AGENDA ITEM 9
Treasure Island Development Authority
City and County of San Francisco
Meeting of September 11, 2024

Subject: Resolution Approving and Authorizing the Execution of a First Amendment to the Professional Services Agreement between the Treasure Island Development Authority and Rubicon Enterprises, Inc., a California nonprofit public benefit corporation, to increase the annual Scope of Services and not to exceed Contract Amount for Fiscal Year 2024-2025 (Action Item)

Contact Richard A. Rovetti, Deputy Director of Real Estate

Phone 415-274-3365

BACKGROUND

For over twenty-nine years, Rubicon has been providing landscape services to Treasure and Yerba Buena Islands through its Landscape Services Division. Rubicon provides stable training and employment opportunities for disabled and economically disadvantaged individuals from San Francisco. The Treasure Island operation has employed over eighty Rubicon Landscape employees through the One Treasure Island ("One TI") referral programs. Some of the One TI referrals have been promoted to supervisor positions, and others have moved on to opportunities, including working for SF Recreation and Parks Department and SF Conservation Corps.

On June 12, 2024, the Treasure Island Development Authority (the "Authority") Board of Directors approved a Professional Services Agreement (the "Agreement") with Rubicon Enterprises, Inc., a California nonprofit public benefit corporation ("Rubicon"), to provide Landscape Maintenance Services on Treasure and Yerba Buena Islands, along with natural resources management services on Yerba Buena Island and as needed landscape services to newly accepted parks and open spaces on Treasure and Yerba Buena Islands. However, the Agreement did not provide funding for scheduled daily/routine Landscape Maintenance Services to these newly accepted parks and open spaces, and did not include parks and open spaces that were approved by the Authority Board in May and June 2024, namely Treasure Island Landing, also called Waterfront Plaza and Causeway Park. Authority staff anticipated coming back to the Authority Board in the beginning of the new fiscal year to provide a comprehensive landscape maintenance service program for all of the newly facilities.

The approved Agreement has a budget of $1,850,000.00 and a Scope of Services that includes landscape / building and grounds services for residential, commercial and public areas of Treasure Island, overseeing the Treasure Island Community Garden and Treasure Island native plant demonstration gardens, providing services to Yerba Buena Island including routine landscape maintenance services at Vista Point and Pier E2, and natural resources management services on Yerba Buena Island. Additionally, Rubicon provides as needed landscape / building and grounds services for newly constructed Hilltop Parks, including the Dog Park, Panorama and Signal Parks, along with other identified areas on Treasure Island including Seven Seas Avenue, Clipper Cove Way, and Treasure Island Road that have come online due to completed development activity. Funding for the Agreement increased by $166,000.00 from the prior years agreement with Rubicon for maintenance of these areas in FY 2023-2024 due to cost of living increases and additional maintenance services.

The proposed First Amendment to the Professional Services Agreement (Exhibit A; the "First Amendment") increases the annual Scope of Services to address these new parks and open spaces and includes a routine and adjunct landscape maintenance services schedule that is for five days a week for maintenance of newly accepted Panorama / Signal Point Parks (Hilltop Parks), The Rocks Dog Park (YBI Dog Park), Causeway Park, and Treasure Island Landing Park, along with Stormwater Garden West and Stormwater Garden East. Detailed Maintenance Guidelines for each of the new parks are attached to this report as Exhibit B. Funding will be taken from the Authority's existing facilities maintenance account and was included in the adopted FY 2024-2025 Budget. Parks and open space maintenance staffing plan was developed in accordance with the detailed workplan prepared by CMG Landscape Architects.

