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John L. Carter Park Improvements, Phase II Project
Biological Resources Report

Project #4116-03

Prepared for:

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Section 1. Introduction

1.1 Project Description

The City of Half Moon Bay (City) is implementing improvements to John L. Carter Park, located adjacent to Pilarcitos Creek in Half Moon Bay (Figure 1). Details of the Phase II improvements are shown in the summary planset included as Appendix A to this report. Existing hardscape and landscaping in the central portion of the park would be upgraded with new park amenities and the existing pathways into the park from Main Street and the commercial center parking lot would be removed and replaced.

Existing bowl topography of the park would be utilized to construct an amphitheater, with seating facing Pilarcitos Creek and the stage facing away from the creek. Seating would consist of tiered seating steps covered in artificial turf or hearty groundcover along the bowl slope, and lawn seating in front. The amphitheater stage would be in front of a small support building housing a storage area and changing rooms, which would all be sited out of the 50 foot riparian buffer area and would be sited out of the 50-foot riparian buffer area.

A new play area located to the east of the stage would also be included. This area would have rubberized surfacing and play structures. A new bathroom and concession stand would be located to the west of the tiered seating, and because the building roof will be approximately level with the top of the slope elevation, the roof will also serve as a deck and will include a roof garden. On the west side of the stage, a new picnic area will be constructed, with decomposed granite permeable paving. A decomposed granite trail will lead to the south from this area, around the back of the stage, to loop around and meet up again with new paths and the flat play area on the east side of the stage. A new concrete pavement path will be constructed from Main Street to enter the park, including updated signage at Main Street, and updated landscaping with a palette including several native species would be installed throughout the redeveloped park area. A pavement path and a second, concrete path on the east side of the park would provide ramps down to the floor of the amphitheater and play area for Americans with Disabilities Act-compatible access to the lower portions of the park.

The vast majority of existing trees within the park would be retained, including the planted woodland of coast redwoods (*Sequoia sempervirens*) that occur adjacent to the riparian habitat along Pilarcitos Creek in the riparian buffer, shown in Figure 2. A total of two landscaping trees (coast redwoods) would be removed, and new native shrub plantings would be installed. Lighting would primarily be provided by short bollards, but two 18-foot tech lighting poles will also be constructed within the lawn seating area to support stage productions.

The proposed park improvements as described above and shown in the plan set in Appendix A provide an opportunity to transform the John L. Carter Park into a more active and utilized space by implementing a number of improvements designed to facilitate performances and use as a summer day camp. Increasing programming and the ability for this park to be better used will also address some of the concerns related to homeless in the riparian areas. The project as analyzed in this report takes into account an increase in park

visitation and usage as a result of the improvements. In addition, with the new park improvements, the city will be regularly maintaining the new landscaped areas. This biological analysis takes into account an increase in routine landscape maintenance.

Figure 1. Project Vicinity Map

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Figure 2. Habitats and Riparian Buffer

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Section 2. Methods

2.1 Background Review

Prior to conducting field work, H. T. Harvey & Associates ecologists reviewed available background information pertaining to the biological resources on and in the vicinity of the Biological Study Area (BSA) for the project. Information was compiled and subsequently compared against site conditions during field surveys. The following sources were consulted:

- California Natural Diversity Database (CNDDB) record search for the *Half Moon Bay, California* U.S. Geological Survey (USGS) 7.5-minute quadrangle (where the BSA occurs) and the surrounding five quadrangles: *Montara Mountain, San Mateo, Woodside, San Gregorio, and La Honda* (CNDDB 2019)
- eBird records for special-status birds in the vicinity of the project site (Cornell Lab of Ornithology 2019)
- CNPS Rare Plant Program Inventory of Rare and Endangered Plants of California for the 7-5-minute quadrangles listed above (CNPS 2019) for Ranks 1-4 and for San Mateo County for Rank 4 species, for which records are not always maintained at the quadrangle level
- USFWS Information for Planning and Consultation tool (USFWS 2019)
- Aerial photographs obtained from Google Earth Pro (Google, Inc. 2019)
- U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Hydric Soils List (NRCS 2019a) and Web Soil Survey for soil types (NRCS 2019b)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory for any existing aquatic features, including wetlands, streams, and sloughs (USFWS 2019)
- The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et al. 2012)

For the purposes of this report, the vicinity of the BSA is defined as the area within a 5-mile (mi) radius of the BSA. A map of CNDDB records for special-status for plants and animals as well as natural communities of concern in the vicinity of the BSA is included as Figures 3 and 4. This generalized map shows areas where special-status species are known to occur or have occurred historically. Other information reviewed included various technical publications available through the USFWS, CDFW, and other sources.

2.2 Site Visit

A reconnaissance-level field survey of the BSA (Figure 2) was conducted by H. T. Harvey & Associates wildlife ecologist, Jane Lien, B.S. on September 25, 2019 and by H. T. Harvey & Associates plant and wetland ecologist Kelly Hardwicke, Ph.D. on November 11, 2019. The purpose of these surveys were to (1) assess existing biotic habitats and plant and animal communities in the BSA, (2) assess the BSA for its potential to support special-status species and their habitats, and (3) identify potential jurisdictional habitats within the BSA, such as Waters

of the U.S./State. Field surveys were also conducted in the spring of 2018 and on December 7, 2018 by plant ecologist Mathew Mosher, B.S., for the Pilarcitos Creek Restoration Project and to map the riparian buffer within Carter Park for the purposes of design.

H. T. Harvey & Associates mapped biotic habitats within the BSA using a combination of field observations, recorded via the Apple iPad geographic information systems (GIS) Kit Pro application and aerial imagery signatures. Habitat types were distinguished using natural community descriptions discussed in Holland (1986) and Sawyer et al. (2009). Plant species within each habitat were identified using Baldwin et al. (2012). Acreages were calculated using GIS and aerial imagery interpretation.

Section 3. Regulatory Setting

Biological resources in the BSA are regulated by a number of federal, state, and local laws and ordinances, as described below.

3.1 Federal

3.1.1 Clean Water Act

As part of its mandate under Section 404 of the CWA, the EPA regulates the discharge of dredged or fill material into "waters of the U.S.". "Waters of the U.S." include territorial seas, tidal waters, and non-tidal waters in addition to wetlands and drainages that support wetland vegetation, exhibit ponding or scouring, show obvious signs of channeling, or have discernible banks and high-water marks. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(b)). The discharge of dredged or fill material into waters of the U.S. is prohibited under the CWA except when it follows Section 404 of the CWA. Enforcement authority for Section 404 was given to the USACE, which it accomplishes under its regulatory branch. The EPA has veto authority over the USACE's administration of the Section 404 program and may override a USACE decision with respect to permitting.

The USACE has specific guidelines for determining the extent of its jurisdiction. The methods of delineating USACE jurisdiction are defined in the 1987 Wetlands Delineation Manual (Environmental Laboratory, 1987), and the Arid West Manual (USACE 2008). The methods of delineating USACE jurisdiction are defined in the manuals and require examination of three parameters (soil, hydrology, and vegetation).

Substantial impacts to waters of the U.S. may require an Individual Permit. Projects that only minimally affect waters of the U.S. may meet the conditions of one of the existing Nationwide Permits, if other conditions of the permit are satisfied. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions. The State Water Resources Control Board (SWRCB) is the state agency (together with the Regional Water Quality Control Boards [RWQCBs]) charged with implementing water quality certification in California.

Project Applicability. The reconnaissance-level field survey in 2018 determined that no habitats that would be considered waters of the U.S./state were located within the BSA (Figure 2). Habitats on site include upland park/ornamental woodland, and arroyo willow riparian forest outside the ordinary high water marks of Pilarcitos Creek.

It is anticipated that any project proposed within the park would not involve impacts to Pilarcitos Creek below the OHWM, and no permit from the USACE will be required.

3.1.2 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects federally listed wildlife species from harm or "take", which is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Take can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species. An activity can be defined as "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA only if they occur on federal lands.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have jurisdiction over federally listed, threatened, and endangered species under FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under FESA, but may become listed in the near future and are often included in their review of a project.

Project Applicability. Pilarcitos Creek is designated as critical habitat for the federally threatened Central California Coast (CCC) steelhead (*Oncorhynchus mykiss irideus*) Distinct Population Segment, but no suitable aquatic habitat is present within the BSA. Federally listed wildlife species that are known to occur, or that may occur, in the BSA include the California red-legged frog (*Rana draytonii*); the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) could potentially occur in the BSA as well. Incidental take approval from the USFWS and/or NMFS would be needed if take of a federally listed species were to occur.

Six federally listed plant species are known to occur in the nine-quadrangle area encompassing the BSA (CNPS 2019, CNDDB 2019): (1) San Mateo thornmint (*Acanthomintha duttonii*), endangered; (2) fountain thistle (*Cirsium fontinale* var. *fontinale*), endangered; (3) San Mateo woolly sunflower (*Eriophyllum latilobum*), endangered; (4) Marin western flax (*Hesperolinon congestum*), threatened; (5) White-rayed pentachaeta (*Pentachaeta bellidiflora*), endangered; and (6) Hickman's cinquefoil (*Potentilla hickmanii*), endangered. There is no suitable habitat for any of these species within the BSA due to existing well-maintained landscaping and a dense cover of coast redwoods or arroyo willow canopy. Therefore, these six federally listed plant species are considered absent from the project site.

3.1.3 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act governs all fishery management activities that occur in federal waters within the United States' 200-nautical-mile limit. The Act establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans (FMPs) to achieve the optimum yield from U.S. fisheries in their regions. These councils, with assistance from the NMFS, establish Essential Fish Habitat (EFH) in FMPs for all managed species. Federal agencies that fund, permit, or implement activities that may adversely affect EFH are required to consult with the NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to recommendations by the NMFS.

Project Applicability. The Pacific Fisheries Management Council has designated EFH for one FMP within the study area: the Pacific Coast Salmon FMP (Pacific Fishery Management Council 2016). Of the salmon that represent this FMP, the Central California Coast (CCC) coho salmon (*Oncorhynchus kisutch*) is the only species that may occur within the study area. Although coho salmon are not known to be present within Pilarcitos Creek, the study area is considered EFH because it is accessible to the species. The project is located well outside the active channel of Pilarcitos Creek and all EFH and coho salmon habitat (Figure 2).

3.1.4 Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section 703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests, and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction. Per a December 22, 2017 memorandum issued by the U.S. Department of the Interior, the MBTA's prohibition on taking migratory birds and their active nests applies only to direct, purposeful actions, and does not include take incidental to other activities.

Project Applicability. All native bird species that occur in the BSA are protected under the MBTA.

3.2 State

3.2.1 Clean Water Act Section 401/Porter-Cologne Water Quality Control Act

The SWRCB works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the State. Their authority comes from the CWA and the State's Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne broadly defines waters of the State as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters of the U.S. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the State include headwaters, wetlands, and riparian areas. Moreover, the San Francisco Bay Region RWQCB's Assistant Executive Director, has stated that, in practice, the RWQCBs claim jurisdiction over riparian areas. Where riparian habitat is not present, such as may be the case at headwaters, jurisdiction is taken to the top of bank.

Pursuant to the CWA, projects that are regulated by the USACE must also obtain a Section 401 Water Quality Certification permit from the RWQCB. This certification ensures that the proposed project will uphold state water quality standards. Because California's jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the State require Water Quality Certification

even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements even if the USACE does not. Under the Porter-Cologne, the SWRCB and the nine regional boards also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements for certain point-source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

On April 2, 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. In these new guidelines, riparian habitats are not specifically described as waters of the state but instead as important buffer habitats to streams that do conform to the State Wetland Definition. The Procedures describe riparian habitat buffers as important resources that may both be included in required mitigation packages for permits for impacts to waters of the state, as well as areas requiring permit authorization from the RWQCBs to impact.

Project Applicability. Although the RWQCB considers riparian habitat within top of bank to be important buffers to waters of the state, the riparian habitat within the park BSA is sited well away from the Pilarcitos Creek low flow channel, and would not likely be claimed due to being outside top of bank (Figure 2).

3.2.2 California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code, Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with CESA, the CDFW has jurisdiction over state-listed species (Fish and Game Code 2070). The CDFW regulates activities that may result in "take" of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code. The CDFW, however, has interpreted "take" to include the "killing of a member of a species which is the proximate result of habitat modification."

Project Applicability. Only one plant species that is a state candidate for listing, coast yellow leptosiphon (*Leptosiphon croceus*), is known to occur in the nine-quadrangle area encompassing the BSA (CNPS 2019, CNDDB 2019). There is no suitable habitat for this species within the project study area, and coast yellow leptosiphon is considered absent from the study area. San Francisco garter snake, a state endangered species, could potentially occur in the vicinity of the project study area, and may occur in the BSA. As noted previously, the CCC coho salmon, which is state listed as endangered, is not expected to occur in the reach of Pilarcitos Creek within the BSA.

3.2.3 California Environmental Quality Act

CEQA is a state law that requires state and local agencies to document and consider the environmental implications of their actions and to refrain from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. CEQA

requires the full disclosure of the environmental effects of agency actions, such as approval of a general plan update or the projects covered by that plan, on resources such as air quality, water quality, cultural resources, and biological resources. The State Resources Agency promulgated guidelines for implementing CEQA are known as the State CEQA Guidelines.

Section 15380(b) of the State CEQA Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW or species that are locally or regionally rare.

The CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of "species of special concern" that serve as "watch lists". Species on these lists are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review as potential rare species, but do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA Section 15380(b).

The CNPS, a non-governmental conservation organization, has developed CRPRs for plant species of concern in California in the Inventory of Rare and Endangered Plants (CNPS 2019). The CRPRs include lichens, vascular, and non-vascular plants, and are defined as follows:

- CRPR 1A Plants considered extinct.
- CRPR 1B Plants rare, threatened, or endangered in California and elsewhere.
- CRPR 2A Plants considered extinct in California but more common elsewhere.
- CRPR 2B Plants rare, threatened, or endangered in California but more common elsewhere.
- CRPR 3 Plants about which more information is needed - review list.
- CRPR 4 Plants of limited distribution-watch list.

The CRPRs are further described by the following threat code extensions:

- .1—seriously endangered in California;
- .2—fairly endangered in California;
- .3—not very endangered in California.

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants appearing as CRPR 1B or 2 are, in general, considered to meet CEQA's Section 15380 criteria, and adverse effects on these species may be considered significant. Impacts on plants that are listed by the CNPS as CRPR 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as those of CRPR 1B or 2, impacts on them are less frequently considered significant.

Compliance with CEQA Guidelines Section 15065(a) requires consideration of natural communities of special concern, in addition to plant and wildlife species. Vegetation types of "special concern" are tracked in Rarefind (CNDDB 2019). Further, the CDFW ranks sensitive vegetation alliances based on their global (G) and state (S) rankings analogous to those provided in the CNDDB. Global rankings (G1–G5) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas S rankings reflect the condition of a habitat within California. If an alliance is marked as a G1–G3, all the associations within it would also be of high priority. The CDFW provides the Vegetation Classification and Mapping Program's currently accepted list of vegetation alliances and associations (CDFG 2010).

Project Applicability. All potential impacts on biological resources will likely be considered during CEQA review of any proposed project. This Biological Resources Report assesses these impacts to facilitate project planning and CEQA review of a project by the City. Project impacts are discussed in Section 6 below.

3.2.4 California Fish and Game Code

Ephemeral and intermittent streams, rivers, creeks, dry washes, sloughs, blue line streams on USGS maps, and watercourses with subsurface flows fall under CDFW jurisdiction. Canals, aqueducts, irrigation ditches, and other means of water conveyance may also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. A *stream* is defined in Title 14, California Code of Regulations Section 1.72, as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish and other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." Using this definition, the CDFW extends its jurisdiction to encompass riparian habitats that function as part of a watercourse. California Fish and Game Code Section 2786 defines *riparian habitat* as "lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source." The lateral extent of a stream and associated riparian habitat that would fall under the jurisdiction of the CDFW can be measured in several ways, depending on the particular situation and the type of fish or wildlife at risk. At minimum, the CDFW would claim jurisdiction over a stream's bed and bank. In areas that lack a vegetated riparian corridor, CDFW jurisdiction would be the same as USACE jurisdiction. Where riparian habitat is present, the outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats.

Pursuant to California Fish and Game Code Section 1603, the CDFW regulates any project proposed by any person that will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds." California Fish and Game Code Section 1602 requires an entity to notify the CDFW of any proposed activity

that may modify a river, stream, or lake. If the CDFW determines that proposed activities may substantially adversely affect fish and wildlife resources, a Lake and Streambed Alteration Agreement (LSAA) must be prepared. The LSAA sets reasonable conditions necessary to protect fish and wildlife, and must comply with CEQA. The applicant may then proceed with the activity in accordance with the final LSAA.

Specific sections of the California Fish and Game Code describe regulations pertaining to protection of certain wildlife species. For example, Code Section 2000 prohibits take of any bird, mammal, fish, reptile, or amphibian except as provided by other sections of the code.

The California Fish and Game Code Sections 3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFW. Raptors (i.e., eagles, hawks, and owls) and their nests are specifically protected in California under Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

Bats and other non-game mammals are protected by California Fish and Game Code Section 4150, which states that all non-game mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the commission. Activities resulting in mortality of non-game mammals (e.g., destruction of an occupied nonbreeding bat roost, resulting in the death of bats), or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), may be considered "take" by the CDFW.

Project Applicability. The reconnaissance-level field surveys in 2018 and 2019 identified one biotic habitat in the BSA which would be subject to CDFW jurisdiction under Sections 1600-1603 of the California Fish and Game Code: arroyo willow riparian forest (Figure 2). Most native bird, mammal, and other wildlife species that occur in the BSA and in the immediate vicinity are protected by the California Fish and Game Code. Direct impacts to this habitat would require a Lake and Streambed Alteration Agreement from CDFW.

3.3 California Coastal Act

The California Coastal Act of 1976, administered by the California Coastal Commission, was created to provide long-term protection of California's 1,100-mile coastline for the benefit of future generations. Integral to the Coastal Act are its policies which provide for protection and expansion of public access to the shoreline and recreational opportunities and resources; protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays, estuaries, riparian habitat, certain woodlands and grasslands, streams, lakes and habitat for rare or endangered plants or animals; protection of productive agricultural lands, commercial fisheries and archaeological resources; protection of the scenic beauty of coastal landscapes and seascapes; practical establishment of urban-rural boundaries and directing new housing and

other development into areas with adequate services to avoid wasteful urban sprawl and leapfrog development; environmentally sound expansion of existing industrial ports and electricity-generating power plants, as well as for the siting of coastal dependent industrial uses; and protection against loss of life and property from coastal hazards.

The following are definitions given for specific ecological features that fall within the purview of the California Coastal Act: §30121 defines a wetland as: lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens; Commission Regulation §13577(b) elaborates: wetlands are lands where the water table is at near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuation of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats…; §30107.5 defines an Environmentally Sensitive Habitat Area as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Under the Coastal Act, local governments that lie in whole or in part within the Coastal Zone are required to prepare Local Coastal Programs (LCPs; Cal. Pub. Res. Code §30500). LCPs identify the location, type, densities, and other ground rules for future development in the coastal zone. Each LCP includes a land-use plan and its implementing measures. The Coastal Commission helps shape each LCP and then formally reviews them for consistency with Coastal Act standards. Once finalized, coastal permitting authority is transferred to the local government, with the exception of proposed development on the immediate shoreline, which stays with the Commission. In developing an LCP, a local government may choose to recognize specific botanical or wildlife resources as locally rare and that therefore garner protection.

Project Applicability. The entire BSA is within the Coastal Zone and subject to the City of Half Moon Bay Local Coastal Program. See below for more details.

3.4 Local

3.4.1 City of Half Moon Bay Local Coastal Program Land Use Plan

Under the California Coastal Act, the California Coastal Commission (CCC) regulates development in the coastal zone, including land and water use. Any activities within the coastal zone that affect aquatic resources, including wetlands, require a coastal development permit from either the CCC or a certified Local Coastal Program (LCP; Division 20 of the Public Resources Code). The CCC is responsible for protecting coastal resources and assessing potential impacts on wetlands and other waters subject to regulation under the California Coastal Act (Sections 30330-30344). The BSA is within the jurisdiction of Half Moon Bay's LCP.

Projects approved by the city of Half Moon Bay under its LCP within Coastal Commission Appeals Jurisdiction are appealable to the Coastal Commission. The site is within the CCC Appeals Jurisdiction.

City of Half Moon Bay Environmentally Sensitive Habitat Areas (ESHAs). The City of Half Moon Bay LCP Land Use Plan (1993) includes provisions for protection of Environmentally Sensitive Habitat Areas (ESHAs). More specifically, Half Moon Bay LCP prohibits any land use or development that would have significant adverse impact on sensitive habitat areas. Development in areas adjacent to sensitive habitats shall be sited and designated to prevent impacts that could significantly degrade the sensitive habitats. Section 18.38 of the Half Moon Bay Municipal Code (City of Half Moon Bay 2018) defines sensitive habitats as any area in which plant or animal life or their habitats are either rare or especially valuable and any area that meets one of the following criteria:

- Habitats containing or supporting rare and endangered species as defined by the State Fish and Game Commission.
- All perennial and intermittent streams and their tributaries.
- Riparian areas.
- Wetlands, coastal tidelands and marshes, lakes and ponds and adjacent shore habitats.
- Coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, including sea cliff faces.
- Areas used for scientific study and research concerning fish and wildlife, and existing game or wildlife refuges and reserves.
- Sand dunes.
- Marine habitats, including rocky intertidal zones.
- Sea cliffs.
- Presence of California wild strawberry (*Fragaria vesca*).

Wetlands are broadly defined in Section 30121 of the California Coastal Act: "Lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens."

The Coastal Commission provides further specificity in their wetlands definitions to guide the process of wetland delineation. The CCC's regulations (California Code of Regulations Title 14 (14 CCR)) establish a one parameter definition that only requires evidence of a single parameter (hydrology, hydric soils, or hydophytic vegetation) to establish wetland conditions:

"Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those

types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats."

The Coastal Commission's regulations do not provide guidance on how to define hydrology, hydric soils or hydrophytic vegetation. The City of Half Moon Bay LCP uses the CCC's definition of a wetland and also does not provide guidance on how to define hydrology, hydric soils, or hydrophytic vegetation.

The Coastal Commission recognizes the guidance provided in the 1987 Army Corps of Engineers Wetland Delineation Manual, the U.S. Fish and Wildlife Service's List of Plant Species that Occur in Wetlands, and the Natural Resource Conservation Service's Field Indicators of Hydric Soils in the United States as suitable sources for guidance.

The City of Half Moon Bay LCP defines "Riparian Area and Corridor" as any area of land bordering a stream or lake, including its banks. It includes land at least up to the highest point (in cross section) of an obvious channel or enclosure of a body of water and extends to the outer edge of appropriate indicator plant species. It defines a riparian corridor as a line determined by the association of plant and animal species normally found near streams, lakes, and other bodies of fresh water: red alder (*Alnus rubra*), jaumea (*Jaumea carnosa*), pickleweed (*Salicornia pacifica*), big leaf maple (*Acer macrophyllum*), narrowleaf cattail (*Typha domingensis*), arroyo willow (*Salix lasiolepis*), broadleaf cattail (*Typha latifolia*), horsetail (*Equisetum* sp.), creek dogwood (*Cornus sericea*), black cottonwood (*Populus trichocarpa*), and box elder (*Acer negundo*). Such a corridor must contain at least a 50 percent cover of some combination of the plants listed.

The LCP includes many measures to protect riparian habitat in Chapter 3 (3-7 to 3-13), and defines a buffer of 50 feet outward from the limit of riparian vegetation along perennial streams (3-11 (a)). Along lakes, ponds, and other wet areas, the LCP extends the buffer zone to 100 feet from the high-water point (3-11(c)).

