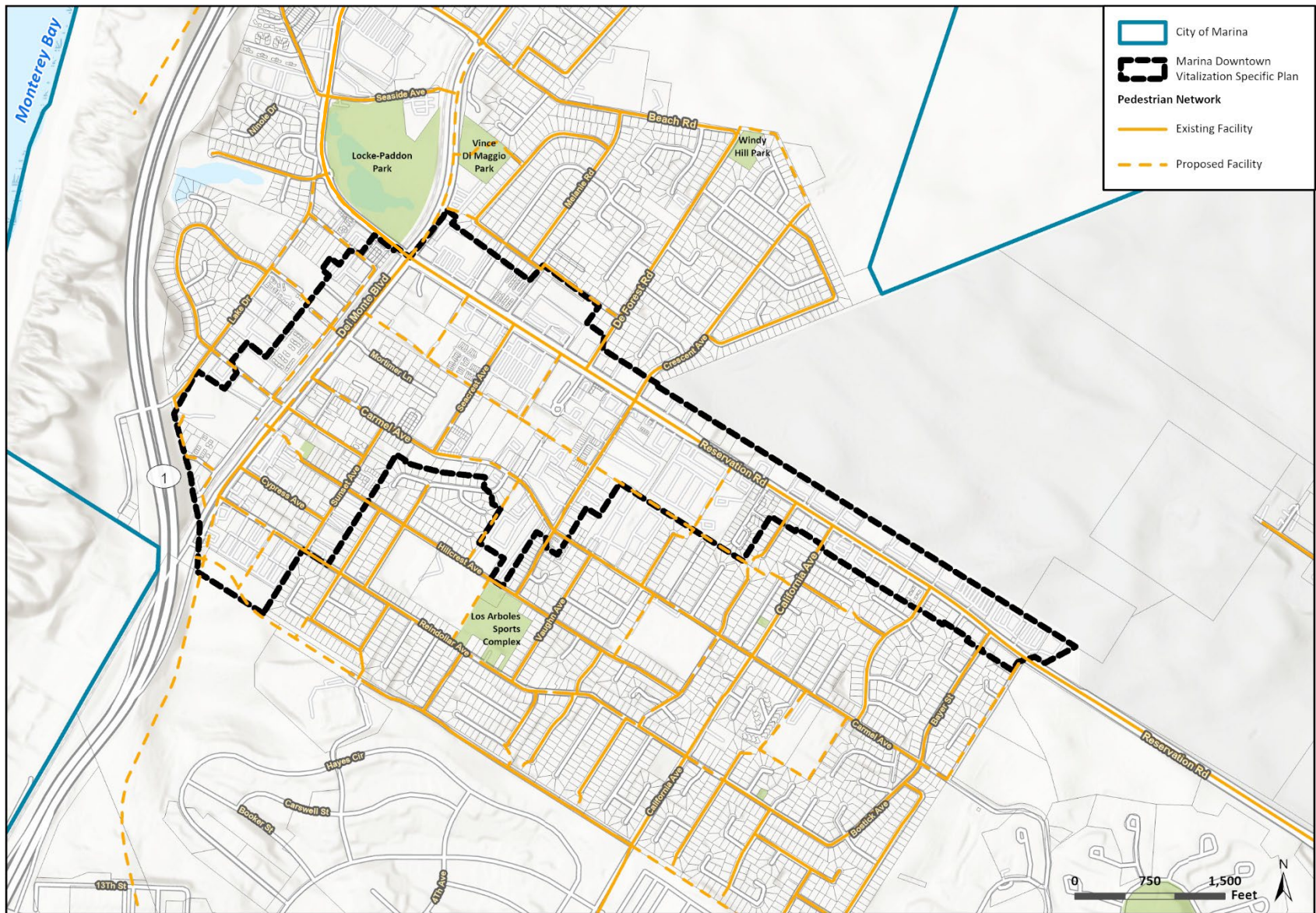
Dedicated facilities for bikes are present in many locations Downtown, but separate facilities for scooters have not been put in place. While recognizing the benefits of bike- and scooter-sharing, the City should support people to use bikes and scooters by providing appropriate facilities including dedicated and protected bike lanes and bike racks. The City should be sure to continue enforcing laws preventing the use of scooters and bikes on sidewalks.



Figure 5-10. Bikeshare parking/charging station.
Source: Wired

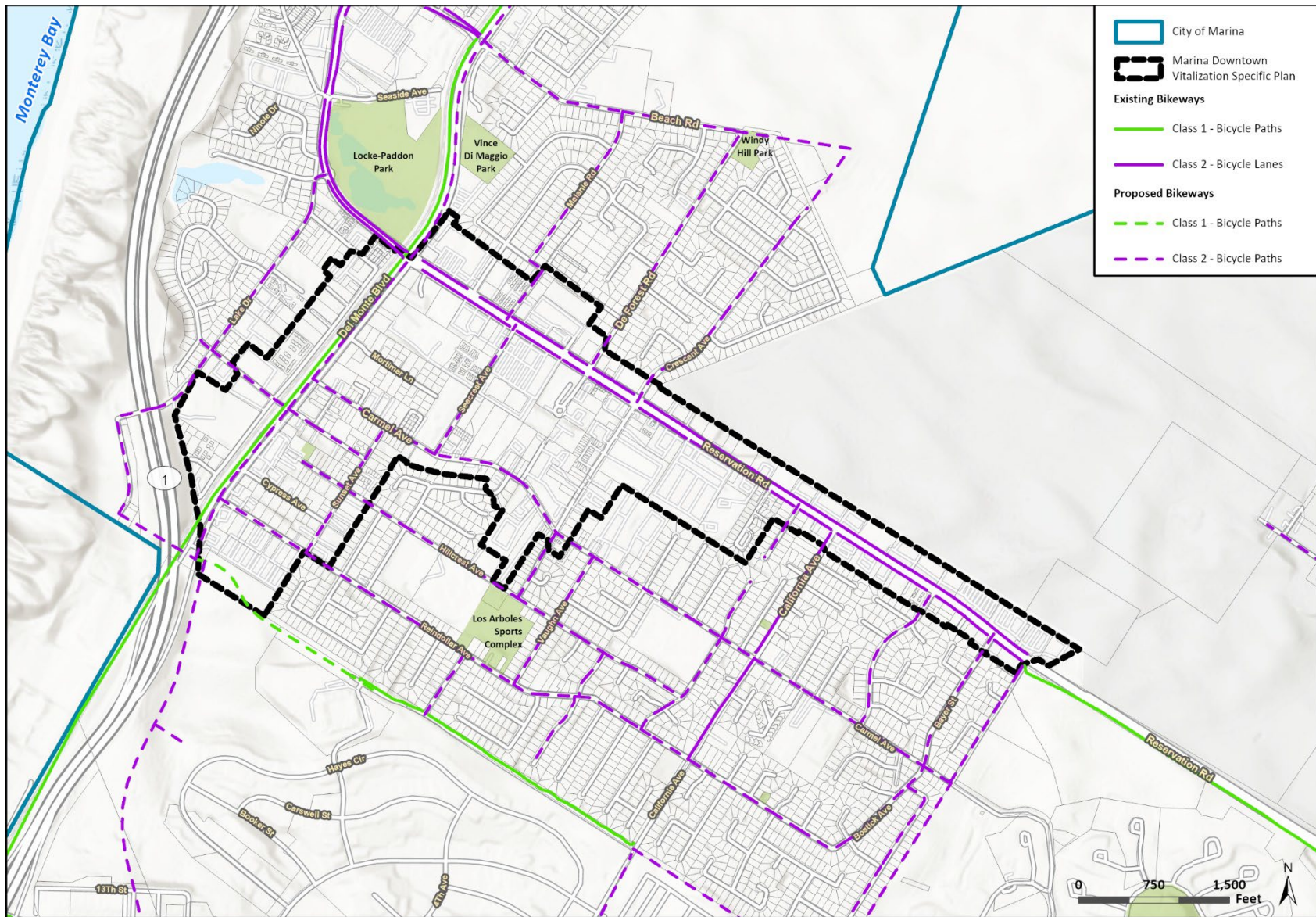
5.4 Pedestrian, Bicycle, and Roadway Improvements

Consistent with the City’s 2010 Pedestrian and Bicycle Master Plan, all streets in Downtown shall have continuous sidewalks on both sides of the street, and bikeways shall be implemented along key thoroughfares (**Map 5-2** and **Map 5-3**). Sidewalks and bikeways shall be designed and maintained as outlined in the Pedestrian and Bicycle Master Plan. 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.



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022.

Map 5-2. Existing and proposed pedestrian network.



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022.

Map 5-3. Existing and proposed bicycle network.

5.5 Parking

Surface parking lots abound in Downtown Marina, and they are primarily located along Reservation Road and Del Monte Boulevard. Existing commercial areas are oriented in a strip mall configuration with buildings positioned to the rear of sites leaving room for large parking lots in the front.

The Specific Plan allows significant intensification of development in the Specific Plan 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 as more intensive mixed-use development occurs. To create a pedestrian-friendly and aesthetically pleasing downtown core, on-site parking lots should be located behind buildings. **Appendix A: Development Code** provides clear standards for the provision of parking in the Specific Plan area. Specific elements of the proposed parking plan are outlined below.

On-street Parking

There are a number of benefits with on-street parking: Convenience, separation between the street and pedestrians, and traffic calming, (**Figure 5-11**). On-street parking will be provided in Downtown in strategic areas in accordance with the Specific Plan.

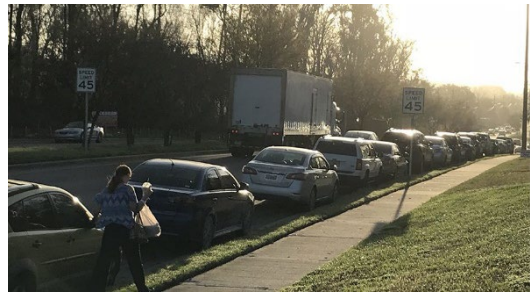


Figure 5-11. On-street parking.
Source: WUFT

Off-street Parking

Off-street parking lots are to be located at the rear of a property in the Core, Mixed-use Node, and Multifamily Residential District and at the rear or side of a property in the Transition District. This aids in maintaining a streetscape that emphasizes a direct connection between pedestrians, buildings, and the landscape. Parking lots should be landscaped (**Figure 5-12**).



Figure 5-12. Off-street parking.
Source: Pinterest

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.

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. **Appendix A: Development Code** includes design standards for parking structures.

5.6 Transit

The use of public transit can reduce the number of single-occupant vehicles on the road and help Marina achieve community-wide goals for reducing traffic congestion, vehicle miles traveled, and greenhouse gas (GHG) emissions. The quality of transit service is determined by a range of factors, including frequency, reliability, and ease of access. As the Specific Plan is built out and new residents move into the area, there will be opportunities to expand transit service and frequency. The City and development community should work with Monterey-Salinas Transit to explore additional routes and more frequent service as the Specific Plan area develops. Streetscape improvements should anticipate bus stops and shelters as well as pedestrian connectivity to public transit stops.

5.7 Mobility Goals, Policies, and Programs

Goal M-1	Mobility - A Downtown with safe and efficient pedestrian and vehicular circulation that encourages people to gather, walk, bike, or use public transportation.
Policy M-1.1	Utilize traffic calming measures such as bulb outs, medians, and street trees to lower speeds throughout the Specific Plan area to creating a safer and more pleasant Downtown environment while balancing the demands of local and regional vehicular traffic.
Policy M-1.2	Mitigate traffic congestion through capacity management measures rather than further road widening.
Policy M-1.3	As development and redevelopment of large sites occurs in Downtown, encourage the development of blocks of approximately five acres in size to help provide access to landlocked and limited access parcels to encourage connectivity. For properties within a block under multiple ownership, provide for cross access through the block consistent with the Bicycle and Pedestrian Master Plan.
Policy M-1.4	Require the dedication of easements to create midblock pedestrian through-ways to develop an efficient, safe, and attractive pedestrian and bicycle path network throughout Downtown as well as providing access to businesses and residences in the interior of the site. These new pedestrian connections should include privately-owned and maintained amenities such as landscaping, outdoor seating, signage, and lighting.
Policy M-1.5	Develop a complete sidewalk system within Downtown, requiring right of way dedication as needed to close gaps the sidewalk network.
Policy M-1.6	Undertake streetscape and landscape improvements such as tree wells with benches, green sidewalks, street furniture, and public art along Reservation Road, Del Monte Boulevard, and side streets in the Core District to enhance the aesthetics and functionality of the pedestrian environment.
Policy M-1.7	Ensure streets accommodate people with special mobility needs by ensuring that right-of-way improvements, like, sidewalks, crosswalks, and driveways meet ADA standards.
Policy M-1.8	Install midblock crossings with enhanced striping, lighting, signage, and other safety features on major streets such that the distances between crossings are reduced to 600 feet or less.
Policy M-1.9	Require new commercial and mixed-use developments to provide appropriate bicycle parking for residents, workers, and patrons. Encourage developments to include end-of-trip support facilities such as lockers, changing rooms, and showers.



Policy M-1.10	Continue to evaluate the need for and financial feasibility of shared parking structures within the Core district if parking demand requires.
Policy M-1.11	Require that parking is located behind buildings or in underground structures in the Core, Mixed-use Node, and Multifamily Residential District out of direct view from the public right of way. Surface parking is allowed to the side of buildings in the Transition District.
Policy M-1.12	Require that above-ground parking structures, including podiums, be wrapped with other uses to create an attractive, pedestrian-friendly environment.
Policy M-1.13	Encourage alternative transportation, such as walking, biking, and transit, to reduce overall parking demand.
Policy M-1.14	Work with MST to improve pedestrian access to the Marina Transit Exchange and provide pedestrian amenities at all bus stops Downtown with adequate lighting, signage, and covered benches.
Policy M-1.15	Work with MST to expand bus routes within Marina and increase the frequency of bus service on both regional and citywide routes.
Policy M-1.16	Collaborate with the Monterey SURF! Program to facilitate the use of bus rapid transit system for resident commutes.
Policy M-1.17	Evaluate the feasibility of lane reductions on Reservation Road and Del Monte Boulevard to calm traffic and create a more inviting streetscape.
Policy M-1.18	Explore the implementation of micro-transit solutions including scooter and bike-share programs and shuttle service between Downtown and major destinations.
Program M-1	Develop a mobility plan for the Downtown to include complete streets design, pedestrian and bicycle paths, improvements to transit, parking, and transportation demand management measures. The plan should include a cost estimate and a financing and capital improvement program.
Program M-2	Community Development Department and Public Works Department should collaborate to implement low-cost improvements using existing resources to establish gateways to the Downtown along Reservation Road and Del Monte Boulevard, directional signage, and simple streetscape enhancements such as protected bike lanes, accent paving on crosswalks, reduced lane width, and curb bulbouts.

6 Public Facilities and Infrastructure

This chapter of the Specific Plan addresses the planned distribution, location, extent, and intensity of local services and public facilities, including potable water, wastewater, stormwater drainage, fire and police services, schools, libraries, and healthcare. Implementation of the Specific Plan will require the construction of infrastructure and provision of public services and utilities to serve the Specific Plan area in accordance with required standards. **Table 6-1** below lists various existing service providers for the Specific Plan area. Phasing and financing related to public services are discussed in **Chapter 7: Implementation**. This chapter also addresses the goals, policies and programs that are associated with the provision of adequate public services, public facilities, and utility services in the Specific Plan area.

Table 6-1. Service Providers in the City of Marina

Public Facility/Service	Provider
Potable Water	Marina Coast Water District
Wastewater	Marina Coast Water District, Monterey One Water
Stormwater	On-site and subdivision scale drainage and retention
Electrical Utilities	Monterey Bay Community Power, Pacific Gas and Electric
Natural Gas	Pacific Gas and Electric
Telecommunications	AT&T, Comcast
Fire Services	Marina Fire Department
Police Services	Marina Police Department
Schools	Monterey Peninsula Unified School District
Libraries	Monterey County Free Libraries

6.1 Potable Water

The public water supplier for Downtown Marina is the Marina Coast Water District (MCWD), a county water district formed and authorized by Division 12 of the California Water Code. MCWD was established in 1960 and provides potable water, wastewater collection, and reclaimed water services to customers within the City of Marina and portions of the City of Seaside to the south. MCWD owns and operates its own wells, pump stations and distribution infrastructure and relies completely on local groundwater pumped from the Salinas Valley Groundwater Basin to meet potable water demand.

In 2020, the MCWD prepared a water supply assessment (WSA) for the 20-year build out of the Specific Plan including up to 1,385,200 square-feet of commercial space and up to 2,900 new multifamily dwelling units. Under the provisions of SB 610, prior to the adoption of the Specific Plan, the City of Marina was required to request that the MCWD assess availability of potable water required to serve the additional development proposed by the Specific Plan. The WSA found that the high-density residential, office, and retail development proposed in the Specific Plan is projected to increase potable water demand by approximately 282-acre feet per year (AFT) by 2040 when compared to previous build out estimates of the Central Marina Service Area. The WSA also concluded that MCWD will be able to provide adequate supply for the projected development of the Specific Plan.

The MCWD 2020 Urban Water Management Plan (UWMP) compiled water demand projections from several recent WSAs (including the 2020 WSA for the Specific Plan) and development forecasts to assess water supply availability for the entire MCWD service area. The UWMP echoed the conclusions of the WSA forecasting that the water demand of Central Marina in 2040 including the buildout projections

identified within Specific Plan will be 2,284 AFT. MCWD has already allocated 3,020 AFT of groundwater from the Salinas Valley Groundwater Basin to supply the Central Marina Service Area. The projected 20-year water demands in the UWMP across the entire MCWD are approximately 10,000 AFT, with an allocation amount of 11,040 AFT as shown in **Table 6-2**.

Table 6-2. Marina Coast Water District 2020 Urban Water Management Plan Projected Demand and Allocation by Service Area (AFT)

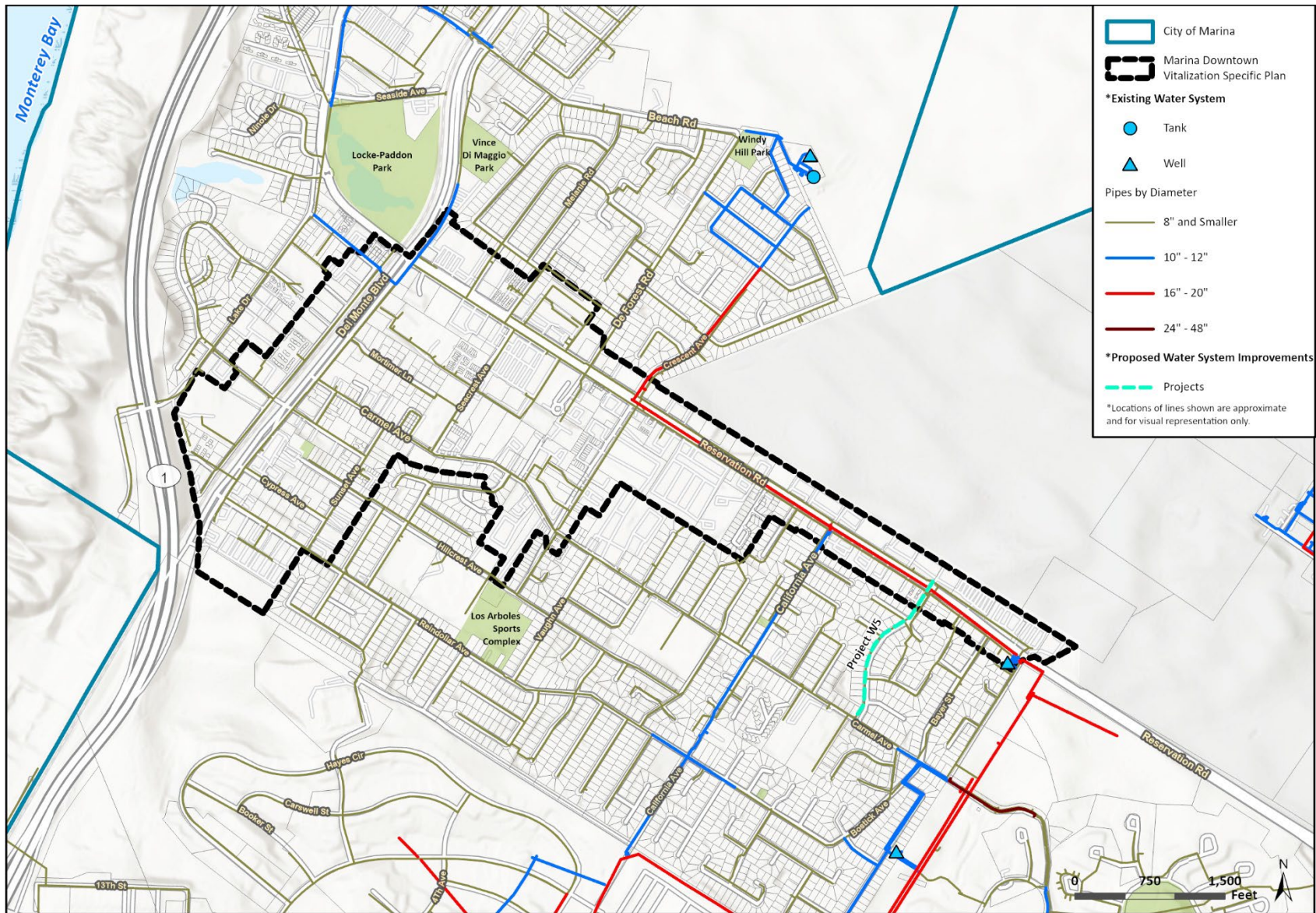
MCWD Service Area	2020	2040	Allocation
Ord Community	1,929	6,610	6,600
Marina	1,438	2,964	4,440
Central Marina (Including DVSP)	1,438	2,284	3,020
Total	3,367	9,574	11,040

As future water demands increase, the District plans to develop additional sources of water supply including the desalination of brackish groundwater and increased indirect potable reuse of purified recycled water from the Pure Water Monterey project. In addition, Monterey One Water (M1W) (formerly known as the Monterey Regional Water Pollution Control Agency) has agreed to deliver up to 1,427 AFY of recycled water from the Advanced Water Treatment Facility. Water from this facility will be used for groundwater replenishment and landscape irrigation within Central Marina thereby reducing additional demand for potable water. MCWD is currently constructing a recycled water distribution network and will begin delivering recycled water for urban landscape irrigation within the next few years.

6.1.1 Water Infrastructure Improvements

MCWD performed an analysis of existing water infrastructure based on projected demands within their 2020 Water Master Plan. MCWD identified one key potable water infrastructure improvement project necessary to accommodate projected future demand within the Specific Plan area. Project W5 of the 2020 MCWD Water Master Plan, the Lynscott Drive Pipeline Replacement shown in Figure 6.1, will replace an existing 8-inch pipeline with a new 12-inch pipeline to meet the increase of demand associated with the buildout of this Specific Plan. **Map 6-1** shows the existing water system and proposed improvements.

While buildout of the Specific Plan will increase water demand, there is sufficient capacity through MCWD to provide water for development of Downtown. Water infrastructure improvements, including pipe upsizing, shall be met with Program PF-1.



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by MCWD, 2019.

Map 6-1. Existing water system and proposed improvements

6.2 Wastewater

The provision of sanitary sewer or wastewater service in the Monterey Region is organized at two levels. Local cities and sanitation districts are responsible for maintenance and extension of sewer lines, while M1W, is responsible for development and operation of wastewater treatment facilities.

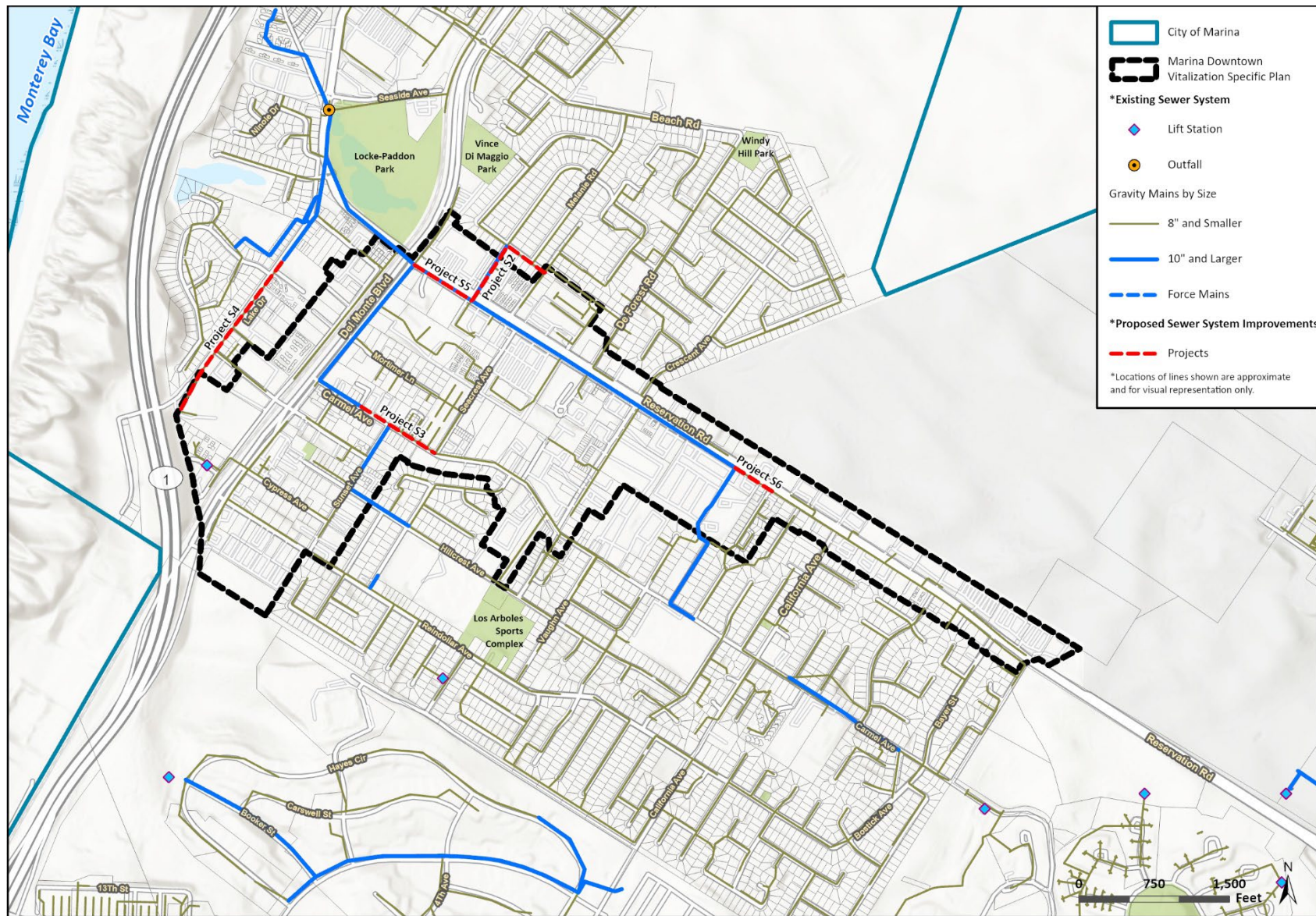
MCWD oversees the installation and maintenance of sewer lines in Marina. Wastewater is carried by the MCWD sanitary collection system to the M1W pump stations. From local pump stations, the wastewater is transported to the M1W treatment plant located two miles north of Marina. The regional treatment facility has a design and permitted capacity of 29.6 million gallons per day (mgd). 7,696 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 769,600 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.

6.2.1 Wastewater Infrastructure Improvements

The existing wastewater system is comprised of gravity sewer mains, pump stations, and force mains. Wastewater generated in the Specific Plan area is discharged to the M1W forebay pipe and lift station near the intersection of Reservation Road and Dunes Drive. The lift station pumps the sewage into the M1W interceptor pipeline that flows into the M1W wastewater treatment plant. The existing sewer system is generally adequate for existing flows but would need to be upgraded to accommodate the planned redevelopment. **Table 6-3** summarizes the sewer system upgrades required to accommodate the build out of the Specific Plan. These improvements are detailed in the 2020 MCWD Sewer Master Plan and shown below in **Map 6-2**. Buildout of the Specific Plan will increase the need for wastewater and sewer services and upgrades are required to meet demands from development of Downtown. Sewer infrastructure improvements, including pipe upsizing, shall be met with Program PF-2.

Table 6-3. MCWD 2020 Sewer Master Plan Planned Improvements in Central Marina

Project Description	Project Benefit	Project Trigger
Project S2 Peninsula Drive and Vista Del Camino Gravity Main: replacement of an existing 8-inch gravity main with a new 12-inch gravity main along Eucalyptus Street, Peninsula Drive and Vista del Camino from Viking Lane to Reservation Road.	Existing Customers: 85% New Development: 15%	Existing and Future Development
Project S3 Carmel Avenue Gravity Main: replacement of an existing 8-inch gravity main with new 10-inch and 12-inch gravity mains along Carmel Avenue between Seacrest Avenue and approximately 400 feet west of Sunset Avenue. This project is intended to mitigate an existing system deficiency.	Existing Customers: 100% New Development: 0%	Development of approximately 600 dwelling units.
Project S4 Lake Drive Pipeline Replacement: Replacement of the existing 6-inch and existing 8-inch gravity main with new 10-inch gravity mains along Lake Drive from the Highway 1 to Messenger Drive.	Existing Customers: 46% New Development: 54%	Development of approximately 600 dwelling units.
Project S5 Reservation Road Pipeline Replacement: Replacement of the existing 12-inch and 18-inch gravity mains with 21-inch gravity main along Reservation Road from Vista Del Camino to Del Monte Boulevard.	Existing Customers: 41% New Development: 59%	Development of approximately 2,950 dwelling units.
Project S6 Crestview Court Pipeline Replacement: Replacement of the existing 8-inch gravity main with new 10-inch gravity main along Reservation Road from 200 feet west of Crestview Court to 800 feet west of Crestview Court.	Existing Customers: 10% New Development: 90%	Development of approximately 200 dwelling units.



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by MCWD, 2019.

Map 6-2. Existing sewer system and proposed improvements.



6.3 Storm Drainage

Stormwater runoff generated from areas within the Specific Plan are collected in drain inlets, conveyed in underground pipes, and discharged into above ground percolation ponds. The majority of runoff from Reservation Road and nearby streets is carried downhill into a large percolation pond located in Locke-Paddon Park. Smaller percolation ponds are located throughout the city to provide detention for individual development areas. The City of Marina requires that the runoff from a ten-year, 24-hour storm event be retained onsite. Individual developments are required to propose a method of achieving this requirement that include the design of above ground percolation ponds or underground chambers to store excess runoff while it is dissipated into the ground via percolation.

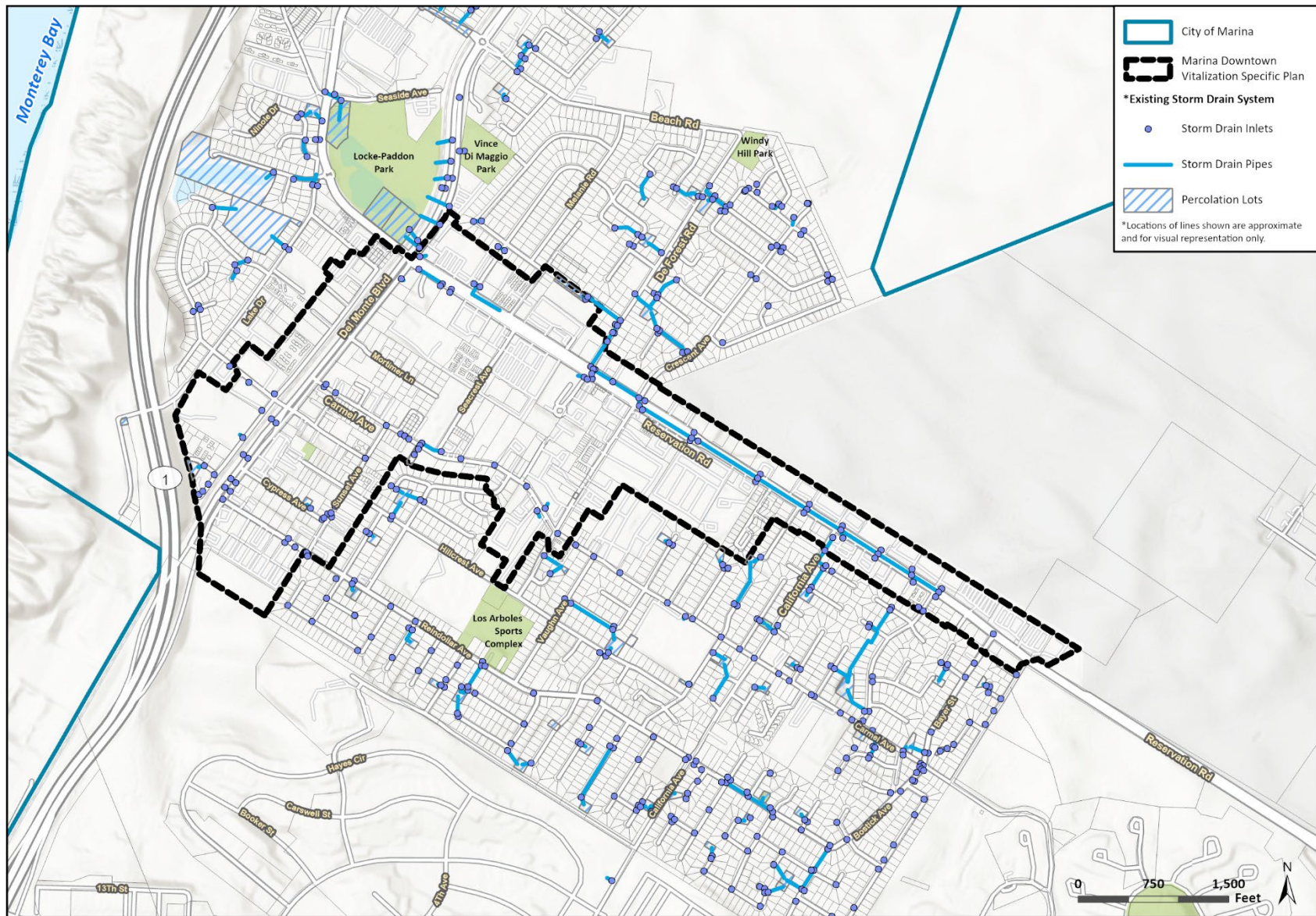
6.3.1 Storm Drainage Infrastructure Improvements

New development will be required to provide on-site retention in accordance with the City of Marina Standards and Specifications, but plan-wide drainage improvements are not required. Existing storm drainage infrastructure in the Specific Plan area is shown in **Map 6-3**. As development occurs, stormwater management measures are to be implemented in a manner that fulfills the requirements of Monterey County's National Pollutant Discharge Elimination System (NPDES) Phase II Permit, issued by the State Water Resources Control Board. This is intended to minimize the effects of urban stormwater runoff on the natural open space areas, including wetland areas and principal drainage corridors. Implementation includes two components: Stormwater management during construction and post-construction.

For active construction projects, a Storm Water Pollution Prevention Plan (SWPPP) is required to manage the release of onsite stormwater runoff. It addresses how stormwater from a construction site is managed and treated prior to being discharged from the site. The use of Best Management Practices (BMPs) during the construction process generally incorporates erosion and sediment controls. These BMPs typically include measures such as applying straw mulch to disturbed areas, the use of fiber rolls and silt fences, sedimentation basins, drain inlet protection, stabilized construction accesses, and material management. For construction activity in the Specific Plan area, the SWPPP is administered by Monterey County.

To manage stormwater quality and reduce post-development stormwater flows, development in the Specific Plan area is to utilize various Low Impact Development (LID) strategies. These strategies remove pollutants from runoff, attenuate peak flows, and reduce runoff volume. The Specific Plan LID measures include options for impervious area disconnection, tree planting, vegetated swales, and if needed, soil amendments. All LID measures are designed to the specifications outlined in the Design Guidelines for Low Impact Development: Site Planning, Source Control, Runoff Volume Reduction, and Treatment Control Practices document¹. Although the Design Guidelines for Low Impact Development do not include BMPs that are implemented during active construction projects, it provides a comprehensive, long-term approach for managing stormwater generated by new development projects by identifying various planning tools and requirements that collectively reduce peak flows and pollution from urban runoff.

¹ Design Guidelines for Low Impact Development: Site Planning, Source Control, Runoff Volume Reduction, and Treatment Control Practices, 2011



Imagery provided by Esri and its licensors © 2023.
 Additional data provided by the City of Marina, 2022; MCWD, 2008.

Map 6-3. Existing sewer system and proposed improvements.

6.4 Solid Waste

All solid waste collection in the City of Marina is serviced by Greenwaste Recovery. Landfill services in the city are provided by the Monterey Regional Waste Management District (MRWMD). Municipal solid waste is delivered to the Monterey Peninsula Landfill (MPL) located north of the Specific Plan area. According to CalRecycle, the landfill is permitted to handle a maximum throughput of 3,500 tons per day. The landfill has remaining capacity of 66 million cubic yards which is the equivalent of more than 100 years of use at current disposal rates. The MRWMD reports that the MPL landfills approximately 692,000 tons of municipal solid waste per year, or 2,241 tons each operating day. Therefore, remaining daily available capacity is approximately 1,259 tons per day.

Buildout of the Specific Plan would result in an estimated 7,957 new residents within the Specific Plan area. Based on 2019 CalRecycle estimates, Californians generate approximately 6.7 pounds of solid waste per day. Therefore, solid waste generation by new residents would total an estimated 53,312 pounds per day, or 26.7 tons per day. Additionally, Specific Plan buildout could result in an additional 1,386,000 square feet of commercial retail and office uses. Based on CalRecycle's generation rate estimates (0.046 lbs/per square foot/per day), it is estimated that there will be an additional 63,756 pounds per day of solid waste for these uses. In total, the Specific Plan would result in an estimated 121,068 pounds, or 60.5 tons, of solid waste per day delivered to the MPL representing 1.7 percent of available daily capacity. This estimate represents a full buildout scenario at the end of the Specific Plan's 20-year planning horizon. Based on this finding, the MRWMD has adequate capacity to accommodate the increase in municipal waste associated with the Specific Plan's buildout scenario.

6.5 Dry Utilities

There are two electricity provider options available to households and businesses in the Specific Plan area. Monterey Bay Community Power (MBCP) is the primary provider of electricity, offering an option to purchase carbon-free electricity from the utility. In addition, Pacific Gas and Electric (PG&E) also serves as the electricity provider to a minority of customers in the Specific Plan area that choose to opt out of MBCP carbon-free services. The Specific Plan area is currently developed and connected to all necessary internet and telecommunication utilities; therefore, expansion of dry utilities would be limited. Still, increased connection to utilities would result in increased demand on service providers.

Internet and telephone services in Marina are available through a variety of providers, including AT&T and Comcast. It is anticipated that these providers or any other future providers would provide cable, internet, and telephone services to the Specific Plan area.

6.6 Public Services and Community Facilities

6.6.1 Fire Services

Fire protection services for the City of Marina are provided by the Marina Fire Department (MFD). The MFD service area is limited to the Marina municipal boundary, with one fire station serving the entire city. The Marina Fire Station is located within Downtown at 211 Hillcrest Avenue and would offer fire protection to the Specific Plan area. In addition to fire services, the MFD provides medical emergency response, natural disaster preparedness, and hazardous materials mitigation services.

In 2016, the most recent year with reported data, MFD received 2,136 calls for service. Under 2016 existing conditions, MFD required three additional uniformed staff members and a fire marshal. In a 2020 interview, the Marina Fire Department indicated that existing fire facilities would not meet the needs of a full buildout of the Specific Plan. Future service expansion for the MFD would be necessary to maintain the safest environment possible within Downtown and the remainder of the city. The expansion of personnel and facilities may be necessary to accommodate buildout of the Specific Plan and would occur concurrently with new development.

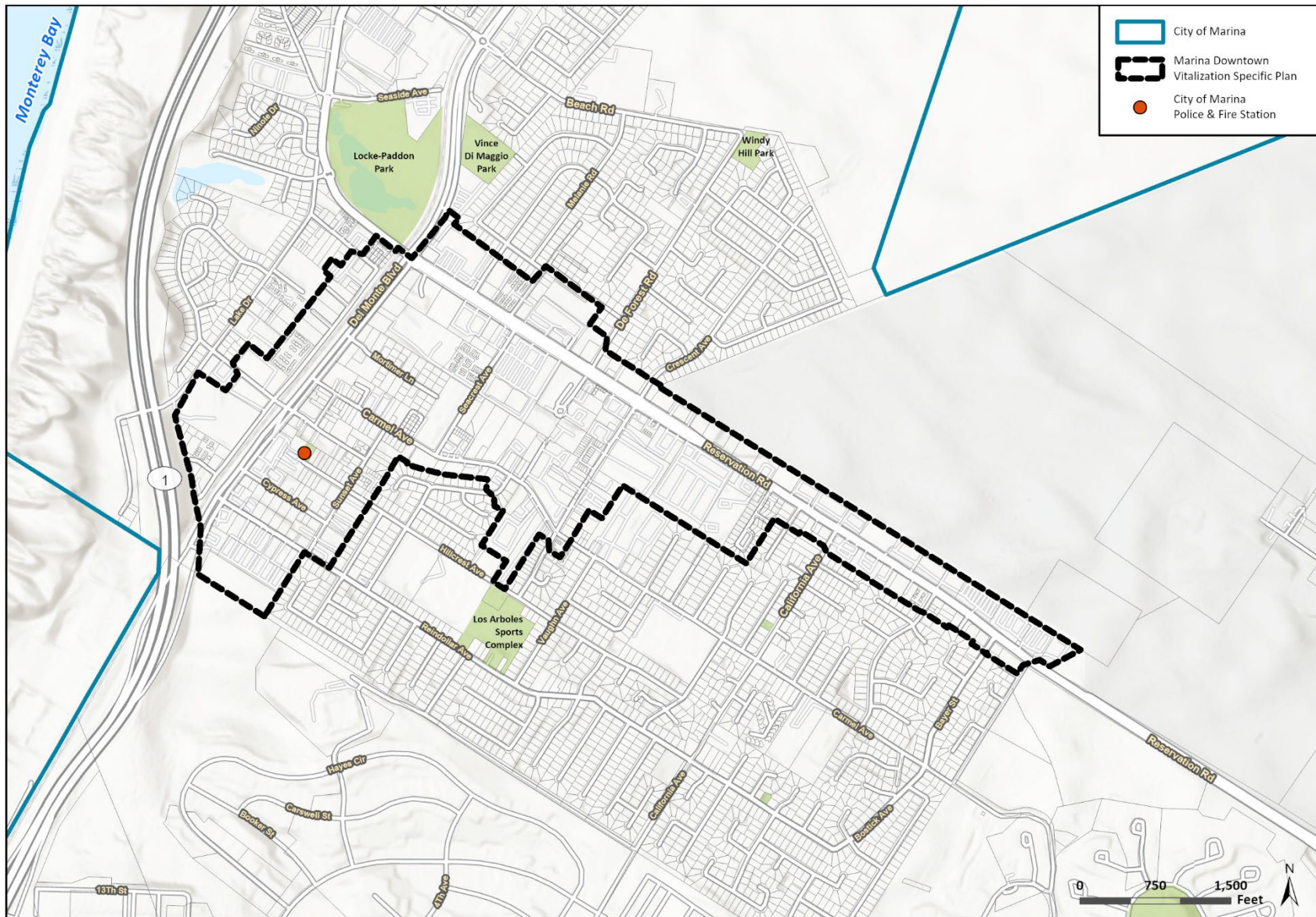
A 2021 study of standards of emergency services cover and deployment in Marina concluded that the fire department had exceeded the administrative and crew capability needs of the current fire station. On the recommendation of the study, City management proposed that a new fire station be built close to the corner of California Avenue and Imjin Parkway to improve response time and address critical deficiencies to emergency services and facilities.

To accommodate any service deficiencies present while new facilities are built, the city currently relies on a mutual aid agreement with all fire departments in Monterey County to enhance fire protection services and reduce response times. This mutual aid agreement can temporarily accommodate growth proposed for the Specific Plan area while emergency services capacity is expanded.

6.6.2 Police Services

The Marina Police Department (MPD) provides police services to the Specific Plan area. The MPD has one station 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.

In 2020, the MPD had a staff of twenty-nine (29) sworn officers and eight (8) non-sworn personnel. Based on the 2020 Census, Marina's population of 22,359 means the ratio of residents to police personnel is, approximately 604 to 1. With an estimated maximum of 7,957 new residents, the buildout of the Specific Plan would require the hiring of approximately 13 new police personnel to maintain the current ratio. Service levels at the MPD are regularly reassessed and adjusted as the population grows. The expansion of personnel and facilities necessary to accommodate buildout of the Specific Plan would occur concurrently with new development. The location of Marina's shared police and fire station is shown in **Map 6-4**.



Imagery provided by Esri and its licensors © 2023.
Additional data provided by the City of Marina, 2022.

Map 6-4. Police and fire stations.

6.6.3 Schools

The Specific Plan area falls within the boundaries of the Monterey Peninsula Unified School District (MPUSD), which services the City of Marina as well as Seaside, Monterey, and Del Rey Oaks. Schools serving residents in the Specific Plan area are shown in **Map 6-5**. Schools serving the Specific Plan area include the following:

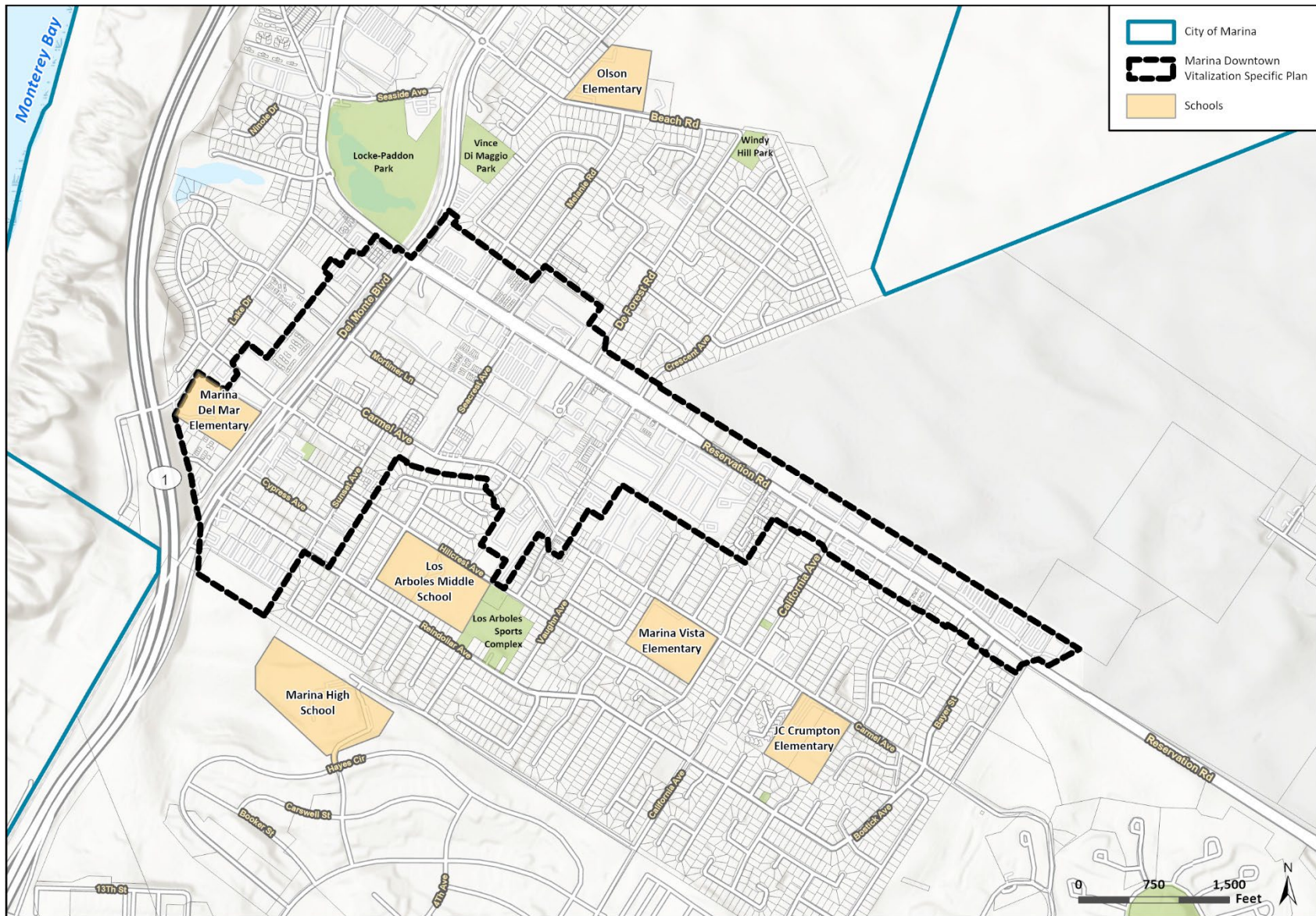
- **Marina High School** located at 298 Patton Parkway
- **Los Arboles Middle School** located at 294 Hillcrest Avenue
- **Crumpton Elementary School** located at 460 Carmel Avenue
- **Marina Vista Elementary School** located at 390 Carmel Avenue
- **Ione Olson Elementary School** located at 261 Beach Road

MPUSD has experienced declining enrollment in recent years. The District's School Reconfiguration and Consolidation Plan proposed to consolidate Foothill Elementary School and Highland Elementary School starting in the 2022-2023 school year. The plan recommended the creation of the Transitional Kindergarten through 8th grade schools at La Mesa and Monte Vista Elementary Schools, and the closure of Colton Middle School at the close of the 2022-2023 school year. While a reconfiguration plan has not yet been finalized, the district reorganization is focused on schools serving the Seaside and Monterey areas and is not expected to affect students in the Specific Plan area.

All new residential development in the Specific Plan area is anticipated to be multifamily housing (such as apartments, townhomes, and condominiums), which typically have a lower student generation rate than single-family homes. As part of the development review process, MPUSD determines student generation rates to assess capacity and set development impact fees.

The General Plan uses a student generation rate of one student for every five bedrooms, with 60 percent of the students projected to be enrolled in grades K-5, 20 percent in grades 6-8, and 20 percent in grades 9-12. Based on the maximum residential build out of the Specific Plan of 2,904 dwelling units, and an average of two-bedrooms per unit, total build out of the Specific Plan would contribute an estimated 1,161 students to local schools. This includes 697 K-5 students, 232 students in grades 6-8, and 232 students in grades 9-12. It should be noted that this estimate represents the number of students in the Specific Plan area at the end of the Specific Plan's 20-year horizon.

Based on capacity at existing schools and student generation rates, the Specific Plan does not anticipate the need for new schools in the Plan area. The capacity of existing schools serving the Specific Plan area will be sufficient to meet the need from residential development.



Imagery provided by Esri and its licensors © 2023.
Additional data provided by the City of Marina, 2022.

Map 6-5. Schools.

6.6.4 Libraries

The Marina branch of Monterey County Free Libraries was established on April 24, 1916. The Marina Library opened in its present location September 2007 with a new 11,000 square foot building including a wing to house the administrative headquarters for the Monterey County Free Libraries System. The Marina Branch offers access to books, periodicals, audio and video content in English, Spanish, Korean, and Vietnamese as well as computers, printing services, community rooms and a variety of programming for children and adults. The Friends of the Marina Library community group helps to provide advocacy, funding, and volunteer resources to support the branch.

According to the General Plan, this newest library branch along Seaside Circle and within Locke Paddon Park was a location identified to serve the entire community. As a result of this most recent development, library services are adequately provided to the Specific Plan area.

6.6.5 Civic Administrative Buildings

According to the General Plan, civic, commercial, cultural, and recreational uses are encouraged to create a center for the community in order to emphasize community life and identity as a focus for the city. Specifically, the Community Land Use Element identifies three potential locations for such a center. Figure 2.3 Public Facilities of the General Plan identifies three locations within or near the Specific Plan area for new civic administration buildings: Locke-Paddon Park adjacent to the Marina Public Library, the location of existing facilities along Hillcrest Avenue and Palm Avenue, and a vacant site along Salinas Avenue at Reservation Road.

The Locke Paddon Park site just outside of the Specific Plan Area was identified as the best location for construction of new City administrative facilities given its proximity to Downtown, and lack of major constraints present at alternative sites.

6.7 Public Facilities Goals, Policies, Programs

Goal PF-1	Public Facilities - Ensure that there are adequate public services and public utilities are provided for future development and enhance Downtown by planning for future public facilities.
Policy PF-1.1	Coordinate with public works and MCWD to prioritize and implement required water supply and distribution projects to ensure there is adequate capacity to serve new development in the Specific Plan Area.
Policy PF-1.2	Coordinate with public works and MCWD to prioritize and implement required wastewater projects to ensure there is adequate capacity to serve new development in the Specific Plan Area.
Policy PF-1.3	Ensure that stormwater and drainage facilities are adequate to accommodate development in Downtown.
Policy PF-1.4	Coordinate with Greenwaste Recovery and MRWMD to ensure waste collection and disposal services are available to serve new development in the Specific Plan area.
Policy PF-1.5	Meet regularly with Marina’s Fire and Police Departments to coordinate the expansion of Fire and Police protection facilities and services in the Downtown.
Policy PF-1.6	Require that new development contribute to school impact fees.
Policy PF-1.7	Work with the school district to ensure that new development and changes in population are regularly assessed in order to adapt to the needs of local student populations and school district needs.
Policy PF-1.8	Continue to explore potential sites for a civic center, expansion of civic administrative buildings and a location that could accommodate commercial, cultural, and recreational uses.
Policy PF-1.9	Maintain a clean, attractive environment free from trash and debris through coordination with local waste management service providers, enforcement of existing policies on appropriate waste disposal, awareness campaigns, and the requirement of adequate on-site waste storage and collection facilities.
Program PF-1	Pipeline upsizing shall occur in accordance with Project W5 of the 2020 MCWD Water Master Plan to meet increased demand from buildout of the Specific Plan.
Program PF-2	The City shall monitor the rate of buildout in the Specific Plan area and throughout the City in accordance with the 2020 MCWD Sewer Master Plan and anticipate upgrades to the wastewater collection system.
Program PF-3	Identify the timing, location and funding source for a new fire station to adequately support the growth within the Specific Plan area.
Program PF-4	Regularly assess changes in the City of Marina’s population, to adequately staff police services based on potential growth within the Specific Plan area.
Program PF-5	Establish a Downtown business improvement district or other funding mechanism to organize and finance the construction of downtown infrastructure improvements in more meaningful and intentional increments.

7 Implementation

7.1 Purpose and Intent

The preceding chapters of this Specific Plan identify the type of development desired in the Specific Plan area, including proposed improvements to vitalize the area. The desired development and vitalization improvements are outlined using goals, policies, and programs that make up a comprehensive community vision.

Successful implementation of the Specific Plan will require investments from the public and private sector. By utilizing the implementation measures outlined within this chapter, the City can create a downtown area that fosters and enables private investment. The implementation measures are intended to result in the systematic and orderly development of the Specific Plan area, consistent with the overarching vision of the project. All subsequent development projects and related activities are required to be consistent with the Downtown Vitalization Specific Plan (DVSP).

7.2 Regulatory Authority

City of Marina is authorized to adopt this Specific Plan pursuant to the provisions of California Planning and Land Use Law (Title 7, Chapter 3, Article 8 [Sections 65450-65457] (Planning and Zoning Law) of the California Government Code and Chapter 5, Subsection 5.11 (Specific Plans) of the City of Marina General Plan. The Government Code Section 65451 requires that a Specific Plan include a program of implementation measures necessary to carry out its proposed land uses, infrastructure, development standards, and other regulatory requirements.

Implementation of the Specific Plan is administered by the City of Marina. Specific Plans are designed to implement the goals and policies of the General Plan. State law requires that a Specific Plan can only be adopted or amended if it is consistent with a jurisdiction's adopted General Plan. As such, this Specific Plan is consistent with the policies of the City of Marina General Plan, and other applicable State and local regulations.

If any section, subsection, sentence, clause, phrase, or portion of this Specific Plan, or any future amendments or additions hereto, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Specific Plan, or any future amendments or additions hereto. The City hereby declares that it would have adopted these requirements and each sentence, subsection, clause, phrase, or portion or any future amendments or additions thereto, irrespective of the fact that any one or more sections, subsections, clauses, phrases, portions or any future amendments or additions thereto may be declared invalid or unconstitutional.

7.3 Relationship to City Plans and Other Related Documents

7.3.1 *Relationship to the General Plan*

The Specific Plan is intended to implement the General Plan, which serves as the long-term policy guide for future development of the City of Marina. The City's values are the foundation of the General Plan and set direction for the Specific Plan's vision. The Specific Plan area implements that vision by

establishing land use designations, design standards and guidelines, and refines that vision related to mobility, public facilities, and services to support new development. At the time of Specific Plan approval, the General Plan was amended to reflect Specific Plan land uses and is considered consistent with the General Plan as amended.

7.3.2 Relationship to the Zoning Code and Specific Plan Area Zoning

The City of Marina Zoning Code is a primary tool for implementing the General Plan. The Specific Plan is designed to supersede selected provisions of the Zoning Code. The zoning of the Specific Plan is SPL-DVSP. The SPL pre-fix is used to direct readers to the DVSP for all allowable land uses and guiding regulations for those uses. Where the Specific Plan establishes administrative practices, land use and/or development standards, the Specific Plan shall govern. Where the Specific Plan is silent on certain issues, such as definitions or procedures, the Zoning Code shall govern.

7.4 Conceptual Phasing

Redevelopment of the Specific Plan area will take place over time. As the majority of the parcels within the Plan Area are privately owned, redevelopment of these parcels will be initiated by the property owner according to the regulations of this Specific Plan.

The construction of public improvements is conditional on the following: (1) the timing of private redevelopment activities, and (2) the availability of funding. In the future, if there are improvements to roads to either reduce lanes or implement multi-modal measures, developers will be required to dedicate the necessary right-of-way as a condition of their projects, whenever they may be proposed. There is no intent to use eminent domain to acquire the right-of-way or to accelerate the public improvements, although the City retains this power.

While the DVSP emphasizes the importance of a downtown as a central business district and important economic driver, downtown residential development has been a critical component of the plan. The phasing plan that follows begins with a primary objective to drive development of multifamily residential within the Downtown consistent with the objectives of the General Plan housing element, which identifies the Downtown as key housing opportunity area for higher density housing, including housing that accommodates income levels of all types. Additional phases address enhancing retail and services, development surrounding the Marina Transit Exchange to emphasize the importance of transit for the future of Marina, as well as other mobility improvements that aim to create a walkable, bikeable downtown that accommodates all modes of transportation. The phasing below can be considered as a *strategy* for future development and is complimented by all the policies and programs outlined in previous sections.

Phasing Strategy 1: Multifamily Residential Development – Residential development is envisioned at the heart of the downtown and is a critical component to the mix of uses that are encouraged in the Specific Plan area. Residential uses are essential to the development of the Downtown and an important driver in achieving housing goals identified in the General Plan housing element. Through specific development standards and a development code that outlines objective design standards, multifamily residential development is expected to be a primary strategy for build out of the DVSP, including through streamlined review of multifamily housing development projects.

Phasing Strategy 2: Downtown Retail and Services – Economic development and enhancement of the city’s identity are an important part of the DVSP. Support for existing local businesses, and the ability to foster an environment that encourages new businesses and attracts residents and visitors are a

subsequent phasing strategy. In addition to the focus on driving residential development in the Downtown, ensuring retail and service uses are successful and thriving will create a desirable environment to live and visit.

Phasing Strategy 3: Marina Transit Exchange – Providing transit services for residents to commute and travel to other areas of the county and region are an important part of the success of the Downtown. The Marina Transit Exchange serves as a hub to support transit that is an essential service to residents who will live in the Downtown and require necessary services to encourage more active transportation and less dependence on single-occupancy vehicles. Development around this transit station, including enhanced services (e.g. shorter headways, express buses, and bus rapid transit), along with adequate sidewalk and bike infrastructure, mixed-use will encourage more use and activity around this station.

Phasing Strategy 4: Other Mobility Improvements – Mobility improvements that encourage traffic calming, complete streets, active transportation, and parking improvements are identified as a final phase for the Downtown to create an environment that matches land use needs with circulation and mobility needs. While these improvements are identified as only concepts in this plan, Program XX encourages the full development of these concepts to ensure land use and transportation work in concert.

7.5 Financing and Maintenance of Public Improvements

The availability of funding and financing are critical to the implementation of the Specific Plan. As new projects are developed in the Specific Plan area, public infrastructure will need to be upgraded to serve the growing population. The City is responsible for ensuring that the adequate infrastructure and public facilities and services are provided to meet the desired development potential outlined in this Specific Plan. The City will be required to pursue funding sources to meet these needs.

Several types of financing strategies and tools are available for financing district-wide improvements such as those found in the DVSP. It is anticipated that the Specific Plan area will be redeveloped over time using a combination of these strategies and tools which could include, but are not limited to, the strategies indicated in *Sections 7.5.1 through 7.5.2*.

7.5.1 Local Funding Sources

Development Impact Fees

California Government Code Section 66000 (“The Mitigation Fee Act”) allows for the creation and collection of development impact fees. The City of Marina and other local agencies currently impose development impact fees on new private developments citywide to mitigate the effects of increased demand on public facilities, transportation infrastructure, and parks. A development impact fee is a one-time fee imposed on new development devised to offset a “proportional share” of the cost of necessary public infrastructure and facilities.

Capital Improvement Program

The City’s existing Capital Improvement Program (CIP), Fund 462, can be utilized to leverage funding for strategic infrastructure projects within the Specific Plan area. Although the existing CIP does not currently account for improvements associated with Specific Plan build-out, an update to the CIP could enable allocation of funding toward infrastructure projects that will not only serve the Specific Plan area but will be beneficial to the greater community in Marina. Improvement projects that may service the

broader community include roadway improvements, strategic economic improvements, and open space/parkland expansion.

Special Assessment/Special Tax District

Special Assessment Districts serve to increase tax amounts beyond existing property or sales tax for property owners and businesses within a specified district. The additional tax revenue gained from the Assessment District can then be used to fund district-specific improvements. Revenue from a Special Assessment District is limited by a requirement that mandates that taxation must be assigned to property owners in direct proportion to the benefits received from targeted improvements. In contrast, a Special Tax District utilizes property characteristics to assign tax amounts. Special Tax Districts allow for funds to be allocated to a broader scope of projects and activities in comparison to Special Assessment Districts. Both the Special Assessment District and the Special Tax District require approval by voters and/or affected property owners.

Enhanced Infrastructure Financing District

Enhanced Infrastructure Financing Districts (EIFDs) are a mechanism for local governments to finance development projects utilizing Tax Increment Financing (TIF). Generally, TIF tools serve to increase available funds by utilizing development bonds, which are then paid by capturing the future tax revenues that flow from the designated project area. An EIFD is a type of TIF that is formed by a city, district or county and may be utilized to help fund infrastructure development, including roadways and housing. Local agencies may establish an EIFD for a given project or geographic area to capture the projected incremental increases in property tax revenue that will occur as a result of development. To obtain the TIF bonds, the relevant authority is required to host three public hearings that overview the Infrastructure Financing Plan associated with the EIFD.

Although EIFDs can be an effective tool, there are multiple limitations to this type of financing. By dedicating future tax revenue to infrastructure projects, cities may limit funding for other necessary services. Because of this, the feasibility of EIFDs should be assessed in detail through a district-focused lens.

Property and Business Improvement District

In 1994, in an effort to create jobs, attract new businesses, and protect business districts in economically disadvantaged areas from blight and erosion, California legislation authorized property owners to form business improvement districts. Under state law, business districts can fund business related improvements, maintenance, and other related activities. A PBID may be formed for up to five years and may be renewed continually for additional terms of up to 10 years. Specific requirements for the formation of PBIDs can be found in Sections 36601-36615, 36621-36637, and 36650-36671 of the California State Code.

The principal activities funded by a PBID, which may also include residential properties and higher density districts and corridors, include the following:

- "Clean and safe" program (improving safety and aesthetics through various cleanup and beautification efforts);
- District marketing and targeted tenant and business capture outreach;
- Seasonal calendar of events and special attraction initiatives; and
- Maintenance of unique signs, banners, and landscape materials.

It is not common for PBIDs to enter into public infrastructure financing obligations, high cost street lighting or street furniture and replacements, or direct financial partnerships in property rehabilitation/façade improvements/public space or public parking partnerships development costs.

Art in Public Places (APP) Program

In many cities, APP programs are established to build public experiences of visual art by installing artworks in public spaces. Funding sources for these programs vary, and may include a specific percentage (e.g., 2-5%) of eligible capital improvement project budgets are set aside for the commission, purchase, and installation of artworks throughout the city. These funds may be administered by a special commission (and include dedication of staff resources) to develop a public art ordinance or master plan. *See Program LU-10 pertaining to the development of public art in the City of Marina.*

7.5.2 State and Federal Funding Sources

There are a variety of State and Federal grant and loan programs available to local and regional governments that can be used to fund local infrastructure projects. Grant opportunities are typically competitive and are allocated through a process of application and approval. The following list of grants may be applicable to the City of Marina for funding related to development in the Specific Plan area.

- **Infill Infrastructure Grant Program.** Administered by the California Department of Housing and Community Development (HCD), the Infill Infrastructure Grant Program aims to promote infill housing development by providing financial assistance to Capital Improvement Projects that are an integral part of, or necessary to facilitate the development of affordable and mixed income housing. Eligible costs include the construction, rehabilitation, demolition, relocation, preservation, acquisition, or other physical improvements of a capital asset that is an integral part of, or necessary to facilitate the development of housing.
- **Community Development Block Program (CDBG).** The CDBG Program is administered by the United States Department of Housing and Urban Development (HUD) and provides funding to jurisdictions to undertake community development and housing projects. Projects proposed by the jurisdictions must meet the objectives and eligibility criteria of CDBG legislation. The primary CDBG objective is the development of viable urban communities, including decent housing, a suitable living environment, and expanded economic opportunity, principally for persons of low-and moderate income.
- **California Infrastructure and Economic Development Bank (IBank).** IBank provides low-interest loans to public agencies for public infrastructure. The principal intent is to fund infrastructure which will generate permanent jobs. The IBANK also provides somewhat lower interest loans to firms seeking expansion that are committed to employment retention, growth, and opportunities in “under employment” areas.
- **Caltrans Sustainable Transportation Planning Grant Program.** This program provides planning funds for local and regional multimodal transportation and land use planning projects that further the region’s RTP SCS, contribute to the State’s GHG reduction targets, and assist in achieving the Caltrans Mission and Grant Program Objectives. For the DVSP, this may mean using funds to advance mobility goals that integrate land use and transportation, including development around the Marina Transit Exchange and other transportation demand management measures.

7.6 Specific Plan Administration

The Specific Plan outlines the general provisions, permitted land uses, design standards and guidelines, public facilities and services, as well as infrastructure improvements intended for the Specific Plan area. The City of Marina Community Development Department is broadly responsible for the administration, implementation, and enforcement of the Specific Plan. All development proposals within the Specific Plan area are subject to the procedures established herein.

7.6.1 Specific Plan Adoption and Administration

The City of Marina prepared the DVSP pursuant to the California Government Code, Chapter 4, Section 65451. This regulation defines the Specific Plan's role as a tool for implementing a City's General Plan. The Specific Plan will serve as a detailed extension to the General Plan, offering area-specific instruments to facilitate broad General Plan objectives.

Adoption

Adoption of this Specific Plan will occur by City Council resolution. Concurrent with the adoption of the DVSP, the City of Marina shall amend the City's General Plan and Zoning Map to ensure consistency with Specific Plan land uses. Upon ordinance adoption, the Specific Plan will serve as the land use and zoning map for the Specific Plan area. It is intended that all Specific Plan area projects, including design review plans, detailed site plans, building permits, or any other action requiring ministerial or discretionary approval, be consistent with this Specific Plan.

Minor Adjustments to the Specific Plan

Minor adjustments to the plans, guidelines, regulations, and standards contained in this Specific Plan may be approved at the discretion of the Community Development Director; provided, however, that such deviations are deemed to be in substantial conformance with this Specific Plan and are not detrimental to public health, safety, and welfare. Modifications to the adopted Specific Plan must be consistent with the purpose and intent of the originally approved Specific Plan. Any decisions made by the Community Development Director may be appealed to the Planning Commission. Decisions of the Planning Commission may be appealed to the City Council. Decisions by the City Council shall be deemed to be final. The following modifications constitute "minor adjustments" to the approved DVSP:

1. Minor changes to the design of the roadway cross-sections, provided that the streets have adequate capacity to handle the anticipated volumes of traffic and the design changes are deemed acceptable by the City's Traffic Engineer;
2. Minor modifications to the architectural or landscape design standards and guidelines;
3. Additions of new information or data to the Specific Plan maps, figures, and/or text which do not change the effect of any concepts or regulations.

Specific Plan Amendments

Those proposed changes to the Marina DVSP that are determined to be substantial in nature must be approved through a formal Specific Plan Amendment. Procedures for approval of a Specific Plan Amendment shall be consistent with the Zoning Amendment procedures outlined in Chapter 17.72 of the City of Marina Municipal Code. A Specific Plan Amendment is the appropriate procedure where changes to the Specific Plan meet one or more of the following criteria:

1. A new type of land use not identified in the Land Use Plan;
2. Increases in maximum allowance development analyzed per CEQA as shown in **Table 7-1**;
3. Significant changes to the Specific Plan area’s circulation pattern that would result in an alteration of land uses;
4. Significant changes to the distribution of land uses would substantially alter the overall mix of land uses in the Land Use section of the Specific Plan.

An amendment to the DVSP shall be processed in the same manner as the original adoption of the DVSP. The document may be amended as many times as necessary. Specific Plan Amendments require approval from the City Council, with a prior recommendation forwarded by the Planning Commission. Approval shall require findings and conclusions such as the following:

1. The Specific Plan Amendment is consistent with the General Plan;
2. The Specific Plan Amendment does not have a significant effect on the environment and does not create new impacts that are not analyzed under the CEQA review process;
3. The amendment does not compromise the project’s community benefits that would otherwise exist without the proposed amendments.

Table 7-1. Maximum Development Analyzed Per CEQA

Land Use	Maximum Allowable New Development
Multifamily Residential	2,904 units
Commercial Uses	874,669 square feet
Office Uses	510,528 square feet

7.6.2 Legal Nonconforming Uses and Structures

Upon adoption of the Specific Plan, any use that is inconsistent with the land use designations outlined in Table 2 of **Appendix A: Development Code** shall be considered a legal nonconforming use. A legal nonconforming use may be continued, changed, or replaced only as provided by this section.

1. Nonconforming uses of land. A legal nonconforming use of land may be continued, transferred, or sold, provided that no such use shall be enlarged or increased, nor extended to occupy a greater area than that which it lawfully occupied before becoming nonconforming. Additionally, legal nonconforming uses shall not be enlarged, extended, expanded, nor increased to occupy a larger area, nor a more intensive use than that which it was characterized by in the prior twelve months.
2. Nonconforming buildings. A legal nonconforming building may continue to be used as follows: If a structure in which a legal nonconforming use exists is modified or altered by 20 percent or more of the existing floor space or ground area, all structures must come into full compliance with the Specific Plan.
3. Nonconforming Residential Uses. A nonconforming residential use located in any district of the Specific Plan area may be expanded, enlarged, or remodeled without regard to 20 percent limitations.
4. If a nonconforming use is superseded by an allowed use, the new use shall conform to the regulations within the Specific Plan.
5. Ordinary maintenance and repairs may be made to any nonconforming building, provided no structural alterations are made and provided that such work does not exceed twenty-five percent of the assessed value in any one-year period.



6. **Destroyed Structure.** The reconstruction of a building damaged by fire or calamity which at the time was devoted to a nonconforming use may be authorized by the Planning Commission through use permit approval, provided that reconstruction shall occur within twenty-four months after the date of the damage and that the reconstructed building shall have no greater floor area than the one damaged.

Upon adoption of the Specific Plan, all structures that do not meet the standards identified in **Appendix A: Development Code** of the DVSP shall be considered legal nonconforming structures. A legal nonconforming structure may be altered subject to approval by the Community Development Director. The Community Development Director may approve alterations that are modified by less than 20 percent of the floor space or ground area existing at the time the structure became nonconforming. No alterations to nonconforming structures may be approved by the Director unless they are made more nearly conforming. Any structural alteration, modification, or expansion above 20 percent of the lawful floor space or ground area must come into full structural compliance with the design guidelines identified within the Specific Plan. If a nonconforming structure is destroyed by natural hazard or fire to an extent of more than 75 percent of its reasonable replacement value at the time of destruction, it must be reconstructed in conformity with the standards outlined within this Specific Plan.

7.7 Implementation Matrix

Each implementation program includes the party responsible for implementation, timeframe, and potential funding source. Assigning a responsible party helps to ensure continued commitment by City staff, elected officials, and other vital organizations to the goals of the Plan. In addition, to help establish priorities, programs include anticipated timeframes for implementation. Short-term programs are anticipated to be implemented within the first three years of Plan adoption, mid-term programs are to be implemented within four to 10 years, and long-term programs in 11 or more years.

	Program	Timeframe	Responsible Party
Program LU-1	The City should pursue funding through public sources such as the California Arts Council, or other private sources, and explore opportunities for entertainment and activities venues such as a new auditorium.	Mid-term	Planning Division
Program LU-2	Study the potential for a lot consolidation program to incentivize lot consolidation that encourages redevelopment. Incentives may include reduced development fees, administrative review, decreased parking ratios, etc.	Short-term	Planning Division
Program LU-3	Develop a business investment program to support minority owned stores and businesses in Downtown.	Short-term	City Manager's Office
Program LU-4	Create outreach material for the non-profit and for-profit development community to learn about the streamlining benefits of the Specific Plan.	Short-term	Planning Division



	Program	Timeframe	Responsible Party
Program LU-5	Dedicate a page on the City's website to show community members how their properties can be redeveloped to accommodate multifamily housing throughout Downtown. Provide example housing developments of duplexes, triplexes, and multiplexes that meet the design intent and standards outlined in the Specific Plan.	Short-term	Planning Division
Program LU-6	Dedicate a webpage on the City's website to encourage transparency in the housing development process, including how the City is meeting its local housing obligations under state requirements.	Short-Term	Planning Division
Program LU-7	Develop and maintain a business retention and expansion program.	Mid-term	Planning Division
Program LU-8	Establish a list of "shovel-ready" sites in consultation with property owners and provide the list to interested developers and businesses seeking sites in the city.	Short-term	Planning Division
Program LU-9	Make Downtown readily identifiable to residents and visitors by establishing gateways at key locations. Include such features as landscaping, vegetation, signage, and public art to define entry points and introduce Downtown to citizens and visitors.	Mid-term	Planning Division, Public Works
Program LU-10	Develop a public art master plan to celebrate the culture and heritage of Marina.	Mid-term	Planning Division
Program M-1	Develop a mobility plan for the Downtown to include complete streets design, pedestrian and bicycle paths, improvements to transit, parking, and transportation demand management measures.	Mid-term	Planning Division, Public Works
Program M-2	Community Development Department and Public Works Department should collaborate to implement low-cost improvements using existing resources to establish gateways to the Downtown along Reservation Road and Del Monte Boulevard, directional signage, and simple streetscape enhancements such as protected bike lanes, accent paving on crosswalks, reduced lane width, and curb bulbouts.	Short-term	Planning Division, Public Works
Program PF-1	Pipeline upsizing shall occur in accordance with Project W5 of the 2020 MCWD Water Master Plan to meet increased demand from buildout of the Specific Plan.	Mid-term	Public Works
Program PF-2	The City shall monitor the rate of buildout in the Specific Plan area and throughout the City in accordance with the 2020 MCWD Sewer Master Plan and anticipate upgrades to the wastewater collection system.	Ongoing	Public Works
Program PF-3	Identify the timing, location, and funding source for a new fire station to adequately support the growth within the Specific Plan area.	Short-Term	City Manager's Office

	Program	Timeframe	Responsible Party
Program PF-4	Regularly assess changes in the City of Marina’s population, to adequately staff police services based on potential growth within the Specific Plan area.	Ongoing	City Manager’s Office
Program PF-5	Establish a Downtown business improvement district or other funding mechanism to organize and finance the construction of downtown infrastructure improvements in more meaningful and intentional increments.	Mid-Term	Planning Division



This page intentionally left blank.



Appendix A: Development Code

A.1 Overview

This section establishes procedures for the consistent promotion of high quality, well-designed development to be appropriately located throughout Downtown Marina. The Development Code includes Objective Development and Design Standards which are composed of written statements and graphic illustrations describing the design intent and regulations to achieve the desired 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 preserve and enhance Marina’s unique community character and natural environment. These standards also help to provide regulatory certainty and permit streamlining, particularly for affordable housing development.

All new construction and proposed structural and façade changes are required to be consistent with the Objective Development and Design Standards presented here. Design Standards are minimum requirements, and applicants may be required to provide additional amenities to meet the goals and policies of the Specific Plan consistent with the objective development and design standards contained herein. The Design Standards presented in this section are intended to create a framework for the design review process while preserving the flexibility needed for creative design. Additional objective standards from the City’s Sign Ordinance and Zoning Ordinance may also be applicable. If there is a perceived conflict between Downtown Vitalization Specific Plan 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 the Standards presented here, then the aforementioned documents, city staff, or relevant commissions and boards may provide further direction.

A.2 Administration

A.2.1 Review and Approval Process

The following administrative standards govern the implementation of future development applications within the Specific Plan area.

1. Administrative Plan Review is required for the following project types:
 - a. Multifamily residential projects without a commercial component.
 - b. Projects submitted and found eligible for SB 35 streamlining.
 - c. Mixed-use projects in which at least two thirds of the occupiable floor space is designated for residential use.
2. Architectural Design Review is required for the following project types:
 - a. Mixed-use projects in which less than two thirds of the occupiable floor space is designated for residential use.
 - b. Non-residential projects.
 - c. Any project which deviates from the objective design standards contained in this chapter.
3. Use Permits are required for projects which include conditionally permitted uses as shown in **Table 2** of this chapter and are not subject to the Architectural Design Review Process.

Table 1 depicts the process of entitlement through the City of Marina for various applications and action. **Table 1** applies only to future developments being implemented within the DVSP.

Table 1. Applications and Review Authority

Permit Type	Action Required By		
	Community Development Director	Planning Commission	City Council
Administrative Development Review	★		
Architectural Design Review, including deviation from objective design standards (Chapter 17.56 of the Marina Municipal Code)		★	
Use Permit (Chapter 17.58 of the Marina Municipal Code)		★	
Specific Plan Use Interpretations	★		

A.2.2 Administrative Development Review

No development shall occur or building permits issued within the adopted Specific Plan area until the proposed development is reviewed by the City’s Planning Division and found to be consistent with the adopted Specific Plan. Criteria for review and approval of proposed development shall include, but not be limited to the following:

1. Conformance with the land use designation;
2. Conformance with the intended density/ intensity of the site; and
3. Conformance with the specific development and design standards, goals, and policies of the Specific Plan.

Evaluation of the proposed project by the planning department shall be granted as follows.

1. Form of Application. An application for a project approval under the Administrative Development Review process shall be completed on a form provided by the planning department.
2. Administrative-level Approval. Administrative-level approval is ministerial in nature and is conducted at the staff level under the general direction of the community development director without notice and hearing. A community meeting prior to filing an application is encouraged but not required. Approval shall be granted by the community development director only when the permit application contains sufficient information for the planning department to verify that the proposed use will be consistent with the standards outlined in this chapter, Appendix A: Development Code. Projects that comply with these requirements shall be permitted by right. Compliance with the requirements of this chapter shall not, however, waive any additional requirements for compliance such as an application for a lot line adjustment, merger of parcels, or subdivision in conjunction with approval of an application. A separate application for the lot line adjustment, merger of parcels, or appropriate subdivision map shall proceed in accordance with Title 16 of the Marina Municipal Code.
3. Notice of Decision. A notice of decision shall be either mailed first class and postage pre-paid to both the applicant and the applicant’s representative (as shown on the application) or emailed and sent via either of those methods to any person who has made a written request for a copy of the decision. The decision of the community development director shall be final and conclusive.



4. Expiration of Administrative-level Review. Within two years of the date of approval by the community development director, commencement of construction shall have occurred or the approval shall become null and void. A one-year extension can be granted by the community development director if the project is compliant with the original approval.