PROFESSIONAL SERVICES AGREEMENT TERMS AND CONDITIONS

The salient terms and conditions of the proposed First Amendment to the Professional Services Agreement include the following:

Location:	Treasure Island and Yerba Buena Island
Commencement Date:	October 1, 2024
Term:	Month-to-Month
Compensation:	Amount not to exceed Two Million Two Hundred Forty-Eight Thousand Seven Hundred and Fifty Dollars ($2,248,750.00).
Landscape Maintenance Services:	Blowing – Clean street, parking areas, sidewalks and turf areas of plant debris; Detailing – Clean plant beds, remove weeds and debris, general plant bed maintenance; Disease and Insect Control – Address plant disease and insect problems using Integrated Pest Management techniques; Edging – Trim turf at edge of pavement; Empty Trash – Empty public trash receptacles in public areas, including bus stops, marina, and perimeter trail, as well as replenishing of doggie bags in same areas; Fertilize – Fertilize shrubs and turf; Mowing – Cut grass in irrigated and non-irrigated areas;

Mulch – Maintain 2” minimum mulch layer in plant beds;

Litter Pickup – Removal and disposal of litter from streets, parking areas, sidewalks and turf areas, including small tree limbs;

Process Plant Debris – Using grinder and chipper, grind and chip green waste, and maintain compost pile;

Pruning – Prune shrubs for shape and plant health;

Spraying – Spray herbicide on weeds in plant beds and pavement cracks;

Trimming – Trim around trees, shrubs, obstacles, etc.;

Watering – Operating irrigation equipment and settings for automated irrigation, and perform hand watering where system is unavailable;

Irrigation Maintenance – adjusting irrigation and sprinkler systems;

Bulk Debris – Removal and disposal of large debris items such as

abandoned furniture, trash, etc.;

Tree Trimming and Shrub Removal at YBI / TI;

Installation of new landscapes and / or renovation of existing landscapes, including irrigation replacement and repair of equipment; and

Tree Service – Tree service above 15 feet from ground, including pruning, removal of trees, and cutting of large fallen trees and branches.

Landscape Maintenance Natural Resources Management Services:

Developing and implementing field strategies for year-round invasive plant species control and removal at identified Yerba Buena Island work sites; assuring both ecologically sensitive protection and restoration of Yerba Buena Island’s native habitat communities and thorough invasive plant removal, to include the following:

Performing invasive plant removal, dry/dead brush clearing and deadfall tree clearing, primarily utilizing methods of hand-pull and use of hand tools;

Monitoring site conditions and installing slope stability measures, if necessary;

Native plant and tree installation, and irrigation if necessary;

Priority invasive plant species removal;

Monitoring, cataloguing, identifying, reporting and analyzing native plant and animal and invasive species conditions and changes in conditions at YBI work sites and submitting associated written reports;

Training, supervision, oversight and quality control of employee efforts to assure native plant and animal species protection and thorough invasive species removal;

Removing and disposing of all generated green waste, debris, and litter present at YBI work sites include developing and employing an Island-wide plant debris and mulch management strategy;

Performing as-needed Integrated Pest Management at YBI sites consistent with the City and County of San Francisco IPM Ordinance, and submitting herbicide application data required under the Ordinance; and

Developing and submitting written reports, summaries, recommendations and data relaying results of monitoring and operational activities performed throughout the term of the Agreement.

Landscape Maintenance TI/YBI Parks System and Stormwater Gardens:

Performing landscape maintenance services consistent with the principles and guidelines of the TI/YBI Parks Operations Manual and as more specifically detailed in the Treasure Island Development Authority Scope and Frequency Schedule, and individual park's Landscape Maintenance task-frequency schedule found within the Manual (See Exhibit C):

Maintaining installed landscape to include invasive plant species removal utilizing primarily hand-pull and hand tool methods;

monitoring site conditions and installing slope stability measures, if necessary; installing plant and tree replacements and infill additions if necessary.

Monitoring reporting and analyzing native and invasive species conditions and changes over time;

Employ as-needed Integrated Pest Management techniques consistent with the City and County of San Francisco IPM Ordinance, generating annual PCA Recommendations for herbicide application, and submitting herbicide application data required under the Ordinance;

Operating and adjusting irrigation equipment and settings for automated irrigation, and performing hand watering when required;

Removing and disposing of all generated green waste, debris, recyclables and litter present at sites, to include employing a plant debris and mulch management strategy;

Regular reporting of monitoring and operational activities performed throughout the term of the Agreement.

BUDGET IMPACT

The First Amendment to the Professional Services Agreement provides Rubicon with an amount not to exceed $2,248,750.00 during FY 2024-2025. This amount increases the level of funding by $326,250.00 to support these new areas coming online due to completed development activity, and increases funding in the natural resources management services on Yerba Buena Island to $428,500.00. Funding will come from the Authority's existing facilities maintenance account. This will result in a budget impact of $398,750.00 for FY 2024-2025.