Project Applicability. The BSA is within the jurisdiction of the Half Moon Bay LCP and within the Coastal Zone. In accordance with the Coastal Act, the implementation of the park improvements may require a Coastal Development Permit (CDP) to ensure that development within the Coastal Zone is consistent with all Local Coastal Program policies and the public access and public recreation policies of the Coastal Act. The reconnaissance-level field survey in 2018 identified, and the 2019 field surveys confirmed, only one ESHA which would be subject to jurisdiction under the Half Moon Bay LCP: arroyo willow riparian forest (Figure 2). This is also confirmed by recent mapping of the LCP Planning Area by Huffman-Broadway Group, Inc., which identifies the Pilarcitos Creek corridor as a riparian ESHA[1]. The required setback buffer from riparian habitat

[1] This updated mapping is available at the following link - https://nebula.wsimg.com/1b378437da95d7845c712a23fac9f2f2?AccessKeyId=06ACEAA5216D33A5C3B0&disposition=0&alloworigin=1

is 50 feet. During the reconnaissance-level field surveys in 2018 and 2019 carried out by H. T. Harvey & Associates plant ecologists, areas in the BSA outside of the Pilarcitos Creek riparian corridor (i.e. the area of potential park improvements) were examined for indicators of hydrophytic wetland vegetation or wetland hydrology, and observations of soil conditions were made. No indicators of hydrophytic wetland vegetation or wetland hydrology were observed within these areas. Although the BSA as a whole is within a mapped soil unit that is listed as hydric on the NRCS (see descriptions of soils in Section 4.3 below), the observed soils within the areas of potential improvements have been significantly manipulated by previous development of the park and the surrounding neighborhood. Despite having NRCS-mapped hydric soils in the area, based on the lack of observed indictors of hydrophytic wetland vegetation or wetland hydrology, and the actual soil conditions observed in the park improvements areas, these areas do not actually indicate wetlands. Therefore, no CCC wetlands are present within the areas that will be affected by the park improvements.

3.4.2 Half Moon Bay Protected Trees

The City of Half Moon Municipal Code contains regulations protecting heritage trees. According to Chapter 7.40 a "heritage tree" means:

- A tree located on public or private property, exclusive of eucalyptus, with a trunk diameter of twelve inches or more, or a circumference of at least thirty-eight inches measured at forty-eight inches above ground level.
- A tree or stand of trees so designated by resolution of the city council based on its finding of special historical, environmental or aesthetic value, including a resolution adopted under former Chapter 12.16 of the City of Half Moon Bay Zoning Code.
- A tree located within the public right-of-way along the entire length of Main Street or along Kelly Avenue between San Benito Street and Highway 1. (Ord. C-2013-02 §1, 2013: Ord. C-2-12 §5, 2012: Ord. C-10-11 §1(part), 2011)

The removal of one or more heritage trees or major pruning as described in Section 7.40.040 requires a permit pursuant to procedures established by the city manager and requires the payment of a fee established by the city council. Additionally, the removal of a heritage tree pursuant to a permit issued under this chapter shall be replaced of a minimum on a one-for-one basis with a minimum size twenty-four-inch-box specimen tree of a species and in a location approved by the city manager or his or her designee (Ord. C-10-11 §1(part), 2011).

Project Applicability. The BSA includes heritage trees. The project was designed to minimize removal of trees protected by the City heritage tree ordinance to the extent feasible, and the vast majority of heritage trees within the park will be protected in place. Where removal of heritage trees cannot be avoided, the project will comply with the standards of the City heritage tree ordinance, including the planting of replacement trees.

3.4.3 National Pollutant Discharge Elimination System (NPDS) Stormwater Program

The CWA has nationally regulated the discharge of pollutants to the waters of the U.S. from any point source since 1972. In 1987, amendments to the CWA added Section 402(p), which established a framework for regulating nonpoint source storm water discharges under the National Pollutant Discharge Elimination System (NPDES). The NPDES is a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the U.S. In California, this permit program is administered by the RWQCBs. The NPDES General Construction Permit requirements apply to clearing, grading, and disturbances to the ground such as excavation. Construction activities on one or more acres are subject to a series of permitting requirements contained in the NPDES General Construction Permit. This permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to be implemented during project construction. The project sponsor is also required to submit a Notice of Intent (NOI) with the State Water Resources Control Board Division of Water Quality. The NOI includes general information on the types of construction activities that would occur on the site. Additionally, In San Mateo County, projects may have to comply with the California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit (MRP) (Water Board Order No. R2-2015-0049). This MRP requires that all projects that meet certain criteria must implement BMPs and incorporate Low Impact Development practices into the design to prevent stormwater runoff pollution, promote infiltration, and hold/slow down the volume of water coming from a site after construction has been completed. To meet these permit and policy requirements, projects must incorporate the use of green roofs, impervious surfaces, tree planters, grassy swales, bioretention and/or detention basins, among other factors.

Project Applicability. The project design will comply with the requirements of the NPDES General Construction Permit and the MRP, as applicable.

Section 4. Environmental Setting

4.1 General Biological Study Area Description

The approximately 0.96-acre BSA is located in Half Moon Bay in San Mateo County. It is located within the *Half Moon Bay California* 7.5-minute USGS quadrangle. The BSA is located between State Route (SR) 92 and Pilarcitos Creek near downtown Half Moon Bay and the majority of this site is already developed as a park. A hardscape path enters the park from Main Street to the west and curves into the interior of the park. During the site visits, the vegetation in the park was well maintained, aside from the native vegetation within the arroyo willow riparian forest. West and north of the BSA is high-density development associated with the City of Half Moon Bay; east of the BSA is Pilarcitos Creek and agricultural land, with the Miramontes Ridge Open Space Reserve to the southeast, and to the south is Pilarcitos Creek and additional high density development.

The climate at the BSA is coastal Mediterranean, with most rain falling in the winter and spring. Fog and cool temperatures are common in the summer. The climate conditions in the project area include an annual precipitation of 28.3 inches, an average high temperature of 62.5°F, and an average low temperature of 49.5°F (PRISM Climate Group 2019), with the majority of the rainfall occurring between the months of November and April. Elevations within the BSA range from approximately 69 feet) to 50 feet above sea level (WGS84) (Google, Inc. 2019).

4.2 Hydrology

Pilarcitos Creek, a 13.5-mile perennial stream that flows from the western slopes of the Santa Cruz Mountains through Pilarcitos Canyon and discharges into the Pacific Ocean meanders through the southern edge of the BSA. The creek drains approximately 30 square miles and has numerous tributaries. The BSA is approximately 1.3 miles upstream from the mouth of the creek.

4.3 Soils

Based on a review of available soil survey maps for the area including those by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), the BSA is generally comprised of coarse sandy loam soils adjacent to Pilarcitos Creek, mapped as Gullied land (alluvial soil material) (NRCS 2019a). This soil type is expected to occasionally flood and is variable in character based on the alluvium present. This soil type is listed as hydric in San Mateo County on the National Hydric Soils List (NRCS 2019b). While this soil map unit is accurate for the portion of the Biological Study Area encompassing Pilarcitos Creek and the adjacent riparian corridor, based on the findings from the site survey by the H. T. Harvey & Associates plant ecologist, the soils within the proposed are of park improvements have been manipulated for the creation of the original park as well as the neighboring development. Based on the absence of any indicators of wetland hydrology or

hydrophytic wetland vegetation, and the history of manipulation, the soils with the landscaped and developed areas of the existing park are presumed to be non-hydric soils.

4.4 Biotic Habitats

Reconnaissance-level survey identified two habitat types/land uses in the BSA (Figure 2): park/ornamental woodland (0.86 acre), and arroyo willow riparian forest (0.10 acre). Although it is entirely outside the project site, the bed of Pilarcitos Creek is located to the south of the BSA and contains perennial stream habitat. These habitats are described in detail below.

4.4.1 Park/Ornamental Woodland

Vegetation. Park/ornamental woodland habitat in the BSA includes areas where permanent features such as benches, statues, and/or pavement have been placed along with landscaping. Such landscaping includes native coast redwood and Monterey pine (*Pinus radiata*) trees. However, these plantings have been installed as part of a landscape plan and do not naturally occur on site. The central and upper areas of the park contain well maintained lawn areas. The park habitat type comprises the majority of the BSA and consists of two main areas: an open area in the north containing the paths and landscaping beds and lawns, as well as scattered landscape trees, while a dense grove of planted, mature coast redwoods is located in the south portion of the site adjacent to the riparian corridor, with no lawn beneath (Photo 1). While redwoods can grow as riparian tree species, they are not restricted to riparian areas as they are able to gather moisture from the coastal fog layer. There is no understory vegetation here, as the area around these planted redwoods is actively maintained by the City.

Photo 1. Ornamental woodland in the study area.

Wildlife. The ornamental woodland habitat on the project site is contiguous with arroyo willow riparian habitat, and provides habitat for many of the same urban-adapted wildlife species. However, the turf grasses and ornamental vegetation of this habitat provide little to no understory cover, as well as low-quality foraging opportunities compared to the adjacent riparian habitats. Common urban-adapted wildlife species, such as the striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), nonnative Virginia opossum (*Didelphis virginiana*), and eastern gray squirrel (*Sciurus carolinensis*) nest and forage in the landscaped trees and shrubs in the ornamental woodland. The redwood trees on the site provide preferred nesting sites for lesser goldfinches (*Spinus psaltria*), Anna's hummingbirds (*Calypte anna*), American crows (*Corvus brachyrhynchos*), American robins (*Turdus migratorius*), and bushtits (*Psaltriparus minimus*). The shrubs adjacent to the paths on the project site provide potential nesting substrate for house finches (*Haemorhous mexicanus*), California towhees (*Melozone crissalis*), and western scrub-jays (*Aphelocoma californica*).

4.4.2 Arroyo Willow Riparian Forest

Vegetation. The arroyo willow riparian forest habitat is found along Pilarcitos Creek, along the southeast margin of the study area. The riparian vegetation in this reach of Pilarcitos Creek is characterized by an overstory predominately consisting of arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and alder (*Alnus* sp.) (Photo 2). The understory contains a dense growth of cape ivy (*Delairea odorata*), garden nasturtium (*Tropaeolum nasturtium*), and California blackberry (*Rubus ursinus*). The riparian habitat is mostly buffered from the main portions of the park by the planted coast redwood grove in the south central portion of the site, but the forest abuts developed portions of the park at the far eastern and western ends. At the border of the riparian habitat, increased sun has allowed cape ivy to form even more dense infestations. Some areas have been cleared and are periodically used as homeless encampments.

Photo 2. Arroyo willow riparian forest habitat along Pilarcitos Creek.

Cape ivy is ranked as highly invasive by the California Invasive Plant Council (Cal-IPC 2019), and is considered to have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. It's largely clonal reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment.

Wildlife. Urban riparian forests typically provide high-quality habitat for a variety of native and nonnative wildlife. The high levels of human activity associated with homeless encampments, as well as the presence of high densities of invasive, nonnative plants (e.g., cape ivy and garden nasturtium) have greatly reduced the suitability of the riparian habitat in the study area for most riparian associated species. However, the riparian corridor along the creek provides suitable nesting habitat for a variety of common bird species such as the California scrub-jay, American robin, American crow, lesser goldfinch, and bushtit. The red-shouldered hawk (*Buteo lineatus*) and Cooper's hawk (*Accipiter cooperii*) may use larger trees in the riparian corridor for nesting, but no raptor nests were detected in the riparian forest during the September 25, 2019, survey. Other common wildlife species that may inhabit or forage in urban riparian corridors are the striped skunk, raccoon, and nonnative Virginia opossum and eastern gray squirrel. Individual bats may be attracted to riparian areas to roost in trees; however, none of the trees in the project area contained large cavities that represented potential habitat for a roosting or maternity colony.

4.4.3 Perennial Freshwater Stream

Vegetation. To the south of the BSA, Pilarcitos Creek is a perennial freshwater stream with a connection to groundwater and flows overland through the southern portion of the BSA. It originates approximately 12 miles northeast of the BSA on the eastern flanks of Montara Mountain in the Santa Cruz Mountains, then flows south through Pilarcitos Canyon before turning westward to flow to the south of the BSA. The creek flows under Main Street near the southwestern boundary of the BSA and discharges into the Pacific Ocean approximately 1.3 miles downstream of the BSA. Pilarcitos Creek has been identified as a USGS blue-line stream course as well as a USFWS palustrine resource, and as of November 2019, was flowing up to 10 inches deep within a 6-foot wide channel.

Wildlife. The aquatic habitat within Pilarcitos Creek supports native fish species such as the California roach (*Hesperoleucus symmetricus*), hardhead (*Mylopharodon conocephalus*), and threespine stickleback (*Gasterosteus aculeatus*). In addition, the federally threatened CCC steelhead and California red-legged frog have been documented within Pilarcitos Creek (CDFW 2013, CNDDB 2019), and the federally and state endangered San Francisco garter snake could possibly occur there. Pacific tree frogs (*Pseudacris regilla*), California newts (*Taricha torosa*), western pond turtle (*Actinemys marmorata*), non-native bullfrogs (*Lithobates catesbeianus*) and crayfish (*Pacifastacus leniusculus*) may be present in the creek, and birds such as the wood duck (*Aix sponsa*), green heron (*Butorides virescens*), and belted kingfisher (*Ceryle alcyon*) also likely forage in the creek. Bats may occassionally forage aerially on insects over the aquatic habitat within Pilarcitos Creek in the vicinity of the BSA.

Section 5. Special-Status Species and Sensitive Habitats

CEQA requires assessment of the effects of a project on species that are protected by state, federal, or local governments as "threatened, rare, or endangered"; such species are typically described as "special-status species". For the purpose of the environmental review of the project, special-status species have been defined as described below. Impacts on these species are regulated by some of the federal, state, and local laws and ordinances described in Section 3.0 above.

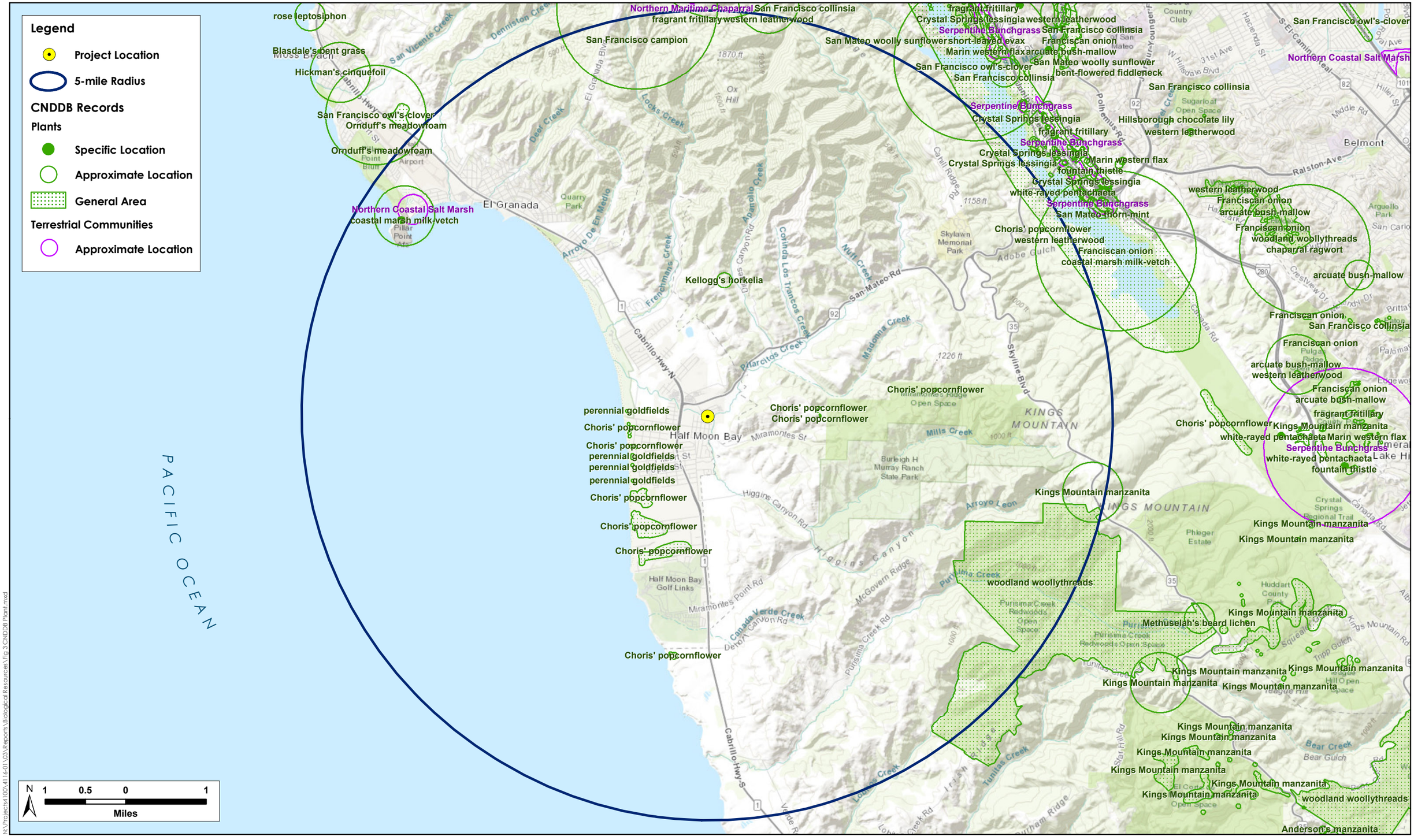
For purposes of this analysis, "special-status" plants are considered plant species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, rare, or a candidate species.
- Listed by the CNPS as CRPR 1A, 1B, 2, 3, or 4.

For purposes of this analysis, "special-status" animals are considered animal species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, or a candidate threatened or endangered species.
- Designated by the CDFW as a California species of special concern.
- Listed in the California Fish and Game Code as fully protected species (fully protected birds are provided in Section 3511, mammals in Section 4700, reptiles and amphibians in Section 5050, and fish in Section 5515).

Information concerning threatened, endangered, and other special-status species that potentially occur in the BSA was collected from several sources and reviewed by H. T. Harvey & Associates biologists as described in Section 2.1 above. Figure 3 depicts CNDDB records of special-status plant species in the general vicinity of the BSA and Figure 4 depicts CNDDB records of special-status animal species. These generalized maps show areas where special-status species are known to occur or have occurred historically.



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H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 3. CNDDB-Mapped Records of Special-Status Plants

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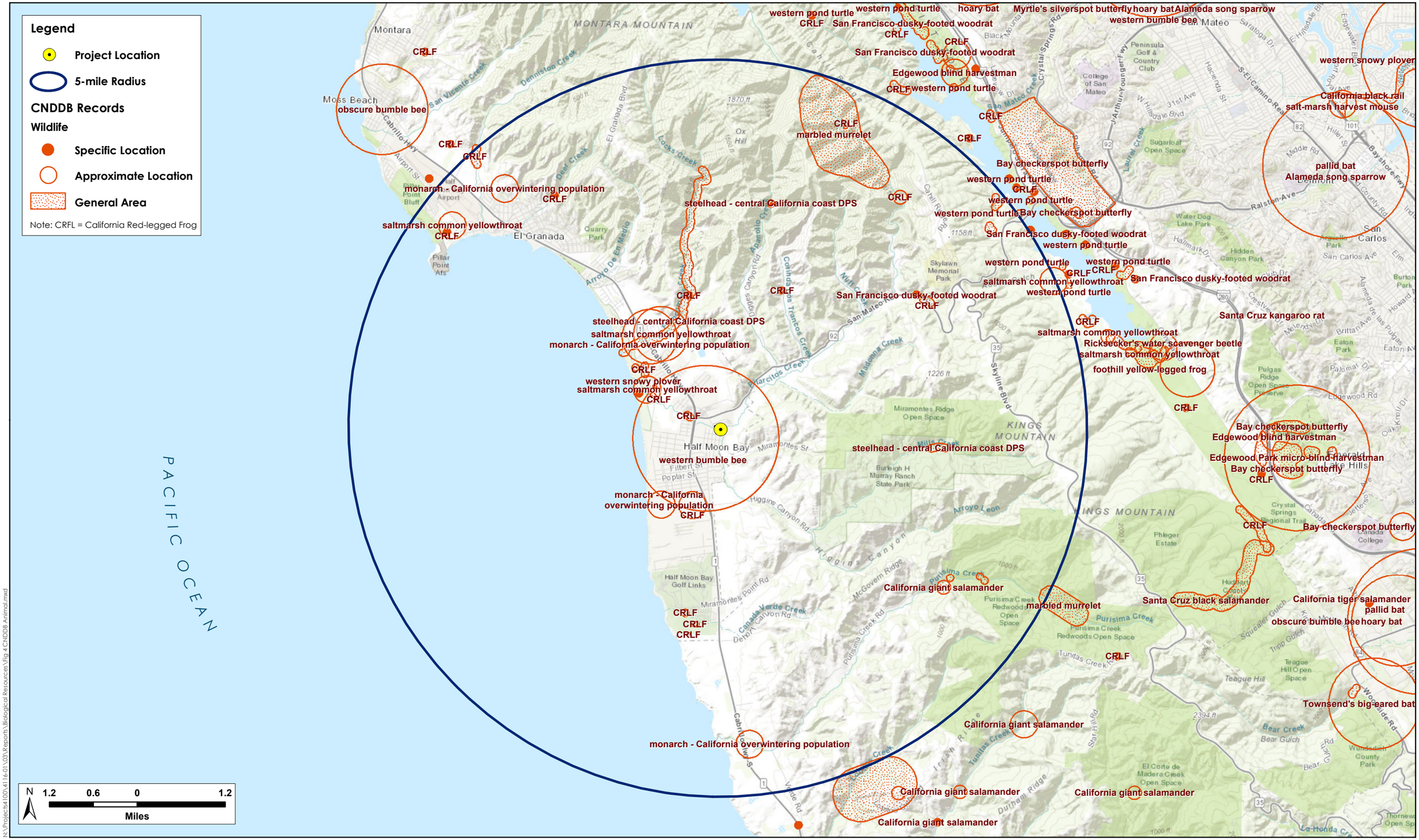
July 2020



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H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 4. CNDDB-Mapped Records of Special-Status Animals

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5.1 Special-Status Plant Species

A list of 73 special-status plant species thought to have some potential for occurrence within the BSA was compiled using the CNPS rare plant inventory (CNPS 2019) and CNDDB records (CNDDB 2019). Analysis of the documented habitat requirements and occurrence records of these plants, and our plant ecologist's knowledge of sensitive species considered, allowed us to reject all 73 species as not having a reasonable potential to occur within the BSA for at least one of the following reasons: (1) lack of suitable habitat types; (2) absence of specific microhabitat or edaphic requirements, such as serpentine soils; (3) the species is presumed extirpated or is not expected to occur in the Project vicinity due to range; and/or (4) the site is too disturbed and/or well-maintained to be expected to support the species. As the BSA is largely composed of actively managed park land, as well as very dense and cape ivy-infested arroyo willow riparian forest, the BSA does not have the capacity to support special-status plants. The CNDDB shows records for the CNPS-ranked species coastal marsh milk-vetch (*Astragalus pycnostachyus* var. *pycnostachyus*), Kellogg's horkelia *(Horkelia uneate* subsp. *sericea*), Choris's popcorn-flower (*Plagiobothrys chorisianus var. chorisianus*), Kings Mountain manzanita (*Arctostaphylos regismontana*), Anderson's manzanita (*Arctostaphylos andersonii*), Franciscan onion (*Allium peninsulare* var. *franciscanum*), western leatherwood (*Dirca occidentalis*), and Crystal Springs lessingia (*Lessingia arachnoidea*) occurring within 5 miles of the BSA. However, no suitable salt marsh habitat (coastal marsh milk-vetch), coastal prairie habitat (Choris's popcorn-flower), scrub or chaparral habitat or sandy soils (manzanita species and Kellogg's horkelia), or serpentine soils (Franciscan onion, Crystal Springs lessingia) occur within the BSA, and the site is too disturbed to support western leatherwood, which is a perennial shrub that is detectable year-round and was also not observed on site during reconnaissance surveys. Therefore, despite nearby records, all of these species are considered absent from the BSA.