A.2.3 Architectural Design Review

Chapter 17.56 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 as identified in Section A.2.1(2). In accordance with this chapter, the Planning Commission has the power to review all applications for developments in the City.

The Planning Commission 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.”

A.2.4 Use Permits

Projects which include conditionally permitted uses as shown in **Table 2** of this chapter shall follow the procedures outlined in Chapter 17.58 of the Marina Municipal Code.

A.2.5 Actions Not Regulated by the Specific Plan

Actions not otherwise regulated in this Specific Plan shall follow administrative procedures outlined in the City of Marina Zoning Code (Chapter 17 of the Marina Municipal Code).

A.3 Land Use Diagram

The Land Use Diagram (Figure 1) outlines the intended uses of land within the Plan Area. Each use designation, depicted by the colors on this diagram, is subject to the land use, development, and design standards presented in this section. The diagram illustrates the policies outlined in the Specific Plan Land Use chapter and serves as a visual aid for the interpretation and application of the land use policies.

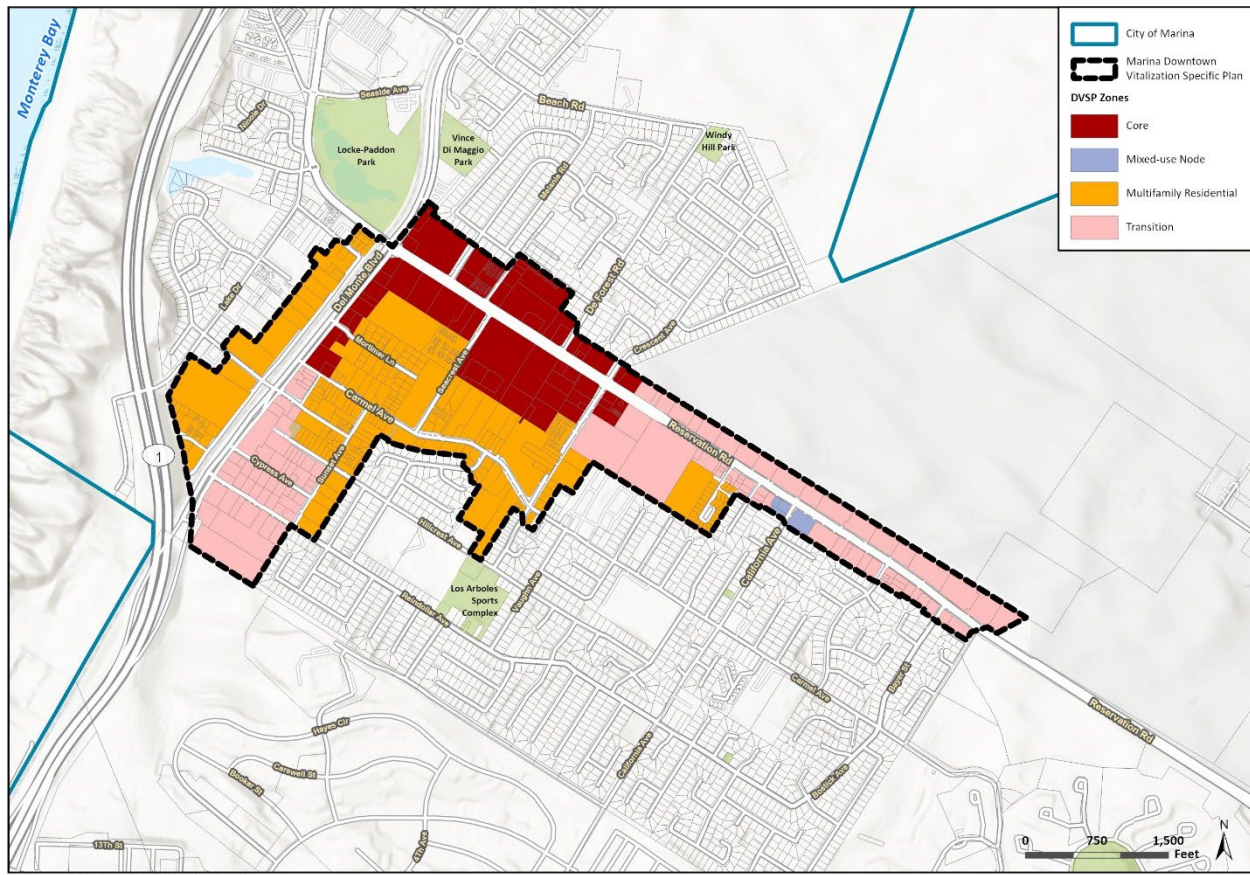


Figure 1. Land Use Diagram

A.4 Land Use Designations

A.4.1 Core District

The Core district is established to encourage higher-rise mixed-use development with a combination of retail, office, commercial, entertainment, residential, and civic uses. This designation is intended to foster a compact, walkable urban form focused along the portions of Reservation Road and Del Monte Boulevard.

A.4.2 Mixed Use Node District

The Mixed-use Node district is intended to facilitate similar uses and development types as is intended in the Core district at a smaller scale in order to remain compatible with the surrounding neighborhood. The Mixed-use Node district allows for mid-rise 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 that visitors and residents associate Downtown Marina with a vibrant, urban atmosphere. Single-use residential buildings may be built on site so long as vertical mixed-use buildings are constructed at the street edge.

A.4.3 Transition District

The Transition District is intended for a combination of retail, service, and hospitality businesses that serve citywide or regional populations and multifamily residential development. Multifamily residential development is encouraged in the Transition District and may be designed in connection with a vertical mixed-use project with commercial space on the street-facing portion of the first floor or as an exclusively residential development.

A.4.4 Multifamily Residential District

The Multifamily Residential district permits and encourages mid-rise multifamily residential developments. Multifamily residential uses near the Core are critical for providing an affordable housing supply and population to support businesses Downtown.

A.5 Permitted Uses

A.5.1 Purpose

Table 2 provides the land uses allowed in each Specific Plan district.

A.5.2 Applicability

Land uses listed in the table are allowed in the district shown. Principally permitted uses are permitted by right. Conditionally permitted uses are those uses which are required to obtain a use permit in accordance with Chapter 17.58 of the Marina Municipal Code. Uses not included in the table are considered prohibited unless determined by the Community Development Director to be substantially similar to another permitted or conditionally permitted use.

Table 2. Downtown Vitalization Specific Plan Land Use Matrix

Land Use	Land Use Designation			
	Core	Mixed-use Node	Transition	Multifamily Residential
Primary Uses				
Amplified Music/Sound	C	C	C	C
Assembly, Major	C	C	C	NP
Assembly, Minor—First Floor facing Del Monte Blvd or Reservation Rd	NP	NP	P	NP
Assembly, Minor—Above First Floor, at first floor facing side streets or alleys, or behind first floor commercial	P	P	P	NP
Cannabis—Retail, Testing, Manufacturing and Delivery	C	C	C	NP
Card Room	NP	NP	NP	NP
Civic and Community Uses	C	C	C	C
Commercial Recreation Facility—Indoor	C	C	P	NP
Commercial Storage	NP	NP	NP	NP

Development Code

Land Use	Land Use Designation			
	Core	Mixed-use Node	Transition	Multifamily Residential
Dwelling, attached—all floors	NP	NP	P	P
Dwelling, attached—above first floor or on first floor behind first floor commercial	P	P	-	-
Food and Beverage Sales, Major	C	C	C	NP
Food and Beverage Sales, Minor	P	P	P	NP
Hotel	C	C	C	NP
Parking Area, Accessory	P(1)	P(1)	P(2)	P(1)
Parking Area, Public	C	C	C	NP
Parking, Subgrade	P	P	P	P
Retail Sales, Major	NP	NP	C	NP
Retail Sales, Minor	P	P	P	NP
Restaurant, Major	C	C	C	NP
Restaurant, Minor	P	P	P	NP
Seating, Outside	P(3)	P(3)	P(3)	NP
Service, Major	NP	NP	C	NP
Service, Minor	P	P	P	NP
Animal Service	C	C	P	NP
Professional Office, First Floor facing Del Monte Blvd or Reservation Rd	NP	NP	P	NP
Professional Office- Above First Floor, at first floor facing side streets or alleys or behind first floor commercial	P	P	P	NP
Laundromat	P(4)	P(4)	P	C
Accessory Uses				
Outdoor display associated with a business	C	C	C	NP
Drive-thru or drive-in facilities associated with a business	NP	NP	C	NP
Exterior vending machines, accessory use to a business	NP	NP	-	NP
Temporary Uses				
Utility, Major	C	C	C	C
Utility, Minor	P	P	P	P
<p>P = Principally Permitted Use by Right C = Conditional Permitted Use; subject to the requirements of Chapter 17.58 of the Marina Municipal Code. NP = Not Permitted - = Not Applicable</p> <p><u>Notes</u></p> <p>(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.</p>				



A.5.3 Use Definitions

The following section defines land uses outlined in **Table 2**.

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 Chapter 17.47 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 section 17.52.

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 childcare facility other than a family childcare home, includes infant centers, preschools, and extended childcare 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 section 17.52.

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, 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

A.6 Core District

A.6.1 Intent

This section includes development standards, including density, height, setbacks, parking, and other site development standards. Applicants are encouraged to design projects that are culturally inclusive spaces respectful of Marina’s diverse history.

A.6.2 Applicability

This section provides standards applicable to the Core District.

A.6.3 Development Standards

Core District Development Standards			
Maximum Residential Density	70 dwelling units per acre		
Minimum Residential Density	20 dwelling units per acre		
Maximum Lot Coverage	70%; Parking facilities are not counted towards lot coverage percentage.		
Minimum Setbacks	Front: 0 feet	Side: 0 feet	Rear: 10 feet
Percent of frontage built to within 5 feet of minimum front setback	Reservation Road: 75%	Del Monte Boulevard: 75%	Other Streets: 50%
Maximum Building Height	Properties fronting Reservation Road or Del Monte Boulevard: lesser of 60 feet or five stories	Properties fronting other streets: lesser of 48 feet or four stories	
Ground floor commercial	All mixed-use developments shall include commercial uses on the ground floor. Residential on the ground floor facing Reservation Road or Del Monte Boulevard is not permitted.		
Minimum Commercial Ground Floor Height	12 feet		
Minimum Fenestration (percentage of façade)	Ground floor frontage: 60%	Upper floors frontage: 20%	Residential - all floors: 20%
Minimum Parking Provided	Commercial Retail: 1 stall per 600 GSF of commercial space	Residential Studio: 1 stall per unit One bedroom or larger: 1.5 stalls per unit	
Minimum Open Space Provided	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.		

A.7 Mixed-use Node District

A.7.1 Intent

This section includes development standards, including density, height, setbacks, parking, and other site development standards. Applicants are encouraged to design projects that are culturally inclusive spaces respectful of Marina’s diverse history.

A.7.2 Applicability

This section provides standards applicable to the Mixed-use Node District.

A.7.3 Development Standards

Mixed-use Node District Development Standards			
Maximum Residential Density	70 dwelling units per acre		
Minimum Residential Density	20 dwelling units per acre		
Maximum Lot Coverage	70%; Parking facilities are not counted towards lot coverage percentage.		
Minimum Setbacks	Front: 0 feet	Side: 0 feet	Rear: 10 feet
Percent of frontage built to within 5 feet of minimum front setback	Reservation Road: 75%	Del Monte Boulevard: 75%	Other Streets: 50%
Maximum Building Height	Lesser of 48 feet or four stories.		
Ground Floor Commercial Requirement	All street-facing buildings shall include commercial uses on the ground floor. Residential uses on the ground floor are permitted for buildings not facing Reservation Road or Del Monte Boulevard.		
Minimum Commercial Ground Floor Height	12 feet		
Minimum Fenestration (percentage of façade)	Ground floor frontage: 60%	Upper floors frontage: 20%	Residential - all floors: 20%
Minimum Parking Provided	Commercial Retail: 1 stall per 600 GSF of commercial space	Residential Studio: 1 stall per unit One bedroom or larger: 1.5 stalls per unit	
Minimum Open Space Provided	While no overall landscaped percentage is required, appropriately placed paseos, plazas, courtyards, and alcoves are encouraged. Properties in the Mixed-Use Node District must adhere to standards in the City landscape and parking ordinances.		



A.8 Transition District

A.8.1 Intent

This section includes development standards, including density, height, setbacks, parking, and other site development standards. Applicants are encouraged to design projects that are culturally inclusive spaces respectful of Marina’s diverse history.

A.8.2 Applicability

This section provides standards applicable to the Transition District.

A.8.3 Development Standards

Transition District Development Standards			
Maximum Residential Density	50 dwelling units per acre		
Minimum Residential Density	20 dwelling units per acre		
Maximum Lot Coverage	50%; Parking facilities are not counted towards lot coverage percentage.		
Minimum Lot Width	100 feet		
Setbacks (min – max)	Front: 10 - 25 feet	Side (min): 10 feet	Rear (min): 10 feet
Maximum Building Height	Lesser of 48 feet or four stories.		
Ground floor commercial	Ground floor commercial is permitted but not required.		
Minimum Commercial Ground Floor Height	12 feet		
Minimum Parking Provided	Commercial Uses along Reservation Road: 1 stall per 600 GSF of commercial space	Commercial Uses along Del Monte Boulevard: 1 stall per 350 GSF of commercial space	Residential Studio: 1 stall per unit One bedroom or larger: 1.5 stalls per unit
Minimum Open Space (as defined per Municipal Code Chapter 17.04.515-516)	Studio/One-bedroom unit: 300 square feet per unit For each additional bedroom in excess of one: 50 square feet Open space may be provided as private or common open space or combination thereof.		

A.9 Multifamily Residential District

A.9.1 Intent

This section includes development standards, including density, height, setbacks, parking, and other site development standards. Applicants are encouraged to design projects that are culturally inclusive spaces respectful of Marina’s diverse history.

A.9.2 Applicability

This section provides standards applicable to the Multifamily Residential District.

A.9.3 Development Standards

Multifamily Residential District Development Standards	
Maximum Residential Density	35 dwelling units per acre
Minimum Residential Density	20 dwelling units per acre
Setbacks	Front (min – max): 10 - 25 feet Side (min; interior lot): 5 feet Side (min; corner lot): 10 feet Rear (min): 15 feet
Maximum Building Height	Lesser of 42 feet or three stories
Minimum Parking Provided	Studio: 1 stall per unit One bedroom or larger: 1.5 stalls per unit
Minimum Open Space (as defined per Municipal Code Chapter 17.04.515-516)	Studio/One-bedroom unit: 300 square feet Each additional bedroom: 50 square feet Open space may be provided as private or common open space or combination thereof.



A.10 Standards Applicable to All Districts

A.10.1 Applicability

This section provides standards applicable to all districts of the Specific Plan.

A.10.2 Development Standards

Development Standards	
Maximum Projection into Setbacks	Front porch: 6 feet Side yard porch/patio: 3 feet Rear yard porch/patio: 6 feet Cornices/eaves/canopies: 2.5 feet Bay window/chimney: 2 feet
Upper Story Stepbacks	Where adjacent to an R-1 or R-2 zoned property, an additional 5-foot stepback from the shared property line is required for each floor above the second story.
Parking Requirements under density bonus application	If an applicant submits a project which meets the requirements of California Density Bonus law, the applicant is entitled to reductions in parking requirements in accordance with Government Code Sections 65915 – 65918.



A.11 Design Standards

The design standards in this section describe the desired character of multiple use, commercial (office and retail), and residential development within the Downtown. Standards establish specific criteria that applicants are required for meeting Objectives and are readily identified by “shall” or “must” statements. Compliance with these standards is mandatory.

Building Location and Orientation

Purpose

Foster a unique character that feels safe, welcoming, and engaging to pedestrians throughout the Specific Plan area.

Design Standards

1. **Building Entry.** Primary building entries shall be located along public rights-of-way, landscaped open space areas, paseos, or fronts of other buildings.
2. **Corner Building Orientation.** Buildings on corner lots shall orient the primary pedestrian entrance towards the larger of the fronting streets or incorporate a chamfered entrance.
3. **Residential Open Spaces.** Multifamily residential development with multiple buildings shall arrange buildings to create outdoor spaces such as courtyards, pathways, paseos, and recreational areas, with windows facing the outdoor spaces.

Specific to the Core District

4. **Core District Street Wall.** Where site conditions permit, buildings in the Core District with frontage on Del Monte or Reservation Road shall be built to side property lines unless the design includes a pedestrian paseo, or publicly accessible plaza.
5. **Angled Buildings.** Primary building façades in the Core District shall be parallel to the front lot line and shall not be at an angle.

Specific to the Multifamily Residential District

6. **Garage Doors.** For developments in the Multifamily Residential District containing 5 or more units, garage doors shall be oriented toward an alley or an internal private street or drive.



Building fronts face public rights-of-way or fronts of other buildings.

Source: Boston Globe



Building oriented toward the street, meeting the edge of the sidewalk.

Source: Milwaukee Public Library

Building Articulation, Massing, and Scale

Purpose

Create an attractive and pedestrian-friendly Downtown environment by encouraging varied building massing and facades that create variety and minimize the appearance of large box-like buildings.

Design Standards

1. **Building Articulation.** The wall plane on all façades visible from a public street or other publicly accessible spaces shall include at least two of the following massing changes or architectural elements to break up monolithic building façades:
 - a. Architectural projections such as balconies covered porches, dormers, or bay windows.
 - b. Varying setbacks to different parts of the building.
 - c. A combination of volumes between one and five stories as allowed by applicable development standards.
 - d. Upper story windows recessed at least two inches with header and sill, awnings, or trellises.
 - e. Wall plane offsets or at least 18 inches.
 - f. Accent materials and colors.
 - g. Other features that serve the purpose of façade articulation at the discretion of the community development director.

Surface detailing, such as score lines, shall not serve as a substitute for the elements listed above.

2. **Pedestrian Scale Features.** Architectural details and materials shall be incorporated on the lower part of façades to relate to human scale and create visual interest. At least two of the following elements shall be provided:
 - a. Awnings
 - b. Trellises
 - c. Transom windows
 - d. Accent materials, textures, and colors
3. **Roofline Articulation.** Buildings shall incorporate one of the following to articulate rooflines.
 - a. A change in the height of a parapet or roof
 - b. A change in roof pitch or direction
 - c. Gables, parapets, or cornices of varying heights
4. **Blank Walls.** Blank walls over 20 feet in height and 20 feet in length on elevations visible to the public are prohibited.
5. **External Stairways.** Exterior stairways, where provided, shall be designed to be complimentary to the overall architecture of the building and consistent with its architectural style.
6. **Internal Walls.** Walls that face internal walkways shall be articulated to a similar extent as the primary façade to enhance the pedestrian experience.



Varied massing and pedestrian scale features.
Source: Commercial Architects



Commercial building with varied roofline.
Source: Buildings on Fire

Architectural Elements

Purpose

Define and enhance the pedestrian realm and create a cohesive and attractive streetscape with visual interest.

Design Standards

1. Entries.

- a. All building entries shall be clearly defined with recesses, overhangs, accent materials, and detailing consistent with the following provisions. Entry design shall be defined with two or more of the following features: porch, decorative detailing or placement of art, a projecting element above the entrance, changes in the roofline, a tower, a recess, or a change in the wall plane.
- b. Primary pedestrian entries shall be accessible directly from a public street or sidewalk.

2. Commercial Storefronts. First floor façades of mixed-use developments shall include elements of traditional storefronts, which can be achieved with a traditional (Figure 2) or more contemporary design. On the first floor, at least 60% of the building facade shall be a transparent, and at least 20% of the façade of any floor above the first shall be transparent.

3. Windows.

- a. Window and door type, material, shape, and proportion shall complement the architectural style of the building.
- b. Storefront and office windows shall use visually permeable glass. Mirrored or reflective glass is prohibited.
- c. Windows shall be either recessed two inches or include surrounding enhancements such as headers and sills, shutters, or trellises in order to provide architectural relief on the façade surface.

4. Roofs.

- a. Roofing materials shall not be reflective. Roofs with solar panels shall include design features that block glare into surrounding buildings, such as a parapet or screen.
- b. Roof elements shall continue all the way around the building, not just in the most visible locations.
- c. For all non-parapet roofs in the Transition and Multifamily Residential Districts, an overhang or eave of at least 16 inches in depth is required.

5. Awnings.

- a. Awnings in the Core and Transition District shall fit within individual bays or structural divisions of the building façade rather than extending beyond a single bay.
- b. Awnings and canopies shall be constructed of canvas, glass, or metal. Vinyl and plastic awnings and canopies are not permitted.
- c. Internal lighting of awnings is prohibited.
- d. For each building, a consistent awning style and color shall be used across the entire building.

6. Ancillary Structures.

- a. Ancillary structures shall incorporate similar or complementary roof pitch, materials, and architectural style as the primary buildings within the development.
- b. Common mailbox enclosures shall be designed similar or complementary in form, material, and color to the primary building.



Recessed building entryway.

Source: Sky Windows & Aluminum Products



Chamfered corner entrance on corner building.

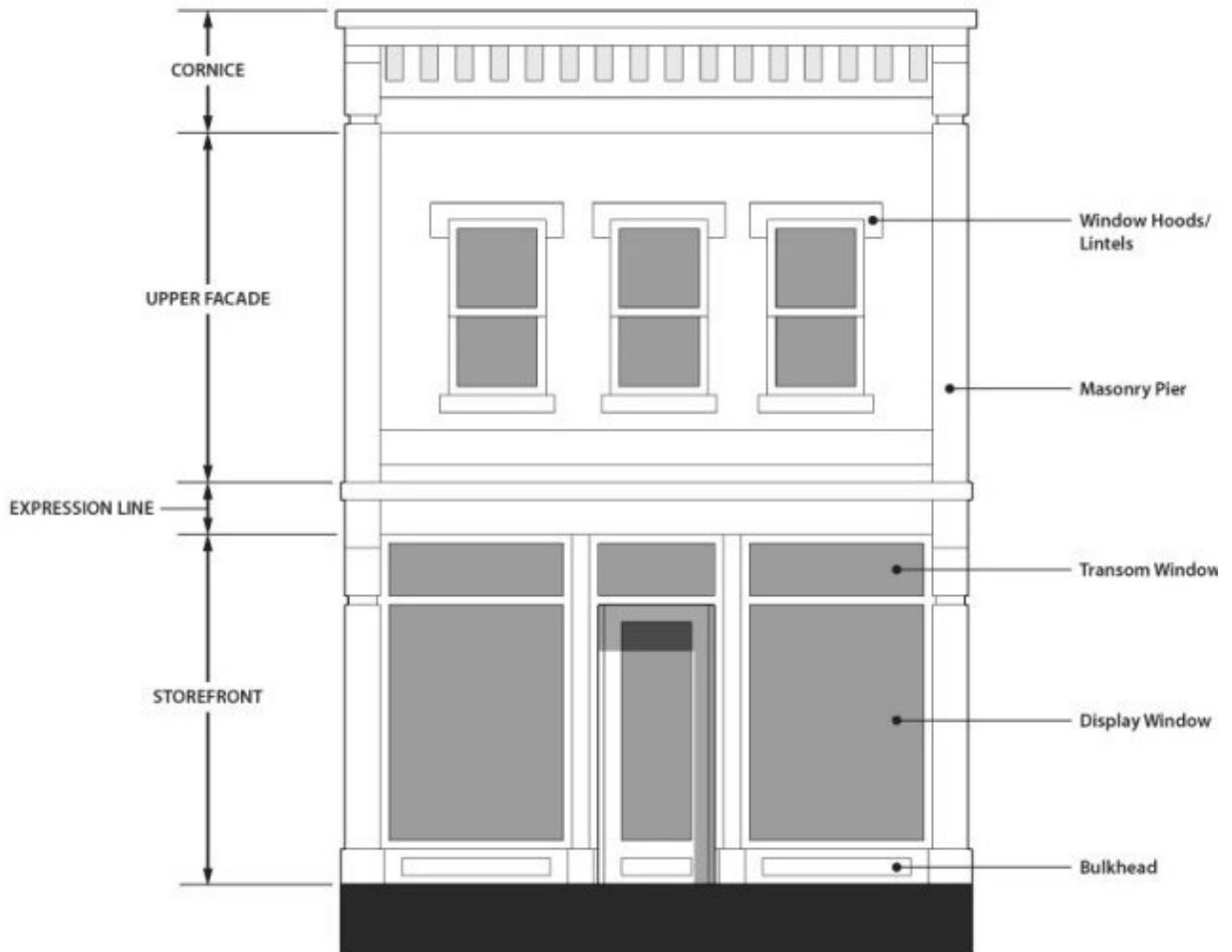
Source: Denver Infill



Single-bay awnings.
Source: Awning Ideas



Permeable glass storefront.
Source: Area-Info



Source: Sterling Codifiers

Figure 2. Traditional Urban Storefront



Modern interpretation of traditional urban storefront.

Materials and Color

Purpose

Maintain and enhance the overall character and quality of development through the use of durable materials that contribute texture and richness to the Downtown environment and celebrate, through architecture, the diversity of the City of Marina.

Design Standards

1. Materials.

- a. Buildings shall incorporate at least two but no more than three different types of materials on exterior walls.
- b. Building materials designed to withstand the coastal climate shall be used for exterior surfaces.
- c. At the pedestrian street level in the Core District, materials shall be selected that are durable and highly resistant to pedestrian traffic, such as precast concrete, stone masonry, brick, commercial grade ceramic tile, weatherized wood siding, and stucco.
- d. The following façade materials are prohibited: mirrored and heavily tinted glass, windows with "tape on" divisions/mullions, Vinyl and aluminum siding, plywood siding, corrugated fiberglass.
- e. The following roof materials are prohibited: highly reflective material (i.e. high gloss tile), Simulated clay tile roofs in metal, corrugated metal roof panels.
- f. Color and material changes shall occur at the inside corner of intersecting wall planes or where architectural elements intersect such as a chimney, pilaster, projection, or fence line.

2. Colors.

- a. Building exterior colors may be earth tones, whites, greys, or muted blue, green, and dark red colors that are complementary to the building’s architectural style. Bright or dark colors may be used on trims or accents only. Pastel, neon, or day-glow colors, as well as primary colors used as field colors, are prohibited.



Material changes at intersecting wall planes.



Durable materials at the pedestrian street level.

Source: Jameson Architects

Utility and Service Areas

Purpose

Buffer service and utility areas from the pedestrian environment to maintain a high-quality pedestrian environment and promote public health, safety, and welfare.

Design Standards

1. Service and Loading Areas.

- a. 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.
- b. Loading areas shall be located and designed to minimize visibility from public areas and adjacent properties.
- c. Where possible, loading areas shall be accessible from side streets or alleys, rather than from the front of buildings.
- d. Loading areas shall be functionally separated from parking and pedestrian walkways for safety, and to provide convenient access for delivery trucks.

2. Waste and Recyclable Material Storage.

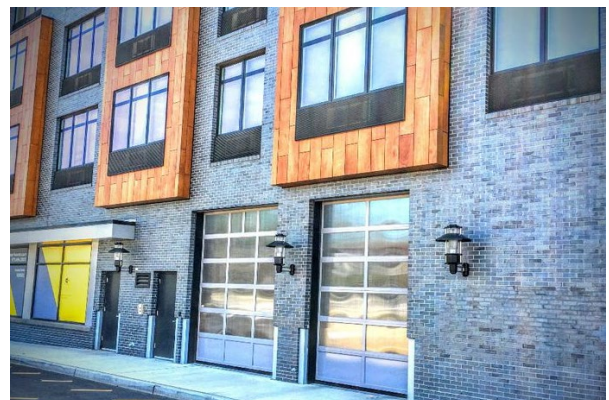
- a. Outdoor areas designated for storage of trash shall be completely enclosed in a walled and gated structure of sufficient size to accommodate storage of both trash and recyclable materials.
- b. Enclosures shall be finished with materials and colors complimentary to the primary buildings on the site.
- c. Enclosures shall include a roof structure to obscure views into the enclosure from above, where adjacent to multi-story buildings.

3. **Mechanical Equipment.** Mechanical and utility equipment (e.g., heating, cooling, antennas, satellite dishes, air conditioners, transformers, electric and gas meters, junction boxes, or similar equipment excluding photovoltaic panels) shall be screened with landscaping, walls, or fencing or if roof mounted, with roof wells or parapets.



Loading area at the rear or side of building.

Source: Wikimedia Commons



Screened loading dock.

Source: Pinterest

Circulation and Access

Purpose

Provide safe and efficient access to pedestrians and vehicles while minimizing the visual impact of parking areas and garages on the public streetscape.

Design Standards

1. Pedestrian Access and Circulation.

- a. Pedestrian pathways shall be provided and designed in compliance with the Americans with Disabilities Act (if required) and Title 24 of the California Code of Regulations, and adopted City Design Guidelines and Standards.

2. Parking and Circulation Areas.

- a. Off-street parking and circulation areas shall be designed and screened in accordance with objective standards contained within adopted City Design Guidelines and Standards.
- b. Surface parking areas shall be located to the rear of buildings in the Core, Mixed-use Node, Multifamily Residential District, and to the rear and/or side of buildings in the Transition District.

3. **Vehicular Access.** Vehicular access to off-street parking and loading areas shall be provided from alleys or secondary streets and not the primary frontage wherever possible.

Parking Structures

Purpose

Provide adequate parking Downtown while minimizing the negative visual impacts on the public realm from parking structures.

Design Standards

1. Structure Articulation.

- a. Horizontal openings shall be broken up with vertical columns to create a rhythm of openings.
- b. Parapet additions shall be added to key areas on the building to change the roof line and reduce its horizontal appearance.
- c. 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.

2. Ingress and Egress.

- a. Vehicular entrance and exit points for parking structures shall be accessible and easy to find, and separate pedestrian routes shall be provided to the outside.
- b. Vehicular entries and exits to parking structures shall be located in areas that will minimize impacts to pedestrians and neighboring land uses.
- c. Vehicular entries and exits to parking garages shall be recessed to help mitigate their impact.
- d. Elevators and stairways shall be located to increase visibility and improve safety.

3. **Lighting.** 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.



Pedestrian entrance to parking structure.
Source: ParkWhiz



Articulation of parking structure façade. Façade may be articulated with landscaping elements.
Source: DeepStream Designs



Articulation of parking structure façade. Façade may be articulated with interesting design elements and artwork.
Source: Moore Ruble Yudell

Appendix B: Design Guidelines

The following design guidelines provide additional direction for achieving the intended result of the policies presented in the Specific Plan and the Design Standards presented in Appendix A: Development Code. Design guidelines use “should”, “consider”, or other similar statements. Compliance is encouraged, not mandatory.

Building Articulation, Massing, and Scale

Purpose

Create an attractive and pedestrian-friendly Downtown environment by encouraging varied building massing and facades that create variety and minimize the appearance of large box-like buildings.

Design Guidelines

- 1. Upper Story Stepbacks.** The upper stories of a building in the Transition and Multifamily Residential Districts 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.
- 2. Climatic Consideration.** Climatic factors—including prevailing winds, shade trees, window and door orientation, and the positioning of buildings on the site—should be considered as part of the design review process with the intent of maximizing energy conservation and providing comfort.



Varied massing and pedestrian scale features.
Source: Commercial Architects



Commercial building with varied roofline.
Source: Buildings on Fire

Architectural Elements

Purpose

Define and enhance the pedestrian realm and create a cohesive and attractive streetscape with visual interest..

Design Guidelines

- 1. Cultural Design Elements.** Strongly consider inclusion of subtle architectural elements reflective of, or modern architectural interpretations of, the various cultural groups of Marina. Refer to Section B.2 of this appendix for examples of traditional architectural elements associated with the Asian community and other cultures in Marina.
- 2. Corner Buildings.** 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.
- 3. Awnings.**
 - a. Awnings and canopies over storefronts and entries provide colorful accents and create the appearance of an interesting and active streetscape. Use canopies, arcades, awnings, and overhangs throughout the Downtown on the ground floor of commercial uses.
 - b. A variety of solid and striped colored awnings may be considered. Painted or baked enamel metal awnings may be considered when an integral design element to the building.
- 4. Windows.**
 - a. 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.
 - b. Windows and skylights should be located to maximize day lighting and reduce the need for indoor lighting.
- 5. Roofs.**
 - a. Light-colored (not highly reflective) roofing materials are encouraged to reduce urban heat island effect.
- 6. Parapet Finishes.** 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.



Cornice and parapet detailing.

Source: Houzz



Bulkhead detailing on an urban storefront.

Source: Pier, Fine Associates



Building entry with transom window.
Source: General Millwork Supply



A variety of awning styles.
Sources: Pinterest, Best Awnings Long Island, CRL Arch

Materials and Color

Purpose

Maintain and enhance the overall character and quality of development through the use of durable materials that contribute texture and richness to the Downtown environment and celebrate, through architecture, the diversity of the City of Marina.

Design Guidelines

1. Materials.

- a. Materials should come from renewable resources whenever possible.
- b. 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.

2. Colors.

- a. Contrasting accent colors are encouraged for architectural details, awnings, and at entrances.
- b. Colors may be used to enhance different parts of a building's façade.
- c. 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.



No more than three different materials on exterior walls.

Source: Commercial Architects



Color used to enhance façade.

Source: ArchiExpo

Parking Structures

Purpose

Provide adequate parking Downtown while minimizing the negative visual impacts on the public realm from parking structures.

Design Guidelines

1. Street facing portions of parking structures should include commercial retail uses.
2. Parking structures should make provisions for car sharing priority spaces and electrical charging stations.
3. Interior walls and ceilings should be painted a light color to improve illumination.
4. All mechanical equipment and piping should be painted to match the interior of the structure.
5. Paved surfaces within parking structures should be designed to reduce tire squeal.
6. Where possible, parking structures should not be located on corner lots.



Retail, offices, and housing screening parking garage from pedestrian streetscape.

Source: Build a Better Burb

B.1 Design Guidelines for Right of Way and Civic Space

The following design guidelines 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 guidelines describe the desired character of streetscapes within the Downtown. Some guidelines apply only to certain portions of the pedestrian zones identified in Figure 1 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).

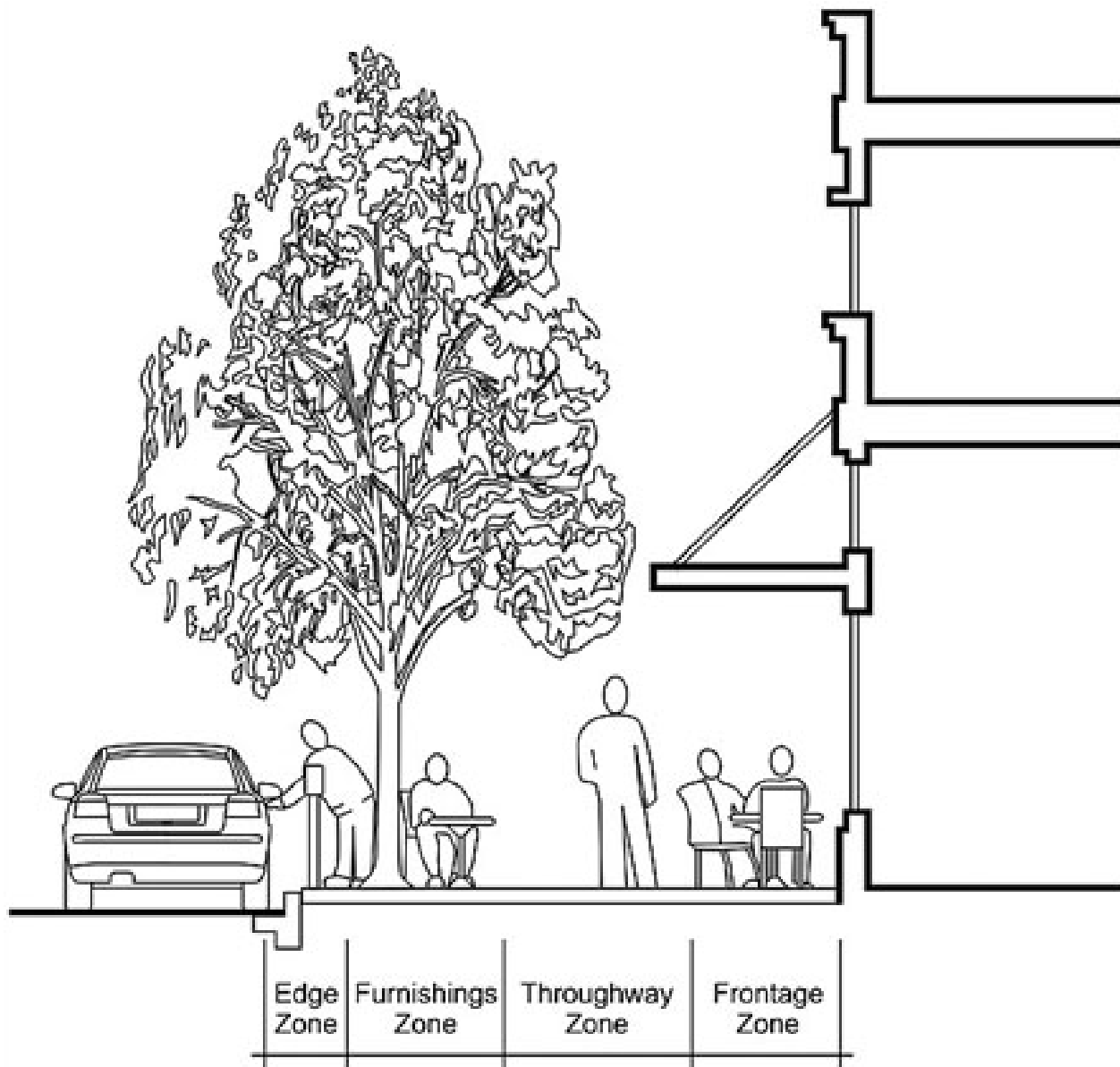


Figure 1 Pedestrian Zones

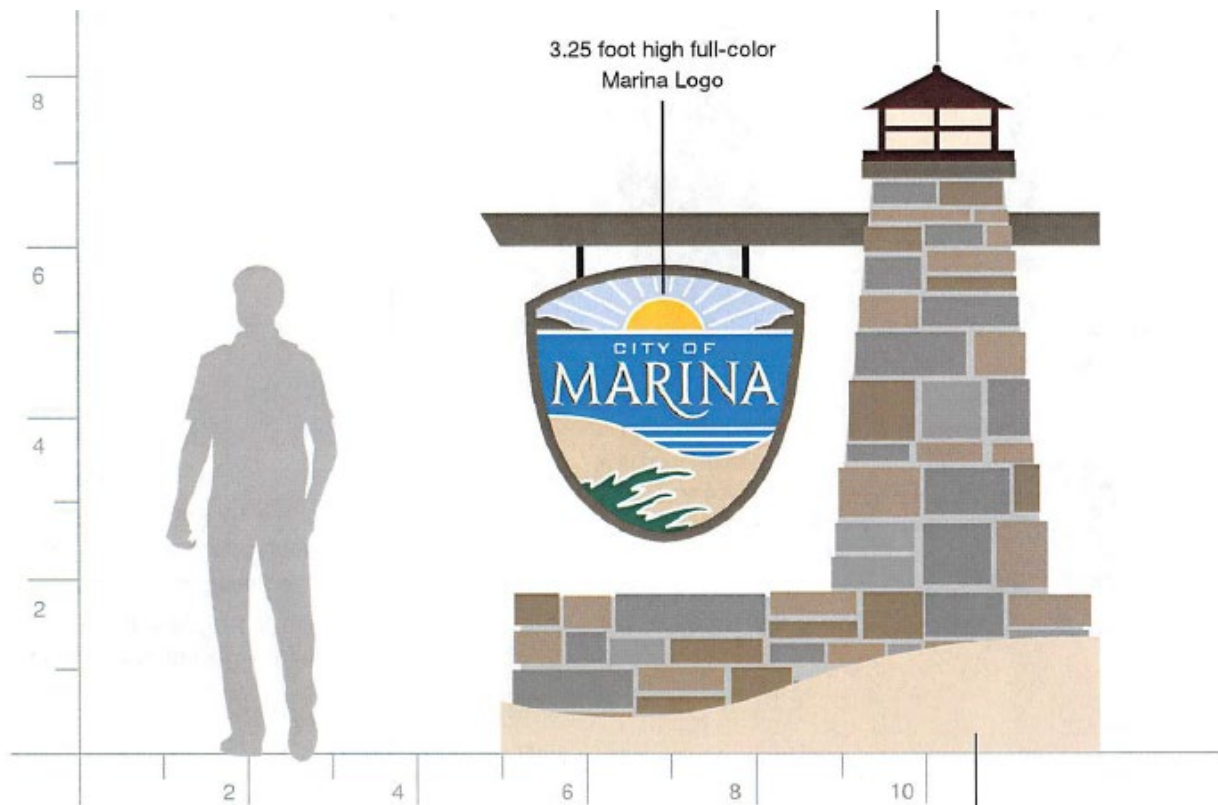
Gateways

Purpose

Design attractive gateways that welcome residents and visitors to Downtown.

Design Guidelines

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.
3. Over-street banners announcing community events may be placed 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.



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*.

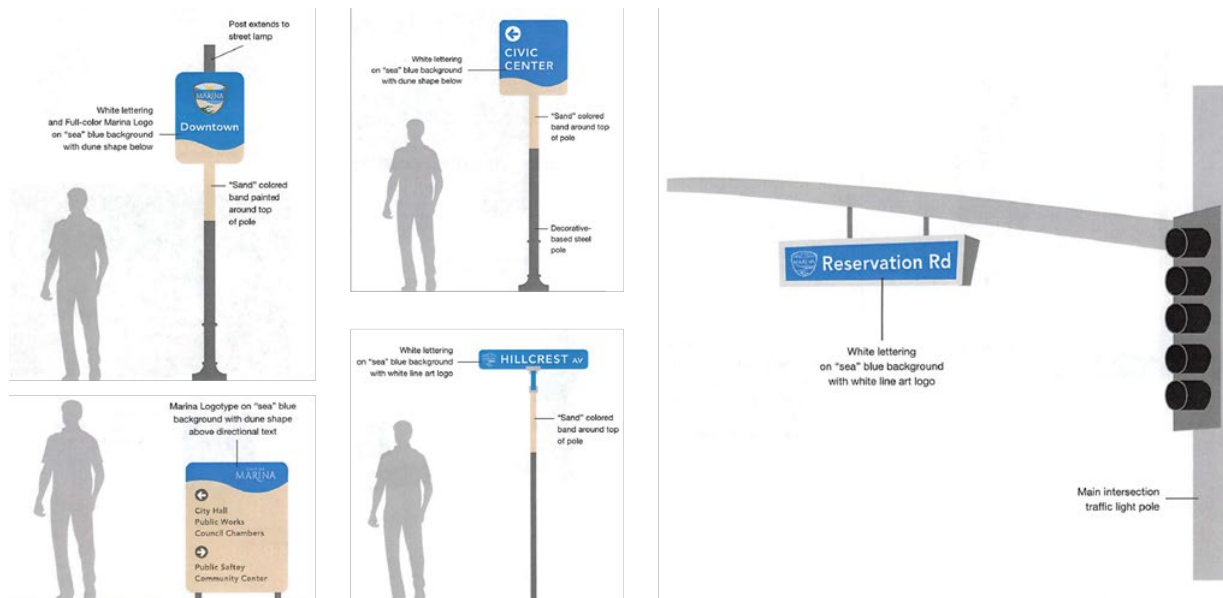
Wayfinding

Purpose

Strategically locate informative wayfinding signs throughout the Downtown.

Design Guidelines

1. Wayfinding signs shall have a consistent shape, font, and pattern.
2. Wayfinding signs shall incorporate a consistent level of contrast (e.g. white lettering with blue background) to increase sign visibility.
3. Sign lettering shall be of sufficient size to be legible to motorists given existing speed limits.
4. Wayfinding signs shall use universal symbols, pictures, or colors to communicate a destination.



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.

Street Furnishings

Purpose

Use street furnishings to create visual interest and opportunities for gathering and relaxing.

Design Guidelines

1. A consistent design theme for benches, light posts, trash receptacles, and other furnishings shall be used throughout the Downtown.
2. 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.
3. Amenities in the Furnishings Zone or Frontage Zone shall not interfere with pedestrian traffic in the Throughway Zone (see Figure 1).
4. 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.
5. Benches and trash receptacles shall be placed approximately every 100 feet on major corridors and at other key locations.
6. Combination recycle and trash receptacles should be used throughout the Downtown.
7. Public art should be incorporated into the streetscape and in medians. Bike racks should include an artistic design element.
8. Planter pots should be consistent in finish and style in key locations throughout the Downtown Core.
9. Expandable grates should be used to accommodate tree growth. Install gravel mulch to prevent accumulation of litter.



Install benches constructed of stone, masonry, or other coastal-appropriate materials.

Source: IndiaMart



Use combination recycle and trash receptacles.

Source: DeepStream Designs



Use a consistent design theme for benches, light posts, and other furnishings.

Source: Rivard Report



Bike racks may include an artistic design element.

Source: Source: Streetscapes



Source: dero.com



Expandable tree grates.

Source: Sweets Construction

Sidewalks and Plazas

Purpose

Integrate sidewalks, plazas, paseos, and walkways throughout the Downtown.



Accent treatments should be applied in the sidewalk at street edge.

Source: USC News

Design Guidelines

1. Sidewalks and street crossings shall be designed to allow people to easily find a direct route to destinations.
2. Sidewalks shall be located on both sides of the street, and gaps in sidewalks shall be filled to improve connectivity.
3. Sidewalk surfaces shall be stable, firm, smooth, and slip-resistant.
4. Sidewalks shall be designed, built, and maintained to appropriate specifications to accommodate all users, including mobility impaired persons.
5. Street trees and planted park strips shall be used to separate pedestrians from vehicular traffic and to enhance safety and sense of place.
6. Crosswalks shall be clearly visible to motorists and made of durable materials.
7. Sidewalks shall be appropriately designed, constructed, and maintained.
8. Permeable materials such as interlocking pavers or porous surface paving should be used.
9. "Structural soil" should be used as a base material below sidewalks to encourage sidewalk tree growth without damage to concrete.
10. 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.
11. In-pavement flashers should be used at high-risk crossings with higher traffic and pedestrian volumes.
12. Safe mid-block crossings should be implemented at appropriate locations to enhance accessibility and increase pedestrian safety for blocks of 600 feet or greater.



Use in-pavement flashers at high-risk crossings.

Source: Honolulu Advertiser



Fill gaps in sidewalks to improve connectivity.



Permeable materials such as these interlocking pavers may be used to minimize runoff.

Medians and Roundabouts

Purpose

Landscape medians and roundabouts to provide visual interest.

Design Guidelines

1. Drought-tolerant plant materials native or adaptable to the area shall be used in medians and roundabouts.
2. Drip or low-water irrigation systems shall be used in medians and roundabouts.
3. Colorful shrub masses or contrast in texture and hue of shrubs should be used to complement median trees.
4. Medians narrower than four feet in width should be paved with pervious concrete.
5. Planted medians should include a one-foot-wide maintenance band along the back of the curb.
6. Landscaping of roundabouts should make the central island more conspicuous and complement surrounding streetscapes.



Landscaped roundabouts.



Plant drought-tolerant shrubs.

Source: Pinterest

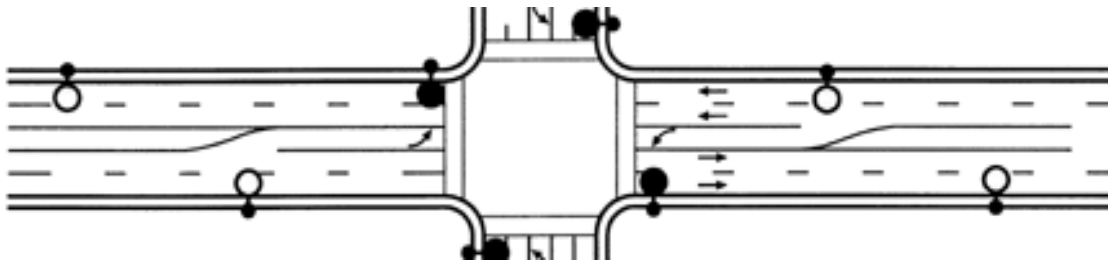
Lighting

Purpose

Install lighting that provides safety, protects the dark night sky, and reduces energy usage.

Design Guidelines

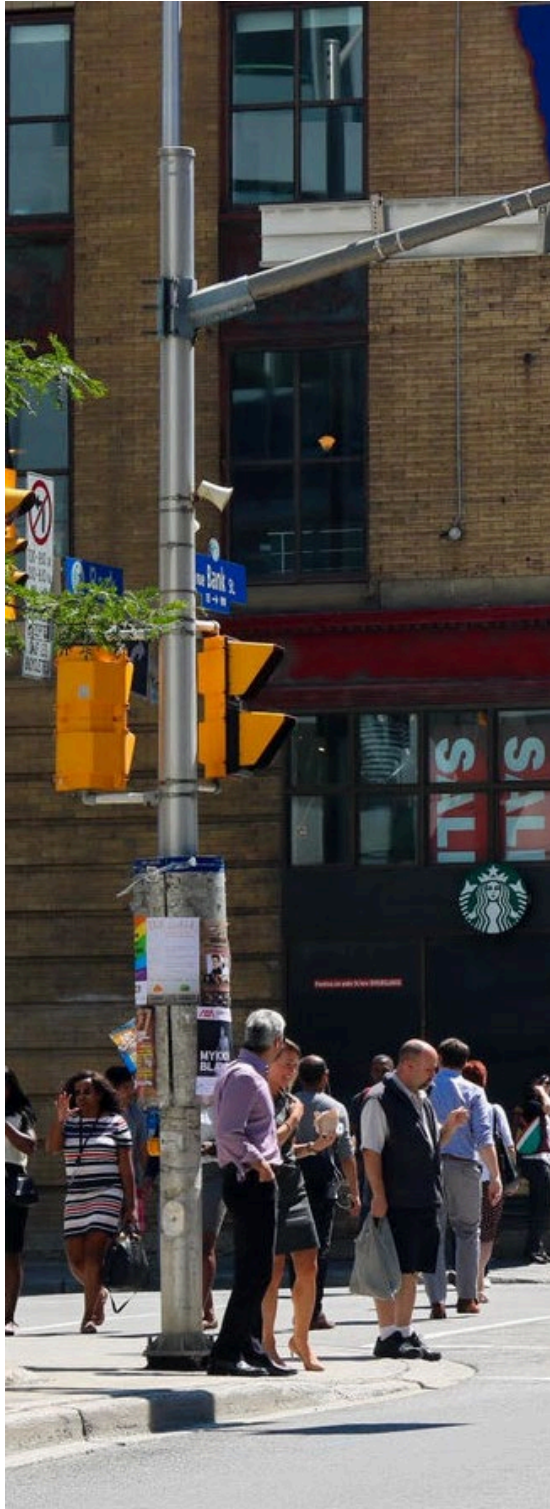
1. Lamps shall be directed downward (except those highlighting architectural features) and shall not be visible from the side or from behind the fixture.
2. Lamps shall be shielded to provide sufficient light for safety while not generating excessive glare.
3. Street light poles shall be no taller than 15 feet on local streets and 25 feet on arterial roads.
4. Energy-efficient bulbs of a consistent color range below 3000K shall be used in all street lamps.
5. Exterior lighting in public spaces shall be compatible with the character of the neighborhood.
6. Pedestrian-scale lighting shall be used in the Downtown.
7. Street light fixtures shall accommodate banner attachment arms in Core and Transition zones.
8. Light poles should be positioned at intersecting property lines and at least five feet from driveways.
9. Streetlamps should be constructed of galvanized steel or other materials suitable to Marina's Climate.



Ensure there is sufficient spacing between poles to minimize glare and conserve energy.

Source: Gvsigmini

B.2 Cultural Design and Landscaping Elements



Bank Street in Ottawa
Source: Downtown Bank

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.

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



Greektown in Detroit
Source: Daily Detroit

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 Specific 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.

Marina is one of the most diverse small cities in the United States. 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 2021 American Community Survey 5-Year Estimates, 28% of Marina's population identify as Hispanic or Latino. Approximately 16% of the population self-identifies as Asian, 7% as Black or African American, 2% as Native Hawaiian or Pacific Islander, and less than 1% as Native American. Another 12% self-identify as some other race, and more than 13% self-identify as being multiracial (two or more races). 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.

Source: Marriott Traveler



Little Ethiopia in Los Angeles.

Source: Amoeba Music

B.2.1 Asian Design/Landscape Element

An example of architecture that celebrates Marina’s Asian community is the Junsay Oaks Apartments, which utilized an Asian-hybrid style. 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 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.



Junsay Oaks Apartments.

Source: Community Housing Improvement Systems and Planning Association



Top, middle: Landscaping with traditional Asian themes.

Bottom: Building incorporating subtle Asian elements of architecture: Multi-level roofs, horizontal lines, extended roof eaves, simple lines, red door, large windows.

Table 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

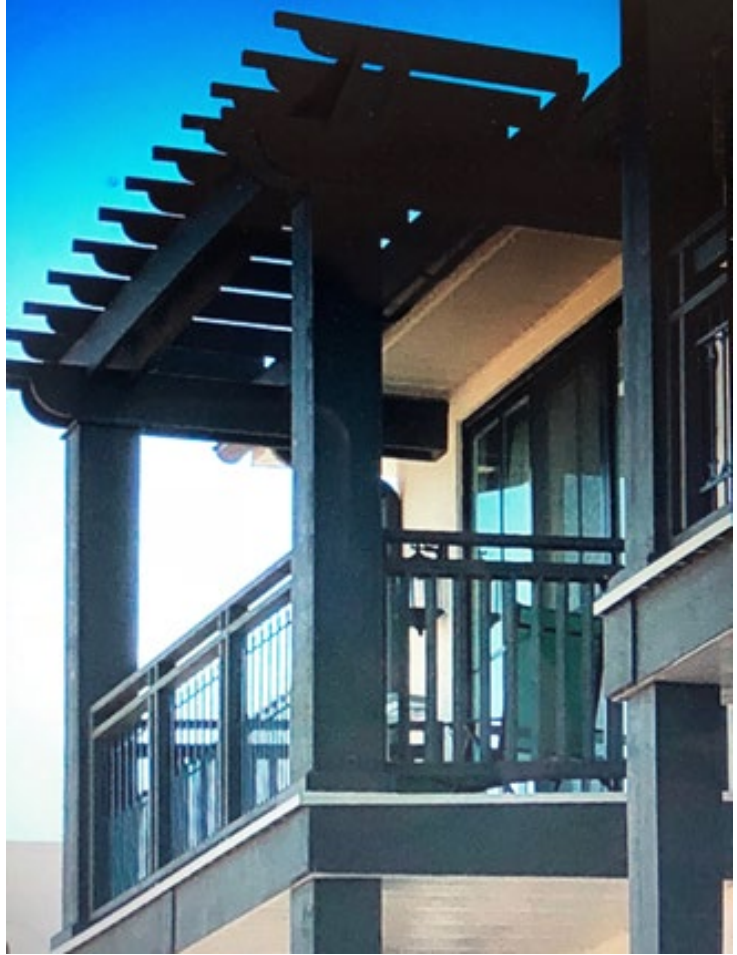


Clockwise, from top left: Natural materials and colors; natural wood; natural stone; synthetic materials that simulate natural materials; subdued color pallet.

**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.



B.3 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.

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/>)



Top: Red flower gum (*eucalyptus ficifolia*).
Bottom: Brisbane box (*lophostemon confertus*).

B.3.1 Recommended List of Preferred Trees

Tree Species: <i>Botanical name</i> Common name	Mature Size (feet):		Tolerances: (5=Best)		Site Suitability: (5=Best)	
	Height	Spread	Coastal Winds	Drought	Street Tree	Overhead Utilities
<i>Arbutus unedo</i> (2) strawberry tree	20-35	20-35	4	3	5	4
<i>Arbutus 'Marina'</i> strawberry tree	20-35	20-35	2	4	3	3
<i>Brachychiton poulneus</i> bottle tree	30-50	25-30	2	4	3	2
<i>Callistemon citrinus</i> Lemon bottlebrush	20-25	15-20	1	1	2	5
<i>Casuarina cunninghamiana</i> river she-oak	40-70	30-50	4	4	3	1
<i>Casuarina strict</i> coast beefwood	20-35	20-30	5	5	5	3
<i>Cinnamomum camphora</i> camphor tree	30-50	40-50	3	4	4	2
<i>Corynocarpus laevigata</i> New Zealand laurel air	20-40	15-30	2	2	2	3
<i>Cupressus Macrocarpa</i> (2) Monterey cypress	50-80	40-70	5	5	5	1
<i>Erobotrya japonica</i> Loquat	15-30	20-30	3	3	3	4
<i>Eucalyptus ficifolia</i> red flower gum	30-40	20-30	5	4	5	3
<i>Eucalyptus nicholii</i> Willow-leaf peppermint	30-40	20-30	5	4	5	3
<i>Eucalyptus polyanthemos</i> Silver dollar gum	20-60	20-30	4	5	4	1
<i>Eucalyptus viminalis</i> Manna gum	100-150	30-40	4	5	3	1
<i>Geijera Parviflora</i> Australian willow	25-30	15-20	1	2	4	4
<i>Ginko biloba</i> maidenhair autumn gold	35-50	25-40	1	2	2	1
<i>Lauris nobilis</i> Grecian laurel	12-40	15-30	3	3	4	3
<i>Leptospermum laevigatum</i> Australian tea tree	15-30	15-25	5	5	4	4
<i>Liquidambar styraciflua</i> American sweet gum	30-60	25-40	4	4	4	1
<i>Lophostemon Conifertus</i> Brisbane box	35-60	25	5	5	5	1
<i>Lyonothamnue floribuncus</i> Catalina ironwood	30-60	15-20	5	5	5	1

Tree Species: <i>Botanical name</i> Common name	Mature Size (feet):		Tolerances: (5=Best)		Site Suitability: (5=Best)	
	Height	Spread	Coastal Winds	Drought	Street Tree	Overhead Utilities
<i>Malus Floribunda</i> Japan flower crabapple	20-30	15-20	1	2	4	4
<i>Maytenus Boaria</i> green showers	30-50	15-20	1	1	1	2
<i>Melaleuca quinquenervia</i> cajeput tree	20-40	20-35	2	4	4	3
<i>Melaleuca styphelioides</i> rigid leaf paperbark	20-40	20-35	1	2	2	3
<i>Metrosderos excelsus</i> New Zealand Xmas	20-30	20-30	2	2	3	4
<i>Olea europaea</i> Olive	25-30	25-30	4	5	5	4
<i>Pinus canariensis</i> Canary Island pine	60-80	20-40	1	2	1	1
<i>Pinus halepensis</i> Aleppo pine	30-60	20-35	2	4	3	1
<i>Pinus pinea</i> Italian stone pine	30-60	30-50	2	3	2	1
<i>Pinus radiate</i> (2) Monterey pine	60-90	20-40	4	3	3	1
<i>Pinus sabiniana</i> (3) foothill pine	40-50	20-40	1	2	2	2
<i>Pinus Torreyana</i> (3) torrey pine	40-60	30-50	2	2	2	1
<i>Pittosporum crassifolium</i> none	15-25	15-25	5	4	4	5
<i>Pittosporum undulatum</i> Victorian box	30-40	20-40	1	1	2	3
<i>Platanus Acerifolia</i> Sycamore – London Plane	40-80	25-40	1	2	2	1
<i>Podocarpus gracilior</i> African fern pine	30-50	20-35	1	2	1	2
<i>Prunus cerasifolia</i> flowering plum	20-30	15-20	1	3	4	4
<i>Prunus caroliniana</i> Carolina laurel cherry	20-40	20-30	1	1	1	3
<i>Prunus ilicifolia</i> (3) holly leaf cherry	20-30	20-30	1	1	2	4
<i>Pyrus calleryana</i> ornamental flower pear	25-50	25-40	1	1	1	2
<i>Quercus agrifolia</i> (1) California coast live oak	30-40	30-40	2	5	5	3
<i>Quercus Ilex</i> holly oak	30-50	40-50	2	4	3	2

Tree Species: <i>Botanical name</i> Common name	Mature Size (feet):		Tolerances: (5=Best)		Site Suitability: (5=Best)	
	Height	Spread	Coastal Winds	Drought	Street Tree	Overhead Utilities
<i>Quercus suber</i> cork oak	30-50	40-50	1	2	1	2
<i>Rhus lancea</i> African zumac	15-25	15-25	3	3	4	5
<i>Robinia ambigua</i> locust	40-50	15-20	3	2	2	2
<i>Tristania laurina</i> elegant Brisbane box	30-60	20-40	5	5	5	2
<i>Schinus Terebinthifolius</i> 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						



B.3.2 Marina Tree & Garden Club Tree List

Common Name	Botanical Name	Common Name	Botanical Name
Small Trees and Shrubs: Less than 20' tall at maturity. Suitable for sidewalk strips and 36" openings in concrete. Will not lift sidewalks.			
California wild lilac	<i>Ceanothus 'Ray Hartman'</i>	Saratoga bay laurel	<i>Laurus 'Saratoga'</i>
Toyon	<i>Heteromeles arbutifolia</i>	Little Gem Magnolia	<i>Magnolia grandiflora</i>
Italian buckthorn	<i>Rhamnus alaternus</i>		
Medium Trees: 20'-35' tall at maturity. Suitable for street strips, wide medians, yards and areas away from power lines. This list reflects trees that have generally well-behaved roots.			
Mountain She-Oak, Coast Beefwood	<i>Allocasuarina verticillate</i>	Strawberry tree	<i>Arbutus "Marina"</i>
Lemon Bottlebrush	<i>Callistemon citrinus</i>	New Zealand Laurel	<i>Corynocarpus laevigatus</i>
Loquat	<i>Eriobotrya japonica</i>	English Holly	<i>Ilex aquifolium</i>
Heath Melaleuca, Swamp paperbark	<i>Melaleuca ericifolia</i>	Flaxleaf Paperbark	<i>Melaleuca linariifolia</i>
Cajeput Tree	<i>Melaleuca quinquenervia</i>	Black Tea Tree, Prickly Leaf Paperbark	<i>Melaleuca styphelioides</i>
Karo Tree	<i>Pittosporum crassifolium</i>	Fern Pine	<i>Podocarpus gracilior</i>
Catalina Cherry	<i>Prunus ilicifolia ssp lyonii</i>	Small-Leaf Tristania, Water gum	<i>Tristaniopsis laurina</i>
African Sumac	<i>Searsia lancea</i>		
Large Trees: More than 35' tall at maturity. Not suitable under or near power lines or, small street/sidewalk openings. Larger trees will have more issues with roots lifting sidewalks and causing damage.			
Monterey Cypress	<i>Cupressus macrocarpa</i>	Camphor Tree	<i>Cinnamomum camphora</i>
Australian Willow	<i>Geijera parviflora</i>	Red flowering gum	<i>Corymbia ficifolia</i>
Willow-leaf peppermint	<i>Eucalyptus nicholii</i>	Silver Dollar gum	<i>Eucalyptus polyanthemos</i>
Brisbane Box	<i>Lophostemon confertus</i>	Catalina Ironwood	<i>Lyonothamnus floribundus asplenifolius</i>
Canary Island Pine	<i>Pinus canariensis</i>	Allepo Pine	<i>Pinus halepensis</i>
Stone Pine	<i>Pinus pinea</i>	Monterey Pine	<i>Pinus radiata</i>
Torrey Pine	<i>Pinus Torreyana</i>	Island Oak	<i>Quercus tomentella</i>
Coast Live Oak	<i>Quercus agrifolia</i>		
Palm Trees: Palms are long lived at 50-100+ years and some get very large. Not suitable under power lines or small street/sidewalk openings because of mature size.			
Mediterranean Fan Palm	<i>Chamaerops humilis</i>	Dracaena Palm	<i>Cordyline australis</i>
Canary Island Date Palm	<i>Phoenix canariensis</i>	Date Palm	<i>Phoenix dactylifera</i>
California Fan Palm	<i>Washingtonia filifera</i>	Mexican Fan Palm	<i>Washingtonia robusta</i>

Appendix B

Biological Resources Assessment

Refer to Appendix E of the EIR for the Biological Resources Assessment.

Appendix C

Noise Analysis Data

Refer to Appendix H of the EIR for the Noise Analysis Data.

Appendix D

CalEEMod Modeling Outputs

Refer to Appendix B of the EIR for CalEEMod Modeling Outputs.

Appendix E

Marina Downtown Traffic Study

Refer to Appendix D of the EIR for the Marina Downtown Traffic Study.

Appendix F

Senate Bill 743 Analysis

Refer to Appendix C of the EIR for the Senate Bill 743 Analysis.

Appendix G

Energy Calculations

Marina DVSP

Last Updated: April 19, 2023

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		Load Factor	Construction Phase	Fuel Used (gallons)
		Day	Horsepower			
Concrete/Industrial Saw	1	8	81	0.73	Demo	116,055.93
Excavators	3	8	158	0.38	Demo	318,000.13
Dozers	2	8	247	0.40	Demo	348,860.91
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	101,875.26
Forklifts	3	8	89	0.20	Building	103,177.75
Generator Sets	1	8	84	0.74	Building	120,103.54
Tractors/Loaders/Backhoes	3	7	97	0.37	Building	182,031.93
Welders	1	8	46	0.45	Building	39,995.87
Air Compressors	1	6	78	0.48	Construction	4,356.26
Pavers	2	8	130	0.42	Arch Coating	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						1,550,185.90 (Gallons)

Construction Phase	Days of Operation
Demolition	4175
Site Preparation	180
Grading	465
Building Construction	4110
Paving	330
Architectural Coating	330

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition	24.0	15	10.8	28,181.25
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	4,686,633.00
Paving	24.0	15	10.8	2,227.50
Architectural Coating	24.0	507	10.8	75,289.50
Fuel				4,797,974.25

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	2,177,244.73
Paving	7.4	-	7.3	-
Architectural Coating	7.4	-	7.3	-
Fuel				2,177,244.73

HAULING TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Hauling Trips	7.4	7,523	20.0	20,332.43
Fuel				20,332.43

Total Gasoline Consumption (gallons)	4,797,974.25
Total Diesel Consumption (gallons)	3,747,763.06

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/ntsntire2018q4.pdf>.

Marina DVSP

Last Updated: April 19, 2023

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	Fuel Economy (MPG)	
Light Duty Auto (LDA)	0.574472	Passenger Vehicles	24.0
Light Duty Truck 1 (LDT1)	0.023499	Light-Med Duty Trucks	17.4
Light Duty Truck 2 (LDT2)	0.208360	Heavy Trucks/Other	7.4
Medium Duty Vehicle (MDV)	0.100658	Motorcycles	43.9
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		

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	57.45%	<i>Gasoline</i>	20,508,395	0.00	854,516.45
Light-Medium Duty Trucks	33.25%	<i>Gasoline</i>	11,870,709	0.00	682,224.65
Heavy Trucks/Other	8.69%	<i>Diesel</i>	3,102,506	0.00	419,257.50
Motorcycle	0.61%	<i>Gasoline</i>	217,946	0.00	4,964.60

Total Gasoline Consumption (gallons)	1,541,705.70
Total Diesel Consumption (gallons)	419,257.50

Appendix B

CalEEMod Modeling Output

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

2.6. Operations Emissions by Sector, Mitigated

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

3.2. Demolition (2024) - Mitigated

- 3.3. Demolition (2025) - Unmitigated
- 3.4. Demolition (2025) - Mitigated
- 3.5. Demolition (2026) - Unmitigated
- 3.6. Demolition (2026) - Mitigated
- 3.7. Demolition (2027) - Unmitigated
- 3.8. Demolition (2027) - Mitigated
- 3.9. Demolition (2028) - Unmitigated
- 3.10. Demolition (2028) - Mitigated
- 3.11. Demolition (2029) - Unmitigated
- 3.12. Demolition (2029) - Mitigated
- 3.13. Demolition (2030) - Unmitigated
- 3.14. Demolition (2030) - Mitigated
- 3.15. Demolition (2031) - Unmitigated
- 3.16. Demolition (2031) - Mitigated
- 3.17. Demolition (2032) - Unmitigated
- 3.18. Demolition (2032) - Mitigated
- 3.19. Demolition (2033) - Unmitigated

3.20. Demolition (2033) - Mitigated

3.21. Demolition (2034) - Unmitigated

3.22. Demolition (2034) - Mitigated

3.23. Demolition (2035) - Unmitigated

3.24. Demolition (2035) - Mitigated

3.25. Demolition (2036) - Unmitigated

3.26. Demolition (2036) - Mitigated

3.27. Demolition (2037) - Unmitigated

3.28. Demolition (2037) - Mitigated

3.29. Demolition (2038) - Unmitigated

3.30. Demolition (2038) - Mitigated

3.31. Demolition (2039) - Unmitigated

3.32. Demolition (2039) - Mitigated

3.33. Demolition (2040) - Unmitigated

3.34. Demolition (2040) - Mitigated

3.35. Site Preparation (2024) - Unmitigated

3.36. Site Preparation (2024) - Mitigated

3.37. Grading (2024) - Unmitigated

3.38. Grading (2024) - Mitigated

3.39. Grading (2025) - Unmitigated

3.40. Grading (2025) - Mitigated

3.41. Building Construction (2024) - Unmitigated

3.42. Building Construction (2024) - Mitigated

3.43. Building Construction (2025) - Unmitigated

3.44. Building Construction (2025) - Mitigated

3.45. Building Construction (2026) - Unmitigated

3.46. Building Construction (2026) - Mitigated

3.47. Building Construction (2027) - Unmitigated

3.48. Building Construction (2027) - Mitigated

3.49. Building Construction (2028) - Unmitigated

3.50. Building Construction (2028) - Mitigated

3.51. Building Construction (2029) - Unmitigated

3.52. Building Construction (2029) - Mitigated

3.53. Building Construction (2030) - Unmitigated

- 3.54. Building Construction (2030) - Mitigated
- 3.55. Building Construction (2031) - Unmitigated
- 3.56. Building Construction (2031) - Mitigated
- 3.57. Building Construction (2032) - Unmitigated
- 3.58. Building Construction (2032) - Mitigated
- 3.59. Building Construction (2033) - Unmitigated
- 3.60. Building Construction (2033) - Mitigated
- 3.61. Building Construction (2034) - Unmitigated
- 3.62. Building Construction (2034) - Mitigated
- 3.63. Building Construction (2035) - Unmitigated
- 3.64. Building Construction (2035) - Mitigated
- 3.65. Building Construction (2036) - Unmitigated
- 3.66. Building Construction (2036) - Mitigated
- 3.67. Building Construction (2037) - Unmitigated
- 3.68. Building Construction (2037) - Mitigated
- 3.69. Building Construction (2038) - Unmitigated
- 3.70. Building Construction (2038) - Mitigated

3.71. Building Construction (2039) - Unmitigated

3.72. Building Construction (2039) - Mitigated

3.73. Building Construction (2040) - Unmitigated

3.74. Building Construction (2040) - Mitigated

3.75. Paving (2024) - Unmitigated

3.76. Paving (2024) - Mitigated

3.77. Paving (2025) - Unmitigated

3.78. Paving (2025) - Mitigated

3.79. Architectural Coating (2024) - Unmitigated

3.80. Architectural Coating (2024) - Mitigated

3.81. Architectural Coating (2025) - Unmitigated

3.82. Architectural Coating (2025) - Mitigated

3.83. Architectural Coating (2026) - Unmitigated

3.84. Architectural Coating (2026) - Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.2. Unmitigated

4.3.1. Mitigated

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

4.4.1. Mitigated

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

4.5.1. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Marina Downtown Vitalization Specific Plan - Proposed
Construction Start Date	1/1/2024
Operational Year	2040
Lead Agency	City of Marina
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	10.8
Location	36.6835098553933, -121.79814886466889
County	Monterey
City	Marina
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3264
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.9

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
------------------	------	------	-------------	-----------------------	------------------------	--------------------------------	------------	-------------

General Office Building	510	1000sqft	11.7	510,528	0.00	0.00	—	—
Apartments Low Rise	2,904	Dwelling Unit	182	3,078,240	0.00	—	7,272	—
Regional Shopping Center	875	1000sqft	20.1	875,000	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Water	W-7	Adopt a Water Conservation Strategy

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	29.5	172	140	244	0.25	5.14	22,382	22,385	4.74	2,243	2,246	—	49,523	49,523	2.39	2.61	121	50,464
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	32.2	177	147	262	0.25	5.18	22,516	22,521	4.77	2,264	2,269	—	52,080	52,080	2.90	2.73	3.34	52,970
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.8	122	80.8	145	0.14	2.91	15,965	15,967	2.68	1,600	1,602	—	32,432	32,432	1.74	1.86	37.2	33,066
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	3.25	22.3	14.8	26.4	0.03	0.53	2,914	2,914	0.49	292	292	—	5,369	5,369	0.29	0.31	6.17	5,474
--------	------	------	------	------	------	------	-------	-------	------	-----	-----	---	-------	-------	------	------	------	-------

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	29.5	25.4	140	244	0.25	5.14	19,222	19,227	4.74	1,935	1,939	—	49,523	49,523	2.39	2.58	112	50,464
2025	25.8	172	96.8	220	0.21	3.11	22,382	22,385	2.87	2,243	2,246	—	47,332	47,332	2.32	2.61	121	48,288
2026	17.4	15.5	53.5	147	0.13	1.37	18,852	18,853	1.27	1,887	1,888	—	34,618	34,618	1.77	2.38	96.2	35,468
2027	16.7	14.2	51.0	139	0.13	1.28	18,852	18,853	1.19	1,887	1,888	—	34,051	34,051	1.63	2.25	87.7	34,850
2028	15.7	13.9	49.0	132	0.13	1.23	18,852	18,853	1.14	1,887	1,888	—	33,468	33,468	1.63	2.24	80.0	34,255
2029	15.1	13.3	46.4	125	0.13	1.16	18,852	18,853	1.08	1,887	1,888	—	32,870	32,870	1.08	2.16	72.5	33,615
2030	14.4	12.7	44.6	120	0.13	1.13	18,852	18,853	1.05	1,887	1,888	—	32,273	32,273	0.95	2.16	65.4	33,007
2031	13.4	12.2	42.6	114	0.13	1.09	18,852	18,853	0.94	1,887	1,888	—	31,690	31,690	0.95	2.09	58.7	32,395
2032	12.7	11.1	40.6	107	0.13	0.92	18,852	18,853	0.85	1,887	1,888	—	31,136	31,136	0.88	2.09	52.4	31,833
2033	12.2	10.7	38.7	102	0.13	0.85	18,852	18,853	0.79	1,887	1,887	—	30,611	30,611	0.88	2.02	46.4	31,280
2034	11.8	10.3	37.7	96.5	0.13	0.81	18,852	18,853	0.75	1,887	1,887	—	30,111	30,111	0.81	1.48	40.9	30,614
2035	11.4	10.0	35.7	91.9	0.13	0.74	18,852	18,853	0.69	1,887	1,887	—	29,645	29,645	0.74	1.41	35.9	30,119
2036	10.6	9.71	34.3	86.8	0.13	0.69	18,852	18,853	0.64	1,887	1,887	—	29,214	29,214	0.74	1.41	31.3	29,684
2037	10.2	9.36	33.5	83.9	0.13	0.68	18,852	18,853	0.63	1,887	1,887	—	28,830	28,830	0.74	1.34	26.9	29,274
2038	9.69	8.94	32.0	80.0	0.13	0.63	18,852	18,853	0.59	1,887	1,887	—	28,485	28,485	0.68	1.34	23.2	28,923
2039	9.28	8.55	31.3	77.4	0.13	0.61	18,852	18,853	0.56	1,887	1,887	—	28,173	28,173	0.60	1.34	19.8	28,606
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	32.2	177	147	262	0.25	5.18	22,516	22,521	4.77	2,264	2,269	—	52,080	52,080	2.90	2.73	3.34	52,970
2025	25.6	172	101	213	0.21	3.11	22,382	22,385	2.87	2,243	2,246	—	46,056	46,056	2.60	2.61	3.13	46,902

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

2026	19.8	167	59.2	163	0.13	1.39	22,146	22,147	1.29	2,216	2,218	—	37,114	37,114	2.17	2.53	2.86	37,925
2027	16.0	14.0	53.9	134	0.13	1.28	18,852	18,853	1.19	1,887	1,888	—	33,045	33,045	1.80	2.31	2.28	33,780
2028	15.5	13.6	51.8	128	0.13	1.23	18,852	18,853	1.14	1,887	1,888	—	32,483	32,483	1.26	2.30	2.07	33,203
2029	14.9	13.0	49.1	121	0.13	1.16	18,852	18,853	1.08	1,887	1,888	—	31,905	31,905	1.19	2.23	1.88	32,602
2030	13.8	12.7	47.3	116	0.13	1.13	18,852	18,853	1.05	1,887	1,888	—	31,327	31,327	1.12	2.22	1.70	32,018
2031	13.3	12.0	45.3	110	0.13	1.09	18,852	18,853	0.94	1,887	1,888	—	30,761	30,761	1.06	2.15	1.52	31,428
2032	12.5	10.9	42.7	104	0.13	0.92	18,852	18,853	0.85	1,887	1,888	—	30,222	30,222	0.99	2.15	1.36	30,888
2033	12.1	10.6	40.7	98.5	0.13	0.85	18,852	18,853	0.79	1,887	1,887	—	29,711	29,711	0.99	2.02	1.20	30,338
2034	11.7	10.2	39.3	93.3	0.13	0.81	18,852	18,853	0.75	1,887	1,887	—	29,224	29,224	0.86	2.02	1.06	29,848
2035	10.8	9.89	37.7	88.7	0.13	0.74	18,852	18,853	0.69	1,887	1,887	—	28,771	28,771	0.85	1.94	0.93	29,372
2036	10.6	9.69	35.8	84.3	0.13	0.69	18,852	18,853	0.64	1,887	1,887	—	28,351	28,351	0.85	1.94	0.81	28,952
2037	10.1	9.27	35.4	81.0	0.13	0.68	18,852	18,853	0.63	1,887	1,887	—	27,978	27,978	0.79	1.34	0.70	28,397
2038	9.70	8.91	33.4	77.1	0.13	0.63	18,852	18,853	0.59	1,887	1,887	—	27,641	27,641	0.78	1.34	0.60	28,060
2039	9.31	8.58	32.8	74.8	0.13	0.61	18,852	18,853	0.56	1,887	1,887	—	27,339	27,339	0.71	1.34	0.51	27,755
2040	8.89	8.17	31.9	72.3	0.13	0.60	18,852	18,853	0.55	1,887	1,887	—	27,065	27,065	0.65	1.27	0.44	27,459
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	16.6	41.1	80.8	131	0.14	2.91	10,951	10,954	2.68	1,102	1,104	—	27,316	27,316	1.42	1.43	27.4	27,804
2025	17.8	122	68.3	145	0.14	2.11	15,965	15,967	1.95	1,600	1,602	—	32,432	32,432	1.74	1.86	37.2	33,066
2026	12.2	12.2	39.6	98.0	0.09	0.98	13,498	13,499	0.91	1,351	1,352	—	24,081	24,081	1.35	1.70	29.7	24,652
2027	11.3	9.95	37.8	92.5	0.09	0.92	13,466	13,467	0.85	1,348	1,348	—	23,655	23,655	1.24	1.65	27.1	24,205
2028	10.9	9.65	36.4	88.3	0.09	0.88	13,503	13,504	0.82	1,351	1,352	—	23,316	23,316	0.82	1.65	24.7	23,854
2029	10.6	9.28	34.4	83.9	0.09	0.83	13,466	13,467	0.77	1,348	1,348	—	22,839	22,839	0.81	1.59	22.4	23,354
2030	10.1	8.95	33.1	80.1	0.09	0.81	13,466	13,467	0.75	1,348	1,348	—	22,425	22,425	0.72	1.54	20.2	22,923
2031	9.38	8.52	31.7	76.2	0.09	0.78	13,466	13,467	0.67	1,348	1,348	—	22,020	22,020	0.72	1.49	18.1	22,500
2032	8.94	7.77	29.9	71.9	0.09	0.66	13,503	13,503	0.61	1,351	1,352	—	21,694	21,694	0.67	1.50	16.2	22,173
2033	8.64	7.54	28.4	68.1	0.09	0.61	13,466	13,466	0.56	1,348	1,348	—	21,269	21,269	0.67	1.44	14.3	21,729
2034	8.31	7.22	27.3	64.6	0.09	0.58	13,466	13,466	0.54	1,348	1,348	—	20,921	20,921	0.62	1.44	12.7	21,378