RECOMMENDATION

Project Staff recommends approval of the First Amendment to the Professional Services Agreement between the Treasure Island Development Authority and Rubicon Enterprises, Inc., a California nonprofit public benefit corporation to increase the annual Scope of Services and not to exceed Contract Amount to $2,248,750.00 for FY 2024-2025 and authorize the Treasure Island Director or his designee to execute said First Amendment subject to the additional terms and conditions set forth above.

EXHIBITS

Exhibit A: First Amendment to the Professional Services Agreement between the Treasure Island Development Authority and Rubicon Enterprises, Inc., a California nonprofit public benefit corporation

Exhibit B: Maintenance Guidelines

Exhibit C: Treasure Island Development Authority Scope and Frequency Schedule

Prepared by: Richard A. Rovetti, Deputy Director of Real Estate
Peter Summerville, Treasure Island Development Authority

For: Robert P. Beck, Treasure Island Director

FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT

THIS FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT (this “First Amendment”), dated for reference purposes only as of October 1, 2024, is by and between the TREASURE ISLAND DEVELOPMENT AUTHORITY, a California nonprofit public benefit corporation (the “Authority”), and Rubicon Enterprises, Inc., a California nonprofit public benefit corporation (the “Contractor”).

RECITALS

A. The Authority and the Contractor entered into that certain Professional Services Agreement dated for reference purposes as July 1, 2024 (the "Original Agreement"), for landscape services within the commercial areas of Treasure Island and limited scope of services to Yerba Buena Island, as more particularly described in the Original Agreement. The term of the Original Agreement expires on June 30, 2025.

B. The Authority and the Contractor desire to amend the Original Agreement to increase the annual Scope of Services and not to exceed Contract Amount for Fiscal Year 2024-2025 on the terms and conditions set forth in this First Amendment

C. The Original Agreement and this First Amendment shall collectively be referred to as the “Agreement”. All capitalized terms used herein but not otherwise defined shall have the meaning given to them in the Agreement.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and for other good and valuable consideration, the Authority and the Contractor hereby amend the Agreement as follows:

AGREEMENT

1. Recitals. The foregoing recitals are true and correct and are incorporated herein by this reference as if fully set forth herein.

2. Effective Date. The effective date of this First Amendment shall be October 1, 2024 (the “Effective Date”).

3. Compensation. As of the Effective Date, the first paragraph of Section 5 of the Original Agreement shall be amended to read as follows:

> "Compensation shall be made in monthly payments on or before the **Tenth** day of each month for work, as set forth in Section 4 of this Agreement, that the Treasure Island Director, in his sole discretion, concludes has been performed as of the **Final** day of the immediately preceding month. In no event shall the amount of this Agreement exceed **Two Million Two Hundred Forty-Eight Thousand Seven Hundred and Fifty Dollars ($2,248,750.00).** The breakdown of costs associated with this Agreement appears in

Appendix A, "Landscape Budget for TI/YBI Service Areas," attached hereto and incorporated by reference as though fully set forth herein.

No charges shall be incurred under this Agreement nor shall any payments become due to Contractor until reports, services, or both, required under this Agreement are received from Contractor and approved by the Authority as being in accordance with this Agreement. Authority may withhold payment to Contractor in any instance in which Contractor has failed or refused to satisfy any material obligation provided for under this Agreement.

In no event shall Authority be liable for interest or late charges for any late payments."

4. **<u>Counterparts</u>**. This First Amendment may be executed in counterparts with the same force and effect as if the parties had executed one instrument, and each such counterpart shall constitute an original hereof.

5. **<u>Full Force and Effect</u>**. Except as specifically amended herein, the terms and conditions of the Sublease shall remain in full force and effect.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the Authority and the Contractor have executed this First Amendment to Agreement at San Francisco, California, as of the date first above written.