5.2 Special-Status Animal Species

A number of special-status animal species occur in the region, and we considered their potential for occurrence in the study area. Most of the species considered were determined to be absent from the study area on the basis of a lack of suitable habitat or microhabitat (e.g., tree cavities). Species considered for occurrence but rejected, as well as the reasons for their rejection, include the following:

- The San Bruno elfin butterfly (*Callophrys mossii bayensis*), federally listed as endangered, is known only from San Bruno Mountain, Milagra Ridge, and Montara Mountain in San Mateo County. In addition, suitable habitat for the species' larval host plant, broadleaf stonecrop (*Sedum spathulifolium*), is not present in the BSA; this plant is a low-growing succulent that occurs on rocky outcrops on steep, north-facing slopes. Therefore, San Bruno elfin butterfly was determined to be absent.
- The monarch butterfly (*Danaus plexippus plexippus*) is a federal candidate for listing. No species of milkweed (*Asclepias* sp.) to support feeding and breeding by monarchs are present in the BSA. Monarchs are known to overwinter along the California coast and often return to the same locations year after year. Although the species has been observed occupying winter roosts in the project vicinity, there are no CNDDB records from the BSA, and no winter roost was observed during the November 2019 reconnaissance visit. A small

to moderate-sized overwintering population was recorded in the late 1980s and 1990s approximately 1.1 mile southwest of the study area, but this site may be extirpated and more recent records for this population are lacking (CNDDB 2019). From 1994 through 1998 an overwintering population was documented in a mixed grove of cypress (*Hesperocyparis* sp.), willows (*Salix* sp.), and eucalyptus (*Eucalyptus* sp.) approximately 1 mile northwest of the study area. This population is presumed to be extant (CNDDB 2019). The BSA supports a small but fairly dense coast redwood grove. The absence of preferred overwintering trees (i.e., dense eucalyptus stands) and prior use of the study area as overwintering habitat make it unlikely that monarchs will congregate in large overwintering roosts in the BSA. Individual butterflies may migrate through the entirety of the study area in small numbers.

- The San Francisco tree lupine moth (*Grapholitha edwardsiana*) and globose dune beetle (*Coleus globosus*) have no federal or state protected status, but are considered rare species by the San Mateo County LCP. The San Francisco tree lupine moth is associated with coastal sand dunes where its larval host plant, the San Francisco tree lupine (*Lupinus arboreus*), occurs. Similarly, the globose dune beetle is associated with coastal sand dunes, where it lives and forages under the sand. No sand dune habitat occurs within the BSA and these species were determined to be absent.

- The Western bumble bee (*Bombus occidentalis occidentalis*), Franklin's bumble bee (*Bombus franklini*), Crotch's bumble bee (*Bombus crotchii*), and Suckley cuckoo bumble bee (*Bombus suckleyi*) are state candidates for listing as endangered. While historically found throughout much of central and northern California, western bumble bees are now confined to high elevation sites and a small number of records on the northern California coast; while Crotch's bumble bees' range has contracted to areas of coastal southern California and the Central Valley to the north and southwest of Sacramento (Xerces Society 2018). Similarly, the Suckley cuckoo bumble bee relies on its host species, the western bumble bee, and would not be expected to occur outside that species' range. Franklin's bumble bee is only known from a small area of the Siskiyou Mountains of northern California. These species are not expected to occur in the BSA due to these recent range contractions.

- The tidewater goby (*Eucyclogobius newberryi*), federally listed as endangered and a California species of special concern, and the California brackish water snail (*Tryonia imitator*), which is considered a rare species by the San Mateo County LCP, both occur in brackish, tidally influenced waters. The reach of Pilarcitos Creek to the south of the BSA is approximately 1.3 miles upstream of the Pacific Ocean and is considered a freshwater stream. Further, the portion of creek within the study area lacks shallow lagoons or pools of still, non-stagnant waters, and is subject to flashy flows. These conditions make the study area unsuitable for these and similar tidal species; therefore, they are not expected to occur there.

- The California black rail (*Laterallus jamaicensis coturniculus*) is state listed as threatened, a California fully protected species, and is considered a rare species by the San Mateo County LCP. This species occurs in fresh, brackish, and tidal marsh habitats. No marsh habitat or sufficiently large stands of emergent vegetation occur within the BSA and the species is not known to breed within the county (Sequoia Audubon Society 2001). Therefore, this species was determined to be absent.

- Critical habitat for the western snowy plover (*Charadrius alexandrinus nivosus*), federally listed as threatened, is located approximately 0.5 mile west of the BSA at Half Moon Bay State Beach. However, suitable beach habitat is not present within the study area. Thus, this species is not expected to occur in the study area, or close enough to the study area to be potentially disturbed by project activities.

- The California least tern (*Sterna antillarum browni*), federally and state listed as endangered, a California fully protected species, and a San Mateo County LCP rare species, nests on tidal flats and beaches. The species typically forages over open water habitat, but it is only rarely observed in open waters along the ocean coastline. Further, open-water foraging habitat suitable for this species and beach habitat area absent from the BSA; therefore, this species was determined to be absent.

- The BSA lacks suitable coastal coniferous forest nesting habitat for the marbled murrelet (*Brachyramphus marmoratus*), federally listed as threatened. Thus, this species is determined to be absent.

- Olive-sided flycatcher (*Contopus cooperi*), Vaux's swift (*Chaetura vauxi*), and yellow-breasted chat (*Icteria virens*) are considered California species of special concern only when they are nesting. Although these species may occur in the study area as nonbreeding transients, foragers, or migrants, they would not nest in the BSA owing to the lack of suitable nesting habitat and absence of breeding areas close to the study area.

- The BSA lacks suitable structures or trees with crevices and cavities that would provide habitat for large roosting or maternity colonies of bats, including the Townsend's big-eared bat (*Corynorhinus townsendii*), and the pallid bat (*Antrozous pallidus*), which are California species of special concern. Pallid bats may forage over Pilarcitos Creek and in open habitats adjacent to the study area, but the probability that pallid bats occur in the project vicinity was determined to be low due to the extent of urbanization. Townsend's big-eared bats are sensitive to human disturbance, and are therefore not expected to occur within the highly urbanized study area.

- The southern sea otter (*Enhydra lutris nereis*), federally listed as threatened and a California fully protected species, Guadalupe fur seal (*Arctocephalus townsendi*), federally and state listed as threatened and a California fully protected species, and California brown pelican (*Pelecanus occidentalis californicus*), a California fully protected species, are considered rare species under the San Mateo County LCP. These species, as well as other marine mammals, utilize coastal marine, beach, and island habitats and are closely associated with near shore habitats. No open water or beach habitats occur within or near the BSA. Thus, these species were determined to be absent.

- The trees along the riparian corridor in the BSA provide suitable nesting and foraging habitat for the San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*). However, no woodrat nests were observed during the focused survey of the BSA. Therefore, the San Francisco dusky-footed woodrat was determined to be absent.

- Several California species of special concern are associated with open grassland habitat, including the northern harrier (*Circus cyaneus*), short-eared owl (*Asio flammeus*), loggerhead shrike (*Lanius ludovicianus*), grasshopper sparrow (*Ammodramus savannarum*), Bryant's savannah sparrow (*Passerculus sandwichensis*

alaudinus), and American badger (*Taxidea taxus*). Open grasslands are absent from the study area; therefore, these species are not expected to breed there, or to occur regularly as nonbreeding foragers.

Several other special-status wildlife species, such as the California brown pelican, bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), and peregrine falcon (*Falco peregrinus*), occur in the study area only as occasional nonbreeding visitors. Project impacts on these visitors will be limited to temporary impacts to a very small proportion of regionally available foraging habitat during construction. Such species will therefore not be substantially affected by the project and are not discussed further.

5.2.1 Federal and State Endangered and Threatened Species

CCC Coho Salmon. Federal Listing Status: Endangered; State Listing Status: Endangered. The CCC evolutionarily significant unit (ESU) of coho salmon was federally listed as a threatened species in 1997 and upgraded to endangered on June 28, 2005 (NMFS 2005). Critical habitat was designated on May 5, 1999, for the CCC and Southern Oregon/Northern California Coast coho salmon (NMFS 1999), and a recovery plan was published in October 2016 (NMFS 2016). CCC coho salmon populations are threatened by significant habitat reduction resulting from gravel mining, poor logging practices, urbanization, and other sources of streambed alteration. This reduction in habitat, in conjunction with reduced genetic diversity, introduced diseases, overharvesting, and climate change, has severely affected coho salmon populations (Brown et al. 1994).

The range of coho salmon extends between Alaska and central coastal California. The CCC ESU of the coho salmon is concentrated in coastal watersheds between Punta Gorda in Humbolt County and the San Lorenzo River in Santa Cruz County (Spence et al. 2005). Coho salmon are anadromous, meaning that they spend only a portion of their annual cycle in the marine environment and swim up coastal freshwater streams to spawn. Coho salmon spawn once they reach maturity (i.e., approximately 3 years) of age in cool, clear, freshwater streams and rivers with oceanic outlets; they die after spawning. Upstream migration from the ocean to spawning habitat occurs between September and December. Coho salmon prefer forested areas and deposit eggs at the heads of riffles with plentiful clean, small- to medium-sized gravel (Moyle 2002). Juveniles seek out cool, deep (i.e., greater than 1 meter [3.3 feet]) water with substantial overhead and instream cover such as woody debris (Moyle 2002). Juveniles typically rear in relatively low-gradient freshwater streams for 1 or 2 years before migrating to the ocean, although some may use estuarine habitats. The downstream migration of juveniles to marine or estuarine areas occurs in spring (i.e., from March through May).

CCC coho salmon populations in the project region have been severely reduced through habitat modification, including levee construction, channel realignment, water diversion structure installation, and recreational fishing. Pilarcitos Creek historically contained CCC coho salmon; however, their passage upstream is impeded at multiple culverts, and the Pilarcitos Creek Watershed Assessment Plan identified the majority of habitat in the watershed to be in poor condition (Phillip Williams & Associates 2008). Inventory surveys conducted by CDFW in Pilarcitos Creek did not document CCC coho salmon adults or juveniles (CDFW 2013). The Pilarcitos Creek Watershed Assessment Plan identifies opportunities (e.g., road crossing improvements) to protect and restore fish passage and habitat connectivity within the watershed. The improvements implemented

under the plan could improve habitat conditions and restore the local presence of adult and juvenile CCC coho salmon.

The BSA is near to, but does not contain designated critical habitat for CCC coho salmon (NMFS 1999, Figure 2). The primary constituent element (PCE) of critical habitat in the study area is the presence of freshwater migration corridors that are free of obstruction, have suitable water quantity and quality conditions, and contain natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks. These habitat conditions enable juveniles to avoid high flows and predators, successfully compete, have adequate time to undergo the behavioral and physiological changes needed for ocean life, and reach the ocean in a timely manner. The aforementioned habitat conditions are also essential for adult, non-feeding CCC coho salmon because they facilitate individuals being able to swim upstream, avoid predators, and reach spawning areas on limited energy stores.

The segment of Pilarcitos Creek to the south of the BSA is suitable for the upstream and downstream migration of adult and juvenile CCC coho salmon. However, this segment of the creek does not support suitable spawning, rearing, or feeding habitat during most of the year due to the lack of channel complexity, appropriately-sized gravel, or connectivity with the adjacent floodplain. The absence of CCC coho salmon from the entire creek during the 2013 CDFW surveys further reduces the potential for coho to be present, and we do not expect that this species would be present in the study area when work occurs.

CCC Steelhead. Federal Listing Status: Threatened; State Listing Status: None. The CCC steelhead distinct population segment (DPS) was federally listed as a threatened species on August 18, 1997 (NMFS 1997), and the threatened status was reaffirmed on January 5, 2006 (NMFS 2006). Critical habitat was designated for the CCC steelhead DPS on September 2, 2005 (NMFS 2005) and a final recovery plan was published in October 2016. Similar to CCC coho salmon, steelhead populations in many areas have declined due to degradation of spawning habitat, introduction of barriers to upstream migration, over-harvesting by recreational fisheries, reduction in winter flows due to damming, and lessened spring flows due to water diversions (NMFS 1997). In addition, nonnative fish species, such as striped bass (*Morone saxatilis*), common carp (*Cyprinus carpio*), and white catfish (*Ameiurus catus*), may pose risks to native steelhead populations through predation, competition, and habitat modification. The increasing predation pressure from the growing California sea lion population at river mouths and in the ocean also represents a substantial threat to CCC steelhead.

Steelhead are found along the entire Pacific Coast of the United States. The CCC steelhead DPS includes all naturally spawned populations of steelhead in coastal streams from the Russian River (inclusive) to Aptos Creek (inclusive), and the drainages of San Francisco, San Pablo, and Suisun Bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin Rivers; and tributary streams to Suisun Marsh including Suisun Creek, Green Valley Creek, and an unnamed tributary to Cordelia Slough (commonly referred to as Red Top Creek), exclusive of the Sacramento-San Joaquin River Basin of the Central Valley.

Steelhead in the CCC DPS are winter-spawning; they mature in the ocean and spawn shortly after entering freshwater. Winter steelhead enter rivers and streams in the late fall and winter months when higher flows and associated lower water temperatures occur. Adult female steelhead will prepare a redd (or nest) in gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Preferred streams typically support dense canopy cover that provides shade, woody debris, and organic matter, and are usually free of rooted or aquatic vegetation. The length of the incubation period is dependent on water temperature. Fry emerge from the gravel and rear along the stream margins, moving gradually into pools and riffles as they grow larger. Young juveniles feed primarily on aquatic invertebrate drift.

In California, juveniles usually live in freshwater for 2 years (Barnhart 1986) with a range of 1 to 3 years (Shapovalov and Taft 1954, Busby et al. 1996). They then undergo smoltification and migrate to the sea; because of this multi-year rearing time period, steelhead can only spawn in tributaries that maintain suitable temperature and other water quality parameters year-round. Most downstream smolt migration takes place between February and June. Fukushima and Lesh (1998) reported the peak timing of steelhead smolt outmigration in Central California occurs in March, April, and May, while Barnhart (1986) found that most steelhead smolts in California enter the sea in March and April.

In a recent survey of coastal drainages south of San Francisco Bay, steelhead populations were either extinct or reduced in size from historical levels in at least half of the 168 surveyed mainstem streams and primary tributaries (Titus et al. in prep.). In addition, only 14% of the streams had steelhead present where there was no discernible, significant change from historical production levels. Steelhead in most tributaries to San Francisco and San Pablo bays have been virtually extirpated (McEwan and Jackson 1996).

CCC steelhead are known to occur in Pilarcitos Creek (CDFW 2013, CNDDB 2019); however, passage upstream is impeded at multiple culverts, and the Pilarcitos Creek Watershed Assessment Plan identified the majority of habitat in the watershed to be in poor condition (Phillip Williams & Associates 2008). The Pilarcitos Creek Watershed Assessment Plan identifies opportunities (e.g., road crossing improvements) to protect and restore fish passage and habitat connectivity within the watershed. The improvements implemented under the plan could improve habitat conditions and restore the local presence of adult and juvenile CCC steelhead.

Habitat conditions in the study area are suitable to support freshwater migration of adult and juvenile CCC steelhead. The study area does not support suitable habitat for spawning, rearing, or feeding during most times of the year due to the lack of channel complexity, gravels, or connectivity with the adjacent floodplain. As a result, steelhead are only present in the Project reach during upstream and downstream migration, which occurs late fall into spring.

Designated critical habitat for CCC steelhead includes aquatic habitat within Pilarcitos Creek to the south of the BSA (NMFS 2005). One of the PCEs of critical habitat essential to the conservation of the species is present within the study area. This PCE consists of freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic

vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival. These features are essential to conservation because without them juveniles cannot use the variety of habitats that allow them to avoid high flows, avoid predators, successfully compete, begin the behavioral and physiological changes needed for life in the ocean, and reach the ocean in a timely manner. Similarly, these features are essential for adults because they allow fish in a nonfeeding condition to successfully swim upstream, avoid predators, and reach spawning areas on limited energy stores.

San Francisco Garter Snake. Federal Listing Status: Endangered; State Listing Status: Endangered (Fully Protected). The historical distribution of the San Francisco garter snake included wetland areas on the San Francisco peninsula from the San Francisco County line. The species' range previously extended south along the eastern and western foothills of the Santa Cruz Mountains to at least Upper Crystal Springs Reservoir and Año Nuevo Point in San Mateo County, and to Waddell Creek in Santa Cruz County. The current distribution of San Francisco garter snake is restricted to San Mateo County and it is known to occur in creeks in the city of Half Moon Bay (H. T. Harvey & Associates 1999).

The San Francisco garter snake is a medium-sized snake that inhabits multiple aquatic and terrestrial habitats. Juveniles and adults have been observed in natural lagoons, dune ponds, streams, pools in or next to streams, marshes, sag ponds, and springs, as well as human-created stock ponds, canals, golf course ponds, irrigation ponds, sand and gravel pits containing water, and large reservoirs (USFWS 1985). The presence of adjacent upland areas with abundant small mammal burrows is also important because they represent hibernation sites for snakes during the winter (Larsen 1994). The most abundant populations of snakes are found in natural sag ponds or artificial waterways that have been allowed to develop a dense cover of vegetation such as willows, bulrushes or tules (*Schoenoplectus* sp.), and cattails (*Typha* sp.), and have dense populations of Pacific tree frogs (Barry 1993, 1994).

San Francisco garter snakes are most active from March to September, although they can be observed during any month of the year (Barry 1994, Larsen 1994). Adults mate during the spring (March through April) and fall (September through November); the fall breeding period is characterized by reproductive aggregations of several males and one female. Neonates, which are normally 7 to 8 inches long, are usually born alive in litters of 1–35 (average size is 16) from late July to early August, although litters can be born as late as early September.

The San Francisco garter snake population in San Mateo County has been severely reduced throughout most of its historical range due to habitat loss and development; however, the project region still supports an extant population of the species. San Francisco garter snakes have been documented within the project region as recently as 2008. Although the specific CNDDB occurrence locations of San Francisco garter snakes are suppressed because of concern about illegal collection of the species, there are two records for the Half Moon Bay 7.5-minute USGS quadrangle that are associated with Pilarcitos Creek. The presence of California red-legged frogs in Pilarcitos Creek increases the likelihood that San Francisco garter snakes could occur along the creek south of the BSA or in the adjacent arroyo willow riparian forest.

San Francisco garter snakes can move into upland habitats during summer to prey on amphibians aestivating in small mammal burrows (Barry 1993). They could potentially forage on amphibians in Pilarcitos Creek and disperse and/or aestivate throughout the BSA, including areas outside the riparian habitat. The San Francisco garter snake is therefore considered potentially present throughout the BSA. However, because the reach of Pilarcitos Creek within the study area does not contain pools deep enough to support breeding by California red-legged frogs or bullfrogs, and thus large frogs are likely rare in the project vicinity, the project site and nearby upland areas are not considered high-quality foraging habitat for San Francisco garter snakes, and it is possible that this species may be absent altogether.

California Red-legged Frog. Federal Listing Status: Threatened; State Listing Status: Species of Special Concern. California red-legged frogs inhabit perennial freshwater pools, streams, and ponds throughout the central California Coast Range, as well as isolated portions of the western slopes of the Sierra Nevada (Fellers 2005). Their preferred breeding habitat consists of deep perennial pools with emergent vegetation for attaching egg clusters (Fellers 2005) and shallow benches to act as nurseries for juveniles (Jennings and Hayes 1994). Nonbreeding frogs can occur adjacent to streams and ponds in grasslands and woodlands, and may travel up to 2 miles from their breeding locations across a variety of upland habitats (Bulger et al. 2003, Fellers and Kleeman 2007).

The historical distribution of California red-legged frogs extended from the city of Redding in the Central Valley and Point Reyes National Seashore along the coast, south to Baja California, Mexico. The species' current distribution includes isolated locations in the Sierra Nevada and the San Francisco Bay area, and along the central coast (USFWS 2002). The California red-legged frog was listed as federally threatened in June 1996 (USFWS 1996) primarily because of significant range reduction and continued threats to surviving populations (Miller 1994). Revised critical habitat was designated in March 2010 (USFWS 2010). Although there is no overlap between designated critical habitat and the study area, Critical Habitat Unit SNM-1 (San Mateo) is located approximately 0.4 mile to the east (USFWS 2010).

One occurrence of the California red-legged frog adults has been reported within 0.5 mile of the project area. This occurrence is in 0.3 miles to the west, in Pilarcitos Creek. The reach of Pilarcitos Creek within the study area is generally not suitable for California red-legged frog breeding because its hydrology and topography do not support pools deep enough to provide breeding habitat. In addition, Pilarcitos Creek is subject to flashy flows of stormwater and urban runoff, which could result in scouring of amphibian egg masses and prevent successful breeding of California red-legged frogs. Because of the lack of deep pools, the quality of aquatic foraging habitat within the study area is also considered low. In addition, no burrows of fossorial mammals (e.g., California ground squirrel) that could provide refugia were observed in the BSA. However, California red-legged frogs may occasionally disperse into the project area from higher-quality habitat areas upstream and downstream.

5.2.2 California Species of Special Concern

Western Pond Turtle. Federal Listing Status: None; State Listing Status: Species of Special Concern. The western pond turtle occurs in ponds, streams, and other wetland habitats in the Pacific slope drainages of California and northern Baja California, Mexico (Bury and Germano 2008). The central California population was historically present in most drainages on the Pacific slope (Jennings and Hayes 1994), but streambed alterations and other sources of habitat destruction, exacerbated by frequent drought events, have caused substantial population declines throughout most of the species' range (Stebbins 2003). Ponds or slack-water pools with suitable basking sites (such as logs) are an important habitat component for this species, and western pond turtles do not occur commonly along high-gradient streams. Females lay eggs in upland habitats, in clay or silty soils in unshaded (often south-facing) areas up to 0.25 mile from aquatic habitat (Jennings and Hayes 1994). Juveniles feed and grow in shallow aquatic habitats (often creeks) with emergent vegetation and ample invertebrate prey. Nesting habitat is typically found within 600 feet of aquatic habitat (Jennings and Hayes 1994), but if no suitable nesting habitat can be found close by, adults may travel overland considerable distances to nest. Threats to the western pond turtle include impacts on nesting habitat from agriculture and development, and increased predation pressure from native and nonnative species as a result of human-induced landscape changes.

The reach of Pilarcitos Creek adjacent to the BSA and its associated riparian forest are degraded due to surrounding development, the presence of nonnative predators, presence of homeless encampments, and extensive stands of cape ivy; however, suitable basking and foraging habitat for pond turtles is present in these areas. Suitable nesting habitat for pond turtles is also present in the BSA in upland areas adjacent to Pilarcitos Creek, although this habitat is degraded due to the urban nature and heavy human usage of the area. Thus, there is some potential for western pond turtles to nest and forage in the study area, although they are expected to do so in low numbers, if at all.

Yellow Warbler. Federal Listing Status: None; State Listing Status: Species of Special Concern (Nesting). The yellow warbler is a widespread neotropical migrant that inhabits wet deciduous forests throughout North America (Lowther et al. 1999). In California, the yellow warbler occupies wooded riparian habitats along the coast, on both eastern and western slopes of the Sierra Nevada up to approximately 1,700 feet, and throughout the northern portion of the state (Heath 2008). Its range has remained relatively stable over time, but populations have declined substantially in many localities because of habitat loss (Cain et al. 2003, Heath 2008) and expansion of the brood-parasitic, brown-headed cowbird (*Molothrus ater*). As a result, breeding yellow warbler has been largely extirpated from the Santa Clara Valley (Heath 2008). Ideal breeding habitat for yellow warbler consists of riparian corridors with dense, shrubby understory and open canopy (Lowther et al. 1999, Cain et al. 2003, Heath 2008). The yellow warbler breeds from early May through early August, and constructs open-cup nests in upright forks of shrubs or trees in dense willow thickets or other dense vegetation (Lowther et al. 1999).