2035	7.69	7.03	26.3	61.6	0.09	0.53	13,466	13,466	0.49	1,348	1,348	—	20,596	20,596	0.57	1.39	11.1	21,035
2036	7.43	6.83	25.0	58.6	0.09	0.49	13,503	13,503	0.46	1,351	1,352	—	20,351	20,351	0.57	1.01	9.68	20,676
2037	7.15	6.55	24.6	56.3	0.09	0.49	13,466	13,466	0.45	1,348	1,348	—	20,028	20,028	0.57	0.96	8.34	20,335
2038	6.82	6.29	23.6	53.6	0.09	0.45	13,466	13,466	0.42	1,348	1,348	—	19,788	19,788	0.52	0.95	7.14	20,092
2039	6.62	6.06	22.8	51.7	0.09	0.43	13,466	13,466	0.40	1,348	1,348	—	19,571	19,571	0.47	0.95	6.11	19,873
2040	0.02	0.02	0.06	0.14	< 0.005	< 0.005	36.9	36.9	< 0.005	3.69	3.69	—	53.1	53.1	< 0.005	< 0.005	0.01	53.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.03	7.50	14.8	23.9	0.03	0.53	1,999	1,999	0.49	201	202	—	4,522	4,522	0.24	0.24	4.54	4,603
2025	3.25	22.3	12.5	26.4	0.03	0.39	2,914	2,914	0.36	292	292	—	5,369	5,369	0.29	0.31	6.17	5,474
2026	2.23	2.23	7.22	17.9	0.02	0.18	2,463	2,464	0.17	247	247	—	3,987	3,987	0.22	0.28	4.92	4,081
2027	2.07	1.82	6.89	16.9	0.02	0.17	2,458	2,458	0.16	246	246	—	3,916	3,916	0.21	0.27	4.48	4,007
2028	2.00	1.76	6.64	16.1	0.02	0.16	2,464	2,464	0.15	247	247	—	3,860	3,860	0.14	0.27	4.10	3,949
2029	1.93	1.69	6.27	15.3	0.02	0.15	2,458	2,458	0.14	246	246	—	3,781	3,781	0.13	0.26	3.71	3,867
2030	1.85	1.63	6.04	14.6	0.02	0.15	2,458	2,458	0.14	246	246	—	3,713	3,713	0.12	0.26	3.34	3,795
2031	1.71	1.55	5.78	13.9	0.02	0.14	2,458	2,458	0.12	246	246	—	3,646	3,646	0.12	0.25	3.00	3,725
2032	1.63	1.42	5.46	13.1	0.02	0.12	2,464	2,464	0.11	247	247	—	3,592	3,592	0.11	0.25	2.68	3,671
2033	1.58	1.38	5.19	12.4	0.02	0.11	2,458	2,458	0.10	246	246	—	3,521	3,521	0.11	0.24	2.37	3,597
2034	1.52	1.32	4.98	11.8	0.02	0.11	2,458	2,458	0.10	246	246	—	3,464	3,464	0.10	0.24	2.10	3,539
2035	1.40	1.28	4.79	11.2	0.02	0.10	2,458	2,458	0.09	246	246	—	3,410	3,410	0.09	0.23	1.84	3,483
2036	1.36	1.25	4.55	10.7	0.02	0.09	2,464	2,464	0.08	247	247	—	3,369	3,369	0.09	0.17	1.60	3,423
2037	1.30	1.20	4.49	10.3	0.02	0.09	2,458	2,458	0.08	246	246	—	3,316	3,316	0.09	0.16	1.38	3,367
2038	1.24	1.15	4.31	9.78	0.02	0.08	2,458	2,458	0.08	246	246	—	3,276	3,276	0.09	0.16	1.18	3,326
2039	1.21	1.11	4.15	9.44	0.02	0.08	2,458	2,458	0.07	246	246	—	3,240	3,240	0.08	0.16	1.01	3,290
2040	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	6.73	6.73	< 0.005	0.67	0.67	—	8.79	8.79	< 0.005	< 0.005	< 0.005	8.92

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	29.5	25.4	140	244	0.25	5.14	19,222	19,227	4.74	1,935	1,939	—	49,523	49,523	2.39	2.58	112	50,464
2025	25.8	172	96.8	220	0.21	3.11	22,382	22,385	2.87	2,243	2,246	—	47,332	47,332	2.32	2.61	121	48,288
2026	17.4	15.5	53.5	147	0.13	1.37	18,852	18,853	1.27	1,887	1,888	—	34,618	34,618	1.77	2.38	96.2	35,468
2027	16.7	14.2	51.0	139	0.13	1.28	18,852	18,853	1.19	1,887	1,888	—	34,051	34,051	1.63	2.25	87.7	34,850
2028	15.7	13.9	49.0	132	0.13	1.23	18,852	18,853	1.14	1,887	1,888	—	33,468	33,468	1.63	2.24	80.0	34,255
2029	15.1	13.3	46.4	125	0.13	1.16	18,852	18,853	1.08	1,887	1,888	—	32,870	32,870	1.08	2.16	72.5	33,615
2030	14.4	12.7	44.6	120	0.13	1.13	18,852	18,853	1.05	1,887	1,888	—	32,273	32,273	0.95	2.16	65.4	33,007
2031	13.4	12.2	42.6	114	0.13	1.09	18,852	18,853	0.94	1,887	1,888	—	31,690	31,690	0.95	2.09	58.7	32,395
2032	12.7	11.1	40.6	107	0.13	0.92	18,852	18,853	0.85	1,887	1,888	—	31,136	31,136	0.88	2.09	52.4	31,833
2033	12.2	10.7	38.7	102	0.13	0.85	18,852	18,853	0.79	1,887	1,887	—	30,611	30,611	0.88	2.02	46.4	31,280
2034	11.8	10.3	37.7	96.5	0.13	0.81	18,852	18,853	0.75	1,887	1,887	—	30,111	30,111	0.81	1.48	40.9	30,614
2035	11.4	10.0	35.7	91.9	0.13	0.74	18,852	18,853	0.69	1,887	1,887	—	29,645	29,645	0.74	1.41	35.9	30,119
2036	10.6	9.71	34.3	86.8	0.13	0.69	18,852	18,853	0.64	1,887	1,887	—	29,214	29,214	0.74	1.41	31.3	29,684
2037	10.2	9.36	33.5	83.9	0.13	0.68	18,852	18,853	0.63	1,887	1,887	—	28,830	28,830	0.74	1.34	26.9	29,274
2038	9.69	8.94	32.0	80.0	0.13	0.63	18,852	18,853	0.59	1,887	1,887	—	28,485	28,485	0.68	1.34	23.2	28,923
2039	9.28	8.55	31.3	77.4	0.13	0.61	18,852	18,853	0.56	1,887	1,887	—	28,173	28,173	0.60	1.34	19.8	28,606
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	32.2	177	147	262	0.25	5.18	22,516	22,521	4.77	2,264	2,269	—	52,080	52,080	2.90	2.73	3.34	52,970
2025	25.6	172	101	213	0.21	3.11	22,382	22,385	2.87	2,243	2,246	—	46,056	46,056	2.60	2.61	3.13	46,902
2026	19.8	167	59.2	163	0.13	1.39	22,146	22,147	1.29	2,216	2,218	—	37,114	37,114	2.17	2.53	2.86	37,925
2027	16.0	14.0	53.9	134	0.13	1.28	18,852	18,853	1.19	1,887	1,888	—	33,045	33,045	1.80	2.31	2.28	33,780
2028	15.5	13.6	51.8	128	0.13	1.23	18,852	18,853	1.14	1,887	1,888	—	32,483	32,483	1.26	2.30	2.07	33,203
2029	14.9	13.0	49.1	121	0.13	1.16	18,852	18,853	1.08	1,887	1,888	—	31,905	31,905	1.19	2.23	1.88	32,602

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

2030	13.8	12.7	47.3	116	0.13	1.13	18,852	18,853	1.05	1,887	1,888	—	31,327	31,327	1.12	2.22	1.70	32,018
2031	13.3	12.0	45.3	110	0.13	1.09	18,852	18,853	0.94	1,887	1,888	—	30,761	30,761	1.06	2.15	1.52	31,428
2032	12.5	10.9	42.7	104	0.13	0.92	18,852	18,853	0.85	1,887	1,888	—	30,222	30,222	0.99	2.15	1.36	30,888
2033	12.1	10.6	40.7	98.5	0.13	0.85	18,852	18,853	0.79	1,887	1,887	—	29,711	29,711	0.99	2.02	1.20	30,338
2034	11.7	10.2	39.3	93.3	0.13	0.81	18,852	18,853	0.75	1,887	1,887	—	29,224	29,224	0.86	2.02	1.06	29,848
2035	10.8	9.89	37.7	88.7	0.13	0.74	18,852	18,853	0.69	1,887	1,887	—	28,771	28,771	0.85	1.94	0.93	29,372
2036	10.6	9.69	35.8	84.3	0.13	0.69	18,852	18,853	0.64	1,887	1,887	—	28,351	28,351	0.85	1.94	0.81	28,952
2037	10.1	9.27	35.4	81.0	0.13	0.68	18,852	18,853	0.63	1,887	1,887	—	27,978	27,978	0.79	1.34	0.70	28,397
2038	9.70	8.91	33.4	77.1	0.13	0.63	18,852	18,853	0.59	1,887	1,887	—	27,641	27,641	0.78	1.34	0.60	28,060
2039	9.31	8.58	32.8	74.8	0.13	0.61	18,852	18,853	0.56	1,887	1,887	—	27,339	27,339	0.71	1.34	0.51	27,755
2040	8.89	8.17	31.9	72.3	0.13	0.60	18,852	18,853	0.55	1,887	1,887	—	27,065	27,065	0.65	1.27	0.44	27,459
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	16.6	41.1	80.8	131	0.14	2.91	10,951	10,954	2.68	1,102	1,104	—	27,316	27,316	1.42	1.43	27.4	27,804
2025	17.8	122	68.3	145	0.14	2.11	15,965	15,967	1.95	1,600	1,602	—	32,432	32,432	1.74	1.86	37.2	33,066
2026	12.2	12.2	39.6	98.0	0.09	0.98	13,498	13,499	0.91	1,351	1,352	—	24,081	24,081	1.35	1.70	29.7	24,652
2027	11.3	9.95	37.8	92.5	0.09	0.92	13,466	13,467	0.85	1,348	1,348	—	23,655	23,655	1.24	1.65	27.1	24,205
2028	10.9	9.65	36.4	88.3	0.09	0.88	13,503	13,504	0.82	1,351	1,352	—	23,316	23,316	0.82	1.65	24.7	23,854
2029	10.6	9.28	34.4	83.9	0.09	0.83	13,466	13,467	0.77	1,348	1,348	—	22,839	22,839	0.81	1.59	22.4	23,354
2030	10.1	8.95	33.1	80.1	0.09	0.81	13,466	13,467	0.75	1,348	1,348	—	22,425	22,425	0.72	1.54	20.2	22,923
2031	9.38	8.52	31.7	76.2	0.09	0.78	13,466	13,467	0.67	1,348	1,348	—	22,020	22,020	0.72	1.49	18.1	22,500
2032	8.94	7.77	29.9	71.9	0.09	0.66	13,503	13,503	0.61	1,351	1,352	—	21,694	21,694	0.67	1.50	16.2	22,173
2033	8.64	7.54	28.4	68.1	0.09	0.61	13,466	13,466	0.56	1,348	1,348	—	21,269	21,269	0.67	1.44	14.3	21,729
2034	8.31	7.22	27.3	64.6	0.09	0.58	13,466	13,466	0.54	1,348	1,348	—	20,921	20,921	0.62	1.44	12.7	21,378
2035	7.69	7.03	26.3	61.6	0.09	0.53	13,466	13,466	0.49	1,348	1,348	—	20,596	20,596	0.57	1.39	11.1	21,035
2036	7.43	6.83	25.0	58.6	0.09	0.49	13,503	13,503	0.46	1,351	1,352	—	20,351	20,351	0.57	1.01	9.68	20,676
2037	7.15	6.55	24.6	56.3	0.09	0.49	13,466	13,466	0.45	1,348	1,348	—	20,028	20,028	0.57	0.96	8.34	20,335
2038	6.82	6.29	23.6	53.6	0.09	0.45	13,466	13,466	0.42	1,348	1,348	—	19,788	19,788	0.52	0.95	7.14	20,092

2039	6.62	6.06	22.8	51.7	0.09	0.43	13,466	13,466	0.40	1,348	1,348	—	19,571	19,571	0.47	0.95	6.11	19,873
2040	0.02	0.02	0.06	0.14	< 0.005	< 0.005	36.9	36.9	< 0.005	3.69	3.69	—	53.1	53.1	< 0.005	< 0.005	0.01	53.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.03	7.50	14.8	23.9	0.03	0.53	1,999	1,999	0.49	201	202	—	4,522	4,522	0.24	0.24	4.54	4,603
2025	3.25	22.3	12.5	26.4	0.03	0.39	2,914	2,914	0.36	292	292	—	5,369	5,369	0.29	0.31	6.17	5,474
2026	2.23	2.23	7.22	17.9	0.02	0.18	2,463	2,464	0.17	247	247	—	3,987	3,987	0.22	0.28	4.92	4,081
2027	2.07	1.82	6.89	16.9	0.02	0.17	2,458	2,458	0.16	246	246	—	3,916	3,916	0.21	0.27	4.48	4,007
2028	2.00	1.76	6.64	16.1	0.02	0.16	2,464	2,464	0.15	247	247	—	3,860	3,860	0.14	0.27	4.10	3,949
2029	1.93	1.69	6.27	15.3	0.02	0.15	2,458	2,458	0.14	246	246	—	3,781	3,781	0.13	0.26	3.71	3,867
2030	1.85	1.63	6.04	14.6	0.02	0.15	2,458	2,458	0.14	246	246	—	3,713	3,713	0.12	0.26	3.34	3,795
2031	1.71	1.55	5.78	13.9	0.02	0.14	2,458	2,458	0.12	246	246	—	3,646	3,646	0.12	0.25	3.00	3,725
2032	1.63	1.42	5.46	13.1	0.02	0.12	2,464	2,464	0.11	247	247	—	3,592	3,592	0.11	0.25	2.68	3,671
2033	1.58	1.38	5.19	12.4	0.02	0.11	2,458	2,458	0.10	246	246	—	3,521	3,521	0.11	0.24	2.37	3,597
2034	1.52	1.32	4.98	11.8	0.02	0.11	2,458	2,458	0.10	246	246	—	3,464	3,464	0.10	0.24	2.10	3,539
2035	1.40	1.28	4.79	11.2	0.02	0.10	2,458	2,458	0.09	246	246	—	3,410	3,410	0.09	0.23	1.84	3,483
2036	1.36	1.25	4.55	10.7	0.02	0.09	2,464	2,464	0.08	247	247	—	3,369	3,369	0.09	0.17	1.60	3,423
2037	1.30	1.20	4.49	10.3	0.02	0.09	2,458	2,458	0.08	246	246	—	3,316	3,316	0.09	0.16	1.38	3,367
2038	1.24	1.15	4.31	9.78	0.02	0.08	2,458	2,458	0.08	246	246	—	3,276	3,276	0.09	0.16	1.18	3,326
2039	1.21	1.11	4.15	9.44	0.02	0.08	2,458	2,458	0.07	246	246	—	3,240	3,240	0.08	0.16	1.01	3,290
2040	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	6.73	6.73	< 0.005	0.67	0.67	—	8.79	8.79	< 0.005	< 0.005	< 0.005	8.92

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	176	278	79.8	716	1.05	2.55	34.4	36.9	2.56	6.01	8.57	2,154	137,565	139,719	229	7.83	91.6	147,867

Mit.	176	278	79.8	716	1.05	2.55	34.4	36.9	2.56	6.01	8.57	2,048	137,398	139,446	218	7.57	91.6	147,243
% Reduced	—	—	—	—	—	—	—	—	—	—	—	5%	< 0.5%	< 0.5%	5%	3%	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	151	253	87.4	581	1.01	2.41	34.4	36.8	2.38	6.01	8.39	2,154	133,277	135,431	231	8.58	29.2	143,783
Mit.	151	253	87.4	581	1.01	2.41	34.4	36.8	2.38	6.01	8.39	2,048	133,110	135,158	220	8.32	29.2	143,159
% Reduced	—	—	—	—	—	—	—	—	—	—	—	5%	< 0.5%	< 0.5%	5%	3%	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	141	243	74.9	597	0.90	2.43	29.6	32.1	2.43	5.18	7.62	2,154	121,574	123,729	229	7.19	51.4	131,638
Mit.	141	243	74.9	597	0.90	2.43	29.6	32.1	2.43	5.18	7.62	2,048	121,407	123,455	218	6.93	51.4	131,013
% Reduced	—	—	—	—	—	—	—	—	—	—	—	5%	< 0.5%	< 0.5%	5%	4%	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.7	44.4	13.7	109	0.16	0.44	5.41	5.85	0.44	0.95	1.39	357	20,128	20,485	37.8	1.19	8.50	21,794
Mit.	25.7	44.4	13.7	109	0.16	0.44	5.41	5.85	0.44	0.95	1.39	339	20,100	20,439	36.0	1.15	8.50	21,691
% Reduced	—	—	—	—	—	—	—	—	—	—	—	5%	< 0.5%	< 0.5%	5%	4%	—	< 0.5%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	148	143	53.6	478	0.89	0.48	34.4	34.8	0.45	6.01	6.46	—	90,611	90,611	6.97	6.16	64.1	92,684

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Area	25.8	133	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	0.00	688	688	0.03	0.01	—	691
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	176	278	79.8	716	1.05	2.55	34.4	36.9	2.56	6.01	8.57	2,154	137,565	139,719	229	7.83	91.6	147,867
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	148	143	63.3	569	0.86	0.48	34.4	34.8	0.45	6.01	6.46	—	87,011	87,011	8.71	6.92	1.66	89,291
Area	0.00	109	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
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	151	253	87.4	581	1.01	2.41	34.4	36.8	2.38	6.01	8.39	2,154	133,277	135,431	231	8.58	29.2	143,783
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	120	116	49.4	431	0.74	0.41	29.6	30.0	0.38	5.18	5.56	—	74,837	74,837	6.58	5.53	23.9	76,672
Area	17.7	126	1.39	155	0.01	0.09	—	0.09	0.12	—	0.12	0.00	471	471	0.02	< 0.005	—	473
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	141	243	74.9	597	0.90	2.43	29.6	32.1	2.43	5.18	7.62	2,154	121,574	123,729	229	7.19	51.4	131,638
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	22.0	21.2	9.01	78.6	0.13	0.07	5.41	5.48	0.07	0.95	1.02	—	12,390	12,390	1.09	0.92	3.95	12,694
Area	3.23	22.9	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	78.1	78.1	< 0.005	< 0.005	—	78.3
Energy	0.51	0.25	4.41	2.22	0.03	0.35	—	0.35	0.35	—	0.35	—	7,521	7,521	0.85	0.06	—	7,560

Water	—	—	—	—	—	—	—	—	—	—	—	87.8	139	226	9.03	0.22	—	517
Waste	—	—	—	—	—	—	—	—	—	—	—	269	0.00	269	26.9	0.00	—	941
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55
Total	25.7	44.4	13.7	109	0.16	0.44	5.41	5.85	0.44	0.95	1.39	357	20,128	20,485	37.8	1.19	8.50	21,794

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	148	143	53.6	478	0.89	0.48	34.4	34.8	0.45	6.01	6.46	—	90,611	90,611	6.97	6.16	64.1	92,684
Area	25.8	133	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	0.00	688	688	0.03	0.01	—	691
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	176	278	79.8	716	1.05	2.55	34.4	36.9	2.56	6.01	8.57	2,048	137,398	139,446	218	7.57	91.6	147,243
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	148	143	63.3	569	0.86	0.48	34.4	34.8	0.45	6.01	6.46	—	87,011	87,011	8.71	6.92	1.66	89,291
Area	0.00	109	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
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	151	253	87.4	581	1.01	2.41	34.4	36.8	2.38	6.01	8.39	2,048	133,110	135,158	220	8.32	29.2	143,159

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	120	116	49.4	431	0.74	0.41	29.6	30.0	0.38	5.18	5.56	—	74,837	74,837	6.58	5.53	23.9	76,672
Area	17.7	126	1.39	155	0.01	0.09	—	0.09	0.12	—	0.12	0.00	471	471	0.02	< 0.005	—	473
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	141	243	74.9	597	0.90	2.43	29.6	32.1	2.43	5.18	7.62	2,048	121,407	123,455	218	6.93	51.4	131,013
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	22.0	21.2	9.01	78.6	0.13	0.07	5.41	5.48	0.07	0.95	1.02	—	12,390	12,390	1.09	0.92	3.95	12,694
Area	3.23	22.9	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	78.1	78.1	< 0.005	< 0.005	—	78.3
Energy	0.51	0.25	4.41	2.22	0.03	0.35	—	0.35	0.35	—	0.35	—	7,521	7,521	0.85	0.06	—	7,560
Water	—	—	—	—	—	—	—	—	—	—	—	70.3	111	181	7.22	0.17	—	413
Waste	—	—	—	—	—	—	—	—	—	—	—	269	0.00	269	26.9	0.00	—	941
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55
Total	25.7	44.4	13.7	109	0.16	0.44	5.41	5.85	0.44	0.95	1.39	339	20,100	20,439	36.0	1.15	8.50	21,691

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.23	1.87	17.8	15.6	0.02	0.76	—	0.76	0.70	—	0.70	—	2,453	2,453	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.25	2.84	< 0.005	0.14	—	0.14	0.13	—	0.13	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.73	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	111	111	0.01	< 0.005	0.48	113
Vendor	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	0.00

Hauling	0.03	0.01	0.43	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	332	332	0.02	0.05	0.68	349
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.01	106
Vendor	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	0.00
Hauling	0.03	0.01	0.46	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	332	332	0.02	0.05	0.02	349
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.47	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	75.0	75.0	0.01	< 0.005	0.15	76.2
Vendor	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	0.00
Hauling	0.02	0.01	0.32	0.11	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	238	238	0.01	0.04	0.21	250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	39.4	39.4	< 0.005	0.01	0.03	41.4

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.23	1.87	17.8	15.6	0.02	0.76	—	0.76	0.70	—	0.70	—	2,453	2,453	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.25	2.84	< 0.005	0.14	—	0.14	0.13	—	0.13	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.73	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	111	111	0.01	< 0.005	0.48	113
Vendor	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	0.00
Hauling	0.03	0.01	0.43	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	332	332	0.02	0.05	0.68	349

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.01	106
Vendor	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	0.00
Hauling	0.03	0.01	0.46	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	332	332	0.02	0.05	0.02	349
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.47	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	75.0	75.0	0.01	< 0.005	0.15	76.2
Vendor	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	0.00
Hauling	0.02	0.01	0.32	0.11	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	238	238	0.01	0.04	0.21	250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	39.4	39.4	< 0.005	0.01	0.03	41.4

3.3. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.71	15.9	14.2	0.02	0.66	—	0.66	0.60	—	0.60	—	2,446	2,446	0.10	0.02	—	2,455
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.89	2.60	< 0.005	0.12	—	0.12	0.11	—	0.11	—	405	405	0.02	< 0.005	—	406
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	108	108	0.01	< 0.005	0.45	110
Vendor	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	0.00
Hauling	0.03	0.01	0.41	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	326	326	0.02	0.05	0.67	342

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.01	104
Vendor	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	0.00
Hauling	0.03	0.01	0.44	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	326	326	0.02	0.05	0.02	342
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.44	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	73.3	73.3	< 0.005	< 0.005	0.14	74.6
Vendor	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	0.00
Hauling	0.02	0.01	0.31	0.11	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	233	233	0.01	0.04	0.21	244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	38.5	38.5	< 0.005	0.01	0.03	40.4

3.4. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.71	15.9	14.2	0.02	0.66	—	0.66	0.60	—	0.60	—	2,446	2,446	0.10	0.02	—	2,455
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.89	2.60	< 0.005	0.12	—	0.12	0.11	—	0.11	—	405	405	0.02	< 0.005	—	406
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	108	108	0.01	< 0.005	0.45	110
Vendor	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	0.00
Hauling	0.03	0.01	0.41	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	326	326	0.02	0.05	0.67	342

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.01	104
Vendor	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	0.00
Hauling	0.03	0.01	0.44	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	326	326	0.02	0.05	0.02	342
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.44	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	73.3	73.3	< 0.005	< 0.005	0.14	74.6
Vendor	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	0.00
Hauling	0.02	0.01	0.31	0.11	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	233	233	0.01	0.04	0.21	244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	38.5	38.5	< 0.005	0.01	0.03	40.4

3.5. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.95	1.63	14.8	13.6	0.02	0.60	—	0.60	0.55	—	0.55	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.69	2.48	< 0.005	0.11	—	0.11	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.63	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	106	106	0.01	< 0.005	0.42	108
Vendor	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	0.00
Hauling	0.03	0.01	0.40	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	319	319	0.02	0.05	0.63	336

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	0.60	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	100	100	0.01	< 0.005	0.01	102
Vendor	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	0.00
Hauling	0.03	0.01	0.42	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	319	319	0.02	0.05	0.02	335
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.41	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	72.0	72.0	< 0.005	< 0.005	0.13	73.2
Vendor	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	0.00
Hauling	0.02	0.01	0.30	0.11	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	228	228	0.01	0.04	0.19	240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	37.8	37.8	< 0.005	0.01	0.03	39.7

3.6. Demolition (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.95	1.63	14.8	13.6	0.02	0.60	—	0.60	0.55	—	0.55	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.69	2.48	< 0.005	0.11	—	0.11	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.63	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	106	106	0.01	< 0.005	0.42	108
Vendor	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	0.00
Hauling	0.03	0.01	0.40	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	319	319	0.02	0.05	0.63	336

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	0.60	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	100	100	0.01	< 0.005	0.01	102
Vendor	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	0.00
Hauling	0.03	0.01	0.42	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	319	319	0.02	0.05	0.02	335
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.41	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	72.0	72.0	< 0.005	< 0.005	0.13	73.2
Vendor	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	0.00
Hauling	0.02	0.01	0.30	0.11	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	228	228	0.01	0.04	0.19	240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	37.8	37.8	< 0.005	0.01	0.03	39.7

3.7. Demolition (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.89	1.58	14.2	13.3	0.02	0.57	—	0.57	0.52	—	0.52	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.59	2.43	< 0.005	0.10	—	0.10	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.59	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.38	106
Vendor	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	0.00
Hauling	0.03	0.01	0.39	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	312	312	0.02	0.05	0.58	328

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.56	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	98.4	98.4	0.01	< 0.005	0.01	99.9
Vendor	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	0.00
Hauling	0.02	0.01	0.41	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	312	312	0.02	0.05	0.01	327
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	70.6	70.6	< 0.005	< 0.005	0.12	71.8
Vendor	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	0.00
Hauling	0.02	0.01	0.29	0.10	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	223	223	0.01	0.04	0.18	234
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	36.9	36.9	< 0.005	0.01	0.03	38.7

3.8. Demolition (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.89	1.58	14.2	13.3	0.02	0.57	—	0.57	0.52	—	0.52	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.59	2.43	< 0.005	0.10	—	0.10	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.59	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.38	106
Vendor	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	0.00
Hauling	0.03	0.01	0.39	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	312	312	0.02	0.05	0.58	328

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.56	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	98.4	98.4	0.01	< 0.005	0.01	99.9
Vendor	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	0.00
Hauling	0.02	0.01	0.41	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	312	312	0.02	0.05	0.01	327
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	70.6	70.6	< 0.005	< 0.005	0.12	71.8
Vendor	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	0.00
Hauling	0.02	0.01	0.29	0.10	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	223	223	0.01	0.04	0.18	234
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	36.9	36.9	< 0.005	0.01	0.03	38.7

3.9. Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	14.0	13.4	0.02	0.56	—	0.56	0.51	—	0.51	—	2,456	2,456	0.10	0.02	—	2,464
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.56	2.44	< 0.005	0.10	—	0.10	0.09	—	0.09	—	407	407	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.55	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.35	104
Vendor	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	0.00
Hauling	0.02	0.01	0.37	0.14	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	304	304	0.02	0.05	0.53	319

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	96.6	96.6	< 0.005	< 0.005	0.01	98.1
Vendor	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	0.00
Hauling	0.02	0.01	0.40	0.14	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	304	304	0.02	0.05	0.01	319
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.36	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	69.5	69.5	< 0.005	< 0.005	0.11	70.7
Vendor	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	0.00
Hauling	0.02	0.01	0.28	0.10	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	218	218	0.01	0.03	0.16	228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	36.0	36.0	< 0.005	0.01	0.03	37.8

3.10. Demolition (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	14.0	13.4	0.02	0.56	—	0.56	0.51	—	0.51	—	2,456	2,456	0.10	0.02	—	2,464
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.56	2.44	< 0.005	0.10	—	0.10	0.09	—	0.09	—	407	407	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.55	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.35	104
Vendor	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	0.00
Hauling	0.02	0.01	0.37	0.14	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	304	304	0.02	0.05	0.53	319

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	96.6	96.6	< 0.005	< 0.005	0.01	98.1
Vendor	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	0.00
Hauling	0.02	0.01	0.40	0.14	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	304	304	0.02	0.05	0.01	319
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.36	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	69.5	69.5	< 0.005	< 0.005	0.11	70.7
Vendor	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	0.00
Hauling	0.02	0.01	0.28	0.10	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	218	218	0.01	0.03	0.16	228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	36.0	36.0	< 0.005	0.01	0.03	37.8

3.11. Demolition (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.82	1.53	13.3	13.2	0.02	0.53	—	0.53	0.48	—	0.48	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.28	2.42	2.41	< 0.005	0.10	—	0.10	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.03	0.52	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	101	101	< 0.005	< 0.005	0.32	102
Vendor	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	0.00
Hauling	0.02	0.01	0.36	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	296	296	0.02	0.05	0.48	311

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.49	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	94.9	94.9	< 0.005	< 0.005	0.01	96.4
Vendor	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	0.00
Hauling	0.02	0.01	0.38	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	296	296	0.02	0.05	0.01	310
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.34	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	68.1	68.1	< 0.005	< 0.005	0.10	69.2
Vendor	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	0.00
Hauling	0.01	0.01	0.27	0.10	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	211	211	0.01	0.03	0.15	222
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	35.0	35.0	< 0.005	0.01	0.02	36.7

3.12. Demolition (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.82	1.53	13.3	13.2	0.02	0.53	—	0.53	0.48	—	0.48	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.28	2.42	2.41	< 0.005	0.10	—	0.10	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.03	0.52	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	101	101	< 0.005	< 0.005	0.32	102
Vendor	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	0.00
Hauling	0.02	0.01	0.36	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	296	296	0.02	0.05	0.48	311

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.49	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	94.9	94.9	< 0.005	< 0.005	0.01	96.4
Vendor	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	0.00
Hauling	0.02	0.01	0.38	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	296	296	0.02	0.05	0.01	310
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.34	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	68.1	68.1	< 0.005	< 0.005	0.10	69.2
Vendor	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	0.00
Hauling	0.01	0.01	0.27	0.10	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	211	211	0.01	0.03	0.15	222
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	35.0	35.0	< 0.005	0.01	0.02	36.7

3.13. Demolition (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	1.49	12.9	13.3	0.02	0.51	—	0.51	0.47	—	0.47	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.36	2.43	< 0.005	0.09	—	0.09	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.03	0.49	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	99.0	99.0	< 0.005	< 0.005	0.29	101
Vendor	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	0.00
Hauling	0.02	0.01	0.35	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	287	287	0.01	0.05	0.44	302

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.46	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	93.3	93.3	< 0.005	< 0.005	0.01	94.7
Vendor	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	0.00
Hauling	0.02	< 0.005	0.37	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	288	288	0.01	0.05	0.01	301
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.31	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	67.0	67.0	< 0.005	< 0.005	0.09	68.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.26	0.09	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	205	205	0.01	0.03	0.14	215
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.1	11.1	< 0.005	< 0.005	0.01	11.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	34.0	34.0	< 0.005	0.01	0.02	35.7

3.14. Demolition (2030) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	1.49	12.9	13.3	0.02	0.51	—	0.51	0.47	—	0.47	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.36	2.43	< 0.005	0.09	—	0.09	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.03	0.49	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	99.0	99.0	< 0.005	< 0.005	0.29	101
Vendor	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	0.00
Hauling	0.02	0.01	0.35	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	287	287	0.01	0.05	0.44	302

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.46	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	93.3	93.3	< 0.005	< 0.005	0.01	94.7
Vendor	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	0.00
Hauling	0.02	< 0.005	0.37	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	288	288	0.01	0.05	0.01	301
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.31	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	67.0	67.0	< 0.005	< 0.005	0.09	68.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.26	0.09	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	205	205	0.01	0.03	0.14	215
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.1	11.1	< 0.005	< 0.005	0.01	11.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	34.0	34.0	< 0.005	0.01	0.02	35.7

3.15. Demolition (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.73	1.46	12.5	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.29	2.39	< 0.005	0.09	—	0.09	0.08	—	0.08	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.45	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	97.3	97.3	< 0.005	< 0.005	0.26	98.9
Vendor	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	0.00
Hauling	0.02	0.01	0.34	0.12	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	279	279	0.01	0.04	0.39	293

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.43	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	91.8	91.8	< 0.005	< 0.005	0.01	93.2
Vendor	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	0.00
Hauling	0.02	< 0.005	0.36	0.12	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	280	280	0.01	0.04	0.01	293
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	65.9	65.9	< 0.005	< 0.005	0.08	66.9
Vendor	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	0.00
Hauling	0.01	< 0.005	0.25	0.09	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	200	200	0.01	0.03	0.12	209
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	33.0	33.0	< 0.005	0.01	0.02	34.6

3.16. Demolition (2031) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.73	1.46	12.5	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.29	2.39	< 0.005	0.09	—	0.09	0.08	—	0.08	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.45	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	97.3	97.3	< 0.005	< 0.005	0.26	98.9
Vendor	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	0.00
Hauling	0.02	0.01	0.34	0.12	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	279	279	0.01	0.04	0.39	293

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.43	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	91.8	91.8	< 0.005	< 0.005	0.01	93.2
Vendor	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	0.00
Hauling	0.02	< 0.005	0.36	0.12	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	280	280	0.01	0.04	0.01	293
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	65.9	65.9	< 0.005	< 0.005	0.08	66.9
Vendor	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	0.00
Hauling	0.01	< 0.005	0.25	0.09	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	200	200	0.01	0.03	0.12	209
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	33.0	33.0	< 0.005	0.01	0.02	34.6

3.17. Demolition (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	11.6	12.1	0.02	0.44	—	0.44	0.41	—	0.41	—	2,454	2,454	0.10	0.02	—	2,463
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.12	2.20	< 0.005	0.08	—	0.08	0.07	—	0.07	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.42	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	95.9	95.9	< 0.005	< 0.005	0.24	97.4
Vendor	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	0.00
Hauling	0.02	0.01	0.33	0.12	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	272	272	0.01	0.04	0.35	285

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.40	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	90.4	90.4	< 0.005	< 0.005	0.01	91.8
Vendor	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	0.00
Hauling	0.02	< 0.005	0.35	0.12	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	272	272	0.01	0.04	0.01	285
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.27	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	65.1	65.1	< 0.005	< 0.005	0.07	66.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.25	0.08	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	195	195	0.01	0.03	0.11	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.8	10.8	< 0.005	< 0.005	0.01	10.9
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	32.2	32.2	< 0.005	0.01	0.02	33.8

3.18. Demolition (2032) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	11.6	12.1	0.02	0.44	—	0.44	0.41	—	0.41	—	2,454	2,454	0.10	0.02	—	2,463
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.12	2.20	< 0.005	0.08	—	0.08	0.07	—	0.07	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.42	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	95.9	95.9	< 0.005	< 0.005	0.24	97.4
Vendor	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	0.00
Hauling	0.02	0.01	0.33	0.12	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	272	272	0.01	0.04	0.35	285

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.40	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	90.4	90.4	< 0.005	< 0.005	0.01	91.8
Vendor	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	0.00
Hauling	0.02	< 0.005	0.35	0.12	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	272	272	0.01	0.04	0.01	285
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.27	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	65.1	65.1	< 0.005	< 0.005	0.07	66.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.25	0.08	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	195	195	0.01	0.03	0.11	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.8	10.8	< 0.005	< 0.005	0.01	10.9
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	32.2	32.2	< 0.005	0.01	0.02	33.8

3.19. Demolition (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.33	11.1	11.4	0.02	0.41	—	0.41	0.38	—	0.38	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	2.02	2.08	< 0.005	0.07	—	0.07	0.07	—	0.07	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.40	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	94.5	94.5	< 0.005	< 0.005	0.21	96.0
Vendor	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	0.00
Hauling	0.02	0.01	0.32	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	265	265	0.01	0.04	0.31	278

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.38	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.1	89.1	< 0.005	< 0.005	0.01	90.4
Vendor	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	0.00
Hauling	0.02	< 0.005	0.34	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	265	265	0.01	0.04	0.01	278
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.26	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	64.0	64.0	< 0.005	< 0.005	0.07	64.9
Vendor	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	0.00
Hauling	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	189	189	0.01	0.03	0.10	198
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.6	10.6	< 0.005	< 0.005	0.01	10.8
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	31.3	31.3	< 0.005	< 0.005	0.02	32.8

3.20. Demolition (2033) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.33	11.1	11.4	0.02	0.41	—	0.41	0.38	—	0.38	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	2.02	2.08	< 0.005	0.07	—	0.07	0.07	—	0.07	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.40	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	94.5	94.5	< 0.005	< 0.005	0.21	96.0
Vendor	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	0.00
Hauling	0.02	0.01	0.32	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	265	265	0.01	0.04	0.31	278

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.38	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.1	89.1	< 0.005	< 0.005	0.01	90.4
Vendor	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	0.00
Hauling	0.02	< 0.005	0.34	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	265	265	0.01	0.04	0.01	278
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.26	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	64.0	64.0	< 0.005	< 0.005	0.07	64.9
Vendor	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	0.00
Hauling	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	189	189	0.01	0.03	0.10	198
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.6	10.6	< 0.005	< 0.005	0.01	10.8
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	31.3	31.3	< 0.005	< 0.005	0.02	32.8

3.21. Demolition (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	10.8	11.2	0.02	0.39	—	0.39	0.35	—	0.35	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.24	1.97	2.05	< 0.005	0.07	—	0.07	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.37	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	93.2	93.2	< 0.005	< 0.005	0.19	93.7
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	258	258	0.01	0.04	0.27	271

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.35	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	87.9	87.9	< 0.005	< 0.005	< 0.005	89.2
Vendor	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	0.00
Hauling	0.01	< 0.005	0.33	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	259	259	0.01	0.04	0.01	271
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	63.1	63.1	< 0.005	< 0.005	0.06	64.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.23	0.08	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	185	185	0.01	0.03	0.08	194
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	30.6	30.6	< 0.005	< 0.005	0.01	32.1

3.22. Demolition (2034) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	10.8	11.2	0.02	0.39	—	0.39	0.35	—	0.35	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.24	1.97	2.05	< 0.005	0.07	—	0.07	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.37	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	93.2	93.2	< 0.005	< 0.005	0.19	93.7
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	258	258	0.01	0.04	0.27	271

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.35	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	87.9	87.9	< 0.005	< 0.005	< 0.005	89.2
Vendor	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	0.00
Hauling	0.01	< 0.005	0.33	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	259	259	0.01	0.04	0.01	271
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	63.1	63.1	< 0.005	< 0.005	0.06	64.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.23	0.08	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	185	185	0.01	0.03	0.08	194
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	30.6	30.6	< 0.005	< 0.005	0.01	32.1

3.23. Demolition (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.25	10.1	10.7	0.02	0.35	—	0.35	0.32	—	0.32	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	1.85	1.95	< 0.005	0.06	—	0.06	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.35	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	92.0	92.0	< 0.005	< 0.005	0.17	92.5
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	253	253	0.01	0.04	0.24	265

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	86.8	86.8	< 0.005	< 0.005	< 0.005	88.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.32	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	253	253	0.01	0.04	0.01	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	62.3	62.3	< 0.005	< 0.005	0.05	63.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.23	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	181	181	0.01	0.03	0.07	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.3	10.3	< 0.005	< 0.005	0.01	10.5
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	29.9	29.9	< 0.005	< 0.005	0.01	31.3

3.24. Demolition (2035) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.25	10.1	10.7	0.02	0.35	—	0.35	0.32	—	0.32	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	1.85	1.95	< 0.005	0.06	—	0.06	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.35	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	92.0	92.0	< 0.005	< 0.005	0.17	92.5
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	253	253	0.01	0.04	0.24	265

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	86.8	86.8	< 0.005	< 0.005	< 0.005	88.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.32	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	253	253	0.01	0.04	0.01	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	62.3	62.3	< 0.005	< 0.005	0.05	63.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.23	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	181	181	0.01	0.03	0.07	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.3	10.3	< 0.005	< 0.005	0.01	10.5
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	29.9	29.9	< 0.005	< 0.005	0.01	31.3

3.25. Demolition (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.43	1.20	9.59	10.1	0.02	0.32	—	0.32	0.29	—	0.29	—	2,454	2,454	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.32	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	90.9	90.9	< 0.005	< 0.005	0.15	91.4
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	248	248	0.01	0.04	0.20	260

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	85.7	85.7	< 0.005	< 0.005	< 0.005	87.0
Vendor	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	0.00
Hauling	0.01	0.01	0.32	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	248	248	0.01	0.04	0.01	260
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.21	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	61.7	61.7	< 0.005	< 0.005	0.05	62.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	178	178	0.01	0.03	0.06	186
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.2	10.2	< 0.005	< 0.005	0.01	10.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	29.4	29.4	< 0.005	< 0.005	0.01	30.8

3.26. Demolition (2036) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.43	1.20	9.59	10.1	0.02	0.32	—	0.32	0.29	—	0.29	—	2,454	2,454	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.32	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	90.9	90.9	< 0.005	< 0.005	0.15	91.4
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	248	248	0.01	0.04	0.20	260

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	85.7	85.7	< 0.005	< 0.005	< 0.005	87.0
Vendor	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	0.00
Hauling	0.01	0.01	0.32	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	248	248	0.01	0.04	0.01	260
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.21	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	61.7	61.7	< 0.005	< 0.005	0.05	62.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	178	178	0.01	0.03	0.06	186
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.2	10.2	< 0.005	< 0.005	0.01	10.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	29.4	29.4	< 0.005	< 0.005	0.01	30.8

3.27. Demolition (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.20	9.57	10.2	0.02	0.32	—	0.32	0.29	—	0.29	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.86	< 0.005	0.06	—	0.06	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.9	89.9	< 0.005	< 0.005	0.13	90.4
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	243	243	0.01	0.04	0.18	255

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	84.8	84.8	< 0.005	< 0.005	< 0.005	85.1
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	244	244	0.01	0.04	< 0.005	255
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.20	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	60.9	60.9	< 0.005	< 0.005	0.04	61.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	174	174	0.01	0.03	0.05	182
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.1	10.1	< 0.005	< 0.005	0.01	10.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	28.8	28.8	< 0.005	< 0.005	0.01	30.2

3.28. Demolition (2037) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.20	9.57	10.2	0.02	0.32	—	0.32	0.29	—	0.29	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.86	< 0.005	0.06	—	0.06	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.9	89.9	< 0.005	< 0.005	0.13	90.4
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	243	243	0.01	0.04	0.18	255

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	84.8	84.8	< 0.005	< 0.005	< 0.005	85.1
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	244	244	0.01	0.04	< 0.005	255
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.20	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	60.9	60.9	< 0.005	< 0.005	0.04	61.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	174	174	0.01	0.03	0.05	182
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.1	10.1	< 0.005	< 0.005	0.01	10.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	28.8	28.8	< 0.005	< 0.005	0.01	30.2

3.29. Demolition (2038) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	1.14	8.83	9.43	0.02	0.29	—	0.29	0.26	—	0.26	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.61	1.72	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.0	89.0	< 0.005	< 0.005	0.11	89.4
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	240	240	0.01	0.04	0.15	251

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.27	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	83.9	83.9	< 0.005	< 0.005	< 0.005	84.3
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	240	240	0.01	0.04	< 0.005	251
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.19	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	60.3	60.3	< 0.005	< 0.005	0.03	60.5
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	171	171	< 0.005	0.03	0.05	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	9.98	9.98	< 0.005	< 0.005	0.01	10.0
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	28.3	28.3	< 0.005	< 0.005	0.01	29.7

3.30. Demolition (2038) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	1.14	8.83	9.43	0.02	0.29	—	0.29	0.26	—	0.26	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.61	1.72	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.0	89.0	< 0.005	< 0.005	0.11	89.4
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	240	240	0.01	0.04	0.15	251

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.27	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	83.9	83.9	< 0.005	< 0.005	< 0.005	84.3
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	240	240	0.01	0.04	< 0.005	251
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.19	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	60.3	60.3	< 0.005	< 0.005	0.03	60.5
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	171	171	< 0.005	0.03	0.05	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	9.98	9.98	< 0.005	< 0.005	0.01	10.0
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	28.3	28.3	< 0.005	< 0.005	0.01	29.7

3.31. Demolition (2039) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.12	8.61	9.28	0.02	0.28	—	0.28	0.25	—	0.25	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.57	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.28	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	88.2	88.2	< 0.005	< 0.005	0.10	88.6
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	236	236	< 0.005	0.04	0.13	248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.26	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	83.2	83.2	< 0.005	< 0.005	< 0.005	83.5
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	236	236	< 0.005	0.04	< 0.005	248
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.01	0.18	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	59.7	59.7	< 0.005	< 0.005	0.03	60.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	169	169	< 0.005	0.03	0.04	177
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	9.89	9.89	< 0.005	< 0.005	< 0.005	9.93
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	27.9	27.9	< 0.005	< 0.005	0.01	29.3

3.32. Demolition (2039) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.12	8.61	9.28	0.02	0.28	—	0.28	0.25	—	0.25	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.57	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.28	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	88.2	88.2	< 0.005	< 0.005	0.10	88.6
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	236	236	< 0.005	0.04	0.13	248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.26	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	83.2	83.2	< 0.005	< 0.005	< 0.005	83.5
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	236	236	< 0.005	0.04	< 0.005	248
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.01	0.18	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	59.7	59.7	< 0.005	< 0.005	0.03	60.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	169	169	< 0.005	0.03	0.04	177
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	9.89	9.89	< 0.005	< 0.005	< 0.005	9.93
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	27.9	27.9	< 0.005	< 0.005	0.01	29.3

3.33. Demolition (2040) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	1.55	12.0	12.9	0.03	0.38	—	0.38	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.70	6.70	< 0.005	< 0.005	—	6.73	
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.11	1.11	< 0.005	< 0.005	—	1.11	
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.03	0.03	0.02	0.25	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	82.5	82.5	< 0.005	< 0.005	< 0.005	82.9	
Vendor	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	0.00	
Hauling	0.01	0.01	0.30	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	233	233	< 0.005	0.04	< 0.005	245	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.19	0.19	0.00	0.02	0.02	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16	
Vendor	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	0.00	
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48	

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.03	0.03	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08

3.34. Demolition (2040) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	1.55	12.0	12.9	0.03	0.38	—	0.38	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.70	6.70	< 0.005	< 0.005	—	6.73
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.11	1.11	< 0.005	< 0.005	—	1.11

Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.25	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	82.5	82.5	< 0.005	< 0.005	< 0.005	82.9
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	233	233	< 0.005	0.04	< 0.005	245
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.19	0.19	0.00	0.02	0.02	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.03	0.03	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08

3.35. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	1.80	17.7	16.2	0.02	0.79	—	0.79	0.73	—	0.73	—	2,612	2,612	0.11	0.02	—	2,621
Dust From Material Movement:	—	—	—	—	—	—	9.69	9.69	—	4.98	4.98	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.24	2.96	< 0.005	0.14	—	0.14	0.13	—	0.13	—	432	432	0.02	< 0.005	—	434
Dust From Material Movement:	—	—	—	—	—	—	1.77	1.77	—	0.91	0.91	—	—	—	—	—	—	—

Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	0.86	0.00	0.00	114	114	0.00	11.4	11.4	—	129	129	0.01	0.01	0.56	131	
Vendor	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	0.00	
Hauling	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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.10	0.09	0.08	0.81	0.00	0.00	114	114	0.00	11.4	11.4	—	122	122	0.01	0.01	0.01	123	
Vendor	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	0.00	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.05	0.04	0.04	0.38	0.00	0.00	56.1	56.1	0.00	5.61	5.61	—	60.2	60.2	< 0.005	< 0.005	0.12	61.2	
Vendor	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	0.00	
Hauling	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.07	0.00	0.00	10.2	10.2	0.00	1.02	1.02	—	9.97	9.97	< 0.005	< 0.005	0.02	10.1	
Vendor	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	0.00	
Hauling	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	0.00	

3.36. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	1.80	17.7	16.2	0.02	0.79	—	0.79	0.73	—	0.73	—	2,612	2,612	0.11	0.02	—	2,621
Dust From Material Movement:	—	—	—	—	—	—	9.69	9.69	—	4.98	4.98	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.24	2.96	< 0.005	0.14	—	0.14	0.13	—	0.13	—	432	432	0.02	< 0.005	—	434

Dust From Material Movement:	—	—	—	—	—	—	1.77	1.77	—	0.91	0.91	—	—	—	—	—	—	
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	0.86	0.00	0.00	114	114	0.00	11.4	11.4	—	129	129	0.01	0.01	0.56	131
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.81	0.00	0.00	114	114	0.00	11.4	11.4	—	122	122	0.01	0.01	0.01	123
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	56.1	56.1	0.00	5.61	5.61	—	60.2	60.2	< 0.005	< 0.005	0.12	61.2
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	10.2	10.2	0.00	1.02	1.02	—	9.97	9.97	< 0.005	< 0.005	0.02	10.1
Vendor	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	0.00
Hauling	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	0.00

3.37. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.50	2.10	20.5	18.0	0.04	0.86	—	0.86	0.80	—	0.80	—	3,938	3,938	0.16	0.03	—	3,952
Dust From Material Movement	—	—	—	—	—	—	5.49	5.49	—	2.18	2.18	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.38	3.73	3.29	0.01	0.16	—	0.16	0.15	—	0.15	—	652	652	0.03	0.01	—	654
Dust From Material Movement	—	—	—	—	—	—	1.00	1.00	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.07	0.98	0.00	0.00	130	130	0.00	13.0	13.0	—	147	147	0.01	0.01	0.64	150
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	0.93	0.00	0.00	130	130	0.00	13.0	13.0	—	139	139	0.01	0.01	0.02	141
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	77.6	77.6	0.00	7.76	7.76	—	83.3	83.3	0.01	< 0.005	0.17	84.7
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	14.2	14.2	0.00	1.42	1.42	—	13.8	13.8	< 0.005	< 0.005	0.03	14.0
Vendor	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	0.00
Hauling	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	0.00

3.38. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement:	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement:	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.50	2.10	20.5	18.0	0.04	0.86	—	0.86	0.80	—	0.80	—	3,938	3,938	0.16	0.03	—	3,952
Dust From Material Movement:	—	—	—	—	—	—	5.49	5.49	—	2.18	2.18	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.38	3.73	3.29	0.01	0.16	—	0.16	0.15	—	0.15	—	652	652	0.03	0.01	—	654	
Dust From Material Movement	—	—	—	—	—	—	1.00	1.00	—	0.40	0.40	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.11	0.10	0.07	0.98	0.00	0.00	130	130	0.00	13.0	13.0	—	147	147	0.01	0.01	0.64	150	
Vendor	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	0.00	
Hauling	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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.11	0.10	0.09	0.93	0.00	0.00	130	130	0.00	13.0	13.0	—	139	139	0.01	0.01	0.02	141	
Vendor	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	0.00	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.06	0.06	0.05	0.53	0.00	0.00	77.6	77.6	0.00	7.76	7.76	—	83.3	83.3	0.01	< 0.005	0.17	84.7	
Vendor	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	0.00	
Hauling	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.10	0.00	0.00	14.2	14.2	0.00	1.42	1.42	—	13.8	13.8	< 0.005	< 0.005	0.03	14.0	
Vendor	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	0.00	

Hauling	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	0.00	0.00
---------	------	------	------	------	------	------	------	------	------	------	------	------	---	------	------	------	------	------	------

3.39. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.58	2.16	20.1	19.2	0.04	0.84	—	0.84	0.77	—	0.77	—	4,468	4,468	0.18	0.04	—	4,483

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Dust From Material Movement:	—	—	—	—	—	—	6.23	6.23	—	2.47	2.47	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	0.40	3.67	3.50	0.01	0.15	—	0.15	0.14	—	0.14	—	740	740	0.03	0.01	—	742
Dust From Material Movement:	—	—	—	—	—	—	1.14	1.14	—	0.45	0.45	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.91	0.00	0.00	130	130	0.00	13.0	13.0	—	145	145	0.01	0.01	0.60	147
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	0.86	0.00	0.00	130	130	0.00	13.0	13.0	—	136	136	0.01	0.01	0.02	138
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.55	0.00	0.00	88.0	88.0	0.00	8.81	8.81	—	92.7	92.7	0.01	< 0.005	0.18	94.2
Vendor	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	0.00
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	16.1	16.1	0.00	1.61	1.61	—	15.3	15.3	< 0.005	< 0.005	0.03	15.6
Vendor	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	0.00
Hauling	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	0.00

3.40. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement:	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement:	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	2.58	2.16	20.1	19.2	0.04	0.84	—	0.84	0.77	—	0.77	—	4,468	4,468	0.18	0.04	—	4,483
Dust From Material Movement	—	—	—	—	—	—	6.23	6.23	—	2.47	2.47	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	0.40	3.67	3.50	0.01	0.15	—	0.15	0.14	—	0.14	—	740	740	0.03	0.01	—	742
Dust From Material Movement	—	—	—	—	—	—	1.14	1.14	—	0.45	0.45	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.91	0.00	0.00	130	130	0.00	13.0	13.0	—	145	145	0.01	0.01	0.60	147
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	0.86	0.00	0.00	130	130	0.00	13.0	13.0	—	136	136	0.01	0.01	0.02	138
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.55	0.00	0.00	88.0	88.0	0.00	8.81	8.81	—	92.7	92.7	0.01	< 0.005	0.18	94.2

Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	16.1	16.1	0.00	1.61	1.61	—	15.3	15.3	< 0.005	< 0.005	0.03	15.6
Vendor	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	0.00
Hauling	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	0.00

3.41. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	6.04	7.06	0.01	0.27	—	0.27	0.25	—	0.25	—	1,290	1,290	0.05	0.01	—	1,295
Onsite truck	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.10	1.29	< 0.005	0.05	—	0.05	0.04	—	0.04	—	214	214	0.01	< 0.005	—	214
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	13.9	12.6	9.06	124	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	18,682	18,682	1.09	0.75	81.7	19,015
Vendor	1.09	0.59	16.3	8.20	0.07	0.14	2,224	2,225	0.14	223	223	—	10,783	10,783	0.48	1.60	27.8	11,298
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	13.8	12.4	11.7	117	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,605	17,605	1.31	0.75	2.12	17,864
Vendor	1.06	0.49	17.1	8.36	0.07	0.14	2,224	2,225	0.14	223	223	—	10,792	10,792	0.49	1.60	0.72	11,280
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.29	6.57	5.88	60.0	0.00	0.00	8,862	8,862	0.00	887	887	—	9,518	9,518	0.65	0.41	19.0	9,674
Vendor	0.58	0.31	9.04	4.45	0.04	0.08	1,197	1,197	0.08	120	120	—	5,805	5,805	0.26	0.86	6.43	6,074
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.33	1.20	1.07	11.0	0.00	0.00	1,617	1,617	0.00	162	162	—	1,576	1,576	0.11	0.07	3.14	1,602
Vendor	0.11	0.06	1.65	0.81	0.01	0.01	218	218	0.01	21.9	21.9	—	961	961	0.04	0.14	1.07	1,006
Hauling	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	0.00

3.42. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	6.04	7.06	0.01	0.27	—	0.27	0.25	—	0.25	—	1,290	1,290	0.05	0.01	—	1,295
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.10	1.29	< 0.005	0.05	—	0.05	0.04	—	0.04	—	214	214	0.01	< 0.005	—	214
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	13.9	12.6	9.06	124	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	18,682	18,682	1.09	0.75	81.7	19,015
Vendor	1.09	0.59	16.3	8.20	0.07	0.14	2,224	2,225	0.14	223	223	—	10,783	10,783	0.48	1.60	27.8	11,298

Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	13.8	12.4	11.7	117	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,605	17,605	1.31	0.75	2.12	17,864	
Vendor	1.06	0.49	17.1	8.36	0.07	0.14	2,224	2,225	0.14	223	223	—	10,792	10,792	0.49	1.60	0.72	11,280	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.29	6.57	5.88	60.0	0.00	0.00	8,862	8,862	0.00	887	887	—	9,518	9,518	0.65	0.41	19.0	9,674	
Vendor	0.58	0.31	9.04	4.45	0.04	0.08	1,197	1,197	0.08	120	120	—	5,805	5,805	0.26	0.86	6.43	6,074	
Hauling	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.33	1.20	1.07	11.0	0.00	0.00	1,617	1,617	0.00	162	162	—	1,576	1,576	0.11	0.07	3.14	1,602	
Vendor	0.11	0.06	1.65	0.81	0.01	0.01	218	218	0.01	21.9	21.9	—	961	961	0.04	0.14	1.07	1,006	
Hauling	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	0.00	

3.43. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.8	12.0	8.36	115	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	18,321	18,321	1.03	0.75	75.7	18,647
Vendor	1.00	0.50	15.5	7.64	0.07	0.14	2,224	2,225	0.14	223	223	—	10,593	10,593	0.48	1.52	27.6	11,087
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.7	11.9	11.0	109	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,267	17,267	1.26	0.75	1.97	17,525
Vendor	0.97	0.49	16.3	7.85	0.07	0.14	2,224	2,225	0.14	223	223	—	10,602	10,602	0.48	1.52	0.72	11,069
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	8.93	8.32	6.93	74.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	12,391	12,391	0.82	0.54	23.4	12,595
Vendor	0.71	0.36	11.5	5.55	0.05	0.10	1,589	1,589	0.10	159	159	—	7,569	7,569	0.34	1.09	8.54	7,911
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.63	1.52	1.26	13.5	0.00	0.00	2,147	2,147	0.00	215	215	—	2,052	2,052	0.14	0.09	3.87	2,085
Vendor	0.13	0.07	2.09	1.01	0.01	0.02	290	290	0.02	29.0	29.1	—	1,253	1,253	0.06	0.18	1.41	1,310
Hauling	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	0.00

3.44. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	12.8	12.0	8.36	115	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	18,321	18,321	1.03	0.75	75.7	18,647	
Vendor	1.00	0.50	15.5	7.64	0.07	0.14	2,224	2,225	0.14	223	223	—	10,593	10,593	0.48	1.52	27.6	11,087	
Hauling	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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	12.7	11.9	11.0	109	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,267	17,267	1.26	0.75	1.97	17,525	
Vendor	0.97	0.49	16.3	7.85	0.07	0.14	2,224	2,225	0.14	223	223	—	10,602	10,602	0.48	1.52	0.72	11,069	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	8.93	8.32	6.93	74.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	12,391	12,391	0.82	0.54	23.4	12,595	
Vendor	0.71	0.36	11.5	5.55	0.05	0.10	1,589	1,589	0.10	159	159	—	7,569	7,569	0.34	1.09	8.54	7,911	
Hauling	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	1.63	1.52	1.26	13.5	0.00	0.00	2,147	2,147	0.00	215	215	—	2,052	2,052	0.14	0.09	3.87	2,085	
Vendor	0.13	0.07	2.09	1.01	0.01	0.02	290	290	0.02	29.0	29.1	—	1,253	1,253	0.06	0.18	1.41	1,310	
Hauling	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	0.00	

3.45. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.3	11.5	7.72	107	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,974	17,974	1.03	0.75	70.1	18,294
Vendor	0.97	0.49	14.8	7.15	0.07	0.14	2,224	2,225	0.14	223	223	—	10,395	10,395	0.48	1.52	25.0	10,886
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.2	11.3	9.75	102	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,943	16,943	1.20	0.75	1.82	17,199
Vendor	0.95	0.45	15.6	7.34	0.07	0.14	2,224	2,225	0.14	223	223	—	10,405	10,405	0.46	1.52	0.65	10,872
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.58	7.96	6.47	69.3	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	12,158	12,158	0.82	0.54	21.6	12,361
Vendor	0.70	0.34	11.0	5.19	0.05	0.10	1,589	1,589	0.10	159	159	—	7,428	7,428	0.34	1.09	7.74	7,769
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.57	1.45	1.18	12.6	0.00	0.00	2,147	2,147	0.00	215	215	—	2,013	2,013	0.14	0.09	3.58	2,046
Vendor	0.13	0.06	2.00	0.95	0.01	0.02	290	290	0.02	29.0	29.1	—	1,230	1,230	0.06	0.18	1.28	1,286
Hauling	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	0.00

3.46. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.3	11.5	7.72	107	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,974	17,974	1.03	0.75	70.1	18,294
Vendor	0.97	0.49	14.8	7.15	0.07	0.14	2,224	2,225	0.14	223	223	—	10,395	10,395	0.48	1.52	25.0	10,886
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.2	11.3	9.75	102	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,943	16,943	1.20	0.75	1.82	17,199

Vendor	0.95	0.45	15.6	7.34	0.07	0.14	2,224	2,225	0.14	223	223	—	10,405	10,405	0.46	1.52	0.65	10,872
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.58	7.96	6.47	69.3	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	12,158	12,158	0.82	0.54	21.6	12,361
Vendor	0.70	0.34	11.0	5.19	0.05	0.10	1,589	1,589	0.10	159	159	—	7,428	7,428	0.34	1.09	7.74	7,769
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.57	1.45	1.18	12.6	0.00	0.00	2,147	2,147	0.00	215	215	—	2,013	2,013	0.14	0.09	3.58	2,046
Vendor	0.13	0.06	2.00	0.95	0.01	0.02	290	290	0.02	29.0	29.1	—	1,230	1,230	0.06	0.18	1.28	1,286
Hauling	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	0.00

3.47. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.8	10.5	7.13	99.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,637	17,637	0.98	0.70	64.6	17,934
Vendor	0.90	0.42	14.2	6.81	0.07	0.14	2,224	2,225	0.14	223	223	—	10,173	10,173	0.39	1.45	22.2	10,638
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.1	10.3	9.11	94.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,627	16,627	1.14	0.75	1.68	16,882
Vendor	0.86	0.38	15.0	6.98	0.07	0.14	2,224	2,225	0.14	223	223	—	10,184	10,184	0.39	1.45	0.58	10,627
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.88	7.30	6.01	64.6	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,932	11,932	0.78	0.54	19.9	12,132
Vendor	0.63	0.28	10.5	4.89	0.05	0.10	1,589	1,589	0.10	159	159	—	7,270	7,270	0.28	1.04	6.85	7,593
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.44	1.33	1.10	11.8	0.00	0.00	2,147	2,147	0.00	215	215	—	1,976	1,976	0.13	0.09	3.30	2,009

Vendor	0.11	0.05	1.92	0.89	0.01	0.02	290	290	0.02	29.0	29.1	—	1,204	1,204	0.05	0.17	1.13	1,257
Hauling	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	0.00

3.48. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.8	10.5	7.13	99.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,637	17,637	0.98	0.70	64.6	17,934
Vendor	0.90	0.42	14.2	6.81	0.07	0.14	2,224	2,225	0.14	223	223	—	10,173	10,173	0.39	1.45	22.2	10,638
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.1	10.3	9.11	94.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,627	16,627	1.14	0.75	1.68	16,882
Vendor	0.86	0.38	15.0	6.98	0.07	0.14	2,224	2,225	0.14	223	223	—	10,184	10,184	0.39	1.45	0.58	10,627
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.88	7.30	6.01	64.6	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,932	11,932	0.78	0.54	19.9	12,132
Vendor	0.63	0.28	10.5	4.89	0.05	0.10	1,589	1,589	0.10	159	159	—	7,270	7,270	0.28	1.04	6.85	7,593
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.44	1.33	1.10	11.8	0.00	0.00	2,147	2,147	0.00	215	215	—	1,976	1,976	0.13	0.09	3.30	2,009
Vendor	0.11	0.05	1.92	0.89	0.01	0.02	290	290	0.02	29.0	29.1	—	1,204	1,204	0.05	0.17	1.13	1,257
Hauling	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	0.00

3.49. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.0	10.2	6.49	93.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,317	17,317	0.98	0.70	59.4	17,608
Vendor	0.81	0.40	13.6	6.40	0.07	0.14	2,224	2,225	0.14	223	223	—	9,919	9,919	0.39	1.44	19.7	10,377
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.8	10.00	8.47	89.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,326	16,326	0.61	0.75	1.54	16,568

Vendor	0.78	0.38	14.3	6.63	0.07	0.14	2,224	2,225	0.14	223	223	—	9,930	9,930	0.39	1.45	0.51	10,373
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.58	7.04	5.57	60.6	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	11,749	11,749	0.36	0.54	18.4	11,937
Vendor	0.57	0.28	10.1	4.65	0.05	0.10	1,593	1,593	0.10	160	160	—	7,107	7,107	0.28	1.04	6.10	7,431
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.38	1.28	1.02	11.1	0.00	0.00	2,153	2,153	0.00	215	215	—	1,945	1,945	0.06	0.09	3.04	1,976
Vendor	0.10	0.05	1.84	0.85	0.01	0.02	291	291	0.02	29.1	29.1	—	1,177	1,177	0.05	0.17	1.01	1,230
Hauling	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	0.00

3.50. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.0	10.2	6.49	93.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,317	17,317	0.98	0.70	59.4	17,608
Vendor	0.81	0.40	13.6	6.40	0.07	0.14	2,224	2,225	0.14	223	223	—	9,919	9,919	0.39	1.44	19.7	10,377
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.8	10.00	8.47	89.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,326	16,326	0.61	0.75	1.54	16,568
Vendor	0.78	0.38	14.3	6.63	0.07	0.14	2,224	2,225	0.14	223	223	—	9,930	9,930	0.39	1.45	0.51	10,373
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.58	7.04	5.57	60.6	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	11,749	11,749	0.36	0.54	18.4	11,937
Vendor	0.57	0.28	10.1	4.65	0.05	0.10	1,593	1,593	0.10	160	160	—	7,107	7,107	0.28	1.04	6.10	7,431
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.38	1.28	1.02	11.1	0.00	0.00	2,153	2,153	0.00	215	215	—	1,945	1,945	0.06	0.09	3.04	1,976

Vendor	0.10	0.05	1.84	0.85	0.01	0.02	291	291	0.02	29.1	29.1	—	1,177	1,177	0.05	0.17	1.01	1,230
Hauling	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	0.00

3.51. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.13	9.22	0.02	0.20	—	0.20	0.18	—	0.18	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.12	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.5	9.77	5.85	87.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,010	17,010	0.45	0.70	54.2	17,283
Vendor	0.81	0.40	13.0	6.07	0.07	0.14	2,224	2,225	0.14	223	223	—	9,640	9,640	0.38	1.37	17.5	10,075
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.3	9.49	7.83	82.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,039	16,039	0.56	0.75	1.41	16,279
Vendor	0.77	0.37	13.7	6.28	0.07	0.14	2,224	2,225	0.14	223	223	—	9,652	9,652	0.38	1.38	0.45	10,073
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.28	6.74	5.10	56.6	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,510	11,510	0.36	0.54	16.8	11,696
Vendor	0.57	0.28	9.56	4.41	0.05	0.10	1,589	1,589	0.10	159	159	—	6,889	6,889	0.27	0.98	5.39	7,193
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.33	1.23	0.93	10.3	0.00	0.00	2,147	2,147	0.00	215	215	—	1,906	1,906	0.06	0.09	2.77	1,936
Vendor	0.10	0.05	1.74	0.80	0.01	0.02	290	290	0.02	29.0	29.1	—	1,141	1,141	0.05	0.16	0.89	1,191
Hauling	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	0.00

3.52. Building Construction (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.13	9.22	0.02	0.20	—	0.20	0.18	—	0.18	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.12	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.5	9.77	5.85	87.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,010	17,010	0.45	0.70	54.2	17,283
Vendor	0.81	0.40	13.0	6.07	0.07	0.14	2,224	2,225	0.14	223	223	—	9,640	9,640	0.38	1.37	17.5	10,075
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.3	9.49	7.83	82.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,039	16,039	0.56	0.75	1.41	16,279

Vendor	0.77	0.37	13.7	6.28	0.07	0.14	2,224	2,225	0.14	223	223	—	9,652	9,652	0.38	1.38	0.45	10,073
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.28	6.74	5.10	56.6	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,510	11,510	0.36	0.54	16.8	11,696
Vendor	0.57	0.28	9.56	4.41	0.05	0.10	1,589	1,589	0.10	159	159	—	6,889	6,889	0.27	0.98	5.39	7,193
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.33	1.23	0.93	10.3	0.00	0.00	2,147	2,147	0.00	215	215	—	1,906	1,906	0.06	0.09	2.77	1,936
Vendor	0.10	0.05	1.74	0.80	0.01	0.02	290	290	0.02	29.0	29.1	—	1,141	1,141	0.05	0.16	0.89	1,191
Hauling	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	0.00

3.53. Building Construction (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.99	9.20	0.02	0.19	—	0.19	0.17	—	0.17	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.09	1.68	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.0	9.27	5.27	82.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,719	16,719	0.39	0.70	49.3	16,985
Vendor	0.72	0.39	12.5	5.82	0.07	0.14	2,224	2,225	0.14	223	223	—	9,345	9,345	0.31	1.37	15.3	9,776
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.44	9.22	7.19	77.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,766	15,766	0.56	0.75	1.28	16,005
Vendor	0.70	0.37	13.2	6.02	0.07	0.14	2,224	2,225	0.14	223	223	—	9,357	9,357	0.31	1.37	0.40	9,773
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.00	6.46	4.64	52.9	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,315	11,315	0.32	0.50	15.2	11,486
Vendor	0.51	0.28	9.20	4.22	0.05	0.10	1,589	1,589	0.10	159	159	—	6,678	6,678	0.22	0.98	4.74	6,980
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.28	1.18	0.85	9.65	0.00	0.00	2,147	2,147	0.00	215	215	—	1,873	1,873	0.05	0.08	2.52	1,902

Vendor	0.09	0.05	1.68	0.77	0.01	0.02	290	290	0.02	29.0	29.1	—	1,106	1,106	0.04	0.16	0.78	1,156
Hauling	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	0.00

3.54. Building Construction (2030) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.99	9.20	0.02	0.19	—	0.19	0.17	—	0.17	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.09	1.68	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.0	9.27	5.27	82.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,719	16,719	0.39	0.70	49.3	16,985
Vendor	0.72	0.39	12.5	5.82	0.07	0.14	2,224	2,225	0.14	223	223	—	9,345	9,345	0.31	1.37	15.3	9,776
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.44	9.22	7.19	77.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,766	15,766	0.56	0.75	1.28	16,005
Vendor	0.70	0.37	13.2	6.02	0.07	0.14	2,224	2,225	0.14	223	223	—	9,357	9,357	0.31	1.37	0.40	9,773
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.00	6.46	4.64	52.9	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,315	11,315	0.32	0.50	15.2	11,486
Vendor	0.51	0.28	9.20	4.22	0.05	0.10	1,589	1,589	0.10	159	159	—	6,678	6,678	0.22	0.98	4.74	6,980
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.28	1.18	0.85	9.65	0.00	0.00	2,147	2,147	0.00	215	215	—	1,873	1,873	0.05	0.08	2.52	1,902
Vendor	0.09	0.05	1.68	0.77	0.01	0.02	290	290	0.02	29.0	29.1	—	1,106	1,106	0.04	0.16	0.78	1,156
Hauling	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	0.00

3.55. Building Construction (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	0.66	5.80	9.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.06	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.05	8.88	4.63	76.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,447	16,447	0.39	0.70	44.7	16,709
Vendor	0.71	0.32	12.0	5.57	0.07	0.14	2,224	2,225	0.07	223	223	—	9,044	9,044	0.31	1.30	13.3	9,452
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.99	8.71	6.61	72.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,510	15,510	0.50	0.75	1.16	15,748

Vendor	0.70	0.30	12.7	5.77	0.07	0.14	2,224	2,225	0.07	223	223	—	9,056	9,056	0.31	1.30	0.35	9,451
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.30	6.14	4.22	49.5	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,131	11,131	0.32	0.50	13.8	11,301
Vendor	0.51	0.22	8.84	4.04	0.05	0.10	1,589	1,589	0.05	159	159	—	6,464	6,464	0.22	0.93	4.11	6,750
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.15	1.12	0.77	9.04	0.00	0.00	2,147	2,147	0.00	215	215	—	1,843	1,843	0.05	0.08	2.28	1,871
Vendor	0.09	0.04	1.61	0.74	0.01	0.02	290	290	0.01	29.0	29.0	—	1,070	1,070	0.04	0.15	0.68	1,117
Hauling	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	0.00

3.56. Building Construction (2031) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	0.66	5.80	9.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.06	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.05	8.88	4.63	76.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,447	16,447	0.39	0.70	44.7	16,709
Vendor	0.71	0.32	12.0	5.57	0.07	0.14	2,224	2,225	0.07	223	223	—	9,044	9,044	0.31	1.30	13.3	9,452
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.99	8.71	6.61	72.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,510	15,510	0.50	0.75	1.16	15,748
Vendor	0.70	0.30	12.7	5.77	0.07	0.14	2,224	2,225	0.07	223	223	—	9,056	9,056	0.31	1.30	0.35	9,451
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.30	6.14	4.22	49.5	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,131	11,131	0.32	0.50	13.8	11,301
Vendor	0.51	0.22	8.84	4.04	0.05	0.10	1,589	1,589	0.05	159	159	—	6,464	6,464	0.22	0.93	4.11	6,750
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.15	1.12	0.77	9.04	0.00	0.00	2,147	2,147	0.00	215	215	—	1,843	1,843	0.05	0.08	2.28	1,871

Vendor	0.09	0.04	1.61	0.74	0.01	0.02	290	290	0.01	29.0	29.0	—	1,070	1,070	0.04	0.15	0.68	1,117
Hauling	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	0.00

3.57. Building Construction (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.64	9.16	0.02	0.16	—	0.16	0.15	—	0.15	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.03	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.60	7.90	4.57	71.3	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,195	16,195	0.34	0.70	40.3	16,451
Vendor	0.64	0.32	11.5	5.41	0.07	0.07	2,224	2,225	0.07	223	223	—	8,750	8,750	0.30	1.30	11.4	9,156
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.49	7.74	5.96	68.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,274	15,274	0.45	0.75	1.04	15,511
Vendor	0.62	0.28	12.3	5.53	0.07	0.07	2,224	2,225	0.07	223	223	—	8,763	8,763	0.30	1.30	0.30	9,157
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.04	5.50	3.81	46.4	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	10,992	10,992	0.28	0.50	12.5	11,160
Vendor	0.45	0.22	8.55	3.89	0.05	0.05	1,593	1,593	0.05	160	160	—	6,271	6,271	0.21	0.93	3.54	6,557
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.10	1.00	0.70	8.47	0.00	0.00	2,153	2,153	0.00	215	215	—	1,820	1,820	0.05	0.08	2.06	1,848
Vendor	0.08	0.04	1.56	0.71	0.01	0.01	291	291	0.01	29.1	29.1	—	1,038	1,038	0.04	0.15	0.59	1,086
Hauling	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	0.00

3.58. Building Construction (2032) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.64	9.16	0.02	0.16	—	0.16	0.15	—	0.15	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.03	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.60	7.90	4.57	71.3	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,195	16,195	0.34	0.70	40.3	16,451
Vendor	0.64	0.32	11.5	5.41	0.07	0.07	2,224	2,225	0.07	223	223	—	8,750	8,750	0.30	1.30	11.4	9,156
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.49	7.74	5.96	68.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,274	15,274	0.45	0.75	1.04	15,511

Vendor	0.62	0.28	12.3	5.53	0.07	0.07	2,224	2,225	0.07	223	223	—	8,763	8,763	0.30	1.30	0.30	9,157
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.04	5.50	3.81	46.4	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	10,992	10,992	0.28	0.50	12.5	11,160
Vendor	0.45	0.22	8.55	3.89	0.05	0.05	1,593	1,593	0.05	160	160	—	6,271	6,271	0.21	0.93	3.54	6,557
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.10	1.00	0.70	8.47	0.00	0.00	2,153	2,153	0.00	215	215	—	1,820	1,820	0.05	0.08	2.06	1,848
Vendor	0.08	0.04	1.56	0.71	0.01	0.01	291	291	0.01	29.1	29.1	—	1,038	1,038	0.04	0.15	0.59	1,086
Hauling	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	0.00

3.59. Building Construction (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.48	9.13	0.02	0.15	—	0.15	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.00	1.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.27	7.57	3.99	67.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,963	15,963	0.34	0.70	36.2	16,215
Vendor	0.63	0.32	11.2	5.17	0.07	0.07	2,224	2,225	0.07	223	223	—	8,465	8,465	0.30	1.23	9.74	8,847
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.21	7.51	5.38	63.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,056	15,056	0.45	0.70	0.94	15,276
Vendor	0.61	0.30	11.8	5.36	0.07	0.07	2,224	2,225	0.07	223	223	—	8,478	8,478	0.30	1.23	0.25	8,851
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.82	5.33	3.35	43.5	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,806	10,806	0.28	0.50	11.1	10,972
Vendor	0.44	0.22	8.27	3.76	0.05	0.05	1,589	1,589	0.05	159	159	—	6,050	6,050	0.21	0.88	3.01	6,320
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.06	0.97	0.61	7.93	0.00	0.00	2,147	2,147	0.00	215	215	—	1,789	1,789	0.05	0.08	1.84	1,817

Vendor	0.08	0.04	1.51	0.69	0.01	0.01	290	290	0.01	29.0	29.0	—	1,002	1,002	0.04	0.15	0.50	1,046
Hauling	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	0.00

3.60. Building Construction (2033) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.48	9.13	0.02	0.15	—	0.15	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.00	1.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.27	7.57	3.99	67.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,963	15,963	0.34	0.70	36.2	16,215
Vendor	0.63	0.32	11.2	5.17	0.07	0.07	2,224	2,225	0.07	223	223	—	8,465	8,465	0.30	1.23	9.74	8,847
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.21	7.51	5.38	63.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,056	15,056	0.45	0.70	0.94	15,276
Vendor	0.61	0.30	11.8	5.36	0.07	0.07	2,224	2,225	0.07	223	223	—	8,478	8,478	0.30	1.23	0.25	8,851
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.82	5.33	3.35	43.5	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,806	10,806	0.28	0.50	11.1	10,972
Vendor	0.44	0.22	8.27	3.76	0.05	0.05	1,589	1,589	0.05	159	159	—	6,050	6,050	0.21	0.88	3.01	6,320
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.06	0.97	0.61	7.93	0.00	0.00	2,147	2,147	0.00	215	215	—	1,789	1,789	0.05	0.08	1.84	1,817
Vendor	0.08	0.04	1.51	0.69	0.01	0.01	290	290	0.01	29.0	29.0	—	1,002	1,002	0.04	0.15	0.50	1,046
Hauling	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	0.00

3.61. Building Construction (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	0.62	5.37	9.12	0.02	0.14	—	0.14	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.98	1.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.87	7.23	3.93	62.5	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,745	15,745	0.34	0.17	32.2	15,835
Vendor	0.63	0.32	10.8	5.02	0.07	0.07	2,224	2,225	0.07	223	223	—	8,191	8,191	0.23	1.23	8.33	8,571
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.87	7.18	4.79	59.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,850	14,850	0.39	0.70	0.83	15,068

Vendor	0.61	0.30	11.5	5.20	0.07	0.07	2,224	2,225	0.07	223	223	—	8,204	8,204	0.23	1.23	0.22	8,576
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.54	5.05	2.93	40.3	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,659	10,659	0.28	0.50	9.94	10,824
Vendor	0.44	0.22	7.97	3.64	0.05	0.05	1,589	1,589	0.05	159	159	—	5,855	5,855	0.16	0.88	2.57	6,122
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.01	0.92	0.53	7.35	0.00	0.00	2,147	2,147	0.00	215	215	—	1,765	1,765	0.05	0.08	1.65	1,792
Vendor	0.08	0.04	1.45	0.67	0.01	0.01	290	290	0.01	29.0	29.0	—	969	969	0.03	0.15	0.43	1,014
Hauling	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	0.00