AUTHORITY:

TREASURE ISLAND DEVELOPMENT AUTHORITY

By: ___________________________________
Robert P. Beck
Treasure Island Director

CONTRACTOR:

Rubicon Enterprises, Inc.
a California nonprofit public benefit corporation

By: ___________________________________

Its: ___________________________________

APPROVED AS TO FORM:

DAVID CHIU, City Attorney

By: ______________________________
Deputy City Attorney

Amendment Prepared By: Richard A. Rovetti, Deputy Director of Real Estate ____________
(initial)

Appendix "A"
Landscape Budget for TI/YBI Service Areas

The Landscape services for Treasure and Yerba Buena Islands overall budget shall not to exceed Two Million Two Hundred Forty-Eight Thousand Seven Hundred and Fifty Dollars ($2,248,750.00). For this agreement, schedule of payments include: (i) Routine and adjunct services are for five days a week for an amount not to exceed $122,000.00 per month commencing on July 1, 2024 through June 30, 2025 totaling $1,464,000.00; (ii) $2,500.00 per month per month commencing on July 1, 2024 through June 30, 2025 totaling $30,000.00 for landscape services at Vista Point and Pier E2; (iii) Landscape services in the TI/YBI Parks Systems and Yerba Buena Island stormwater collection gardens for five days a week for an amount not to exceed $36,250.00 per month commencing on October 1, 2024 through June 30, 2025 totaling $326,250.00; and (iv) amount not to exceed $428,500.00, payable upon monthly invoice, for defined natural resources management services on Yerba Buena Island.

Below is the Landscape Maintenance Scope of Services to be performed by Rubicon Landscape at Treasure and Yerba Buena Islands, for FY 2024-2025:

Landscape Maintenance Services:

Blowing – Clean street, parking areas, sidewalks and turf areas of plant debris;

Detailing – Clean plant beds, remove weeds and debris, general plant bed maintenance;

Disease and Insect Control – Address plant disease and insect problems using Integrated Pest Management techniques;

Edging – Trim turf at edge of pavement;

Empty Trash – Empty public trash receptacles in public areas, including bus stops, marina, and perimeter trail, as well as replenishing of doggie bags in same areas;

Fertilize – Fertilize shrubs and turf;

Mowing – Cut grass in irrigated and non-irrigated areas;

Mulch – Maintain 2” minimum mulch layer in plant beds;

Litter Pickup – Removal and disposal of litter from streets, parking areas, sidewalks and turf areas, including small tree limbs;

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Watering – Operating irrigation equipment and settings for automated irrigation, and perform hand watering where system is unavailable;

Irrigation Maintenance – adjusting irrigation and sprinkler systems;

Bulk Debris – Removal and disposal of large debris items such as

abandoned furniture, trash, etc.;

Tree Trimming and Shrub Removal at YBI / TI;

Installation of new landscapes and / or renovation of existing landscapes, including irrigation replacement and repair of equipment; and

Tree Service – Tree service above 15 feet from ground, including pruning, removal of trees, and cutting of large fallen trees and branches.

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Performing invasive plant removal, dry/dead brush clearing and deadfall tree clearing, primarily utilizing methods of hand-pull and use of hand tools;

Monitoring site conditions and installing slope stability measures, if necessary;

Native plant and tree installation, and irrigation if necessary;

Priority invasive plant species removal;

Monitoring, cataloging, identifying, reporting and analyzing native plant and animal and invasive species conditions and changes in

conditions at YBI work sites and submitting associated written reports;
Training, supervision, oversight and quality control of employee efforts to assure native plant and animal species protection and thorough invasive species removal;
Removing and disposing of all generated green waste, debris, and litter present at YBI work sites include developing and employing an Island-wide plant debris and mulch management strategy;
Performing as-needed Integrated Pest Management at YBI sites consistent with the City and County of San Francisco IPM Ordinance, and submitting herbicide application data required under the Ordinance; and
Developing and submitting written reports, summaries, recommendations and data relaying results of monitoring and operational activities performed throughout the term of the Agreement.

Landscape Maintenance TI/YBI Parks System and Stormwater Gardens:

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Maintaining installed landscape to include invasive plant species removal utilizing primarily hand-pull and hand tool methods;
monitoring site conditions and installing slope stability measures, if necessary; installing plant and tree replacements and infill additions if necessary.