Yellow warblers are uncommon breeders in the project vicinity due to loss of riparian habitat, invasion by nonnative plants, development along riparian corridors, and the abundance of the brown-headed cowbirds in

the Half Moon Bay area. However, small numbers of yellow warblers still breed in remnant riparian areas within neighboring Santa Clara County (Bousman 2007). Suitable breeding habitat consists of riparian corridors, often with an overstory of mature cottonwoods and sycamores, a midstory of box elder and willow, and a substantial shrub understory (Bousman 2007). Riparian areas with reduced understory because of grazing or disturbance generally are not used by this species, and riparian corridors lacking open ruderal or herbaceous vegetation along the edges of the corridors or with development up to the corridor edge often are avoided as well. The riparian forest habitat along Pilarcitos Creek adjacent to the BSA provides at least moderately suitable breeding conditions for a few pairs of yellow warblers, and probable breeding has been recorded in the project vicinity (Sequoia Audubon Society 2001). Yellow warblers are also an abundant migrant throughout the region during the spring and fall.

San Francisco Common Yellowthroat. Federal Listing Status: None; State Listing Status: Species of Special Concern. The San Francisco common yellowthroat inhabits emergent vegetation and nests in fresh and brackish marshes and moist floodplain vegetation around the San Francisco Bay. Common yellowthroats will use small and isolated patches of habitat as long as groundwater is close enough to the surface to encourage the establishment of dense stands of rushes (*Scirpus* and *Juncus* spp.), cattails, willows, and other emergent vegetation (Nur et al. 1997, Gardali and Evens 2008). Ideal habitat, however, is composed of extensive, thick riparian, marsh, or herbaceous floodplain vegetation in perpetually moist areas, where few or no brown-headed cowbirds are present (Menges 1998). San Francisco common yellowthroats nest primarily in fresh and brackish marshes, although they will also nest in salt marsh habitats that support tall vegetation (Guzy and Ritchison 1999). This subspecies builds open-cup nests low in the vegetation, and nests from mid-March through late July (Guzy and Ritchison 1999, Gardali and Evens 2008).

The San Francisco common yellowthroat is one of approximately 12 subspecies of common yellowthroat recognized in North America, two of which occur in the project region: the California Species of Special Concern, *G. t. sinuosa*, and the widespread subspecies, *G. t. arizela*. Common yellowthroats nesting in the study area are likely of the special-status *sinuosa* subspecies, but intergrades between the two subspecies may also occur in this area (SFBBO 2012). Because subspecies cannot be reliably distinguished in the field, determination of the presence of the San Francisco common yellowthroat can be achieved only by locating birds that are actively nesting within the breeding range known for the subspecies.

Nesting San Francisco common yellowthroats have been recorded in the project vicinity (Sequoia Audubon Society 2001) and the species may nest in taller vegetation within the Pilarcitos Creek corridor. Because of the existing human use, this species is not expected to nest in vegetation within the BSA or in the immediate vicinity, though they may forage in vegetation close to the BSA year-round.

5.2.3 State Fully Protected Species

White-tailed Kite. Federal Listing Status: None; State Listing Status: Fully Protected. In California, white-tailed kites can be found in the Central Valley and along the coast in grasslands, agricultural fields, cismontane woodlands, and other open habitats (Zeiner et al. 1990, Dunk 1995, Erichsen et al. 1996). White-

tailed kites are year-round residents of the state, establishing nesting territories that encompass open areas with healthy prey populations and snags, shrubs, trees, or other substrates for nesting (Dunk 1995). Nonbreeding birds typically remain in the same area over the winter, although some movements do occur (Polite 1990). The presence of white-tailed kites is closely tied to the presence of prey species, particularly voles, and prey base may be the most important factor in determining habitat quality for white-tailed kites (Dunk and Cooper 1994, Skonieczny and Dunk 1997). Although the species recovered after population declines during the early 20th century, its populations may be exhibiting new declines because of recent increases in habitat loss and disturbance (Dunk 1995, Erichsen et al. 1996).

White-tailed kites are common residents in less-developed portions of the project region where open grassland, ruderal, or agricultural habitats are present. Large trees on and immediately adjacent to the study area provide suitable nesting sites. The open habitats (e.g., agricultural areas) near the BSA provide limited foraging opportunities for this species. Additionally, the developed nature and high levels of human disturbance within the study area make it less attractive to nesting kites; however, up to one pair of white-tailed kites may attempt to nest in trees within the study area.

5.3 Sensitive Natural Communities, Habitats, and Vegetation Alliances

Natural communities have been considered part of the Natural Heritage Conservation triad, along with plants and animals of conservation significance, since the state inception of the Natural Heritage Program in 1979. The CDFW determines the level of rarity and imperilment of vegetation types, and tracks sensitive communities in its Rarefind database (CNDDB 2019). Global rankings (G) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas state (S) rankings reflect the condition of a habitat within California. Natural communities are defined using NatureServe's standard heritage program methodology as follows (CDFG 2007):

- G1/S1: Less than 6 viable occurrences or less than 2,000 ac.
- G2/S2: Between 6 and 20 occurrences or 2,000 to 10,000 ac.
- G3/S3: Between 21 and 100 occurrences or 10,000 to 50,000 ac.
- G4/S4: The community is apparently secure, but factors and threats exist to cause some concern.
- G5/S4: The community is demonstrably secure to ineradicable due to being common throughout the world (for global rank) or the state of California (for state rank).

State rankings are further described by the following threat code extensions:

- S1.1: Very threatened
- S1.2: Threatened

- S1.3: No current threats known

In addition to tracking sensitive natural communities, the CDFW also ranks vegetation alliances, defined by repeating patterns of plants across a landscape that reflect climate, soil, water, disturbance, and other environmental factors (Sawyer et al. 2009). If an alliance is marked G1-G3, all the vegetation associations within it will also be of high priority (CDFG 2007). The CDFW provides the Vegetation Classification and Mapping Program's (VegCAMP) currently accepted list of vegetation alliances and associations (CDFG 2010).

Impacts on CDFW sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, must be considered and evaluated under CEQA (Title 14, Division 6, Chapter 3, Appendix G of the California Code of Regulations). Furthermore, aquatic, wetland and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, USFWS, and/or the Half Moon Bay LCP.

Sensitive Natural Communities. There are no CDFW classified sensitive natural communities within the BSA, However, there are two sensitive natural communities identified in the CNDDB within five miles of the BSA:

- **Northern maritime chaparral**. Northern maritime chaparral is characterized by a dense, nearly impenetrable shrub cover composed of several species. Characteristic species include chamise (*Adenostoma fasciculatum*), buckbrush (*Ceanothus cuneatus*) as well as other *Ceanothus* species, black sage (*Salvia mellifera*), and several species of manzanitas (*Manzanita* sp.). Northern maritime chaparral is not present within the BSA because none of the characteristic plant species that make up this community are present.
- **Northern coastal salt marsh**. Northern coastal salt marsh is characterized is wetland community dominated by herbaceous to sub-shrub salt-tolerant hydrophytes that typically forms a dense mat of vegetation up to three feet high. Characteristic species include pickleweed (*Salicornia* sp.), cordgrass (*Spartina* sp.), and salt grass (*Distichlis spicata*). Northern coastal salt marsh is not present within the BSA because none of the characteristic plant species that make up this community are present.

Sensitive Vegetation Alliances. There is one CDFW-classified sensitive vegetation alliances within the BSA. Impacts to these plant communities may be considered significant under CEQA. Sensitive plant communities identified by CDFW within the BSA include the red willow-arroyo willow vegetation alliance, which is found within the riparian forest along Pilarcitos Creek (Figure 3). This plant community has been identified by CDFW as "G4 S3", which means that it is rare and threatened throughout its range in California but is apparently secure throughout its range outside of California. This vegetation alliance occurs within the riparian forest in the BSA.

Waters of the U.S./State. Pilarcitos Creek would be considered waters of the U.S. below the ordinary high water marks and waters of the state or important buffer habitat to waters of the state below top of bank or the outer canopy of any trees rooted within top of bank. Any impacts on verified waters of the U.S./state within

the BSA would require a Section 404 permit from the USACE and Section 401 Water Quality Certification and/or Waste Discharge Requirement from the San Francisco RWQCB. Also, Pilarcitos Creek and the full extent of the arroyo willow riparian forest, including areas extending beyond top of bank into the BSA, are subject to lake and streambed jurisdiction under Section 1600 et seq. of State Fish and Game Code (see Section 5.4).

Environmentally Sensitive Habitat Areas. The BSA contains one ESHA or sensitive coastal resource areas–arroyo willow riparian forest. The riparian forest along Pilarcitos Creek is classified as sensitive habitat by the Half Moon Bay LCP and is also subject to riparian jurisdiction under Section 1600 et seq. of State Fish and Game Code.

Wild strawberry habitat is also included as a sensitive habitat in the Zoning Code and Local Coastal Program and is defined as "any undeveloped areas within one half mile of the coast" (City of Half Moon Bay 2018). The BSA is approximately 1.2 mi from the coast and therefore does not meet the definition of wild strawberry habitat due to its distance from the coast. Additionally, no strawberry plants were observed during the reconnaissance-level field survey in November 2019.

Critical Habitat. Pilarcitos Creek is designated as critical habitat for the federally Threatened CCC steelhead Distinct Population Segment.

Critical habitat for the CCC steelhead DPS was designated on September 2, 2005 and includes all river reaches and estuarine areas accessible to listed steelhead in coastal river basins from the Russian River in Sonoma County to Aptos Creek in Santa Cruz County. The San Mateo Hydrologic Unit includes the coastal streams in San Mateo County from San Pedro Creek near Pacifica to Butano Creek near Año Nuevo (NOAA 2005).

5.4 Non-Native and Invasive Species

Non-native, invasive plant species occur in the BSA in the arroyo willow riparian forest, primarily cape ivy and garden nasturtium. Of these, cape ivy has the potential to cause the most severe ecological impacts, as this species can invade and degrade the margins of sensitive wetland habitat, and is rated high impact by the Cal-IPC (Cal-IPC 2019).

Section 6. Anticipated Avoidance, Minimization, and Mitigation Measures

The State CEQA Guidelines provide direction for evaluating the impacts of projects on biological resources and determining which impacts will be significant. CEQA defines a "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under State CEQA Guidelines Section 15065, a project's impacts on biological resources are deemed significant if the project would:

A. "substantially reduce the habitat of a fish or wildlife species"

B. "cause a fish or wildlife population to drop below self-sustaining levels"

C. "threaten to eliminate a plant or animal community"

D. "reduce the number or restrict the range of a rare or endangered plant or animal"

In addition to the Section 15065 criteria that trigger mandatory findings of significance, Appendix G of State CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the project 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 Game 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, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"

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

D. "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites"

E. "conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance"

F. "conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan"

6.1 Impacts on Special-Status Species

Impacts on Special-Status Species: 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 CDFW or USFWS (Less than Significant with Mitigation)

6.1.1 Impacts on Special-Status Plant Species (No impact)

There is no suitable habitat for any species of special status plant present within the BSA, and all potentially occurring species are considered absent from the site. Therefore, there are no impacts to special status plants associated with the project and no mitigation is necessary.

6.1.2 Impacts on the California Red-legged Frog, San Francisco Garter Snake, and Western Pond Turtle (Less than Significant with Mitigation)

The number of California red-legged frogs, San Francisco garter snakes, and western pond turtles that could potentially occur in the study area is low for the reasons discussed above. Due to the developed nature of the project site (lack of cover and food resources), even fewer can be expected to be encountered there, and it is possible that the San Francisco garter snake is completely absent from the project site. As a result, the likelihood and magnitude of project impacts on these species would be very low. Nevertheless, project activities could result in the direct loss and indirect disturbance of a very small number of individuals of these species, and very limited areas of their habitats. In the absence of mitigation measures, the project could result in direct impacts on individuals through injury or mortality from trampling by construction personnel or equipment. In addition, individuals may be crushed in their refugia by the passage of heavy equipment or trapped and suffocated. An increase in native and non-native predators attracted to the Project site due to trash left on the work site might result in increased mortality of individuals of these species. Due to the rarity of these species, project-related impacts on individual California red-legged frogs, San Francisco garter snakes, and western pond turtles would be significant.

Implementation of Mitigation Measures 1 through 13 will reduce project impacts on the California red-legged frog, San Francisco garter snake, and western pond turtle due to construction disturbance and impacts on individuals to a less-than-significant level. In addition, implementation of these mitigation measures will ensure that take of individuals (e.g., handling, injury, or mortality) of the state fully protected San Francisco garter snake, which is prohibited by the California Fish and Game Code for construction projects such as this, will be avoided.

Mitigation Measure 1. Receive Agency Approval of Qualified Biologist. The qualifications of biologist(s) experienced with the California red-legged frog, San Francisco garter snake, and western pond turtle will be

submitted to the USFWS and CDFW for review and written approval at least thirty (30) calendar days prior to the start of Project activities.

Mitigation Measure 2. Install Temporary Wildlife Exclusion Barrier. Prior to any ground disturbance in the impact area, an agency-approved temporary wildlife exclusion barrier will be installed along the limits of disturbance, including along the areas of new/re-paved paths from Main Street and the proposed concrete paths at the southeastern corner of the site, and along the proposed path that loops around the stage through the 50-foot riparian buffer. An agency-approved biologist will inspect the area prior to installation of the barrier. The barrier will be designed to allow the California red-legged frog, San Francisco garter snake, and western pond turtle to leave the impact area and prevent them from entering the impact area, and will remain in place until all development activities have been completed. This barrier will be inspected daily and maintained and repaired as necessary to ensure that it is functional and is not a hazard to individuals of these species on the outer side of the barrier.

Mitigation Measure 3. Conduct Preconstruction Survey. No more than twenty-four (24) hours prior to the date of initial ground disturbance and before any work within the riparian buffer until the exclusion fence is fully erected, a pre-construction survey for the California red-legged frog, San Francisco garter snake, and western pond turtle will be conducted by an agency-approved biologist within the impact area. The survey will consist of walking the limits of impact to ascertain the possible presence of the species. The agency-approved biologist will investigate all potential areas that could be used by individuals of these species for feeding, breeding, sheltering, movement, and other essential behaviors. This includes an adequate examination of mammal burrows, such as California ground squirrels or gophers.

Mitigation Measure 4. Worker Environmental Awareness Program. All construction personnel will participate in a worker environmental awareness program. These personnel will be informed about the possible presence of all special-status species and habitats associated with the species identified here to be potentially present in the BSA. Prior to construction activities, the agency-approved biologist will instruct all construction personnel about (1) the description and status of the species; (2) the importance of their associated habitats; and (3) a list of measures being taken to reduce impacts on these species during project construction and implementation. A fact sheet conveying this information will be prepared for distribution to the construction crew and anyone else who enters the project site.

Mitigation Measure 5. Construction Monitoring. An agency-approved biologist(s) will be onsite during all project activities that may result in take of any of these three species (e.g., during all clearing and rough grading, or during any activities that are not enclosed within the wildlife exclusion barrier). The agency-approved biologist(s) will be given the authority to freely communicate verbally, by telephone, electronic mail, or in writing at any time with construction personnel, any other person(s) at the project site, otherwise associated with the project, the USFWS, the CDFW, or their designated agents. The agency-approved biologist will have oversight over implementation of all the conservation measures and will have the authority and responsibility to stop project activities if they determine any of the associated requirements are not being fulfilled. If the

agency-approved biologist(s) exercises this authority, the USFWS will be notified by telephone and electronic mail within twenty-four (24) hours.

Mitigation Measure 6. Steep-walled Holes and Trenches. To prevent inadvertent entrapment of the California red-legged frog, San Francisco garter snake, or western pond turtle during construction, the agency-approved biologist and/or construction foreman/manager will ensure that all excavated, steep-walled holes or trenches more than one foot deep are completely covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks and inspected by the agency-approved biologist. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals by the agency-approved biologist and/or construction foreman/manager. If at any time a trapped California red-legged frog, San Francisco garter snake, or western pond turtle is discovered by the agency-approved biologist or anyone else, the steps in Mitigation Measure 7 will be followed.

Mitigation Measure 7. Protocol if California Red-legged Frog, San Francisco Garter Snake, or Western Pond Turtle is Encountered. If a California red-legged frog, San Francisco garter snake, western pond turtle, or any animal that construction personnel believes may be either of these species, is encountered during project construction, the following procedures will be followed:

- All work that could result in direct injury, disturbance, or harassment of the individual animal shall immediately cease.
- The foreman and agency-approved biologist will be immediately notified.
- The agency-approved biologist will determine if the animal is a California red-legged frog, San Francisco garter snake, or western pond turtle and if so will follow Mitigation Measure 16 for California red-legged frog or western pond turtle, or Mitigation Measure 17 for San Francisco garter snake.

Mitigation Measure 8. Relocation of California Red-legged Frogs and Western Pond Turtles. If any life stages of the California red-legged frog are found, the agency-approved biologist will contact the USFWS to determine if moving individuals is appropriate. If the USFWS approves moving animals, the biologist will move the red-legged frogs to suitable habitat at least 300 m from the project area. The same procedure will be followed with respect to western pond turtles, although no USFWS approval to relocate that species is necessary. Only agency-approved biologists will capture, handle, and move California red-legged frogs or western pond turtles. The agency-approved biologist will monitor any relocated frog or turtle until it is determined that it is not imperiled by predators or other dangers.

Mitigation Measure 9. Monitor San Francisco Garter Snake. The agency-approved biologist will monitor any individual of the San Francisco garter snake encountered within the impact area but allow it to leave the impact area on its own. If the agency-approved biologist determines that the snake cannot leave on its own, then the USFWS and CDFW will be consulted to determine if the snake can be captured and relocated to appropriate habitat on the outside of the impact area.

Mitigation Measure 10. Daytime Restriction. Construction activities related to park improvements will be restricted to the daytime. No nighttime construction will occur.

Mitigation Measure 11. Food and Trash. To eliminate an attraction for the predators of the California red-legged frog, San Francisco garter snake, and western pond turtle, all food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in solid, closed containers (trash cans) and removed at the end of each working day from the entire construction site. As part of routine park maintenance, City staff will remove trash on a regular schedule to prevent trash bins from overfilling.

Mitigation Measure 12. Prohibition of Plastic Mono-filament Netting. Plastic mono-filament netting (erosion control matting), rolled erosion control products or similar material will not be used at the project site to prevent trapping California red-legged frogs, San Francisco garter snakes, western pond turtles, or other species.

Mitigation Measure 13. Best Management Practices. During all construction implementation, standard Best Management Practices (BMPs) will be used to minimize erosion and impacts to water quality to protect water quality in areas used by the California red-legged frog, San Francisco garter snake, and western pond turtle. These will be incorporated into the proposed project. Construction BMPs may include but are not limited to the following:

- No litter, debris, or sediment will be dumped into existing site drainage systems. Trash and debris will be removed from the project site on a daily basis during construction and regularly during park operations.
- Equipment staging and parking of vehicles will occur on established access roads and flat surfaces.
- The integrity and effectiveness of construction fencing and erosion control measures will be inspected on a daily basis. Corrective actions and repairs will be carried out immediately for fence breaches and ineffective BMPs.
- Fueling, washing, and maintenance of vehicles will occur in developed habitat at least 50 feet away from the riparian habitat and stream channel. Equipment will be regularly maintained to avoid fluid leaks. Any leaks will be captured in containers until equipment is moved to a repair location. Hazardous materials will be stored only within the developed habitat. Containment and cleanup plans will be prepared and implemented for the immediate cleanup of fluid or hazardous materials spills.
- Sediment-laden water will not be allowed to enter the stream channel.
- Absorbent materials designated for spill containment and clean-up activities shall be available on site for use in an accidental spill.

6.1.3 Impacts on the Central California Coast Steelhead and Central California Coast Coho (Less than Significant with Mitigation)

CCC steelhead, and possibly CCC coho, may be present in Pilarcitos Creek adjacent to or downstream of the BSA. Because the project will not occur within Pilarcitos Creek in the BSA, direct impacts of construction-related activities are not expected to occur. Additionally, the areas of the BSA proposed to be redeveloped are buffered from the riparian corridor in most locations by about 20 feet, and then the stream is protected by an additional approximately 60-150 feet of dense arroyo willow riparian habitat, which provides a natural buffer to sedimentation. The project will also comply with a stormwater pollution prevention plan during construction to prevent disturbed soils from releasing sediment into the riparian corridor. However, during construction, minor and temporary increases in turbidity within the creek may occur if sediment mobilized by the project is washed (e.g., in runoff) into Pilarcitos Creek. Implementation of Mitigation Measure 13 will further minimize potential impacts on CCC steelhead and CCC coho as a result of increased turbidity in Pilarcitos Creek, thereby reducing this impact to a less-than-significant level.

6.1.4 Impacts on Nesting Yellow Warbler, San Francisco Common Yellowthroat, and White-tailed Kite (Less than Significant)

The yellow warbler, San Francisco common yellowthroat, and white-tailed kite are associated with riparian habitats, and may nest in this habitat and forage in the BSA. Heavy ground disturbance, noise, and vibrations caused by project development in the BSA could disturb foraging or roosting individuals, causing them to move away from impact area. Although adult birds are not expected to be killed or injured, as they could easily fly from the impact area prior to such effects occurring, eggs or young in nests or roosts could be injured or killed. In addition, project activities causing a substantial increase in noise, movement of equipment, or human presence near active nests could result in the abandonment of such nests, and possibly the loss of eggs or young as a result. However, based on the extent of suitable habitat within the riparian habitat associated with Pilarcitos Creek in the BSA and typical territory sizes of these species, no more than one pair of each of these species may nest in the BSA. Therefore, the loss of nesting effort potentially resulting from project activities would represent a very small fraction of the regional populations of these species and would not rise to the CEQA standard of having a *substantial* adverse effect.

Construction disturbance during the nesting season (February 1 through August 31, for most species) could result in the incidental loss of eggs or nestlings, either directly through the destruction or disturbance of active nests or indirectly by causing the abandonment of nests. This type of impact would not be significant under CEQA for the species that could potentially nest in the project site due to the local and regional abundances of these species and/or the low magnitude of the potential impact of the project on these species (i.e., the project is only expected to impact one or two individual pairs of these species, which is not a significant impact to their regional populations). However, we recommend that the following measures be implemented to ensure that project activities comply with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code:

Recommended Measure A. Avoidance. Construction activities will be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts to nesting birds protected under the MBTA and California Fish and Game Code will be avoided. The nesting season for most birds in San Mateo County extends from February 1 through August 31.

Recommended Measure B. Preconstruction Surveys. If it is not possible to schedule construction activities between September 1 and January 31, then preconstruction surveys for nesting birds will be conducted by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. These surveys will be conducted no more than seven days prior to the initiation of construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., shrubs and bridges) in and immediately adjacent to the impact area for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist will determine the extent of a construction-free buffer zone to be established around the nest (typically 300 ft for raptors and 100 ft for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation.

Recommended Measure C. Inhibition of Nesting. If construction activities will not be initiated until after the start of the nesting season, all potential nesting substrates (e.g., bushes, trees, grasses, and other vegetation) that are scheduled to be removed by the project will be removed prior to the start of the nesting season (e.g., prior to February 1). This will preclude the initiation of nests in this vegetation, and prevent the potential delay of the project due to the presence of active nests in these substrates.

6.1.5 Impacts Related to Increased Lighting (Less than Significant with Mitigation)

In general, the project will re-develop already developed areas within the park, which have some lighting currently. The majority of lighting will be low bollards. However, to support the stage and amphitheater, there will be production lighting erected on two, 18-foot-tall poles facing the stage. This light will be directed towards the riparian corridor based on the site design. Although this lighting would be used intermittently when performances are taking place, this will represent an increase in light levels in proximity to the riparian corridor, and therefore this impact could still have negative effects on special status species that would be considered potentially significant. Increased light levels could lead to greater predation on California red legged frogs, western pond turtles, or San Francisco garter snakes. Additionally, were the light able to reach the creek bed itself, it could affect CCC steelhead migration patterns. However, the stage will be located in front of an approximately 50-foot wide grove of mature coast redwood trees, which will create a screen to the riparian habitat much higher than the 18-foot production lighting, and which will prevent the majority of additional lighting from affecting special status species and their use of the riparian corridor. With implementation of Mitigation Measure 14 below, this impact will be less than significant.