3.62. Building Construction (2034) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	0.62	5.37	9.12	0.02	0.14	—	0.14	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.98	1.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.87	7.23	3.93	62.5	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,745	15,745	0.34	0.17	32.2	15,835
Vendor	0.63	0.32	10.8	5.02	0.07	0.07	2,224	2,225	0.07	223	223	—	8,191	8,191	0.23	1.23	8.33	8,571
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.87	7.18	4.79	59.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,850	14,850	0.39	0.70	0.83	15,068
Vendor	0.61	0.30	11.5	5.20	0.07	0.07	2,224	2,225	0.07	223	223	—	8,204	8,204	0.23	1.23	0.22	8,576
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.54	5.05	2.93	40.3	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,659	10,659	0.28	0.50	9.94	10,824
Vendor	0.44	0.22	7.97	3.64	0.05	0.05	1,589	1,589	0.05	159	159	—	5,855	5,855	0.16	0.88	2.57	6,122
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.01	0.92	0.53	7.35	0.00	0.00	2,147	2,147	0.00	215	215	—	1,765	1,765	0.05	0.08	1.65	1,792

Vendor	0.08	0.04	1.45	0.67	0.01	0.01	290	290	0.01	29.0	29.0	—	969	969	0.03	0.15	0.43	1,014
Hauling	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	0.00

3.63. Building Construction (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.24	9.06	0.02	0.13	—	0.13	0.12	—	0.12	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.96	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.71	7.07	3.35	58.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,545	15,545	0.28	0.17	28.4	15,631
Vendor	0.56	0.32	10.5	4.94	0.07	0.07	2,224	2,225	0.07	223	223	—	7,931	7,931	0.21	1.15	7.02	8,288
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.12	6.95	4.74	55.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,663	14,663	0.39	0.70	0.74	14,881
Vendor	0.52	0.30	11.1	5.04	0.07	0.07	2,224	2,225	0.07	223	223	—	7,945	7,945	0.21	1.15	0.18	8,294
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.05	4.93	2.89	38.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,524	10,524	0.24	0.50	8.81	10,687
Vendor	0.39	0.22	7.77	3.59	0.05	0.05	1,589	1,589	0.05	159	159	—	5,669	5,669	0.15	0.82	2.17	5,921
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.92	0.90	0.53	6.93	0.00	0.00	2,147	2,147	0.00	215	215	—	1,742	1,742	0.04	0.08	1.46	1,769
Vendor	0.07	0.04	1.42	0.65	0.01	0.01	290	290	0.01	29.0	29.0	—	939	939	0.03	0.14	0.36	980
Hauling	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	0.00

3.64. Building Construction (2035) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.24	9.06	0.02	0.13	—	0.13	0.12	—	0.12	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.96	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.71	7.07	3.35	58.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,545	15,545	0.28	0.17	28.4	15,631
Vendor	0.56	0.32	10.5	4.94	0.07	0.07	2,224	2,225	0.07	223	223	—	7,931	7,931	0.21	1.15	7.02	8,288
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.12	6.95	4.74	55.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,663	14,663	0.39	0.70	0.74	14,881

Vendor	0.52	0.30	11.1	5.04	0.07	0.07	2,224	2,225	0.07	223	223	—	7,945	7,945	0.21	1.15	0.18	8,294
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.05	4.93	2.89	38.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,524	10,524	0.24	0.50	8.81	10,687
Vendor	0.39	0.22	7.77	3.59	0.05	0.05	1,589	1,589	0.05	159	159	—	5,669	5,669	0.15	0.82	2.17	5,921
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.92	0.90	0.53	6.93	0.00	0.00	2,147	2,147	0.00	215	215	—	1,742	1,742	0.04	0.08	1.46	1,769
Vendor	0.07	0.04	1.42	0.65	0.01	0.01	290	290	0.01	29.0	29.0	—	939	939	0.03	0.14	0.36	980
Hauling	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	0.00

3.65. Building Construction (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.10	9.03	0.02	0.12	—	0.12	0.11	—	0.11	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.93	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.95	6.84	3.29	54.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,354	15,354	0.28	0.17	25.0	15,436
Vendor	0.56	0.32	10.2	4.79	0.07	0.07	2,224	2,225	0.07	223	223	—	7,698	7,698	0.21	1.15	5.90	8,053
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.01	6.84	4.10	52.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,483	14,483	0.39	0.70	0.65	14,701
Vendor	0.52	0.30	10.9	4.96	0.07	0.07	2,224	2,225	0.07	223	223	—	7,711	7,711	0.21	1.15	0.15	8,061
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.86	4.78	2.48	35.7	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	10,424	10,424	0.24	0.12	7.75	10,473
Vendor	0.39	0.22	7.55	3.48	0.05	0.05	1,593	1,593	0.05	160	160	—	5,518	5,518	0.15	0.83	1.82	5,770
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.89	0.87	0.45	6.52	0.00	0.00	2,153	2,153	0.00	215	215	—	1,726	1,726	0.04	0.02	1.28	1,734

Vendor	0.07	0.04	1.38	0.64	0.01	0.01	291	291	0.01	29.1	29.1	—	913	913	0.03	0.14	0.30	955
Hauling	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	0.00

3.66. Building Construction (2036) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.10	9.03	0.02	0.12	—	0.12	0.11	—	0.11	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.93	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.95	6.84	3.29	54.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,354	15,354	0.28	0.17	25.0	15,436
Vendor	0.56	0.32	10.2	4.79	0.07	0.07	2,224	2,225	0.07	223	223	—	7,698	7,698	0.21	1.15	5.90	8,053
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.01	6.84	4.10	52.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,483	14,483	0.39	0.70	0.65	14,701
Vendor	0.52	0.30	10.9	4.96	0.07	0.07	2,224	2,225	0.07	223	223	—	7,711	7,711	0.21	1.15	0.15	8,061
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.86	4.78	2.48	35.7	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	10,424	10,424	0.24	0.12	7.75	10,473
Vendor	0.39	0.22	7.55	3.48	0.05	0.05	1,593	1,593	0.05	160	160	—	5,518	5,518	0.15	0.83	1.82	5,770
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.89	0.87	0.45	6.52	0.00	0.00	2,153	2,153	0.00	215	215	—	1,726	1,726	0.04	0.02	1.28	1,734
Vendor	0.07	0.04	1.38	0.64	0.01	0.01	291	291	0.01	29.1	29.1	—	913	913	0.03	0.14	0.30	955
Hauling	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	0.00

3.67. Building Construction (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.58	4.99	8.93	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.91	1.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.62	6.51	2.76	52.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,186	15,186	0.28	0.17	21.8	15,265
Vendor	0.56	0.32	9.99	4.72	0.07	0.07	2,224	2,225	0.07	223	223	—	7,487	7,487	0.21	1.08	4.82	7,820
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.56	6.45	4.10	49.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,325	14,325	0.34	0.17	0.57	14,384

Vendor	0.51	0.28	10.6	4.88	0.07	0.07	2,224	2,225	0.07	223	223	—	7,501	7,501	0.21	1.08	0.13	7,829
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.61	4.53	2.43	33.4	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,282	10,282	0.24	0.12	6.76	10,330
Vendor	0.38	0.21	7.39	3.42	0.05	0.05	1,589	1,589	0.05	159	159	—	5,352	5,352	0.15	0.77	1.49	5,588
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.84	0.83	0.44	6.10	0.00	0.00	2,147	2,147	0.00	215	215	—	1,702	1,702	0.04	0.02	1.12	1,710
Vendor	0.07	0.04	1.35	0.62	0.01	0.01	290	290	0.01	29.0	29.0	—	886	886	0.03	0.13	0.25	925
Hauling	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	0.00

3.68. Building Construction (2037) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.58	4.99	8.93	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.91	1.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.62	6.51	2.76	52.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,186	15,186	0.28	0.17	21.8	15,265
Vendor	0.56	0.32	9.99	4.72	0.07	0.07	2,224	2,225	0.07	223	223	—	7,487	7,487	0.21	1.08	4.82	7,820
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.56	6.45	4.10	49.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,325	14,325	0.34	0.17	0.57	14,384
Vendor	0.51	0.28	10.6	4.88	0.07	0.07	2,224	2,225	0.07	223	223	—	7,501	7,501	0.21	1.08	0.13	7,829
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.61	4.53	2.43	33.4	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,282	10,282	0.24	0.12	6.76	10,330
Vendor	0.38	0.21	7.39	3.42	0.05	0.05	1,589	1,589	0.05	159	159	—	5,352	5,352	0.15	0.77	1.49	5,588
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.84	0.83	0.44	6.10	0.00	0.00	2,147	2,147	0.00	215	215	—	1,702	1,702	0.04	0.02	1.12	1,710

Vendor	0.07	0.04	1.35	0.62	0.01	0.01	290	290	0.01	29.0	29.0	—	886	886	0.03	0.13	0.25	925
Hauling	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	0.00

3.69. Building Construction (2038) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	4.92	8.90	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.90	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.28	6.17	2.70	49.3	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,036	15,036	0.22	0.17	18.9	15,110
Vendor	0.49	0.32	9.74	4.65	0.07	0.07	2,224	2,225	0.07	223	223	—	7,297	7,297	0.21	1.08	3.97	7,630
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.34	6.17	3.51	46.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,183	14,183	0.34	0.17	0.49	14,242
Vendor	0.44	0.28	10.3	4.75	0.07	0.07	2,224	2,225	0.07	223	223	—	7,311	7,311	0.20	1.08	0.10	7,639
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.41	4.33	2.43	31.7	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,180	10,180	0.20	0.12	5.84	10,227
Vendor	0.32	0.21	7.21	3.32	0.05	0.05	1,589	1,589	0.05	159	159	—	5,217	5,217	0.14	0.77	1.23	5,452
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.79	0.44	5.78	0.00	0.00	2,147	2,147	0.00	215	215	—	1,685	1,685	0.03	0.02	0.97	1,693
Vendor	0.06	0.04	1.31	0.61	0.01	0.01	290	290	0.01	29.0	29.0	—	864	864	0.02	0.13	0.20	903
Hauling	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	0.00

3.70. Building Construction (2038) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	4.92	8.90	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.90	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.28	6.17	2.70	49.3	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,036	15,036	0.22	0.17	18.9	15,110
Vendor	0.49	0.32	9.74	4.65	0.07	0.07	2,224	2,225	0.07	223	223	—	7,297	7,297	0.21	1.08	3.97	7,630
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.34	6.17	3.51	46.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,183	14,183	0.34	0.17	0.49	14,242

Vendor	0.44	0.28	10.3	4.75	0.07	0.07	2,224	2,225	0.07	223	223	—	7,311	7,311	0.20	1.08	0.10	7,639
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.41	4.33	2.43	31.7	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,180	10,180	0.20	0.12	5.84	10,227
Vendor	0.32	0.21	7.21	3.32	0.05	0.05	1,589	1,589	0.05	159	159	—	5,217	5,217	0.14	0.77	1.23	5,452
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.79	0.44	5.78	0.00	0.00	2,147	2,147	0.00	215	215	—	1,685	1,685	0.03	0.02	0.97	1,693
Vendor	0.06	0.04	1.31	0.61	0.01	0.01	290	290	0.01	29.0	29.0	—	864	864	0.02	0.13	0.20	903
Hauling	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	0.00

3.71. Building Construction (2039) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.57	4.84	8.86	0.02	0.10	—	0.10	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.10	0.88	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.95	5.84	2.65	47.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,900	14,900	0.22	0.17	16.3	14,972
Vendor	0.45	0.30	9.55	4.51	0.07	0.07	2,224	2,225	0.07	223	223	—	7,126	7,126	0.13	1.08	3.24	7,456
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.00	5.89	3.46	44.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,056	14,056	0.34	0.17	0.42	14,115
Vendor	0.43	0.27	10.2	4.66	0.07	0.07	2,224	2,225	0.07	223	223	—	7,140	7,140	0.13	1.08	0.08	7,467
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.25	4.13	2.01	30.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,089	10,089	0.20	0.12	5.04	10,134
Vendor	0.31	0.20	7.07	3.27	0.05	0.05	1,589	1,589	0.05	159	159	—	5,094	5,094	0.09	0.77	1.00	5,328
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.78	0.75	0.37	5.48	0.00	0.00	2,147	2,147	0.00	215	215	—	1,670	1,670	0.03	0.02	0.83	1,678

Vendor	0.06	0.04	1.29	0.60	0.01	0.01	290	290	0.01	29.0	29.0	—	843	843	0.02	0.13	0.17	882
Hauling	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	0.00

3.72. Building Construction (2039) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.57	4.84	8.86	0.02	0.10	—	0.10	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.10	0.88	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.95	5.84	2.65	47.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,900	14,900	0.22	0.17	16.3	14,972
Vendor	0.45	0.30	9.55	4.51	0.07	0.07	2,224	2,225	0.07	223	223	—	7,126	7,126	0.13	1.08	3.24	7,456
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.00	5.89	3.46	44.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,056	14,056	0.34	0.17	0.42	14,115
Vendor	0.43	0.27	10.2	4.66	0.07	0.07	2,224	2,225	0.07	223	223	—	7,140	7,140	0.13	1.08	0.08	7,467
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.25	4.13	2.01	30.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,089	10,089	0.20	0.12	5.04	10,134
Vendor	0.31	0.20	7.07	3.27	0.05	0.05	1,589	1,589	0.05	159	159	—	5,094	5,094	0.09	0.77	1.00	5,328
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.78	0.75	0.37	5.48	0.00	0.00	2,147	2,147	0.00	215	215	—	1,670	1,670	0.03	0.02	0.83	1,678
Vendor	0.06	0.04	1.29	0.60	0.01	0.01	290	290	0.01	29.0	29.0	—	843	843	0.02	0.13	0.17	882
Hauling	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	0.00

3.73. Building Construction (2040) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.71	12.4	0.02	0.14	—	0.14	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.61	5.50	2.87	42.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	13,942	13,942	0.28	0.17	0.36	13,999
Vendor	0.43	0.27	9.98	4.59	0.07	0.07	2,224	2,225	0.07	223	223	—	6,985	6,985	0.13	1.01	0.07	7,290
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	32.2	32.2	0.00	3.22	3.22	—	27.4	27.4	< 0.005	< 0.005	0.01	27.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	4.35	4.35	< 0.005	0.44	0.44	—	13.7	13.7	< 0.005	< 0.005	< 0.005	14.3
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	5.88	5.88	0.00	0.59	0.59	—	4.54	4.54	< 0.005	< 0.005	< 0.005	4.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.79	0.79	< 0.005	0.08	0.08	—	2.26	2.26	< 0.005	< 0.005	< 0.005	2.36
Hauling	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	0.00

3.74. Building Construction (2040) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.71	12.4	0.02	0.14	—	0.14	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.61	5.50	2.87	42.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	13,942	13,942	0.28	0.17	0.36	13,999
Vendor	0.43	0.27	9.98	4.59	0.07	0.07	2,224	2,225	0.07	223	223	—	6,985	6,985	0.13	1.01	0.07	7,290
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	32.2	32.2	0.00	3.22	3.22	—	27.4	27.4	< 0.005	< 0.005	0.01	27.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	4.35	4.35	< 0.005	0.44	0.44	—	13.7	13.7	< 0.005	< 0.005	< 0.005	14.3
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	5.88	5.88	0.00	0.59	0.59	—	4.54	4.54	< 0.005	< 0.005	< 0.005	4.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.79	0.79	< 0.005	0.08	0.08	—	2.26	2.26	< 0.005	< 0.005	< 0.005	2.36
Hauling	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	0.00

3.75. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.36	0.31	2.81	3.61	0.01	0.14	—	0.14	0.13	—	0.13	—	544	544	0.02	< 0.005	—	546	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.07	0.06	0.51	0.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	90.1	90.1	< 0.005	< 0.005	—	90.4	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.08	0.07	0.05	0.73	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	111	111	0.01	< 0.005	0.48	113	
Vendor	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	0.00	
Hauling	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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Worker	0.08	0.07	0.07	0.69	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.01	106
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	35.1	35.1	0.00	3.51	3.51	—	37.7	37.7	< 0.005	< 0.005	0.08	38.3
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	6.41	6.41	0.00	0.64	0.64	—	6.24	6.24	< 0.005	< 0.005	0.01	6.34
Vendor	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	0.00
Hauling	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	0.00

3.76. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.31	2.81	3.61	0.01	0.14	—	0.14	0.13	—	0.13	—	544	544	0.02	< 0.005	—	546
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.51	0.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	90.1	90.1	< 0.005	< 0.005	—	90.4
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.73	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	111	111	0.01	< 0.005	0.48	113
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.01	106
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	35.1	35.1	0.00	3.51	3.51	—	37.7	37.7	< 0.005	< 0.005	0.08	38.3

Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	6.41	6.41	0.00	0.64	0.64	—	6.24	6.24	< 0.005	< 0.005	0.01	6.34
Vendor	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	0.00
Hauling	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	0.00

3.77. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	4.03	5.39	0.01	0.19	—	0.19	0.17	—	0.17	—	816	816	0.03	0.01	—	819

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.73	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	136
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	108	108	0.01	< 0.005	0.45	110
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.01	104
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	52.6	52.6	0.00	5.27	5.27	—	55.5	55.5	< 0.005	< 0.005	0.10	56.4
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	9.61	9.61	0.00	0.96	0.96	—	9.18	9.18	< 0.005	< 0.005	0.02	9.33
Vendor	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	0.00

Hauling	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	0.00	0.00
---------	------	------	------	------	------	------	------	------	------	------	------	------	---	------	------	------	------	------	------

3.78. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	4.03	5.39	0.01	0.19	—	0.19	0.17	—	0.17	—	816	816	0.03	0.01	—	819	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.73	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	136	

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	108	108	0.01	< 0.005	0.45	110
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.01	104
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	52.6	52.6	0.00	5.27	5.27	—	55.5	55.5	< 0.005	< 0.005	0.10	56.4
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	9.61	9.61	0.00	0.96	0.96	—	9.18	9.18	< 0.005	< 0.005	0.02	9.33
Vendor	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	0.00
Hauling	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	0.00

3.79. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Architectural Coatings	—	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99
Architectural Coatings	—	4.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.75	2.47	2.34	23.5	0.00	0.00	3,293	3,293	0.00	330	330	—	3,521	3,521	0.26	0.15	0.42	3,573
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.44	0.39	4.02	0.00	0.00	593	593	0.00	59.3	59.3	—	637	637	0.04	0.03	1.27	647
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.73	0.00	0.00	108	108	0.00	10.8	10.8	—	105	105	0.01	< 0.005	0.21	107
Vendor	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	0.00
Hauling	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	0.00

3.80. Architectural Coating (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1	
Architectural Coatings	—	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99	
Architectural Coatings	—	4.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	2.75	2.47	2.34	23.5	0.00	0.00	3,293	3,293	0.00	330	330	—	3,521	3,521	0.26	0.15	0.42	3,573	
Vendor	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	0.00	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.49	0.44	0.39	4.02	0.00	0.00	593	593	0.00	59.3	59.3	—	637	637	0.04	0.03	1.27	647	
Vendor	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	0.00	

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.73	0.00	0.00	108	108	0.00	10.8	10.8	—	105	105	0.01	< 0.005	0.21	107
Vendor	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	0.00
Hauling	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	0.00

3.81. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	0.11	0.09	0.63	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	—	106	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	—	19.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.57	2.41	1.67	23.0	0.00	0.00	3,293	3,293	0.00	330	330	—	3,664	3,664	0.21	0.15	15.1	3,729
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.55	2.37	2.20	21.8	0.00	0.00	3,293	3,293	0.00	330	330	—	3,453	3,453	0.25	0.15	0.39	3,505
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.79	1.66	1.39	14.8	0.00	0.00	2,352	2,352	0.00	235	235	—	2,478	2,478	0.16	0.11	4.68	2,519
Vendor	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	0.00

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.30	0.25	2.70	0.00	0.00	429	429	0.00	43.0	43.0	—	410	410	0.03	0.02	0.77	417
Vendor	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	0.00
Hauling	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	0.00

3.82. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Off-Road Equipment	0.11	0.09	0.63	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	—	106	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	—	19.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.57	2.41	1.67	23.0	0.00	0.00	3,293	3,293	0.00	330	330	—	3,664	3,664	0.21	0.15	15.1	3,729
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.55	2.37	2.20	21.8	0.00	0.00	3,293	3,293	0.00	330	330	—	3,453	3,453	0.25	0.15	0.39	3,505
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.79	1.66	1.39	14.8	0.00	0.00	2,352	2,352	0.00	235	235	—	2,478	2,478	0.16	0.11	4.68	2,519
Vendor	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	0.00

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.30	0.25	2.70	0.00	0.00	429	429	0.00	43.0	43.0	—	410	410	0.03	0.02	0.77	417
Vendor	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	0.00
Hauling	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	0.00

3.83. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.31	1.31	< 0.005	< 0.005	—	1.31
Architect ural Coatings	—	1.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.22	0.22	< 0.005	< 0.005	—	0.22
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.43	2.26	1.95	20.3	0.00	0.00	3,293	3,293	0.00	330	330	—	3,389	3,389	0.24	0.15	0.36	3,440
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.19	0.00	0.00	32.2	32.2	0.00	3.22	3.22	—	33.3	33.3	< 0.005	< 0.005	0.06	33.9
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	5.88	5.88	0.00	0.59	0.59	—	5.51	5.51	< 0.005	< 0.005	0.01	5.61
Vendor	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	0.00
Hauling	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	0.00

3.84. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.31	1.31	< 0.005	< 0.005	—	1.31
Architectural Coatings	—	1.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.22	0.22	< 0.005	< 0.005	—	0.22
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.43	2.26	1.95	20.3	0.00	0.00	3,293	3,293	0.00	330	330	—	3,389	3,389	0.24	0.15	0.36	3,440
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.19	0.00	0.00	32.2	32.2	0.00	3.22	3.22	—	33.3	33.3	< 0.005	< 0.005	0.06	33.9
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	5.88	5.88	0.00	0.59	0.59	—	5.51	5.51	< 0.005	< 0.005	0.01	5.61
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

General Office Building	10.0	9.85	2.79	18.7	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	744	744	0.41	0.28	0.00	839
Apartments Low Rise	54.3	52.0	25.1	261	0.66	0.31	27.1	27.4	0.29	4.74	5.03	—	66,924	66,924	2.95	3.10	50.6	67,973
Regional Shopping Center	83.3	81.4	25.8	198	0.23	0.16	7.23	7.39	0.15	1.26	1.41	—	22,942	22,942	3.61	2.77	13.5	23,872
Total	148	143	53.6	478	0.89	0.48	34.4	34.8	0.45	6.01	6.46	—	90,611	90,611	6.97	6.16	64.1	92,684
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	10.1	9.84	3.28	27.7	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	763	763	0.54	0.32	0.00	873
Apartments Low Rise	54.4	51.9	29.6	277	0.63	0.31	27.1	27.4	0.29	4.74	5.03	—	63,963	63,963	3.52	3.45	1.31	65,081
Regional Shopping Center	83.7	81.3	30.4	264	0.22	0.16	7.23	7.39	0.15	1.26	1.41	—	22,284	22,284	4.65	3.14	0.35	23,336
Total	148	143	63.3	569	0.86	0.48	34.4	34.8	0.45	6.01	6.46	—	87,011	87,011	8.71	6.92	1.66	89,291
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	1.37	1.34	0.42	3.26	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	94.5	94.5	0.06	0.04	0.00	107
Apartments Low Rise	8.75	8.35	4.52	42.3	0.10	0.05	4.43	4.48	0.05	0.78	0.82	—	9,514	9,514	0.48	0.49	3.24	9,676
Regional Shopping Center	11.9	11.6	4.07	33.0	0.03	0.02	0.98	1.00	0.02	0.17	0.19	—	2,781	2,781	0.55	0.39	0.71	2,911
Total	22.0	21.2	9.01	78.6	0.13	0.07	5.41	5.48	0.07	0.95	1.02	—	12,390	12,390	1.09	0.92	3.95	12,694

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	10.0	9.85	2.79	18.7	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	744	744	0.41	0.28	0.00	839
Apartments Low Rise	54.3	52.0	25.1	261	0.66	0.31	27.1	27.4	0.29	4.74	5.03	—	66,924	66,924	2.95	3.10	50.6	67,973
Regional Shopping Center	83.3	81.4	25.8	198	0.23	0.16	7.23	7.39	0.15	1.26	1.41	—	22,942	22,942	3.61	2.77	13.5	23,872
Total	148	143	53.6	478	0.89	0.48	34.4	34.8	0.45	6.01	6.46	—	90,611	90,611	6.97	6.16	64.1	92,684
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	10.1	9.84	3.28	27.7	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	763	763	0.54	0.32	0.00	873
Apartments Low Rise	54.4	51.9	29.6	277	0.63	0.31	27.1	27.4	0.29	4.74	5.03	—	63,963	63,963	3.52	3.45	1.31	65,081
Regional Shopping Center	83.7	81.3	30.4	264	0.22	0.16	7.23	7.39	0.15	1.26	1.41	—	22,284	22,284	4.65	3.14	0.35	23,336
Total	148	143	63.3	569	0.86	0.48	34.4	34.8	0.45	6.01	6.46	—	87,011	87,011	8.71	6.92	1.66	89,291
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	1.37	1.34	0.42	3.26	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	94.5	94.5	0.06	0.04	0.00	107

Apartme Low Rise	8.75	8.35	4.52	42.3	0.10	0.05	4.43	4.48	0.05	0.78	0.82	—	9,514	9,514	0.48	0.49	3.24	9,676
Regional Shopping Center	11.9	11.6	4.07	33.0	0.03	0.02	0.98	1.00	0.02	0.17	0.19	—	2,781	2,781	0.55	0.39	0.71	2,911
Total	22.0	21.2	9.01	78.6	0.13	0.07	5.41	5.48	0.07	0.95	1.02	—	12,390	12,390	1.09	0.92	3.95	12,694

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,955	5,955	0.96	0.12	—	6,014
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,120	5,120	0.83	0.10	—	5,170
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	4,048	4,048	0.65	0.08	—	4,088
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,122	15,122	2.45	0.30	—	15,272
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,955	5,955	0.96	0.12	—	6,014

Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,120	5,120	0.83	0.10	—	5,170
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	4,048	4,048	0.65	0.08	—	4,088
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,122	15,122	2.45	0.30	—	15,272
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	986	986	0.16	0.02	—	996
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	848	848	0.14	0.02	—	856
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	670	670	0.11	0.01	—	677
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,504	2,504	0.41	0.05	—	2,528

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,955	5,955	0.96	0.12	—	6,014
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,120	5,120	0.83	0.10	—	5,170

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	4,048	4,048	0.65	0.08	—	4,088
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,122	15,122	2.45	0.30	—	15,272
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,955	5,955	0.96	0.12	—	6,014
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,120	5,120	0.83	0.10	—	5,170
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	4,048	4,048	0.65	0.08	—	4,088
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,122	15,122	2.45	0.30	—	15,272
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	986	986	0.16	0.02	—	996
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	848	848	0.14	0.02	—	856
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	670	670	0.11	0.01	—	677
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,504	2,504	0.41	0.05	—	2,528

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 4/19/2023

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.17	3.10	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,696	3,696	0.33	0.01	—	3,706
Apartments Low Rise	2.30	1.15	19.6	8.36	0.13	1.59	—	1.59	1.59	—	1.59	—	24,936	24,936	2.21	0.05	—	25,006
Regional Shopping Center	0.15	0.08	1.40	1.18	0.01	0.11	—	0.11	0.11	—	0.11	—	1,675	1,675	0.15	< 0.005	—	1,680
Total	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	30,307	30,307	2.68	0.06	—	30,391
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.17	3.10	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,696	3,696	0.33	0.01	—	3,706
Apartments Low Rise	2.30	1.15	19.6	8.36	0.13	1.59	—	1.59	1.59	—	1.59	—	24,936	24,936	2.21	0.05	—	25,006
Regional Shopping Center	0.15	0.08	1.40	1.18	0.01	0.11	—	0.11	0.11	—	0.11	—	1,675	1,675	0.15	< 0.005	—	1,680
Total	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	30,307	30,307	2.68	0.06	—	30,391
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.06	0.03	0.57	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	612	612	0.05	< 0.005	—	614
Apartments Low Rise	0.42	0.21	3.59	1.53	0.02	0.29	—	0.29	0.29	—	0.29	—	4,129	4,129	0.37	0.01	—	4,140
Regional Shopping Center	0.03	0.01	0.26	0.22	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278

Total	0.51	0.25	4.41	2.22	0.03	0.35	—	0.35	0.35	—	0.35	—	5,018	5,018	0.44	0.01	—	5,032
-------	------	------	------	------	------	------	---	------	------	---	------	---	-------	-------	------	------	---	-------

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.17	3.10	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,696	3,696	0.33	0.01	—	3,706
Apartments Low Rise	2.30	1.15	19.6	8.36	0.13	1.59	—	1.59	1.59	—	1.59	—	24,936	24,936	2.21	0.05	—	25,006
Regional Shopping Center	0.15	0.08	1.40	1.18	0.01	0.11	—	0.11	0.11	—	0.11	—	1,675	1,675	0.15	< 0.005	—	1,680
Total	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	30,307	30,307	2.68	0.06	—	30,391
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.17	3.10	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,696	3,696	0.33	0.01	—	3,706
Apartments Low Rise	2.30	1.15	19.6	8.36	0.13	1.59	—	1.59	1.59	—	1.59	—	24,936	24,936	2.21	0.05	—	25,006
Regional Shopping Center	0.15	0.08	1.40	1.18	0.01	0.11	—	0.11	0.11	—	0.11	—	1,675	1,675	0.15	< 0.005	—	1,680
Total	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	30,307	30,307	2.68	0.06	—	30,391
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	0.06	0.03	0.57	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	612	612	0.05	< 0.005	—	614
Apartments Low Rise	0.42	0.21	3.59	1.53	0.02	0.29	—	0.29	0.29	—	0.29	—	4,129	4,129	0.37	0.01	—	4,140
Regional Shopping Center	0.03	0.01	0.26	0.22	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
Total	0.51	0.25	4.41	2.22	0.03	0.35	—	0.35	0.35	—	0.35	—	5,018	5,018	0.44	0.01	—	5,032

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	95.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	25.8	24.2	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	—	688	688	0.03	0.01	—	691
Total	25.8	133	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	0.00	688	688	0.03	0.01	—	691
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	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
Consumer Products	—	95.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	109	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	17.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.23	3.03	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	—	78.1	78.1	< 0.005	< 0.005	—	78.3
Total	3.23	22.9	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	78.1	78.1	< 0.005	< 0.005	—	78.3

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	95.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	25.8	24.2	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	—	688	688	0.03	0.01	—	691
Total	25.8	133	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	0.00	688	688	0.03	0.01	—	691
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	95.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	109	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	17.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.23	3.03	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	—	78.1	78.1	< 0.005	< 0.005	—	78.3
Total	3.23	22.9	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	78.1	78.1	< 0.005	< 0.005	—	78.3

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	174	274	448	17.9	0.43	—	1,022
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	233	367	600	23.9	0.57	—	1,369
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	124	196	320	12.8	0.31	—	731
Total	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	174	274	448	17.9	0.43	—	1,022
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	233	367	600	23.9	0.57	—	1,369
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	124	196	320	12.8	0.31	—	731
Total	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	28.8	45.4	74.1	2.96	0.07	—	169

Apartment Low Rise	—	—	—	—	—	—	—	—	—	—	—	38.5	60.8	99.3	3.96	0.10	—	227
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	20.6	32.4	53.0	2.11	0.05	—	121
Total	—	—	—	—	—	—	—	—	—	—	—	87.8	139	226	9.03	0.22	—	517

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	139	219	358	14.3	0.34	—	817
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	186	294	480	19.1	0.46	—	1,095
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	99.4	157	256	10.2	0.25	—	585
Total	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	139	219	358	14.3	0.34	—	817
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	186	294	480	19.1	0.46	—	1,095

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	99.4	157	256	10.2	0.25	—	585
Total	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23.0	36.3	59.3	2.36	0.06	—	135
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	30.8	48.6	79.4	3.17	0.08	—	181
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	16.4	26.0	42.4	1.69	0.04	—	96.8
Total	—	—	—	—	—	—	—	—	—	—	—	70.3	111	181	7.22	0.17	—	413

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	256	0.00	256	25.5	0.00	—	894
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	495	0.00	495	49.5	0.00	—	1,732

Total	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	256	0.00	256	25.5	0.00	—	894
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	495	0.00	495	49.5	0.00	—	1,732
Total	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	42.3	0.00	42.3	4.23	0.00	—	148
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	145	0.00	145	14.4	0.00	—	506
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	82.0	0.00	82.0	8.19	0.00	—	287
Total	—	—	—	—	—	—	—	—	—	—	—	269	0.00	269	26.9	0.00	—	941

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	256	0.00	256	25.5	0.00	—	894
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	495	0.00	495	49.5	0.00	—	1,732
Total	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	256	0.00	256	25.5	0.00	—	894
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	495	0.00	495	49.5	0.00	—	1,732
Total	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	42.3	0.00	42.3	4.23	0.00	—	148
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	145	0.00	145	14.4	0.00	—	506
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	82.0	0.00	82.0	8.19	0.00	—	287
Total	—	—	—	—	—	—	—	—	—	—	—	269	0.00	269	26.9	0.00	—	941

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.24	1.24
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.0	22.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.20	4.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.24	1.24
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.0	22.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.20	4.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.65	3.65
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.70	0.70
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.24	1.24
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.0	22.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.20	4.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.24	1.24

Apartment Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.0	22.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.20	4.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.65	3.65
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.70	0.70
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetatio	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
---------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2024	01/1/2040	5.00	4,175	—
Site Preparation	Site Preparation	2/03/2024	10/11/2024	5.00	180	—
Grading	Grading	03/02/2024	12/12/2025	5.00	465	—
Building Construction	Building Construction	04/01/2024	1/1/2040	5.00	4,110	—
Paving	Paving	07/1/2024	10/3/2025	5.00	330	—
Architectural Coating	Architectural Coating	10/01/2024	1/5/2026	5.00	330	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
------------	----------------	-----------	-------------	----------------	---------------	------------	-------------

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38

Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT

Demolition	Hauling	4.56	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2,534	9.47	LDA,LDT1,LDT2
Building Construction	Vendor	538	6.03	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	507	9.47	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.03	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT
Demolition	Hauling	4.56	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2,534	9.47	LDA,LDT1,LDT2
Building Construction	Vendor	538	6.03	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	507	9.47	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.03	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	5,880,600	1,960,200	2,077,796	692,599	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,653,879	—
Site Preparation	—	—	270	0.00	—
Grading	—	—	1,395	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Apartments Low Rise	—	0%
Regional Shopping Center	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005
2029	0.00	204	0.03	< 0.005
2030	0.00	204	0.03	< 0.005
2031	0.00	204	0.03	< 0.005
2032	0.00	204	0.03	< 0.005
2033	0.00	204	0.03	< 0.005
2034	0.00	204	0.03	< 0.005
2035	0.00	204	0.03	< 0.005
2036	0.00	204	0.03	< 0.005
2037	0.00	204	0.03	< 0.005
2038	0.00	204	0.03	< 0.005
2039	0.00	204	0.03	< 0.005
2040	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	4,967	1,127	357	1,372,457	0.00	0.00	0.00	0.00
Apartments Low Rise	21,257	23,639	18,237	7,725,594	89,281	99,282	76,596	32,447,496
Regional Shopping Center	33,031	40,355	18,462	11,678,631	19,673	26,465	12,108	7,140,421

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	4,967	1,127	357	1,372,457	0.00	0.00	0.00	0.00
Apartments Low Rise	21,257	23,639	18,237	7,725,594	89,281	99,282	76,596	32,447,496
Regional Shopping Center	33,031	40,355	18,462	11,678,631	19,673	26,465	12,108	7,140,421

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	2904

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	2904
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
5880600	1,960,200	2,077,796	692,599	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	10,655,421	204	0.0330	0.0040	11,531,783
Apartments Low Rise	9,160,950	204	0.0330	0.0040	77,808,163
Regional Shopping Center	7,242,543	204	0.0330	0.0040	5,226,267

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	10,655,421	204	0.0330	0.0040	11,531,783
Apartments Low Rise	9,160,950	204	0.0330	0.0040	77,808,163
Regional Shopping Center	7,242,543	204	0.0330	0.0040	5,226,267

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	90,644,211	0.00
Apartments Low Rise	121,407,818	0.00
Regional Shopping Center	64,813,456	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	72,515,369	0.00
Apartments Low Rise	97,126,255	0.00
Regional Shopping Center	51,850,765	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	474.30	0.00
Apartments Low Rise	1619.68	0.00
Regional Shopping Center	918.75	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	474.30	0.00
Apartments Low Rise	1619.68	0.00
Regional Shopping Center	918.75	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
--------------------------	---	--------	-------	------	------	------	------

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
----------------	-----------	-------------	----------------	---------------	------------	-------------

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
----------------	-----------	-------------	----------------	---------------	------------	-------------

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
----------------	-----------	----------------	---------------	----------------	------------	-------------

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
----------------	-----------	--------	--------------------------	------------------------------	------------------------------

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.01	annual days of extreme heat
Extreme Precipitation	1.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	31.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	10.6

AQ-PM	2.56
AQ-DPM	25.6
Drinking Water	49.2
Lead Risk Housing	42.6
Pesticides	80.5
Toxic Releases	5.90
Traffic	35.6
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	59.6
Haz Waste Facilities/Generators	53.5
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	75.5
Cardio-vascular	44.0
Low Birth Weights	62.6
Socioeconomic Factor Indicators	—
Education	60.9
Housing	50.3
Linguistic	84.9
Poverty	73.3
Unemployment	41.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
-----------	---------------------------------

Economic	—
Above Poverty	38.31643783
Employed	47.36301809
Median HI	28.41011164
Education	—
Bachelor's or higher	27.48620557
High school enrollment	100
Preschool enrollment	78.95547286
Transportation	—
Auto Access	36.49428975
Active commuting	44.45014757
Social	—
2-parent households	2.438085461
Voting	55.37020403
Neighborhood	—
Alcohol availability	24.95829591
Park access	35.51905556
Retail density	51.50776338
Supermarket access	65.81547543
Tree canopy	54.27948159
Housing	—
Homeownership	24.80431156
Housing habitability	36.09649686
Low-inc homeowner severe housing cost burden	13.08866932
Low-inc renter severe housing cost burden	52.59848582
Uncrowded housing	46.38778391
Health Outcomes	—

Insured adults	47.60682664
Arthritis	0.0
Asthma ER Admissions	34.3
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	50.1
Cognitively Disabled	11.3
Physically Disabled	21.7
Heart Attack ER Admissions	42.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	77.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	72.4

Elderly	28.2
English Speaking	32.3
Foreign-born	45.9
Outdoor Workers	59.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	30.3
Traffic Density	40.7
Traffic Access	0.0
Other Indices	—
Hardship	49.5
Other Decision Support	—
2016 Voting	44.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	51.0
Healthy Places Index Score for Project Location (b)	41.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Land uses based on project description. Population based on project description.
Operations: Hearths	—
Characteristics: Project Details	Consistent with project description
Construction: Construction Phases	Phase lengths default except building construction and demolition ending at operational year. Start dates adjusted to estimate worst case impacts.
Construction: Architectural Coatings	MBARD Rule 426
Operations: Architectural Coatings	MBARD Rule 426
Operations: Vehicle Data	Adjusted trip lengths to match VMT.
Operations: Road Dust	Roads would be paved in specific plan area.

S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,

Plaintiffs and Appellants,

v.

COUNTY OF FRESNO,

Defendant and Respondent,

and,

FRIANT RANCH, L.P.,

Real Party in Interest and Respondent.

SUPREME COURT
FILED

APR 13 2015

Frank A. McGuire Clerk
Deputy

After a Published Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726
Honorable Rosendo A. Pena, Jr.

**APPLICATION OF THE SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT FOR LEAVE TO FILE
BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY
AND [*PROPOSED*] BRIEF OF *AMICUS CURIAE***

Kurt R. Wiese, General Counsel (SBN 127251)
*Barbara Baird, Chief Deputy Counsel (SBN 81507)
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765
Telephone: 909-396-2302; Facsimile: 909-396-2961
Email: bbaird@aqmd.gov
Counsel for [Proposed] Amicus Curiae,
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RECEIVED

APR - 8 2015

CLERK SUPREME COURT

TABLE OF CONTENTS

APPLICATION FOR LEAVE TO FILE *amicus curiae* brief..... App-1

HOW THIS BRIEF WILL ASSIST THE COURT App-1

STATEMENT OF INTEREST OF *AMICUS CURIAE*..... App-3

CERTIFICATION REGARDING AUTHORSHIP & FUNDING App-4

BRIEF OF AMICUS CURIAE..... 1

SUMMARY OF ARGUMENT 1

ARGUMENT 2

I. RELEVANT FACTUAL AND LEGAL FRAMEWORK. 2

 A. Air Quality Regulatory Background2

 B. The SCAQMD's Role Under CEQA..... 6

II. THIS COURT SHOULD NOT SET A HARD-AND-FAST
RULE CONCERNING THE EXTENT TO WHICH AN EIR
MUST CORRELATE A PROJECT'S EMISSION OF
POLLUTANTS WITH RESULTING HEALTH IMPACTS..... 8

III. THE QUESTION OF WHETHER AN EIR CONTAINS
SUFFICIENT ANALYSIS TO MEET CEQA'S
REQUIREMENTS IS A MIXED QUESTION OF FACT
AND LAW GOVERNED BY TWO DIFFERENT
STANDARDS OF REVIEW..... 16

 A. Standard of Review for Feasibility Determination and
Sufficiency as an Informative Document 16

 B. Friant Ranch's Rationale for Rejecting the Independent
Judgment Standard of Review is Unsupported by Case
Law..... 23

IV. COURTS MUST SCRUPULOUSLY ENFORCE THE
REQUIREMENTS THAT LEAD AGENCIES CONSULT
WITH AND OBTAIN COMMENTS FROM AIR
DISTRICTS..... 26

CONCLUSION 29

TABLE OF AUTHORITIES

State Cases

<i>Association of Irrigated Residents v. County of Madera</i> (2003) 107 Cal App.4th 1383	1, 9
<i>Bakersfield Citizens for Local Control v. City of Bakersfield</i> (2004) 124 Cal.App.4th 1184	9, 22
<i>Berkeley Keep Jets Over the Bay v. Board of Port Commissioners</i> (2007) 91 Cal.App.4th 1344.....	21, 28
<i>Center for Biological Diversity v. County of San Bernardino</i> (2010) 185 Cal.App.4th 866.	20
<i>Citizens of Goleta Valley v. Bd. of Supervisors</i> (1990) 52 Cal.3d 553	8-9
<i>County of Amador v. El Dorado County Water Agency</i> (1999) 76 Cal.App.4th 931	23
<i>Crocker National Bank v. City and County of San Francisco</i> (1989) 49 Cal.3d 881	18
<i>Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection</i> (2008) 43 Cal.4th 936.....	21
<i>Fall River Wild Trout Foundation v. County of Shasta</i> , (1999) 70 Cal.App.4th 482	27, 28
<i>Gray v. County of Madera</i> (2008) 167 Cal.App.4th 1099	25
<i>Laurel Heights Improvement Assn. v. Regents of the Univ of Cal. ("Laurel Heights I")</i> (1988) 47 Cal.3d 376.....	1, 8, 19, 20, 21, 22
<i>Natural Res. Def. Council v SCAQMD</i> , Los Angeles Superior Court No. BS110792.....	12
<i>Neighbors for Smart Rail v. Exposition Metro Line</i> (2013) 57 Cal.4th 439	15, 20

State Cases (cont'd)

Orange County Air Pollution Control District v. Public Util. Com.
(1971) 4 Cal.3d 945.....27

Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors
(2001) 87 Cal.App.4th 99.....19

Schenck v. County of Sonoma (2011)
198 Cal.App.4th 94926, 27

Sierra Club v. County of Fresno (2014)
226 Cal.App.4th 704 (superseded by grant of review)
172 Cal.Rptr.3d 2719, 23

Sierra Club v. State Bd. Of Forestry (1994)
7 Cal.4th 121528

Uphold Our Heritage v. Town of Woodside (2007)
147 Cal.App.4th 58720

Vineyard Area Citizens for Responsible Growth, Inc.
v. City of Rancho Cordova (2007)
40 Cal.4th 4121, 17, 19, 24, 25, 26

Western Oil & Gas Assn. v. Monterey Bay Unified APCD (1989)
49 Cal.3d 4085

California Statutes

Health & Saf. Code § 396665

Health & Saf. Code § 400003

Health & Saf. Code § 400013

Health & Saf. Code § 404103

Health & Saf. Code §§ 40460, et seq4

Health & Saf. Code § 415085

Health & Saf. Code §§ 42300, et seq5

Health & Saf. Code § 443205

Health & Saf. Code § 443225

Health & Saf. Code § 443605

Pub. Resources Code § 20180.3.....27

Pub. Resources Code § 21061.....19

Pub. Resources Code § 21061.1.....16

California Statutes (cont'd)

Pub. Resources Code § 21080..... 6
Pub. Resources Code § 21080.5..... 6
Pub. Resources Code § 21083.1..... 26
Pub. Resources Code § 21100..... 27
Pub. Resources Code § 21104..... 6, 7 26
Pub. Resources Code §§ 21150-21154 7
Pub. Resources Code § 21151.8..... 25
Pub. Resources Code § 21153 6, 7, 26

California Regulations

Cal. Code Regs., tit. 14, §§ 15000, et seq. ("CEQA Guidelines")

CEQA Guidelines § 15050.....6
CEQA Guidelines § 15051..... 1, 6
CEQA Guidelines § 15073..... 6
CEQA Guidelines § 15086..... 6
CEQA Guidelines § 15088.5.....28
CEQA Guidelines § 15096.....6
CEQA Guidelines § 15126.2.....25
CEQA Guidelines § 15131.....26
CEQA Guidelines § 15144..... 19, 24
CEQA Guidelines § 15151.....9, 18, 19
CEQA Guidelines § 15204..... 1, 9, 21
CEQA Guidelines § 15251..... 6
CEQA Guidelines § 15366.....7
CEQA Guidelines § 15381.....6

Cal. Code Regs., tit. 17, § 601043

Federal Statutes

42 U.S.C. § 7401; CAA § 101 4
42 U.S.C. § 7408; CAA § 108 3
42 U.S.C. § 7409; CAA § 109 4
42 U.S.C. § 7410; CAA § 110 4, 5
42 U.S.C. § 7412; CAA § 112 5
42 U.S.C. § 7502; CAA § 172 5, 13
42 U.S.C. § 7503; CAA § 173 5, 13
42 U.S.C. § 7511a; CAA § 182..... 13
42 U.S.C. § 7521; CAA § 202 4
42 U.S.C. § 7543; CAA § 209 4
42 U.S.C. § 7547; CAA § 213 4

Rules

SCAQMD Rule 1303 7
SCAQMD Rule 1401 5, 8, 9

Other

Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) (Appendix G, “Environmental Checklist Form.”)24

CARB, *Health Impacts Analysis: PM Premature Death Relationship* 14

CARB, *Health Impacts Analysis: PM Mortality Relationship* 16

CARB, Resolution 98-35, Aug. 27, 1998 8

SCAQMD, *Air Quality Analysis Handbook* 13

SCAQMD, *Final 2012 AQMP (Feb. 2013)* 3, 11

SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren E&P, Inc. WTU Central Facility, New Equipment Project (certified July 19, 2011)* 14-15

SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System*, 12

SCAQMD Governing Board Agenda, April 3, 2015, Agenda Item 16, Attachment A 7

SCAQMD, Health Risk Assessment Summary form 10

SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588)* 10

U.S. EPA, Ground Level Ozone 11

U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2 11

U.S. EPA, *Health Effects of Ozone in the General Population*, Figure 9, 11

U.S. EPA, National Ambient Air Quality Standards (NAAQS) 4

U.S. EPA, Particulate Matter (PM) 4

**TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE
SUPREME COURT:**

APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this *amicus* brief in support of neither party.

HOW THIS BRIEF WILL ASSIST THE COURT

SCAQMD's proposed *amicus* brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

- 1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
- 2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review *de novo*.

This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

STATEMENT OF INTEREST OF *AMICUS CURIAE*

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

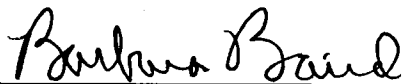
CERTIFICATION REGARDING AUTHORSHIP AND FUNDING

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT
KURT R. WIESE, GENERAL COUNSEL
BARBARA BAIRD, CHIEF DEPUTY COUNSEL

By: 
Barbara Baird

Attorneys for [proposed] Amicus Curiae
SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT

BRIEF OF AMICUS CURIAE

SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, “[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.” (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 [*“Laurel Heights I”*]) Accordingly, “an agency must use its best efforts to find out and disclose all that it reasonably can.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)¹). However, “[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible.” (*Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project’s pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

¹ The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq.*

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

ARGUMENT

I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.

A. Air Quality Regulatory Background

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality

management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “chapter 7” hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Executive Summary” hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called “criteria” document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called “criteria pollutants.” EPA must then establish “national ambient air quality standards” at levels “requisite to protect public health”,

allowing “an adequate margin of safety.” (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), <http://www.epa.gov/air/criteria.html> (last updated Oct. 21, 2014).)²

Under the Clean Air Act, EPA sets emission standards for motor vehicles and “nonroad engines” (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as “stationary sources.” The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified “major” stationary sources use technology to achieve the “lowest achievable emission rate,” and to control minor stationary sources as

² Particulate matter (PM) is further divided into two categories: fine particulate or PM_{2.5} (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM₁₀) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), <http://www.epa.gov/airquality/particulatepollution/> (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called “hazardous air pollutants” calling for EPA to establish “maximum achievable control technology” (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as “toxic air contaminants” (TACs) which are subject to two state-required programs. The first program requires “air toxics control measures” for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare “health risk assessments” for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as “significant,” the facility must implement a “risk reduction plan” to bring its risk levels below “significant” levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv>; then follow “Rule 1401” hyperlink (last visited Apr. 1, 2015).)

B. The SCAQMD's Role Under CEQA

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the “lead agency” that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called “responsible” agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to “trustee agencies” and agencies “with jurisdiction by law” including “authority over resources which may be affected by the project.” (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.³

³ The SCAQMD's CEQA program for its rules is a “Certified Regulatory Program” under which it prepares a “functionally equivalent” document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)

The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.⁴ SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a “responsible agency” for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii>; then follow “Rule 1303” hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with “jurisdiction by law” over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

⁴ The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)

(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015>; then follow “16. Lead Agency Projects and Environmental Documents Received by SCAQMD” hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, *supra*, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT’S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.

Numerous cases hold that courts do not review the correctness of an EIR's conclusions but rather its sufficiency as an informative document. (*Laurel Heights 1*, *supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

Bd. of Supervisors (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must “draw[] a line that divides *sufficient* discussions from those that are *insufficient*.” (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that “[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis.” (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that “the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.” Case law reflects this: “Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible.” (*Association of Irrigated Residents v. County of Madera, supra*, 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be “feasible”; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a “health risk assessment” before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the “maximally exposed individual” (worker and residence exposures). (*See, e.g.*, SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it

is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588)*, pp. 11-16; (last visited Apr. 1, 2015) <http://www.aqmd.gov/home/library/documents-support-material>; "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, <http://www.aqmd.gov/home/forms>; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from

the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants⁵, such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, <http://www.epa.gov/airquality/ozonepollution/> (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, <http://www.epa.gov/ttnamti1/archive/cpreldoc.html> (last visited Apr. 1, 2015).) NO_x and VOC are known as “precursors” of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population*, Figure 9, <http://www.epa.gov/apti/ozonehealth/population.html#levels> (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO_x by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP (February 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Appendix V: Modeling & Attainment Demonstrations” hyperlink,

⁵ See discussion of types of pollutants, *supra*, Part I.A.

pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO_x and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts “internal bank” of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.⁶ The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO_x (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).⁷ (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6) at p. 4.1-35, Table 4.1-29.)

⁶ (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6*, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011>; the follow “26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System” (last visited April 1, 2015).)

⁷ The SCAQMD was able to establish the location of future NO_x and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO_x or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_x with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; <https://www.epa.gov/ttnamti1/archive/cpreldoc.html>; then search “Guideline on Ozone Monitoring Site Selection” click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA “significance” threshold for NO_x and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>; then follow “SCAQMD Air Quality Significance Thresholds” hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a “major” stationary source for “extreme” ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA “significance” finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO_x or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD’s thresholds of significance may determine

that many projects have “significant” air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter (PM_{2.5})⁸, another “criteria” pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of PM_{2.5}. (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional PM_{2.5} in the District, up to 2.82 tons/day (5,650 lbs/day of PM_{2.5}, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this PM_{2.5} health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties.⁹ (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

⁸ SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for “PM_{2.5}” or particulate matter less than 2.5 microns in diameter.

⁹ Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)

E&P, Inc. WTU Central Facility, New Equipment Project (certified July 19, 2011), <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011>; then follow “Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project” hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small PM_{2.5} increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated PM_{2.5} emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the “normal” “existing conditions” CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.¹⁰

¹⁰ Whether a particular study would result in “informational value” is a part of deciding whether it is “feasible.” CEQA defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.¹¹ Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, <http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm> (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.

A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

¹¹ In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

As this Court has explained, “a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts.” (*Vineyard Area Citizens v. City of Rancho Cordova, supra*, 40 Cal.4th at 435.) For questions regarding compliance with proper procedure or other legal questions, courts review an agency’s action de novo under the “independent judgment” test. (*Id.*) On the other hand, courts review factual disputes only for substantial evidence, thereby “accord[ing] greater deference to the agency’s substantive factual conclusions.” (*Id.*)

Here, Friant Ranch and Sierra Club agree that the case involves the question of whether an EIR includes sufficient information regarding a project’s impacts. However, they disagree on the proper standard of review for answering this question: Sierra Club contends that courts use the independent judgment standard to determine whether an EIR’s analysis is sufficient to meet CEQA’s informational purposes,¹² while Friant Ranch contends that the substantial evidence standard applies to this question.

///
///
///
///
///
///
///
///
///
///

¹² Sierra Club acknowledges that courts use the substantial evidence standard when reviewing predicate factual issues, but argues that courts ultimately decide as a matter of law what CEQA requires. (Answering Brief, pp. 14, 23.)

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,¹³ containing two levels of inquiry that should be judged by different standards.¹⁴

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

¹³ Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

¹⁴ Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its *sufficiency as an informative document.*" (*Laurel Heights I, supra*, 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra*, 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.

(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses “in sufficient detail to enable meaningful participation and criticism by the public. ‘[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.’” (*Laurel Heights I, supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority, supra*, 57 Cal.4th 439, 448, 457:

whether “existing conditions” baseline would be misleading or uninformative judged by substantial evidence standard.¹⁵)

If the lead agency’s determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA’s information disclosure provisions, since it would be infeasible to provide additional information. This Court’s decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency’s finding that “the precise parameters of future herbicide use could not be predicted.” *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4th 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact “substantial”. (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

¹⁵ The substantial evidence standard recognizes that the courts "have neither the resources nor the scientific expertise" to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra*, 47 Cal.3d 376, 393.)

requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA’s informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a “project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary.” (*Laurel Heights I, supra*, 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA “does not require a lead agency to conduct every test. . . recommended or demanded by commenters.”].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA’s informational purposes.¹⁶

¹⁶ We recognize that there is case law stating that the substantial evidence standard applies to “challenges to the scope of an EIR’s analysis of a topic” as well as the methodology used and the accuracy of the data relied on in the document “because these types of challenges involve factual questions.” (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra*, 124 Cal.App.4th 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed “omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project.” *Bakersfield, supra*, 124 Cal.App.4th at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra*, 124 Cal.App.4th at p. 1220. Therefore, the court must not have interpreted this question as one of the “scope of the analysis” to be judged by the substantial evidence standard.

B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra*, at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR" (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra*, at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "... leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, “Environmental Checklist Form.”¹⁷) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency’s noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts’ proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA’s prohibition on courts interpreting its provisions “in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines.” (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra*, at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project’s significant impacts on human health. However, except in certain particular circumstances,¹⁸ neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law’s requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe “health and safety problems caused by {a project’s} physical changes”].) Accordingly, courts must interpret CEQA as a whole to

¹⁷ Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

¹⁸ E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.¹⁹ Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4th 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck*, 198 Cal.App.4th at p. 959 (citations omitted).²⁰

¹⁹ We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131), or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

²⁰ Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta*, (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)²¹

districts should be considered “state agencies” for purposes of the requirement to consult with “trustee agencies” as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere “local agencies” whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id.* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

²¹ In *Schenck*, the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck*, 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district’s published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district’s published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those

Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay, supra*, 91 Cal.App.4th 1344, 1369-1371.)

guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra*, 70 Cal.App.4th 482, 492.

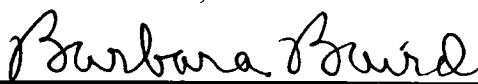
CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is “sufficient as an informational document” is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT
KURT R. WIESE, GENERAL COUNSEL
BARBARA BAIRD, CHIEF DEPUTY COUNSEL

By: 
Barbara Baird

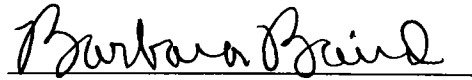
Attorneys for Amicus Curiae
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015

Respectfully submitted,


Barbara Baird

PROOF OF SERVICE

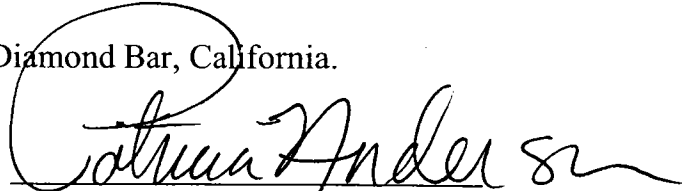
I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND [PROPOSED] BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

BY MAIL: I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.


Patricia Anderson

SERVICE LIST

James G. Moose, Tiffany K. Wright,
Laura M. Harris
REMY MOOSE MANLEY, LLP
555 Capitol Mall, Suite 800
Sacramento, CA 95814

Attorneys for Real Party in
Interest and Respondent *Friant
Ranch, L.P.*

Bryan N. Wagner
WAGNER & WAGNER
7110 N. Fresno St, Suite 340
Fresno, CA 93720

Attorney for Real Party in Interest
and Respondent *Friant Ranch,
L.P.*

Sara Hedgpeth-Harris
LAW OFFICE OF SARA
HEDGPETH-HARRIS
5445 E. Lane Avenue
Fresno, CA 93727

Attorney for Plaintiffs and
Appellants *Sierra Club, et al*

Daniel C. Cederborg
Bruce B. Johnson, Jr.
Zachary Stephen Redmond
OFFICE OF THE FRESNO COUNTY
COUNSEL
2220 Tulare Street, Suite 500
Fresno, CA 93721

Attorneys for Respondents
County of Fresno

Clerk of the Court
California Court of Appeal
Fifth Appellate District
2424 Ventura Street
Fresno, CA 93721
(via U.S. Mail & Electronic Transmission)

Clerk of the Court
Superior Court of California
County of Fresno
1130 O Street
Fresno, CA 93721

SUPREME COURT COPY

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

SUPREME COURT
FILED

APR 13 2015

Frank A. McGuire Clerk
Deputy

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

CATHERINE T. REDMOND (State Bar No. 226957)
261 High Street
Duxbury, Massachusetts 02332
Tel. (339) 236-5720
Catherineredmond22@gmail.com

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
Annette Ballatore-Williamson, District Counsel (State Bar. No. 192176)
1990 E. Gettysburg Avenue
Fresno, California 93726
Tel. (559) 230-6033
Annette.Ballatore-Williamson@valleyair.org

Counsel for San Joaquin Valley Unified Air Pollution Control District

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

CATHERINE T. REDMOND (State Bar No. 226957)
261 High Street
Duxbury, Massachusetts 02332
Tel. (339) 236-5720
Catherinetredmond22@gmail.com

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
Annette Ballatore-Williamson, District Counsel (State Bar. No. 192176)
1990 E. Gettysburg Avenue
Fresno, California 93726
Tel. (559) 230-6033
Annette.Ballatore-Williamson@valleyair.org

Counsel for San Joaquin Valley Unified Air Pollution Control District

APPLICATION

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality

conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a “serious nonattainment” area to come into attainment of health-based National Ambient Air Quality Standard (“NAAQS”) for coarse particulate matter (PM10), an achievement made even more notable given the Valley’s extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of “extreme” nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates “smog” and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to “offset” vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)¹, ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

¹ San Joaquin’s incentive program has been so successful that through 2012, it has awarded over \$ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. See SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) available at <http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206%20Incentives.pdf>.

Valley counties and cities that implement the California Environment Quality Act (CEQA).² In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.³ Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.⁴ For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.⁵

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

² See, e.g., SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), available at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf ("CEQA Guidance").

³ Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

⁴ See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 64-66, 80.

⁵ See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 66, 99-101.

pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).⁶ The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

2. How the Proposed Amicus Curiae Brief Will Assist the Court

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

⁶ CEQA does not require speculation. *See, e.g., Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

Rule 8.520 Disclosure

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

CONCLUSION

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015



Annette A. Ballatore-Williamson
District Counsel
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

**AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

CATHERINE T. REDMOND (State Bar No. 226957)
261 High Street
Duxbury, Massachusetts 02332
Tel. (339) 236-5720
Catherineredmond22@gmail.com

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
Annette A. Ballatore-Williamson, District Counsel (State Bar. No. 192176)
1990 E. Gettysburg Avenue
Fresno, California 93726
Tel. (559) 230-6033
Annette.Ballatore-Williamson@valleyair.org
Counsel for San Joaquin Valley Unified Air Pollution Control District

TABLE OF CONTENTS

APPLICATION.....1

1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District.....1

2. How the Proposed Amicus Curiae Brief Will Assist the Court5

CONCLUSION.....6

I. INTRODUCTION1

II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.....3

A, Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project’s Air Emissions and Specific Human Health Impacts.....4

B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants11

III. CONCLUSION.....15

CERTIFICATE OF WORD COUNT.....17

TABLE OF AUTHORITIES

CASES

Bakersfield Citizens for Local Control v. City of Bakersfield
(2004) 124 Cal.App.4th 1184, 1199, 22 Cal.Rptr.3d 203 15

Citizens for Responsible Equitable Environmental Development
v. City of San Diego, (2011) 196 Cal.App.4th 515, 527
129 Cal.Rptr.3d 512, 52114

Kings County Farm Bureau v. City of Hanford (1990)
221 Cal.App.3d 692, 717 n. 8.10

Sierra Club v. City of Orange (2008) 163 Cal.App.4th
523, 535, 78 Cal.Rptr.3d 1, 1314

Sierra Club v. City of Orange,163 Cal.App.4th at 536..... 15

Sierra Club v. County of Fresno (2014) 172 Cal.Rptr.3d 271, 306..... 12

Sierra Club, supra, 172 Cal.Rptr.3d at 303; AR 45548

FEDERAL STATUTES

United States Environmental Protection Agency (“EPA”)
Clean Air Act. 42 U.S.C. § 74121,2,5,6

42 U.S.C. § 7412.....1

U.S.C. §§ 7407 – 7411.....1

U.S.C. §§ 7501 – 7515.....1

42 U.S.C. § 7411.....1

42 U.S.C. § 7412(b).....1,2

42 U.S.C. § 7409(b)(1) 2, 6

CALIFORNIA STATUTES

California Environmental Quality Act
 (“CEQA”).....*passim*

OTHER AUTHORITIES

United States Environmental Protection Agency, <i>Ground-level Ozone: Basic Information</i> , available at: http://www.epa.gov/airquality/ozonepollution/basic.html (visited March 10, 015).....	4
<i>San Joaquin Valley Air Pollution Control District 2007 Ozone Plan</i> , Executive Summary p. ES-6, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf (visited March 10, 2015).....	5
United States Environmental Protection Agency, <i>Particulate Matter: Basic Information</i> , available at: http://www.epa.gov/airquality/particulatepollution/basic.html (visited March 10, 2015).....	5
United States Environmental Protection Agency, <i>Table of National Ambient Air Quality Standards</i> , available at: http://www.epa.gov/air/criteria.html#3 (visited March 10, 2015)	6
<i>San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard</i> , Ch. 2 p. 2-16, available at: http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf (visited March 10, 2015).....	6
Ch. 2 p. 2-19 (visited March 12, 2015); <i>San Joaquin Valley Unified Air Pollution Control District 2008 PM2.5 Plan</i> , Appendix F, pp. F-2 – F-5, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf (visited March 19, 2015).....	6
San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: http://www.valleyair.org/rules/currnrules/Rule22010411.pdf (visited March 19, 2015).....	7
<i>San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts</i> , (March 19, 2015) p. 22, available at: http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf (visited March 30, 2015).....	7

San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines (Aug. 2000) p. 4-11, available at: http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20_August%202000_.pdf (visited March 12, 2015).....8

San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan, Appendix B pp. B-6, B-9, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf (visited March 12, 2015).....9

I. INTRODUCTION.

The San Joaquin Valley Unified Air Pollution Control District (“Air District”) respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report (“EIR”) for the Friant Ranch development project was inadequate under the California Environmental Quality Act (“CEQA”) because it did not include an analysis of the correlation between the project’s criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court’s holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as “TACs”) regulated by the United States Environmental Protection Agency (“EPA”) and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health,

they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully

appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

///

///

A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.¹ Once formed, ozone can be transported long distances by wind.² Because of the complexity of ozone formation, a specific tonnage amount of NO_x or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NO_x or VOCs can have high levels of ozone concentration simply due to wind transport.³ Conversely, the San Francisco Bay Area has six times more NO_x and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

¹ See United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: <http://www.epa.gov/airquality/ozonepollution/basic.html> (visited March 10, 2015).

² *Id.*

³ *Id.*

concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.⁴

Particulate matter (“PM”) can be divided into two categories: directly emitted PM and secondary PM.⁵ While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.⁶ Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO_x) and NO_x.⁷ Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NO_x, SO_x and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards (“NAAQS”), which are statutorily required to be set by the United States Environmental Protection

⁴ *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf (visited March 10, 2015).

⁵ United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: <http://www.epa.gov/airquality/particlepollution/basic.html> (visited March 10, 2015).

⁶ *Id.*

⁷ *Id.*

Agency (“EPA”) at levels that are “requisite to protect the public health,” 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.⁸

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.⁹ Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District’s tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO_x, SO_x and VOCs) and the atmospheric chemistry and meteorology of the Valley.¹⁰ At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

⁸ See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: <http://www.epa.gov/air/criteria.html#3> (visited March 10, 2015).

⁹ *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf (visited March 10, 2015).

¹⁰ *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM_{2.5} Plan*, Appendix F, pp. F-2 – F-5, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf (visited March 19, 2015).

emissions Valley wide.¹¹ Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.¹²

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.¹³ The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.¹⁴ This "offset"

¹¹ *Id.*

¹² Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. See San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: <http://www.valleyair.org/rules/currntrules/Rule22010411.pdf> (visited March 19, 2015).

¹³ *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: <http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf> (visited March 30, 2015).

¹⁴ *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.¹⁵ In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club, supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, “cumulative impacts.”

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

¹⁵ *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20August%202000_.pdf (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NO_x inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.¹⁶ Running the photochemical grid model used for predicting ozone attainment with the

¹⁶ *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AO_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf (visited March 12, 2015).

emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

///

///

///

B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated

with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

[t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)¹⁷ The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)¹⁸ The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

¹⁷ Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

¹⁸ Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "[T]he objections must be sufficiently specific so that the agency has the

opportunity to evaluate and respond to them.’ [Citation.]” *Sierra Club v. City of Orange*, 163 Cal.App.4th at 536.¹⁹

As discussed above, the City’s comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since “[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action.” *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1199, 22 Cal.Rptr.3d 203.

III. CONCLUSION

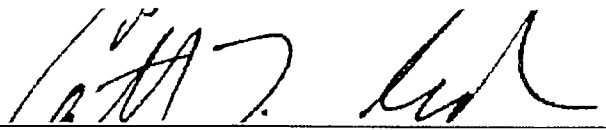
For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal’s decision requiring an analysis correlating the localized human health impacts associated with an individual project’s criteria air pollutant emissions be reversed.

¹⁹ *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or “piecemealed” the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as “*the use of a single document for both a project-level and a program-level EIR [is] ‘confusing’*,” and “[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,” were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4th at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015



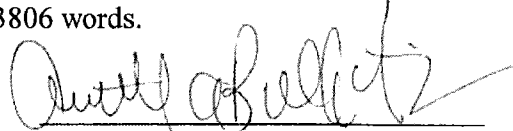
Catherine T. Redmond
Attorney for Proposed Amicus
Curiae

SAN JOAQUIN VALLEY
UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.204 of the California Rules of Court, I hereby certify that this document, based on the Word County feature of the Microsoft Word software program used to compose and print this document, contains, exclusive of caption, tables, certificate of word count, signature block and certificate of service, 3806 words.

Dated: April 2, 2015



Annette A. Ballatore-Williamson
District Counsel (SBN 192176)

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

PROOF OF SERVICE

I am over the age of 18 years and not a party to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO**

On all parties to this action at the following addresses and in the following manner:

PLEASE SEE ATTACHED SERVICE LIST

- (XX) **(BY MAIL)** I caused a true copy of each document(s) to be laced in a sealed envelope with first-class postage affixed and placed the envelope for collection. Mail is collected daily at my office and placed in a United State Postal Service collection box for pick-up and delivery that same day.
- () **(BY ELECTRONIC MAIL)** I caused a true and correct scanned image (.PDF file) copy to be transmitted via electronic mail transfer system in place at the San Joaquin Valley Unified Air Pollution Control District ("District"), originating from the undersigned at 1990 E. Gettysburg Avenue, Fresno, CA, to the address(es) indicated below.
- () **(BY OVERNIGHT MAIL)** I caused a true and correct copy to be delivered via Federal Express to the following person(s) or their representative at the address(es) listed below.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I executed this document on April 2, 2015, at Fresno, California.



Esthela Soto

SERVICE LIST

Sierra Club et al, v. County of Fresno, et al

Supreme Court of California Case No.: S219783

Fifth District Court of Appeal Case No.: F066798

Fresno County Superior Court Case No.: 11CECG00726

Sara Hedgpeth-Harris, Esq. LAW OFFICE OF SARA HEDGPETH-HARRIS 2125 Kern Street, Suite 301 Fresno, California 93721 Telephone: (559) 233-0907 Facsimile: (559) 272-6046 Email: sara.hedgpethharris@shh-law.com	Attorney for Plaintiffs and Appellants, Sierra Club, et al
Daniel C. Cederborg, Esq. Bruce B. Johnson, Jr., Esq. OFFICE OF THE FRESNO COUNTY COUNSEL 2220 Tulare Street, Suite 500 Fresno, California 93721 Telephone: (559) 600-3479 Facsimile: (559) 600-3480 Email: bjohnson@co.fresno.ca.us	Attorneys for Defendant and Respondent, County of Fresno
Bryan N. Wagner, Esq. WAGNER & WAGNER 7110 N. Fresno Street, Suite 340 Fresno, California 93720 Telephone: (559) 224-0871 Facsimile: (559) 224-0885 Email: bryan@wagnerandwagner.com	Attorneys for Real Party in Interest/Respondent Friant Ranch, L.P.
Clerk of the Court Superior Court of California County of Fresno 1130 'O' Street Fresno, California 93721 Telephone: (559) 457-1900	
Clerk of the Court Fifth District Court of Appeal 2424 Ventura Street Fresno, California 93721 Telephone: (559) 445-5491	

<p>R. Tyson Sohagim, Esq. THE SOHAGI LAW GROUP 11999 San Vicente Blvd., Suite 150 Los Angeles, California 90049 Telephone: (310) 475-5700 Facsimile: (310) 475-5707 Email: tsohagi@sohagi.com</p>	<p>Attorney for Amici Curiae; League of California Cities, and the California State Association of Counties</p>
<p>Marcia L. Scully, Esq. General Counsel METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA Post Office Box 54153 Los Angeles, California 90054 Telephone: (213) 217-6115</p>	<p>Attorney for Amicus Curiae, The Metropolitan Water District of Southern CA</p>
<p>Amy Minter, Esq. CHATEN-BROWN & CARSTENS LLP 2200 Pacific Coast Highway, Suite 318 Hermosa Beach, California 90254 Telephone: (310) 798-2400 Facsimile: (310) 798-2402 Email: ACM@CBCEarthlaw.com</p>	<p>Attorney for Amici Curiae, Association of Irrigated Residents, Medical Advocates for Healthy Air, and Coalition for Clean Air</p>
<p>Shanda M. Beltran, Esq. General Counsel BUILDING INDUSTRY LEGAL DEFENSE FOUNDATION 17744 Sky Park Cr., Suite 170 Irvine, California 92614 Telephone: (949) 553-9500 Facsimile: (949) 769-8943 Email: sbeltran@biasec.org</p>	<p>Attorney for Amicus Curiae, Building Industry Legal Defense Foundation</p>
<p>Gene Talmadge, President CALIFORNIA ASSOCIATION OF ENVIRONMENTAL PROFESSIONALS 40747 Baranda Court Palm Desert, California 92260 Telephone: (760) 340-4499 Facsimile: (760) 674-2479</p>	<p>Attorney for Amicus Curiae, California Association of Environmental Professionals</p>
<p>Jennifer L. Hernandez, Esq. HOLLAND & KNIGHT LLP 50 California Street, Suite 2800 San Francisco, California 94111</p>	<p>On behalf of Amicus Curiae, CEQA Research Council</p>

Telephone: (415) 743-6927 Facsimile: (415) 743-6910 Email: Jennifer.hernandez@hklaw.com	
---	--

Appendix C

SB 743 Analysis and Results Review

Memorandum

To: Christine Hopper, City of Marina
From: Michael Schmitt, AICP CTP, PTP, RSP₁
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

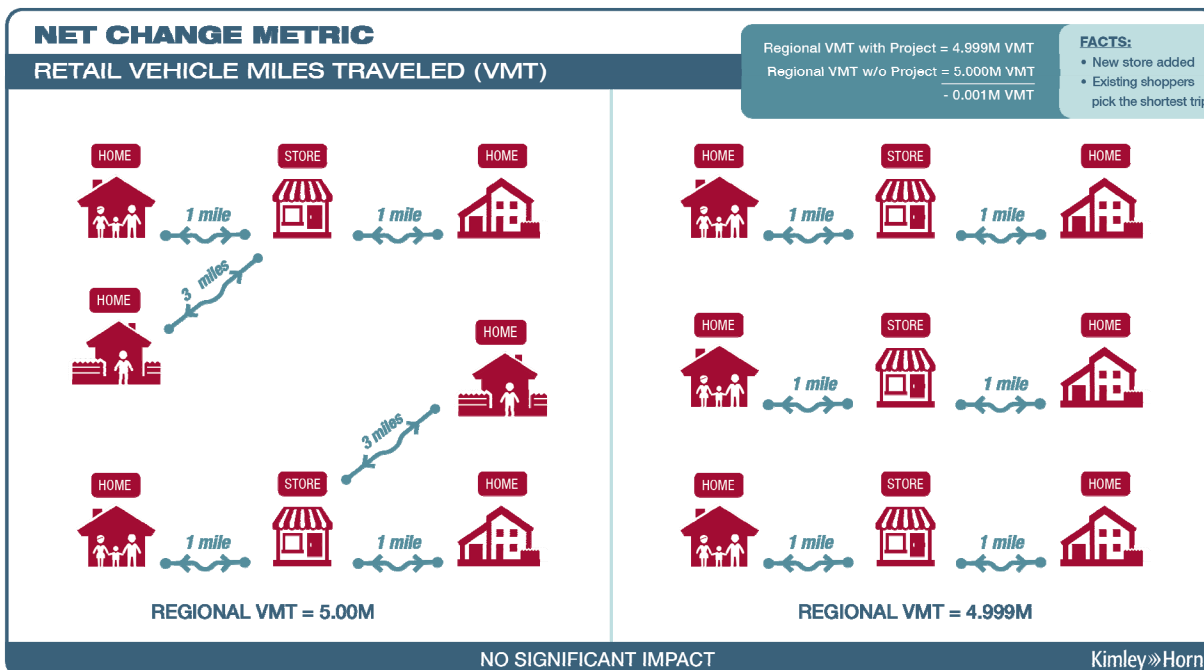
As described previously, the retail land uses were analyzed qualitatively. Page 4 and 7 of the Draft City of Marina SB 743 Implementation Guidelines¹ specifically addresses some of the key issues surrounding how a local serving retail store should be evaluated in terms of its VMT impact. As described, 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 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.

Memorandum

To: Guido F. Persicone
Community Development Director
City of Marina

From: Chris Gregerson, P.E., T.E., PTOE, PTP

Re: SB 743 Analysis Results Review
City of Marina Downtown Specific Plan

Date: June 29, 2023

This memorandum reviews a previously completed SB 743 compliant analysis for the proposed Downtown Marina Specific Plan in the City of Marina, CA¹. The proposed Downtown Vitalization 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 Vitalization Specific Plan.

2021 Analysis Results

The following sections summarize the results of the previously completed analysis by land use type:

Residential and Office Land Uses

Exhibit 1 summarizes the VMT per Capita and VMT per Employee for the proposed Downtown Vitalization Specific Plan by scenario.

Exhibit 1 – 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

¹ City of Marina Downtown Specific Plan Vehicle Miles Traveled (VMT) Assessment. Kimley-Horn. January 7, 2021.

As shown in ~~Exhibit 1~~ Exhibit 1, for both the residential and office land uses, the proposed Project exceeds the City's draft thresholds.

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 Guidelines² 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 and can be presumed to result in a less than significant transportation impact. 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. 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.

Original (2021) Findings

Based on the results of the analysis summarized above, the following findings were 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.

² Draft City of Marina SB 743 Implementation Guidelines, December 16, 2020

2023 Analysis and Findings Review

The City of Marina requested this review to determine whether any updates are required for the VMT analysis as the original study was completed in early 2021. Since the original analysis the Association of Monterey Bay Area Governments (AMBAG) has released a new version of their travel demand model (AMBAG model). However, the new version of the AMBAG model continues to have a base year of 2015, the same base year as the previous version of the model used to perform the previous analysis summarized above, but the employment assumptions throughout the region were refined within the model. In addition, the future year version of the AMBAG model was increased to 2045 from 2040, which was used in the last version of the AMBAG model and for the previously completed analysis. However, given the magnitude of the differences between the version of the AMBAG model released in 2018 and the current version, a new analysis would not result in materially different thresholds than what were developed previously and used in the original study to compare the Project against. In addition, due to the total amount of development contained within the Project (2,904 households, 1,533 office employees, and 1,750 retail employees for Existing Conditions compared to approximately 6,600 total households and 6,050 total employees citywide) an analysis using the newest version of the AMBAG model would not yield materially different results than those reported in [Exhibit 1Exhibit 1](#). Note that this is also due in part to the fact that the underlying methodologies/algorithms in the AMBAG model have also not materially changed since the prior version.

Note that the existence of a new version of the AMBAG model does not necessarily automatically trigger the need to establish new VMT thresholds. This is both a practical matter in that it takes some time between the release of a new model to evaluate the regional model to determine its appropriateness and whether any modifications may be appropriate for local use; and that a City has the ability, as part of CEQA, to define the methods for VMT analysis which does not necessarily necessitate updating thresholds and analysis tools if it is determined by the City that the existing methods yield reasonable analysis results. As noted above, given that the base year of the model has remained consistent with the previous version, the model's methodologies/algorithms have not materially changed, and the project description has not changed, it is reasonable to assume that the previously presented results are accurate.

With respect to mitigating the VMT impacts summarized in [Exhibit 1Exhibit 1](#), the California Air Pollution Control Officers Association (CAPCOA) released a new version of the VMT Mitigation Handbook in January 2022³, subsequent to the completion of the previous analysis in 2021. The updated version of the VMT Mitigation Handbook includes updated VMT reduction methodologies compared to the previous version of the Handbook based on recent research. However, the new Handbook did not introduce new mitigation strategies that would address the impacts identified previously. Therefore, due to the magnitude of the impacts shown in [Exhibit 1Exhibit 1](#), the new Handbook would not provide any meaningful differences in mitigation strategies for the Project.

³ *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. CAPCOA. January 2022.