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Operating and adjusting irrigation equipment and settings for automated irrigation, and performing hand watering when required;

Removing and disposing of all generated green waste, debris, recyclables and litter present at sites, to include employing a plant debris and mulch management strategy;

Regular reporting of monitoring and operational activities performed throughout the term of the Agreement.

TREASURE ISLAND & YERBA BUENA ISLAND PARKS

OPERATIONS & MAINTENANCE

DRAFT FOR REVIEW

MAY 2023

PREPARED FOR TREASURE ISLAND DEVELOPMENT AUTHORITY

One Avenue of Palms, Suite 241

San Francisco, CA 94130

SUBMITTED BY

TICD TREASURE ISLAND COMMUNITY DEVELOPMENT

PREPARED BY

MJM Management Group

cmg Landscape Architecture

Treasure Island & Yerba Buena Island Parks
OPERATIONS AND MAINTENANCE

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Figure 1.1: Treasure Island and Yerba Buena Island Parks

1 EXECUTIVE SUMMARY

1.1 PROJECT OVERVIEW

Upon completion, Treasure Island and Yerba Buena Island will be home to thousands of new residents. An extensive redevelopment project has re-imagined this formal naval base located within the heart of the San Francisco Bay as a new urban neighborhood. Significant amounts of affordable housing, increased public access to open space, and robust transportation networks and infrastructure improvements now define the islands. These changes bring new recreational and entertainment opportunities to the region, while also creating jobs and a sustainable community. Unparalleled views, a rich array of public amenities for residents and visitors, and approximately 290 acres of parks and open space make Treasure Island and Yerba Buena Island vibrant communities and destinations within the San Francisco Bay.

The project's urban form is intended to be distinctive, place-based, and experience-focused, establishing a memorable identity for the islands. Treasure Island is arranged with a series of fine grained, walkable blocks. The new homes on Treasure Island will form two neighborhoods: one along the island's western edge with spectacular views back to the City, and a second stretching to the east along Clipper Cove with views of the new Bay Bridge and the East Bay hills. On Yerba Buena Island, the rugged natural topography informs the placement and form of development, which is focused on views and relationship to natural habitats. Yerba Buena Island's limited development footprint allows for the preservation of natural vegetation and land-form along with historic structures and gardens. The islands also include a U.S. Coast Guard Station and Sector Facility, a U.S. Department of Labor Job Corps campus, and Federal Highway Administration land occupied by the San Francisco-Oakland Bay Bridge and tunnel structures.

The parklands include a variety of public open spaces, from neighborhood parks and sports fields to shoreline open space with striking views of the San Francisco Bay. Treasure Island and Yerba Buena Island parks are designed to offer opportunities for passive recreation and picnics while also serving as venues for larger public activities such as concerts and athletic events.

The Treasure Island Development Authority (TIDA) is the city governing body which oversees the redevelopment and has jurisdiction over the new parklands and responsibility for their maintenance.

1.2 DOCUMENT OVERVIEW

The Operations and Maintenance Manual is intended to provide guidance for the long-term planning, scoping, and maintenance of the parks and open space of Treasure Island and Yerba Buena Island. This document sets out the required standards of care for each park space and details the roles of park maintenance management personnel. The information within this document is also intended as a tool for budget projections.

The Operations and Maintenance Manual is divided into two main sections: 'System-wide Management' and 'Parks Management.' The information presented in these chapters is supplemented by a series of appendices that include supporting technical information, design, construction, and management documentation.

Chapter 2 of this document, 'System-wide Management,' offers standards and guidelines for parks maintenance practices across all park types and phases. While Treasure Island and Yerba Buena Island will be home to a wide range of parks, each with of varying scales, uses, and material characters, these parks will all be subject to baseline levels of care in order to support the longevity and health of the parks system.

The wide variety of parks on Treasure Island and Yerba Buena Island also necessitates more detailed maintenance practices based on intensity of use, park character, and size. Chapter 3, 'Parks Management,' offers detailed maintenance standards that expand upon the general guidelines found in Chapter 2. This section includes park-specific levels of care, plan diagrams, maintenance frequency tables, and narrative descriptions of individualized park management practices.

1.3 PHASING CONSIDERATIONS

The re-development of Treasure Island and Yerba Buena Island will occur across multiple phases through approximately 2034, with the timing of construction phasing dependent upon market conditions. This manual is intended to evolve and grow as construction progresses and new parks are completed.