Mitigation Measure 14. Reduce and Minimize Lighting Impacts. During park operations, the City will ensure that production lighting is focused or shielded so that all light is directed towards the stage, not above the stage and not to the side. Additionally, production lighting will only be used during a production, and will

not be used at other times. Light will be turned off promptly following nighttime productions. This would include any lighting that guides people to the amphitheater seats in the dark but that would not be needed during nights when productions are not being held in the amphitheater.

6.2 Impacts on Sensitive Communities

Impacts on Sensitive Communities: 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 (Less than Significant with Mitigation).

6.2.1 Impacts on Riparian Habitat or Other Sensitive Natural Communities (Less than Significant with Mitigation)

Within the BSA, arroyo willow riparian forest habitat is present along the banks of Pilarcitos Creek and forms a dense, wide thicket that extends up to 180 ft from the edges of the aquatic habitat in the bed of the creek to its outer edge along the perimeter of the BSA. The Zoning Code and Local Coastal Program includes riparian area and corridors as sensitive habitats. The City of Half Moon Bay Zoning Code defines the Riparian Buffer Zone as "land on both sides of riparian corridors which extends from the 'limit of riparian vegetation' 50 ft outward for perennial streams and wetlands. Also, the riparian habitat along Pilarcitos Creek includes the red willow-arroyo willow vegetation alliance, which is classified as a sensitive vegetation alliance, and considered jurisdictional riparian habitat under Sections 1600 et seq. of the State Fish and Game Code by CDFW.

Continuous riparian buffers provide important wildlife migration corridors, which are critical "movement highways" for terrestrial species such as mammals and reptiles as well as for water dependent species such as amphibians and waterfowl. Wildlife corridors play an important role in countering habitat fragmentation. A wildlife corridor is a landscape element which serves as a linkage between historically connected habitats or landscapes that are otherwise separated and is meant to provide avenues along which wildlife can travel, migrate, and meet mates; plants can propagate; genetic interchange can occur; populations can move in response to environmental changes and natural disasters; and individuals can re-colonize habitats from which populations have been locally extirpated. Corridors can consist of a sequence of stepping-stones across the landscape (i.e., discontinuous areas of habitat such as isolated wetlands and roadside vegetation), continuous lineal strips of vegetation and habitat (e.g., riparian strips and ridge lines), or they may be parts of larger habitat areas of known or likely importance to local wildlife. Thus, any permanent loss or temporary disturbance of riparian habitat because of the project would be considered significant under CEQA.

The project has been specifically designed to avoid direct impacts to the riparian corridor. Indirect impacts to these habitats will be minimized and avoided through compliance with the project stormwater pollution prevention plan, as well as observance of the 50-foot riparian buffer. Within the 50-foot riparian buffer, only trails will be constructed and some landscaping replaced. The existing path from Main Street, which directly abuts the riparian habitat, will be re-constructed in place using concrete. The riparian canopy slightly overhangs

this path, so although there may be light pruning of some riparian trees to do this work, there will be no substantial or permanent loss of riparian habitat.

The existing path on the eastern side of the park that proceeds from street level down the slope into the park will be re-paved. A small (approximately 54-foot-long) length of new concrete path will also be constructed in the riparian buffer to accommodate the ADA-compliant ramp path from the top of the park to the bottom of the amphitheater. The permeable, decomposed granite path around the back of the stage will wind through the coast redwood grove within the riparian buffer, being located at least 20 feet away from the riparian corridor in all locations. No new lighting is planned for this path, although existing lighting may be replaced within the riparian buffer where the existing paths are being re-constructed. Similarly, no new structures or development would be placed in the riparian buffer, as all play areas, the stage, amphitheater seating, new picnic area, and concession stands and bathrooms are all located outside the riparian buffer.

All proposed landscaping will be installed outside the buffer. Plantings include several native species such as lizard tail (*Eriophyllum staechadifolium*) snowberry (*Symphoricarpos mollis*), ceanothus (*Ceanothus thrysifolius*), and coffeeberry (*Rhamnus californica*), and would represent a small improvement in habitat quality in these areas, especially for wildlife frequently found in urban areas, such as native pollinators. Large areas currently covered in turfed lawn within the buffer are proposed to be planted in a more diverse array of native grasses and native and non-native flowering shrubs. While not all the plants proposed in the plan are native, those that are non-native are not expected to be invasive or to degrade the riparian corridor or buffer.

Because the impacts within the riparian buffer are minor and related to paths and improved landscaping, with the incorporation of Mitigation Measure 13 and Mitigation Measure 17 below, impacts to the sensitive riparian habitat within Pilarcitos Creek will be mitigated to a less than significant level.

Mitigation Measure 17. Pruning of Riparian Trees. If project activities require pruning of riparian trees or shrubs, a certified arborist will be retained to perform any necessary pruning to minimize harm to vegetation and ensure rapid regeneration. Pruning will be limited to the minimum area necessary.

6.2.2 Impacts Caused by Non-Native and Invasive Species (Less than Significant with Mitigation)

Several non-native, invasive plant species occur in riparian habitat located within or near the BSA, with the most important and impactful weed being cape ivy. Invasive species can spread quickly and can be difficult to eradicate. Many non-native, invasive plant species produce seeds that germinate readily following disturbance. Further, disturbed areas are highly susceptible to colonization by non-native, invasive species that occur locally, or whose propagules are transported by personnel, vehicles, and other equipment. Activities such as trampling, equipment staging, and vegetation removal are all factors that would contribute to disturbance. Areas of disturbance could serve as the source for promoting the spread of non-native species, which could degrade the ecological values of riparian habitat and adversely affect native plants and wildlife that occur there. Invasive species can have an adverse effect on native species and habitats in several ways, including by altering nutrient

cycles, fire frequency and/or intensity, and hydrologic cycles; by creating changes in sediment deposition and erosion; by dominating habitats and displacing native species; by hybridizing with native species; and by promoting non-native animal species (Bossard et al. 2000).

Invasive species such as cape ivy are already present within and adjacent to the riparian habitat. However, project activities near existing riparian habitat could cause them to spread further into previously unoccupied areas within the riparian habitats or spread to other sites from this site. Therefore, this impact is considered potentially significant. Implementation of the following mitigation measure will reduce potential weed-related impacts on sensitive habitats and the species they support to a less-than-significant level.

Mitigation Measure 18. Invasive Species Best Management Practices (BMPs). The following BMPs will be implemented to limit the spread of invasive species into sensitive habitats:

- All ground disturbing equipment used adjacent to the riparian habitat will be washed (including weeks, tracks, and undercarriages) at a legally operating equipment yard both before and after being used at the site.
- All applicable construction materials used on site, such as straw wattles, mulch, and fill material, will be certified weed free.
- The project will follow a stormwater pollution prevention plan as per the NPDES *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; Water Board Order No. 2009-0009-DWQ) if applicable.
- All bare soil resulting from project disturbance will be stabilized and planted with landscaping or a native seed mix from a local source following construction.
- Any cape ivy removed from the riparian corridor, i.e. during pruning near the entrance path, will be disposed of at a legally operating landfill or other off-site facility capable of handling noxious weed material.

6.3 Impacts on Wetlands and Waters (No Impact)

Impacts on Wetlands and Waters: 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 (No Impact).

Waters of the U.S./state occur within the bed and banks of Pilarcitos Creek to the south of the BSA. The project proposes no impacts to these habitats, and the project work boundary is located some 80-170 feet away from the creek itself. Therefore, there will be no impacts to waters claimed by the U.S. or State and no mitigation is required.

6.4 Impacts on Wildlife Movement

Impacts on Wildlife Movement: 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 (Less than Significant)

Environmental corridors are segments of land that provide a link between different habitats while also providing cover. Development that fragments natural habitats (i.e., breaks them into smaller, disjunct pieces) can have a twofold impact on wildlife: first, as habitat patches become smaller they are unable to support as many individuals (patch size); and second, the area between habitat patches may be unsuitable for wildlife species to traverse (connectivity).

Implementation of the proposed project would not result in any permanent or temporary loss of aquatic or associated riparian habitat: the project footprint is located entirely within the currently developed portions of the BSA. Thus, while Pilarcitos Creek and its associated riparian zone provide an east-west movement corridor for wildlife, development of the project site, which sits on the outer, developed margin of this east-west corridor, will not disrupt wildlife movement along the corridor. Abundant, urban-adapted species such as raccoon and striped skunk, may currently move across the developed portion of the park into adjacent developed areas, and the proposed addition of facilities (stage, restrooms, and playground equipment) may curtail movement of these animals somewhat. However, the animals that currently use the park as a dispersal corridor are regionally abundant and common in California; as such, impacts on these species from project activities do not constitute a significant impact.

6.5 Impacts due to Conflicts with Local Policies

Impacts due to Conflicts with Local Policies: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant).

6.5.1 Municipal Code Section 7.40, Heritage Trees (Less than Significant)

Per City of Half Moon Bay Municipal Code Section 7.40, *heritage trees*, a permit from the City Manager or his or her designee and payment of a fee are required for the removal of any trees which meets the definition of heritage tree, as defined in Section 3.4.2 above.

The BSA contains trees that meet the definition of a heritage tree, and two trees that would meet this definition would be removed by the project. Because these trees are protected by the City of Half Moon Bay's heritage tree ordinance and this is a City proposed project, their removal will comply with the standards of the City heritage tree ordinance, including the planting of replacement trees where feasible and approval from the City Manager. This impact is considered less than significant.

6.6 Impact due to Conflicts with an Adopted Habitat Conservation Plan

Impact due to Conflicts with an Adopted Habitat Conservation Plan: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (No Impact).

The BSA is not located within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with any such plans.

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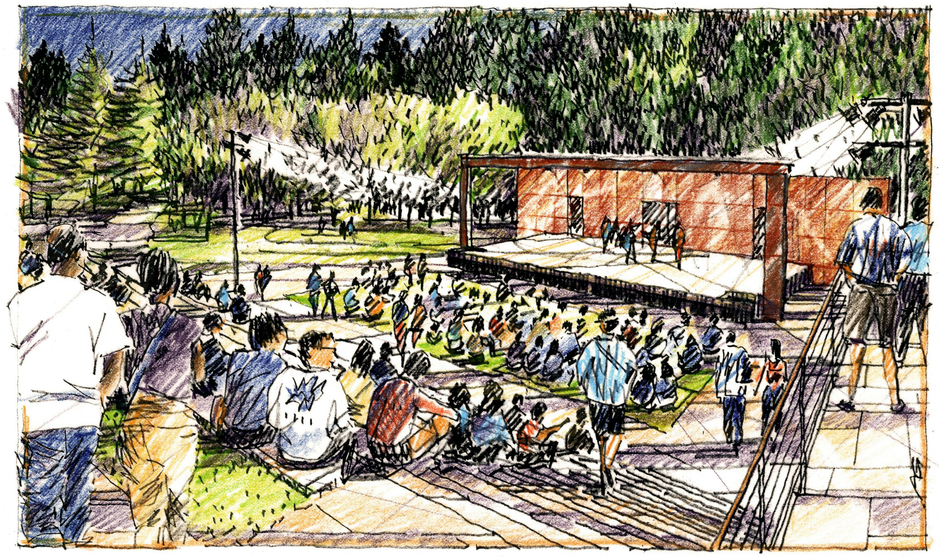
Appendix A: John L. Carter Park Improvements, Phase II Summary Plan Set

THE CITY OF

HALF MOON BAY

JOHN L. CARTER PARK

IMPROVEMENTS



SHEET LIST

THE CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
650.726.8270

PROJECT NUMBER: 201820.00

SUMMARY PLAN SET

29 APRIL 2020

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REVISION

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PERSPECTIVE SKETCH - LOOKING AT STAGE FROM AMPITHEATER

SIMPLE MATERIAL PALETTE WITH REDWOOD GROVE BACKDROP

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JOHN L CARTER PARK IMPROVEMENTS

PROJECT NUMBER:
201820.00

CLIENT:

CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
650.726.8270

PROJECT TEAM:

LANDSCAPE:
CALLANDER ASSOCIATES
BURLINGAME OFFICE
1633 BAYSHORE HIGHWAY, SUITE 133
BURLINGAME, CA 94010
650.375.1313

CIVIL:
BKF ENGINEERS
255 SHORELINE DRIVE, SUITE 200
REDWOOD CITY, CA 94065
650.482.6422

STRUCTURAL:
KPFF
45 FREMONT STREET, 28TH FLOOR
SAN FRANCISCO, CA 94105
415.989.1004

MEP/LIGHTING:
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1624 FRANKLIN ST. SUITE 1300
OAKLAND, CA 94612
510.876.2591

ELECTRICAL
RUA, INC.
1620 MONTGOMERY ST. SUITE 250
SAN FRANCISCO, CA 94111
415.730.7994

THEATER SPECIALTIES:
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1553 MARTIN LUTHER KING JR. WAY
BERKELEY, CA 94709
415.956.4100 OFFICE

COST ESTIMATING:
MACK 5
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EMERYVILLE, CA 94608
510.595.3020

GRAPHICS:
DONNELLY DESIGN
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PROJECT IMAGERY

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ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AB	AGGREGATE BASE	MAX	MAXIMUM
AC	ASPHALT CONCRETE	MIN	MINIMUM
AD	AREA DRAIN	MH	MANHOLE
APPROX	APPROXIMATE	NTS	NOT TO SCALE
BFP	BACK FLOW PREVENTER	P/L, PL	PROPERTY LINE
BLDG	BUILDING	POC	POINT OF CONNECTION
BOV	BLOW OFF VALVE	(P), PR, PROP	PROPOSED
BPD	BACKFLOW PREVENTION DEVICE	PVMT	PAVEMENT
BW	BACK OF WALK	PVC	POLYVINYL CHLORIDE
CATV	CABLE TELEVISION	R	RADIUS
CB	CATCH BASIN	RG	ROUGH GRADE
C&G	CURB AND GUTTER	RIM	RIM ELEVATION
CLF	CHAIN LINK FENCE	R/W, ROW	RIGHT OF WAY
CONC	CONCRETE	S.A.D.	SEE ARCHITECTURAL DRAWING
DI	DROP INLET	S.L.D.	SEE LANDSCAPE DRAWING
DW, D/W, DWY	DRIVEWAY	SD	STORM DRAIN
E, ELEC	ELECTRIC	SDAD	STORM DRAIN AREA DRAIN
(E), EX, EXIST	EXISTING	SDCO	STORM DRAIN CLEANOUT
EB	ELECTRIC BOX	SDDI	STORM DRAIN DRAIN INLET
EG	EXISTING GROUND	SDMH	STORM DRAIN MANHOLE
EL, ELEV	ELEVATION	SDWK	SIDEWALK
ESMT	EASEMENT	SG	SUBGRADE
FF	FINISH FLOOR	SS	SANITARY SEWER
FG	FINISH GRADE	SSCO	SANITARY SEWER CLEANOUT
FL	FLOW LINE	SSMH	SANITARY SEWER MANHOLE
FS	FINISHED SURFACE	STD	STANDARD
GB	GRADE BREAK	TC	TOP OF CURB
HC/HCR	HANDICAP RAMP	T, TEL, TELE	TELEPHONE
HP	HIGH POINT	TYP	TYPICAL
INV	INVERT	UB	UTILITY BOX
IRR	IRRIGATION	W	WATER
LP	LOW POINT	WD	WATER DOMESTIC
LS	LANDSCAPE	WM	WATER METER

N

GRAPHIC SCALE
20 0 20 40

STONE PINE ROAD
STONE PINE CENTER
PARKING LOT
RIPARIAN BUFFER ZONE
RIPARIAN BOUNDARY
PROPERTY LINE
MAIN STREET
PILARCITOS CREEK
OFFICE
OFFICE
PARKING LOT
RIPARIAN BUFFER ZONE
RIPARIAN BOUNDARY

65.44 T VLT
64.70 SLB
65.36 SSMH
67.44 AD
67.48 SSCO
GV 66.05
66.46 SLB
66.62 SL
67.09 AD
67.08 STE LGHT
67.56 STE LGHT
65.85 EB
65.96 EV
67.46 SDMH
67.89 CLDR
67.70 AD
65.92 EV
67.79 STE LGHT
67.74 SDMH
65.48 EV
67.59 STE LGHT
65.07 EB
67.80 ELEC CAB
67.31 SD DI
64.98 CATV BOX
67.39 SSMH
67.50 EV
67.00 ELEC CAB
66.32 SL
67.61 HNDRL
67.63 HNDRL
67.59 HNDRL
66.10 SD DI
67.13 SSMH
66.71 EB
69.00 CL DOOR 6' WIDE
66.08 SD DI

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PROJECT:

JOHN L CARTER PARK IMPROVEMENTS

PHASE II

PROJECT NUMBER:
201820.00

CLIENT:
CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
650.726.8270

PROJECT TEAM:

BKF 100+ YEARS
ENGINEERS . SURVEYORS . PLANNERS

LANDSCAPE:
CALLANDER ASSOCIATES
BURLINGAME OFFICE
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BURLINGAME, CA 94010
650.375.1313

CIVIL:
BKF ENGINEERS
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REDWOOD CITY, CA 94065
650.482.6422

STRUCTURAL:
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SAN FRANCISCO, CA 94105
415.989.1004

MEP/LIGHTING:
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OAKLAND, CA 94608
510.876.2591

RIJA, INC.
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SAN FRANCISCO, CA 94111
415.730.7994

THEATER SPECIALTIES:
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BERKELEY, CA 94709
415.956.4100 OFFICE

COST ESTIMATING:
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510.595.3020

GRAPHICS:
DONNELLY DESIGN
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WALNUT CREEK, CA 94596
707.803.1789

REVISION:

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SHEET TITLE:

EXISTING SITE PLAN

SHEET NUMBER:

C1.0

DEMOLITION NOTES

1. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 811 OR (800) 642-2444 AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, EXCAVATION OR GRADING WORK.
2. EXISTING SUBSURFACE UTILITIES SHOWN ON THESE PLANS WERE TAKEN FROM RECORD INFORMATION KNOWN TO THE ENGINEER. THESE PLANS ARE NOT MEANT TO BE A FULL CATALOG OF EXISTING SUBSURFACE CONDITIONS. CONTRACTOR SHALL CONDUCT A FULL CATALOG OF EXISTING SUBSURFACE CONDITIONS. CONTRACTOR SHALL CONDUCT FIELD INVESTIGATIONS TO VERIFY ALL LOCATIONS AND ELEVATIONS OF EXISTING SUBSURFACE UTILITIES, WHETHER SHOWN ON PLANS OR NOT.
3. DEMOLISH EXISTING STRUCTURES, UTILITIES, AND OTHER FEATURES WITHIN THE LIMIT OF DEMOLITION AS SHOWN. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION WITHIN THE LIMITS OF THE PROPOSED PROJECT AND WHERE APPLICABLE ON THESE PLANS.
4. ALL HARDSCAPE WITHIN THE LIMITS OF DEMOLITION AS INDICATED IS TO BE DEMOLISHED, REMOVED AND/OR RECYCLED UNLESS OTHERWSE NOTED.
5. CONTRACTOR SHALL REPLACE ANY DAMAGED STRUCTURE, PAVEMENT, CURB OR SIDEWALK THAT IS SAID TO REMAIN AND IS DAMAGED DURING THE COURSE OF CONSTRUCTION.
6. AN APPROVED TEMPORARY FENCE SHALL BE INSTALLED ALONG THE LIMITS OF DEMOLITION PRIOR TO DEMOLITION WHERE REQUIRED. GATES SHALL BE KEPT LOCKED DURING NON-WORKING HOURS.
7. CONTRACTOR SHALL PROVIDE EMERGENCY VEHICULAR ACCESS TO THE SITE.
8. THE CONTRACTOR SHALL PROCEED WITH DUE CAUTION DURING ALL UNDERGROUND OPERATIONS AND SHALL REPAIR OR REPLACE ALL UTILITIES DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNER AND/OR AFFECTED AGENCIES.
9. SEE SPECS FOR TREE PROTECTION. CONFIRM WITH OWNER PRIOR TO REMOVAL.
10. TREES AND SHRUBS DESIGNATED FOR REMOVAL SHALL HAVE ROOTBALLS AND ANY ROOTS GREATER THAN 1/2 INCH DIAMETER REMOVED.
11. DO NOT PLACE RECYCLED CONCRETE, AC, AB OR OTHER MATERIALS IN PROPOSED LANDSCAPE AREAS.