Conclusions

Based on the results of this review, the following findings are made:

- Given the magnitude of the differences between the version of the AMBAG model released in 2018 and the current version, a new analysis would not result in significantly different thresholds for the City of Marina.
- Due to the total amount of development contained within the Project (2,904 households, 1,533 office employees, and 1,750 retail employees for Existing Conditions compared to approximately 6,600 total households and 6,050 total employees citywide), using the newest version of the AMBAG model would not yield significantly different results or findings than what was reported in 2021 and summarized in [Exhibit 1Exhibit 1](#).
- CAPCOA's new VMT Mitigation Handbook did not introduce new mitigation strategies, it merely provided refined analysis methodologies. Therefore, due to the magnitude of the impacts shown in [Exhibit 1Exhibit 1](#), the new Handbook would not provide any meaningful differences in mitigation strategies for the Project.
- Based on the above findings, **the prior analysis is sufficient and does not require an update.**

Appendix D

Marina Downtown Traffic Study

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

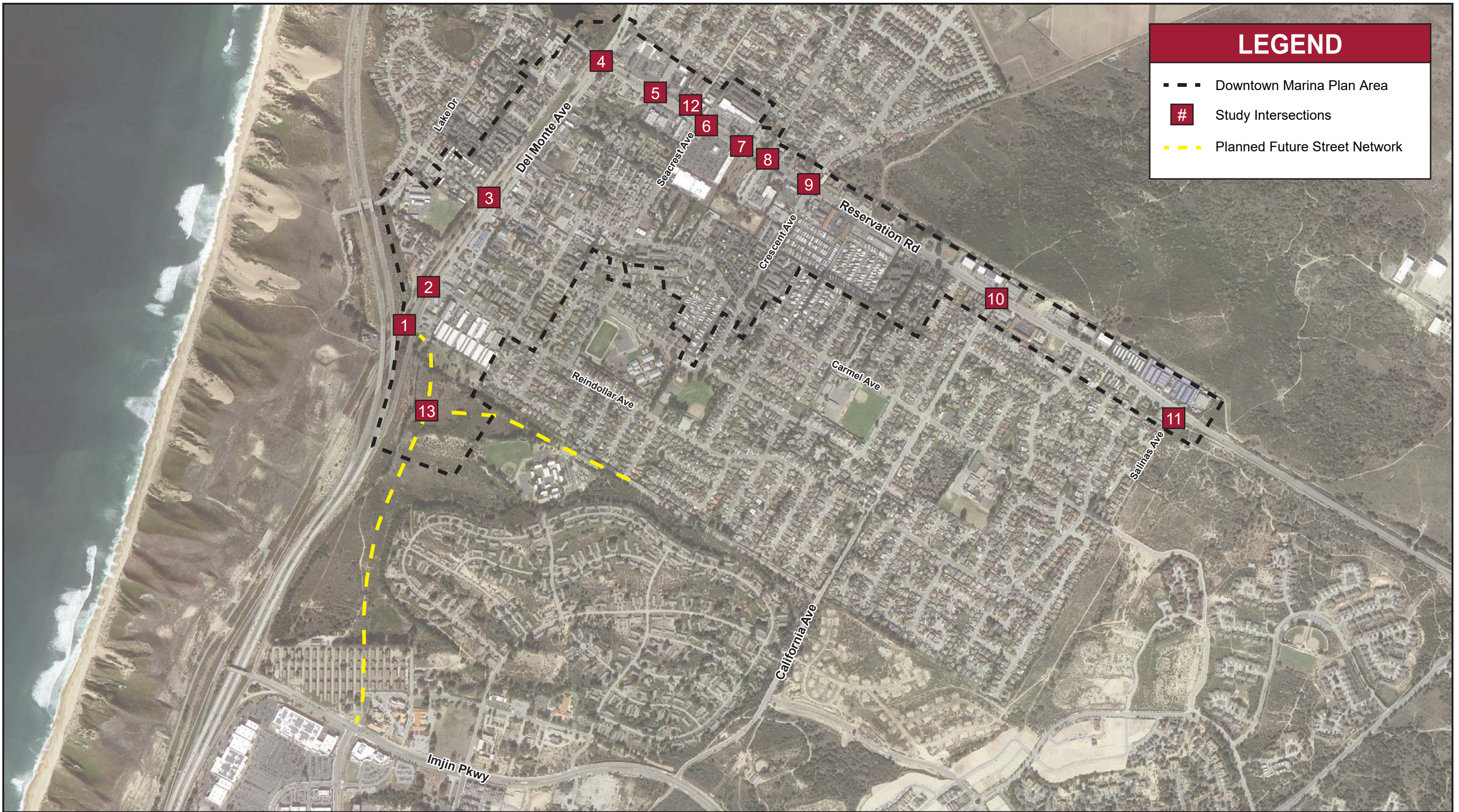
This memorandum discusses the effect of the implementation of the Downtown Specific Plan to the circulation network due in the City of Marina. The proposed Downtown Plan would include up to 2,904 new multifamily dwelling units, 874,669 square feet of retail land uses, and 284,448 square feet of office 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**.



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
<i>Retail</i>	--	375,277	
<i>Office</i>	--	36,587	
Multi-Family Residential	106.66	--	1,638
Transition	104.00	593,894	377
<i>Retail</i>	--	316,428	
<i>Office/Light Manufacturing</i>	--	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
<i>Retail</i>	--	583,704 - 1,050,667	--	208,427 - 675,390	--
<i>Office</i>	--	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
<i>Retail</i>	--	386,780 - 515,707	--	70,352 - 199,279	--
<i>Office</i>	--	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 AMBAG 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		
						Total	In	Out	Total	In	Out		Total	In	Out	Total	In	Out
Trip Generation Rates¹																		
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
<i>Sub-Total</i>					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
<i>Sub-Total</i>					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
<i>Sub-Total</i>					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
<i>New Trips</i>					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
<i>Total Trip Reduction</i>					-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)

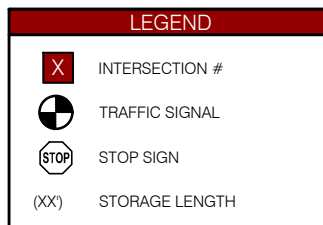
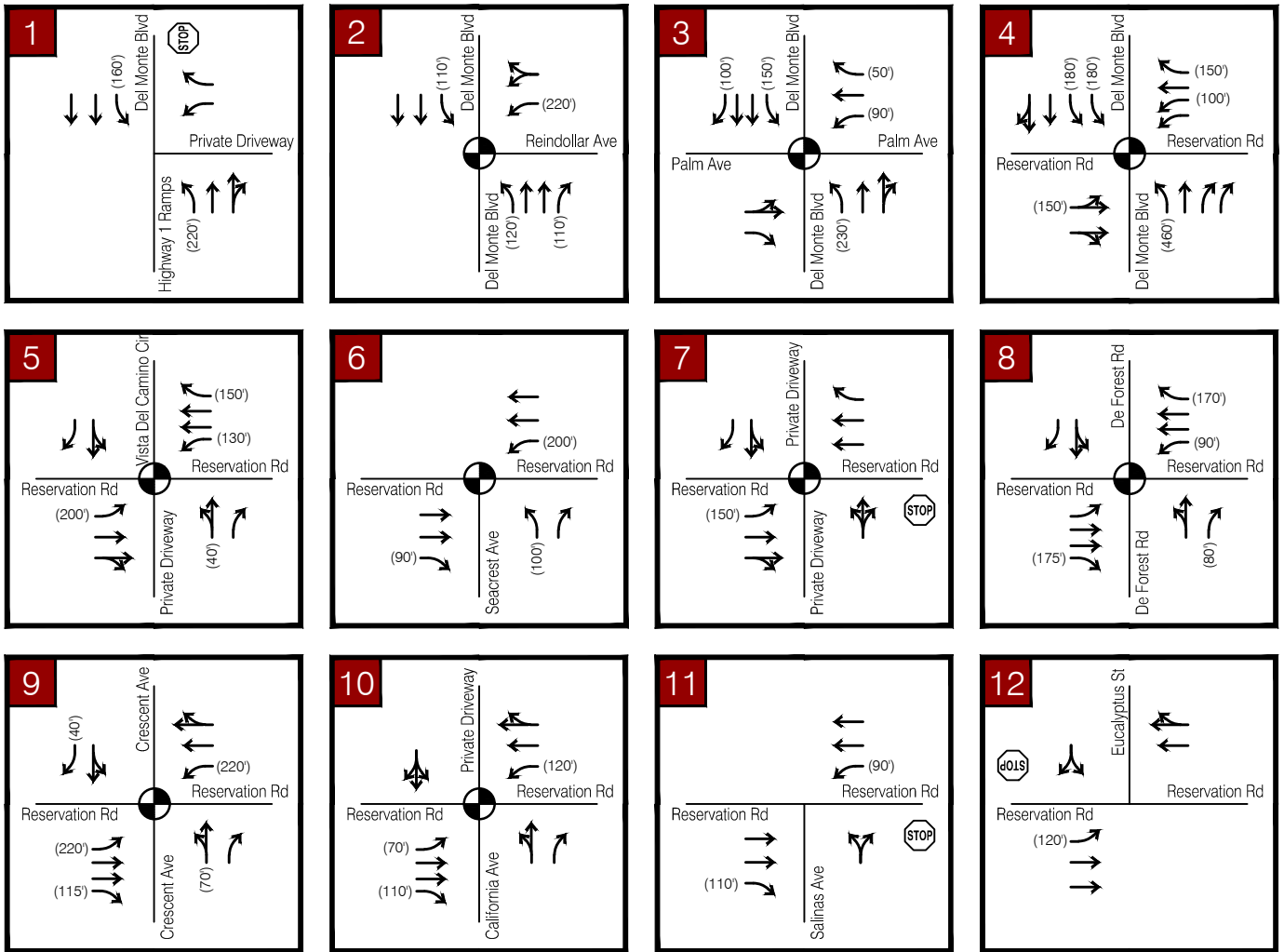
Operations Methodology

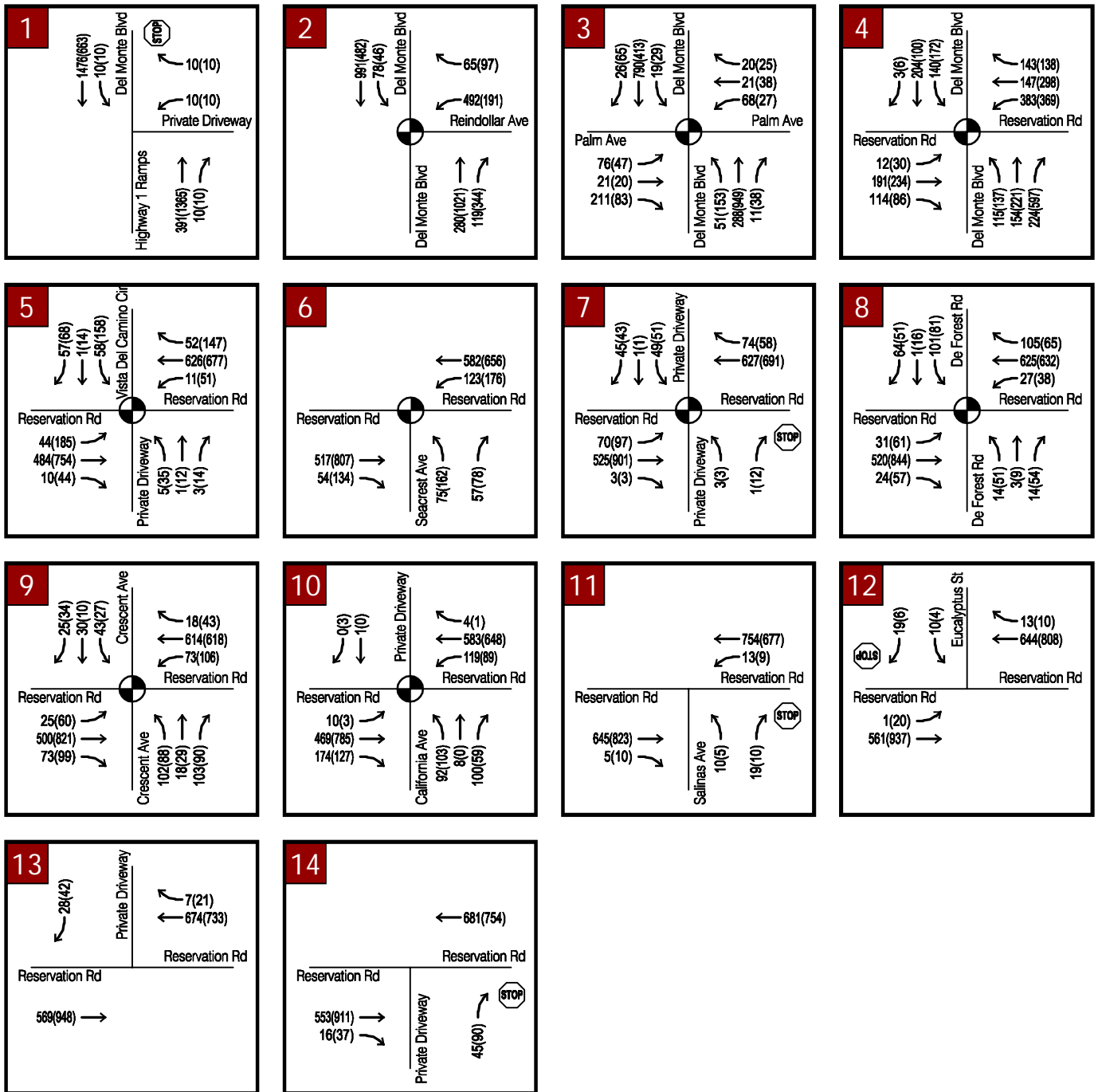
The study intersections were modeled in Synchro 10 software. Roundabout controlled intersections were studied using Sidra 7.0. Highway Capacity Manual (HCM) 6th Edition was used to analyze intersection operations and report intersection delay.

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**.





LEGEND

- X INTERSECTION #
- ⊙ TRAFFIC SIGNAL
- STOP STOP SIGN
- XX(X) AM(PM) PEAK HOUR VOLUMES
- *Left-Turn Movements Include U-Turns



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
			<i>Worst Approach</i>	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
			<i>Worst Approach</i>	13.1	B (NB)	14.6	B (NB)
12 Reservation Rd/ Eucalyptus St	City	SSSC	Overall	0.3	A	0.2	A
			<i>Worst Approach</i>	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

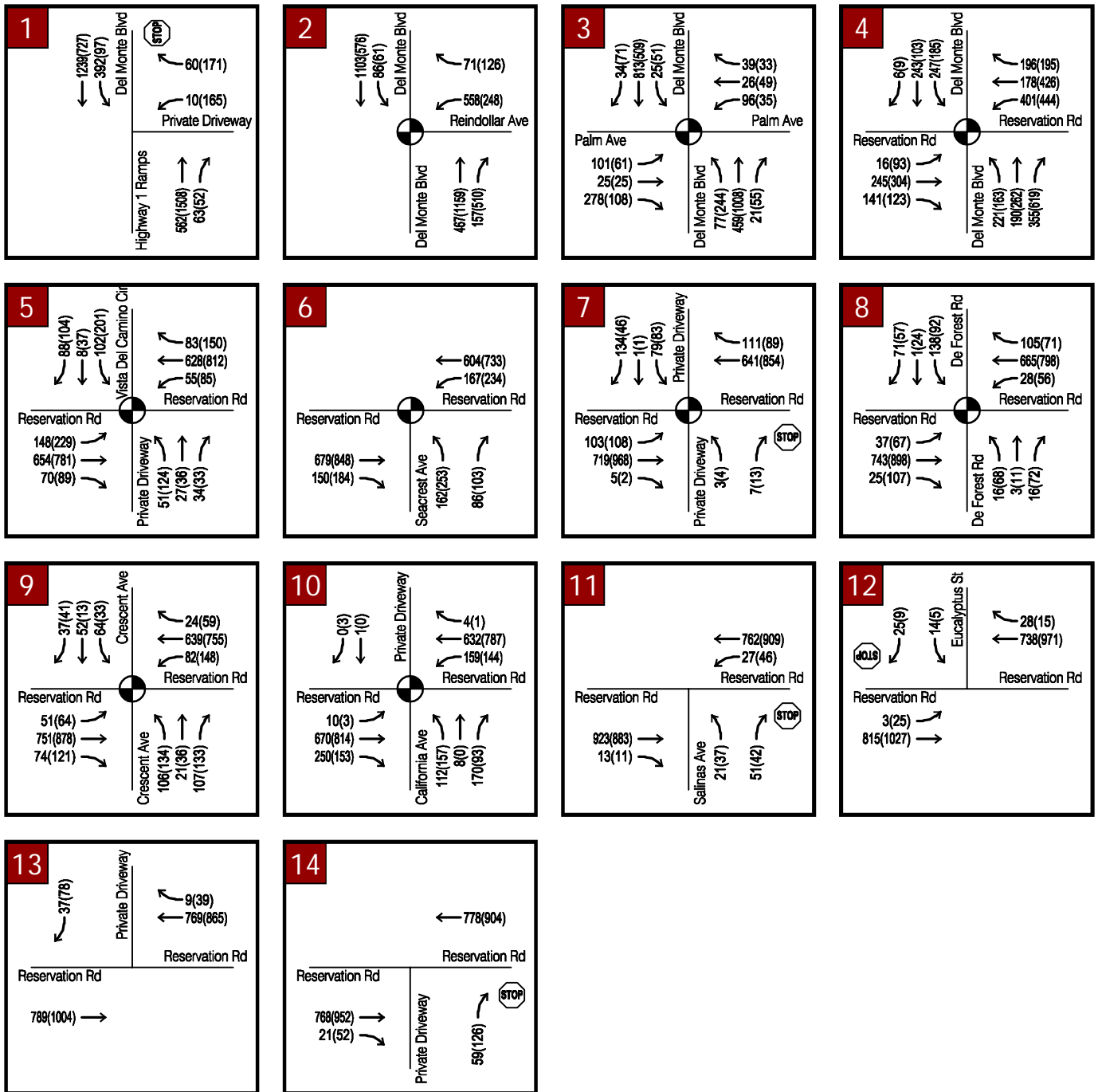
Future Conditions describes the conditions anticipated in 2040. The Association of Monterey Bay Area Government (AMBAG) Regional Travel Demand Model was used to determine future traffic on Reservation Road and Del Monte Boulevard with the proposed Downtown Plan Redevelopment representing the average 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 furnishing 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.



LEGEND

- INTERSECTION #
- TRAFFIC SIGNAL
- STOP SIGN
- XX(XX)XX AM(PM) PEAK HOUR VOLUMES
- *Left-Turn Movements Include U-Turns



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
			<i>Worst Approach</i>	22.2	<i>C (WB)</i>	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
			<i>Worst Approach</i>	17.2	<i>C (NB)</i>	22.5	<i>C (NB)</i>
12 Reservation Rd/ Eucalyptus St	City	SSSC	Overall	0.3	A	0.2	A
			<i>Worst Approach</i>	14.5	<i>B (SB)</i>	17.1	<i>C (SB)</i>
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
			<i>Worst Approach</i>	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 queuing 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.

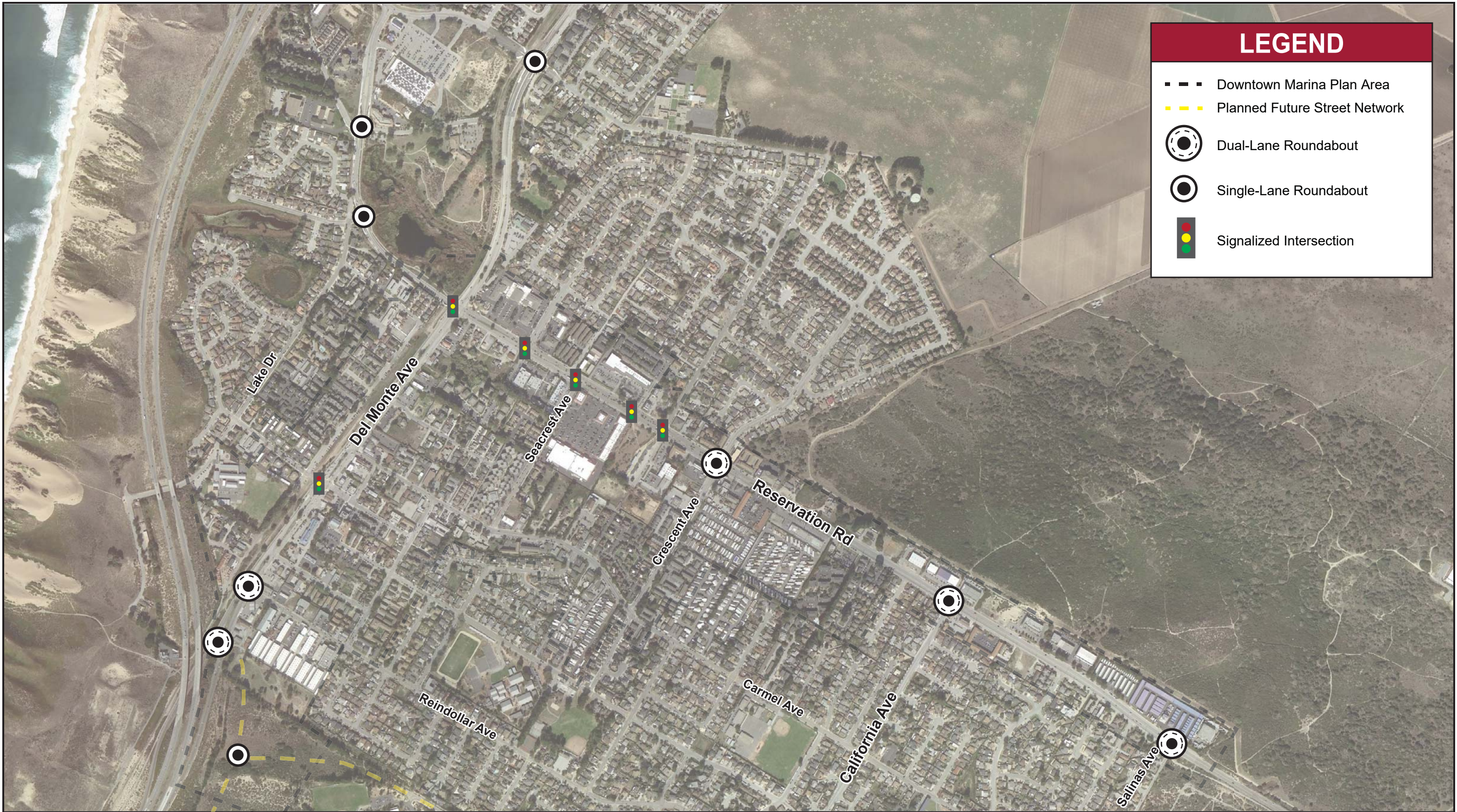


Figure 5
Recommended Roundabout Locations
Marina Downtown Study

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.



LEGEND

- Downtown Marina Plan Area
- Existing Class II Bicycle Facilities
- Existing Pedestrian Facilities
- Existing Class I Facilities



Figure 7
Proposed Pedestrian and Bicycle Facilities
Marina Downtown Study

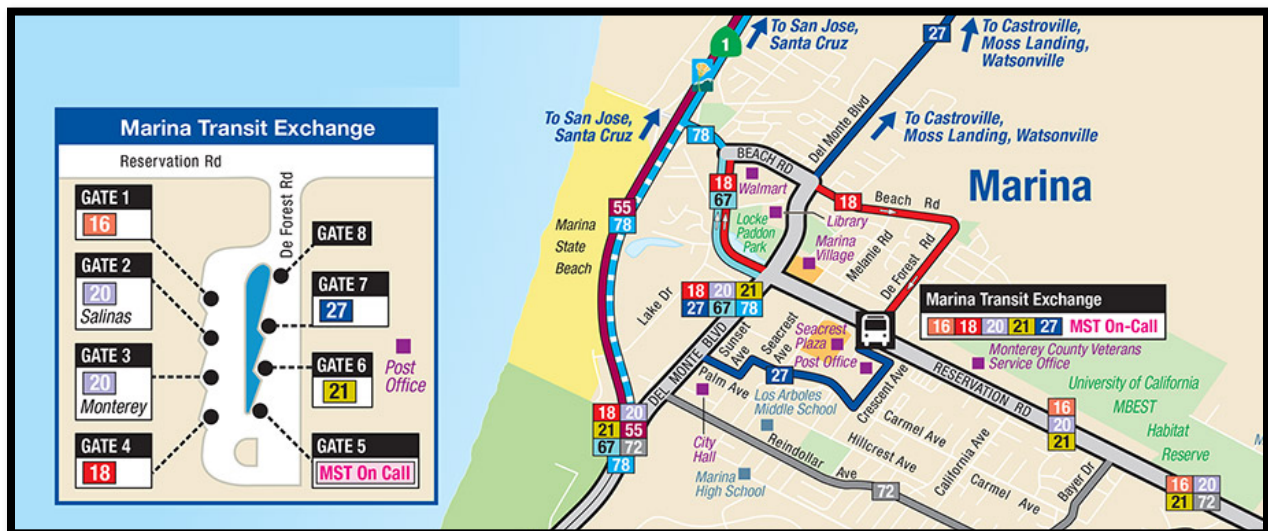
Monterey Salinas Transit

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.



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

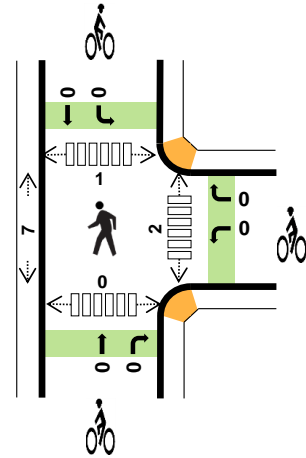
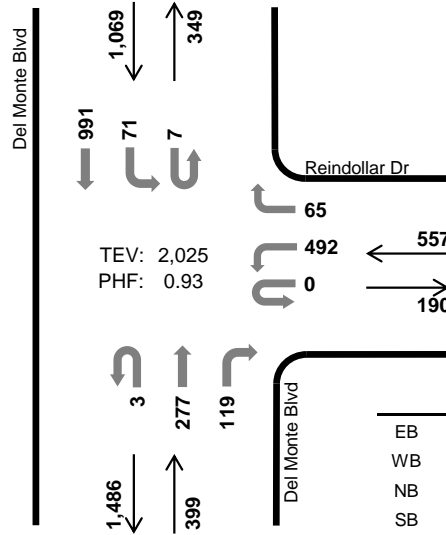
**TRAFFIC COUNTS
AM & PM PEAK HOUR**

Del Monte Blvd Reindollar Dr



Peak Hour

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				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	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
	HV	0	0	0	0	0	5	0	1	0	0	8	2	1	3	13	0	33	0
	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														15-min Total	Rolling One Hour			
Interval Start	0				Reindollar Dr				Del Monte Blvd				Del Monte Blvd					
	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														15-min Total	Rolling One Hour
Interval Start	0			Reindollar Dr			Del Monte Blvd			Del Monte Blvd					
	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	

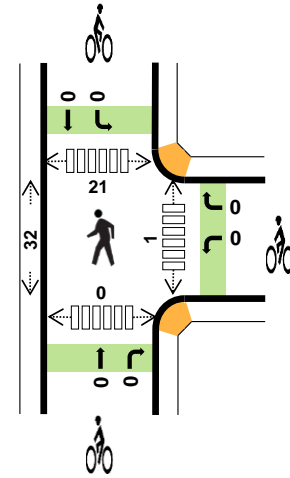
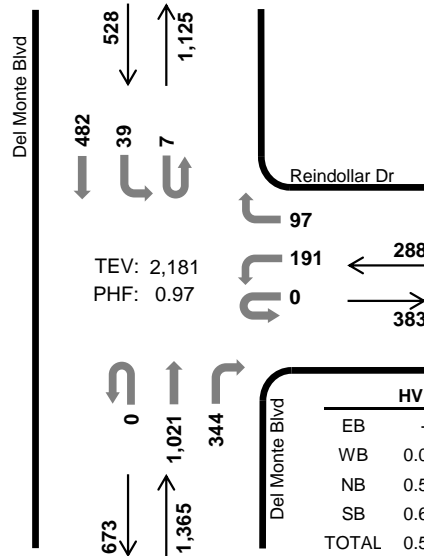
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd Reindollar Dr



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	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	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
	HV	0	0	0	0	0	0	0	0	0	0	6	1	0	0	3	0	10	0
	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														15-min Total	Rolling One Hour			
Interval Start	0				Reindollar Dr				Del Monte Blvd				Del Monte Blvd					
	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														15-min Total	Rolling One Hour
Interval Start	0			Reindollar Dr			Del Monte Blvd			Del Monte Blvd					
	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	

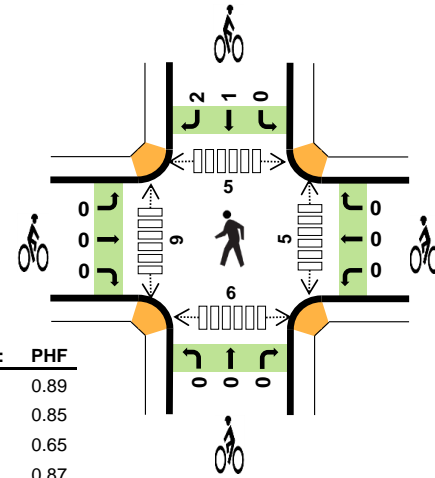
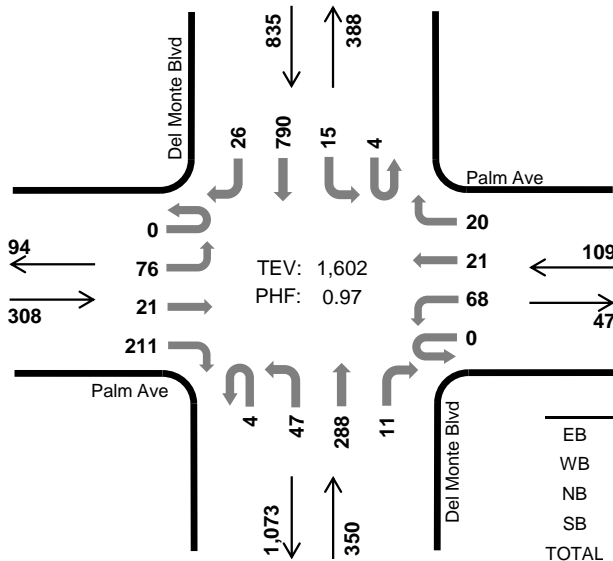
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd Palm Ave



Peak Hour

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
	HV	0	0	0	1	0	1	0	1	0	1	9	1	0	0	15	0	29	0
	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				Palm Ave				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	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			Palm Ave			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	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	0	1	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	0	1	2	0		
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	1	2	0		

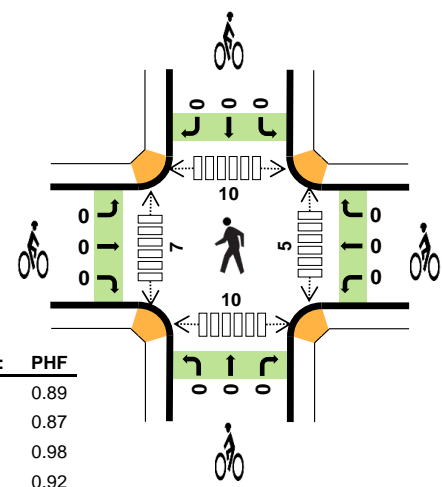
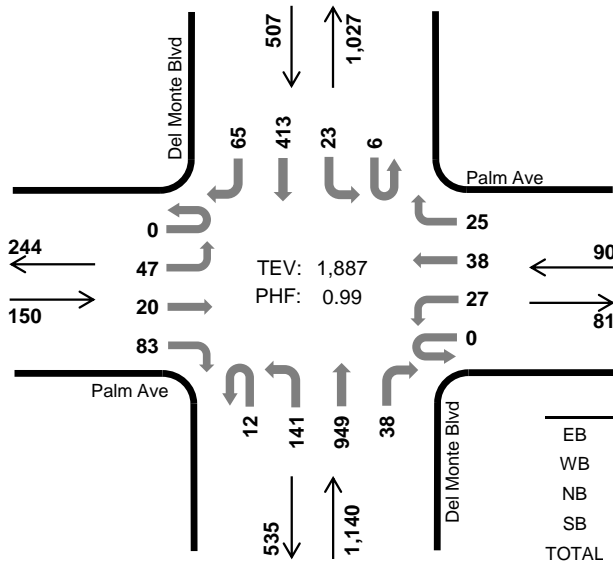
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd Palm Ave



Peak Hour

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	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
	HV	0	0	0	0	0	0	1	1	0	0	10	0	0	2	3	0	17	0
	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

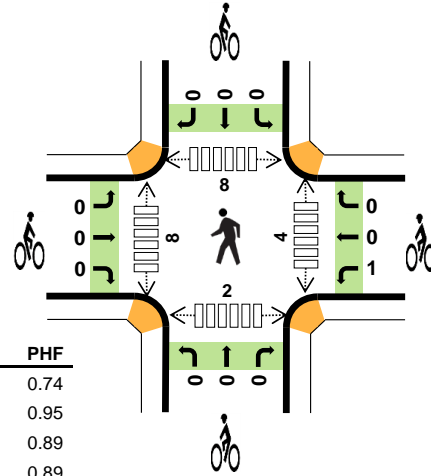
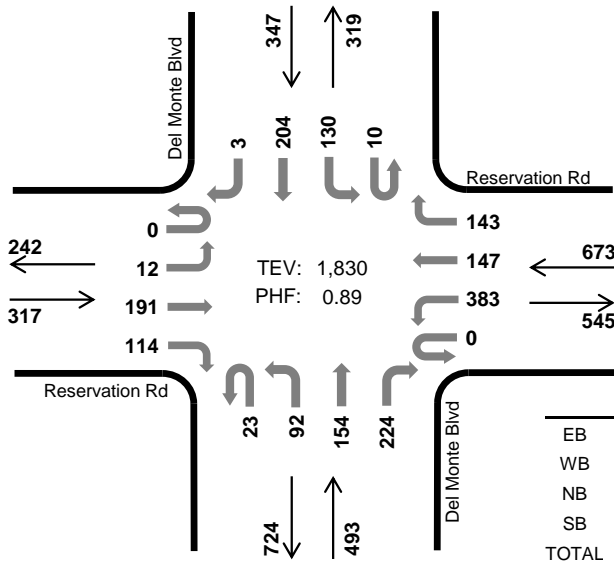
Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Palm Ave				Palm Ave				Del Monte Blvd				Del Monte Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	0	0	0	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	0	1	1	0	0	1	1	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			Palm Ave			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	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
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	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	0	0	0	0	1
5:15 PM	0	0	0	0	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	0	0	0	0
5:45 PM	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	1	0	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

Del Monte Blvd Reservation Rd



Peak Hour

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
	HV	0	0	9	2	0	14	5	5	0	2	0	6	0	6	5	0	54	0
	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				Reservation Rd				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	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			Reservation Rd			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	0	0	0
7:15 AM	0	0	0	1	0	0	0	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	0	0	0	1	0
7:45 AM	0	0	0	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	0	0	0	2
8:15 AM	0	0	0	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	0	0	0
8:45 AM	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	2	0
Peak Hour	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Reservation Rd				Reservation Rd				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	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

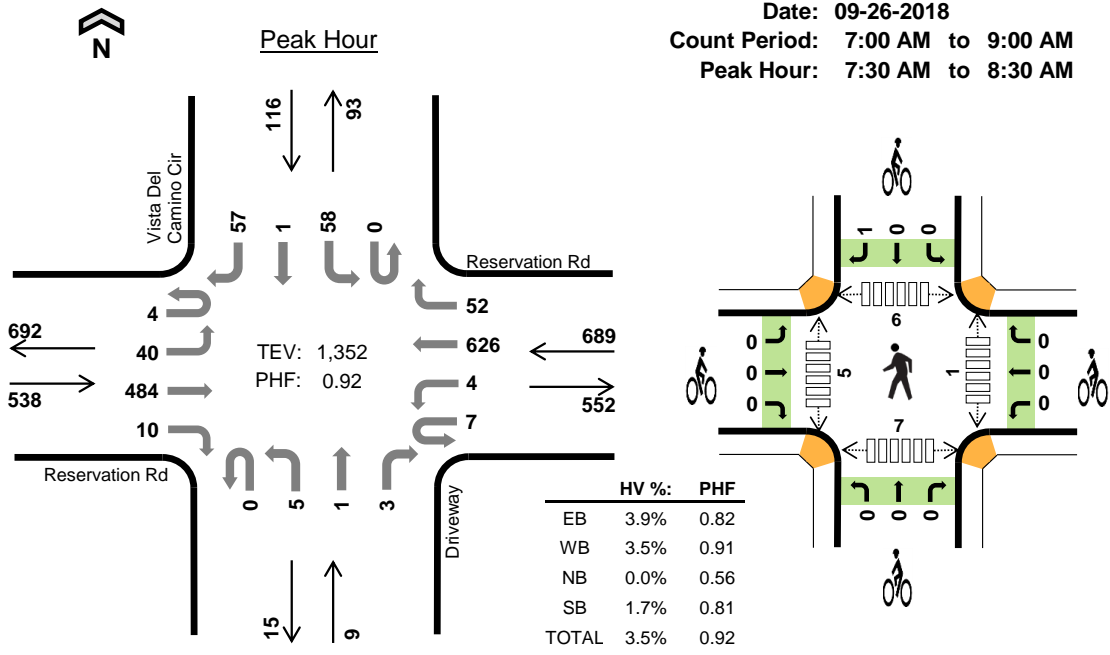
Two-Hour Count Summaries - Bikes																		
Interval Start	Reservation Rd			Reservation Rd			Del Monte Blvd			Del Monte Blvd			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	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	1	0	0	0	0	0	1	2
5:15 PM	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	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	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	1	0	0	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
	HV	0	4	17	0	0	1	21	2	0	0	0	0	0	0	0	2	47	0
	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	0	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				Reservation Rd				Driveway				Vista Del Camino Cir				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	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	0	1	0	9	45
Count Total	0	6	32	0	0	1	36	4	0	0	0	0	0	0	1	0	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			Reservation Rd			Driveway			Vista Del Camino Cir			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	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:45 AM	0	0	0	0	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	0	0	0	0	2
8:15 AM	0	0	0	0	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	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
Count Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Reservation Rd				Reservation Rd				Driveway				Vista Del Camino Cir				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	2	1	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	1	0	7	0
4:30 PM	0	0	3	0	0	0	3	0	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	0	9	27
5:00 PM	0	0	3	0	0	0	4	0	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	0	2	24
5:30 PM	0	0	4	0	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	0	7	20
Count Total	0	1	24	0	0	0	20	1	0	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	0	20	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Reservation Rd			Reservation Rd			Driveway			Vista Del Camino Cir			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	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	0	1	0	1	2			
Count Total	0	3	0	0	0	0	0	1	0	0	1	1	6	0			
Peak Hour	0	1	0	0	0	0	0	0	0	0	1	0	2	0			

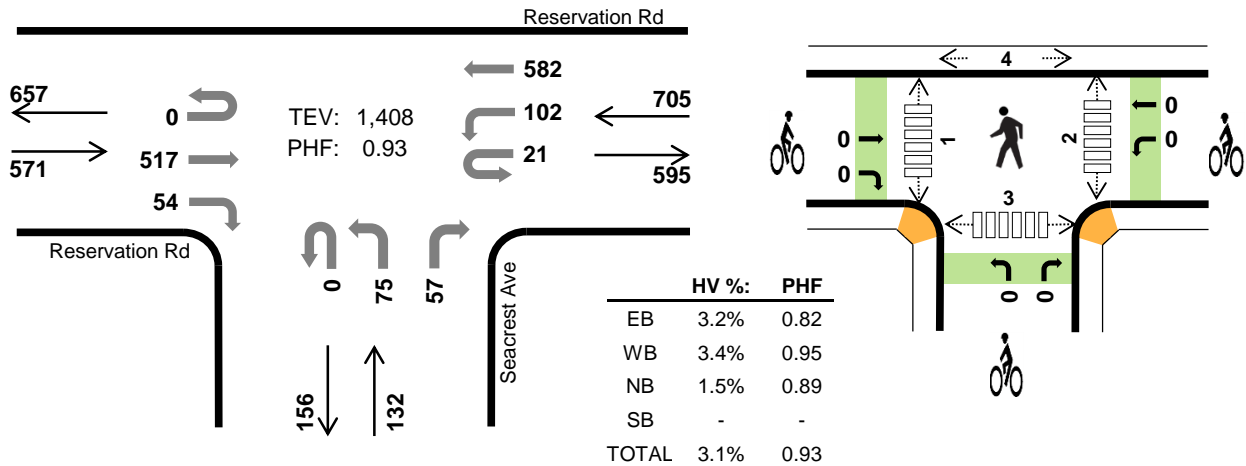
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Seacrest Ave Reservation Rd



Peak Hour

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Seacrest Ave Northbound				Seacrest 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	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				Reservation Rd				Seacrest Ave				0				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	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			Reservation Rd			Seacrest Ave			0			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

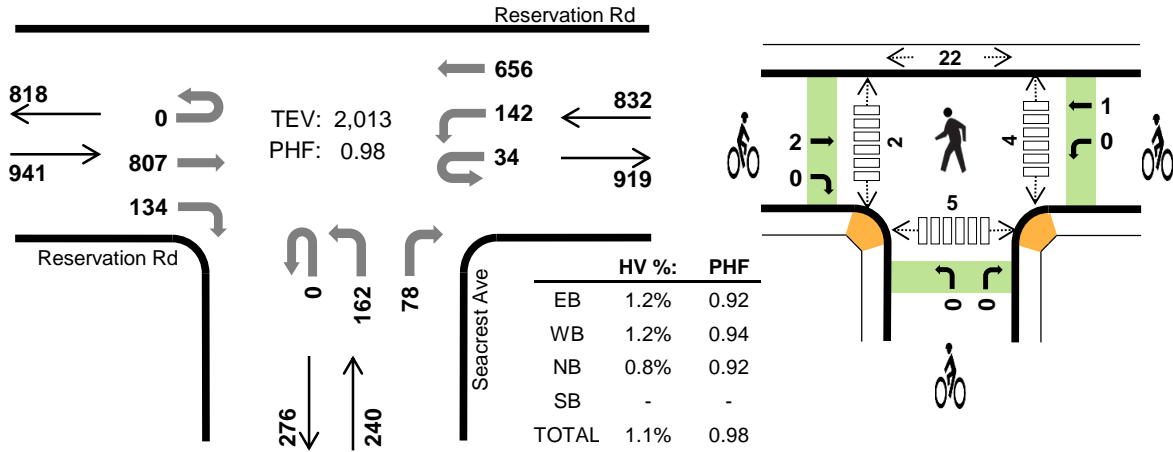
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Seacrest Ave Reservation Rd



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				Seacrest 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	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
	HV	0	0	9	2	0	2	8	0	0	1	0	1	0	0	0	0	23	0
	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				Reservation Rd				Seacrest Ave				0				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	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			Reservation Rd			Seacrest Ave			0			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	0
4:15 PM	0	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	0	1	0
4:45 PM	0	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	0	1	3
5:15 PM	0	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	0	3
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	3
Count Total	0	3	1	0	0	1	0	0	0	0	0	0	0	5	0
Peak Hour	0	2	0	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.

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Reservation Rd				Reservation Rd				Driveway				Shopping Center				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	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

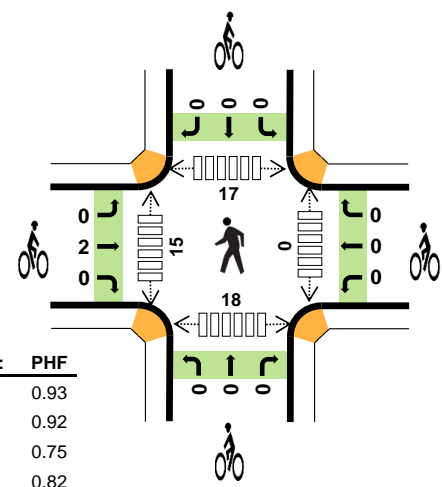
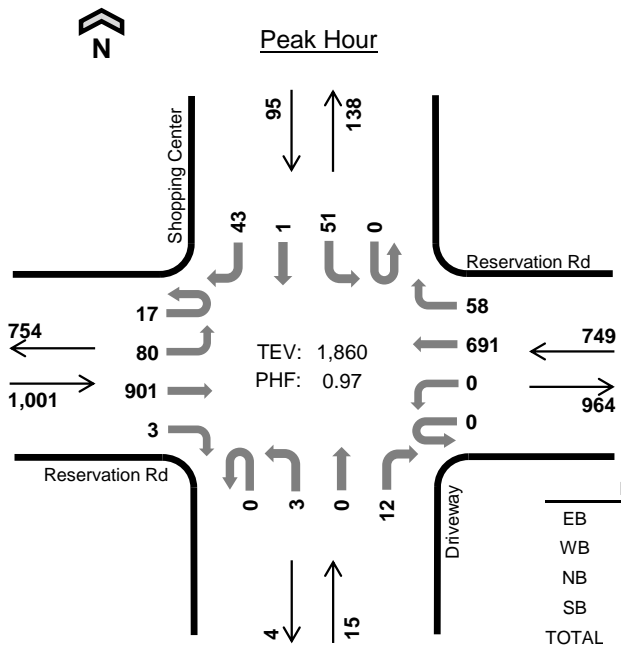
Two-Hour Count Summaries - Bikes																	
Interval Start	Reservation Rd			Reservation Rd			Driveway			Shopping Center			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	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	0	0	0
7:45 AM	0	0	0	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	0	0	1
8:15 AM	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
8:45 AM	0	0	0	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	0	0	1	0	0
Peak Hour	0	0	0	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
	HV	0	1	11	1	0	0	11	0	0	0	0	0	0	1	0	1	26	0
	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				Reservation Rd				Driveway				Shopping Center				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	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	0	1	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			Reservation Rd			Driveway			Shopping Center			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	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
4:30 PM	0	1	0	0	0	0	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	0	0	0	0	1
5:00 PM	0	1	0	0	0	0	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	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	1
5:45 PM	0	1	0	0	0	0	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	0	0	0	0	3	0
Peak Hour	0	2	0	0	0	0	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.

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Reservation Rd				Reservation Rd				De Forest Rd				De Forest Rd				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	3	2	0	1	4	0	0	2	0	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	0	7	0
7:30 AM	0	0	3	1	0	1	4	0	0	1	0	1	0	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	0	11	41
8:00 AM	0	0	6	0	0	1	6	0	0	3	0	1	0	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	0	9	48
8:30 AM	0	0	3	1	0	3	4	0	0	2	0	1	0	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	0	14	54
Count Total	0	0	24	8	0	9	31	2	0	12	0	8	0	0	1	0	0	95	0
Peak Hour	0	0	14	4	0	3	17	2	0	5	0	3	0	0	0	0	0	48	0

Two-Hour Count Summaries - Bikes																			
Interval Start	Reservation Rd			Reservation Rd			De Forest Rd			De Forest Rd			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	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
7:30 AM	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	1
8:00 AM	0	0	0	0	0	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	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
8:45 AM	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	1	0	0	1	0
Peak Hour	0	0	0	0	0	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.

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Reservation Rd				Reservation Rd				De Forest Rd				De Forest Rd				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	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			Reservation Rd			De Forest Rd			De Forest Rd			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	0	0	0
4:15 PM	0	0	0	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	0	0	0	1	0
4:45 PM	0	0	0	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	0	0	0	2	3
5:15 PM	0	0	0	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	0	0	0	2
5:45 PM	0	1	0	0	0	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	0	0	0	4	0
Peak Hour	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0

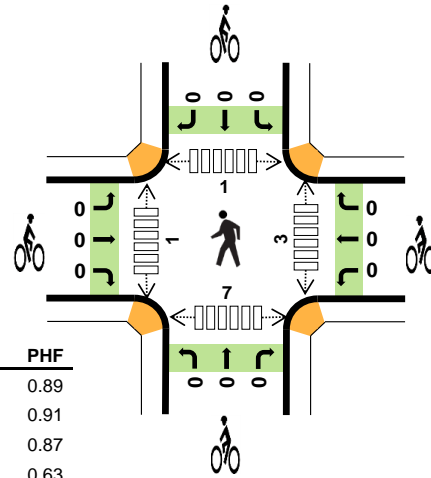
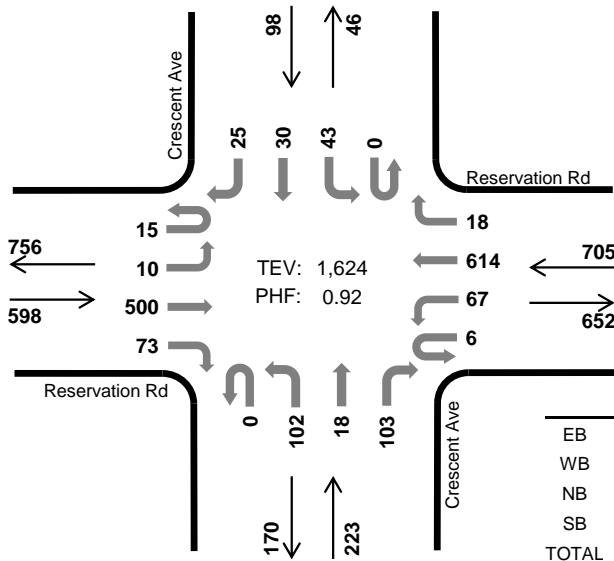
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Crescent Ave Reservation Rd



Peak Hour

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
	HV	1	0	13	4	0	1	21	1	0	2	0	0	0	3	1	0	47	0
	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				Reservation Rd				Crescent Ave				Crescent Ave				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	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	0	1	1	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	0	1	0	13	47
8:15 AM	0	0	3	0	0	0	6	0	0	0	0	0	0	0	1	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	0	1	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

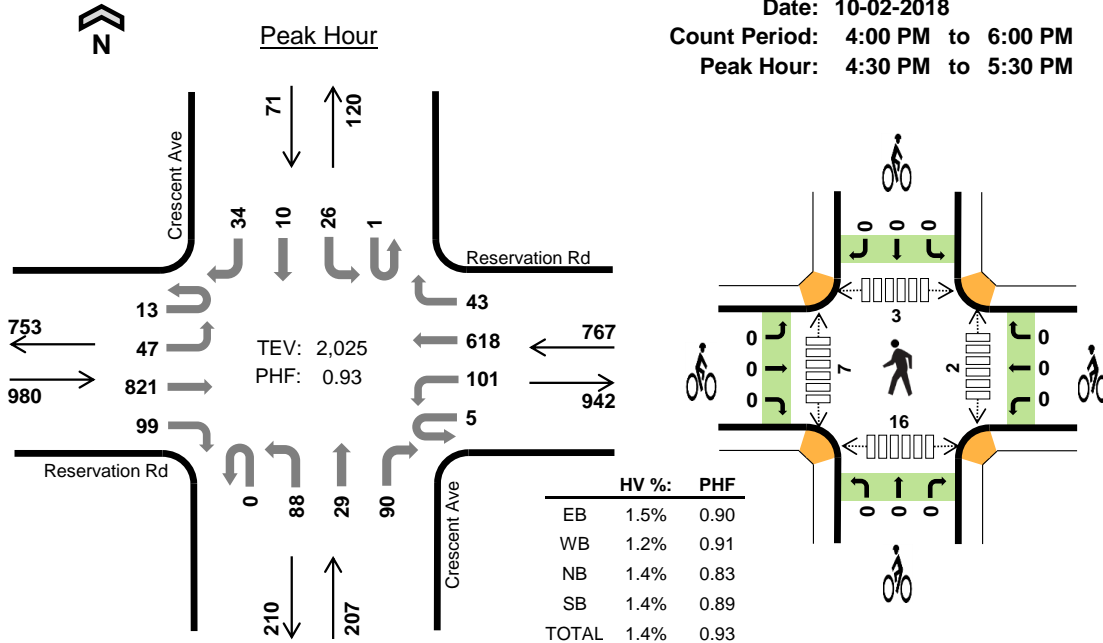
Two-Hour Count Summaries - Bikes																	
Interval Start	Reservation Rd			Reservation Rd			Crescent Ave			Crescent Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
7:15 AM	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
7:45 AM	0	0	0	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	0	0	0
8:15 AM	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
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Count Total	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0
Peak Hour	0	0	0	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



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
	HV	1	0	12	2	0	0	9	0	0	2	0	1	0	0	0	1	28	0
	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.

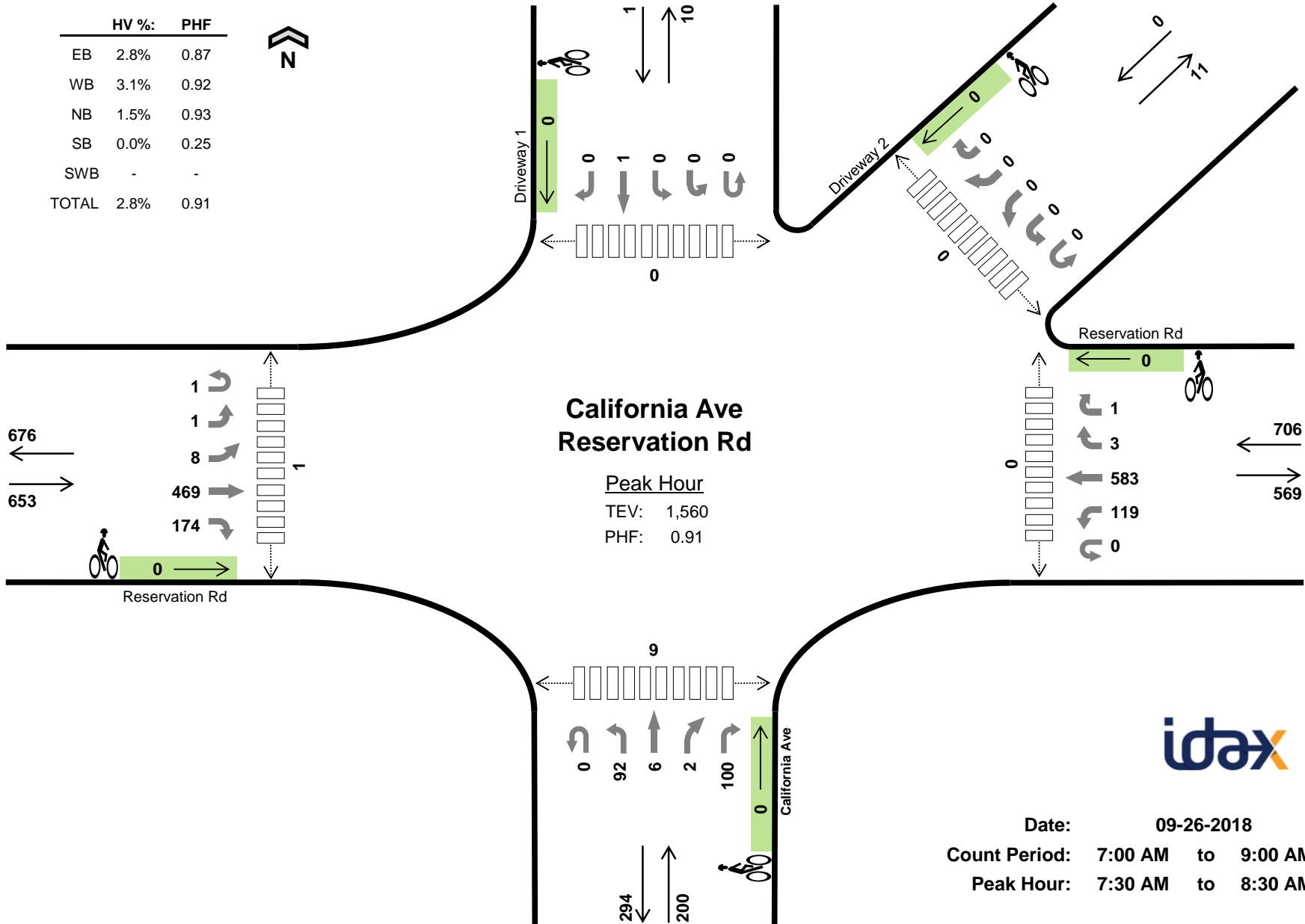
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	5	2	0	0	7	0	0	0	0	0	8	3	1	0	12
4:15 PM	5	2	0	0	7	0	0	0	0	0	3	2	3	2	10
4:30 PM	3	2	1	0	6	0	0	0	0	0	0	4	3	5	12
4:45 PM	4	3	1	1	9	0	0	0	0	0	0	2	0	4	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				Reservation Rd				Crescent Ave				Crescent Ave				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	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			Reservation Rd			Crescent Ave			Crescent Ave			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	0	0	0
4:15 PM	0	0	0	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	0	0	0
4:45 PM	0	0	0	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	0	0	0
5:15 PM	0	0	0	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	0	0	0
5:45 PM	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
Peak Hour	0	0	0	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



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					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	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

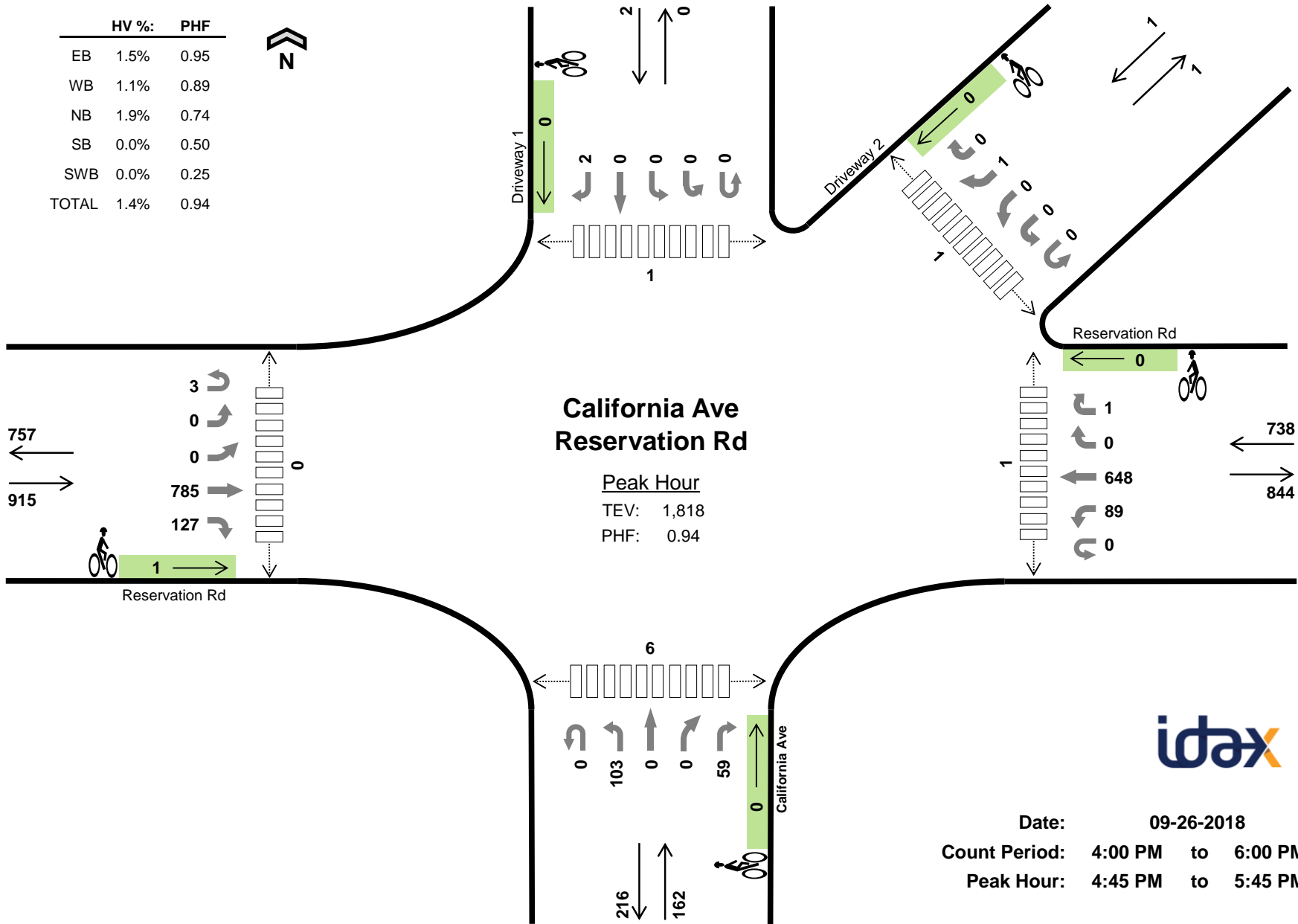
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd 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	3	0	0	2	3	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	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	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	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	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	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	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	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	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	43	0	

Two-Hour Count Summaries - Bikes

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	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	
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	
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	
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	
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	
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	
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	
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	
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	

	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



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					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	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	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	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	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	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	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	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	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	0	2	0	0	2
4:15 PM	3	3	2	0	0	8	0	0	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	0	1	
4:45 PM	4	4	1	0	0	9	1	0	0	0	0	1	0	0	0	2	0	0	2	
5:00 PM	5	3	0	0	0	8	0	0	0	0	0	0	0	0	0	2	0	0	2	
5:15 PM	2	0	1	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	2	
5:30 PM	3	1	1	0	0	5	0	0	0	0	0	0	1	0	1	0	1	1	3	
5:45 PM	3	3	0	0	0	6	0	0	0	0	0	0	0	0	0	3	0	0	3	
Count Total	26	20	6	1	0	53	2	0	0	0	0	2	1	0	1	12	1	15	15	
Peak Hr	14	8	3	0	0	25	1	0	0	0	0	1	1	0	1	6	1	9	9	

Two-Hour Count Summaries - Heavy Vehicles

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	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	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	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	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	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	5	25	
5:45 PM	0	0	0	2	1	0	0	3	0	0	0	2	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	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	25	0	

Two-Hour Count Summaries - Bikes

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	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	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	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	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	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	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	
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	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	1	0	

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Reservation Rd				Reservation Rd				Salinas Ave				Driveway				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	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			Reservation Rd			Salinas Ave			Driveway			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	0	0	0
7:15 AM	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
7:45 AM	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
8:15 AM	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
8:45 AM	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
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

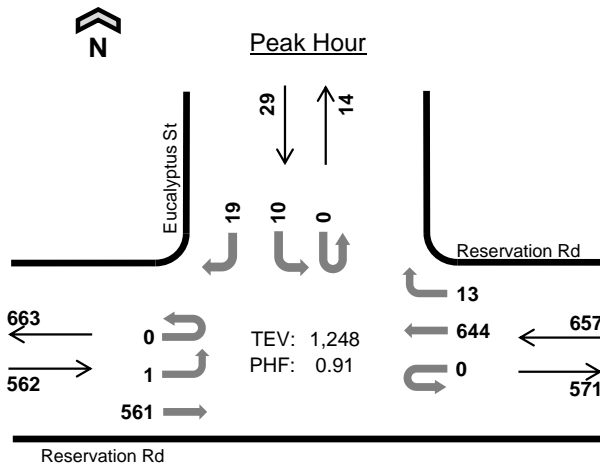
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Reservation Rd				Reservation Rd				Salinas Ave				Driveway				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	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

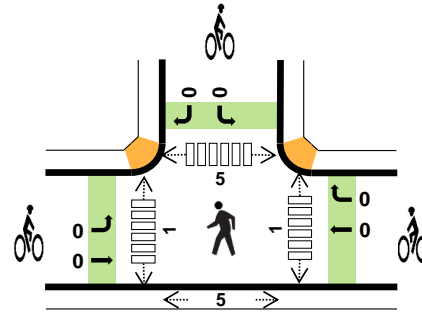
Two-Hour Count Summaries - Bikes																	
Interval Start	Reservation Rd			Reservation Rd			Salinas Ave			Driveway			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	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	0	0	0
4:45 PM	0	0	0	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	0	0	0
5:15 PM	0	0	0	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	0	0	0
5:45 PM	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
Peak Hour	0	0	0	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



TEV: 1,248
 PHF: 0.91

	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

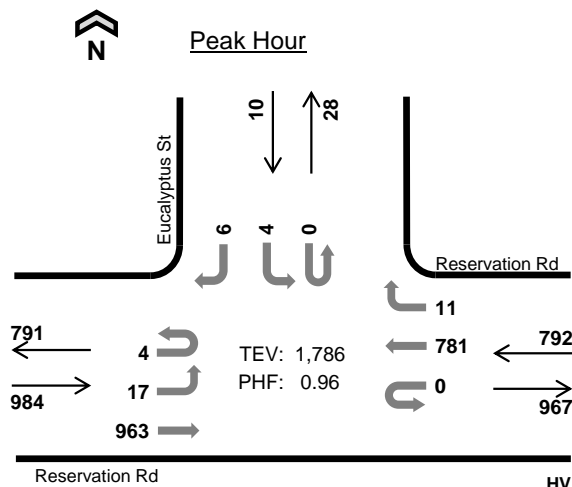
Interval Start	Reservation Rd				Reservation Rd				0				Eucalyptus St				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Westbound		Northbound		Southbound		Southbound		Northbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	75	0	0	0	186	0	0	0	0	0	0	1	0	5	267	0	
7:15 AM	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	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	0	0	0	
7:15 AM	0	0	0	0	1	0	0	0	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	0	0	0	
7:45 AM	0	0	0	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	0	0	1	
8:15 AM	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	
8:45 AM	0	0	0	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	0	0	0	1	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

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

	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				Reservation Rd				0				Eucalyptus St				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		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					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	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	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
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3
Count Total	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0	0
Peak Hour	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

**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	NBRWBLn1	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

Marina Downtown Study
2: Del Monte Blvd & Reindollar Ave

Existing Conditions
AM Peak



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.

Marina Downtown Study
3: Del Monte Blvd & Palm Ave

Existing Conditions
AM Peak



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/ln1800	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/ln1.2	0.0	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), s4.6	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+1/2), s 12.5	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.

Marina Downtown Study
4: Del Monte Blvd & Reservation Rd

Existing Conditions
AM Peak



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		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+1), s	14.5	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.

Marina Downtown Study
5: Vista Del Camino Cir & Reservation Rd

Existing Conditions
AM Peak



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

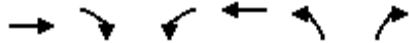
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Marina Downtown Study
6: Seacrest Ave & Reservation Rd

Existing Conditions
AM Peak



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	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			

Marina Downtown Study
7: Driveway/Shopping Center & Reservation Rd

Existing Conditions
AM Peak



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.

Marina Downtown Study
8: De Forest Rd & Reservation Rd

Existing Conditions
AM Peak



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	

Marina Downtown Study
9: Crescent Ave & Reservation Rd

Existing Conditions
AM Peak



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	

Marina Downtown Study
10: California Ave & Reservation Rd

Existing Conditions
AM Peak



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+1), s	12.3	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	Minor2	Minor3
Conflicting Flow All	0	0	706	0	1139
Stage 1	-	-	-	-	701
Stage 2	-	-	-	-	438
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	888	-	195
Stage 1	-	-	-	-	453
Stage 2	-	-	-	-	618
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	888	-	192
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

Marina Downtown Study
 1: SR-1 Ramps/Del Monte Blvd & Driveway

Existing Conditions
 PM Peak

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	NBRWBLn1	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

Marina Downtown Study
2: Del Monte Blvd & Reindollar Ave

Existing Conditions
PM Peak



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	YY		U	↑↑	↑	↓	↑↑
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.

Marina Downtown Study
3: Del Monte Blvd & Palm Ave

Existing Conditions
PM Peak



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		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/ln1807	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/ln0.8	0.0	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), s4.9	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+1), s 12.8	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.

Marina Downtown Study
4: Del Monte Blvd & Reservation Rd

Existing Conditions
PM Peak



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		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	8.0	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+1), s	11.3	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.

Marina Downtown Study
5: Vista Del Camino Cir & Reservation Rd

Existing Conditions
PM Peak



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+1), 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

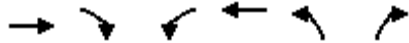
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Marina Downtown Study
6: Seacrest Ave & Reservation Rd

Existing Conditions
PM Peak



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	3.4	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			

Marina Downtown Study
7: Driveway/Shopping Center & Reservation Rd

Existing Conditions
PM Peak



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	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+1), 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.

Marina Downtown Study
8: De Forest Rd & Reservation Rd

Existing Conditions
PM Peak



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	

Marina Downtown Study
9: Crescent Ave & Reservation Rd

Existing Conditions
PM Peak



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	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	

Marina Downtown Study
10: California Ave & Reservation Rd

Existing Conditions
PM Peak



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	20.5	30.0		36.0	36.5	30.0		29.0				
Max Q Clear Time (g_c+1), s	12.5	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	Minor2	Minor3
Conflicting Flow All	0	0	934	0	1328
Stage 1	-	-	-	-	923
Stage 2	-	-	-	-	405
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	729	-	146
Stage 1	-	-	-	-	347
Stage 2	-	-	-	-	642
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	723	-	141
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
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	NBRWBLn1	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

Marina Downtown Study
2: Del Monte Blvd & Reindollar Ave

Future Conditions
AM Peak



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.

Marina Downtown Study
3: Del Monte Blvd & Palm Ave

Future Conditions
AM Peak



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		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+1), s	13.0	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.

Marina Downtown Study
4: Del Monte Blvd & Reservation Rd

Future Conditions
AM Peak



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		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+1), s	17.6	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.

Marina Downtown Study
5: Vista Del Camino Cir & Reservation Rd

Future Conditions
AM Peak



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

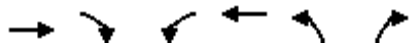
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Marina Downtown Study
6: Seacrest Ave & Reservation Rd

Future Conditions
AM Peak



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			

Marina Downtown Study
7: Driveway/Shopping Center & Reservation Rd

Future Conditions
AM Peak



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	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.

Marina Downtown Study
8: De Forest Rd & Reservation Rd

Future Conditions
AM Peak



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	

Marina Downtown Study
9: Crescent Ave & Reservation Rd

Future Conditions
AM Peak



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	

Marina Downtown Study
10: California Ave & Reservation Rd

Future Conditions
AM Peak



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(l)	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	20.5	30.0		36.0	36.5	30.0		29.0				
Max Q Clear Time (g_c+1), s	12.3	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	Minor2	Minor3
Conflicting Flow All	0	0	1017	0	1475
Stage 1	-	-	-	-	1003
Stage 2	-	-	-	-	472
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	678	-	117
Stage 1	-	-	-	-	315
Stage 2	-	-	-	-	594
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	678	-	112
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
Stage 1	-	-	-	-	827
Stage 2	-	-	-	-	454
Critical Hdwy	4.14	-	-	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	2.22	-	-	-	3.52
Pot Cap-1 Maneuver	789	-	-	-	157
Stage 1	-	-	-	-	390
Stage 2	-	-	-	-	606
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	789	-	-	-	156
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	NBRWBLn1	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

Marina Downtown Study
2: Del Monte Blvd & Reindollar Ave

Future Conditions
PM Peak



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	YY		U	↑↑	↑	↓	↑↑
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.

Marina Downtown Study
3: Del Monte Blvd & Palm Ave

Future Conditions
PM Peak



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		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+1), s	13.6	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.

Marina Downtown Study
4: Del Monte Blvd & Reservation Rd

Future Conditions
PM Peak



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		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	16.8	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	1.0	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+1), 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.												

Marina Downtown Study
5: Vista Del Camino Cir & Reservation Rd

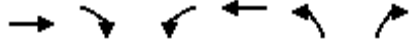
Future Conditions
PM Peak



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		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.												

Marina Downtown Study
6: Seacrest Ave & Reservation Rd

Future Conditions
PM Peak



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			

Marina Downtown Study
7: Driveway/Shopping Center & Reservation Rd

Future Conditions
PM Peak



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	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.

Marina Downtown Study
8: De Forest Rd & Reservation Rd

Future Conditions
PM Peak



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	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	

Marina Downtown Study
9: Crescent Ave & Reservation Rd

Future Conditions
PM Peak



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

Marina Downtown Study
10: California Ave & Reservation Rd

Future Conditions
PM Peak



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	20.5	30.0		36.0	36.5	30.0		29.0				
Max Q Clear Time (g_c+1), s	12.5	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	Minor2	Minor3
Conflicting Flow All	0	0	1002	0	1606
Stage 1	-	-	-	-	990
Stage 2	-	-	-	-	616
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	687	-	96
Stage 1	-	-	-	-	320
Stage 2	-	-	-	-	501
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	681	-	87
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 Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:23:53 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 101 [Del Monte/Hwy1 - PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:23:54 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 102 [Del Monte/Reindollar - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Thursday, January 24, 2019 1:12:54 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 102 [Del Monte/Reindollar - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Thursday, January 24, 2019 1:12:56 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 104 [Del Monte/Reservation - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Thursday, January 24, 2019 10:50:05 AM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 104 [Del Monte/Reservation - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Thursday, January 24, 2019 10:50:08 AM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 108 [Reservation/De Forest - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:23:57 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 108 [Reservation/De Forest - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:23:58 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 109 [Reservation/Crescent - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:29:17 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 109 [Reservation/Crescent - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:29:15 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 110 [Reservation/California - AM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:24:01 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 110 [Reservation/California - PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:24:02 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 111 [Reservation/Salinas - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Thursday, January 24, 2019 1:08:05 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 111 [Reservation/Salinas - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Thursday, January 24, 2019 1:13:23 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 113 [Del Monte/Patton Pkwy - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:24:02 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

MOVEMENT SUMMARY

 Site: 113 [Del Monte/Patton Pkwy - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:24:03 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-DelMonte-RAB.sip7

SYNCHRO LEVEL OF
SERVICE REPORTS

ROAD DIET CONDITIONS
AM & PM PEAK HOUR

Marina Downtown Study
4: Del Monte Ave & Reservation Rd

Future Conditions - Road Diet
AM Peak



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

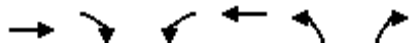
User approved ignoring U-Turning movement.

Marina Downtown Study
5: Vista Del Camino Cir & Reservation Rd

Future Conditions - Road Diet
AM Peak



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			

Marina Downtown Study
7: Driveway/Shopping Center & Reservation Rd

Future Conditions - Road Diet
AM Peak



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.

Marina Downtown Study
8: De Forest Rd & Reservation Rd

Future Conditions - Road Diet
AM Peak



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	

Marina Downtown Study
9: Crescent Ave & Reservation Rd

Future Conditions - Road Diet
AM Peak



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

Marina Downtown Study
4: Del Monte Ave & Reservation Rd

Future Conditions - Road Diet
PM Peak



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.

Marina Downtown Study
5: Vista Del Camino Cir & Reservation Rd

Future Conditions - Road Diet
PM Peak



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+1), 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

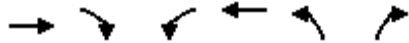
HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Marina Downtown Study
6: Seacrest Ave & Reservation Rd

Future Conditions - Road Diet
PM Peak



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			

Marina Downtown Study
7: Driveway/Shopping Center & Reservation Rd

Future Conditions - Road Diet
PM Peak



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(l)	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+1), 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.

Marina Downtown Study
8: De Forest Rd & Reservation Rd

Future Conditions - Road Diet
PM Peak



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	

Marina Downtown Study
9: Crescent Ave & Reservation Rd

Future Conditions - Road Diet
PM Peak



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
Queuing Penalty (veh)		4	0	0	8							12

Intersection: 9: Crescent 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: Crescent 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
Queuing Penalty (veh)	0	5	39	0		3	109					106

Intersection: 9: Crescent 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 Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:37:27 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-ROADDIET-RAB.sip7

MOVEMENT SUMMARY

 Site: 104 [Del Monte/Reservation - PM]

ROAD DIET SCENARIO

Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:37:28 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-ROADDIET-RAB.sip7

MOVEMENT SUMMARY

 Site: 108 [Reservation/De Forest - AM]

ROAD DIET SCENARIO

Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:37:29 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-ROADDIET-RAB.sip7

MOVEMENT SUMMARY

 Site: 108 [Reservation/De Forest - PM]

ROAD DIET SCENARIO

Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:37:30 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-ROADDIET-RAB.sip7

MOVEMENT SUMMARY

 Site: 109 [Reservation/Crescent - AM]

ROAD DIET SCENARIO

Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:37:31 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-ROADDIET-RAB.sip7

MOVEMENT SUMMARY

 Site: 109 [Reservation/Crescent - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:37:31 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-ROADDIET-RAB.sip7

MOVEMENT SUMMARY

 Site: 110 [Reservation/California - AM]

ROAD DIET SCENARIO

Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:37:32 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-ROADDIET-RAB.sip7

MOVEMENT SUMMARY

 Site: 110 [Reservation/California - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue 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.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Processed: Monday, January 21, 2019 5:37:33 PM

Project: K:\SJC_TPTO\City of Marina\097789101_Marina Downtown Study\3_Analysis\Sidra\Marina-ROADDIET-RAB.sip7

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 E

Biological Resources Assessment



Downtown Vitalization Specific Plan

Revised Biological Resources Assessment

prepared by

City of Marina

211 Hillcrest Avenue

Marina, California 93933

Contact: Guido Persicone, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.

2511 Garden Road, Suite C-250

Monterey, California 93940

May 2023



RINCON CONSULTANTS, INC.

Environmental Scientists | Planners | Engineers

rinconconsultants.com

Table of Contents

Executive Summary	1
1 Introduction	2
1.1 Project Location	2
1.2 Project Description.....	2
2 Methodology	6
2.1 Regulatory Overview.....	6
2.1.1 Definition of Special Status Species.....	6
2.1.2 Environmental Statutes	6
2.1.3 Guidelines for Determining CEQA Significance	7
2.2 Literature Review	7
2.3 Field Reconnaissance Survey	8
3 Existing Conditions.....	9
3.1 Physical Characteristics.....	9
3.1.1 Watershed and Drainages	9
3.1.2 Soils.....	9
3.2 Vegetation and Other Land Cover	9
3.3 General Wildlife	12
4 Sensitive Biological Resources	13
4.1 Special Status Species	13
4.1.1 Special Status Plant Species.....	13
4.1.2 Special Status Animal Species.....	14
4.1.3 Other Protected Species.....	15
4.2 Sensitive Plant Communities and Critical Habitats.....	15
4.3 Jurisdictional Waters and Wetlands	15
4.4 Wildlife Movement	16
4.5 Resources Protected By Local Policies and Ordinances.....	17
4.6 Habitat Conservation Plans.....	17
5 Impact Analysis and Mitigation Measures.....	18
5.1 Special-Status Species.....	18
5.2 Sensitive Plant Communities	23
5.3 Jurisdictional Waters and Wetlands	23
5.4 Wildlife Movement	24
5.5 Local Policies and Ordinances.....	24
5.6 Adopted or Approved Plans.....	25
6 Limitations, Assumptions, and Use Reliance	26
7 References	27
8 List of Preparers.....	29

Figures

Figure 1	Regional Location Map	3
Figure 2	Project Area Map	5
Figure 3	Vegetation Communities and Land Cover Types	11

Appendices

Appendix A	Regulatory Framework
Appendix B	Site Photographs
Appendix C	Special Status Species Evaluation Tables

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.