The majority of the parks acreage is included in the first and last major phases of development. Major Phase 1 includes the open space on Yerba Buena Island, the island center, and the first portions of the main waterfront and neighborhood parks on Treasure Island. The second and third major phases include incremental additions to the parks constructed in Phase 1, as well as the first phase of the agricultural park and the open space on the existing Pier 1. The last major phase completes the park system with significant additions to Cityside Park, the agricultural park and the entirety of the Northern Shoreline Park (or Wilds).

As described previously, Chapter 2 (System-wide Guidelines) of this manual is intended to provide high level guidelines for maintenance that can be applied across all parks and Chapter 3 (Parks Management) includes more specific information per park. As new park spaces are designed and constructed, they will require the development or expansion of a section within the Parks Management chapter of this manual to provide detailed standards based on their particular characteristics, features, and uses. Additionally, as the parks system grows, the System-wide Guidelines found in Chapter 2 require regular assessment to ensure that they continue to reflect the latest best practices and provide strong standards for the efficient and effective maintenance of the parks system. Overtime, this manual anticipates increased efficiency and economy of scale in terms of capital investment, maintenance facilities use, and overall park system management.

This first version of the manual includes maintenance practices for parks and open space in Major Phase 1, Sub-phases 1YA and 1YB (Yerba Buena Island) and Sub-phases 1B, 1C, and 1E (Treasure Island). Detailed sections for each of the parks and open spaces in these sub-phases are included in Chapter 3.

TREASURE ISLAND	ACRES
Waterfront Plaza (Treasure Island Landing)	2.4
Building 1 Plaza (Unity Plaza)	2.4
Cultural Park (Chapel Grove)	2.4
Cityside Waterfront Park	24.2
Northern Shoreline Park and The Wilds	103.0
Eastern Shoreline Park	9.8
Pier 1	2.7
Clipper Cove Promenade	2.0
Marina Plaza (Treasure Island Landing)	2.0
Cityside Neighborhood Parks	1.6
Eastside Commons (Eastside Gardens)	2.9
Sports Park	21.0
Urban Agricultural Park	25
Building 2 and 3 Historical Landscape (Pan Am Grove and Aviator's Court)	4.8
School District Open Space	6.3
SUBTOTAL	*212.5*
TOTAL	**212.5**

YERBA BUENA ISLAND	
Hilltop Park (Infinity Point and Signal Point)	5.4
Beach Park (Clipper Cove Park)	0.8
YBI Trails and Habitat Management Areas	66.7
Senior Officers Quarters Historic District (The Officer's Quarters)	4.77
SUBTOTAL	*77.67*
TOTAL	**290.2**