N

GRAPHIC SCALE
20 0 20 40

DEMOLITION LEGEND

- TREE TO BE REMOVED
- TREE PROTECTION
- HARDSCAPE TO BE DEMOLISHED AND REMOVED (INCLUDING AC PAVEMENT, AB, SIDEWALK, PLANTERS, MISC. CONCRETE)
- LANDSCAPE TO BE DEMOLISHED, TREES AND SHRUBS SHALL BE MULCHED (2" MAX CHIP SIZE) AND STOCKPILED FOR REUSE, TOP SOIL TO BE STRIPPED AND STOCKPILED FOR REUSE (S.L.D. FOR TREE REMOVAL)
- LIMITS OF DEMOLITION

DEMOLITION SYMBOLS:

1. TO BE REMOVED
2. TO REMAIN, PROTECT IN PLACE
3. SALVAGE, STORE, AND RELOCATE
4. TO REMAIN, ADJUST TO FINISH GRADE

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PHASE II

PROJECT NUMBER:
201820.00

CLIENT:
CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
650.726.8270

PROJECT TEAM:

BKF 100+ YEARS
ENGINEERS . SURVEYORS . PLANNERS

LANDSCAPE:
CALLANDER ASSOCIATES
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BURLINGAME, CA 94010
650.375.1313

CIVIL:
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SAN FRANCISCO, CA 94105
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BERKELEY, CA 94709
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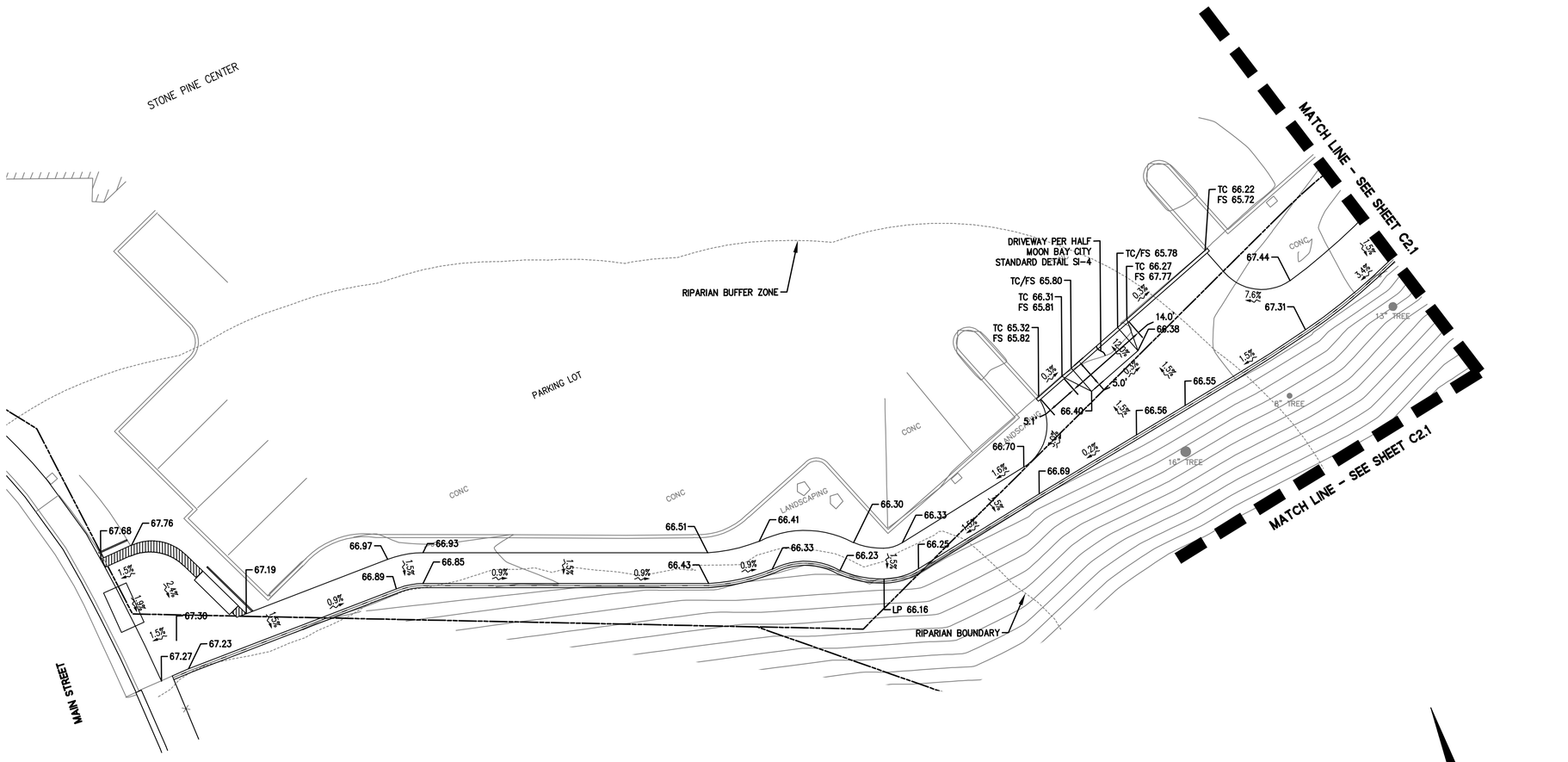

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
2. SEE LANDSCAPE DRAWINGS FOR MATERIALS AND CONSTRUCTION NOTES.
3. CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES WITHIN THE PROJECT LIMITS, CONSISTING OF EASEMENTS, RIGHT-OF-WAY, AND RIGHTS OF ENTRY, AS SHOWN ON THE PLANS AND AS DIRECTED.
4. ALL PROPOSED PAVING, CURBS, AND PLANTING AREAS SHALL SMOOTHLY CONFORM TO EXISTING ADJACENT FEATURES TO REMAIN. PROVIDE POSITIVE DRAINAGE ON ALL PAVING AND THROUGHOUT ALL PLANTING AREAS. FLOOD PAVED AREAS UPON COMPLETION OF WORK AND RECONSTRUCT ANY LOW SPOTS AS DIRECTED.
5. PERFORM ALL EARTHWORK AND GRADING OPERATIONS PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

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CLIENT:
CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
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BKF 100+ YEARS
ENGINEERS . SURVEYORS . PLANNERS

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BURLINGAME, CA 94010
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CIVIL:
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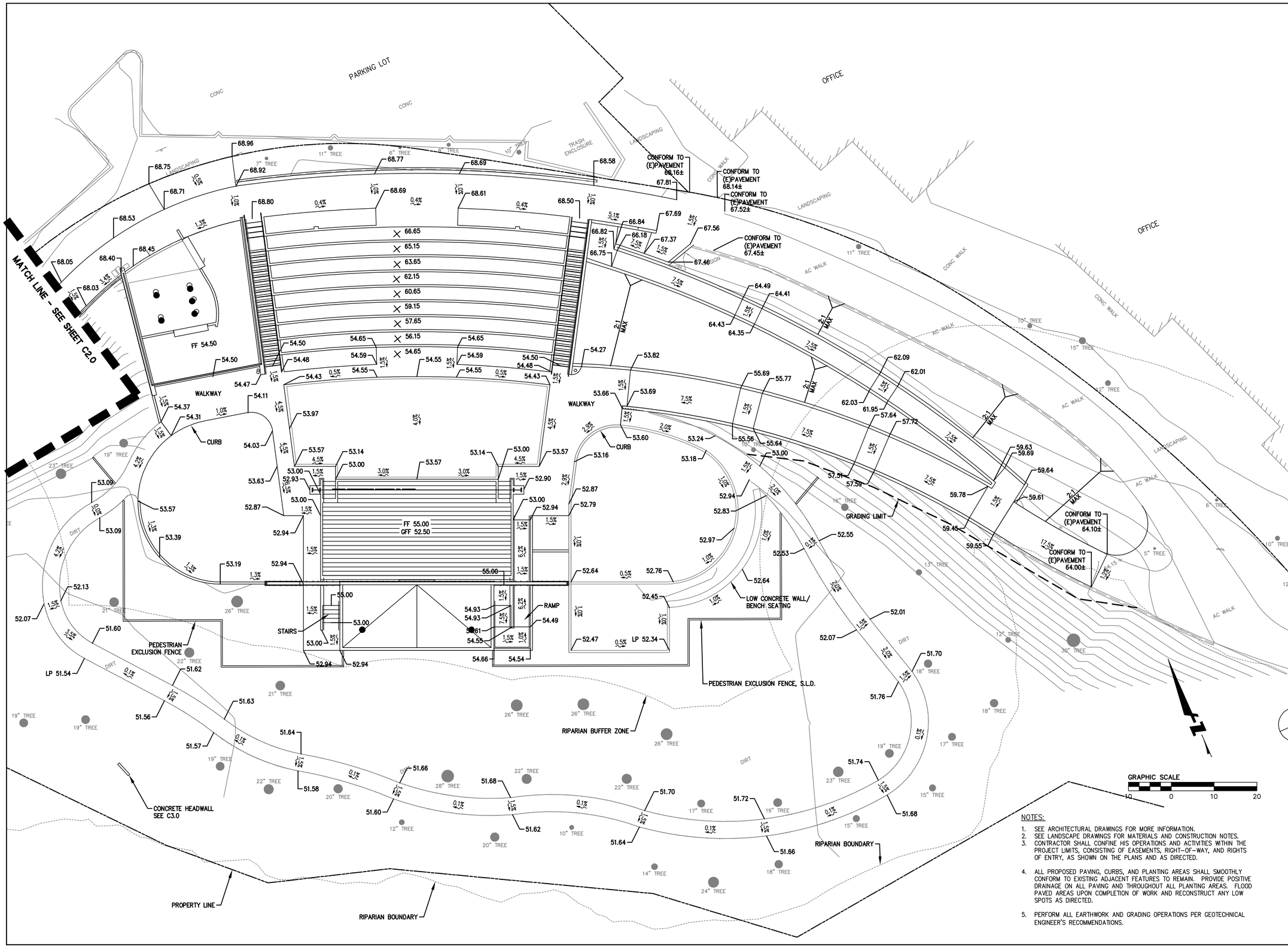

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5. PERFORM ALL EARTHWORK AND GRADING OPERATIONS PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

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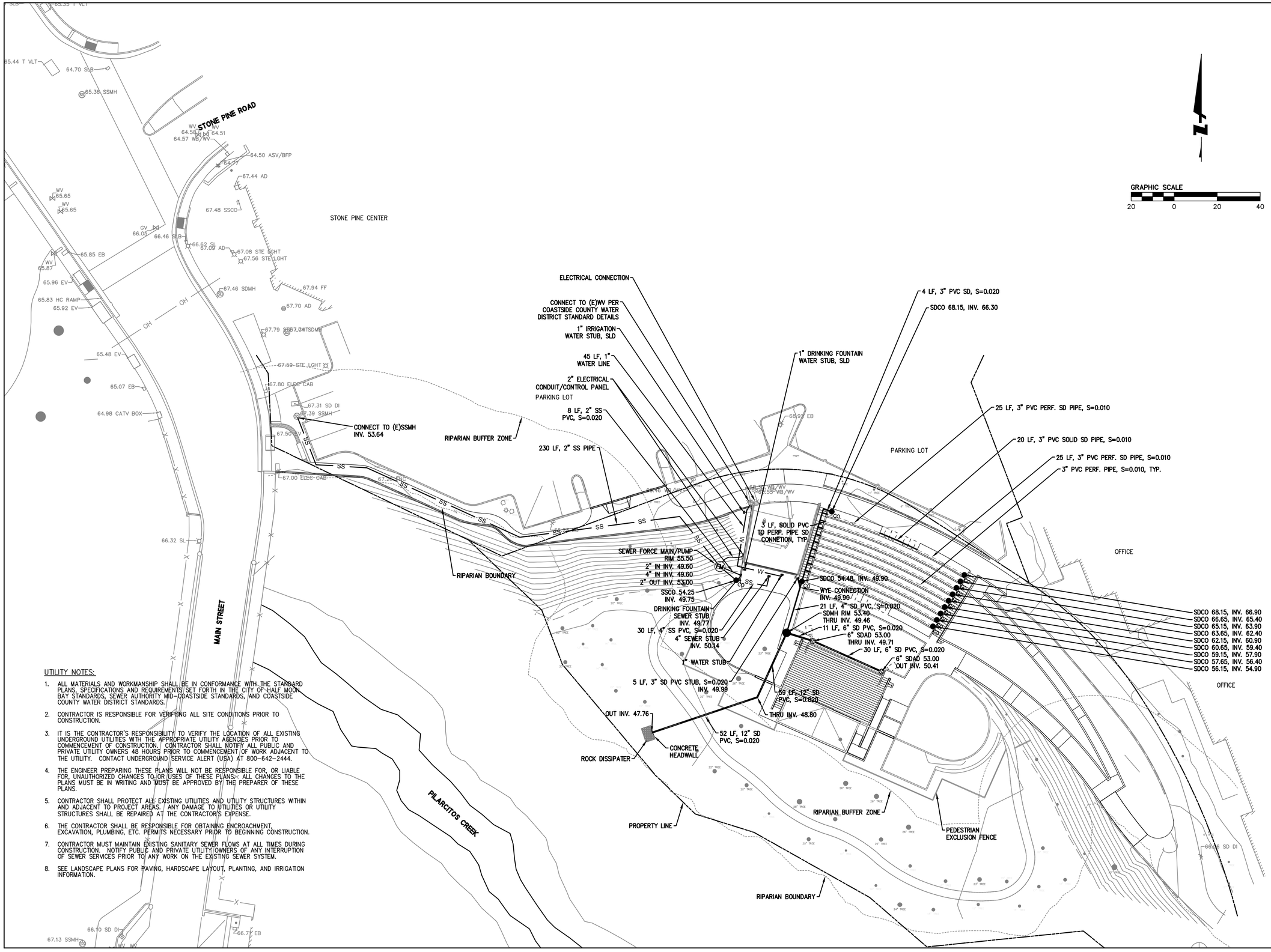

UTILITY NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE STANDARD PLANS, SPECIFICATIONS AND REQUIREMENTS SET FORTH IN THE CITY OF HALF MOON BAY STANDARDS, SEWER AUTHORITY MID-COASTSIDE STANDARDS, AND COASTSIDE COUNTY WATER DISTRICT STANDARDS.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES WITH THE APPROPRIATE UTILITY AGENCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY OWNERS 48 HOURS PRIOR TO COMMENCEMENT OF WORK ADJACENT TO THE UTILITY. CONTACT UNDERGROUND SERVICE ALERT (USA) AT 800-642-2444.
4. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
5. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND UTILITY STRUCTURES WITHIN AND ADJACENT TO PROJECT AREAS. ANY DAMAGE TO UTILITIES OR UTILITY STRUCTURES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ENCROACHMENT, EXCAVATION, PLUMBING, ETC. PERMITS NECESSARY PRIOR TO BEGINNING CONSTRUCTION.
7. CONTRACTOR MUST MAINTAIN EXISTING SANITARY SEWER FLOWS AT ALL TIMES DURING CONSTRUCTION. NOTIFY PUBLIC AND PRIVATE UTILITY OWNERS OF ANY INTERRUPTION OF SEWER SERVICES PRIOR TO ANY WORK ON THE EXISTING SEWER SYSTEM.
8. SEE LANDSCAPE PLANS FOR PAVING, HARDSCAPE LAYOUT, PLANTING, AND IRRIGATION INFORMATION.

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PROJECT:

JOHN L CARTER PARK IMPROVEMENTS

PHASE II

PROJECT NUMBER:
201820.00

CLIENT:
CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
650.726.8270

PROJECT TEAM:

BKF 100+ YEARS
ENGINEERS . SURVEYORS . PLANNERS

LANDSCAPE:
CALLANDER ASSOCIATES
BURLINGAME OFFICE
1633 BAYSHORE HIGHWAY, SUITE 133
BURLINGAME, CA 94010
650.375.1313

CIVIL:
BKF ENGINEERS
255 SHORELINE DRIVE, SUITE 200
REDWOOD CITY, CA 94065
650.482.6422

STRUCTURAL:
KPFF
45 FREMONT STREET, 28TH FLOOR
SAN FRANCISCO, CA 94105
415.989.1004

MEP/LIGHTING:
ALTER CONSULTING ENGINEERS
1295 59TH STREET
OAKLAND, CA 94608
510.876.2591

RIJA, INC.
1620 MONTGOMERY STREET, SUITE 250
SAN FRANCISCO, CA 94111
415.730.7994

THEATER SPECIALTIES:
THE SHALLECK COLLABORATIVE
1553 MARTIN LUTHER KING JR. WAY
BERKELEY, CA 94709
415.956.4100 OFFICE

COST ESTIMATING:
MACK 5
1900 POWELL STREET, SUITE 470
EMERYVILLE, CA 94608
510.595.3020

GRAPHICS:
DONNELLY DESIGN
2121 N. CALIFORNIA BLVD., SUITE 305
WALNUT CREEK, CA 94596
707.803.1789

REVISION:

NO.	DATE	DESCRIPTION

ISSUE:
SUMMARY PLAN SET

DATE:
29 APRIL, 2020

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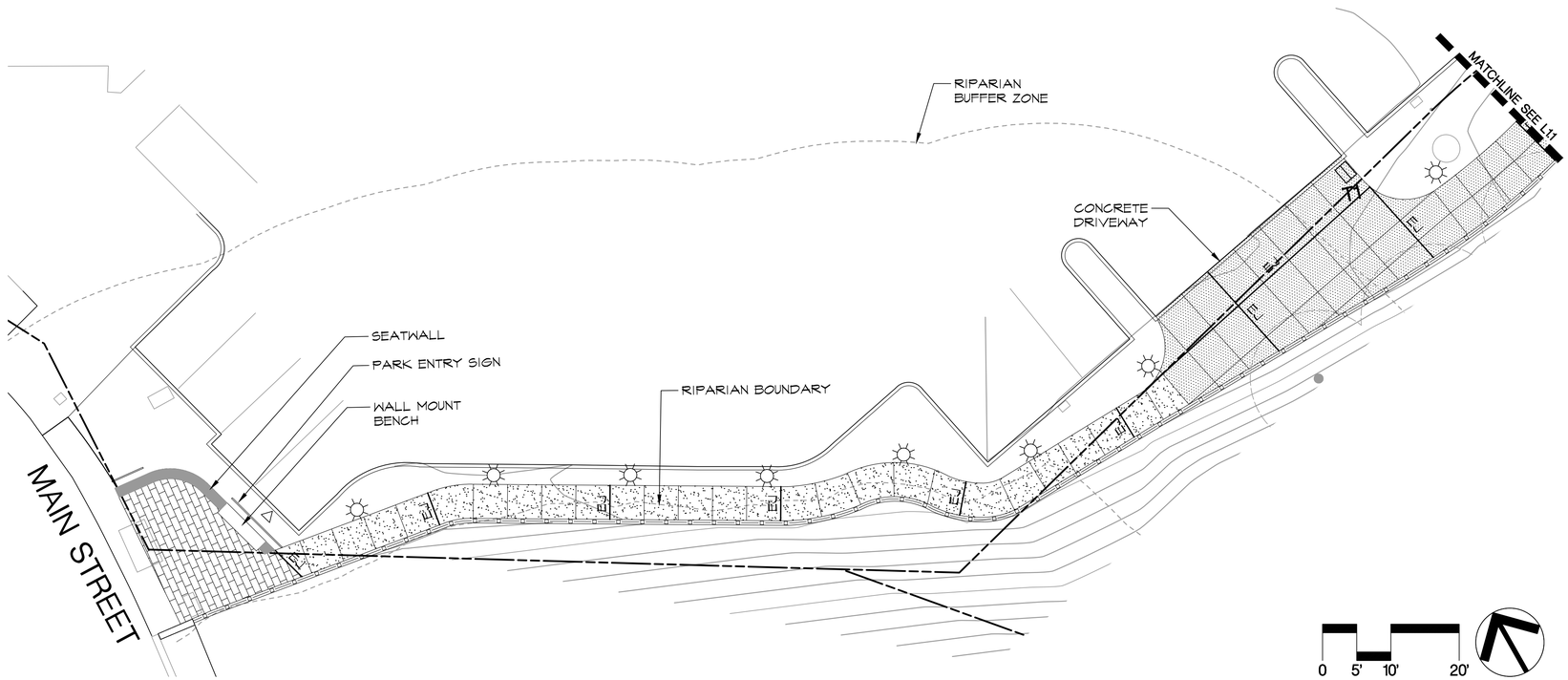
SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C3.0

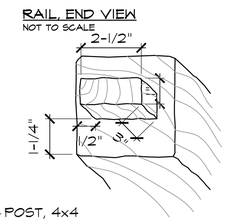


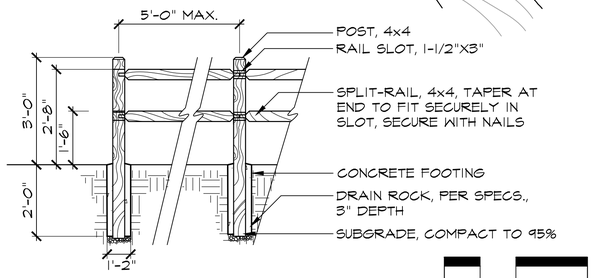
SITE CONSTRUCTION NOTES

- PEDESTRIAN CONCRETE PAVEMENT
- EXPANSION JOINT
- SCORE JOINT, TYP
- VEHICULAR CONCRETE PAVEMENT
- UNIT PAVERS
- DECOMPOSED GRANITE PAVEMENT
- SYNTHETIC TURF AT AMPHITHEATER
- SYNTHETIC TURF AT STAGE
- BONDED RUBBER PLAY SURFACING
- DF — DRINKING FOUNTAIN
- SITE LIGHTING
- BARRIER FENCE IN CONCRETE BAND, 4' TALL, METAL WIRE MESH
- PEDESTRIAN EXCLUSION FENCE
- SCREEN FENCE, 6' TALL DECORATIVE METAL
- P — PET WASTE STATION
- B — BIKE RACK
- T1 — TRASH RECEPTACLE, TYPE 1
- T2 — TRASH RECEPTACLE, TYPE 2
- HDR — HEADERBOARD

NOTES: ALL WOOD TO BE WESTERN RED CEDAR, OR APPROVED EQUAL

RAIL, END VIEW
NOT TO SCALE





1 / L1.0 **PEDESTRIAN EXCLUSION FENCE**
SECTION

11057 SplitRailFence_24.dwg

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PROJECT:

JOHN L CARTER PARK IMPROVEMENTS

PROJECT NUMBER: 201820.00

CLIENT:
CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
650.726.8270

PROJECT TEAM:

CALA
DRAWN BY: DC
CHECKED BY: NR
1633 Bayshore Highway, Suite 133
Burlingame, CA 94010
T 650.375.1313
www.callanderassociates.com
CALA PROJECT # 18061

LANDSCAPE:
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650.482.6422

STRUCTURAL:
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THEATER SPECIALTIES:
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415.956.4100 OFFICE

COST ESTIMATING:
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510.595.3020

GRAPHICS:
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707.803.1789

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SHEET TITLE:

PROPOSED SITE PLAN

SHEET NUMBER:

L1.0

WALL MOUNT BENCH

RESTROOMS AND CONCESSIONS BUILDING

AMPHITHEATER SEATING

STAIRS

ACCESSIBLE RAMP

MATCHLINE SEE L1.0

B B B B T1P

UP

UP

DF

T2

EJ

CONCRETE BAND, TYP.