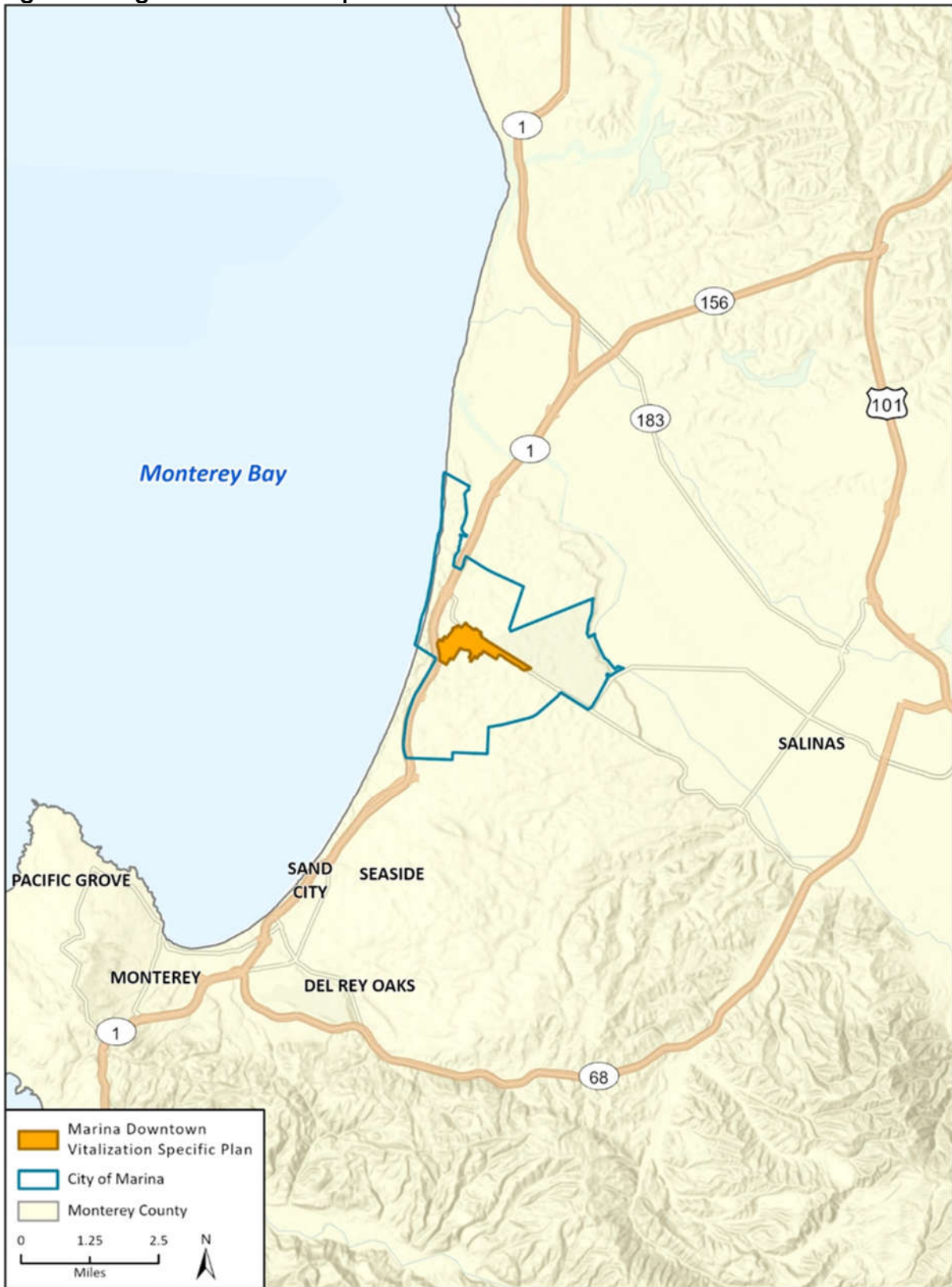
1.1 Project Location

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

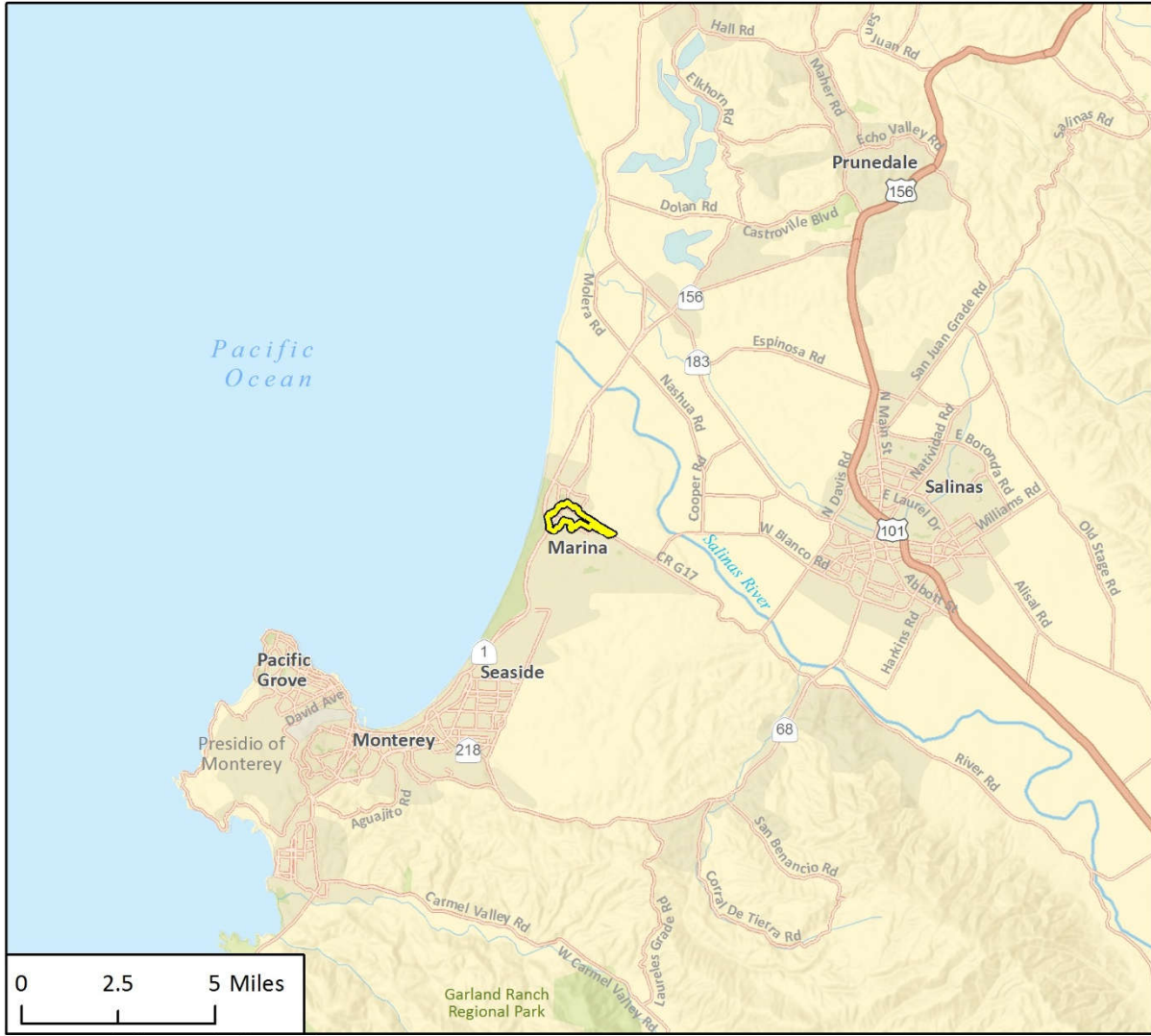
The Specific Plan implements the goals and policies of the City of Marina General Plan and provides specific direction to reflect conditions unique to the Downtown area. The Specific Plan includes land use designations, access requirements and standards, infrastructure location and sizing, financing, 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



Imagery provided by Microsoft Bing and its licensors © 2023.
Additional data provided by County of Monterey, 2020.

City of Marina
Downtown Vitalization Specific Plan



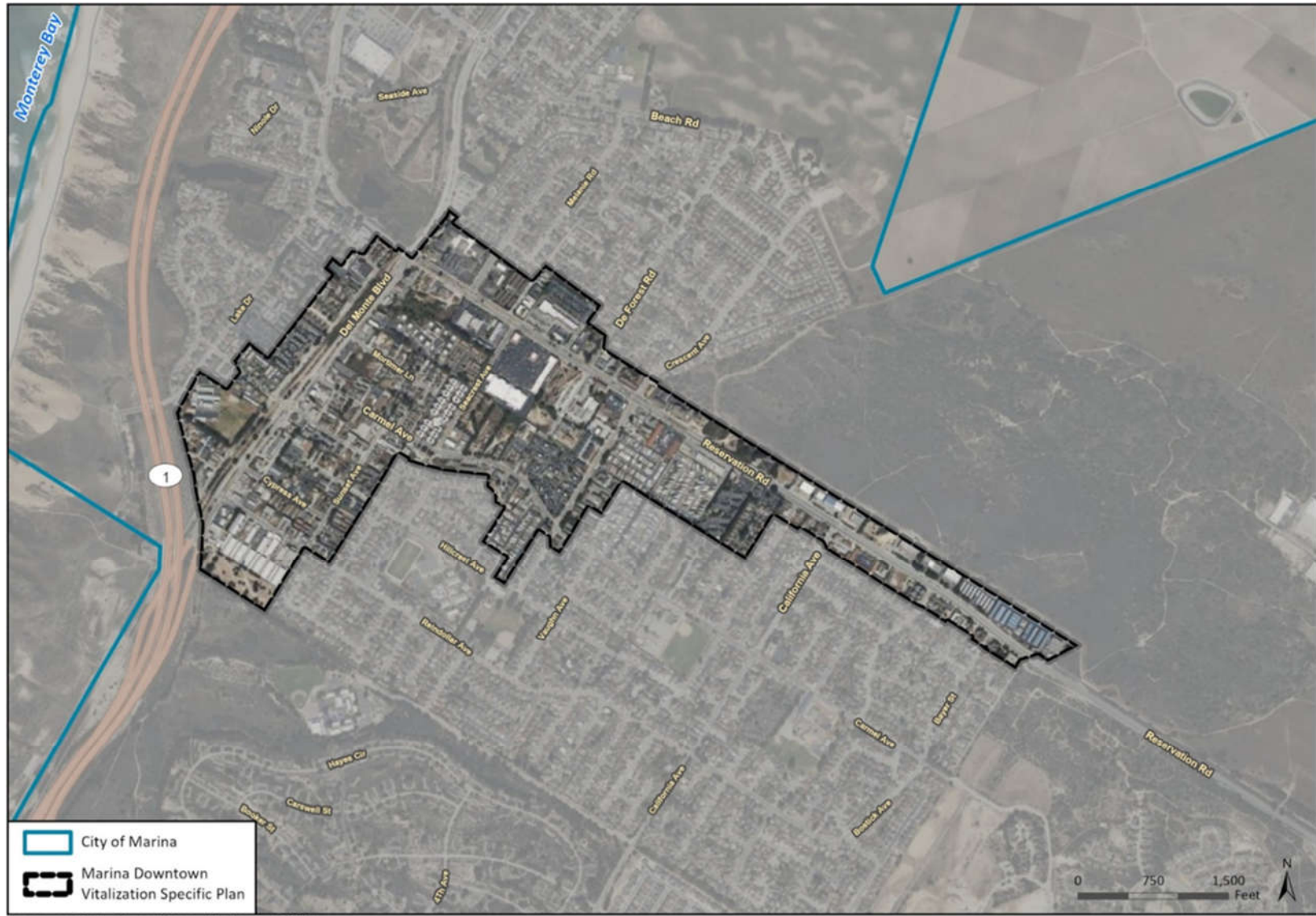
Imagery provided by Esri and its licensors © 2019.

 Specific Plan Area 



Fig 1 Regional Location

Figure 2 Project Area Map



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 (CNDDDB) (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 CNDDDB 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. Updated queries of the CNDDDB (CDFW 2023a), Special Animals List (CDFW 2023b), CNPS Inventory of Rare and Endangered Plants of California (CNPS 2023), and Information, Planning and Conservation System (USFWS 2023) were conducted in March 2023.

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 assess 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 area 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, and the majority of potential impacts from project-level development would result only in those areas comprised of lots, open space and natural areas. 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.

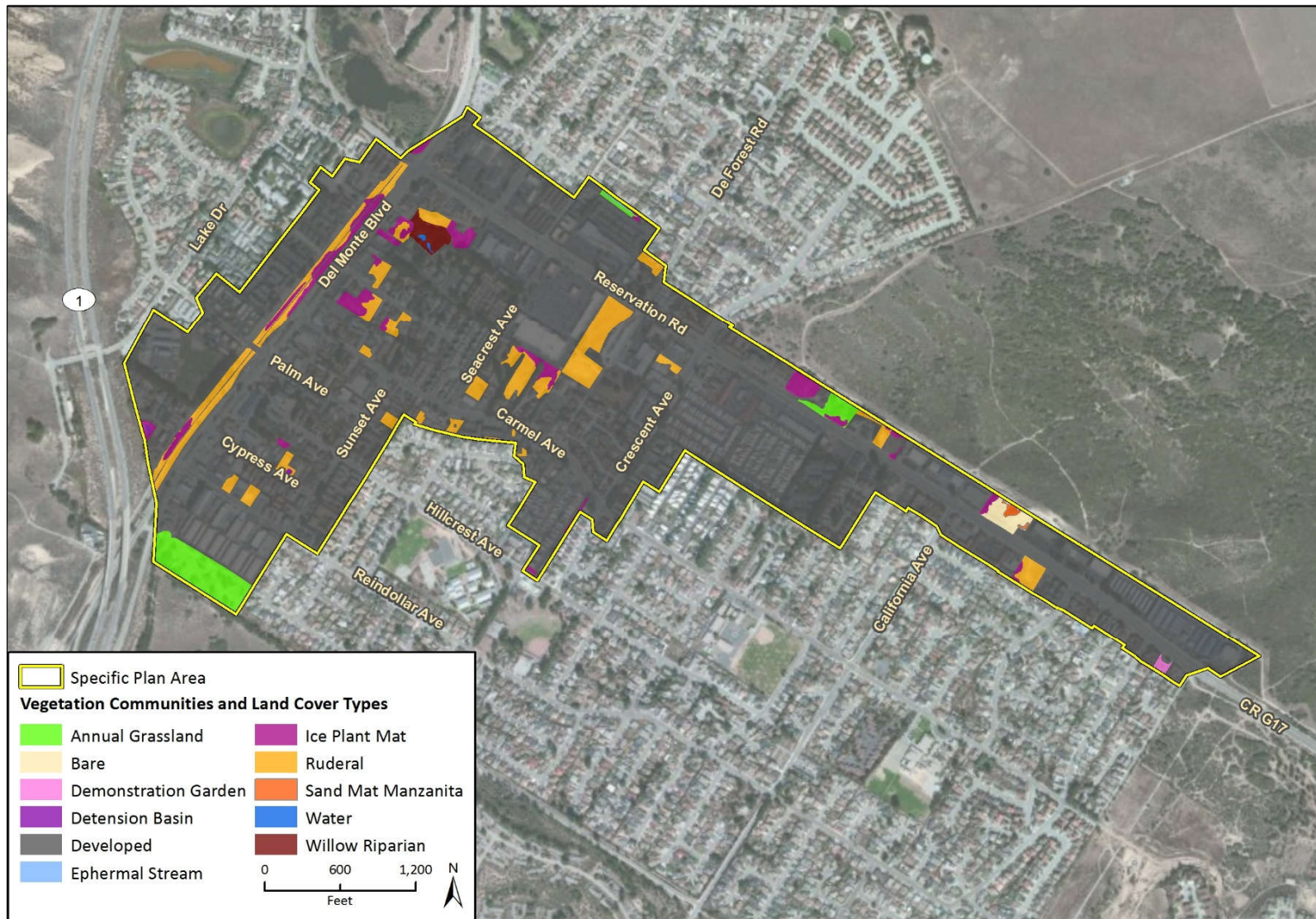
Ruderal

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



Imagery provided by Esri and its licensors © 2019.

Fig X Biological Resources

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 (*Melospiza 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 CNDDDB, 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., CNDDDB, 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. With the exception of nesting birds, special status species would not be expected to occur in any portions of the Specific Plan area mapped as “developed.”

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 ammphilum*)
- 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 salarii*) – 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.

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 gillia, 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

Downtown Vitalization Specific Plan

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 seaciff 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

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 qualified 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.

▪

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 CNDDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDDB, may vary with regard to accuracy and completeness. In particular, the CNDDDB 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.

7 References

- California Department of Fish and Wildlife (CDFW). 2019a. California Natural Diversity Database, Rarefind V. Accessed May 2019.
- _____. 2010b. Biogeographic Information and Observation System (BIOS). Accessed May, 2019 from www.wildlife.ca.gov/data/BIOS
- _____. 2023a. California Natural Diversity Database, Rarefind Version 5.3.0. Accessed March, 2023.
- _____. 2023b. January 2023. Special Animals List. California Department of Fish and Wildlife. Sacramento, CA.
- California Native Plant Society (CNPS). 2019. Inventory of Rare and Endangered Plants. V.7-08c-Interim 8-22-02. www.rareplants.cnps.org Accessed May, 2019.
- _____. 2023. Inventory of Rare and Endangered Plants. (online edition, v9.5). www.rareplants.cnps.org Accessed March, 2023.
- Baldwin , B.G. (Ed.), D.H. Goldman (Ed.), D. J. Keil (Ed.), R. Patterson (Ed.), T. J. Rosatti (Ed.), D. H. Wilken (Ed.). 2012. The Jepson Manual: Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded. University of California Press. Berkeley, California.
- Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Wildlife, Nongame Heritage Program. 156 pgs.
- Sawyer, J. O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, California
- Sibley, D. 2016. Sibley Birds West: Field Guide to Birds of Western North America. New York :Alfred A. Knopf; 2nd edition (March 29, 2016)
- Stebbins, R. C. 2003. A Field Guide to Western Reptiles and Amphibians. 2nd ed. Houghton-Mifflin Company. Boston, Massachusetts.
- Sullivan, B.L., C.L. Wood, M.J. Iliff, R.E. Bonney, D. Fink, and S. Kelling. 2009. eBird: a citizen-based bird observation network in the biological sciences. *Biological Conservation* 142: 2282-2292.
- United States Army Corps of Engineers (USACE). 1992. Flora and Fauna Baseline Study of Fort Ord, California. Sacramento District.
- United States Department of Agricultural, Natural Resources Conservation Service (USDA, NRCS). 2019. Web Soil Survey. Soil Survey Area: Monterey County, California. Soil Survey Data: Version 15, Sep 17, 2018. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> Accessed May, 2019
- United States Geologic Survey (USGS) Historical Topographic Map Explorer. 2019. California Monterey Quadrangle, 1941. <http://historicalmaps.arcgis.com/usgs/> Accessed June, 2019
- United States Fish and Wildlife Service (USFWS). 2019a. Critical Habitat Portal. <https://ecos.fws.gov/ecp/report/table/critical-habitat.html> Accessed May, 2019

Downtown Vitalization Specific Plan

_____. 2019b. National Wetlands Inventory. <https://www.fws.gov/wetlands/data/mapper.html>
Accessed May, 2019

_____. 2019c. Information for Planning and Consultation online project planning tool. Available at:
<https://ecos.fws.gov/ipac/> Accessed May, 2019

_____.2023. Information for Planning and Consultation online project planning tool. Available at:
<https://ecos.fws.gov/ipac/> Accessed March, 2023

Western Region Climate Center (WRCC).2019. Western U.S. Climate Historical Summaries, Weather
Station: FRITZSCHE AAF, CALIFORNIA (043186). [https://wrcc.dri.edu/cgi-
bin/cliMAIN.pl?ca3186](https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3186) (Accessed May 2019)

8 List of Preparers

Rincon Consultants, Inc.

Primary Author

- Samantha Kehr, Senior Biologist

Technical Review

- David Daitch, Ph.D., Program Manager

Graphics

- Jon Montgomery, GIS Analyst

Field Reconnaissance Survey

- Samantha Kehr, Senior biologist

This page intentionally left blank.

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 anadromous 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 offense 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.

Fort Ord Habitat Management 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.

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.

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
<i>Agrostis lacuna-vernalis</i> 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.
<i>Allium hickmanii</i> 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.
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i> 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.
<i>Arctostaphylos montereyensis</i> 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.
<i>Arctostaphylos pajaroensis</i> 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.
<i>Arctostaphylos pumila</i> 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.
<i>Astragalus tener</i> var. <i>tener</i> 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.
<i>Astragalus tener</i> var. <i>titi</i> 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.

City of Marina
Downtown Vitalization Specific Plan

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Bryoria spiralis</i> 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.
<i>Castilleja ambigua</i> var. <i>insalutata</i> 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.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon's tarplant	None/None G3T2/S2 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.
<i>Chorizanthe minutiflora</i> 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.
<i>Chorizanthe pungens</i> var. <i>pungens</i> 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.
<i>Chorizanthe robusta</i> var. <i>robusta</i> 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.
<i>Clarkia jolonensis</i> 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
<i>Collinsia multicolor</i> 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.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> 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.
<i>Delphinium californicum</i> ssp. <i>interius</i> 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.
<i>Delphinium hutchinsoniae</i> 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.
<i>Delphinium umbraculorum</i> 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.
<i>Ericameria fasciculata</i> 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.

City of Marina
Downtown Vitalization Specific Plan

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Eriogonum nortonii</i> 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.
<i>Erysimum ammophilum</i> 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.
<i>Erysimum menziesii</i> 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.
<i>Fritillaria liliacea</i> 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.
<i>Gilia tenuiflora ssp. arenaria</i> 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
<i>Hesperocypris goveniana</i> 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.
<i>Hesperocypris macrocarpa</i> 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.
<i>Holocarpha macradenia</i> 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.
<i>Horkelia cuneata</i> var. <i>sericea</i> 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.
<i>Horkelia marinensis</i> 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
<i>Lasthenia conjugens</i> 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.

City of Marina
Downtown Vitalization Specific Plan

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Layia carnosa</i> 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 there are no known occurrences of this species within 5 miles.
<i>Legenere limosa</i> 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.
<i>Lupinus tidestromii</i> 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 there are no known occurrences of this species within 5 miles.
<i>Malacothamnus palmeri</i> var. <i>involucratus</i> 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 there are no known occurrences of this species within 5 miles.
<i>Malacothamnus palmeri</i> var. <i>palmeri</i> 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 there are no known occurrences of this species within 5 miles.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> 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 there are no known occurrences of this species within 5 miles.
<i>Meconella oregana</i> 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.
<i>Microseris paludosa</i> 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
<i>Monardella sinuata</i> ssp. <i>nigrescens</i> 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.
<i>Monolopia gracilens</i> 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 there are no known occurrences of this species within 5 miles.
<i>Pinus radiata</i> 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.
<i>Piperia yadonii</i> 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.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> 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.
<i>Potentilla hickmanii</i> 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 there are no known occurrences of this species within 5 miles.

City of Marina
Downtown Vitalization Specific Plan

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Ramalina thrausta</i> angel's hair lichen	None/None G5?/S2S3 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.
<i>Rosa pinetorum</i> 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.
<i>Stebbinsoseris decipiens</i> 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.
<i>Trifolium buckwestiorum</i> 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.
<i>Trifolium hydrophilum</i> 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.
<i>Trifolium polyodon</i> 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.
<i>Trifolium trichocalyx</i> 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	Status Fed/State ESA	Habitat Requirements	Potential to Occur	Rationale
Common Name	CRPR			
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				
<i>Bombus crotchii</i> Crotch bumble bee	None/State Candidate Endangered G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Not Expected	There are no known occurrences of this species within 5 miles.
<i>Bombus occidentalis</i> western bumble bee	None/SCE G3/S1	Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Not Expected	There is one known occurrence of this species within 5 miles, however suitable natural habitats are not present, and the Specific Plan area is largely developed.
<i>Danaus plexippus pop. 1</i> 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.
<i>Euphilotes enoptes smithi</i> 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: <i>Eriogonum latifolium</i> and <i>Eriogonum parvifolium</i> 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 <i>Eriogonum latifolium</i> , was also reported from just north of the Specific Plan area adjacent to the small patch of sandmat manzanita.
Fish				
<i>Eucyclogobius newberryi</i> 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.
<i>Lavinia exilicauda harengus</i> Monterey hitch	None/None G4T3/S3 SSC	Aquatic, Klamath/North coast flowing waters, Klamath/North coast standing waters, Riparian forest.	Not Expected	Suitable Aquatic habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Oncorhynchus mykiss irideus</i> 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 there are no known occurrences of this species within 5 miles.
<i>Spirinchus thaleichthys</i> 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 there are no known occurrences of this species within 5 miles.
Reptiles				
<i>Anniella pulchra</i> 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 areas	Suitable sandy soils are present and there are 27 known occurrences within 5 miles, including one within the Specific Plan area.
<i>Emys marmorata</i> 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.
<i>Phrynosoma blainvillii</i> 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.
<i>Thamnophis hammondi</i> 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 there are no known occurrences of this species within 5 miles.
Amphibians				
<i>Ambystoma californiense</i> 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.

City of Marina
Downtown Vitalization Specific Plan

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Ambystoma macrodactylum croceum</i> 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.
<i>Rana boylei</i> 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.
<i>Rana draytonii</i> 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 present and agricultural and airport development are likely to block movement from the river.
<i>Spea hammondi</i> 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.
<i>Taricha torosa</i> 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				
<i>Agelaius tricolor</i> 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.
<i>Asio flammeus</i> 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.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Athene cunicularia</i> 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.
<i>Buteo regalis</i> 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.
<i>Charadrius alexandrinus nivosus</i> western snowy plover	Threatened/None G3T3/S2S3 SSC	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.
<i>Coturnicops noveboracensis</i> 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.
<i>Cypseloides niger</i> 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.
<i>Elanus leucurus</i> 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).
<i>Eremophila alpestris actia</i> 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.

City of Marina
Downtown Vitalization Specific Plan

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Falco mexicanus</i> 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.
<i>Falco peregrinus anatum</i> 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
<i>Laterallus jamaicensis coturniculus</i> 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.
<i>Pelecanus occidentalis californicus</i> 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.
<i>Rallus obsoletus obsoletus</i> 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.
<i>Riparia riparia</i> 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				
<i>Corynorhinus townsendii</i> 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.
<i>Neotoma macrotis luciana</i> Monterey dusky-footed woodrat	None/None G5T3/S3 SSC	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Nests constructed of grass, leaves, sticks, feathers, etc. Population may be limited by availability of nest materials.	Not Expected	Suitable habitat is not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Sorex ornatus salarius</i> 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.
<i>Taxidea taxus</i> 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.
<p>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</p>				

Appendix F

Water Supply Assessment and Gap Analysis

Water Supply Assessment

WATER SUPPLY ASSESSMENT
FOR THE
MARINA DOWNTOWN VITALIZATION
SPECIFIC PLAN

Prepared by
MARINA COAST WATER DISTRICT



and

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

April 2020

**WATER SUPPLY ASSESSMENT AND WRITTEN
VERIFICATION OF SUPPLY**

FOR THE

MARINA DOWNTOWN VITALIZATION SPECIFIC PLAN

Prepared by

MARINA COAST WATER DISTRICT



Board of Directors
Thomas P. Moore, President
Jan Shriner, Vice-President
Herbert Cortez
Peter Le
Matt Zefferman

and

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
3 QUAIL RUN CIRCLE, SUITE 101
SALINAS, CA 93907

April 2020



Table of Contents

Summary of Water Supply Assessment..... 1

Section 1 - Introduction..... 2

 1.1 Project Overview..... 2

 1.2 Purpose of Water Supply Assessment..... 2

 1.3 Project Subject to CEQA..... 2

 1.4 Project Requiring a Water Supply Assessment..... 3

 1.5 Requirements of a Written Verification of Supply 3

 1.6 Public Water Agency Serving the Project..... 4

 1.7 Relationship of WSA to MCWD Urban Water Management Plan..... 6

Section 2 - Project Description and Water Demands 7

 2.1 Project Description..... 7

 2.2 Proposed Land Uses and Water Demands 7

 2.2.1 Residential..... 10

 2.2.2 Commercial..... 10

 2.2.3 Parks and Landscaping 10

 2.2.4 Project Total Water Demands..... 11

Section 3 - District Water Demands..... 12

 3.1 Historic and Current Water Demands 12

 3.2 Future Demands 13

 3.3 Dry-Year Demands 16

Section 4 - Water Supply 18

 4.1 Current Water Supply..... 18

 4.1.1 Groundwater 18

 4.1.2 Desalinated Water..... 20

 4.2 Future Water Supply 20

 4.2.1 Recycled Water..... 20

 4.2.2 Desalinated Water..... 20

 4.2.3 Conservation 21

 4.3 Regulatory Permits Necessary for Supply Delivery 21

Section 5 - Supply Sufficiency Analysis..... 22

 5.1 Comparison of Project Demands to Projected Supply..... 22

 5.2 Plans for Acquiring Additional Water Supplies..... 22

 5.3 Reliability of Water Supply..... 23

 5.4 Effect on Agricultural and Industrial Users Reliant on the Same Source 23

Section 6 - Conclusions..... 24

 6.1 Sufficiency of Water Supply for the Project 24

Appendices

- A. Recycled Water Project Details
- B. Desalination Project Details
- C. References
- D. Board Resolution Approving the Water Supply Assessment

List of Tables

Table i Acronyms Used in this Report..... iii

Table ii Units of Measure Used in this Report iv

Table 2-1: Current Land Use in DVSP Area 9

Table 2-2: Projected Land Use in DVSP Area 9

Table 2-3: Projected Increases 9

Table 2-4: Water Demand Factors 10

Table 2-5: Summary of Estimated Water Demand..... 11

Table 3-1: Water Production by Service Area (AF) 12

Table 3-2: Water Demand Projection by Service Area (AF)..... 14

Table 3-3: Central Marina In-Fill Projection Compared to Elements in the 2015 UWMP 15

Table 3-4: Cumulative Central Marina Demand by Time Increment 15

Table 3-5: Revised Water Demand Projection by Service Area (AF)..... 16

Table 3-6: Dry Year Demand Projections 17

Table 4-1: Existing Pumping Capacity 19

Table 5-1: FORA Allocations in the Ord Community..... 22

List of Figures

Figure 1.1: Marina Coast Water District Service Area Designations 4

Figure 1.2: Marina Coast Water District LAFCO Service Boundary 5

Figure 2.1: Specific Plan Area 8

Figure 3.1: Water Use within Central Marina (acre-feet)..... 13

Figure 4.1: Groundwater Basins 18

Table i. Acronyms Used in this Report

Acronym	Description
afy, ac-ft/yr	Acre-feet/year
ccf, hcf	Hundred cubic feet
gpd	Gallons per day
gpcd	Gallons per capita day, or gallons per person per day
mgd	Million gallons per day
sq-ft	Square feet
BMP	Best management practice
CAW, CalAm	California American Water Company
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CSUMB	California State University – Monterey Bay
CWC	California Water Code
DDW	SWRCB Division of Drinking Water
DMM	Demand management measure
DVSP	Downtown Vitalization Specific Plan
DWR	California Department of Water Resources
FORA	Fort Ord Reuse Authority
LAFCO	Local Agency Formation Commission
M1W	Monterey One Water (formerly MRWPCA)
MCWD, District	Marina Coast Water District
MCWRA	Monterey County Water Resources Agency
MPWMD	Monterey Peninsula Water Management District
OMC	Ord Military Community
POM	Presidio of Monterey
PWM	Pure Water Monterey Project
SB	California Senate Bill
SRDP	Salinas River Diversion Project
SVBGSA	Salinas Valley Basin Groundwater Sustainability Agency
SVWP	Salinas Valley Water Project
SVGB	Salinas Valley Groundwater Basin
SWRCB	State Water Resources Control Board
UCMBEST	University of California Monterey Bay Education, Science and Technology Center
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
WVS	Written Verification of Supply

Table ii. Units of Measure Used in this Report

Unit	Equals
1 acre-foot	= 43,560 cubic feet = 325,851 gallons
1 cubic foot	= 7.48 gallons
1 CCF	= 100 cubic feet = 748 gallons
1 MGD	= 1,000,000 gallons/day = 1,120 acre-feet / year

Summary of Water Supply Assessment

Project: Marina Downtown Vitalization Specific Plan, Marina, California

Pursuant to Section 10910 of the California Water Code (CWC), and based on the analysis detailed in this report and the representations by the Project's proponents, the Marina Coast Water District (the District) has determined that its currently projected water supplies are sufficient to meet the projected annual water demands of existing and previously approved uses and the implementation of the Marina Downtown Vitalization Specific Plan during normal, single-dry, and multiple-dry years. The Project will increase the amount of in-fill development in the District's Central Marina service area. The increased development adds approximately 282.3 acre-feet per year (AFY) to the previously projected water demand due to in-fill development. A portion of this is offset by reduced baseline water demand due to permanent water conservation modifications made during the recent drought. The projected water demand for Central Marina with the Project is 2,785 AFY in year 2040. The City has an existing allocation of Salinas Valley Groundwater of 3,020 AFY for Central Marina. Therefore, there is sufficient supply available for the proposed project.

Section 1 - Introduction

1.1 Project Overview

The City of Marina in Monterey County, California, is preparing the Downtown Vitalization Specific Plan (DVSP). The Downtown Vitalization Specific Plan is a community-initiated plan intended to guide the future development and ultimate transformation of the City's 322-acre downtown. Water supply for the City is provided by the Marina Coast Water District. Further description of the Project is given in Section 2.0.

1.2 Purpose of Water Supply Assessment

The California Water Code (§10910 et. seq.), based on Senate Bill 610 of 2001 (SB 610), requires a project proponent to assess the reliability of a project's water supply as part of the California Environmental Quality Act (CEQA) process. Under the California Government Code (§66473.7), based on Senate Bill 221 of 2001, proposed subdivisions adding 500 dwelling units are also required to receive written verification of the available water supply from the project's water supplier. This project includes the addition of up to 2,904 dwelling units but is not a subdivision as explained in Section 1.5, so only a water supply assessment is required.

This report is meant to serve as the Water Supply Assessment (WSA) for the Project to meet the California Water and Government Code requirements. This WSA documents the District's existing and future water supplies for the Project area and compares them to the District's total projected water demands for the next twenty (20) years.

The SB 610 process requires the following several steps to identify the need and scope of a project's WSA:

1. Determine whether the project is subject to CEQA.
2. Determine whether the project meets the definition of a "project" per SB 610.
3. Determine the public water agency that will serve the project.
4. Determine whether any current Urban Water Management Plan considers the projected water demand for the project area.
5. Determine whether groundwater is used by the public water agency to serve the project area.

1.3 Project Subject to CEQA

CEQA applies to projects for which a public agency is directly responsible, funds, and/or requires the issuance of a permit. The City of Marina determined that the Project is subject to the requirements of CEQA. An Environmental Impact Report (EIR) is currently being prepared.

1.4 Project Requiring a Water Supply Assessment

CWC §10912(a) defines a Project for WSA purposes as including any of the following¹:

- a proposed residential development of more than 500 dwelling units;
- a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- a mixed-use project that includes one or more of the projects identified in this list;
- a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The Downtown Vitalization Specific Plan proposes the addition of up to 2,904 dwelling units and 1,385,000 square feet of commercial space, so a water supply assessment is required.

1.5 Requirements of a Written Verification of Supply

Government Code §66473.7(b)(1) requires:

The legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove the tentative map, shall include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply shall be requested by the subdivision applicant or local agency, at the discretion of the local agency, and shall be based on written verification from the applicable public water system within 90 days of a request.

The public water system must determine if there is sufficient water supply for the subdivision, as defined in Government Code §66473.7(a)(2): “Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses.

However, Government Code §66473.7(i) exempts infill projects:

This section shall not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households.

¹ There are additional uses that may qualify as a “project” under the CWC, but included here are the applicable categories.

The DVSP is a zoning action that facilitates infill development but does not require preparing a tentative map or final map, so a Written Verification of Supply is not required.

1.6 Public Water Agency Serving the Project

The Marina Coast Water District, a county water district, serves the City of Marina and the former Fort Ord, which includes portions of the City of Marina, City of Seaside, City of Del Rey Oaks, City of Monterey and unincorporated Monterey County. The District has two service areas, Central Marina (outside the former Fort Ord) and the Ord Community. The Project is located in the Central Marina Service Area (see Figure 1.1). MCWD provides water and wastewater service to the Ord Community as outlined in the Water/ Wastewater Facilities Agreement between the Fort Ord Reuse Authority (FORA) and MCWD (1998) and as further described in the Assignment of Easements on Former Fort Ord and Ord Military Community, County of Monterey, and Quitclaim Deed for Water and Wastewater Systems, between FORA and MCWD, dated October 24, 2001. MCWD recently completed the Local Agency Formation Commission of Monterey County (LAFCO) annexation of the served portions of the Ord Community into the District's service area and sphere of influence (see Figure 1.2).

Figure 1.1: Marina Coast Water District Service Area Designations

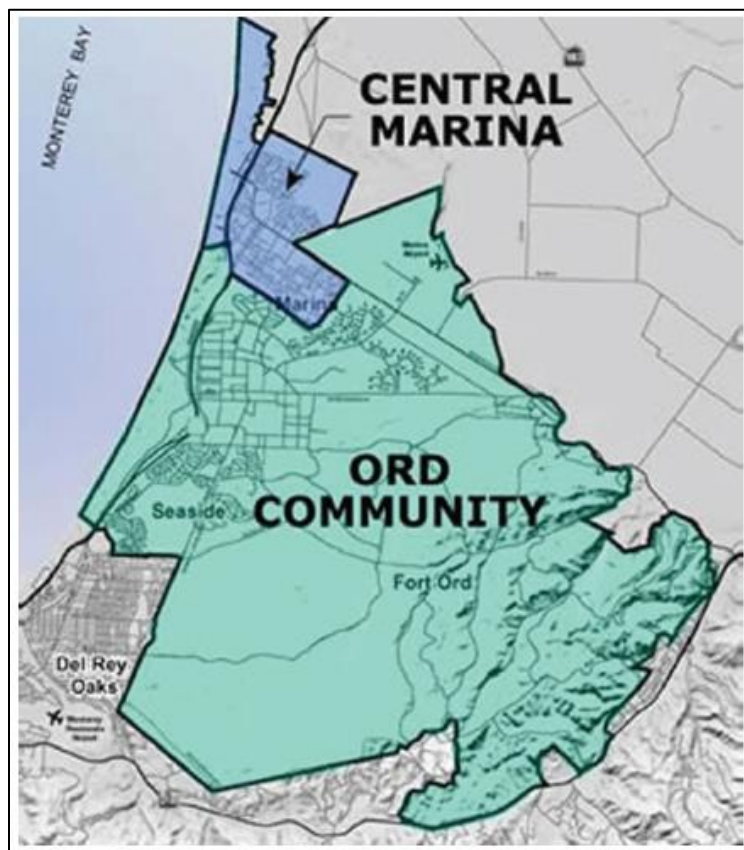
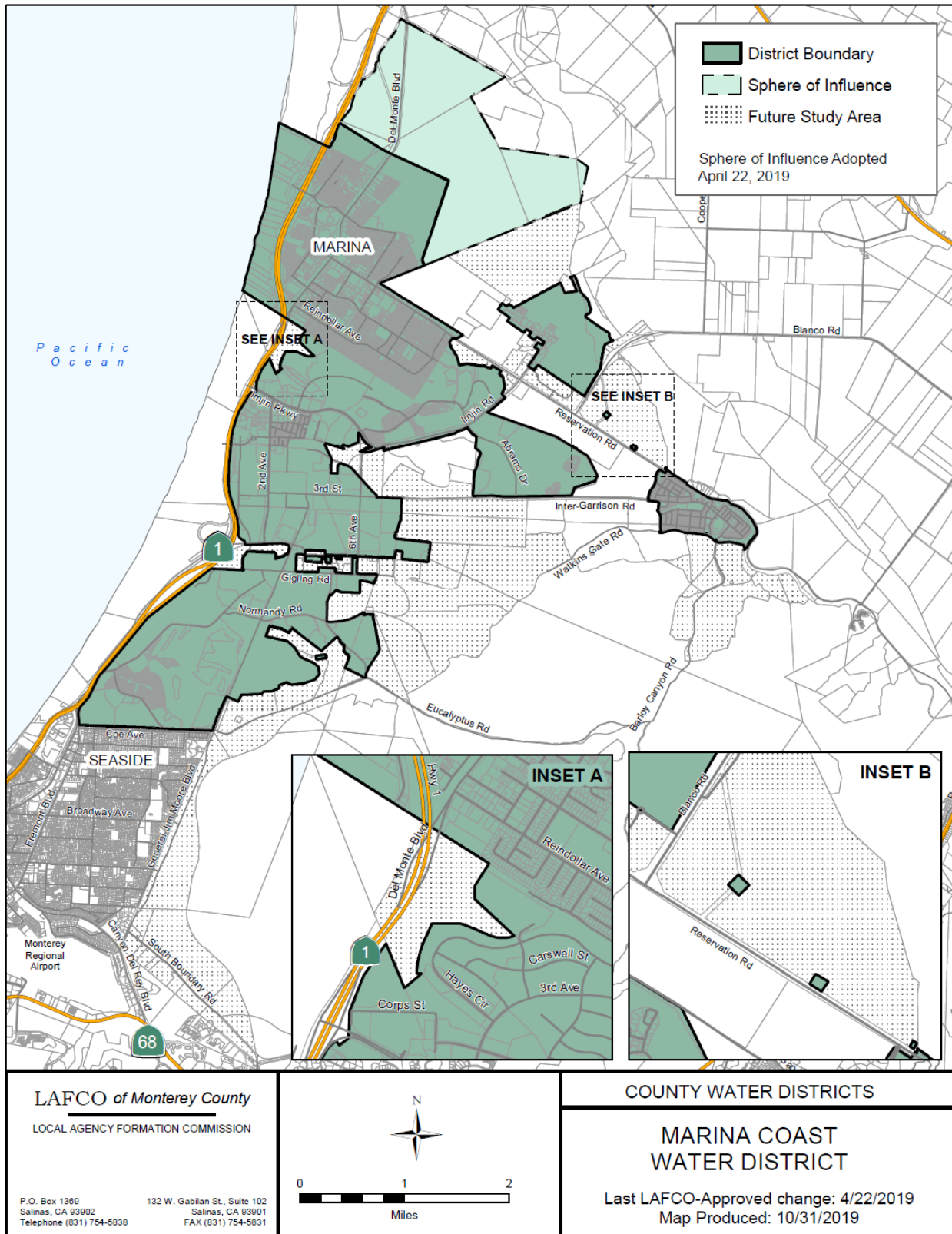


Figure 1.2: Marina Coast Water District LAFCO Service Boundary



1.7 Relationship of WSA to MCWD Urban Water Management Plan

The California Urban Water Management Planning Act (§10610 et. seq. of the CWC) requires urban water suppliers providing over 3,000 acre-feet per year (AFY) of water or having a minimum of 3,000 service connections to prepare plans (urban water management plans or UWMPs) on a five-year, ongoing basis. An UWMP must demonstrate the continued ability of the provider to serve customers with water supplies that meet current and future expected demands under normal, single dry, and multiple dry year scenarios. These plans must also include the assessment of urban water conservation measures and wastewater recycling. Pursuant to Section 10632 of the CWC, the plans must also include a water shortage contingency plan outlining how the water provider will manage water shortages, including shortages of up to fifty percent (50%) of their normal supplies, and catastrophic interruptions of water supply. The Marina Coast Water District is required to prepare Urban Water Management Plans. The District's most recent Urban Water Management Plan (2015 UWMP) was adopted in June 2016. The 2015 UWMP projected demands for 20 years through the year 2035.

As provided for in the State law, this WSA incorporates by reference and relies upon many of the planning assumptions and projections of the 2015 UWMP in assessing the water demands of the proposed Project relative to the overall increase in water demands expected within the entire District service area. The 2015 UWMP projected a significant increase in water demand within the Central Marina Service Area due to anticipated in-fill development, based upon the City's General Plan, Zoning Ordinance and earlier drafts of the DVSP, and the planned Marina Station subdivision on the north edge of the City. Water demand for Central Marina was projected to increase from 1,823 acre-feet/year (AFY) in 2012 to 3,905 AFY in 2035. The increased demand was projected to be met with existing groundwater resources.

The 2015 UWMP found that the projected Central Marina water demand of 2,725 AFY in year 2035 could be met using the available groundwater supply, but the Ord Community water demand of 8,293 AFY in year 2035 exceeded the currently available supply of 6,600 AFY. Additionally, because the current water supply within the Ord Community has been allocated among the land use jurisdictions, some jurisdictions maintain a projected surplus, while others have projected shortages. The District is pursuing two water supply projects to address the projected shortfall. First, an urban recycled water system is being constructed, which will provide an initial 600 AFY for landscape irrigation, and ultimately provide up to 1,427 AFY of non-potable supply. Second, a seawater desalination project is proposed to provide up to 1,500 AFY of potable water supply. The District is currently considering alternative groundwater replenishment projects which, if feasible, may replace the desalination portion of the RUWAP.

Section 2 - Project Description and Water Demands

2.1 Project Description

The DVSP for the City of Marina, California describes the planned redevelopment in the 322-acre Project Area, whose boundaries are shown in Figure 2.1. The DVSP area is located within the District's Central Marina service area, generally including parcels along and near Del Monte Boulevard and Reservation Road. The Project area is currently developed, as described further below.

Based on the DSVP documentation, the Project entails rezoning of the Project Area to allow for development of the following:

- A Commercial Core District with a mix of retail, office, commercial, entertainment, residential and civic uses, focused along portions of Reservation Road and Del Monte Boulevard. Residential development in the Core District is high-density (70 dwelling units per acre) and restricted to the upper floors (no ground-floor residential);
- A Transition District for retail, service and hospitality businesses. Residential development in the Transition District is high-density (50 dwelling units per acre). In mixed use buildings facing Reservation Road and Del Monte Blvd, residential is restricted to the upper floors.
- Mixed Use nodes with retail and commercial space on the ground floor, and high-density residential (70 dwelling units per acre) on upper floors.
- Multifamily Residential Districts with apartments, townhomes and row homes at densities from 25 to 37 dwelling units per acre.

Other elements of the DVSP are the identification of required access and circulation to serve future development, location and sizing of needed infrastructure, financing methods for public improvements, and establishing standards of development. These other elements, except for the discussion of future water supply infrastructure, are not relevant to the WSA and so are not discussed further.

2.2 Proposed Land Uses and Water Demands

Table 2-1 and Table 2-2 quantify the existing and proposed land uses within the plan area. Anticipated build-out of the DVSP area includes adding from 532,000 to 1,385,200 SF of commercial space and 2,904 high-density residential units to the specific plan area. The timing of the planned development would depend upon market forces, so an exact estimate of when build-out would occur is not possible. This report assumes build-out will occur over 20-years so that the full water demand increase is reflected in the analysis.

Figure 2.1: Specific Plan Area

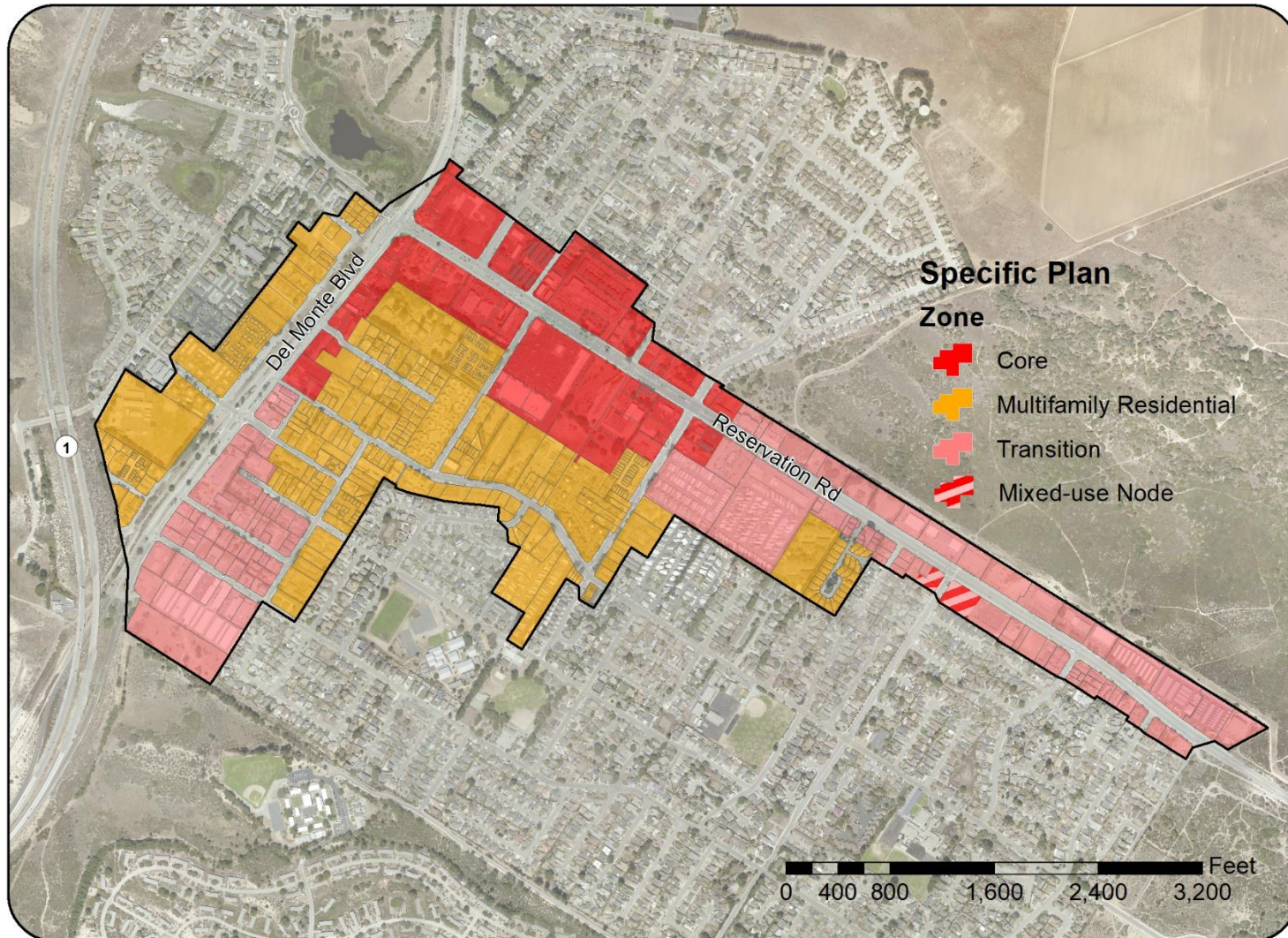


Table 2-1: Current Land Use in DVSP Area

Current Land Use		
	Square Footage	Residential Units
Core		286
Retail	375,277	
Office	36,587	
Multifamily Residential	0	1,638
Transition		377
Retail	316,428	
Office	277,466	
Total	1,005,758	2,301

Table 2-2: Projected Land Use in DVSP Area

DVSP (Current plus Development)				
	Minimum Sq. Ft	Maximum Sq. Ft	Residential Density	Residential Units
Core			70/acre	1,658
Retail	583,704	1,050,667		
Office	145,926	262,667		
Multifamily Residential	0	0	35/acre	1,792
Transition			50/acre	1,755
Retail	386,780	515,707		
Office	421,436	561,914		
Total	1,537,846	2,390,955		5,205

Table 2-3: Projected Increases

	Commercial Min Sq. Ft	Commercial Max Sq. Ft	Residential Units
Current	1,005,708	1,005,758	2,301
Projected	1,537,846	2,390,955	5,205
Increase	532,138	1,385,197	2,904

2.2.1 Residential

Multi-family residential densities are proposed to increase from the current maximum of 35 units per acre to as high as 70 units per acre, depending upon the district. The MCWD 2015 UWMP uses a demand factor of 0.25 AFY/DU for all multi-family residential development. The projected increase in multi-family dwelling units is 2,904, with a resulting increase in water demand of 726 AFY = (2,904 DU) x (0.25 AFY/DU). This value is inclusive of on-site landscaping and laundry facilities.

2.2.2 Commercial

The specific plan anticipates commercial square-footage increases of 532,088 SF (minimum) to 1,385,197 (maximum). The new uses will be a mix of office, retail, dining, entertainment and light industrial. The MCWD 2015 UWMP has demand factors for various types of development, as well as a generic Commercial demand factor, as shown in Table 2-4. Applying the generic commercial demand factor to the projected increases, the estimated demand ranges from 159.6 AFY to 415.6 AFY. Applying the retail demand factor, which is mid-way between the factors for office and restaurant, the estimated demand ranges from 111.7 AFY to 290.9 AFY. For this analysis, we will use 290.9 as the projected commercial demand increase. This is the upper end estimate using the retail demand factor, and also the mid-point of the range using the commercial demand factor.

Table 2-4: Water Demand Factors

Use Type	Qty/AFY	Factor	Unit
Apartments	4	0.25	AFY/DU
Commercial (generic)	3,333	0.00030	AFY/SF
Retail	4,762	0.00021	AFY/SF
Office	7,407	0.00014	AFY/SF
Govt./Institutional	3,333	0.00030	AFY/SF
Restaurant	2,857	0.00035	AFY/SF
Light Industrial	6,667	0.00015	AFY/SF

2.2.3 Parks and Landscaping

The specific plan text speaks to the need for in-fill parks and recreation areas, but none are specifically proposed. Since the project area is fully developed, we assume that existing irrigated landscaping will be reconfigured within the project, but no additional landscaping will be added.

Landscaping for street medians, parks and commercial sites may be irrigated with recycled water. MCWD will begin delivering recycled water for urban irrigation in 2021. Initial sites in Central Marina are outside the DVSP area, so no reduction in potable water demand for landscape irrigation is assumed for this analysis.

2.2.4 Project Total Water Demands

The total water demand projected for the project is 1,016.9 AFY, as shown in Table 2-5, below. A portion of this growth was included in the 2015 UWMP, as discussed in later sections.

Table 2-5: Summary of Estimated Water Demand

Land Use	Maximum Quantity	Unit	Demand Factor (AFY/unit)	Demand (AFY)
MF Residential	2,904	DU	0.25	726
Commercial	1,385,197	SF	0.00021	290.9
Total				1016.9

Section 3 - District Water Demands

3.1 Historic and Current Water Demands

Table 3-1 shows the District's water production over the period 2010-2019. The District's average production over that period was 3,690 AFY, with 1,582 AFY in the Central Marina service area and 2,107 AFY in the Ord Community service area.

Table 3-1: Water Production by Service Area (AF)²

Year	Central Marina	Ord Community	Total
2010	1,744	2,389	4,133
2011	1,698	2,348	4,047
2012	1,814	2,360	4,174
2013	1,467	2,964	4,431
2014	1,619	2,407	4,026
2015	1,420	1,808	3,228
2016	1,303	1,722	3,025
2017	1,587	1,651	3,238
2018	1,744	1,661	3,405
2019	1,425	1,764	3,189

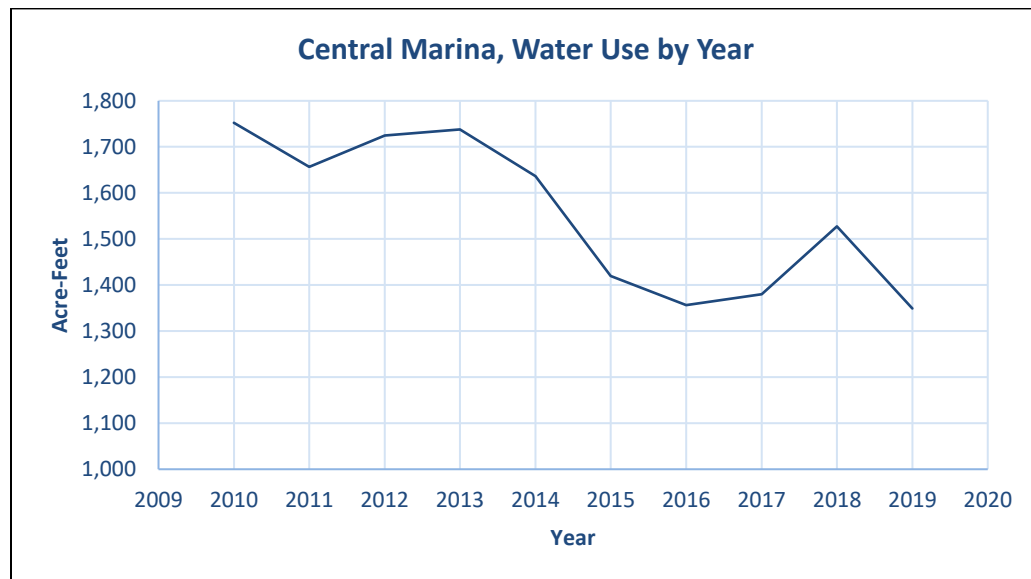
The City of Marina is made up of six sub-areas used for planning. Central Marina is divided into the three parties to the 1996 Zone 2/2A Annexation Agreement with MCWRA, which were the City of Marina (outside the former Fort Ord), the Armstrong Ranch and the RMC-Lonestar (now CEMEX) property. Armstrong Ranch is undeveloped land north of the City and east of Highway 1. CEMEX is north of the City and west of Highway 1. Each party to the annexation agreement has a separate allocation of Salinas Valley groundwater, so development and use is tracked by sub-area, although the City has since annexed the CEMEX property and a portion of the Armstrong Ranch. Similarly, the former Fort Ord was annexed into MCWRA Zones 2/2A and has an allocation of Salinas Valley Groundwater. The City portion of the Ord Community includes three land use jurisdictions, the City of Marina, the University of California and California State University. Each jurisdiction was allocated a portion of the existing groundwater supply by the Fort Ord Reuse Authority and is tracked as a separate entity.

For this WSA, we only assess the City portion of Central Marina, which is where the project is located. Planned development has not yet occurred in the Armstrong Ranch and CEMEX properties. Significant redevelopment is occurring in the City portion of the Ord Community, although at a slower pace than what was projected in the 2015 UWMP.

² Source: District Operations Staff

Water use in Central Marina is shown in Figure 3.1. Demand declined during the drought of record (2012-2016) due to mandated water conservation measures. Following the drought, demand rebounded somewhat but has not returned to pre-drought levels due to non-temporary changes (installation of water-conserving fixtures, reductions in irrigated landscaping, etc.) as well as changes in customer consumption behavior. System wide use in 2019 was approximately equal to the use in 2018. The 2015 UWMP assumed a baseline water demand of 1,823 AFY for Central Marina, based upon pre-drought usage. For this analysis, the baseline demand is revised to 1,600 AFY, reflective of the post-drought trend.

Figure 3.1: Water Use within Central Marina³ (acre-feet)



3.2 Future Demands

Table 3-2 shows projected water demands for the District through 2035. The projection is based on Table 3.5 of the 2015 UWMP, with updates to the City of Seaside portion of the Ord Community made under a previous WSA⁴. The projected water demand for Central Marina is based upon a baseline usage of 1,823 acre-feet per year, and a significant amount of in-fill development. A portion of the in-fill was based upon the 2010 version of the draft DVSP, but it also included a new school with irrigated sports fields, 400 new hotel rooms and low-density housing additions outside the DVSP area. City staff has revised the in-fill projection based on available in-fill sites outside the DVSP area. A comparison of the previous and current in-fill projections is provided in Table 3-3. Infill within the DVSP area significantly increases, partially because the 2015 UWMP showed the first 20-years of a 30-year buildout projection, but

³ Source: MCWD Quarterly Water Consumption Reports

⁴ See the WSA/WSV for the Campus Town Specific Plan

also because the updated DVSP projects a much greater amount of infill. This increased the demand projection by 554.7 AFY. Outside the DVSP area, the projected demand decreases by 272.4, as explained below. The net result is the projected in-fill water demand increases by 282.3 AFY.

Table 3-2: Water Demand Projection by Service Area (AF)⁵

	Jurisdiction	2012*	2015**	2020	2025	2030	2035	Notes	Allocation
Ord	U.S. Army	620	633	663	825	825	825		1,577
	CSUMB	404	404	442	632	755	779		1,035
	Del Rey Oaks	0	0	186	551	551	551		243
	City of Monterey	0	0	0	130	130	130		65
	County of Monterey	8	52	377	539	539	539		720
	UCMBEST	3	3	94	299	515	515	4	230
	City of Seaside	657	657	592	783	1,097	1,560	1, 2	1,012
	State Parks and Rec.	0	0	12	18	20	25		45
	Marina Ord Comm.	264	285	901	1,572	1,702	1,704	3	1,325
	Assumed Line Loss	395	348	348	348	348	348		348
Marina	Armstrong Ranch	0	0	0	680	680	680		920
	Cemex	0	0	0	0	0	500		500
	Marina Central	1,823	1,823	2,184	2,491	2,606	2,725		3,020
Subtotal - Ord		2,351	2,382	3,616	5,698	6,482	6,976		6,600
Subtotal - Marina		1,823	1,823	2,184	3,171	3,286	3,905		4,440
Total		4,174	4,204	5,800	8,868	9,768	10,881		11,040

*Actual demands from calendar year 2012 used to represent a non-drought year.

** Projected demands. Actual use was lower due to mandatory drought restrictions.

1 Includes Seaside Resort Golf Course use in 2012 and 2015 (temporary use).

2. Revised values shown in italics. Removes Monterey Downs project.

3. Revised allocation to reflect groundwater only. Supply from existing pilot desalination plant removed.

4. MBEST commented that they may develop up to 230 AFY as soon as the market allows it.

⁵ Source: Table 3-3 of the WSA/WSV for the Campus Town Specific Plan. Marina-Ord allocation revised per note 3.

Table 3-3: Central Marina In-Fill Projection Compared to Elements in the 2015 UWMP⁶

Area and Use	2015 UWMP				2019 Specific Plan			
	Qty	Unit	Factor	Demand	Qty	Unit	Factor	Demand
DVSP In-Fill								
MF Residential (> 15 DU/Acre)	1,600	DU	0.25	400.0	2,904	DU	0.25	726.0
Office	84,000	SF	0.000135	11.3	510,528	SF	0.000135	68.9
Retail/Commercial	169,400	SF	0.0003	50.8	874,669	SF	0.000254	222.0
			Total:	462.2			Total:	1,016.9
In-Fill Outside the DVSP								
SF Residential (5-8 DU/Acre)	33	DU	0.33	10.9	0	DU	0.33	0.0
SF Residential (8-12 DU/acre)	0	DU	0.25	0.0	200	DU	0.25	50.0
MF Residential (> 15 DU/Acre)	349	DU	0.25	87.3	189	DU	0.25	47.3
Hotel/Motel	400	Room	0.17	68.0	180	Room	0.11	19.8
Retail/Restuarants	92,000	SF	0.00145	133.4	0	SF	0.00145	0.0
Other Commercial	60,000	SF	0.0003	18.0	138,521	SF	0.0003	41.6
Institutional	10,000	SF	0.0003	3.0	0	SF	0.0003	0.0
Schools	188,260	SF	0.0003	56.5	0	SF	0.0003	0.0
RV Park	0	Space	0.065	0.0	24	Space	0.065	1.6
Landscape (turf)	25.2	AC	2.5	63.0	0	AC	2.5	0.0
Landscape (non-turf)	0	AC	2.1	0.0	3.53	AC	2.1	7.4
			Total:	440.0			Total:	167.6
Total for Central Marina:				902.2				1,184.5

The most significant change to the in-fill projection is the removal of the previously proposed school⁷, but the demand projection is also reduced due to assuming higher-density housing which uses less water per unit, and revising the demand factor for hotels to reflect the current average demand per room within the District⁸. The revised demand factor for hotel rooms is used in the current Capacity Fee Study and will be posted in the next revision to Appendix C of the District Code. Assuming infill-occurs at a steady rate over 20-years, the revised projection for the City portion of Central Marina is shown in Table 3-4. The revised projection for Central Marina is provided in Table 3-5. Note that the projections for the Ord Community were not carried past the 2015 UWMP Projection.

Table 3-4: Cumulative Central Marina Demand by Time Increment

	2020	2025	2030	2035	2040
Revised Baseline	1,600.0	1,641.9	1,683.8	1,725.7	1,767.6
DVSP	0.0	254.2	508.5	762.7	1,016.9
Total Central Marina	1,600.0	1,896.1	2,192.3	2,488.4	2,784.5

Assumes flat-line growth

⁶ Source: Table C-3, 2015 UWMP. DVSP demands per Section 2.2 of this report.

⁷ The Monterey Peninsula Unified School District Facilities Master Plan does not include a new school.

⁸ Based on billing records for 2015 to 2018

Table 3-5: Revised Water Demand Projection by Service Area (AF)

	Jurisdiction	2015*	2020	2025	2030	2035	2040**	Notes	Allocation
Ord	U.S. Army	633	663	825	825	825			1,577
	CSUMB	404	442	632	755	779			1,035
	Del Rey Oaks	0	186	551	551	551			243
	City of Monterey	0	0	130	130	130			65
	County of Monterey	52	377	539	539	539			720
	UCMBEST	3	94	299	515	515			230
	City of Seaside	657	992	1,183	1,497	1,960			1,012
	State Parks and Rec.	0	12	18	20	25			45
	Marina Ord Comm.	285	901	1,572	1,702	1,704			1,625
	Assumed Line Loss	348	348	348	348	348			348
Marina	Armstrong Ranch	0	0	680	680	680	680	3	920
	Cemex	0	0	0	0	0	500	4	500
	Marina Central	1,419	1,600	1,896	2,192	2,488	2,785	1, 2	3,020
Subtotal - Ord		2,382	4,016	6,098	6,882	7,376			6,900
Subtotal - Marina		1,419	1,600	2,576	2,872	3,168	3,964		4,440
Total		3,801	5,616	8,674	9,754	10,544			11,340

* Ord Community values are projected demands from 2015 UWMP.

** Ord Community projections for 2040 have not been developed.

1. Revised current baseline water demand to 1,600 AFY
2. Assumes a uniform in-fill rate
3. Projection is for the Marina Station project
4. Projection is from the 1996 2/2A Annexation Agreement.

3.3 Dry-Year Demands

Section 10631 of the Water Code requires that water demands be estimated for an average water year, a single dry water year and multiple dry water years. As discussed in the District's 2015 Urban Water Management Plan, the MCWD service area has a cool summer-type Mediterranean climate, with rain occurring in October through May, and advection fog enveloping the coast in the summer in response to inland heating. Due to these cool summer conditions, the area does not experience the significant increases in summer irrigation demands common to areas further inland in the Salinas River Valley. Periods of below normal rainfall do not reduce the coastal fog, resulting in very minor demand fluctuations between average and dry years.

During the drought of 2012-2016, Central Marina water demand increased by 4% in the first dry year and 5% in the second dry year, compared with the use in 2011⁹. Demands then declined to 99%, 86% and finally 82% of the pre-drought use due to mandatory drought restrictions. The

⁹ Values based on MCWD Quarterly Water Consumption Reports

projected demands for Central Marina during single dry years and multiple dry years are provided in Table 3-6, with the maximum demand being 2,923.7 AFY.

Table 3-6: Dry Year Demand Projections

	Average Year	Single Dry Year	1st Dry Year	2nd Dry Year	3rd Dry Year	4th Dry Year	5th Dry Year
Factor		1.04	1.04	1.05	0.99	0.86	0.82
Projected Demand (AFY)	2,784.5	2,895.9	2,895.9	2,923.7	2,756.7	2,394.7	2,283.3

MCWD has sufficient supply and well capacity to meet all customer demands during peak (dry year) conditions.

Section 4 - Water Supply

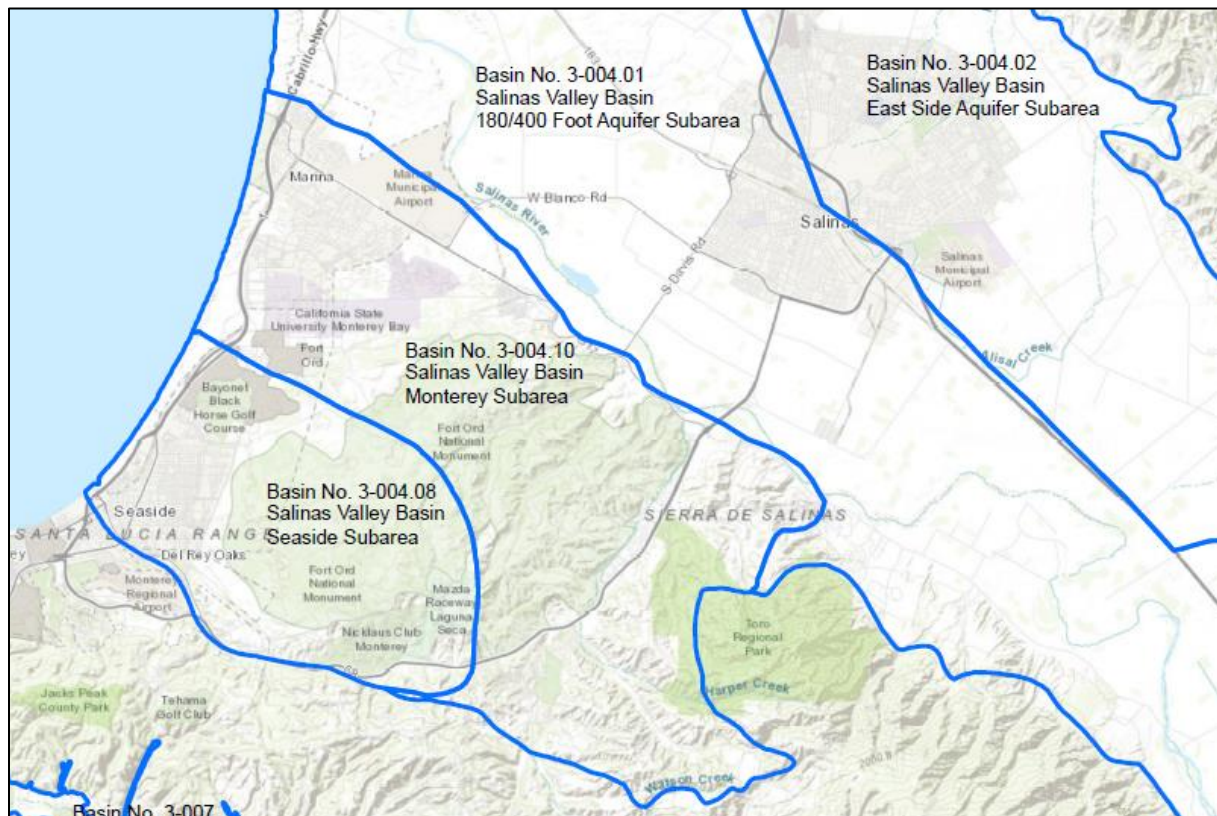
4.1 Current Water Supply

The District's primary source of water supply is the Salinas Valley Groundwater Basin, and it also has a small desalination plant in the Central Marina Service Area. Under the Regional Urban Water Augmentation Project, the District is working to develop recycled water and a larger desalination plant to meet the projected demands of the Ord Community. None of the District's current supply is purchased under wholesale contract.

4.1.1 Groundwater

The District supplies groundwater from the Salinas Valley Groundwater Basin. In 2016, the California Department of Water Resources (DWR) published an Interim Update to Bulletin 118, California's Groundwater. Bulletin 118 defines groundwater basin and sub-basin boundaries used for planning and groundwater management. The update reflects changes submitted to and approved by DWR under the Sustainable Groundwater Management Act. Within northern Monterey County, the changes include redefining the boundaries of the Seaside and Corral De Tierra sub-areas to reflect the defined boundary of the adjudicated Seaside Groundwater Basin, and merge the remaining portion of the Seaside sub-area with the Corral de Tierra sub-area (renamed the Monterey sub-area). The revised boundaries are shown in Figure 4.1.

Figure 4.1: Groundwater Basins



All of the District’s wells are located within the Monterey Sub-Basin of the Salinas Valley Groundwater Basin. MCWD has been designated as an exclusive Groundwater Sustainability Agency (GSA) within its LAFCO service area, and it participates in the Salinas Valley Basin GSA as a member of the Advisory Committee. A portion of the District’s Ord Community service area overlays the Seaside Sub-Basin of the Salinas Valley Groundwater Basin, which is an adjudicated basin managed by the Seaside Water Master Board.

Under the “Agreement between the United States of America and the Monterey County Water Resources Agency concerning Annexation of Fort Ord into Zones 2 and 2A of the Monterey County Water Resources Agency, Agreement No. A-06404”, dated September 21, 1993, the District (successor to the United States) may withdraw up to 6,600 acre-feet per year from the Salinas Valley Groundwater Basin for use in the District’s Ord Community service area. Under the “Annexation Agreement and Groundwater Mitigation Framework for Marina Area Lands” dated March 1996, by and between the MCWRA, the Marina Coast Water District, J.G. Armstrong Family Members, RMC Lonestar, and the City of Marina, the District may withdraw up to 3,020 AFY from the Salinas Valley Groundwater Basin for use in the District’s Central Marina service area. Under that agreement, additional groundwater supply will be made available to the District for use within the Armstrong Ranch and the RMC Lonestar properties north of Marina, if and when the City annexes and develops those areas. The City and the District annexed the Marina Station portion of the Armstrong Ranch in 2007. That subdivision has not yet been constructed.

There are three defined aquifers within the Marina Coast Water District service area, the 180-foot, the 400-foot and the 900-foot or Deep Aquifer. The District operates seven wells, with two in Central Marina and five in the Ord Community. The service areas are interconnected for reliability, with meters at the points of connection to facilitate managing the two well-fields to ensure each service area remains within its authorized withdrawal limit. Table 4-1 summarizes the existing pumping capacity of the District wells. As can be seen, the District has sufficient well capacity to meet the maximum day demands with the largest well out-of-service.

Table 4-1: Existing Pumping Capacity

Location	Well #	Aquifer	Estimated Capacity	
			(AFY)	(GPM)
Marina	10	Deep	2,352	1,458
	11	Deep	3,266	2,025
Ord	29	180/400	2,420	1,500
	30	180/400	2,465	1,528
	31	180/400	3,734	2,315
	34	Deep	4,000	2,480
	35	400 foot	4,023	2,494

4.1.2 Desalinated Water

The District has a desalination plant located near Marina State Beach, which was designed to contribute up to 300 AFY of potable water supply to the Central Marina service area. The plant was constructed in 1997 as a pilot project but is not currently in use. Supply from this facility is not included in this water supply assessment, although the District may elect to reinstate the plant at some point in the future.

4.2 Future Water Supply

The District is working towards developing new sources of water supply to meet projected demand increases due to redevelopment within the Ord Community, as well as taking actions to address groundwater wells impacted by seawater intrusion. The two major water supply projects described below are (i) reclaimed wastewater, and (ii) desalinated water, which make up the Regional Urban Water Augmentation Project. MCWD is investigating alternative sources of potable supply, which may be less costly than desalination.

4.2.1 Recycled Water

Recycled water refers to sanitary sewage which undergoes treatment and disinfection, typically for non-potable uses such as agricultural and landscape irrigation. The Monterey One Water (M1W, formerly Monterey Regional Water Pollution Control Agency) operates a regional wastewater treatment facility in north Marina and produces reclaimed water for agricultural irrigation in the Castroville area. Through prior agreements with the M1W, the District is entitled to receive recycled water from the regional plant, up to the volume of wastewater generated within the District and sent to the plant. In 2007, MCWD began detailed design of the recycled water distribution system, and constructed several portions of the transmission main in conjunction with road improvement projects. In 2012, M1W began planning the Pure Water Monterey Groundwater Replenishment Project, which will develop additional sources of water supply and produce advanced treated water for injection into the Seaside Groundwater Basin for indirect potable reuse. In 2016, MCWD and M1W entered into an agreement allowing MCWD to participate in the Pure Water Monterey Project. MCWD has now completed construction of the transmission main, which will be used to deliver advanced treated water for both groundwater injection and for urban irrigation.

Under the initial phase of the project, MCWD will receive up to 600 AFY of advanced treated water for urban irrigation use. In later phases, the project may be expanded and MCWD's share would increase to 1,427 AFY, which was the amount of non-potable demand in the Ord Community analyzed in the RUWAP EIR.

4.2.2 Desalinated Water

Given readily available saline and brackish waters near the District's service area, desalinated water has been considered as another potential water supply. The Regional Urban Water Augmentation Project EIR includes a 1,500 AFY desalination facility for the District. The

facility was sized to provide 1,200 AFY of new supply to the Ord Community and 300 AFY to Central Marina.

4.2.3 Conservation

The Marina Coast Water District has an active water conservation program. Under the District's water conservation ordinance, all new construction is required to incorporate water saving devices over and above the requirements of the state building code. Additionally, the District has adopted the State's Model Water Efficient Landscape Ordinance. The District requires developers to install water conserving fixtures during construction, landscapes which require high irrigation are discouraged, and a tiered water rate structure discourages water waste. The District offers rebate incentives to replace less efficient water fixtures, for installing smart irrigation controllers, and for replacing lawns and sprinklers.

The State of California has established a goal of reducing per person water use by 20% by the year 2020, compared to the 2008 baseline demands. Toward that end, the California Building Code was updated in 2010, with the goal of reducing indoor water use to 55 gallons per person per day. In the 2010 UWMP, the District identified a year 2020 conservation target of 117 gallons per person per day (system-wide potable average). It is anticipated that the Downtown Vitalization Specific Plan area will meet that goal, based upon the new indoor plumbing fixture codes and the increased housing density.

4.3 Regulatory Permits Necessary for Supply Delivery

The Marina Coast Water District is a public water system, permitted by the State Water Resources Control Board, Division of Drinking Water, System No. 2710017. The recycled water distribution system is permitted as System No. 2790009. Permits required for the construction and operation of new facilities are obtained on a project-by-project basis.

Section 5 - Supply Sufficiency Analysis

5.1 Comparison of Project Demands to Projected Supply

The water demand for the Central Marina service area with the implementation of the DVSP is projected to increase to 2,784.5 AFY over the next 20 years. The Central Marina service area has 3,020 AFY of groundwater supply available, which is sufficient to meet the existing and projected demands over the 20-year projection during normal, single-dry and multiple-dry water years.

Within the Ord Community, the 6,600 AFY of existing Salinas Valley groundwater supply has been allocated among the land use jurisdictions by the Fort Ord Reuse Authority (FORA), as shown in Table 5-1, below. The municipal jurisdictions (Cities and Monterey County) formally sub-allocate this supply to developments. Until additional water supplies are developed and allocated within the Ord Community, MCWD will only allow new service connections up to the usage totals allocated by the respective jurisdictions. FORA has also formally allocated the recycled water supply from the Phase 1 Recycled Water Project. Those allocations are included in Table 5-1.

Table 5-1: FORA Allocations in the Ord Community

Land Use Jurisdiction	Existing Groundwater Allocation (AFY)	Future Recycled Allocation (AFY)
City of Del Rey Oaks	243	280
City of Marina (Ord)	1,325	345
City of Monterey	65	0
City of Seaside	1,012	453
County of Monterey	710	134
Marina Sphere (existing use)	10	0
CA State Parks and Rec.	45	0
CSU Monterey Bay	1,035	87
Univ. of California MBEST	230	60
U.S. Army	1,577	0
Assumed Line Loss	348	68
Total – Ord Community	6,600	1,427

As shown in Table 3-2, water demand in the Ord Community service area is projected to exceed the available existing supply of Salinas Valley groundwater. The District is pursuing the development of additional water supplies to meet the demands of that service area.

5.2 Plans for Acquiring Additional Water Supplies

Under the provisions of Section 10911 of the California Water Code, if the water supplier concludes that water supplies will be insufficient for the proposed project, the water supplier

shall provide its plans for acquiring additional water supplies. The Marina Coast Water District is currently pursuing two water supply projects, the Recycled Water Project and the Desalination Project, which are intended to allow the District to develop 2,400 AFY of new supply to meet the projected Ord Community demand. Detailed descriptions of these projects are provided in Appendices B and C.

5.3 Reliability of Water Supply

The Salinas Valley Groundwater Basin has a large storage volume, and is recharged by the Salinas River, which is augmented by upstream reservoirs managed by MCWRA. Consequently, the aquifer does not experience wide level variations due to climatic conditions. Water levels vary by 20 to 30 feet seasonally and decline an additional 10 to 20 feet during drought periods. The District's demands accounted for less than one percent of the total groundwater pumped from the Salinas groundwater basin in 2015, the latest year reported. Therefore, the District's supply is considered reliable on a quantity basis. The upper aquifers in the Salinas Valley Groundwater Basin (180-foot aquifer and 400-foot aquifer) along the coast are experiencing high salinity due to seawater intrusion. The District's wells in Central Marina are in the Deep Aquifer, which has not experienced signs of seawater intrusion and is considered to have reliable quality. In the Ord Community, the District has one well in the deep aquifer and four wells in the upper aquifers, but outside the area currently affected by seawater intrusion. The District is closely monitoring the quality in these wells.

The planned additional sources of supply are recycled wastewater and seawater desalination. The source of supply for recycled water is wastewater return flows, which originate from indoor water use. Indoor water use is not subject to the same levels of curtailment during drought periods as outdoor water use, so the source of recycled water supply is considered drought-proof. The SVRP treatment plant operated by the MRWPCA has reliably produced recycled water meeting the requirements of Title 22 for over a decade. Similarly, seawater desalination is considered a reliable source of supply. Reverse osmosis technology is a proven method of desalinating seawater and brackish groundwater.

5.4 Effect on Agricultural and Industrial Users Reliant on the Same Source

There are no agricultural water users within the MCWD service area, nor are there industrial users with privately-owned wells. Agricultural users in the Salinas Valley rely on the same basin-wide supply from the Salinas Valley Groundwater Basin, accounting for 92.9% of the groundwater pumping in 2015. In the local area, 12,000 acres of irrigated agriculture are supplied with recycled water from the Castroville Seawater Intrusion Project. These uses are taken into account in the basin planning of the MCWRA and SVBGSA as part of developing a water balance for the Basin. Additional demands in the Central Marina and Ord Community area are not expected to affect the agricultural users, provided that the District groundwater pumping to meet new demands remains consistent with the MCWRA agreements.