Table 1.1: Parks Acreage

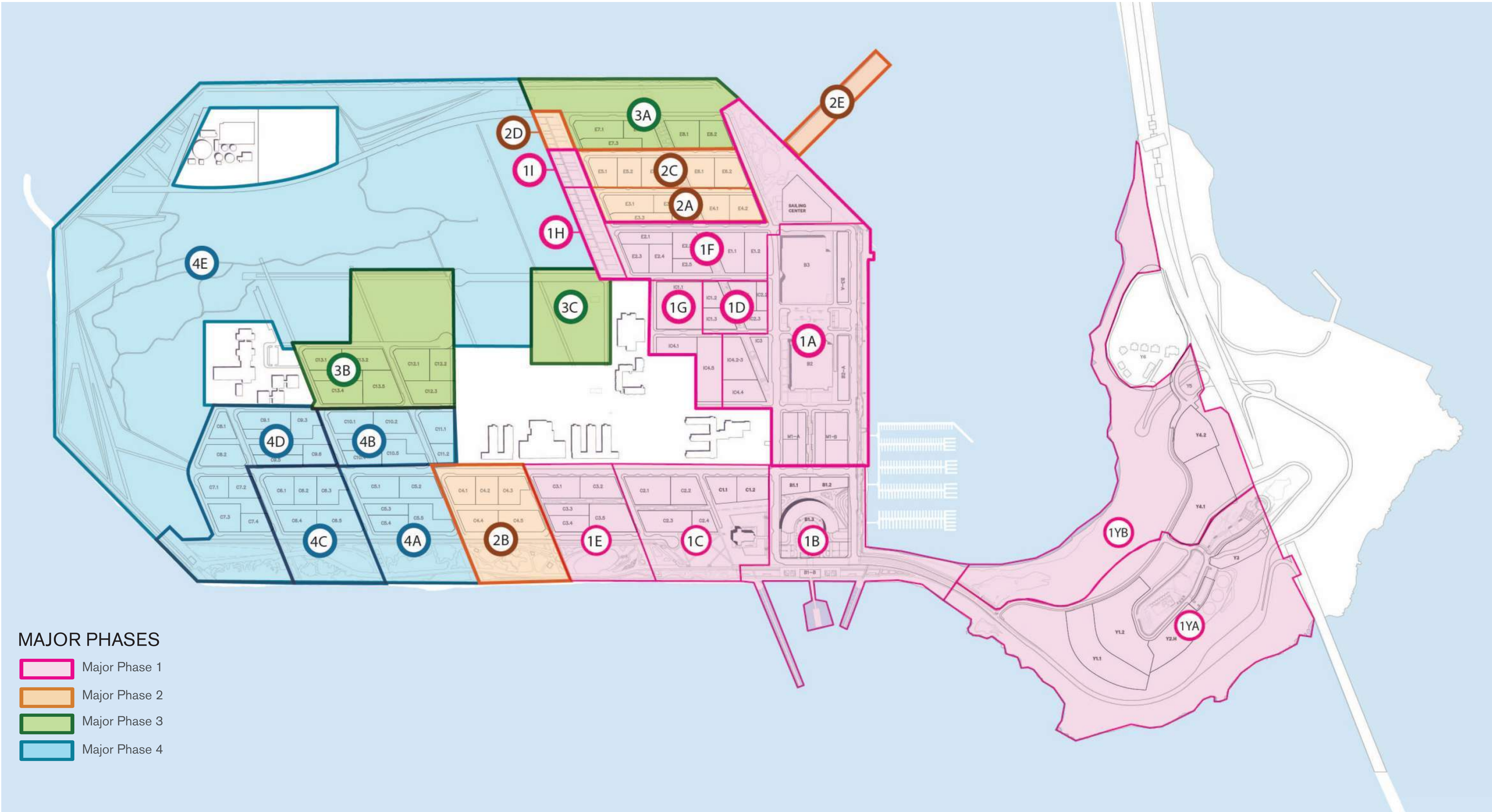


Figure 1.2: Major Phases

1.4 YERBA BUENA ISLAND PARKS (1YA & 1YB)

Sub-Phases 1YA and 1YB on Yerba Buena Island include the construction of approximately 14 acres of parks and trails. Infinity Point and Signal Point are the premier open spaces on Yerba Buena Island, intended to be a regional destination with unparalleled views of the San Francisco Bay. The parks transform existing water tanks into destination overlooks with areas for picnics, native planting, and an iconic art piece. Clipper Cove Park and The Rocks Dog Park provide other programmed spaces for picnics or off-leash dogs. Clipper Cove Park sits on the bluff above Clipper Cove Beach and surrounds the historic Quarters 10 building. The Rocks Dog Park is comprised of a fenced-in, off-leash dog run along Yerba Buena Road.

Willow Bridge Park and Buckeye Grove stormwater gardens include walking paths and planted, bio-treatment areas and swales that clean the stormwater runoff from the streets and private parcels on YBI. The Final Stormwater Control Plans for each space include maintenance guidelines to ensure their continued efficacy and as required by the San Francisco Public Utility Commission (SFPUC).

The Yerba Buena Island Trail Network consists of park walkways, sidewalks, and a series of rustic paths around the island. The trails use local, reclaimed material including furniture made of salvaged eucalyptus from the island and boulders unearthed during the construction process. The trails and habitat restoration areas adjacent require specialized knowledge and care to maintain specific to the ecological character or Yerba Buena Island.