B B

T2

HDR

SEATWALL

PLAY AREA

STAGE AND BACKSTAGE SUPPORT BUILDING

RIPARIAN BUFFER ZONE

RIPARIAN BOUNDARY

0 5' 10' 20'

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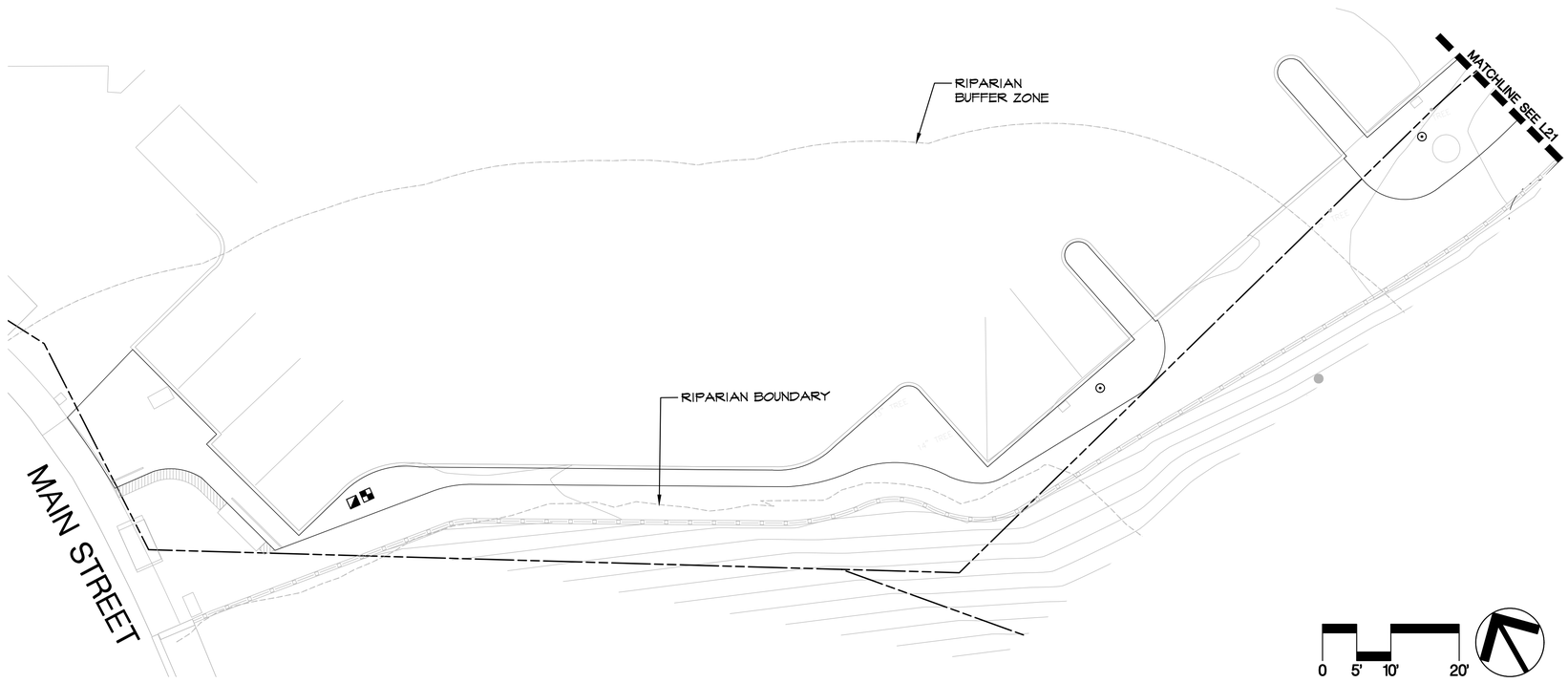

IRRIGATION LEGEND

- IN-LINE DRIP,NETAFIM, TLCV-06-24, TECHLINE, 0.6 GPH EMITTERS AT 24" O.C.
- POINT-SOURCE DRIP, HUNTER, IH-RISERS, ONE EMITTER PER PLANT
- TREE BUBBLER, HUNTER, PCB, TWO BUBBLERS PER TREE
- GATE VALVE, NIBCO, CLASS 125, T-133
- QUICK COUPLING VALVE, HUNTER, HQ-44LRC
- DRIP CONTROL ZONE KIT, HUNTER, ICZ-101
- DRIP/LATERAL CONNECTION
- MANUAL FLUSH VALVE, NETAFIM TLSOV
- DRIP OPERATION INDICATOR, NETAFIM, 10-F-01
- (M) LANDSCAPE SUB-METER, NETAFIM, WATER METER
- (BF) BACKFLOW PREVENTER, FEBCO, 825Y
- (V) MASTER VALVE, SUPERIOR 3200, NORMALLY CLOSED
- (FS) FLOW SENSOR, HUNTER, FLOW-SYNC
- (C) EXISTING CONTROLLER, RELOCATE
- (S) RAIN SENSOR, HUNTER, SOLAR-SYNC
- MAINLINE, SCHEDULE 40 PVC
- LATERAL LINE, CLASS 200 PVC
- SLEEVE, SCHEDULE 40 PVC

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SHEET TITLE:

IRRIGATION PLAN

SHEET NUMBER:

L2.0

POINT OF CONNECTION:
CONNECT TO DOMESTIC WATER LINE

INSTALL ALL EQUIPMENT WITHIN CITY PROPERTY

INSTALL CONTROLLER WITHIN BUILDING UTILITY CHASE

MATCHLINE SEE L2.0

STUB OUT LATERAL LINE AT GATE VALVE FOR FUTURE IRRIGATION BY OTHERS

RIPARIAN BUFFER ZONE

RIPARIAN BOUNDARY

0 5' 10' 20'

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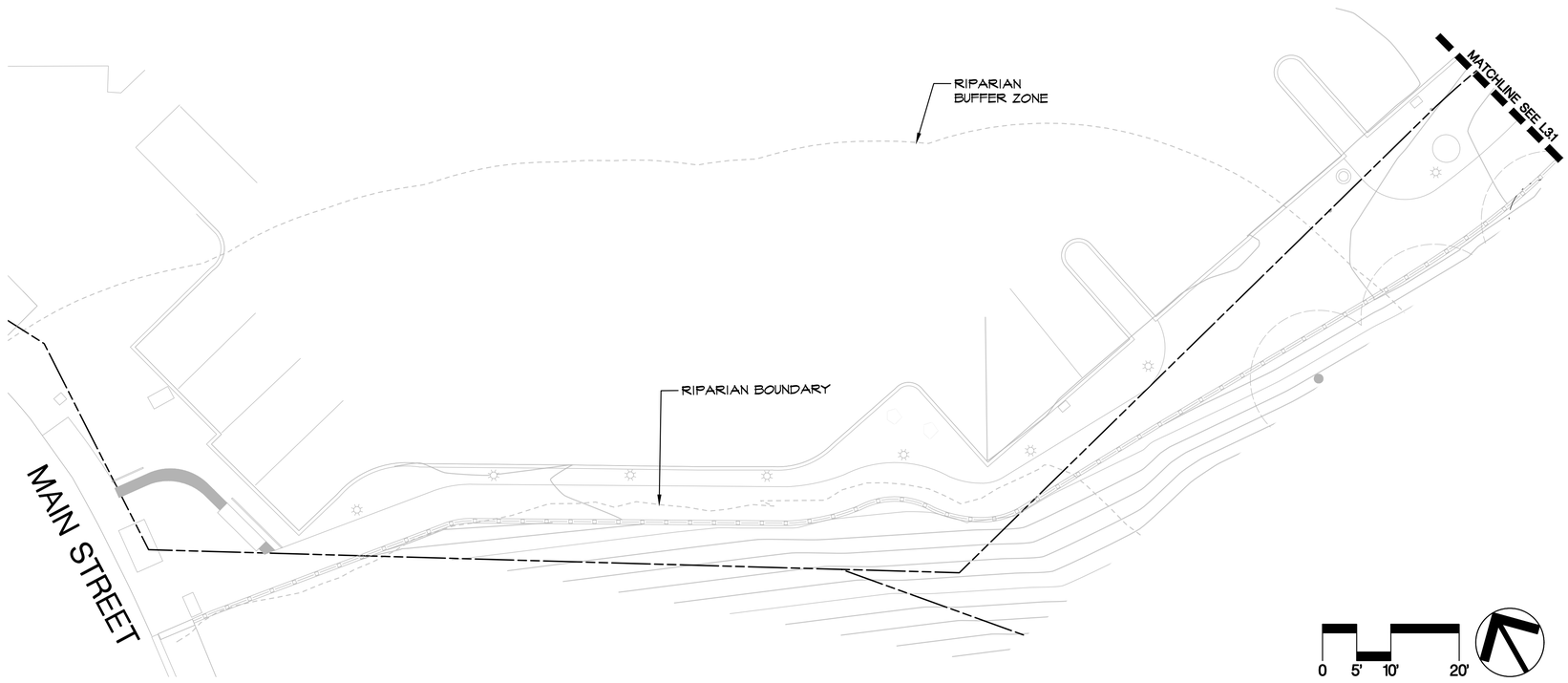
IRRIGATION PLAN

SHEET NUMBER:

L2.1



PLANT LEGEND

EXISTING TREE TO REMAIN

SHRUB MASS

ROOT PROTECTION ZONE

PLANT LIST

SHRUBS	BOTANICAL / COMMON NAME	SIZE	WUCOLS	SPACING
CEA ANC	CEANOTHUS GLORIOSUS 'ANCHOR BAY' / ANCHOR BAY LILAC	5 GAL	L	48" o.c.
CEA TH2	CEANOTHUS THYRSIFLORUS / BLUE BLOSSOM	5 GAL	L	60" o.c.
ERI STA	ERIOPHYLLUM STAECHADIFOLIUM / LIZARD-TAIL	5 GAL	L	48" o.c.
FES CA2	FESTUCA CALIFORNICA / CALIFORNIA FESCUE	5 GAL	L	24" o.c.
LUP ALB	LUPINUS ALBIFRONS / BUSH LUPINE	5 GAL	VL	60" o.c.
MIM AUR	MIMULUS AURANTIACUS / STICKY MONKEY FLOWER	5 GAL	VL	60" o.c.
MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS	5 GAL	L	60" o.c.
RIB SAN	RIBES SANGUINEUM / RED FLOWERING CURRANT	5 GAL	L	72" o.c.
RUB THI	RUBUS PARVIFLORUS / THIMBLEBERRY	5 GAL	L	60" o.c.
SAL BEE	SALVIA X 'BEE'S BLISS' / BEE'S BLISS SAGE	5 GAL	L	60" o.c.
SYM MOL	SYMPHORICARPOS MOLLIS / CREEPING SNOWBERRY	5 GAL	L	36" o.c.

GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	WUCOLS	SPACING
	ERIGERON GLAUCUS / BEACH DAISY	5 GAL	L	24" o.c.
	CONSERVATION/RESTORATION PLANTING PLANT TYPES TO BE DETERMINED			

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PROJECT:

JOHN L CARTER PARK IMPROVEMENTS

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201820.00

CLIENT:
CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
650.726.8270

PROJECT TEAM:

CALA
DRAWN BY: DC
CHECKED BY: NR
1633 Bayshore Highway, Suite 133
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T 650.375.1313
www.callanderassociates.com
CALA PROJECT # 18061

LANDSCAPE:
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CIVIL:
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REDWOOD CITY, CA 94065
650.482.6422

STRUCTURAL:
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415.989.1004

MEP/LIGHTING:
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OAKLAND, CA 94608
510.876.2591

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415.730.7994

THEATER SPECIALTIES:
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COST ESTIMATING:
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GRAPHICS:
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PLANTING PLAN

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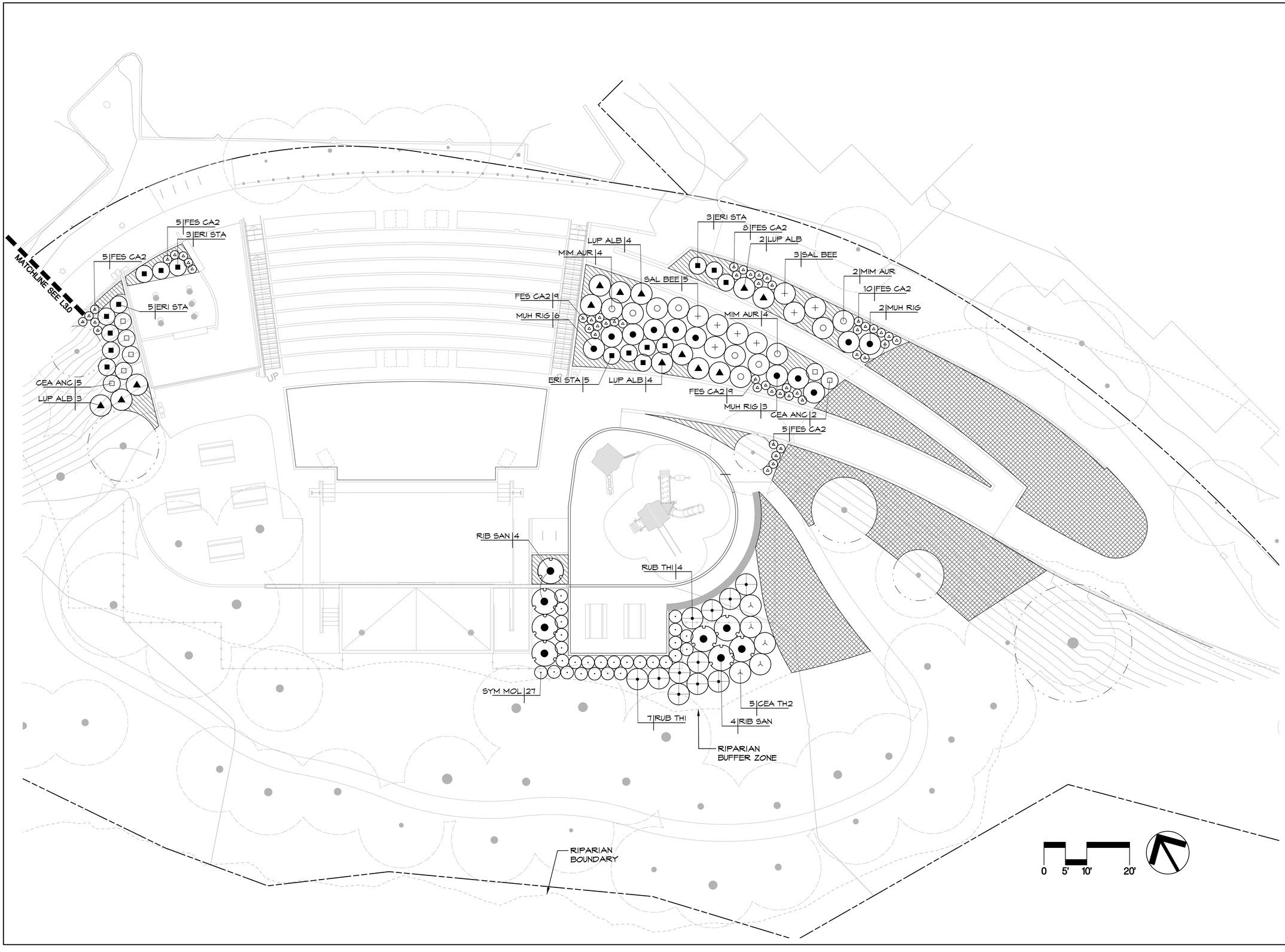
L3.0



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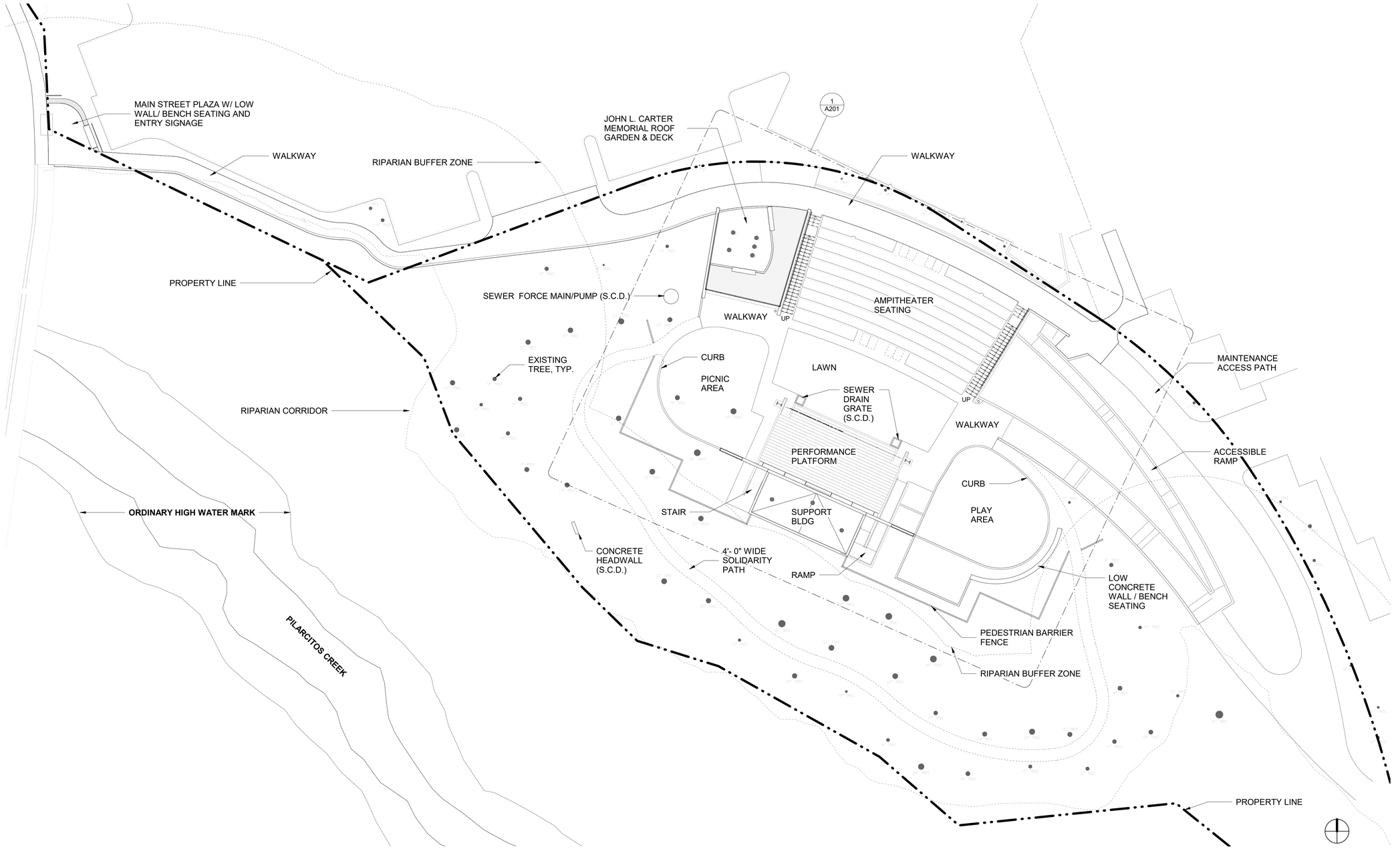

1 SITE PLAN
1/16" = 1'-0"

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ELECTRICAL
RUA, INC.
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SITE PLAN

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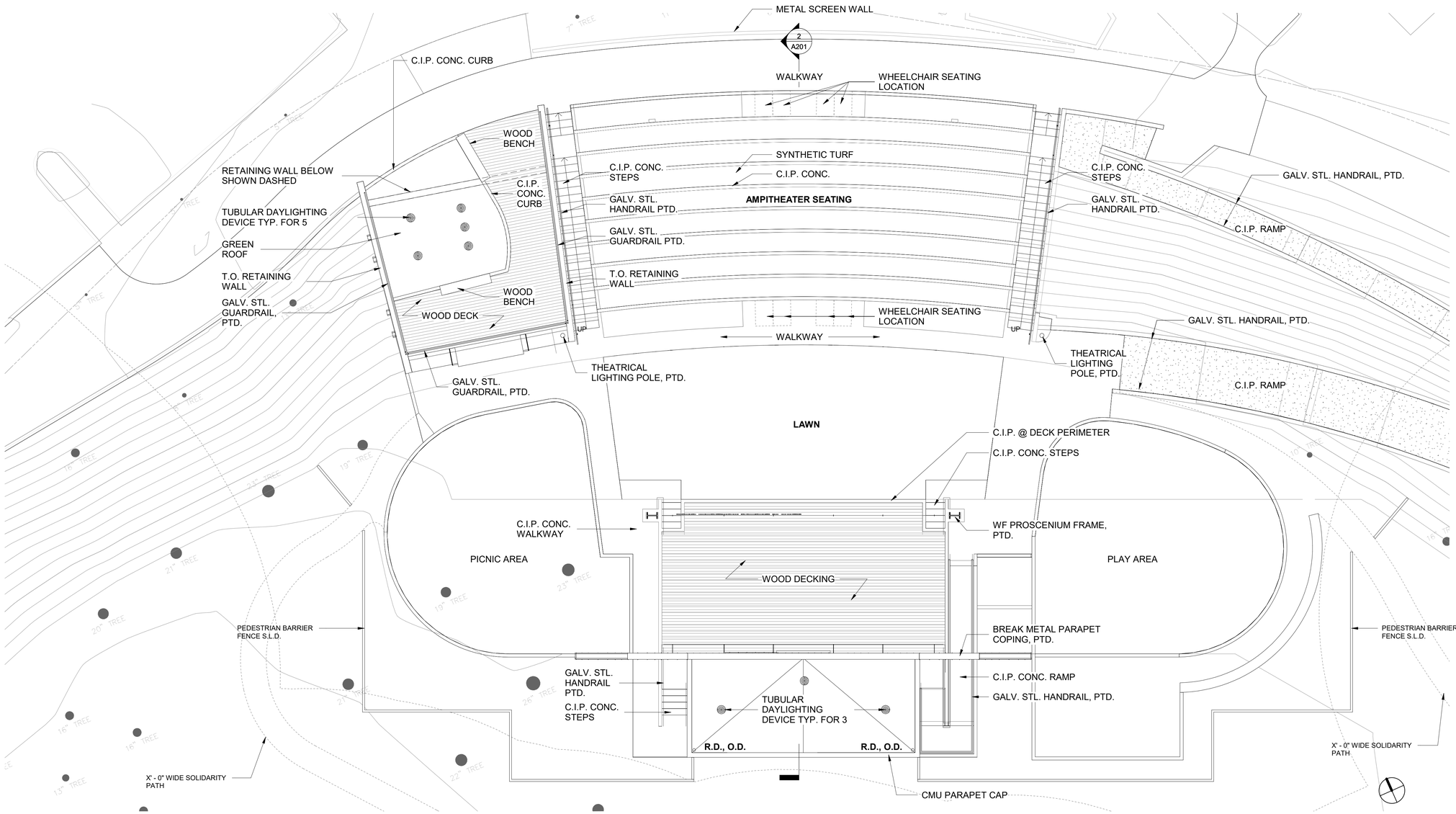
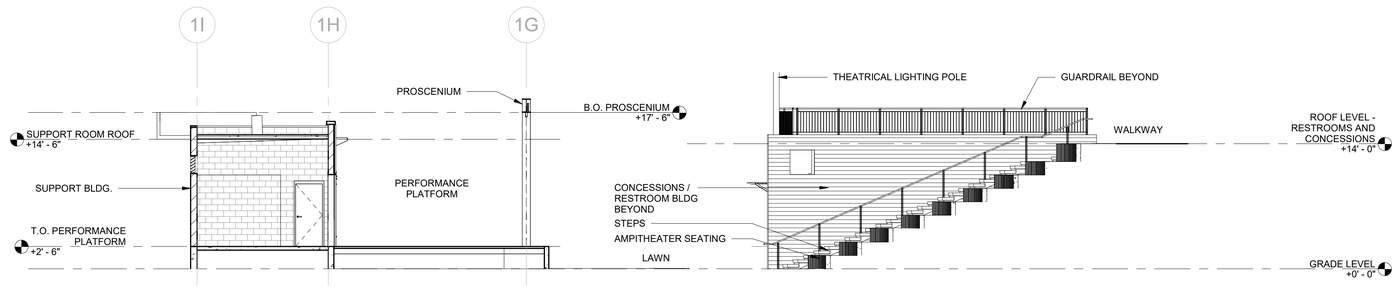
A102



1 ENLARGED SITE PLAN
1/8" = 1'-0"



2 SITE SECTION
1/8" = 1'-0"

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PROJECT:

JOHN L CARTER PARK IMPROVEMENTS

PROJECT NUMBER:
201820.00

CLIENT:
CITY OF HALF MOON BAY
501 MAIN STREET
HALF MOON BAY, CA 94019
650.726.8270

PROJECT TEAM:

LANDSCAPE:
CALLANDER ASSOCIATES
BURLINGAME OFFICE
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BURLINGAME, CA 94010
650.375.1313

CIVIL:
BKF ENGINEERS
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REDWOOD CITY, CA 94065
650.482.6422

STRUCTURAL:
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415.989.1004

MEP/LIGHTING:
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ELECTRICAL
RUA, INC.
1620 MONTGOMERY ST. SUITE 250
SAN FRANCISCO, CA 94111
415.730.7994

THEATER SPECIALTIES:
THE SHALLECK COLLABORATIVE
1553 MARTIN LUTHER KING JR. WAY
BERKELEY, CA 94709
415.956.4100 OFFICE

COST ESTIMATING:
MACK 5
1900 POWELL STREET, SUITE 470
EMERYVILLE, CA 94608
510.595.3020

GRAPHICS:
DONNELLY DESIGN
2121 N. CALIFORNIA BLVD., SUITE 305
WALNUT CREEK, CA 94596
707.803.1789

REVISION:

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ISSUE:
SUMMARY PLAN SET

DATE:
29 APRIL, 2020

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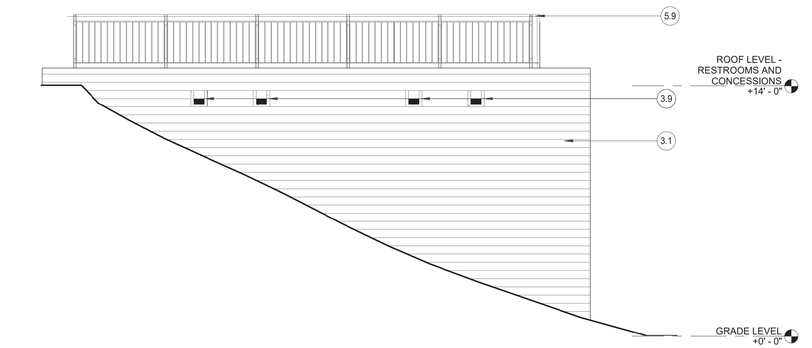
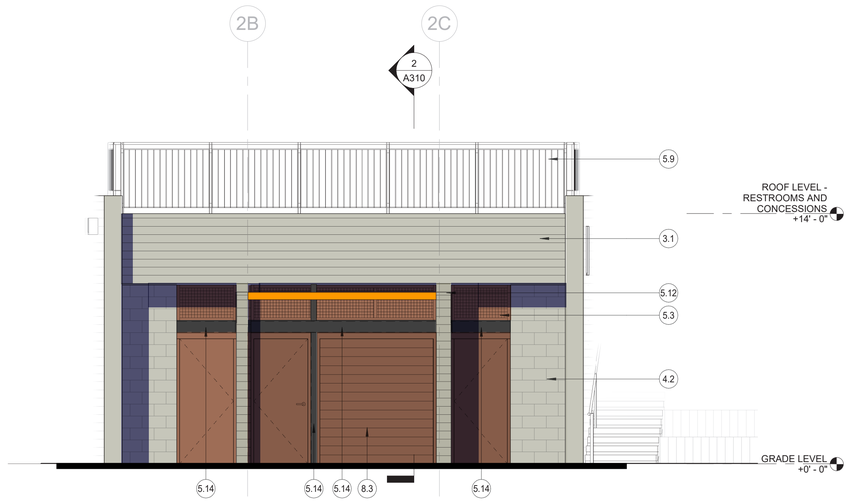
SHEET TITLE:
ENLARGED SITE PLAN