Section 6 - Conclusions

6.1 Sufficiency of Water Supply for the Project

The City of Marina has sufficient existing water supply within the Central Marina service area to achieve the complete build-out of the planned Downtown Vitalization Specific Plan. The available supply is sufficient to meet the existing and projected demands over the 20-year projection during normal, single-dry and multiple-dry water years.

Appendix A: Recycled Water Project Details

In 2004-2005, the District prepared engineering studies for the Regional Urban Water Augmentation Project (RUWAP). This project was intended to develop 2,400 AFY of additional water supply for the Ord Community, to meet projected demands identified in the Fort Ord Base Reuse Plan. The RUWAP has two components, urban use of recycled water and a desalination facility. The final capacity of the two components may be adjusted during final design, but the total amount of new supply will be 2,400 AFY.

In 2012, the Monterey One Water (M1W, formerly the Monterey Regional Water Pollution Control Agency) and the Monterey Peninsula Water Management District began planning the Pure Water Monterey Groundwater Replenishment Project, which includes the advanced treatment of recycled water for indirect potable reuse. On April 8, 2016, MCWD and M1W entered into an agreement which would provide up to 1,427 AFY of advanced treated water for urban landscape irrigation instead of the tertiary treated recycled water planned under the RUWAP. The Pure Water Monterey Project required a pipeline running parallel to MCWD's planned RUWAP pipeline, so the agencies agreed to share a single pipeline, realizing a cost savings to each project.

1. Source of Supply: Tertiary treated wastewater available at the MRWPCA Regional Wastewater Treatment Plant in North Marina. Under the annexation agreement between MCWD and MRWPCA, the District has the right to purchase recycled water, subject to annual and seasonal limits. The Advanced Water Purification Facility (AWPF) was constructed in 2018-2019, with a design capacity of 5.0 mgd. The plant produces advanced-treated recycled water meeting the Title 22 standards for indirect potable reuse (injection into a groundwater aquifer and recovery at other wells).
2. Expected Supply Capability: The Phase 1 project has an initial yield of 4,100 AFY, of which 600 AFY is available to MCWD. The remaining 3,500 AFY is conveyed to an injection wellfield in the Ord Community and stored in the Seaside Groundwater Basin. Future Phases of the project will increase MCWD's yield to 1,427 AFY.
3. Project Facilities:
 - Advanced water purification facility and pump station, located within the M1W plant in North Marina
 - Product water transmission and distribution pipelines within Marina and the Ord Community
 - Recycled water storage tank within the Ord Community

4. Historical Record:

- MCWD connected into the Regional wastewater collection system in the early 1990's but operated a recycled water system located at the Marina Wastewater Treatment Plant from 1996 to 1998. Thereafter the Marina Wastewater Treatment Plant was fully retired and all wastewater flows were conveyed to the Regional Treatment Plant.
- MCWD prepared engineering studies for the Regional Urban Water Augmentation Project (RUWAP), which included a recycled water component. The District approved the CEQA EIR for the RUWAP in 2005, and amended the findings in 2006 and 2007 as detailed planning progressed.
- In 2004, MCWD published standards for recycled water infrastructure and began requiring the construction of recycled water pipelines in new subdivisions.
- MCWD constructed 3.5 miles of recycled water pipelines within the Ord Community during on-going road construction projects, in cooperation with the Fort Ord Reuse Authority and California State University Monterey Bay.
- MCWD constructed the shared product water transmission main and storage reservoir in 2018. The transmission main connects the AWP in north Marina to the injection wellfield in Seaside.
- M1W constructed the Pure Water Monterey AWP and the injection wellfield in 2018-2019.
- Start-up and testing of the full Pure Water Monterey system occurred in February-March 2020. The system is now in full operation.
- MCWD completed design of the recycled water distribution system in 2019, which connects customers to the transmission system. Construction will begin in 2020.
- MCWD obtained a pipeline easement for the recycled water main across the Armstrong Ranch in 2007. MCWD obtained a pipeline easement from the City of Seaside for the recycled water main from Normandy Ave to the water tank site in 2010. The District obtained ownership of the recycled water tank site in 2010 (previously held as an exclusive easement). MCWD finalized the recycled water main easements with the Presidio of Monterey in 2012. MCWD finalized the recycled water main easements with CSUMB in 2018.

5. Written Contracts and Agreements:

- In the annexation agreement between MCWD and MRWPCA, MCWD retained the right to obtain recycled water in an amount not to exceed the volume of wastewater flows originating from the District.
- MCWD entered into an agreement with the Fort Ord Reuse Authority in 2005 to develop the RUWAP water supplies.
- MCWD executed two memoranda of understanding with MRWPCA and MCWRA (one in 2009 and one in 2010) to work cooperatively towards the RUWAP, and to specify quantities, (seasonal) availability, and roles and responsibilities.

- MCWD entered into the Pure Water Delivery and Supply Project Agreement with M1W in 2016 to participate in the Pure Water Monterey Project and receive advanced treated water instead of tertiary treated and disinfected recycled water for the RUWAP.
 - In agreements with developers of new subdivisions for the construction of water infrastructure, the District requires the installation of recycled water pipelines for the irrigation of public and commercial landscapes.
6. Estimated Costs and Financing: The Pure Water Monterey Project overall cost is approximately \$104 million. This includes both the MCWD and M1W Facilities. Both agencies have received State Revolving Fund Loans to cover a majority of the construction costs. The Fort Ord Reuse Authority has budgeted \$37 million for the Regional Urban Water Augmentation Project. A portion of that funding was applied to this project.
7. Timeframes: The District began constructing recycled water pipelines in conjunction with road construction projects by other jurisdictions (Fort Ord Reuse Authority and CSU Monterey Bay) and private developers beginning in 2004. Construction of the transmission main and water tank was completed in 2018. Construction of the AWPf and injection wellfield was completed in 2019, with start-up in 2020. Construction of the distribution laterals to customers will occur in 2020.
8. Federal, State and Local Permits for Construction:
- The project is subject to the California Environmental Quality Act (CEQA) and also the National Environmental Policy Act (NEPA) because the SVRP facility is partially funded by the U.S. Department of the Interior, Bureau of Reclamation. The CEQA EIR for the RUWAP Phase 1 Project with supporting NEPA studies has been completed. CEQA actions for a future RUWAP Phase 2 expansion have not been initiated.
 - The CEQA EIR for the Pure Water Monterey Project with supporting NEPA studies has been completed.
 - The project pump stations and pipelines are outside the Coastal Zone and therefore a Coastal Commission Permit is not required.
 - Encroachment permits and easements for pipeline construction have been coordinated with the City of Marina, the City of Seaside, CSU Monterey Bay, Monterey Peninsula Unified School District and the Presidio of Monterey (Ord Military Community).
 - A Monterey County Conditional Use Permit was obtained for the pipeline crossing agricultural land (Armstrong Ranch).
 - M1W has obtained a Water System Permit with the California State Water Resources Control Board, Division of Drinking Water for the advanced treated water system.
 - MCWD has obtained a Recycled Water System Permit with the California State Water Resources Control Board, Division of Drinking Water.

Appendix B: Desalination Project Details

In 2004-2005, the District prepared engineering studies for the Regional Urban Water Augmentation Project (RUWAP). This project was intended to develop 2,400 AFY of additional water supply for the Ord Community, to meet projected demands identified in the Fort Ord Base Reuse Plan. The RUWAP has two components, urban use of recycled water and a desalination facility. The final capacity of the two components may be adjusted during final design, but the total amount of new supply will be 2,400 AFY.

The Desalination Project was originally studied as a stand-alone facility, located at the former Fort Ord Wastewater Treatment Plant. In 2008, the District began working cooperatively with California American Water, which was planning a larger desalination facility to serve their Monterey Service Area (adjacent to the Ord Community). The two agencies jointly planned a Regional Desalination Facility to be located in North Marina adjacent to the MRWPCA Regional Wastewater Treatment Plant. This location facilitated the use of the existing wastewater outfall pipeline for brine disposal from the desalination plant. In 2011, the agreement between MCWD, American Water and Monterey County Water Resources Agency was terminated by CAWC. MCWD is now pursuing a smaller desalination facility, as sized in the RUWAP EIR, located on the North Marina site.

The following details are provided as required per Water Code §10911.

1. Source of Supply: Seawater-intruded groundwater in the 180-foot aquifer of the Salinas Valley Groundwater Basin, Pressure Sub-Area. Source wells will capture seawater within the aquifer which is currently migrating inland.
2. Expected Supply Capability: 1,500 AFY (average annual yield). Of this total, 1,200 AFY would be for the Ord Community, and 300 AFY would replace the capacity of the District's existing pilot desalination plant, which would then be retired.
3. Project Facilities:
 - Source wells in the intruded portion of the 180-ft aquifer
 - A reverse-osmosis desalination plant located in North Marina,
 - Product water pipeline from the plant to the MCWD service area,
 - Brine disposal pipeline from the plant to the Monterey One Water effluent disposal pipeline (deep ocean outfall)
 - Water storage tanks within the MCWD service area
4. Historical Record:

- MCWD constructed a pilot desalination plant in Marina in 1996.
 - MCWD prepared engineering studies for the Regional Urban Water Augmentation Project (RUWAP), which included a seawater desalination component.
 - The District approved the CEQA EIR for the RUWAP in 2005, and amended the findings in 2006 and 2007 as detailed planning progressed.
 - CAWC prepared engineering studies for the Coastal Water Project (CWP) in 2005-2008, which included a seawater desalination facility, and submitted a CEQA EIR to the California Public Utilities Commission in 2009.
 - MCWD and CAWC worked cooperatively to develop a regional desalination facility as an alternative to two separate facilities, as reflected in the CWP EIR.
 - The CPUC approved the CWP EIR in 2010.
 - The Water Purchase Agreement was terminated by CAWC in September 2011.
 - MCWD issued an RFQ for Design-Build Services for the RUWAP Desalination Project in September 2012, but did not award a contract. The project was placed on hold to focus on the recycled water project.
5. Written Contracts and Agreements:
- MCWD entered into an agreement with the Fort Ord Reuse Authority in 2005 to develop the RUWAP water supplies.
 - MCWD entered into an option agreement with the Armstrong Family Trust in 1998 to purchase land for a future water facility. The District executed that option in 2010 for the Regional Desalination Facility site.
 - MCWD entered into an agreement with MRWPCA in 2009 for shared use of the effluent disposal pipeline.
 - MCWD, CAWC and MCWRA entered in the Water Purchase Agreement in 2010. This agreement established project responsibilities between the three agencies. This agreement was terminated by CAWC in September 2011.
6. Estimated Costs and Financing: The RUWAP Desalination Project was estimated to cost approximately \$80 million. The original project planning included a \$37 million contribution to the RUWAP from the Fort Ord Reuse Authority. That agency will sunset on 6/30/2020. The District will pursue State and Federal grants for portions of the project cost.
7. Timeframe: Preliminary studies are complete. Assuming a traditional design-bid-build delivery model, it would take from 4 to 6 years to complete design, permitting and construction.
8. Federal, State and Local Permits for Construction:
- The project is subject to the California Environmental Quality Act (CEQA) and also the National Environmental Policy Act (NEPA) because the facility may be partially funded by the U.S. Department of the Interior, Bureau of Reclamation. CEQA EIRs

- with supporting NEPA studies for the RUWAP Desalination Project and for the Regional Desalination Project have been completed. The RUWAP EIR must be amended to reflect the new MCWD facility location and brine disposal method.
- A Coastal Development Permit from the California Coastal Commission may be required for some project facilities if brackish water source wells are located in the Coastal Zone.
 - Encroachment permits for pipelines will be required from Monterey County, City of Marina, and possibly CALTRANS.
 - MCWD must amend their Water System Permit with the California Department of Public Health to add the desalination facility as a new source of supply before the system can be placed into operation.
 - A Regional Water Quality Control Board discharge permit (NPDES) for the desalination plant will be required.
 - A Monterey County Building Permit will be required for the desalination plant
 - A permit from the Monterey Bay Unified Air Pollution Control District will be required for the desalination facility
 - Monterey County Environmental Health must approve permits for (1) construction of the groundwater wells, and (2) construction of the desalination facility

Appendix C: References

Akel Engineering Group, Final Draft Water Master Plan, September 2019

Bartle Wells Associates, Draft Water, Wastewater and Recycled Water Capacity Fee Study, June 2019

California American Water Company:

Coastal Water Project, Final Environmental Impact Report, prepared for the California Public Utilities Commission, October 2009

CalAm Monterey Peninsula Water Supply Project, Final Environmental Impact Report, prepared for the California Public Utilities Commission, March 2018

California Department of Water Resources:

20x2020 Water Conservation Plan, February 2010.

Bulletin 118: California's Groundwater, Interim Updated 2016, December 2016

California Irrigation Management Information System (CIMIS) website,
www.cimis.water.gov

Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001, October 8, 2003.

2015 Urban Water Management Plan Guidebook for Urban Water Suppliers, March 2016.

Model Water Efficient Landscape Ordinance, July 15, 2015

California Urban Water Conservation Council, Memorandum of Understanding Regarding Urban Water Conservation in California, As Amended June 9, 2010

California Building Standards Commission, 2013 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11

Carollo Engineers, Marina Water Systems Master Plan, February 2007.

City of Marina:

Mid-term Review of the 2015-2023 Housing Element, adopted May 2019

Draft Downtown Vitalization Specific Plan, April 19, 2019

Zoning Plan and Ordinance

County of Monterey, 2010 Monterey County General Plan, October 26, 2010

Denise Duffy & Associates:

Draft Environmental Impact Report, Pure Water Monterey Groundwater Replenishment Project, April 2015.

Final Environmental Impact Report, Pure Water Monterey Groundwater Replenishment Project, January 2016.

Denise Duffy & Associates in association with RBF Consulting:

Draft Environmental Impact Report Regional Urban Water Augmentation Project, June 2004.

Final Environmental Impact Report Regional Urban Water Augmentation Project, September, 2004.

Fort Ord Reuse Authority:

Capital Improvement Program, FY 2017/18 through Post FORA, June 2017.

Fort Ord Reuse Plan, 1996.

Reuse Plan EIR, 1997.

Harding ESE, Final Report, Hydrogeologic Investigation of the Salinas Valley Basin in the Vicinity of Fort Ord and Marina, Salinas Valley, California, prepared for the Monterey County Water Resources Agency, April 2001

Keyser Marston Associates, Inc., Implementation Plan for the Fort Ord Redevelopment Project Area, Prepared for the Redevelopment Agency of Monterey County, March 2007

LAFCO of Monterey County, 2019 Municipal Services Review and Sphere of Influence Study for Marina Coast Water District, April 2019

Marina Coast Water District:

2015 Urban Water Management Plan, prepared by Schaaf & Wheeler, Consulting Civil Engineers, June 2016.

2018 Consumer Confidence Report for Central Marina and Ord Community, April 2019

Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2018, approved December 17, 2018.

Pure Water Delivery and Supply Project Agreement between Monterey Regional Water Pollution Control Agency and Marina Coast Water District, April 8, 2016.

Water Supply Assessment and Written Verification of Supply for the Proposed Marina Station Project, prepared with Byron Buck & Associates, January 4, 2006.

Water Supply Assessment and Written Verification of Supply for the Marina Heights Specific Plan, prepared with Byron Buck & Associates, December 15, 2003.

Water Supply Assessment and Written Verification of Supply for the Proposed University Villages Specific Plan Development and Marina Community Partners Project, prepared with Byron Buck & Associates, January 26, 2005.

Water Supply Assessment and Written Verification of Supply for the Proposed Cypress Knolls Residential Project, prepared with Byron Buck & Associates, March 22, 2006.

Water Supply Assessment and Written Verification of Supply for the Proposed Resort at Del Rey Oaks, prepared with Byron Buck & Associates, December 2007.

Water Supply Assessment and Written Verification of Supply for the Proposed East Garrison Specific Plan Development, prepared with Byron Buck & Associates, June 3, 2004.

Water Supply Assessment and Written Verification of Supply for the Amended Main Gate Specific Plan, prepared with Schaaf & Wheeler, November 20, 2018.

Water Supply Assessment and Written Verification of Supply for the Campus Town Specific Plan, prepared with Schaaf & Wheeler, June 12, 2018.

Quarterly Water Consumption Report, period ending: December 31, 2019.

Monterey County Water Resources Agency:

2015 Groundwater Extraction Summary Report, April 2017.

Agreement between the United States of America and the Monterey County Water Resources Agency concerning Annexation of Fort Ord into Zones 2 and 2A of the Monterey County Water Resources Agency, Agreement No. A-06404, September 21, 1993.

Annexation Agreement and Groundwater Mitigation Framework for Marina Area Lands (1996). Document recorded in the Office of the Monterey County Recorder on August 7, 1996, at Reel 3404 Page 749.

RHAA, Development Master Plan, California Central Coast Veterans Cemetery, Fort Ord, prepared for the Redevelopment Agency of Monterey County, September 2008.

RMC Water and Environment, MCWD Recycled Water Project Basis of Design Report, 2006

University of California Cooperative Extension, A Guide to Estimating Irrigation Water Needs for Landscape Plantings in California, August 2000

Appendix D: Board Resolution Approving the Water Supply Assessment

April 20, 2020

Resolution No. 2020-21
Resolution of the Board of Directors
Marina Coast Water District
Approving the Water Supply Assessment for the
Marina Downtown Vitalization Specific Plan

RESOLVED by the Board of Directors (“Directors”) of the Marina Coast Water District (“District,” “MCWD”), at a meeting duly called and held on April 20, 2020, via a videoconference pursuant to Gov. Newsom’s Executive Order N-29-20, as follows:

WHEREAS, the City of Marina is the lead agency for preparation of the Downtown Vitalization Specific Plan EIR, a project requiring a Water Supply Assessment; and,

WHEREAS, the project is located within the portion of the City of Marina known as the Central Marina service area; and,

WHEREAS, the City of Marina is required to produce a water supply assessment (Water Code section 10910 et. seq.) as part of the approval process for the Downtown Vitalization Specific Plan EIR; and,

WHEREAS, the City of Marina requested that MCWD, as the public water supplier for the area of development, analyze the available supplies and produce the required assessment and written verification of supply; and,

WHEREAS, the District completed the requested water supply assessment which concluded, pursuant to Section 10910 of the California Water Code, that the District’s water supplies allocated for Central Marina are currently sufficient to meet the increase in water demand of 1,016.9-acre-feet-per-year associated with the Marina Downtown Vitalization Specific Plan development area in addition to other existing and previously approved development demands expected by MCWD in the Central Marina service area as described in MCWD’s Urban Water Management Plan during normal, single-dry and multiple dry years within a twenty-year projection; and,

WHEREAS, the District has planned the Regional Urban Water Augmentation Project to develop additional water supply for the Central Marina service area (in conjunction with the Ord Community service area), and has certified a CEQA Environmental Impact Report for the Project; and,

WHEREAS, the District is currently constructing the recycled water portion of the Regional Urban Water Augmentation Project to deliver non-potable water, a portion of which may be used by the City of Marina for the Downtown Vitalization Specific Plan project area; and,

WHEREAS, the Water Supply Assessment is confirmation of the availability of a reliable water supply for the project, based on the “Agreement between the United States of America and Monterey County Water Resources Agency Concerning Annexation of Fort Ord into Zones 2 and 2A of the Monterey County Water Resources Agency” dated September 21, 1993.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District does hereby approve the Water Supply Assessment for the Downtown Vitalization Specific Plan.


PASSED AND ADOPTED on April 20, 2020, by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors Cortez, Zefferman, Shriner, Moore

Noes: Directors Le

Absent: Directors None

Abstained: Directors None


Thomas P. Moore, President

ATTEST:


Keith Van Der Maaten, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2020-21 adopted April 20, 2020.


Keith Van Der Maaten, Secretary

Gap Analysis



Downtown Vitalization Specific Plan

Water Supply Assessment Update – Gap Analysis

prepared by

City of Marina

Community Development Department
211 Hillcrest Avenue
Marina, California 93933

Contact: Guido Persicone, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.

2511 Garden Road, Suite C-250
Monterey, California 93940

May 2023



RINCON CONSULTANTS, INC.

Environmental Scientists | Planners | Engineers

rinconconsultants.com

Table of Contents

1	Introduction	1
1.1	Proposed Water Demands	1
1.2	Water Supply Assessment.....	2
2	Gap Analysis.....	3
3	Conclusions.....	7
4	References	8

Tables

Table 1	Comparison of Existing and Projected Conditions.....	1
Table 2	2015 UWMP – Central Marina Projected Development Details ¹	3
Table 3	2020 UWMP – Central Marina Projected Development Details ¹	4
Table 4	2015 UWMP and 2020 UWMP Development by Type	4
Table 5	2015-2020 UWMPs – Central Marina Projected Population ¹	5
Table 6	2015-2020 UWMPs – Central Marina Projected Water Demand (AFY) ¹	6

Appendices

Appendix A 2020 Water Supply Assessment

This page intentionally left blank.

1 Introduction

The Marina Downtown Vitalization Specific Plan (“proposed project” or “DVSP”) addresses development that would occur on the Downtown area of the City of Marina, consistent with the City of Marina General Plan and Municipal Code. Water supply to this area is provided by the Marina Coast Water District (MCWD), which identifies the Downtown area as the Central Marina portion of its service area. MCWD prepared a Water Supply Assessment (WSA) for the proposed project in 2020, based upon information and projections included in its 2015 Urban Water Management Plan (UWMP). The 2015 UWMP has since been superseded by the 2020 UWMP, which was published in 2021. This “gap analysis” has been prepared to assess whether any differences between the 2015 UWMP and the 2020 UWMP would affect the analysis or conclusions in the 2020 WSA for the proposed project and, if so, to provide revised analysis and conclusions to inform the impact analysis provided in the Environmental Impact Report (EIR) for the project. This gap analysis will be used in conjunction with the 2020 WSA to inform the EIR.

1.1 Proposed Water Demands

The DVSP was developed over several years with the most recent iteration relying on studies and data last updated in 2017. It serves as a critical planning document to help the City of Marina achieve its housing development goals as well as its long-standing goal to promote development and revitalize the downtown. Water supply for the Specific Plan area would continue to be provided by MCWD, consistent with existing conditions, and MCWD would continue to source its potable water supply from the underlying Salinas Groundwater Basin.

Table 1, below, provides an overview of existing and projected commercial and residential uses in the Downtown area, and the associated water demands. These projections were provided in the 2020 WSA for the proposed DVSP, which was informed by MCWD’s 2015 UWMP, and include simplified land use categories, as discussed in footnotes to the table.

Table 1 Comparison of Existing and Projected Conditions

	Commercial (Maximum) ¹		Residential	
	SF	AFY ²	Units	AFY ³
Existing	1,005,758	211.21	2,301	575.25
Projected w DVSP	2,390,955	502.10	5,205	1,301.25
Change	+1,385,197	+290.89	+2,904	+726.00

¹ SF = square feet; AFY = acre-feet per year

² The 2015 UWMP identified water demand factors for “generic” commercial uses, as well as for categories including retail, office, government/institutional, restaurant, and light industrial. The 2020 WSA applied the “retail” water demand factor of 0.00021 AFY/SF to all commercial uses (existing and projected) for the DVSP based upon the size of this demand factor being mid-way between the “office” water demand factor of 0.00014 AFY/SF and the “restaurant” water demand factor of 0.00035 AFY/SF. For consistency with the 2020 WSA, this table also reflects the retail water demand factor for all commercial uses.

³ The 2015 UWMP identified a water demand factor for “residential” of 0.25 AFY/DU, where “DU” represents “dwelling units.” For consistency with the 2020 WSA, this table also reflects the residential water demand factor of 0.25 AFY/DU.

Source: MCWD 2020; MCWD 2021

Table 1 indicates that the maximum commercial space included under DVSP would increase water demand by 290.89 AFY, and the maximum residential development would increase water demand by 726.00 AFY. In total, the new water demand introduced by maximum buildout of the DVSP would be approximately 1,016.89 AFY.

1.2 Water Supply Assessment

MCWD prepared a WSA for the proposed DVSP in 2020. The 2020 WSA describes that a portion of development associated with the DVSP was accounted for in the water demand projections for Central Marina that were included in MCWD's 2015 UWMP, and were based on a previous iteration of the DVSP. The 2020 WSA assessed the proposed Specific Plan in comparison to the water supply availability projections provided in the 2015 UWMP, including consideration to the portion of the project's water demand that was previously accounted for.

The 2015 UWMP assumed a baseline water demand for Central Marina of 1,823 AFY, based upon usage from before the drought of record in 2012-2016. The 2020 WSA also assumed a baseline water demand of 1,600 AFY, which was lower than pre-drought conditions; this was considered an appropriate approach because some conservation measures implemented during the drought were considered permanent, such as the installation of water-conserving fixtures and reductions in irrigated landscaping, and would perpetuate reduced water demands (MCWD 2020).

The 2020 WSA concluded that the MCWD has sufficient existing water supply within the Central Marina Service Area to support buildout of the DVSP over a 20-year planning horizon and with consideration to normal, single-dry, and multiple-dry water years (MCWD 2020).

2 Gap Analysis

In accordance with the Urban Water Management Planning Act, UWMPs are updated every five years. As discussed above, the 2020 WSA for the proposed project was informed by MCWD’s 2015 UWMP, which was published in 2016; MCWD’s 2020 UWMP was then published in 2021, after the WSA was prepared. Therefore, this “gap analysis” is being prepared to assess differences between the 2015 and 2020 UWMPs, and determine whether any differences affect the analysis or conclusions of the 2020 WSA for the proposed project.

Development projections for Central Marina differed between the 2015 UWMP, shown in Table 2, and the 2020 UWMP, shown in Table 3; discussion below addresses how the differences shown affect water demands.

Table 2 2015 UWMP – Central Marina Projected Development Details¹

Year ²	In-fill MF (DU)	In-fill SF (DU)	DVSP Res (DU)	DVSP Office (SF)	DVSP R+C (SF)	Hotel / Motel (rooms)	Ret / Rest (SF)	Other Com. (SF)	Inst. (SF)	School (SF)	Irrig. (acres)
2019-2020	182	9	80	4,200	8,470	400	46,000	60,000	5,000	77,760	8
2020-2021			80	4,200	8,470						
2021-2022			80	4,200	8,470						
2022-2023			80	4,200	8,470						
2023-2024			80	4,200	8,470						
2024-2025	167	24	80	4,200	8,470		46,000		5,000	110,500	16
2025-2026			80	4,200	8,470						
2026-2027			80	4,200	8,470						
2027-2028			80	4,200	8,470						
2028-2029			80	4,200	8,470						
2029-2030			80	4,200	8,470						
2030-2031			80	4,200	8,470						1.2
2031-2032			80	4,200	8,470						
2032-2033			80	4,200	8,470						
2033-2034			80	4,200	8,470						
2034-2035			80	4,200	8,470						
Total	349	33	1,280	67,200	135,520	400	92,000	60,000	10,000	188,260	25.2

¹ MF = Multi-Family Residential; SF = Single-Family Residential; Res = Residential; R+C = Retail / Commercial; Ret / Rest = Retail & Restaurant; Other Com. = Other Commercial; Irrig. = (Irrigation for) Landscaping; DU = dwelling units; SF = square feet

² Only those years that are projected in both the 2015 UWMP and the 2020 UWMP are shown here; the 2020 UWMP also includes projections for 2040, which are discussed below.

Source: MCWD 2016b

Table 3 2020 UWMP – Central Marina Projected Development Details¹

Year ²	In-fill MF (DU)	In-fill SF (DU)	DVSP Res (DU)	DVSP Office (SF)	DVSP R+C (SF)	Hotel / Motel (rooms)	Ret / Rest (SF)	Other Com. (SF)	Inst. (SF)	School (SF)	Irrig. (acres)
2019-2020											
2020-2021		10	97	17,020	29,160						
2021-2022		10	97	17,020	29,160						
2022-2023		10	97	17,020	29,160						
2023-2024		10	97	17,020	29,160						
2024-2025	50	10	97	17,020	29,160	90		34,650			1
2025-2026		10	97	17,020	29,160						
2026-2027		10	97	17,020	29,160						
2027-2028		10	97	17,020	29,160						
2028-2029		10	97	17,020	29,160						
2029-2030	50	10	97	17,020	29,160	90		34,650			1
2030-2031		10	97	17,020	29,160						
2031-2032		10	97	17,020	29,160						
2032-2033		10	97	17,020	29,160						
2033-2034		10	97	17,020	29,160						
2034-2035	50	10	97	17,020	29,160			34,650			1
Total	150	150	1,455	255,300	437,400	180	0	103,950	0	0	3

¹ MF = Multi-Family Residential; SF = Single-Family Residential; Res = Residential; R+C = Retail / Commercial; Ret / Rest = Retail & Restaurant; Other Com. = Other Commercial; Irrig. = (Irrigation for) Landscaping; DU = dwelling units; SF = square feet

² Only those years that are projected in both the 2015 UWMP and the 2020 UWMP are shown here; the 2020 UWMP also includes projections for 2040, which are discussed below.

Source: MCWD 2016b

To facilitate comparison of the information in the tables above, Table 4 presents the total development per development type under both versions of the UWMP.

Table 4 2015 UWMP and 2020 UWMP Development by Type

UWMP	In-fill MF (DU)	In-fill SF (DU)	DVSP Res (DU)	DVSP Office (SF)	DVSP R+C (SF)	Hotel / Motel (rooms)	Ret / Rest (SF)	Other Com. (SF)	Inst. (SF)	School (SF)	Irrig. (acres)
2015	349	33	1,280	67,200	135,520	400	92,000	60,000	10,000	188,260	25.2
2020	150	150	1,455	255,300	437,400	180		103,950			3
Change	-199	+117	+175	+188,100	+301,880	-220	-92,000	+43,950	-10,000	-188,260	-22.2

¹ MF = Multi-Family Residential; SF = Single-Family Residential; Res = Residential; R+C = Retail / Commercial; Ret / Rest = Retail & Restaurant; Other Com. = Other Commercial; Irrig. = (Irrigation for) Landscaping; DU = dwelling units; SF = square feet

² Only those years that are projected in both the 2015 UWMP and the 2020 UWMP are shown here; the 2020 UWMP also includes projections for 2040, which are discussed below.

Source: MCWD 2016b

Table 4 shows that the Central Marina development characteristics used to inform the 2015 UWMP differ from those used to inform the 2020 UWMP. Below is a summary of how the changes shown above affect water demand projections.

- Increasing single-family residential units (+117) while decreasing multi-family residential units (-199) reduces the density of residents within the Central Marina Service Area, which reduces water demand associated with residential demands;
- Increasing DVSP Office (+188,100 SF) and DVSP Retail and Commercial (+301,880) results in a higher concentration of non-residential uses within the Central Marina Service Area, with water demands occurring primarily during designated business hours;
- Decreasing the number of Hotel/Motel rooms (-220) decreases water demands associated with transitory or short-term uses;
- Removing Retail & Restaurant uses (-92,000 SF) removes higher water demands associated with restaurant operations;
- Removing Institutional (10,000 SF) and School (188,260 SF) removes higher water demands that would have been associated with the day-long presence of students, faculty, and staff on the institutional or school sites;
- Reducing Landscape areas (-22.2 acres) removes water demands associated with vegetation establishment and upkeep.

Based on this comparison above, the development characteristics used to inform the 2020 UWMP include a higher concentration of non-residential land uses in the Central Marina Service Area; this suggests that population of full-time residents within this area would also be lower under the 2020 UWMP projections. Table 5, below, provides comparison of the population projections included in the 2015 UWMP and the 2020 UWMP.

Table 5 2015-2020 UWMPs – Central Marina Projected Population¹

Year ²	2015 UWMP	2020 UWMP	Change	Change (%)
2020	18,770	14,297	-4,473	-23.83
2025	24,504	19,520	-4,984	-20.34
2030	25,620	21,647	-3,973	-15.51
2035	26,736	23,279	-3,457	-12.93

¹ 2015 UWMP Table 2.3, *Projected Population*; 2020 UWMP Table 3.3, *Projected Population by Service Area*

² Only those years that are projected in both the 2015 UWMP and the 2020 UWMP are shown here; the 2020 UWMP also includes projections for 2040, which are discussed below.

Source: MCWD 2016a; MCWD 2021a

The information in Table 5 confirms the assumption that the 2020 UWMP projects a lower overall population than the 2015 UWMP. Table 6, below, provides comparison of water demands based upon development and population projections used in the 2015 and 2020 UWMPs, respectively.

Table 6 2015-2020 UWMPs – Central Marina Projected Water Demand (AFY)¹

Year ²	2015 UWMP	2020 UWMP	Change (AFY)	Change (%)
2020	2,184	1,438	-746	-34.16
2025	2,491	1,656	-835	-33.52
2030	2,606	1,874	-732	-28.09
2035	2,725	2,081	-644	-23.63

¹ identify table from each UWMP

² Only those years that are projected in both the 2015 UWMP and the 2020 UWMP are shown here; the 2020 UWMP also includes projections for 2040, which are discussed below.

Source: MCWD 2016a; MCWD 2021a

Table 6 shows that the 2020 UWMP projects consistently decreasing water demands for MCWD’s Central Marina Service Area through 2035. The magnitude of the decrease in water demands (Table 6) is larger than the magnitude of the population decrease (Table 5), indicating reduced per-capita water use. This is likely due to conservation measures and water-conserving indoor plumbing fixtures in new development, as well as MCWD’s rebate programs for upgrading to water-efficient plumbing and appliances (toilet, landscape, clothes washer), which are available to commercial as well as residential customers (MCWD 2021a).

3 Conclusions

The gap analysis provided above demonstrates that the 2020 UWMP projected decreased water demands for the Specific Plan area compared to the 2015 UWMP, due changes in development types and intensities in the Specific Plan area. Therefore, although the 2015 UWMP has been superseded by the 2020 UWMP, the analysis and conclusions presented in the 2020 WSA remain sufficiently accurate and adequate for use in the EIR.

4 References

- MCWD (Marina Coast Water District). 2021a. 2020 Urban Water Management Plan. June.
https://www.mcwd.org/docs/2021_uwmp/DRAFT_MCWD_2020_UWMP_v20210520.pdf
(April 2023).
- _____. 2021b. Appendices – 2020 Urban Water Management Plan. May.
https://www.mcwd.org/docs/agenda_minutes/2021-05-17_board/Item_8-C_-_MCWD_2020_UWMP_Appendices.pdf (April 2023).
- _____. 2020. Water Supply Assessment for the Marina Downtown Vitalization Specific Plan. April.
- _____. 2016a. 2015 Urban Water Management Plan. June.
https://www.mcwd.org/docs/engr_files/MCWD_2015_UWMP_Final.pdf (April 2023).
- _____. 2016b. Appendices – 2015 Urban Water Management Plan. June.
https://www.mcwd.org/docs/engr_files/MCWD%202015%20UWMP%20Appendices_Final.pdf (April 2023).

Appendix G

Tribal Consultation

The following Assembly Bill 52 consultation letter sample was sent to each of the following tribal contacts:

Name of Tribe	Address	City	State	Zip	Representative
Ohlone/Coastanoan Esselen Nation-Address 1	PO Box 1301	Monterey	CA	93942	Chairperson Louise Miranda-Ramirez
Ohlone/Coastanoan Esselen Nation-Address 2	2653 McLaughlin Ave.	San Jose	CA	95121	Chairperson Louise Miranda-Ramirez
Coastanoan Rumsen Carmel Tribe	244 1st Street	Pomona	CA	91766	Mr. Cerda
Amah Mutsun Tribal Band	PO Box 5272	Galt	CA	95632	Mr. Lopez
Amah Mutsun Tribal Band of Mission San Juan Bautista	789 Canada Road	Woodside	CA	94062	Chairperson Irene Zwierlein
Amah Mutsun Tribal Band of Mission San Juan Bautista	3030 Soda Bay Road	Lakeport	CA	95453	Chairperson Irene Zwierlein
Rumsen Am: a Tur: ataj Ohlone	14671 Farmington	Hesperia	CA	92345	Chairperson Dee Dee Ybarra
Indian Canyon Mutsun Band of Costanoan	PO Box 28	Hollister	CA	95024	Ms. Sayers
Indian Canyon Mutsun Band of Costanoan	1615 Pearson Court	San Jose	CA	95122	Kanyon Sayers- Roods
Esselen Tribe of Monterey County	38655 Tassajara Road	Carmel Valley	CA	93924	Mr. Nason
Esselen Tribe of Monterey County	P.O. Box 95	Carmel Valley	CA	93924	Mr. Nason
California Native American Heritage Commission	1550 Harbor Blvd Ste 100	West Sacramento	CA	95691	Executive Secretary
Kakoon Ta Ruk Band of Ohlone-Costanoan Indians of the Big Sur Rancheria	PO Box 541	Esparto	CA	95627	Chairperson Isaac Bojorquez
Costanoan Rumsen Carmel Tribe	244 E. 1st Street	Pomona	CA	91766	Chairman Tony Cerda
Amah Mutsun Tribal Band	P.O. Box 5272	Galt	CA	95623	Chairperson Valentine Lopez
Wuksache Indian Tribe/Eshom Valley Band	1179 Rock Haven Court	Salinas	CA	93906	Chairperson Kenneth Woodrow

City of Marina



City of Marina
211 HILLCREST AVENUE
MARINA, CA 93933
831- 884-1278; FAX 831- 384-9148
www.cityofmarina.org

February 9, 2023

Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Court
Salinas, CA 93906

Subject: Assembly Bill 52 and Senate Bill 18 Consultation, City of Marina Downtown Vision Specific Plan Project, Marina, Monterey County, California

Dear Chairperson Kenneth Woodrow

The City of Marina is preparing a Focused Environmental Impact Report for the Marina Downtown Vitalization Specific Plan (DVSP). 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 (Plan Area; see enclosed map). The DVSP does not include any construction or ground disturbance itself, but is a policy document intended to guide future development within the Plan Area. We previously sent a letter to you on June 26, 2019 regarding this project; since that time, minor adjustments have been made to the DVSP, including the reorganization of introductory material, refined policies and development standards related to land use and mobility, and the addition of chapters related to public facilities, infrastructure, and plan implementation.

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.

Additionally, the proposed project includes a minor amendment of the City of Marina's General 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. This minor amendment includes the addition of language in the Land Use Element that identifies select parcels as affordable housing opportunity sites, and subsequently as recipients of the Affordable Housing Overlay.

Your tribe's input is important to the City of Marina'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 of Marina if you are interested in further consultation. If you require any additional information or have any questions, please contact me at 831-884-1289 or by email at gpersicone@cityofmarina.org. Thank you for your assistance.

Sincerely,

Guido Persicone, AICP
Community Development Director
City of Marina

Enclosed:
Project Location Map

Appendix H

HVAC Noise Data

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.

Appendix I

CalEEMod Modeling Output for Alternatives Analysis

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report

Table of Contents

1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
2. Emissions Summary
 - 2.1. Construction Emissions Compared Against Thresholds
 - 2.2. Construction Emissions by Year, Unmitigated
 - 2.3. Construction Emissions by Year, Mitigated
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
 - 2.6. Operations Emissions by Sector, Mitigated
3. Construction Emissions Details
 - 3.1. Demolition (2024) - Unmitigated
 - 3.2. Demolition (2024) - Mitigated

- 3.3. Demolition (2025) - Unmitigated
- 3.4. Demolition (2025) - Mitigated
- 3.5. Demolition (2026) - Unmitigated
- 3.6. Demolition (2026) - Mitigated
- 3.7. Demolition (2027) - Unmitigated
- 3.8. Demolition (2027) - Mitigated
- 3.9. Demolition (2028) - Unmitigated
- 3.10. Demolition (2028) - Mitigated
- 3.11. Demolition (2029) - Unmitigated
- 3.12. Demolition (2029) - Mitigated
- 3.13. Demolition (2030) - Unmitigated
- 3.14. Demolition (2030) - Mitigated
- 3.15. Demolition (2031) - Unmitigated
- 3.16. Demolition (2031) - Mitigated
- 3.17. Demolition (2032) - Unmitigated
- 3.18. Demolition (2032) - Mitigated
- 3.19. Demolition (2033) - Unmitigated

3.20. Demolition (2033) - Mitigated

3.21. Demolition (2034) - Unmitigated

3.22. Demolition (2034) - Mitigated

3.23. Demolition (2035) - Unmitigated

3.24. Demolition (2035) - Mitigated

3.25. Demolition (2036) - Unmitigated

3.26. Demolition (2036) - Mitigated

3.27. Demolition (2037) - Unmitigated

3.28. Demolition (2037) - Mitigated

3.29. Demolition (2038) - Unmitigated

3.30. Demolition (2038) - Mitigated

3.31. Demolition (2039) - Unmitigated

3.32. Demolition (2039) - Mitigated

3.33. Demolition (2040) - Unmitigated

3.34. Demolition (2040) - Mitigated

3.35. Site Preparation (2024) - Unmitigated

3.36. Site Preparation (2024) - Mitigated

3.37. Grading (2024) - Unmitigated

3.38. Grading (2024) - Mitigated

3.39. Grading (2025) - Unmitigated

3.40. Grading (2025) - Mitigated

3.41. Building Construction (2024) - Unmitigated

3.42. Building Construction (2024) - Mitigated

3.43. Building Construction (2025) - Unmitigated

3.44. Building Construction (2025) - Mitigated

3.45. Building Construction (2026) - Unmitigated

3.46. Building Construction (2026) - Mitigated

3.47. Building Construction (2027) - Unmitigated

3.48. Building Construction (2027) - Mitigated

3.49. Building Construction (2028) - Unmitigated

3.50. Building Construction (2028) - Mitigated

3.51. Building Construction (2029) - Unmitigated

3.52. Building Construction (2029) - Mitigated

3.53. Building Construction (2030) - Unmitigated

- 3.54. Building Construction (2030) - Mitigated
- 3.55. Building Construction (2031) - Unmitigated
- 3.56. Building Construction (2031) - Mitigated
- 3.57. Building Construction (2032) - Unmitigated
- 3.58. Building Construction (2032) - Mitigated
- 3.59. Building Construction (2033) - Unmitigated
- 3.60. Building Construction (2033) - Mitigated
- 3.61. Building Construction (2034) - Unmitigated
- 3.62. Building Construction (2034) - Mitigated
- 3.63. Building Construction (2035) - Unmitigated
- 3.64. Building Construction (2035) - Mitigated
- 3.65. Building Construction (2036) - Unmitigated
- 3.66. Building Construction (2036) - Mitigated
- 3.67. Building Construction (2037) - Unmitigated
- 3.68. Building Construction (2037) - Mitigated
- 3.69. Building Construction (2038) - Unmitigated
- 3.70. Building Construction (2038) - Mitigated

3.71. Building Construction (2039) - Unmitigated

3.72. Building Construction (2039) - Mitigated

3.73. Building Construction (2040) - Unmitigated

3.74. Building Construction (2040) - Mitigated

3.75. Paving (2024) - Unmitigated

3.76. Paving (2024) - Mitigated

3.77. Paving (2025) - Unmitigated

3.78. Paving (2025) - Mitigated

3.79. Architectural Coating (2024) - Unmitigated

3.80. Architectural Coating (2024) - Mitigated

3.81. Architectural Coating (2025) - Unmitigated

3.82. Architectural Coating (2025) - Mitigated

3.83. Architectural Coating (2026) - Unmitigated

3.84. Architectural Coating (2026) - Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.2. Unmitigated

4.3.1. Mitigated

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

4.4.1. Mitigated

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

4.5.1. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Marina Downtown Vitalization Specific Plan - Proposed
Construction Start Date	1/1/2024
Operational Year	2040
Lead Agency	City of Marina
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	10.8
Location	36.6835098553933, -121.79814886466889
County	Monterey
City	Marina
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3264
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.13

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
------------------	------	------	-------------	-----------------------	------------------------	--------------------------------	------------	-------------

General Office Building	383	1000sqft	8.79	383,000	0.00	0.00	—	—
Apartments Low Rise	2,178	Dwelling Unit	136	2,308,680	0.00	—	7,272	—
Regional Shopping Center	656	1000sqft	15.1	656,000	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Water	W-7	Adopt a Water Conservation Strategy

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.7	168	134	210	0.24	5.11	44.5	49.7	4.71	17.5	22.2	—	42,156	42,156	2.00	2.00	90.9	42,884
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	27.8	173	139	224	0.24	5.14	47.1	52.2	4.74	18.1	22.8	—	44,100	44,100	2.39	2.10	2.52	44,790
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.0	120	77.0	121	0.13	2.89	24.1	27.0	2.66	9.28	11.9	—	26,822	26,822	1.41	1.42	28.1	27,309
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	2.73	21.8	14.1	22.1	0.02	0.53	4.40	4.93	0.49	1.69	2.18	—	4,441	4,441	0.23	0.24	4.65	4,521
--------	------	------	------	------	------	------	------	------	------	------	------	---	-------	-------	------	------	------	-------

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	25.7	22.1	134	210	0.24	5.11	44.5	49.7	4.71	17.5	22.2	—	42,156	42,156	2.00	1.99	85.0	42,884
2025	21.7	168	90.4	184	0.19	3.07	27.3	30.4	2.84	7.96	10.8	—	39,187	39,187	1.90	2.00	90.9	39,921
2026	14.0	12.4	47.9	118	0.11	1.33	15.3	16.7	1.24	3.65	4.89	—	27,525	27,525	1.39	1.81	72.4	28,172
2027	13.5	11.5	45.7	112	0.11	1.25	15.3	16.6	1.16	3.65	4.81	—	27,097	27,097	1.29	1.71	66.0	27,706
2028	12.7	11.2	44.0	107	0.11	1.19	15.3	16.5	1.10	3.65	4.75	—	26,658	26,658	1.28	1.70	60.2	27,258
2029	12.2	10.8	41.7	102	0.11	1.13	15.3	16.5	1.04	3.65	4.69	—	26,207	26,207	0.88	1.65	54.6	26,774
2030	11.7	10.3	40.2	98.0	0.11	1.09	15.3	16.4	1.01	3.65	4.66	—	25,756	25,756	0.78	1.65	49.2	26,315
2031	10.9	9.91	38.5	93.3	0.11	1.06	15.3	16.4	0.93	3.65	4.58	—	25,317	25,317	0.78	1.59	44.2	25,854
2032	10.4	9.03	36.5	87.7	0.11	0.90	15.3	16.2	0.83	3.65	4.48	—	24,899	24,899	0.72	1.59	39.4	25,431
2033	10.0	8.70	34.9	83.5	0.11	0.83	15.3	16.2	0.77	3.65	4.42	—	24,503	24,503	0.72	1.53	35.0	25,013
2034	9.64	8.40	34.0	79.6	0.11	0.79	15.3	16.1	0.73	3.65	4.38	—	24,126	24,126	0.67	1.13	30.8	24,512
2035	9.35	8.18	32.2	76.0	0.11	0.72	15.3	16.1	0.67	3.65	4.32	—	23,775	23,775	0.62	1.08	27.0	24,139
2036	8.68	7.92	30.9	71.9	0.11	0.67	15.3	16.0	0.62	3.65	4.27	—	23,450	23,450	0.61	1.08	23.6	23,811
2037	8.41	7.66	30.3	69.8	0.11	0.66	15.3	16.0	0.61	3.65	4.27	—	23,161	23,161	0.61	1.03	20.3	23,502
2038	8.00	7.32	28.9	66.5	0.11	0.61	15.3	15.9	0.57	3.65	4.22	—	22,901	22,901	0.57	1.02	17.4	23,238
2039	7.68	7.01	28.3	64.5	0.11	0.59	15.3	15.9	0.55	3.65	4.20	—	22,666	22,666	0.51	1.02	14.9	22,999
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	27.8	173	139	224	0.24	5.14	47.1	52.2	4.74	18.1	22.8	—	44,100	44,100	2.39	2.10	2.52	44,790
2025	21.6	168	93.4	179	0.19	3.07	27.3	30.4	2.84	7.96	10.8	—	38,225	38,225	2.10	2.00	2.36	38,876

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

2026	15.9	163	52.3	131	0.11	1.36	17.9	19.2	1.26	4.25	5.51	—	29,429	29,429	1.69	1.92	2.15	30,047
2027	13.0	11.3	47.8	108	0.11	1.25	15.3	16.6	1.16	3.65	4.81	—	26,342	26,342	1.41	1.75	1.72	26,902
2028	12.6	11.0	46.1	104	0.11	1.19	15.3	16.5	1.10	3.65	4.75	—	25,918	25,918	1.01	1.75	1.56	26,467
2029	12.1	10.6	43.7	98.9	0.11	1.13	15.3	16.5	1.04	3.65	4.69	—	25,482	25,482	0.96	1.70	1.42	26,013
2030	11.3	10.3	42.2	95.1	0.11	1.09	15.3	16.4	1.01	3.65	4.66	—	25,045	25,045	0.90	1.69	1.28	25,572
2031	10.9	9.77	40.5	90.3	0.11	1.06	15.3	16.4	0.93	3.65	4.58	—	24,618	24,618	0.86	1.63	1.14	25,128
2032	10.3	8.88	38.1	85.3	0.11	0.90	15.3	16.2	0.83	3.65	4.48	—	24,212	24,212	0.81	1.63	1.02	24,720
2033	9.94	8.64	36.4	81.1	0.11	0.83	15.3	16.2	0.77	3.65	4.42	—	23,827	23,827	0.81	1.53	0.91	24,305
2034	9.62	8.34	35.2	77.2	0.11	0.79	15.3	16.1	0.73	3.65	4.38	—	23,460	23,460	0.71	1.53	0.80	23,936
2035	8.88	8.08	33.8	73.6	0.11	0.72	15.3	16.1	0.67	3.65	4.32	—	23,118	23,118	0.70	1.48	0.70	23,577
2036	8.69	7.90	32.1	70.0	0.11	0.67	15.3	16.0	0.62	3.65	4.27	—	22,802	22,802	0.70	1.48	0.61	23,261
2037	8.33	7.59	31.8	67.6	0.11	0.66	15.3	16.0	0.61	3.65	4.27	—	22,520	22,520	0.66	1.03	0.53	22,843
2038	8.01	7.29	30.0	64.4	0.11	0.61	15.3	15.9	0.57	3.65	4.22	—	22,267	22,267	0.65	1.02	0.45	22,589
2039	7.70	7.04	29.4	62.6	0.11	0.59	15.3	15.9	0.55	3.65	4.20	—	22,039	22,039	0.59	1.02	0.39	22,359
2040	7.38	6.72	28.7	60.6	0.11	0.58	15.3	15.9	0.54	3.65	4.19	—	21,833	21,833	0.55	0.97	0.33	22,136
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	14.5	39.3	77.0	114	0.13	2.89	24.1	27.0	2.66	9.28	11.9	—	23,325	23,325	1.19	1.11	20.7	23,705
2025	15.0	120	63.3	121	0.13	2.09	19.1	21.2	1.93	5.52	7.45	—	26,822	26,822	1.41	1.42	28.1	27,309
2026	9.90	10.1	35.2	79.4	0.08	0.95	10.9	11.9	0.88	2.60	3.48	—	19,176	19,176	1.06	1.29	22.4	19,610
2027	9.21	8.05	33.6	75.1	0.08	0.89	10.9	11.8	0.83	2.59	3.41	—	18,854	18,854	0.98	1.25	20.4	19,273
2028	8.89	7.82	32.5	72.0	0.08	0.85	10.9	11.8	0.79	2.60	3.39	—	18,602	18,602	0.66	1.26	18.6	19,011
2029	8.59	7.53	30.7	68.6	0.08	0.80	10.9	11.7	0.74	2.59	3.33	—	18,238	18,238	0.66	1.21	16.9	18,631
2030	8.27	7.26	29.6	65.8	0.08	0.78	10.9	11.7	0.72	2.59	3.31	—	17,926	17,926	0.59	1.18	15.2	18,306
2031	7.68	6.92	28.4	62.8	0.08	0.75	10.9	11.6	0.66	2.59	3.25	—	17,620	17,620	0.59	1.14	13.6	17,987
2032	7.32	6.34	26.8	59.3	0.08	0.64	10.9	11.6	0.59	2.60	3.19	—	17,377	17,377	0.55	1.14	12.2	17,743
2033	7.08	6.15	25.5	56.3	0.08	0.60	10.9	11.5	0.55	2.59	3.14	—	17,054	17,054	0.55	1.10	10.8	17,405
2034	6.82	5.90	24.6	53.6	0.08	0.56	10.9	11.4	0.52	2.59	3.11	—	16,792	16,792	0.51	1.10	9.53	17,141

2035	6.33	5.75	23.6	51.2	0.08	0.52	10.9	11.4	0.48	2.59	3.07	—	16,547	16,547	0.47	1.06	8.36	16,882
2036	6.12	5.58	22.4	48.8	0.08	0.48	10.9	11.4	0.44	2.60	3.04	—	16,365	16,365	0.47	0.77	7.29	16,615
2037	5.90	5.37	22.2	47.0	0.08	0.47	10.9	11.4	0.44	2.59	3.03	—	16,119	16,119	0.47	0.73	6.28	16,355
2038	5.63	5.15	21.2	44.9	0.08	0.44	10.9	11.3	0.41	2.59	2.99	—	15,938	15,938	0.43	0.73	5.38	16,172
2039	5.48	4.97	20.5	43.4	0.08	0.42	10.9	11.3	0.39	2.59	2.98	—	15,775	15,775	0.39	0.73	4.60	16,007
2040	0.01	0.01	0.06	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	42.8	42.8	< 0.005	< 0.005	0.01	43.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.65	7.16	14.1	20.8	0.02	0.53	4.40	4.93	0.49	1.69	2.18	—	3,862	3,862	0.20	0.18	3.43	3,925
2025	2.73	21.8	11.6	22.1	0.02	0.38	3.48	3.86	0.35	1.01	1.36	—	4,441	4,441	0.23	0.24	4.65	4,521
2026	1.81	1.85	6.43	14.5	0.01	0.17	1.99	2.16	0.16	0.47	0.64	—	3,175	3,175	0.17	0.21	3.71	3,247
2027	1.68	1.47	6.14	13.7	0.01	0.16	1.99	2.15	0.15	0.47	0.62	—	3,122	3,122	0.16	0.21	3.38	3,191
2028	1.62	1.43	5.92	13.1	0.01	0.16	1.99	2.15	0.14	0.47	0.62	—	3,080	3,080	0.11	0.21	3.08	3,148
2029	1.57	1.37	5.60	12.5	0.01	0.15	1.99	2.13	0.14	0.47	0.61	—	3,020	3,020	0.11	0.20	2.79	3,085
2030	1.51	1.32	5.40	12.0	0.01	0.14	1.99	2.13	0.13	0.47	0.60	—	2,968	2,968	0.10	0.19	2.52	3,031
2031	1.40	1.26	5.18	11.5	0.01	0.14	1.99	2.12	0.12	0.47	0.59	—	2,917	2,917	0.10	0.19	2.26	2,978
2032	1.34	1.16	4.89	10.8	0.01	0.12	1.99	2.11	0.11	0.47	0.58	—	2,877	2,877	0.09	0.19	2.02	2,938
2033	1.29	1.12	4.66	10.3	0.01	0.11	1.99	2.09	0.10	0.47	0.57	—	2,824	2,824	0.09	0.18	1.78	2,882
2034	1.24	1.08	4.49	9.78	0.01	0.10	1.99	2.09	0.10	0.47	0.57	—	2,780	2,780	0.08	0.18	1.58	2,838
2035	1.15	1.05	4.31	9.34	0.01	0.09	1.99	2.08	0.09	0.47	0.56	—	2,740	2,740	0.08	0.17	1.38	2,795
2036	1.12	1.02	4.10	8.91	0.01	0.09	1.99	2.08	0.08	0.47	0.55	—	2,709	2,709	0.08	0.13	1.21	2,751
2037	1.08	0.98	4.04	8.59	0.01	0.09	1.99	2.07	0.08	0.47	0.55	—	2,669	2,669	0.08	0.12	1.04	2,708
2038	1.03	0.94	3.87	8.19	0.01	0.08	1.99	2.07	0.07	0.47	0.55	—	2,639	2,639	0.07	0.12	0.89	2,677
2039	1.00	0.91	3.74	7.92	0.01	0.08	1.99	2.06	0.07	0.47	0.54	—	2,612	2,612	0.07	0.12	0.76	2,650
2040	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	7.09	7.09	< 0.005	< 0.005	< 0.005	7.19

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	25.7	22.1	134	210	0.24	5.11	44.5	49.7	4.71	17.5	22.2	—	42,156	42,156	2.00	1.99	85.0	42,884
2025	21.7	168	90.4	184	0.19	3.07	27.3	30.4	2.84	7.96	10.8	—	39,187	39,187	1.90	2.00	90.9	39,921
2026	14.0	12.4	47.9	118	0.11	1.33	15.3	16.7	1.24	3.65	4.89	—	27,525	27,525	1.39	1.81	72.4	28,172
2027	13.5	11.5	45.7	112	0.11	1.25	15.3	16.6	1.16	3.65	4.81	—	27,097	27,097	1.29	1.71	66.0	27,706
2028	12.7	11.2	44.0	107	0.11	1.19	15.3	16.5	1.10	3.65	4.75	—	26,658	26,658	1.28	1.70	60.2	27,258
2029	12.2	10.8	41.7	102	0.11	1.13	15.3	16.5	1.04	3.65	4.69	—	26,207	26,207	0.88	1.65	54.6	26,774
2030	11.7	10.3	40.2	98.0	0.11	1.09	15.3	16.4	1.01	3.65	4.66	—	25,756	25,756	0.78	1.65	49.2	26,315
2031	10.9	9.91	38.5	93.3	0.11	1.06	15.3	16.4	0.93	3.65	4.58	—	25,317	25,317	0.78	1.59	44.2	25,854
2032	10.4	9.03	36.5	87.7	0.11	0.90	15.3	16.2	0.83	3.65	4.48	—	24,899	24,899	0.72	1.59	39.4	25,431
2033	10.0	8.70	34.9	83.5	0.11	0.83	15.3	16.2	0.77	3.65	4.42	—	24,503	24,503	0.72	1.53	35.0	25,013
2034	9.64	8.40	34.0	79.6	0.11	0.79	15.3	16.1	0.73	3.65	4.38	—	24,126	24,126	0.67	1.13	30.8	24,512
2035	9.35	8.18	32.2	76.0	0.11	0.72	15.3	16.1	0.67	3.65	4.32	—	23,775	23,775	0.62	1.08	27.0	24,139
2036	8.68	7.92	30.9	71.9	0.11	0.67	15.3	16.0	0.62	3.65	4.27	—	23,450	23,450	0.61	1.08	23.6	23,811
2037	8.41	7.66	30.3	69.8	0.11	0.66	15.3	16.0	0.61	3.65	4.27	—	23,161	23,161	0.61	1.03	20.3	23,502
2038	8.00	7.32	28.9	66.5	0.11	0.61	15.3	15.9	0.57	3.65	4.22	—	22,901	22,901	0.57	1.02	17.4	23,238
2039	7.68	7.01	28.3	64.5	0.11	0.59	15.3	15.9	0.55	3.65	4.20	—	22,666	22,666	0.51	1.02	14.9	22,999
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	27.8	173	139	224	0.24	5.14	47.1	52.2	4.74	18.1	22.8	—	44,100	44,100	2.39	2.10	2.52	44,790
2025	21.6	168	93.4	179	0.19	3.07	27.3	30.4	2.84	7.96	10.8	—	38,225	38,225	2.10	2.00	2.36	38,876
2026	15.9	163	52.3	131	0.11	1.36	17.9	19.2	1.26	4.25	5.51	—	29,429	29,429	1.69	1.92	2.15	30,047
2027	13.0	11.3	47.8	108	0.11	1.25	15.3	16.6	1.16	3.65	4.81	—	26,342	26,342	1.41	1.75	1.72	26,902
2028	12.6	11.0	46.1	104	0.11	1.19	15.3	16.5	1.10	3.65	4.75	—	25,918	25,918	1.01	1.75	1.56	26,467
2029	12.1	10.6	43.7	98.9	0.11	1.13	15.3	16.5	1.04	3.65	4.69	—	25,482	25,482	0.96	1.70	1.42	26,013

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

2030	11.3	10.3	42.2	95.1	0.11	1.09	15.3	16.4	1.01	3.65	4.66	—	25,045	25,045	0.90	1.69	1.28	25,572
2031	10.9	9.77	40.5	90.3	0.11	1.06	15.3	16.4	0.93	3.65	4.58	—	24,618	24,618	0.86	1.63	1.14	25,128
2032	10.3	8.88	38.1	85.3	0.11	0.90	15.3	16.2	0.83	3.65	4.48	—	24,212	24,212	0.81	1.63	1.02	24,720
2033	9.94	8.64	36.4	81.1	0.11	0.83	15.3	16.2	0.77	3.65	4.42	—	23,827	23,827	0.81	1.53	0.91	24,305
2034	9.62	8.34	35.2	77.2	0.11	0.79	15.3	16.1	0.73	3.65	4.38	—	23,460	23,460	0.71	1.53	0.80	23,936
2035	8.88	8.08	33.8	73.6	0.11	0.72	15.3	16.1	0.67	3.65	4.32	—	23,118	23,118	0.70	1.48	0.70	23,577
2036	8.69	7.90	32.1	70.0	0.11	0.67	15.3	16.0	0.62	3.65	4.27	—	22,802	22,802	0.70	1.48	0.61	23,261
2037	8.33	7.59	31.8	67.6	0.11	0.66	15.3	16.0	0.61	3.65	4.27	—	22,520	22,520	0.66	1.03	0.53	22,843
2038	8.01	7.29	30.0	64.4	0.11	0.61	15.3	15.9	0.57	3.65	4.22	—	22,267	22,267	0.65	1.02	0.45	22,589
2039	7.70	7.04	29.4	62.6	0.11	0.59	15.3	15.9	0.55	3.65	4.20	—	22,039	22,039	0.59	1.02	0.39	22,359
2040	7.38	6.72	28.7	60.6	0.11	0.58	15.3	15.9	0.54	3.65	4.19	—	21,833	21,833	0.55	0.97	0.33	22,136
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	14.5	39.3	77.0	114	0.13	2.89	24.1	27.0	2.66	9.28	11.9	—	23,325	23,325	1.19	1.11	20.7	23,705
2025	15.0	120	63.3	121	0.13	2.09	19.1	21.2	1.93	5.52	7.45	—	26,822	26,822	1.41	1.42	28.1	27,309
2026	9.90	10.1	35.2	79.4	0.08	0.95	10.9	11.9	0.88	2.60	3.48	—	19,176	19,176	1.06	1.29	22.4	19,610
2027	9.21	8.05	33.6	75.1	0.08	0.89	10.9	11.8	0.83	2.59	3.41	—	18,854	18,854	0.98	1.25	20.4	19,273
2028	8.89	7.82	32.5	72.0	0.08	0.85	10.9	11.8	0.79	2.60	3.39	—	18,602	18,602	0.66	1.26	18.6	19,011
2029	8.59	7.53	30.7	68.6	0.08	0.80	10.9	11.7	0.74	2.59	3.33	—	18,238	18,238	0.66	1.21	16.9	18,631
2030	8.27	7.26	29.6	65.8	0.08	0.78	10.9	11.7	0.72	2.59	3.31	—	17,926	17,926	0.59	1.18	15.2	18,306
2031	7.68	6.92	28.4	62.8	0.08	0.75	10.9	11.6	0.66	2.59	3.25	—	17,620	17,620	0.59	1.14	13.6	17,987
2032	7.32	6.34	26.8	59.3	0.08	0.64	10.9	11.6	0.59	2.60	3.19	—	17,377	17,377	0.55	1.14	12.2	17,743
2033	7.08	6.15	25.5	56.3	0.08	0.60	10.9	11.5	0.55	2.59	3.14	—	17,054	17,054	0.55	1.10	10.8	17,405
2034	6.82	5.90	24.6	53.6	0.08	0.56	10.9	11.4	0.52	2.59	3.11	—	16,792	16,792	0.51	1.10	9.53	17,141
2035	6.33	5.75	23.6	51.2	0.08	0.52	10.9	11.4	0.48	2.59	3.07	—	16,547	16,547	0.47	1.06	8.36	16,882
2036	6.12	5.58	22.4	48.8	0.08	0.48	10.9	11.4	0.44	2.60	3.04	—	16,365	16,365	0.47	0.77	7.29	16,615
2037	5.90	5.37	22.2	47.0	0.08	0.47	10.9	11.4	0.44	2.59	3.03	—	16,119	16,119	0.47	0.73	6.28	16,355
2038	5.63	5.15	21.2	44.9	0.08	0.44	10.9	11.3	0.41	2.59	2.99	—	15,938	15,938	0.43	0.73	5.38	16,172

2039	5.48	4.97	20.5	43.4	0.08	0.42	10.9	11.3	0.39	2.59	2.98	—	15,775	15,775	0.39	0.73	4.60	16,007
2040	0.01	0.01	0.06	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	42.8	42.8	< 0.005	< 0.005	0.01	43.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.65	7.16	14.1	20.8	0.02	0.53	4.40	4.93	0.49	1.69	2.18	—	3,862	3,862	0.20	0.18	3.43	3,925
2025	2.73	21.8	11.6	22.1	0.02	0.38	3.48	3.86	0.35	1.01	1.36	—	4,441	4,441	0.23	0.24	4.65	4,521
2026	1.81	1.85	6.43	14.5	0.01	0.17	1.99	2.16	0.16	0.47	0.64	—	3,175	3,175	0.17	0.21	3.71	3,247
2027	1.68	1.47	6.14	13.7	0.01	0.16	1.99	2.15	0.15	0.47	0.62	—	3,122	3,122	0.16	0.21	3.38	3,191
2028	1.62	1.43	5.92	13.1	0.01	0.16	1.99	2.15	0.14	0.47	0.62	—	3,080	3,080	0.11	0.21	3.08	3,148
2029	1.57	1.37	5.60	12.5	0.01	0.15	1.99	2.13	0.14	0.47	0.61	—	3,020	3,020	0.11	0.20	2.79	3,085
2030	1.51	1.32	5.40	12.0	0.01	0.14	1.99	2.13	0.13	0.47	0.60	—	2,968	2,968	0.10	0.19	2.52	3,031
2031	1.40	1.26	5.18	11.5	0.01	0.14	1.99	2.12	0.12	0.47	0.59	—	2,917	2,917	0.10	0.19	2.26	2,978
2032	1.34	1.16	4.89	10.8	0.01	0.12	1.99	2.11	0.11	0.47	0.58	—	2,877	2,877	0.09	0.19	2.02	2,938
2033	1.29	1.12	4.66	10.3	0.01	0.11	1.99	2.09	0.10	0.47	0.57	—	2,824	2,824	0.09	0.18	1.78	2,882
2034	1.24	1.08	4.49	9.78	0.01	0.10	1.99	2.09	0.10	0.47	0.57	—	2,780	2,780	0.08	0.18	1.58	2,838
2035	1.15	1.05	4.31	9.34	0.01	0.09	1.99	2.08	0.09	0.47	0.56	—	2,740	2,740	0.08	0.17	1.38	2,795
2036	1.12	1.02	4.10	8.91	0.01	0.09	1.99	2.08	0.08	0.47	0.55	—	2,709	2,709	0.08	0.13	1.21	2,751
2037	1.08	0.98	4.04	8.59	0.01	0.09	1.99	2.07	0.08	0.47	0.55	—	2,669	2,669	0.08	0.12	1.04	2,708
2038	1.03	0.94	3.87	8.19	0.01	0.08	1.99	2.07	0.07	0.47	0.55	—	2,639	2,639	0.07	0.12	0.89	2,677
2039	1.00	0.91	3.74	7.92	0.01	0.08	1.99	2.06	0.07	0.47	0.54	—	2,612	2,612	0.07	0.12	0.76	2,650
2040	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	7.09	7.09	< 0.005	< 0.005	< 0.005	7.19

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	49.1	132	36.8	187	0.50	1.64	15.3	16.9	1.63	2.67	4.29	1,834	73,545	75,380	191	3.46	49.1	81,225

Mit.	49.1	132	36.8	187	0.50	1.64	15.3	16.9	1.63	2.67	4.29	1,755	73,420	75,174	182	3.26	49.1	80,757
% Reduced	—	—	—	—	—	—	—	—	—	—	—	4%	< 0.5%	< 0.5%	4%	6%	—	1%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	49.3	132	40.1	210	0.48	1.64	15.3	16.9	1.63	2.67	4.29	1,834	71,913	73,747	191	3.72	21.4	79,656
Mit.	49.3	132	40.1	210	0.48	1.64	15.3	16.9	1.63	2.67	4.29	1,755	71,787	73,542	183	3.52	21.4	79,188
% Reduced	—	—	—	—	—	—	—	—	—	—	—	4%	< 0.5%	< 0.5%	4%	5%	—	1%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	42.6	125	36.2	172	0.44	1.62	13.7	15.3	1.61	2.39	3.99	1,834	68,038	69,872	191	3.33	31.6	75,661
Mit.	42.6	125	36.2	172	0.44	1.62	13.7	15.3	1.61	2.39	3.99	1,755	67,912	69,667	182	3.13	31.6	75,193
% Reduced	—	—	—	—	—	—	—	—	—	—	—	4%	< 0.5%	< 0.5%	4%	6%	—	1%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.77	22.8	6.61	31.3	0.08	0.30	2.49	2.79	0.29	0.44	0.73	304	11,264	11,568	31.6	0.55	5.23	12,527
Mit.	7.77	22.8	6.61	31.3	0.08	0.30	2.49	2.79	0.29	0.44	0.73	290	11,244	11,534	30.2	0.52	5.23	12,449
% Reduced	—	—	—	—	—	—	—	—	—	—	—	4%	< 0.5%	< 0.5%	4%	6%	—	1%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	47.0	45.4	18.7	178	0.38	0.19	15.3	15.4	0.18	2.67	2.85	—	38,845	38,845	2.34	2.21	28.4	39,591

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Area	0.00	85.1	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
Energy	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	34,072	34,072	3.85	0.27	—	34,247
Water	—	—	—	—	—	—	—	—	—	—	—	398	628	1,026	40.9	0.98	—	2,342
Waste	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Total	49.1	132	36.8	187	0.50	1.64	15.3	16.9	1.63	2.67	4.29	1,834	73,545	75,380	191	3.46	49.1	81,225
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	47.2	45.3	22.0	201	0.37	0.19	15.3	15.4	0.18	2.67	2.85	—	37,212	37,212	2.87	2.47	0.74	38,022
Area	0.00	85.1	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
Energy	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	34,072	34,072	3.85	0.27	—	34,247
Water	—	—	—	—	—	—	—	—	—	—	—	398	628	1,026	40.9	0.98	—	2,342
Waste	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Total	49.3	132	40.1	210	0.48	1.64	15.3	16.9	1.63	2.67	4.29	1,834	71,913	73,747	191	3.72	21.4	79,656
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	40.5	39.0	18.1	163	0.33	0.17	13.7	13.8	0.16	2.39	2.55	—	33,338	33,338	2.30	2.08	11.0	34,027
Area	0.00	85.1	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
Energy	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	34,072	34,072	3.85	0.27	—	34,247
Water	—	—	—	—	—	—	—	—	—	—	—	398	628	1,026	40.9	0.98	—	2,342
Waste	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Total	42.6	125	36.2	172	0.44	1.62	13.7	15.3	1.61	2.39	3.99	1,834	68,038	69,872	191	3.33	31.6	75,661
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.39	7.11	3.31	29.7	0.06	0.03	2.49	2.52	0.03	0.44	0.46	—	5,519	5,519	0.38	0.34	1.82	5,634
Area	0.00	15.5	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
Energy	0.38	0.19	3.31	1.66	0.02	0.26	—	0.26	0.26	—	0.26	—	5,641	5,641	0.64	0.04	—	5,670

Water	—	—	—	—	—	—	—	—	—	—	—	65.9	104	170	6.77	0.16	—	388
Waste	—	—	—	—	—	—	—	—	—	—	—	238	0.00	238	23.8	0.00	—	832
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.41	3.41
Total	7.77	22.8	6.61	31.3	0.08	0.30	2.49	2.79	0.29	0.44	0.73	304	11,264	11,568	31.6	0.55	5.23	12,527

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	47.0	45.4	18.7	178	0.38	0.19	15.3	15.4	0.18	2.67	2.85	—	38,845	38,845	2.34	2.21	28.4	39,591
Area	0.00	85.1	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
Energy	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	34,072	34,072	3.85	0.27	—	34,247
Water	—	—	—	—	—	—	—	—	—	—	—	318	502	821	32.7	0.79	—	1,873
Waste	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Total	49.1	132	36.8	187	0.50	1.64	15.3	16.9	1.63	2.67	4.29	1,755	73,420	75,174	182	3.26	49.1	80,757
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	47.2	45.3	22.0	201	0.37	0.19	15.3	15.4	0.18	2.67	2.85	—	37,212	37,212	2.87	2.47	0.74	38,022
Area	0.00	85.1	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
Energy	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	34,072	34,072	3.85	0.27	—	34,247
Water	—	—	—	—	—	—	—	—	—	—	—	318	502	821	32.7	0.79	—	1,873
Waste	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Total	49.3	132	40.1	210	0.48	1.64	15.3	16.9	1.63	2.67	4.29	1,755	71,787	73,542	183	3.52	21.4	79,188

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	40.5	39.0	18.1	163	0.33	0.17	13.7	13.8	0.16	2.39	2.55	—	33,338	33,338	2.30	2.08	11.0	34,027
Area	0.00	85.1	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
Energy	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	34,072	34,072	3.85	0.27	—	34,247
Water	—	—	—	—	—	—	—	—	—	—	—	318	502	821	32.7	0.79	—	1,873
Waste	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Total	42.6	125	36.2	172	0.44	1.62	13.7	15.3	1.61	2.39	3.99	1,755	67,912	69,667	182	3.13	31.6	75,193
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.39	7.11	3.31	29.7	0.06	0.03	2.49	2.52	0.03	0.44	0.46	—	5,519	5,519	0.38	0.34	1.82	5,634
Area	0.00	15.5	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
Energy	0.38	0.19	3.31	1.66	0.02	0.26	—	0.26	0.26	—	0.26	—	5,641	5,641	0.64	0.04	—	5,670
Water	—	—	—	—	—	—	—	—	—	—	—	52.7	83.2	136	5.42	0.13	—	310
Waste	—	—	—	—	—	—	—	—	—	—	—	238	0.00	238	23.8	0.00	—	832
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.41	3.41
Total	7.77	22.8	6.61	31.3	0.08	0.30	2.49	2.79	0.29	0.44	0.73	290	11,244	11,534	30.2	0.52	5.23	12,449

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.23	1.87	17.8	15.6	0.02	0.76	—	0.76	0.70	—	0.70	—	2,453	2,453	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.25	2.84	< 0.005	0.14	—	0.14	0.13	—	0.13	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.73	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	111	111	0.01	< 0.005	0.48	113
Vendor	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	0.00

Hauling	0.03	0.01	0.43	0.16	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	332	332	0.02	0.05	0.68	349
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	104	104	0.01	< 0.005	0.01	106
Vendor	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	0.00
Hauling	0.03	0.01	0.46	0.16	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	332	332	0.02	0.05	0.02	349
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.47	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	75.0	75.0	0.01	< 0.005	0.15	76.2
Vendor	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	0.00
Hauling	0.02	0.01	0.32	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	238	238	0.01	0.04	0.21	250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.4	39.4	< 0.005	0.01	0.03	41.4

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.23	1.87	17.8	15.6	0.02	0.76	—	0.76	0.70	—	0.70	—	2,453	2,453	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.25	2.84	< 0.005	0.14	—	0.14	0.13	—	0.13	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.73	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	111	111	0.01	< 0.005	0.48	113
Vendor	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	0.00
Hauling	0.03	0.01	0.43	0.16	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	332	332	0.02	0.05	0.68	349

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	104	104	0.01	< 0.005	0.01	106
Vendor	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	0.00
Hauling	0.03	0.01	0.46	0.16	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	332	332	0.02	0.05	0.02	349
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.47	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	75.0	75.0	0.01	< 0.005	0.15	76.2
Vendor	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	0.00
Hauling	0.02	0.01	0.32	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	238	238	0.01	0.04	0.21	250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.4	39.4	< 0.005	0.01	0.03	41.4

3.3. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.71	15.9	14.2	0.02	0.66	—	0.66	0.60	—	0.60	—	2,446	2,446	0.10	0.02	—	2,455
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.89	2.60	< 0.005	0.12	—	0.12	0.11	—	0.11	—	405	405	0.02	< 0.005	—	406
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	0.01	< 0.005	0.45	110
Vendor	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	0.00
Hauling	0.03	0.01	0.41	0.16	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	326	326	0.02	0.05	0.67	342

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	0.01	< 0.005	0.01	104
Vendor	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	0.00
Hauling	0.03	0.01	0.44	0.16	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	326	326	0.02	0.05	0.02	342
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.44	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	73.3	73.3	< 0.005	< 0.005	0.14	74.6
Vendor	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	0.00
Hauling	0.02	0.01	0.31	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	233	233	0.01	0.04	0.21	244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.5	38.5	< 0.005	0.01	0.03	40.4

3.4. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.71	15.9	14.2	0.02	0.66	—	0.66	0.60	—	0.60	—	2,446	2,446	0.10	0.02	—	2,455
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.89	2.60	< 0.005	0.12	—	0.12	0.11	—	0.11	—	405	405	0.02	< 0.005	—	406
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	0.01	< 0.005	0.45	110
Vendor	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	0.00
Hauling	0.03	0.01	0.41	0.16	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	326	326	0.02	0.05	0.67	342

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	0.01	< 0.005	0.01	104
Vendor	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	0.00
Hauling	0.03	0.01	0.44	0.16	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	326	326	0.02	0.05	0.02	342
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.44	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	73.3	73.3	< 0.005	< 0.005	0.14	74.6
Vendor	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	0.00
Hauling	0.02	0.01	0.31	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	233	233	0.01	0.04	0.21	244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.5	38.5	< 0.005	0.01	0.03	40.4

3.5. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.95	1.63	14.8	13.6	0.02	0.60	—	0.60	0.55	—	0.55	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.69	2.48	< 0.005	0.11	—	0.11	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.63	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	0.01	< 0.005	0.42	108
Vendor	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	0.00
Hauling	0.03	0.01	0.40	0.15	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	319	319	0.02	0.05	0.63	336

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	0.60	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	0.01	< 0.005	0.01	102
Vendor	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	0.00
Hauling	0.03	0.01	0.42	0.15	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	319	319	0.02	0.05	0.02	335
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.41	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.0	72.0	< 0.005	< 0.005	0.13	73.2
Vendor	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	0.00
Hauling	0.02	0.01	0.30	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	228	228	0.01	0.04	0.19	240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.8	37.8	< 0.005	0.01	0.03	39.7

3.6. Demolition (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.95	1.63	14.8	13.6	0.02	0.60	—	0.60	0.55	—	0.55	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.69	2.48	< 0.005	0.11	—	0.11	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.63	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	0.01	< 0.005	0.42	108
Vendor	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	0.00
Hauling	0.03	0.01	0.40	0.15	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	319	319	0.02	0.05	0.63	336

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	0.60	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	0.01	< 0.005	0.01	102
Vendor	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	0.00
Hauling	0.03	0.01	0.42	0.15	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	319	319	0.02	0.05	0.02	335
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.41	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.0	72.0	< 0.005	< 0.005	0.13	73.2
Vendor	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	0.00
Hauling	0.02	0.01	0.30	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	228	228	0.01	0.04	0.19	240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.8	37.8	< 0.005	0.01	0.03	39.7

3.7. Demolition (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.89	1.58	14.2	13.3	0.02	0.57	—	0.57	0.52	—	0.52	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.59	2.43	< 0.005	0.10	—	0.10	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.59	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	104	104	0.01	< 0.005	0.38	106
Vendor	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	0.00
Hauling	0.03	0.01	0.39	0.15	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	312	312	0.02	0.05	0.58	328

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.4	98.4	0.01	< 0.005	0.01	99.9
Vendor	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	0.00
Hauling	0.02	0.01	0.41	0.15	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	312	312	0.02	0.05	0.01	327
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	70.6	70.6	< 0.005	< 0.005	0.12	71.8
Vendor	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	0.00
Hauling	0.02	0.01	0.29	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	223	223	0.01	0.04	0.18	234
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.9	36.9	< 0.005	0.01	0.03	38.7

3.8. Demolition (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.89	1.58	14.2	13.3	0.02	0.57	—	0.57	0.52	—	0.52	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.59	2.43	< 0.005	0.10	—	0.10	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.59	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	104	104	0.01	< 0.005	0.38	106
Vendor	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	0.00
Hauling	0.03	0.01	0.39	0.15	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	312	312	0.02	0.05	0.58	328

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.4	98.4	0.01	< 0.005	0.01	99.9
Vendor	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	0.00
Hauling	0.02	0.01	0.41	0.15	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	312	312	0.02	0.05	0.01	327
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	70.6	70.6	< 0.005	< 0.005	0.12	71.8
Vendor	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	0.00
Hauling	0.02	0.01	0.29	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	223	223	0.01	0.04	0.18	234
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.9	36.9	< 0.005	0.01	0.03	38.7

3.9. Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	14.0	13.4	0.02	0.56	—	0.56	0.51	—	0.51	—	2,456	2,456	0.10	0.02	—	2,464
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.56	2.44	< 0.005	0.10	—	0.10	0.09	—	0.09	—	407	407	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.55	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	0.01	< 0.005	0.35	104
Vendor	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	0.00
Hauling	0.02	0.01	0.37	0.14	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	304	304	0.02	0.05	0.53	319

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	96.6	96.6	< 0.005	< 0.005	0.01	98.1
Vendor	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	0.00
Hauling	0.02	0.01	0.40	0.14	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	304	304	0.02	0.05	0.01	319
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.36	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	69.5	69.5	< 0.005	< 0.005	0.11	70.7
Vendor	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	0.00
Hauling	0.02	0.01	0.28	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	218	218	0.01	0.03	0.16	228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.0	36.0	< 0.005	0.01	0.03	37.8

3.10. Demolition (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	14.0	13.4	0.02	0.56	—	0.56	0.51	—	0.51	—	2,456	2,456	0.10	0.02	—	2,464
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.56	2.44	< 0.005	0.10	—	0.10	0.09	—	0.09	—	407	407	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.55	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	0.01	< 0.005	0.35	104
Vendor	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	0.00
Hauling	0.02	0.01	0.37	0.14	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	304	304	0.02	0.05	0.53	319

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	96.6	96.6	< 0.005	< 0.005	0.01	98.1
Vendor	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	0.00
Hauling	0.02	0.01	0.40	0.14	< 0.005	0.01	0.08	0.09	0.01	0.02	0.03	—	304	304	0.02	0.05	0.01	319
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.36	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	69.5	69.5	< 0.005	< 0.005	0.11	70.7
Vendor	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	0.00
Hauling	0.02	0.01	0.28	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	218	218	0.01	0.03	0.16	228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.0	36.0	< 0.005	0.01	0.03	37.8

3.11. Demolition (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.82	1.53	13.3	13.2	0.02	0.53	—	0.53	0.48	—	0.48	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.28	2.42	2.41	< 0.005	0.10	—	0.10	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.03	0.52	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.32	102
Vendor	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	0.00
Hauling	0.02	0.01	0.36	0.13	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	296	296	0.02	0.05	0.48	311

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.49	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.9	94.9	< 0.005	< 0.005	0.01	96.4
Vendor	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	0.00
Hauling	0.02	0.01	0.38	0.13	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	296	296	0.02	0.05	0.01	310
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.34	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	68.1	68.1	< 0.005	< 0.005	0.10	69.2
Vendor	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	0.00
Hauling	0.01	0.01	0.27	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	211	211	0.01	0.03	0.15	222
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.0	35.0	< 0.005	0.01	0.02	36.7

3.12. Demolition (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.82	1.53	13.3	13.2	0.02	0.53	—	0.53	0.48	—	0.48	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.28	2.42	2.41	< 0.005	0.10	—	0.10	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.03	0.52	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.32	102
Vendor	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	0.00
Hauling	0.02	0.01	0.36	0.13	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	296	296	0.02	0.05	0.48	311

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.49	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.9	94.9	< 0.005	< 0.005	0.01	96.4
Vendor	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	0.00
Hauling	0.02	0.01	0.38	0.13	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	296	296	0.02	0.05	0.01	310
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.34	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	68.1	68.1	< 0.005	< 0.005	0.10	69.2
Vendor	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	0.00
Hauling	0.01	0.01	0.27	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	211	211	0.01	0.03	0.15	222
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.0	35.0	< 0.005	0.01	0.02	36.7

3.13. Demolition (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	1.49	12.9	13.3	0.02	0.51	—	0.51	0.47	—	0.47	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.36	2.43	< 0.005	0.09	—	0.09	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.03	0.49	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.0	99.0	< 0.005	< 0.005	0.29	101
Vendor	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	0.00
Hauling	0.02	0.01	0.35	0.13	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	287	287	0.01	0.05	0.44	302

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.46	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93.3	93.3	< 0.005	< 0.005	0.01	94.7
Vendor	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	0.00
Hauling	0.02	< 0.005	0.37	0.13	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	288	288	0.01	0.05	0.01	301
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.31	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	67.0	67.0	< 0.005	< 0.005	0.09	68.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.26	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	205	205	0.01	0.03	0.14	215
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.01	11.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.0	34.0	< 0.005	0.01	0.02	35.7

3.14. Demolition (2030) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	1.49	12.9	13.3	0.02	0.51	—	0.51	0.47	—	0.47	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.36	2.43	< 0.005	0.09	—	0.09	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.03	0.49	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.0	99.0	< 0.005	< 0.005	0.29	101
Vendor	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	0.00
Hauling	0.02	0.01	0.35	0.13	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	287	287	0.01	0.05	0.44	302

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.46	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93.3	93.3	< 0.005	< 0.005	0.01	94.7
Vendor	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	0.00
Hauling	0.02	< 0.005	0.37	0.13	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	288	288	0.01	0.05	0.01	301
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.31	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	67.0	67.0	< 0.005	< 0.005	0.09	68.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.26	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	205	205	0.01	0.03	0.14	215
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.01	11.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.0	34.0	< 0.005	0.01	0.02	35.7

3.15. Demolition (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.73	1.46	12.5	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.29	2.39	< 0.005	0.09	—	0.09	0.08	—	0.08	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	97.3	97.3	< 0.005	< 0.005	0.26	98.9
Vendor	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	0.00
Hauling	0.02	0.01	0.34	0.12	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	279	279	0.01	0.04	0.39	293

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.43	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	91.8	91.8	< 0.005	< 0.005	0.01	93.2
Vendor	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	0.00
Hauling	0.02	< 0.005	0.36	0.12	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	280	280	0.01	0.04	0.01	293
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.08	66.9
Vendor	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	0.00
Hauling	0.01	< 0.005	0.25	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	200	200	0.01	0.03	0.12	209
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.0	33.0	< 0.005	0.01	0.02	34.6

3.16. Demolition (2031) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.73	1.46	12.5	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.29	2.39	< 0.005	0.09	—	0.09	0.08	—	0.08	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	97.3	97.3	< 0.005	< 0.005	0.26	98.9
Vendor	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	0.00
Hauling	0.02	0.01	0.34	0.12	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	279	279	0.01	0.04	0.39	293

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.43	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	91.8	91.8	< 0.005	< 0.005	0.01	93.2
Vendor	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	0.00
Hauling	0.02	< 0.005	0.36	0.12	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	280	280	0.01	0.04	0.01	293
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.08	66.9
Vendor	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	0.00
Hauling	0.01	< 0.005	0.25	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	200	200	0.01	0.03	0.12	209
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.0	33.0	< 0.005	0.01	0.02	34.6

3.17. Demolition (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	11.6	12.1	0.02	0.44	—	0.44	0.41	—	0.41	—	2,454	2,454	0.10	0.02	—	2,463
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.12	2.20	< 0.005	0.08	—	0.08	0.07	—	0.07	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.42	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.9	95.9	< 0.005	< 0.005	0.24	97.4
Vendor	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	0.00
Hauling	0.02	0.01	0.33	0.12	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	272	272	0.01	0.04	0.35	285

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.40	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.4	90.4	< 0.005	< 0.005	0.01	91.8
Vendor	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	0.00
Hauling	0.02	< 0.005	0.35	0.12	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	272	272	0.01	0.04	0.01	285
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.27	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.1	65.1	< 0.005	< 0.005	0.07	66.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.25	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	195	195	0.01	0.03	0.11	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.01	10.9
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.2	32.2	< 0.005	0.01	0.02	33.8

3.18. Demolition (2032) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	11.6	12.1	0.02	0.44	—	0.44	0.41	—	0.41	—	2,454	2,454	0.10	0.02	—	2,463
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.12	2.20	< 0.005	0.08	—	0.08	0.07	—	0.07	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.42	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.9	95.9	< 0.005	< 0.005	0.24	97.4
Vendor	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	0.00
Hauling	0.02	0.01	0.33	0.12	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	272	272	0.01	0.04	0.35	285

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.40	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.4	90.4	< 0.005	< 0.005	0.01	91.8
Vendor	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	0.00
Hauling	0.02	< 0.005	0.35	0.12	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	272	272	0.01	0.04	0.01	285
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.27	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.1	65.1	< 0.005	< 0.005	0.07	66.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.25	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	195	195	0.01	0.03	0.11	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.01	10.9
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.2	32.2	< 0.005	0.01	0.02	33.8

3.19. Demolition (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.33	11.1	11.4	0.02	0.41	—	0.41	0.38	—	0.38	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	2.02	2.08	< 0.005	0.07	—	0.07	0.07	—	0.07	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.40	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.5	94.5	< 0.005	< 0.005	0.21	96.0
Vendor	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	0.00
Hauling	0.02	0.01	0.32	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	265	265	0.01	0.04	0.31	278

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.38	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	89.1	89.1	< 0.005	< 0.005	0.01	90.4
Vendor	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	0.00
Hauling	0.02	< 0.005	0.34	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	265	265	0.01	0.04	0.01	278
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.0	64.0	< 0.005	< 0.005	0.07	64.9
Vendor	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	0.00
Hauling	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	189	189	0.01	0.03	0.10	198
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	10.8
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.3	31.3	< 0.005	< 0.005	0.02	32.8

3.20. Demolition (2033) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.33	11.1	11.4	0.02	0.41	—	0.41	0.38	—	0.38	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	2.02	2.08	< 0.005	0.07	—	0.07	0.07	—	0.07	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.40	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.5	94.5	< 0.005	< 0.005	0.21	96.0
Vendor	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	0.00
Hauling	0.02	0.01	0.32	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	265	265	0.01	0.04	0.31	278

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.38	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	89.1	89.1	< 0.005	< 0.005	0.01	90.4
Vendor	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	0.00
Hauling	0.02	< 0.005	0.34	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	265	265	0.01	0.04	0.01	278
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.0	64.0	< 0.005	< 0.005	0.07	64.9
Vendor	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	0.00
Hauling	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	189	189	0.01	0.03	0.10	198
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	10.8
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.3	31.3	< 0.005	< 0.005	0.02	32.8

3.21. Demolition (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	10.8	11.2	0.02	0.39	—	0.39	0.35	—	0.35	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.24	1.97	2.05	< 0.005	0.07	—	0.07	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93.2	93.2	< 0.005	< 0.005	0.19	93.7
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	258	258	0.01	0.04	0.27	271

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.35	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	87.9	87.9	< 0.005	< 0.005	< 0.005	89.2
Vendor	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	0.00
Hauling	0.01	< 0.005	0.33	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	259	259	0.01	0.04	0.01	271
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63.1	63.1	< 0.005	< 0.005	0.06	64.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.23	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	185	185	0.01	0.03	0.08	194
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.6	30.6	< 0.005	< 0.005	0.01	32.1

3.22. Demolition (2034) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	10.8	11.2	0.02	0.39	—	0.39	0.35	—	0.35	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.24	1.97	2.05	< 0.005	0.07	—	0.07	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93.2	93.2	< 0.005	< 0.005	0.19	93.7
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	258	258	0.01	0.04	0.27	271

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.35	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	87.9	87.9	< 0.005	< 0.005	< 0.005	89.2
Vendor	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	0.00
Hauling	0.01	< 0.005	0.33	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	259	259	0.01	0.04	0.01	271
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63.1	63.1	< 0.005	< 0.005	0.06	64.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.23	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	185	185	0.01	0.03	0.08	194
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.6	30.6	< 0.005	< 0.005	0.01	32.1

3.23. Demolition (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.25	10.1	10.7	0.02	0.35	—	0.35	0.32	—	0.32	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	1.85	1.95	< 0.005	0.06	—	0.06	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.35	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.0	92.0	< 0.005	< 0.005	0.17	92.5
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	253	253	0.01	0.04	0.24	265

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.8	86.8	< 0.005	< 0.005	< 0.005	88.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.32	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	253	253	0.01	0.04	0.01	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	62.3	62.3	< 0.005	< 0.005	0.05	63.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.23	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	181	181	0.01	0.03	0.07	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.5
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.9	29.9	< 0.005	< 0.005	0.01	31.3

3.24. Demolition (2035) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.25	10.1	10.7	0.02	0.35	—	0.35	0.32	—	0.32	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	1.85	1.95	< 0.005	0.06	—	0.06	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.02	0.35	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.0	92.0	< 0.005	< 0.005	0.17	92.5
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	253	253	0.01	0.04	0.24	265

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.8	86.8	< 0.005	< 0.005	< 0.005	88.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.32	0.11	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	253	253	0.01	0.04	0.01	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	62.3	62.3	< 0.005	< 0.005	0.05	63.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.23	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	181	181	0.01	0.03	0.07	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.5
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.9	29.9	< 0.005	< 0.005	0.01	31.3

3.25. Demolition (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.43	1.20	9.59	10.1	0.02	0.32	—	0.32	0.29	—	0.29	—	2,454	2,454	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.32	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.9	90.9	< 0.005	< 0.005	0.15	91.4
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	248	248	0.01	0.04	0.20	260

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	85.7	85.7	< 0.005	< 0.005	< 0.005	87.0
Vendor	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	0.00
Hauling	0.01	0.01	0.32	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	248	248	0.01	0.04	0.01	260
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.21	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	61.7	61.7	< 0.005	< 0.005	0.05	62.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	178	178	0.01	0.03	0.06	186
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.4	29.4	< 0.005	< 0.005	0.01	30.8

3.26. Demolition (2036) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.43	1.20	9.59	10.1	0.02	0.32	—	0.32	0.29	—	0.29	—	2,454	2,454	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.32	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.9	90.9	< 0.005	< 0.005	0.15	91.4
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	248	248	0.01	0.04	0.20	260

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	85.7	85.7	< 0.005	< 0.005	< 0.005	87.0
Vendor	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	0.00
Hauling	0.01	0.01	0.32	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	248	248	0.01	0.04	0.01	260
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.21	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	61.7	61.7	< 0.005	< 0.005	0.05	62.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	178	178	0.01	0.03	0.06	186
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.3
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.4	29.4	< 0.005	< 0.005	0.01	30.8

3.27. Demolition (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.20	9.57	10.2	0.02	0.32	—	0.32	0.29	—	0.29	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.86	< 0.005	0.06	—	0.06	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	89.9	89.9	< 0.005	< 0.005	0.13	90.4
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	243	243	0.01	0.04	0.18	255

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	84.8	84.8	< 0.005	< 0.005	< 0.005	85.1
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	244	244	0.01	0.04	< 0.005	255
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.20	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.9	60.9	< 0.005	< 0.005	0.04	61.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	174	174	0.01	0.03	0.05	182
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.8	28.8	< 0.005	< 0.005	0.01	30.2

3.28. Demolition (2037) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.20	9.57	10.2	0.02	0.32	—	0.32	0.29	—	0.29	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.86	< 0.005	0.06	—	0.06	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	89.9	89.9	< 0.005	< 0.005	0.13	90.4
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	243	243	0.01	0.04	0.18	255

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	84.8	84.8	< 0.005	< 0.005	< 0.005	85.1
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	244	244	0.01	0.04	< 0.005	255
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.20	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.9	60.9	< 0.005	< 0.005	0.04	61.1
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	174	174	0.01	0.03	0.05	182
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.1
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.8	28.8	< 0.005	< 0.005	0.01	30.2

3.29. Demolition (2038) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	1.14	8.83	9.43	0.02	0.29	—	0.29	0.26	—	0.26	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.61	1.72	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	89.0	89.0	< 0.005	< 0.005	0.11	89.4
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	240	240	0.01	0.04	0.15	251

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.27	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	83.9	83.9	< 0.005	< 0.005	< 0.005	84.3
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	240	240	0.01	0.04	< 0.005	251
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.19	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.3	60.3	< 0.005	< 0.005	0.03	60.5
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	171	171	< 0.005	0.03	0.05	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.98	9.98	< 0.005	< 0.005	0.01	10.0
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.3	28.3	< 0.005	< 0.005	0.01	29.7

3.30. Demolition (2038) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	1.14	8.83	9.43	0.02	0.29	—	0.29	0.26	—	0.26	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.61	1.72	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	89.0	89.0	< 0.005	< 0.005	0.11	89.4
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	240	240	0.01	0.04	0.15	251

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.27	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	83.9	83.9	< 0.005	< 0.005	< 0.005	84.3
Vendor	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	0.00
Hauling	0.01	0.01	0.31	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	240	240	0.01	0.04	< 0.005	251
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.19	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.3	60.3	< 0.005	< 0.005	0.03	60.5
Vendor	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	0.00
Hauling	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	171	171	< 0.005	0.03	0.05	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.98	9.98	< 0.005	< 0.005	0.01	10.0
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.3	28.3	< 0.005	< 0.005	0.01	29.7

3.31. Demolition (2039) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.12	8.61	9.28	0.02	0.28	—	0.28	0.25	—	0.25	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.57	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.28	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	88.2	88.2	< 0.005	< 0.005	0.10	88.6
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	236	236	< 0.005	0.04	0.13	248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.26	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	83.2	83.2	< 0.005	< 0.005	< 0.005	83.5
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	236	236	< 0.005	0.04	< 0.005	248
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.01	0.18	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	59.7	59.7	< 0.005	< 0.005	0.03	60.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	169	169	< 0.005	0.03	0.04	177
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.89	9.89	< 0.005	< 0.005	< 0.005	9.93
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.9	27.9	< 0.005	< 0.005	0.01	29.3

3.32. Demolition (2039) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.12	8.61	9.28	0.02	0.28	—	0.28	0.25	—	0.25	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.57	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.28	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	88.2	88.2	< 0.005	< 0.005	0.10	88.6
Vendor	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	0.00
Hauling	0.01	0.01	0.29	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	236	236	< 0.005	0.04	0.13	248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.26	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	83.2	83.2	< 0.005	< 0.005	< 0.005	83.5
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	236	236	< 0.005	0.04	< 0.005	248
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.01	0.18	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	59.7	59.7	< 0.005	< 0.005	0.03	60.0
Vendor	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	0.00
Hauling	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	169	169	< 0.005	0.03	0.04	177
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.89	9.89	< 0.005	< 0.005	< 0.005	9.93
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.9	27.9	< 0.005	< 0.005	0.01	29.3

3.33. Demolition (2040) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	1.55	12.0	12.9	0.03	0.38	—	0.38	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.70	6.70	< 0.005	< 0.005	—	6.73	
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.11	1.11	< 0.005	< 0.005	—	1.11	
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.03	0.03	0.02	0.25	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	82.5	82.5	< 0.005	< 0.005	< 0.005	82.9	
Vendor	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	0.00	
Hauling	0.01	0.01	0.30	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	233	233	< 0.005	0.04	< 0.005	245	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16	
Vendor	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	0.00	
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48	

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08

3.34. Demolition (2040) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	1.55	12.0	12.9	0.03	0.38	—	0.38	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.70	6.70	< 0.005	< 0.005	—	6.73
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.11	1.11	< 0.005	< 0.005	—	1.11

Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.25	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	82.5	82.5	< 0.005	< 0.005	< 0.005	82.9
Vendor	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	0.00
Hauling	0.01	0.01	0.30	0.09	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	233	233	< 0.005	0.04	< 0.005	245
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08

3.35. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	1.80	17.7	16.2	0.02	0.79	—	0.79	0.73	—	0.73	—	2,612	2,612	0.11	0.02	—	2,621
Dust From Material Movement:	—	—	—	—	—	—	9.69	9.69	—	4.98	4.98	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.24	2.96	< 0.005	0.14	—	0.14	0.13	—	0.13	—	432	432	0.02	< 0.005	—	434
Dust From Material Movement:	—	—	—	—	—	—	1.77	1.77	—	0.91	0.91	—	—	—	—	—	—	—

Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	0.86	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	129	129	0.01	0.01	0.56	131	
Vendor	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	0.00	
Hauling	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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.10	0.09	0.08	0.81	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	122	122	0.01	0.01	0.01	123	
Vendor	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	0.00	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.05	0.04	0.04	0.38	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.2	60.2	< 0.005	< 0.005	0.12	61.2	
Vendor	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	0.00	
Hauling	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.97	9.97	< 0.005	< 0.005	0.02	10.1	
Vendor	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	0.00	
Hauling	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	0.00	

3.36. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	1.80	17.7	16.2	0.02	0.79	—	0.79	0.73	—	0.73	—	2,612	2,612	0.11	0.02	—	2,621
Dust From Material Movement:	—	—	—	—	—	—	9.69	9.69	—	4.98	4.98	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.24	2.96	< 0.005	0.14	—	0.14	0.13	—	0.13	—	432	432	0.02	< 0.005	—	434

Dust From Material Movement:	—	—	—	—	—	—	1.77	1.77	—	0.91	0.91	—	—	—	—	—	—	
Onsite truck	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	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.10	0.09	0.06	0.86	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	129	129	0.01	0.01	0.56	131
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.10	0.09	0.08	0.81	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	122	122	0.01	0.01	0.01	123
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.05	0.04	0.04	0.38	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.2	60.2	< 0.005	< 0.005	0.12	61.2
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.97	9.97	< 0.005	< 0.005	0.02	10.1
Vendor	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	0.00
Hauling	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	0.00

3.37. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.50	2.10	20.5	18.0	0.04	0.86	—	0.86	0.80	—	0.80	—	3,938	3,938	0.16	0.03	—	3,952
Dust From Material Movement	—	—	—	—	—	—	5.49	5.49	—	2.18	2.18	—	—	—	—	—	—	—
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.38	3.73	3.29	0.01	0.16	—	0.16	0.15	—	0.15	—	652	652	0.03	0.01	—	654
Dust From Material Movement	—	—	—	—	—	—	1.00	1.00	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.07	0.98	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	147	147	0.01	0.01	0.64	150
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	0.93	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	139	139	0.01	0.01	0.02	141
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	83.3	83.3	0.01	< 0.005	0.17	84.7
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.03	14.0
Vendor	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	0.00
Hauling	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	0.00

3.38. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement:	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement:	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.50	2.10	20.5	18.0	0.04	0.86	—	0.86	0.80	—	0.80	—	3,938	3,938	0.16	0.03	—	3,952
Dust From Material Movement:	—	—	—	—	—	—	5.49	5.49	—	2.18	2.18	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.38	3.73	3.29	0.01	0.16	—	0.16	0.15	—	0.15	—	652	652	0.03	0.01	—	654	
Dust From Material Movement	—	—	—	—	—	—	1.00	1.00	—	0.40	0.40	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.11	0.10	0.07	0.98	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	147	147	0.01	0.01	0.64	150	
Vendor	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	0.00	
Hauling	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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.11	0.10	0.09	0.93	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	139	139	0.01	0.01	0.02	141	
Vendor	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	0.00	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.06	0.06	0.05	0.53	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	83.3	83.3	0.01	< 0.005	0.17	84.7	
Vendor	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	0.00	
Hauling	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.03	14.0	
Vendor	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	0.00	

Hauling	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	0.00	0.00
---------	------	------	------	------	------	------	------	------	------	------	------	------	---	------	------	------	------	------	------

3.39. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622	
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622	
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.58	2.16	20.1	19.2	0.04	0.84	—	0.84	0.77	—	0.77	—	4,468	4,468	0.18	0.04	—	4,483	

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Dust From Material Movement:	—	—	—	—	—	—	6.23	6.23	—	2.47	2.47	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	0.40	3.67	3.50	0.01	0.15	—	0.15	0.14	—	0.14	—	740	740	0.03	0.01	—	742
Dust From Material Movement:	—	—	—	—	—	—	1.14	1.14	—	0.45	0.45	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.91	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	145	145	0.01	0.01	0.60	147
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	0.86	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	0.01	0.01	0.02	138
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.55	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	92.7	92.7	0.01	< 0.005	0.18	94.2
Vendor	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	0.00
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.03	15.6
Vendor	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	0.00
Hauling	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	0.00

3.40. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement:	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement:	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	2.58	2.16	20.1	19.2	0.04	0.84	—	0.84	0.77	—	0.77	—	4,468	4,468	0.18	0.04	—	4,483
Dust From Material Movement	—	—	—	—	—	—	6.23	6.23	—	2.47	2.47	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	0.40	3.67	3.50	0.01	0.15	—	0.15	0.14	—	0.14	—	740	740	0.03	0.01	—	742
Dust From Material Movement	—	—	—	—	—	—	1.14	1.14	—	0.45	0.45	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.91	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	145	145	0.01	0.01	0.60	147
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	0.86	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	0.01	0.01	0.02	138
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.55	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	92.7	92.7	0.01	< 0.005	0.18	94.2

Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.03	15.6
Vendor	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	0.00
Hauling	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	0.00

3.41. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	6.04	7.06	0.01	0.27	—	0.27	0.25	—	0.25	—	1,290	1,290	0.05	0.01	—	1,295
Onsite truck	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.10	1.29	< 0.005	0.05	—	0.05	0.04	—	0.04	—	214	214	0.01	< 0.005	—	214
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.4	9.45	6.79	92.9	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	14,011	14,011	0.82	0.56	61.3	14,261
Vendor	0.82	0.45	12.2	6.15	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	8,087	8,087	0.36	1.20	20.8	8,473
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.3	9.28	8.76	88.1	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	13,203	13,203	0.98	0.56	1.59	13,398
Vendor	0.79	0.37	12.9	6.27	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	8,093	8,093	0.37	1.20	0.54	8,460
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.46	4.93	4.41	45.0	0.00	0.00	6.80	6.80	0.00	1.59	1.59	—	7,138	7,138	0.48	0.30	14.2	7,255
Vendor	0.43	0.23	6.78	3.34	0.03	0.06	1.09	1.15	0.06	0.30	0.36	—	4,354	4,354	0.20	0.64	4.83	4,555
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.00	0.90	0.80	8.21	0.00	0.00	1.24	1.24	0.00	0.29	0.29	—	1,182	1,182	0.08	0.05	2.36	1,201
Vendor	0.08	0.04	1.24	0.61	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	721	721	0.03	0.11	0.80	754
Hauling	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	0.00

3.42. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	6.04	7.06	0.01	0.27	—	0.27	0.25	—	0.25	—	1,290	1,290	0.05	0.01	—	1,295
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.10	1.29	< 0.005	0.05	—	0.05	0.04	—	0.04	—	214	214	0.01	< 0.005	—	214
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.4	9.45	6.79	92.9	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	14,011	14,011	0.82	0.56	61.3	14,261
Vendor	0.82	0.45	12.2	6.15	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	8,087	8,087	0.36	1.20	20.8	8,473

Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.3	9.28	8.76	88.1	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	13,203	13,203	0.98	0.56	1.59	13,398	
Vendor	0.79	0.37	12.9	6.27	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	8,093	8,093	0.37	1.20	0.54	8,460	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.46	4.93	4.41	45.0	0.00	0.00	6.80	6.80	0.00	1.59	1.59	—	7,138	7,138	0.48	0.30	14.2	7,255	
Vendor	0.43	0.23	6.78	3.34	0.03	0.06	1.09	1.15	0.06	0.30	0.36	—	4,354	4,354	0.20	0.64	4.83	4,555	
Hauling	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.00	0.90	0.80	8.21	0.00	0.00	1.24	1.24	0.00	0.29	0.29	—	1,182	1,182	0.08	0.05	2.36	1,201	
Vendor	0.08	0.04	1.24	0.61	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	721	721	0.03	0.11	0.80	754	
Hauling	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	0.00	

3.43. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.63	9.03	6.27	86.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	13,741	13,741	0.77	0.56	56.7	13,985
Vendor	0.75	0.37	11.6	5.73	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,944	7,944	0.36	1.14	20.7	8,314
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.55	8.90	8.23	81.8	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,950	12,950	0.94	0.56	1.48	13,143
Vendor	0.73	0.37	12.2	5.89	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,951	7,951	0.36	1.14	0.54	8,301
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	6.70	6.24	5.20	55.5	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	9,293	9,293	0.61	0.40	17.6	9,446
Vendor	0.53	0.27	8.59	4.16	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,677	5,677	0.25	0.82	6.40	5,933
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.22	1.14	0.95	10.1	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,539	1,539	0.10	0.07	2.91	1,564
Vendor	0.10	0.05	1.57	0.76	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	940	940	0.04	0.14	1.06	982
Hauling	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	0.00

3.44. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	9.63	9.03	6.27	86.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	13,741	13,741	0.77	0.56	56.7	13,985	
Vendor	0.75	0.37	11.6	5.73	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,944	7,944	0.36	1.14	20.7	8,314	
Hauling	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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	9.55	8.90	8.23	81.8	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,950	12,950	0.94	0.56	1.48	13,143	
Vendor	0.73	0.37	12.2	5.89	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,951	7,951	0.36	1.14	0.54	8,301	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	6.70	6.24	5.20	55.5	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	9,293	9,293	0.61	0.40	17.6	9,446	
Vendor	0.53	0.27	8.59	4.16	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,677	5,677	0.25	0.82	6.40	5,933	
Hauling	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	1.22	1.14	0.95	10.1	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,539	1,539	0.10	0.07	2.91	1,564	
Vendor	0.10	0.05	1.57	0.76	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	940	940	0.04	0.14	1.06	982	
Hauling	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	0.00	

3.45. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.21	8.65	5.79	80.3	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	13,480	13,480	0.77	0.56	52.6	13,720
Vendor	0.73	0.37	11.1	5.36	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,796	7,796	0.36	1.14	18.8	8,164
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.13	8.48	7.32	76.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,707	12,707	0.90	0.56	1.36	12,899
Vendor	0.71	0.34	11.7	5.50	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,804	7,804	0.35	1.14	0.49	8,153
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.43	5.97	4.85	51.9	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	9,119	9,119	0.61	0.40	16.2	9,270
Vendor	0.52	0.25	8.22	3.89	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,571	5,571	0.25	0.82	5.80	5,826
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.17	1.09	0.89	9.48	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,510	1,510	0.10	0.07	2.68	1,535
Vendor	0.10	0.05	1.50	0.71	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	922	922	0.04	0.14	0.96	965
Hauling	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	0.00

3.46. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.21	8.65	5.79	80.3	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	13,480	13,480	0.77	0.56	52.6	13,720
Vendor	0.73	0.37	11.1	5.36	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,796	7,796	0.36	1.14	18.8	8,164
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	9.13	8.48	7.32	76.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,707	12,707	0.90	0.56	1.36	12,899

Vendor	0.71	0.34	11.7	5.50	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,804	7,804	0.35	1.14	0.49	8,153
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.43	5.97	4.85	51.9	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	9,119	9,119	0.61	0.40	16.2	9,270
Vendor	0.52	0.25	8.22	3.89	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,571	5,571	0.25	0.82	5.80	5,826
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.17	1.09	0.89	9.48	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,510	1,510	0.10	0.07	2.68	1,535
Vendor	0.10	0.05	1.50	0.71	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	922	922	0.04	0.14	0.96	965
Hauling	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	0.00

3.47. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.84	7.88	5.35	74.9	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	13,228	13,228	0.73	0.52	48.5	13,450
Vendor	0.68	0.31	10.6	5.10	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,629	7,629	0.29	1.09	16.6	7,978
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.36	7.71	6.83	71.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,470	12,470	0.86	0.56	1.26	12,661
Vendor	0.64	0.28	11.3	5.24	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,637	7,637	0.29	1.09	0.43	7,970
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.91	5.48	4.51	48.4	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,949	8,949	0.58	0.40	15.0	9,099
Vendor	0.47	0.21	7.88	3.67	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,452	5,452	0.21	0.78	5.13	5,694
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.08	1.00	0.82	8.84	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,482	1,482	0.10	0.07	2.48	1,506

Vendor	0.09	0.04	1.44	0.67	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	903	903	0.03	0.13	0.85	943
Hauling	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	0.00

3.48. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.84	7.88	5.35	74.9	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	13,228	13,228	0.73	0.52	48.5	13,450
Vendor	0.68	0.31	10.6	5.10	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,629	7,629	0.29	1.09	16.6	7,978
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.36	7.71	6.83	71.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,470	12,470	0.86	0.56	1.26	12,661
Vendor	0.64	0.28	11.3	5.24	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,637	7,637	0.29	1.09	0.43	7,970
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.91	5.48	4.51	48.4	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,949	8,949	0.58	0.40	15.0	9,099
Vendor	0.47	0.21	7.88	3.67	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,452	5,452	0.21	0.78	5.13	5,694
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.08	1.00	0.82	8.84	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,482	1,482	0.10	0.07	2.48	1,506
Vendor	0.09	0.04	1.44	0.67	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	903	903	0.03	0.13	0.85	943
Hauling	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	0.00

3.49. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.23	7.67	4.87	70.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,987	12,987	0.73	0.52	44.5	13,206
Vendor	0.61	0.30	10.2	4.80	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,439	7,439	0.29	1.08	14.8	7,783
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.10	7.50	6.35	66.8	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,244	12,244	0.46	0.56	1.15	12,425

Vendor	0.59	0.28	10.8	4.97	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,447	7,447	0.29	1.09	0.38	7,779
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.68	5.28	4.18	45.4	0.00	0.00	9.05	9.05	0.00	2.12	2.12	—	8,811	8,811	0.27	0.40	13.8	8,952
Vendor	0.43	0.21	7.55	3.49	0.04	0.08	1.45	1.53	0.08	0.40	0.48	—	5,330	5,330	0.21	0.78	4.58	5,573
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.04	0.96	0.76	8.29	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,459	1,459	0.04	0.07	2.28	1,482
Vendor	0.08	0.04	1.38	0.64	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	882	882	0.03	0.13	0.76	923
Hauling	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	0.00

3.50. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.23	7.67	4.87	70.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,987	12,987	0.73	0.52	44.5	13,206
Vendor	0.61	0.30	10.2	4.80	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,439	7,439	0.29	1.08	14.8	7,783
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.10	7.50	6.35	66.8	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,244	12,244	0.46	0.56	1.15	12,425
Vendor	0.59	0.28	10.8	4.97	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,447	7,447	0.29	1.09	0.38	7,779
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.68	5.28	4.18	45.4	0.00	0.00	9.05	9.05	0.00	2.12	2.12	—	8,811	8,811	0.27	0.40	13.8	8,952
Vendor	0.43	0.21	7.55	3.49	0.04	0.08	1.45	1.53	0.08	0.40	0.48	—	5,330	5,330	0.21	0.78	4.58	5,573
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.04	0.96	0.76	8.29	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,459	1,459	0.04	0.07	2.28	1,482

Vendor	0.08	0.04	1.38	0.64	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	882	882	0.03	0.13	0.76	923
Hauling	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	0.00

3.51. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.13	9.22	0.02	0.20	—	0.20	0.18	—	0.18	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.12	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.85	7.33	4.39	65.5	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,757	12,757	0.34	0.52	40.7	12,962
Vendor	0.61	0.30	9.73	4.55	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,230	7,230	0.29	1.03	13.1	7,556
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.73	7.12	5.87	62.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,029	12,029	0.42	0.56	1.06	12,209
Vendor	0.58	0.28	10.3	4.71	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,238	7,238	0.29	1.04	0.34	7,554
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.46	5.06	3.82	42.5	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,633	8,633	0.27	0.40	12.6	8,772
Vendor	0.43	0.21	7.17	3.31	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,167	5,167	0.20	0.73	4.04	5,394
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.00	0.92	0.70	7.75	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,429	1,429	0.04	0.07	2.08	1,452
Vendor	0.08	0.04	1.31	0.60	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	855	855	0.03	0.12	0.67	893
Hauling	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	0.00

3.52. Building Construction (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.13	9.22	0.02	0.20	—	0.20	0.18	—	0.18	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.12	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.85	7.33	4.39	65.5	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,757	12,757	0.34	0.52	40.7	12,962
Vendor	0.61	0.30	9.73	4.55	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,230	7,230	0.29	1.03	13.1	7,556
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.73	7.12	5.87	62.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,029	12,029	0.42	0.56	1.06	12,209

Vendor	0.58	0.28	10.3	4.71	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,238	7,238	0.29	1.04	0.34	7,554
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.46	5.06	3.82	42.5	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,633	8,633	0.27	0.40	12.6	8,772
Vendor	0.43	0.21	7.17	3.31	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,167	5,167	0.20	0.73	4.04	5,394
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.00	0.92	0.70	7.75	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,429	1,429	0.04	0.07	2.08	1,452
Vendor	0.08	0.04	1.31	0.60	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	855	855	0.03	0.12	0.67	893
Hauling	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	0.00

3.53. Building Construction (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.99	9.20	0.02	0.19	—	0.19	0.17	—	0.17	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.09	1.68	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.52	6.95	3.95	61.5	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,539	12,539	0.29	0.52	37.0	12,739
Vendor	0.54	0.29	9.35	4.36	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,008	7,008	0.23	1.03	11.5	7,331
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.08	6.91	5.39	58.4	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,824	11,824	0.42	0.56	0.96	12,004
Vendor	0.53	0.28	9.88	4.51	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,017	7,017	0.23	1.03	0.30	7,329
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.25	4.85	3.48	39.7	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,486	8,486	0.24	0.37	11.4	8,614
Vendor	0.38	0.21	6.90	3.17	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,009	5,009	0.17	0.73	3.55	5,235
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.96	0.88	0.63	7.24	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,405	1,405	0.04	0.06	1.89	1,426

Vendor	0.07	0.04	1.26	0.58	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	829	829	0.03	0.12	0.59	867
Hauling	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	0.00

3.54. Building Construction (2030) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.99	9.20	0.02	0.19	—	0.19	0.17	—	0.17	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.09	1.68	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.52	6.95	3.95	61.5	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,539	12,539	0.29	0.52	37.0	12,739
Vendor	0.54	0.29	9.35	4.36	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,008	7,008	0.23	1.03	11.5	7,331
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.08	6.91	5.39	58.4	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,824	11,824	0.42	0.56	0.96	12,004
Vendor	0.53	0.28	9.88	4.51	0.05	0.11	2.04	2.15	0.11	0.56	0.67	—	7,017	7,017	0.23	1.03	0.30	7,329
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.25	4.85	3.48	39.7	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,486	8,486	0.24	0.37	11.4	8,614
Vendor	0.38	0.21	6.90	3.17	0.04	0.08	1.45	1.52	0.08	0.40	0.48	—	5,009	5,009	0.17	0.73	3.55	5,235
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.96	0.88	0.63	7.24	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,405	1,405	0.04	0.06	1.89	1,426
Vendor	0.07	0.04	1.26	0.58	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	829	829	0.03	0.12	0.59	867
Hauling	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	0.00

3.55. Building Construction (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	0.66	5.80	9.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.06	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.79	6.66	3.47	57.5	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,335	12,335	0.29	0.52	33.5	12,531
Vendor	0.53	0.24	8.97	4.18	0.05	0.11	2.04	2.15	0.05	0.56	0.62	—	6,783	6,783	0.23	0.97	9.96	7,089
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.74	6.53	4.95	54.3	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,632	11,632	0.38	0.56	0.87	11,811

Vendor	0.53	0.22	9.51	4.33	0.05	0.11	2.04	2.15	0.05	0.56	0.62	—	6,792	6,792	0.23	0.97	0.26	7,088
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.73	4.61	3.17	37.2	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,348	8,348	0.24	0.37	10.3	8,476
Vendor	0.38	0.17	6.63	3.03	0.04	0.08	1.45	1.52	0.04	0.40	0.44	—	4,848	4,848	0.17	0.70	3.08	5,062
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.86	0.84	0.58	6.78	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,382	1,382	0.04	0.06	1.71	1,403
Vendor	0.07	0.03	1.21	0.55	0.01	0.01	0.26	0.28	0.01	0.07	0.08	—	803	803	0.03	0.12	0.51	838
Hauling	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	0.00

3.56. Building Construction (2031) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	0.66	5.80	9.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.06	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.79	6.66	3.47	57.5	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,335	12,335	0.29	0.52	33.5	12,531
Vendor	0.53	0.24	8.97	4.18	0.05	0.11	2.04	2.15	0.05	0.56	0.62	—	6,783	6,783	0.23	0.97	9.96	7,089
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.74	6.53	4.95	54.3	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,632	11,632	0.38	0.56	0.87	11,811
Vendor	0.53	0.22	9.51	4.33	0.05	0.11	2.04	2.15	0.05	0.56	0.62	—	6,792	6,792	0.23	0.97	0.26	7,088
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.73	4.61	3.17	37.2	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,348	8,348	0.24	0.37	10.3	8,476
Vendor	0.38	0.17	6.63	3.03	0.04	0.08	1.45	1.52	0.04	0.40	0.44	—	4,848	4,848	0.17	0.70	3.08	5,062
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.86	0.84	0.58	6.78	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,382	1,382	0.04	0.06	1.71	1,403

Vendor	0.07	0.03	1.21	0.55	0.01	0.01	0.26	0.28	0.01	0.07	0.08	—	803	803	0.03	0.12	0.51	838
Hauling	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	0.00

3.57. Building Construction (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.64	9.16	0.02	0.16	—	0.16	0.15	—	0.15	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.03	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.45	5.93	3.43	53.5	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,146	12,146	0.25	0.52	30.2	12,338
Vendor	0.48	0.24	8.64	4.06	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,562	6,562	0.22	0.97	8.58	6,866
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.37	5.80	4.47	51.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,455	11,455	0.34	0.56	0.78	11,633
Vendor	0.46	0.21	9.19	4.15	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,571	6,571	0.22	0.97	0.22	6,867
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.53	4.13	2.86	34.8	0.00	0.00	9.05	9.05	0.00	2.12	2.12	—	8,244	8,244	0.21	0.37	9.35	8,370
Vendor	0.34	0.17	6.42	2.91	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,703	4,703	0.16	0.70	2.66	4,917
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.83	0.75	0.52	6.35	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,365	1,365	0.03	0.06	1.55	1,386
Vendor	0.06	0.03	1.17	0.53	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	779	779	0.03	0.12	0.44	814
Hauling	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	0.00

3.58. Building Construction (2032) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.64	9.16	0.02	0.16	—	0.16	0.15	—	0.15	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.03	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.45	5.93	3.43	53.5	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	12,146	12,146	0.25	0.52	30.2	12,338
Vendor	0.48	0.24	8.64	4.06	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,562	6,562	0.22	0.97	8.58	6,866
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.37	5.80	4.47	51.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,455	11,455	0.34	0.56	0.78	11,633

Vendor	0.46	0.21	9.19	4.15	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,571	6,571	0.22	0.97	0.22	6,867
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.53	4.13	2.86	34.8	0.00	0.00	9.05	9.05	0.00	2.12	2.12	—	8,244	8,244	0.21	0.37	9.35	8,370
Vendor	0.34	0.17	6.42	2.91	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,703	4,703	0.16	0.70	2.66	4,917
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.83	0.75	0.52	6.35	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,365	1,365	0.03	0.06	1.55	1,386
Vendor	0.06	0.03	1.17	0.53	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	779	779	0.03	0.12	0.44	814
Hauling	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	0.00

3.59. Building Construction (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.48	9.13	0.02	0.15	—	0.15	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.00	1.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.20	5.68	2.99	50.4	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,972	11,972	0.25	0.52	27.1	12,161
Vendor	0.47	0.24	8.38	3.88	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,348	6,348	0.22	0.92	7.30	6,635
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.16	5.63	4.03	47.9	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,292	11,292	0.34	0.52	0.70	11,456
Vendor	0.45	0.22	8.87	4.02	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,358	6,358	0.22	0.92	0.19	6,638
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.37	3.99	2.51	32.6	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,104	8,104	0.21	0.37	8.35	8,229
Vendor	0.33	0.17	6.20	2.82	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,537	4,537	0.16	0.66	2.26	4,739
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.73	0.46	5.95	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,342	1,342	0.03	0.06	1.38	1,362

Vendor	0.06	0.03	1.13	0.52	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	751	751	0.03	0.11	0.37	785
Hauling	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	0.00

3.60. Building Construction (2033) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.48	9.13	0.02	0.15	—	0.15	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.00	1.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.20	5.68	2.99	50.4	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,972	11,972	0.25	0.52	27.1	12,161
Vendor	0.47	0.24	8.38	3.88	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,348	6,348	0.22	0.92	7.30	6,635
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.16	5.63	4.03	47.9	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,292	11,292	0.34	0.52	0.70	11,456
Vendor	0.45	0.22	8.87	4.02	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,358	6,358	0.22	0.92	0.19	6,638
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.37	3.99	2.51	32.6	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	8,104	8,104	0.21	0.37	8.35	8,229
Vendor	0.33	0.17	6.20	2.82	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,537	4,537	0.16	0.66	2.26	4,739
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.73	0.46	5.95	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,342	1,342	0.03	0.06	1.38	1,362
Vendor	0.06	0.03	1.13	0.52	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	751	751	0.03	0.11	0.37	785
Hauling	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	0.00

3.61. Building Construction (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	0.62	5.37	9.12	0.02	0.14	—	0.14	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.98	1.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.91	5.43	2.95	46.9	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,808	11,808	0.25	0.13	24.1	11,876
Vendor	0.47	0.24	8.11	3.76	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,143	6,143	0.17	0.92	6.25	6,428
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.91	5.38	3.60	44.4	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,137	11,137	0.29	0.52	0.62	11,301

Vendor	0.45	0.22	8.60	3.90	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,153	6,153	0.17	0.92	0.16	6,431
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.16	3.79	2.20	30.2	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,994	7,994	0.21	0.37	7.46	8,118
Vendor	0.33	0.17	5.98	2.73	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,391	4,391	0.12	0.66	1.93	4,592
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.69	0.40	5.51	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,323	1,323	0.03	0.06	1.23	1,344
Vendor	0.06	0.03	1.09	0.50	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	727	727	0.02	0.11	0.32	760
Hauling	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	0.00

3.62. Building Construction (2034) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	0.62	5.37	9.12	0.02	0.14	—	0.14	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.98	1.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.91	5.43	2.95	46.9	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,808	11,808	0.25	0.13	24.1	11,876
Vendor	0.47	0.24	8.11	3.76	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,143	6,143	0.17	0.92	6.25	6,428
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.91	5.38	3.60	44.4	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,137	11,137	0.29	0.52	0.62	11,301
Vendor	0.45	0.22	8.60	3.90	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	6,153	6,153	0.17	0.92	0.16	6,431
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.16	3.79	2.20	30.2	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,994	7,994	0.21	0.37	7.46	8,118
Vendor	0.33	0.17	5.98	2.73	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,391	4,391	0.12	0.66	1.93	4,592
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.69	0.40	5.51	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,323	1,323	0.03	0.06	1.23	1,344

Vendor	0.06	0.03	1.09	0.50	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	727	727	0.02	0.11	0.32	760
Hauling	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	0.00

3.63. Building Construction (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.24	9.06	0.02	0.13	—	0.13	0.12	—	0.12	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.96	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.78	5.30	2.51	44.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,659	11,659	0.21	0.13	21.3	11,723
Vendor	0.42	0.24	7.85	3.70	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,948	5,948	0.16	0.87	5.26	6,216
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.34	5.22	3.55	41.7	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,997	10,997	0.29	0.52	0.55	11,161
Vendor	0.39	0.22	8.35	3.78	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,958	5,958	0.16	0.87	0.14	6,220
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.79	3.70	2.17	28.5	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,893	7,893	0.18	0.37	6.61	8,015
Vendor	0.29	0.17	5.82	2.69	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,252	4,252	0.11	0.62	1.63	4,441
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.67	0.40	5.20	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,307	1,307	0.03	0.06	1.09	1,327
Vendor	0.05	0.03	1.06	0.49	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	704	704	0.02	0.10	0.27	735
Hauling	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	0.00

3.64. Building Construction (2035) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.24	9.06	0.02	0.13	—	0.13	0.12	—	0.12	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.96	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.78	5.30	2.51	44.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,659	11,659	0.21	0.13	21.3	11,723
Vendor	0.42	0.24	7.85	3.70	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,948	5,948	0.16	0.87	5.26	6,216
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.34	5.22	3.55	41.7	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,997	10,997	0.29	0.52	0.55	11,161

Vendor	0.39	0.22	8.35	3.78	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,958	5,958	0.16	0.87	0.14	6,220
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.79	3.70	2.17	28.5	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,893	7,893	0.18	0.37	6.61	8,015
Vendor	0.29	0.17	5.82	2.69	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,252	4,252	0.11	0.62	1.63	4,441
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.67	0.40	5.20	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,307	1,307	0.03	0.06	1.09	1,327
Vendor	0.05	0.03	1.06	0.49	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	704	704	0.02	0.10	0.27	735
Hauling	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	0.00

3.65. Building Construction (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.10	9.03	0.02	0.12	—	0.12	0.11	—	0.11	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.93	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.22	5.13	2.47	41.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,515	11,515	0.21	0.13	18.8	11,577
Vendor	0.42	0.24	7.65	3.59	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,773	5,773	0.16	0.87	4.42	6,039
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.26	5.13	3.07	39.1	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,862	10,862	0.29	0.52	0.49	11,026
Vendor	0.39	0.22	8.15	3.72	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,783	5,783	0.16	0.87	0.11	6,045
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.65	3.59	1.86	26.8	0.00	0.00	9.05	9.05	0.00	2.12	2.12	—	7,817	7,817	0.18	0.09	5.81	7,855
Vendor	0.29	0.17	5.66	2.61	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,138	4,138	0.11	0.62	1.37	4,327
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.65	0.34	4.89	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,294	1,294	0.03	0.01	0.96	1,300

Vendor	0.05	0.03	1.03	0.48	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	685	685	0.02	0.10	0.23	716
Hauling	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	0.00

3.66. Building Construction (2036) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.10	9.03	0.02	0.12	—	0.12	0.11	—	0.11	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.93	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	284	284	0.01	< 0.005	—	285
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.22	5.13	2.47	41.2	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,515	11,515	0.21	0.13	18.8	11,577
Vendor	0.42	0.24	7.65	3.59	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,773	5,773	0.16	0.87	4.42	6,039
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.26	5.13	3.07	39.1	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,862	10,862	0.29	0.52	0.49	11,026
Vendor	0.39	0.22	8.15	3.72	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,783	5,783	0.16	0.87	0.11	6,045
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.65	3.59	1.86	26.8	0.00	0.00	9.05	9.05	0.00	2.12	2.12	—	7,817	7,817	0.18	0.09	5.81	7,855
Vendor	0.29	0.17	5.66	2.61	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,138	4,138	0.11	0.62	1.37	4,327
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.65	0.34	4.89	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,294	1,294	0.03	0.01	0.96	1,300
Vendor	0.05	0.03	1.03	0.48	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	685	685	0.02	0.10	0.23	716
Hauling	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	0.00

3.67. Building Construction (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.58	4.99	8.93	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.91	1.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.96	4.88	2.07	39.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,390	11,390	0.21	0.13	16.3	11,449
Vendor	0.42	0.24	7.49	3.54	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,615	5,615	0.16	0.81	3.62	5,865
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.92	4.84	3.07	36.7	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,744	10,744	0.25	0.13	0.42	10,788

Vendor	0.38	0.21	7.96	3.66	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,626	5,626	0.16	0.81	0.09	5,872
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.46	3.40	1.82	25.1	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,711	7,711	0.18	0.09	5.07	7,747
Vendor	0.29	0.16	5.54	2.57	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,014	4,014	0.11	0.58	1.12	4,191
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.63	0.62	0.33	4.58	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,277	1,277	0.03	0.01	0.84	1,283
Vendor	0.05	0.03	1.01	0.47	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	665	665	0.02	0.10	0.18	694
Hauling	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	0.00

3.68. Building Construction (2037) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.58	4.99	8.93	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.91	1.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.96	4.88	2.07	39.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,390	11,390	0.21	0.13	16.3	11,449
Vendor	0.42	0.24	7.49	3.54	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,615	5,615	0.16	0.81	3.62	5,865
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.92	4.84	3.07	36.7	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,744	10,744	0.25	0.13	0.42	10,788
Vendor	0.38	0.21	7.96	3.66	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,626	5,626	0.16	0.81	0.09	5,872
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.46	3.40	1.82	25.1	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,711	7,711	0.18	0.09	5.07	7,747
Vendor	0.29	0.16	5.54	2.57	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	4,014	4,014	0.11	0.58	1.12	4,191
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.63	0.62	0.33	4.58	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,277	1,277	0.03	0.01	0.84	1,283

Vendor	0.05	0.03	1.01	0.47	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	665	665	0.02	0.10	0.18	694
Hauling	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	0.00

3.69. Building Construction (2038) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	4.92	8.90	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.90	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.71	4.63	2.03	37.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,276	11,276	0.17	0.13	14.2	11,332
Vendor	0.36	0.24	7.31	3.49	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,473	5,473	0.16	0.81	2.98	5,722
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.75	4.63	2.63	34.8	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,637	10,637	0.25	0.13	0.37	10,681
Vendor	0.33	0.21	7.76	3.56	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,483	5,483	0.15	0.81	0.08	5,729
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.31	3.25	1.82	23.8	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,635	7,635	0.15	0.09	4.38	7,670
Vendor	0.24	0.16	5.40	2.49	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	3,912	3,912	0.11	0.58	0.92	4,089
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.59	0.33	4.34	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,264	1,264	0.02	0.01	0.72	1,270
Vendor	0.04	0.03	0.99	0.45	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	648	648	0.02	0.10	0.15	677
Hauling	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	0.00

3.70. Building Construction (2038) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	4.92	8.90	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.90	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.71	4.63	2.03	37.0	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,276	11,276	0.17	0.13	14.2	11,332
Vendor	0.36	0.24	7.31	3.49	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,473	5,473	0.16	0.81	2.98	5,722
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.75	4.63	2.63	34.8	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,637	10,637	0.25	0.13	0.37	10,681

Vendor	0.33	0.21	7.76	3.56	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,483	5,483	0.15	0.81	0.08	5,729
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.31	3.25	1.82	23.8	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,635	7,635	0.15	0.09	4.38	7,670
Vendor	0.24	0.16	5.40	2.49	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	3,912	3,912	0.11	0.58	0.92	4,089
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.59	0.33	4.34	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,264	1,264	0.02	0.01	0.72	1,270
Vendor	0.04	0.03	0.99	0.45	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	648	648	0.02	0.10	0.15	677
Hauling	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	0.00

3.71. Building Construction (2039) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.57	4.84	8.86	0.02	0.10	—	0.10	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.10	0.88	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.46	4.38	1.99	35.4	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,175	11,175	0.17	0.13	12.3	11,229
Vendor	0.34	0.22	7.16	3.38	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,344	5,344	0.10	0.81	2.43	5,591
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.50	4.42	2.59	33.3	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,542	10,542	0.25	0.13	0.32	10,586
Vendor	0.32	0.20	7.62	3.50	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,355	5,355	0.10	0.81	0.06	5,600
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.19	3.10	1.51	22.5	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,566	7,566	0.15	0.09	3.78	7,601
Vendor	0.24	0.15	5.30	2.45	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	3,821	3,821	0.07	0.58	0.75	3,996
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.57	0.28	4.11	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,253	1,253	0.02	0.01	0.63	1,258

Vendor	0.04	0.03	0.97	0.45	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	633	633	0.01	0.10	0.12	662
Hauling	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	0.00

3.72. Building Construction (2039) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.57	4.84	8.86	0.02	0.10	—	0.10	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.10	0.88	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.46	4.38	1.99	35.4	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	11,175	11,175	0.17	0.13	12.3	11,229
Vendor	0.34	0.22	7.16	3.38	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,344	5,344	0.10	0.81	2.43	5,591
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.50	4.42	2.59	33.3	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,542	10,542	0.25	0.13	0.32	10,586
Vendor	0.32	0.20	7.62	3.50	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,355	5,355	0.10	0.81	0.06	5,600
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.19	3.10	1.51	22.5	0.00	0.00	9.02	9.02	0.00	2.11	2.11	—	7,566	7,566	0.15	0.09	3.78	7,601
Vendor	0.24	0.15	5.30	2.45	0.04	0.04	1.45	1.49	0.04	0.40	0.44	—	3,821	3,821	0.07	0.58	0.75	3,996
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.57	0.28	4.11	0.00	0.00	1.65	1.65	0.00	0.39	0.39	—	1,253	1,253	0.02	0.01	0.63	1,258
Vendor	0.04	0.03	0.97	0.45	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	633	633	0.01	0.10	0.12	662
Hauling	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	0.00

3.73. Building Construction (2040) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.71	12.4	0.02	0.14	—	0.14	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.21	4.13	2.15	31.6	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,456	10,456	0.21	0.13	0.27	10,499
Vendor	0.32	0.20	7.48	3.44	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,238	5,238	0.10	0.76	0.05	5,467
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.6	20.6	< 0.005	< 0.005	0.01	20.7
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	< 0.005	10.7
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.40	3.40	< 0.005	< 0.005	< 0.005	3.42
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	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	0.00

3.74. Building Construction (2040) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.71	12.4	0.02	0.14	—	0.14	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	4.21	4.13	2.15	31.6	0.00	0.00	12.7	12.7	0.00	2.98	2.98	—	10,456	10,456	0.21	0.13	0.27	10,499
Vendor	0.32	0.20	7.48	3.44	0.05	0.05	2.04	2.09	0.05	0.56	0.62	—	5,238	5,238	0.10	0.76	0.05	5,467
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.6	20.6	< 0.005	< 0.005	0.01	20.7
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	< 0.005	10.7
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.40	3.40	< 0.005	< 0.005	< 0.005	3.42
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	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	0.00

3.75. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.36	0.31	2.81	3.61	0.01	0.14	—	0.14	0.13	—	0.13	—	544	544	0.02	< 0.005	—	546	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.07	0.06	0.51	0.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	90.1	90.1	< 0.005	< 0.005	—	90.4	
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.08	0.07	0.05	0.73	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	111	111	0.01	< 0.005	0.48	113	
Vendor	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	0.00	
Hauling	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	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Worker	0.08	0.07	0.07	0.69	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	104	104	0.01	< 0.005	0.01	106
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.7	37.7	< 0.005	< 0.005	0.08	38.3
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.24	6.24	< 0.005	< 0.005	0.01	6.34
Vendor	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	0.00
Hauling	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	0.00

3.76. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.31	2.81	3.61	0.01	0.14	—	0.14	0.13	—	0.13	—	544	544	0.02	< 0.005	—	546
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.51	0.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	90.1	90.1	< 0.005	< 0.005	—	90.4
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.73	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	111	111	0.01	< 0.005	0.48	113
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	104	104	0.01	< 0.005	0.01	106
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.7	37.7	< 0.005	< 0.005	0.08	38.3

Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.24	6.24	< 0.005	< 0.005	0.01	6.34
Vendor	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	0.00
Hauling	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	0.00

3.77. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	4.03	5.39	0.01	0.19	—	0.19	0.17	—	0.17	—	816	816	0.03	0.01	—	819

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.73	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	136
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	0.01	< 0.005	0.45	110
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	0.01	< 0.005	0.01	104
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	55.5	55.5	< 0.005	< 0.005	0.10	56.4
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.18	9.18	< 0.005	< 0.005	0.02	9.33
Vendor	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	0.00

Hauling	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	0.00	0.00
---------	------	------	------	------	------	------	------	------	------	------	------	------	---	------	------	------	------	------	------

3.78. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	4.03	5.39	0.01	0.19	—	0.19	0.17	—	0.17	—	816	816	0.03	0.01	—	819
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.73	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	136

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	0.01	< 0.005	0.45	110
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	0.01	< 0.005	0.01	104
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	55.5	55.5	< 0.005	< 0.005	0.10	56.4
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.18	9.18	< 0.005	< 0.005	0.02	9.33
Vendor	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	0.00
Hauling	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	0.00

3.79. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Architectural Coatings	—	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99
Architectural Coatings	—	4.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.06	1.86	1.75	17.6	0.00	0.00	2.54	2.54	0.00	0.60	0.60	—	2,641	2,641	0.20	0.11	0.32	2,680
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.33	0.30	3.01	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	478	478	0.03	0.02	0.95	485
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.55	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.1	79.1	0.01	< 0.005	0.16	80.4
Vendor	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	0.00
Hauling	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	0.00

3.80. Architectural Coating (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1	
Architectural Coatings	—	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99	
Architectural Coatings	—	4.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	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	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	2.06	1.86	1.75	17.6	0.00	0.00	2.54	2.54	0.00	0.60	0.60	—	2,641	2,641	0.20	0.11	0.32	2,680	
Vendor	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	0.00	
Hauling	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	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.37	0.33	0.30	3.01	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	478	478	0.03	0.02	0.95	485	
Vendor	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	0.00	

Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.55	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.1	79.1	0.01	< 0.005	0.16	80.4	
Vendor	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	0.00	
Hauling	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	0.00	

3.81. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	0.11	0.09	0.63	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	—	106	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	—	19.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.93	1.81	1.25	17.2	0.00	0.00	2.54	2.54	0.00	0.60	0.60	—	2,748	2,748	0.15	0.11	11.3	2,797
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.91	1.78	1.65	16.4	0.00	0.00	2.54	2.54	0.00	0.60	0.60	—	2,590	2,590	0.19	0.11	0.30	2,629
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.34	1.25	1.04	11.1	0.00	0.00	1.80	1.80	0.00	0.42	0.42	—	1,859	1,859	0.12	0.08	3.51	1,889
Vendor	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	0.00

Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.23	0.19	2.03	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	308	308	0.02	0.01	0.58	313	
Vendor	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	0.00	
Hauling	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	0.00	

3.82. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Off-Road Equipment	0.11	0.09	0.63	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	—	106	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	—	19.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.93	1.81	1.25	17.2	0.00	0.00	2.54	2.54	0.00	0.60	0.60	—	2,748	2,748	0.15	0.11	11.3	2,797
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.91	1.78	1.65	16.4	0.00	0.00	2.54	2.54	0.00	0.60	0.60	—	2,590	2,590	0.19	0.11	0.30	2,629
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.34	1.25	1.04	11.1	0.00	0.00	1.80	1.80	0.00	0.42	0.42	—	1,859	1,859	0.12	0.08	3.51	1,889
Vendor	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	0.00

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.23	0.19	2.03	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	308	308	0.02	0.01	0.58	313
Vendor	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	0.00
Hauling	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	0.00

3.83. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.31	1.31	< 0.005	< 0.005	—	1.31
Architect ural Coatings	—	1.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.22	0.22	< 0.005	< 0.005	—	0.22
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.70	1.46	15.2	0.00	0.00	2.54	2.54	0.00	0.60	0.60	—	2,541	2,541	0.18	0.11	0.27	2,580
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.14	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.0	25.0	< 0.005	< 0.005	0.04	25.4
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.14	4.14	< 0.005	< 0.005	0.01	4.20
Vendor	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	0.00
Hauling	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	0.00

3.84. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.31	1.31	< 0.005	< 0.005	—	1.31
Architectural Coatings	—	1.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.22	0.22	< 0.005	< 0.005	—	0.22
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.70	1.46	15.2	0.00	0.00	2.54	2.54	0.00	0.60	0.60	—	2,541	2,541	0.18	0.11	0.27	2,580
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.14	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.0	25.0	< 0.005	< 0.005	0.04	25.4
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.14	4.14	< 0.005	< 0.005	0.01	4.20
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

General Office Building	7.53	7.40	2.09	14.1	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	559	559	0.31	0.21	0.00	630
Apartments Low Rise	39.5	38.0	16.6	164	0.38	0.18	15.3	15.4	0.17	2.67	2.84	—	38,286	38,286	2.03	2.00	28.4	38,961
Regional Shopping Center	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	0.00
Total	47.0	45.4	18.7	178	0.38	0.19	15.3	15.4	0.18	2.67	2.85	—	38,845	38,845	2.34	2.21	28.4	39,591
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	7.57	7.39	2.47	20.8	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	573	573	0.41	0.24	0.00	656
Apartments Low Rise	39.6	38.0	19.6	181	0.36	0.18	15.3	15.4	0.17	2.67	2.84	—	36,639	36,639	2.46	2.23	0.74	37,366
Regional Shopping Center	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	0.00
Total	47.2	45.3	22.0	201	0.37	0.19	15.3	15.4	0.18	2.67	2.85	—	37,212	37,212	2.87	2.47	0.74	38,022
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	1.03	1.00	0.32	2.45	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	71.0	71.0	0.05	0.03	0.00	80.7
Apartments Low Rise	6.36	6.11	2.99	27.2	0.06	0.03	2.49	2.52	0.03	0.44	0.46	—	5,448	5,448	0.34	0.32	1.82	5,553
Regional Shopping Center	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	0.00
Total	7.39	7.11	3.31	29.7	0.06	0.03	2.49	2.52	0.03	0.44	0.46	—	5,519	5,519	0.38	0.34	1.82	5,634

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	7.53	7.40	2.09	14.1	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	559	559	0.31	0.21	0.00	630
Apartments Low Rise	39.5	38.0	16.6	164	0.38	0.18	15.3	15.4	0.17	2.67	2.84	—	38,286	38,286	2.03	2.00	28.4	38,961
Regional Shopping Center	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	0.00
Total	47.0	45.4	18.7	178	0.38	0.19	15.3	15.4	0.18	2.67	2.85	—	38,845	38,845	2.34	2.21	28.4	39,591
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	7.57	7.39	2.47	20.8	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	573	573	0.41	0.24	0.00	656
Apartments Low Rise	39.6	38.0	19.6	181	0.36	0.18	15.3	15.4	0.17	2.67	2.84	—	36,639	36,639	2.46	2.23	0.74	37,366
Regional Shopping Center	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	0.00
Total	47.2	45.3	22.0	201	0.37	0.19	15.3	15.4	0.18	2.67	2.85	—	37,212	37,212	2.87	2.47	0.74	38,022
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	1.03	1.00	0.32	2.45	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	71.0	71.0	0.05	0.03	0.00	80.7

Apartme Low Rise	6.36	6.11	2.99	27.2	0.06	0.03	2.49	2.52	0.03	0.44	0.46	—	5,448	5,448	0.34	0.32	1.82	5,553
Regional Shopping Center	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	0.00
Total	7.39	7.11	3.31	29.7	0.06	0.03	2.49	2.52	0.03	0.44	0.46	—	5,519	5,519	0.38	0.34	1.82	5,634

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	4,467	4,467	0.72	0.09	—	4,512
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,840	3,840	0.62	0.08	—	3,878
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	3,035	3,035	0.49	0.06	—	3,065
Total	—	—	—	—	—	—	—	—	—	—	—	—	11,342	11,342	1.83	0.22	—	11,454
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	4,467	4,467	0.72	0.09	—	4,512

Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,840	3,840	0.62	0.08	—	3,878
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	3,035	3,035	0.49	0.06	—	3,065
Total	—	—	—	—	—	—	—	—	—	—	—	—	11,342	11,342	1.83	0.22	—	11,454
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	740	740	0.12	0.01	—	747
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	636	636	0.10	0.01	—	642
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	502	502	0.08	0.01	—	507
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,878	1,878	0.30	0.04	—	1,896

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	4,467	4,467	0.72	0.09	—	4,512
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,840	3,840	0.62	0.08	—	3,878

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	3,035	3,035	0.49	0.06	—	3,065
Total	—	—	—	—	—	—	—	—	—	—	—	—	11,342	11,342	1.83	0.22	—	11,454
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	4,467	4,467	0.72	0.09	—	4,512
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	3,840	3,840	0.62	0.08	—	3,878
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	3,035	3,035	0.49	0.06	—	3,065
Total	—	—	—	—	—	—	—	—	—	—	—	—	11,342	11,342	1.83	0.22	—	11,454
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	740	740	0.12	0.01	—	747
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	636	636	0.10	0.01	—	642
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	502	502	0.08	0.01	—	507
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,878	1,878	0.30	0.04	—	1,896

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report, 5/25/2023

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.26	0.13	2.32	1.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,773	2,773	0.25	0.01	—	2,780
Apartments Low Rise	1.72	0.86	14.7	6.27	0.09	1.19	—	1.19	1.19	—	1.19	—	18,702	18,702	1.66	0.04	—	18,754
Regional Shopping Center	0.12	0.06	1.05	0.88	0.01	0.08	—	0.08	0.08	—	0.08	—	1,256	1,256	0.11	< 0.005	—	1,259
Total	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	22,731	22,731	2.01	0.04	—	22,794
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.26	0.13	2.32	1.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,773	2,773	0.25	0.01	—	2,780
Apartments Low Rise	1.72	0.86	14.7	6.27	0.09	1.19	—	1.19	1.19	—	1.19	—	18,702	18,702	1.66	0.04	—	18,754
Regional Shopping Center	0.12	0.06	1.05	0.88	0.01	0.08	—	0.08	0.08	—	0.08	—	1,256	1,256	0.11	< 0.005	—	1,259
Total	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	22,731	22,731	2.01	0.04	—	22,794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.05	0.02	0.42	0.36	< 0.005	0.03	—	0.03	0.03	—	0.03	—	459	459	0.04	< 0.005	—	460
Apartments Low Rise	0.31	0.16	2.69	1.14	0.02	0.22	—	0.22	0.22	—	0.22	—	3,096	3,096	0.27	0.01	—	3,105
Regional Shopping Center	0.02	0.01	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	208	208	0.02	< 0.005	—	208

Total	0.38	0.19	3.31	1.66	0.02	0.26	—	0.26	0.26	—	0.26	—	3,763	3,763	0.33	0.01	—	3,774
-------	------	------	------	------	------	------	---	------	------	---	------	---	-------	-------	------	------	---	-------

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.26	0.13	2.32	1.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,773	2,773	0.25	0.01	—	2,780
Apartments Low Rise	1.72	0.86	14.7	6.27	0.09	1.19	—	1.19	1.19	—	1.19	—	18,702	18,702	1.66	0.04	—	18,754
Regional Shopping Center	0.12	0.06	1.05	0.88	0.01	0.08	—	0.08	0.08	—	0.08	—	1,256	1,256	0.11	< 0.005	—	1,259
Total	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	22,731	22,731	2.01	0.04	—	22,794
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.26	0.13	2.32	1.95	0.01	0.18	—	0.18	0.18	—	0.18	—	2,773	2,773	0.25	0.01	—	2,780
Apartments Low Rise	1.72	0.86	14.7	6.27	0.09	1.19	—	1.19	1.19	—	1.19	—	18,702	18,702	1.66	0.04	—	18,754
Regional Shopping Center	0.12	0.06	1.05	0.88	0.01	0.08	—	0.08	0.08	—	0.08	—	1,256	1,256	0.11	< 0.005	—	1,259
Total	2.10	1.05	18.1	9.11	0.11	1.45	—	1.45	1.45	—	1.45	—	22,731	22,731	2.01	0.04	—	22,794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	0.05	0.02	0.42	0.36	< 0.005	0.03	—	0.03	0.03	—	0.03	—	459	459	0.04	< 0.005	—	460
Apartments Low Rise	0.31	0.16	2.69	1.14	0.02	0.22	—	0.22	0.22	—	0.22	—	3,096	3,096	0.27	0.01	—	3,105
Regional Shopping Center	0.02	0.01	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	208	208	0.02	< 0.005	—	208
Total	0.38	0.19	3.31	1.66	0.02	0.26	—	0.26	0.26	—	0.26	—	3,763	3,763	0.33	0.01	—	3,774

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	71.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	85.1	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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

Consumer Products	—	71.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	85.1	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	13.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	15.5	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

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	71.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	85.1	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	71.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	85.1	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	13.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	15.5	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

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	130	206	336	13.4	0.32	—	767

Apartme Low Rise	—	—	—	—	—	—	—	—	—	—	—	174	275	450	17.9	0.43	—	1,026
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	93.1	147	240	9.57	0.23	—	548
Total	—	—	—	—	—	—	—	—	—	—	—	398	628	1,026	40.9	0.98	—	2,342
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	130	206	336	13.4	0.32	—	767
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	174	275	450	17.9	0.43	—	1,026
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	93.1	147	240	9.57	0.23	—	548
Total	—	—	—	—	—	—	—	—	—	—	—	398	628	1,026	40.9	0.98	—	2,342
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	21.6	34.1	55.7	2.22	0.05	—	127
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	28.9	45.6	74.5	2.97	0.07	—	170
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	15.4	24.3	39.7	1.58	0.04	—	90.7
Total	—	—	—	—	—	—	—	—	—	—	—	65.9	104	170	6.77	0.16	—	388

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	104	165	269	10.7	0.26	—	614
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	140	220	360	14.3	0.34	—	821
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	74.5	118	192	7.66	0.18	—	438
Total	—	—	—	—	—	—	—	—	—	—	—	318	502	821	32.7	0.79	—	1,873
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	104	165	269	10.7	0.26	—	614
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	140	220	360	14.3	0.34	—	821
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	74.5	118	192	7.66	0.18	—	438
Total	—	—	—	—	—	—	—	—	—	—	—	318	502	821	32.7	0.79	—	1,873
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	17.3	27.3	44.5	1.78	0.04	—	102
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	23.1	36.5	59.6	2.38	0.06	—	136

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	12.3	19.5	31.8	1.27	0.03	—	72.6
Total	—	—	—	—	—	—	—	—	—	—	—	52.7	83.2	136	5.42	0.13	—	310

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	192	0.00	192	19.2	0.00	—	672
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	371	0.00	371	37.1	0.00	—	1,299
Total	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	192	0.00	192	19.2	0.00	—	672
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	371	0.00	371	37.1	0.00	—	1,299
Total	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	31.8	0.00	31.8	3.18	0.00	—	111
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	145	0.00	145	14.4	0.00	—	506
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	61.5	0.00	61.5	6.14	0.00	—	215
Total	—	—	—	—	—	—	—	—	—	—	—	238	0.00	238	23.8	0.00	—	832

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	192	0.00	192	19.2	0.00	—	672
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	371	0.00	371	37.1	0.00	—	1,299
Total	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	192	0.00	192	19.2	0.00	—	672
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	371	0.00	371	37.1	0.00	—	1,299
Total	—	—	—	—	—	—	—	—	—	—	—	1,436	0.00	1,436	144	0.00	—	5,024
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	31.8	0.00	31.8	3.18	0.00	—	111
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	145	0.00	145	14.4	0.00	—	506
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	61.5	0.00	61.5	6.14	0.00	—	215
Total	—	—	—	—	—	—	—	—	—	—	—	238	0.00	238	23.8	0.00	—	832

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.5	16.5
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.15	3.15
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.5	16.5
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.15	3.15
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.74	2.74
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.41	3.41

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.5	16.5
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.15	3.15
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.5	16.5
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.15	3.15
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	20.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15

Apartment Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.74	2.74
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.41	3.41

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
------------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
---------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2024	01/1/2040	5.00	4,175	—
Site Preparation	Site Preparation	2/03/2024	10/11/2024	5.00	180	—
Grading	Grading	03/02/2024	12/12/2025	5.00	465	—
Building Construction	Building Construction	04/01/2024	1/1/2040	5.00	4,110	—
Paving	Paving	07/1/2024	10/3/2025	5.00	330	—
Architectural Coating	Architectural Coating	10/01/2024	1/5/2026	5.00	330	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48

Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT
Demolition	Hauling	4.56	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	9.47	LDA,LDT1,LDT2

Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1,901	9.47	LDA,LDT1,LDT2
Building Construction	Vendor	403	6.03	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	380	9.47	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.03	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT
Demolition	Hauling	4.56	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—

Site Preparation	Worker	17.5	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1,901	9.47	LDA,LDT1,LDT2
Building Construction	Vendor	403	6.03	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	380	9.47	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.03	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	5,880,600	1,960,200	2,077,796	692,599	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,653,879	—
Site Preparation	—	—	270	0.00	—
Grading	—	—	1,395	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Apartments Low Rise	—	0%
Regional Shopping Center	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005
2029	0.00	204	0.03	< 0.005
2030	0.00	204	0.03	< 0.005
2031	0.00	204	0.03	< 0.005
2032	0.00	204	0.03	< 0.005
2033	0.00	204	0.03	< 0.005
2034	0.00	204	0.03	< 0.005
2035	0.00	204	0.03	< 0.005
2036	0.00	204	0.03	< 0.005
2037	0.00	204	0.03	< 0.005
2038	0.00	204	0.03	< 0.005
2039	0.00	204	0.03	< 0.005
2040	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	3,730	846	268	1,030,689	0.00	0.00	0.00	0.00
Apartments Low Rise	15,943	17,729	13,678	5,794,196	50,188	55,811	43,058	18,240,128

Regional Shopping Center	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
--------------------------	------	------	------	------	------	------	------	------

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	3,730	846	268	1,030,689	0.00	0.00	0.00	0.00
Apartments Low Rise	15,943	17,729	13,678	5,794,196	50,188	55,811	43,058	18,240,128
Regional Shopping Center	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	2178
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	2178
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
5880600	1,960,200	2,077,796	692,599	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	250
-------------	--------	-----

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	7,993,736	204	0.0330	0.0040	8,651,186
Apartments Low Rise	6,870,712	204	0.0330	0.0040	58,356,122
Regional Shopping Center	5,429,838	204	0.0330	0.0040	3,918,207

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	7,993,736	204	0.0330	0.0040	8,651,186
Apartments Low Rise	6,870,712	204	0.0330	0.0040	58,356,122
Regional Shopping Center	5,429,838	204	0.0330	0.0040	3,918,207

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	68,072,025	0.00
Apartments Low Rise	91,055,864	0.00
Regional Shopping Center	48,591,574	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	54,457,620	0.00
Apartments Low Rise	72,844,691	0.00
Regional Shopping Center	38,873,259	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	356	—
Apartments Low Rise	1,620	—
Regional Shopping Center	689	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	356	—
Apartments Low Rise	1,620	—
Regional Shopping Center	689	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
----------------	-----------	-------------	----------------	---------------	------------	-------------

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
----------------	-----------	-------------	----------------	---------------	------------	-------------

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
----------------	-----------	----------------	---------------	----------------	------------	-------------

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
----------------	-----------	--------	--------------------------	------------------------------	------------------------------

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.01	annual days of extreme heat
Extreme Precipitation	1.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	31.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	10.6
AQ-PM	2.56
AQ-DPM	25.6
Drinking Water	49.2
Lead Risk Housing	42.6
Pesticides	80.5
Toxic Releases	5.90
Traffic	35.6
Effect Indicators	—

CleanUp Sites	68.9
Groundwater	59.6
Haz Waste Facilities/Generators	53.5
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	75.5
Cardio-vascular	44.0
Low Birth Weights	62.6
Socioeconomic Factor Indicators	—
Education	60.9
Housing	50.3
Linguistic	84.9
Poverty	73.3
Unemployment	41.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	38.31643783
Employed	47.36301809
Median HI	28.41011164
Education	—
Bachelor's or higher	27.48620557
High school enrollment	100
Preschool enrollment	78.95547286

Transportation	—
Auto Access	36.49428975
Active commuting	44.45014757
Social	—
2-parent households	2.438085461
Voting	55.37020403
Neighborhood	—
Alcohol availability	24.95829591
Park access	35.51905556
Retail density	51.50776338
Supermarket access	65.81547543
Tree canopy	54.27948159
Housing	—
Homeownership	24.80431156
Housing habitability	36.09649686
Low-inc homeowner severe housing cost burden	13.08866932
Low-inc renter severe housing cost burden	52.59848582
Uncrowded housing	46.38778391
Health Outcomes	—
Insured adults	47.60682664
Arthritis	0.0
Asthma ER Admissions	34.3
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0

Diagnosed Diabetes	0.0
Life Expectancy at Birth	50.1
Cognitively Disabled	11.3
Physically Disabled	21.7
Heart Attack ER Admissions	42.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	77.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	72.4
Elderly	28.2
English Speaking	32.3
Foreign-born	45.9
Outdoor Workers	59.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	30.3
Traffic Density	40.7
Traffic Access	0.0

Other Indices	—
Hardship	49.5
Other Decision Support	—
2016 Voting	44.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	51.0
Healthy Places Index Score for Project Location (b)	41.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Land uses based on project description. Population based on project description.
Operations: Hearths	—
Characteristics: Project Details	Consistent with project description

Construction: Construction Phases	Phase lengths default except building construction and demolition ending at operational year. Start dates adjusted to estimate worst case impacts.
Construction: Architectural Coatings	MBARD Rule 426
Operations: Architectural Coatings	MBARD Rule 426
Construction: On-Road Fugitive Dust	Paved roads in Specific Plan area.
Operations: Road Dust	Paved roads in Specific Plan area.
Operations: Vehicle Data	Adjusted trip lengths to match VMT.