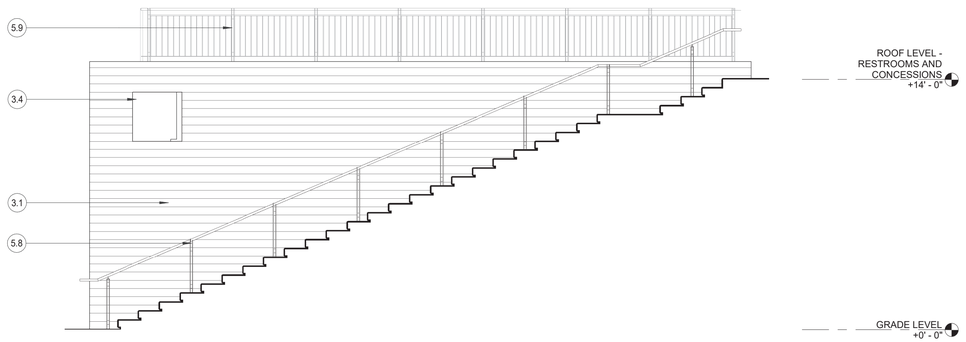
SHEET NUMBER:
A201



3 WEST ELEVATION - RESTROOMS & CONCESSIONS
1/4" = 1'-0"



2 SOUTH ELEVATION - RESTROOMS & CONCESSIONS
1/4" = 1'-0"



1 EAST ELEVATION - RESTROOMS & CONCESSIONS
1/4" = 1'-0"

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
3.1	HORIZONTAL BOARD FORMED C.I.P. CONC. W/ INTEGRAL COLOR
3.4	C.I.P. RECESS FOR PRECAST SIGNAGE MEDALLION
3.9	PRECAST CONC. SCUPPER
4.2	CMU - 5 DEEP SCORE, SPLIT FACE
5.3	WELDED WIRE MESH - 1" SQUARE, 11 GA. S. STL. STD. MILL FINISH, HEMMED, 1" X 1" GALV. STL. ANGLE PERIMETER FRAME, PTD.
5.8	GALV. STL. HANDRAIL, PTD.
5.9	GALV. STL. GUARDRAIL, PTD.
5.12	STANDING SEAM METAL PANEL CANOPY O/ STL PIPE W/ STL. PLATE BRACKETS
5.14	AESS 2, PTD.
8.3	ROLL UP DOOR

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CIVIL:
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415.989.1004

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COST ESTIMATING:
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GRAPHICS:
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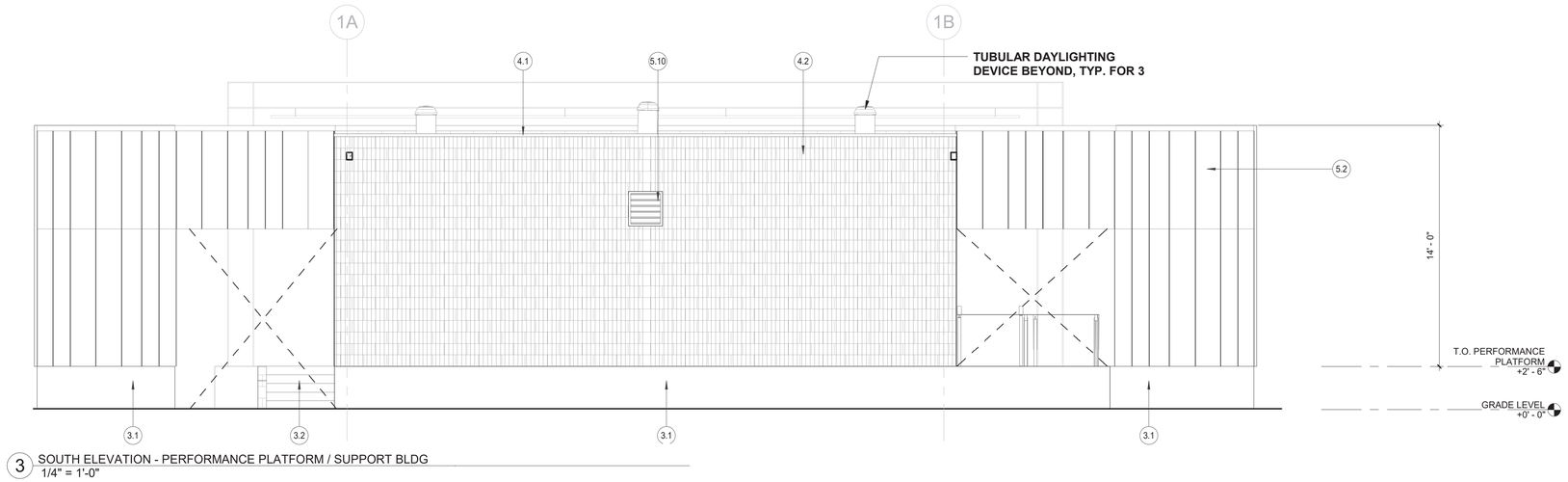
SHEET TITLE:

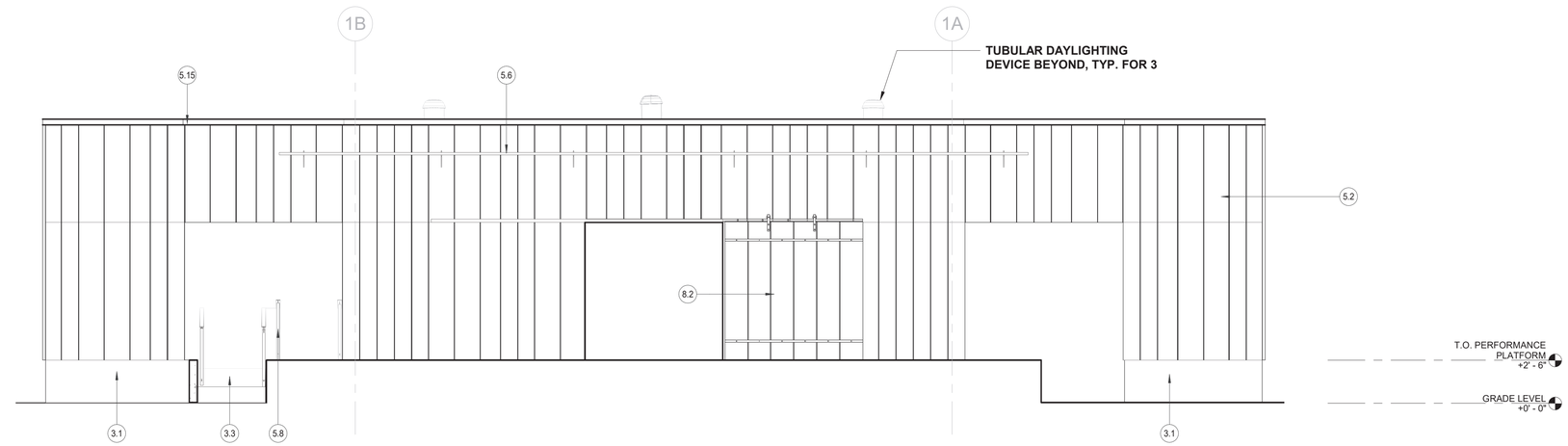
BLDG. ELEVATIONS - RESTROOM & CONCESSIONS

SHEET NUMBER:

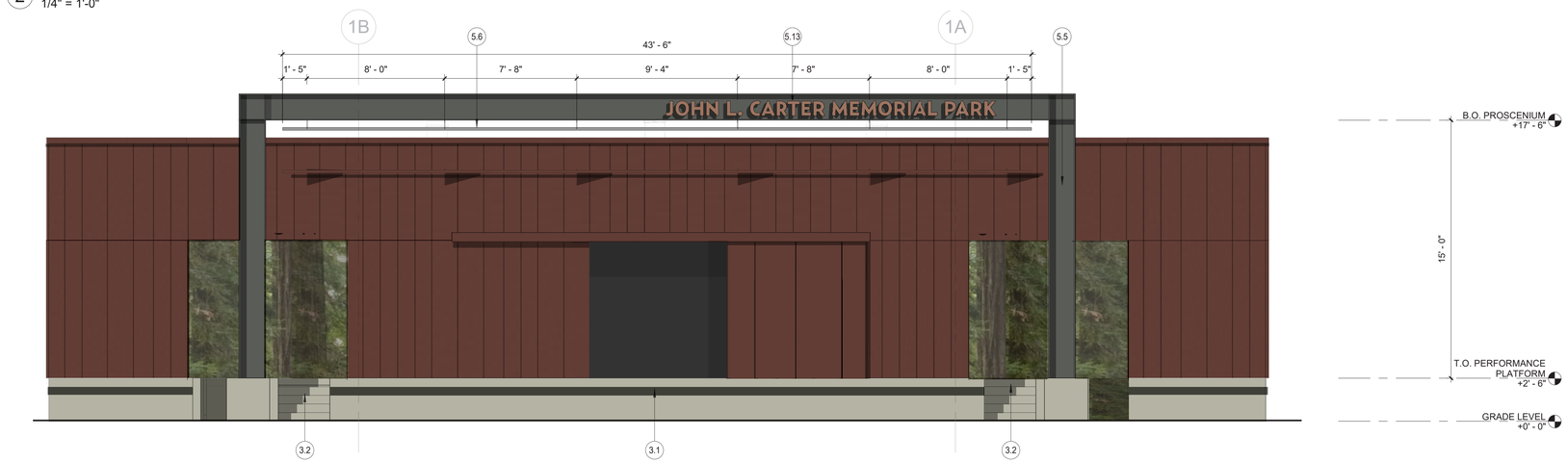
A300



3 SOUTH ELEVATION - PERFORMANCE PLATFORM / SUPPORT BLDG
1/4" = 1'-0"



2 NORTH ELEVATION - PERFORMANCE PLATFORM
1/4" = 1'-0"



1 NORTH ELEVATION - PROSCENIUM
1/4" = 1'-0"

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
3.1	HORIZONTAL BOARD FORMED C.I.P. CONC. W/ INTEGRAL COLOR
3.2	C.I.P. CONC. STEPS W/ INTEGRAL COLOR
3.3	C.I.P. CONC. RAMP W/ INTEGRAL COLOR
4.1	2" CMU WALL CAP
4.2	CMU - 5 DEEP SCORE, SPLIT FACE
5.2	STANDING SEAM METAL PANEL WALL CLADDING W/ FACTORY FINISH O/ 7/8" GALV. HAT CHANNELS O/ CMU
5.5	PROSCENIUM AESS 2 WF COLUMNS & BEAM, PTD.
5.6	1 1/2" NOMINAL GALV. STL. SCHEDULE 40 PIPE RAIL, PTD.
5.8	GALV. STL. HANDRAIL, PTD.
5.10	LOUVER, PTD.
5.13	STL. LETTERS PINNED OFF WEB OF PROSCENIUM BEAM
5.15	METAL COPING, FACTORY FINISH TO MATCH METAL WALL CLADDING
8.2	SLIDING STL. BARN DOOR, TRACK & HARDWARE

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CIVIL:
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STRUCTURAL:
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SAN FRANCISCO, CA 94105
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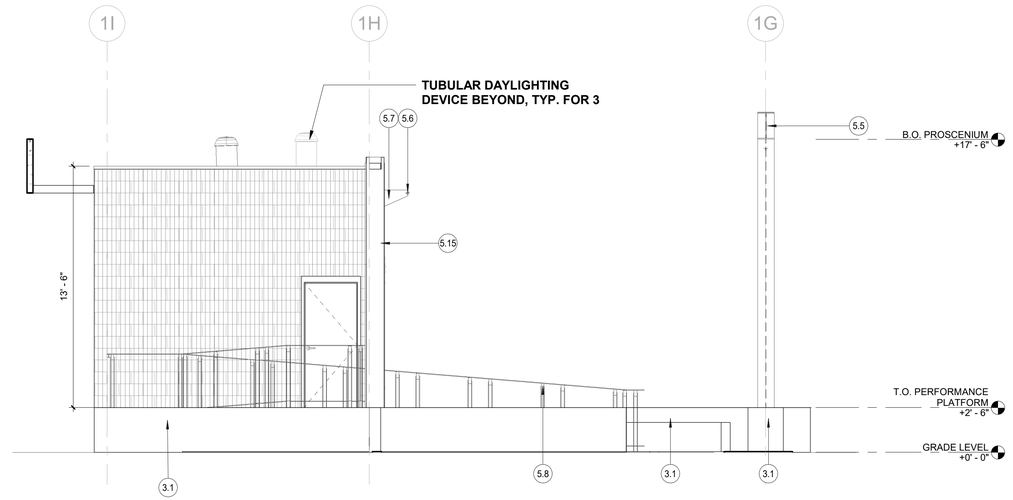
SHEET TITLE:

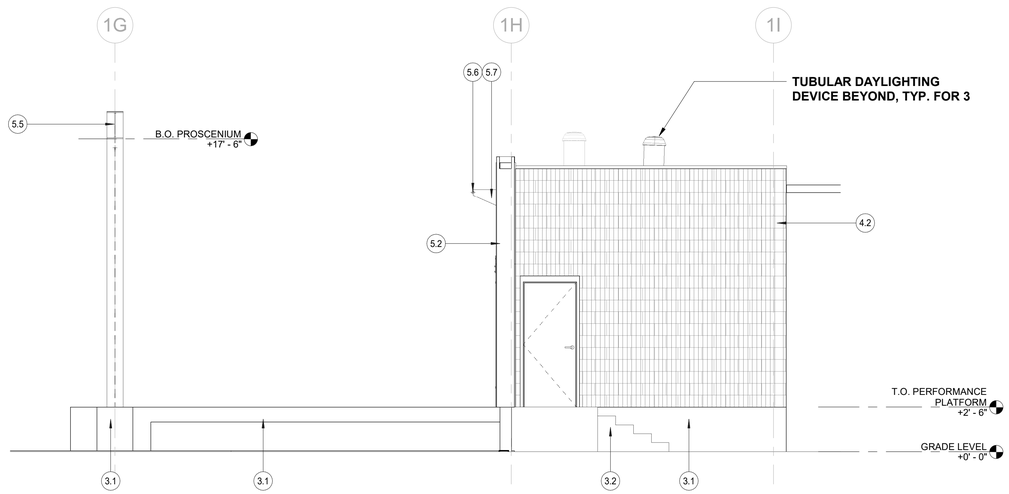
BLDG. ELEVATIONS - PERFORMANCE PLATFORM & SUPPORT BLDG

SHEET NUMBER:

A301



2 EAST ELEVATION - PERFORMANCE PLATFORM & SUPPORT BLDG
1/4" = 1'-0"



1 WEST ELEVATION - PERFORMANCE PLATFORM & SUPPORT BLDG
1/4" = 1'-0"

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
3.1	HORIZONTAL BOARD FORMED C.I.P. CONC. W/ INTEGRAL COLOR
3.2	C.I.P. CONC. STEPS W/ INTEGRAL COLOR
4.2	CMU - 5 DEEP SCORE, SPLIT FACE
5.2	STANDING SEAM METAL PANEL WALL CLADDING W/ FACTORY FINISH O/ 7/8" GALV. HAT CHANNELS O/ CMU
5.5	PROSCENIUM AESS 2 WF COLUMNS & BEAM, PTD.
5.6	1 1/2" NOMINAL GALV. STL. SCHEDULE 40 PIPE RAIL, PTD.
5.7	GALV. STL. RAIL MOUNTING BRACKET, PTD.
5.8	GALV. STL. HANDRAIL, PTD.
5.15	METAL COPING, FACTORY FINISH TO MATCH METAL WALL CLADDING

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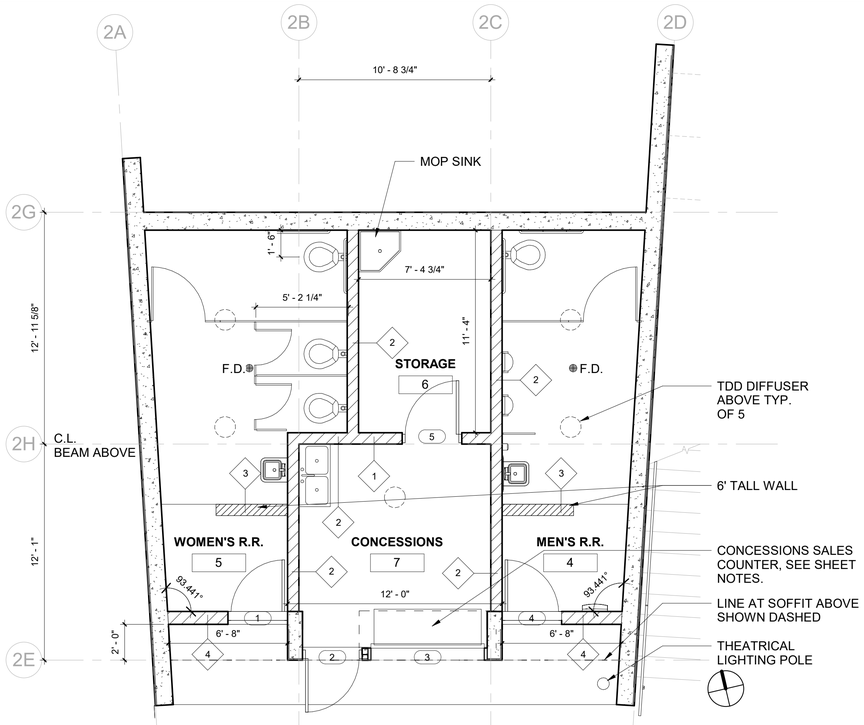
SHEET TITLE:

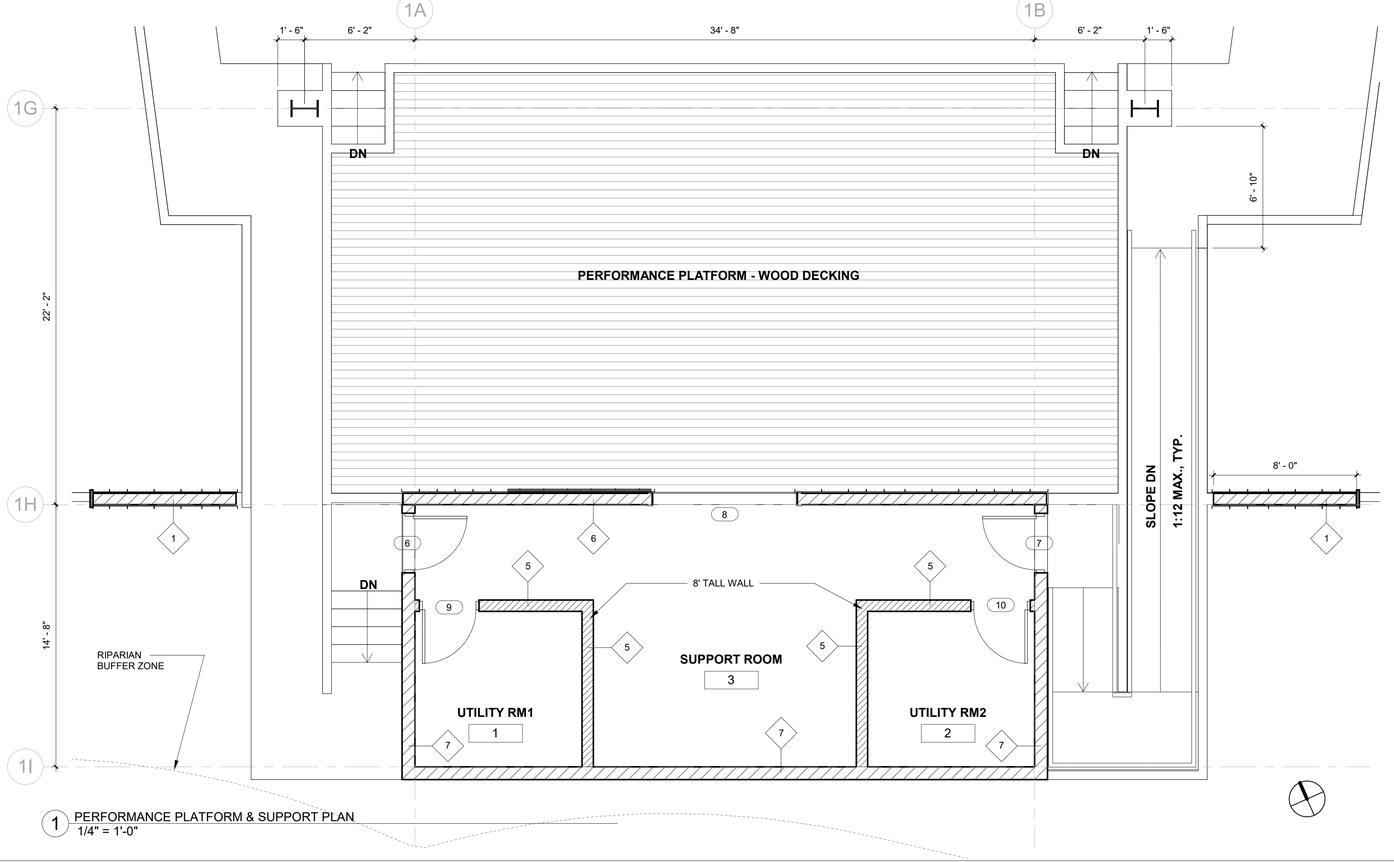
BLDG. ELEVATIONS - PERFORMANCE PLATFORM & SUPPORT BLDG

SHEET NUMBER:

A302



2 RESTROOMS & CONCESSIONS PLAN
1/4" = 1'-0"



1 PERFORMANCE PLATFORM & SUPPORT PLAN
1/4" = 1'-0"

LEGEND:

1. CMU 1 - STD 8" CMU STD FINISH BOTH SIDES
2. CMU 2 - STD 8" CMU: GRAFFITI RESISTANT COATING ON GROUND FACE ONE SIDE / STD FINISH ONE SIDE
3. CMU 3 - STD 8" CMU: GRAFFITI RESISTANT COATING ON GROUND FACE BOTH SIDES & END EXPOSED TO VIEW
4. CMU 4 - 5 DEEP SCORE CMU SPLIT FACE OUTSIDE / GRAFFITI RESISTANT COATING ON GROUND FACE INSIDE
5. CMU 5 - STD 8" CMU: GROUND FACE & PAINTED WHITE BOTH SIDES
6. CMU 6 - STD FINISH OUTSIDE / GROUND FACE & PAINTED WHITE INSIDE
7. CMU 7 - 5 DEEP SCORE CMU SPLIT FACE OUTSIDE / GROUND FACE & PAINTED WHITE INSIDE

PARTIAL HEIGHT CMU WALL

FULL HEIGHT CMU WALL

SHEET NOTES:

1. CONCESSIONS SALES COUNTER:
24" X 72" X 34" HIGH ALL WELDED CONSTRUCTION W/ STD MILL FINISH STAINLESS STEEL TABLE W/ 2" SQUARE CORNER LEGS W/ LOCKABLE 4" RUBBER CASTERS W/ PRIVACY SCREEN AND LOCKABLE CASH DRAWER
27" MINIMUM CLEAR KNEE SPACE AT 30" WIDE

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SHEET TITLE:
ENLARGED FLOOR PLANS

SHEET NUMBER:
A400