The remaining 58 acres of open space is undeveloped and to be managed by TIDA as part of the Yerba Buena Island Habitat Management Plan (HMP). See Appendix 4.8 and Section 2.2.7. The HMP provides a framework for the long-term removal of invasive eucalyptus trees and the restoration of native habitat. A native plant nursery run by Literacy for Environmental Justice (LEJ) grew many of the plants for the open spaces from seeds and cuttings from YBI or other nearby natural areas. The long-term goals and vision of the HMP must be adhered to when maintaining or modifying these areas.

1.5 TREASURE ISLAND PARKS (1B, 1C, 1E)

Sub-Phases 1B, 1C and 1E on Treasure Island contain approximately 15.5 acres of parks and open space. This first phase of parks includes a variety of public plazas, regional destination parks, and neighborhood parks. Treasure Island Landing serves as the arrival point for the ferry service from San Francisco, making it the front door to the island. Similarly, Unity Plaza is a highly visible space that acts as the forecourt to the historic Building 1. To the east of Building 1, the Court of Pacifica provides many opportunities for gathering, recreation, and entertainment while protecting existing mature vegetation, mitigating wind, and enhancing the use and prominence of the building. On the south side of Treasure Island, the Clipper Cove Promenade provides access along the marina waterfront, and creates a linear open space oriented toward the Cove and associated marina activities.

To the north of Building 1, the Chapel Grove will be a focal point and civic gathering space for the Treasure Island community, providing an idyllic setting for the existing Chapel, as well as a place of refuge in its urban context for both sightseers and Island dwellers alike. The Chapel Grove offers flexible open spaces that will stand up to the evolving urban character of later development phases.

The first phase of Cityside Park includes 6.5 acres of what will be a 24-acre regional park stretching across the western edge of the island. Legible at the urban scale but distinguished along its length by a variety of activities, the park is conceived as one landscape with many experiences. This initial portion of the park includes coastal scrub habitat, stormwater treatment, two plazas, and a large lawn space for passive recreation or hosting neighborhood events.

Figure 1.3: Major Phase 1 Parks (Sub-Phases 1YA, 1YB, 1B, 1C, 1E)

PHASE 1 PARKS (SUB-PHASES 1YA, 1YB, 1B, 1C, 1E)

PARK	Total Area (SF)	Description
Willow Bridge Park	60,700	A centralized stormwater treatment and habitat garden with a pedestrian strolling path and seating
Causeway Slopes & Beach Access	77,000	An accessible path with retaining wall, seating area, and planted slopes
Cityside Park 1	102,400	Waterfront park for passive recreation, views across the Bay, and event space
Signal Point	87,300	Destination park located at the summit of Yerba Buena Island with panoramic views and picnic tables
Buckeye Grove	97,900	A centralized stormwater treatment and habitat garden with historic buckeye trees, a pedestrian path, and bicycle path
The Rocks Dog Park	15,100	A social space for dogs and people with a boulder scramble, seating areas, and views to the East Bay
Infinity Point	106,200	Destination park located at the summit of Yerba Buena Island with panoramic views, repurposed historic structures, and public art
Treasure Island Landing	65,300	A gateway park and transit hub for Treasure Island containing a ferry terminal, planting areas, and bike share station

PHASE 1 PARKS (SUB-PHASES 1YA, 1YB, 1B, 1C, 1E)		
PARK	**Total Area (SF)**	**Description**
Causeway Stormwater Garden	38,300	Stepped stormwater treatment garden
Clipper Cove Park	52,000	Park adjacent to Clipper Cove Beach with picnic areas, beach access, and historic building
Unity Plaza	101,800	Welcoming civic plaza with access to Building 1, historic palm trees, and space for events
YBI Trails	220,600	1.5 mile network of trails through the YBI Habitat Management Plan areas with bay views and native vegetation
Cityside Park 2	190,200	Waterfront park with flexible spaces, views across the Bay to downtown San Francisco, and space for a range of events
Clipper Cove Promenade	32,300	Pedestrian promenade running along the southern edge of Treasure Island with seating opportunities and marina access
Chapel Grove	114,300	Civic gathering space with tree grove, historic chapel, and event space
Court of Pacifica	64,100	Plaza for casual gathering and events that connections Building 1 to the retail corridor to the east

2 SYSTEM-WIDE MANAGEMENT

2.1 GENERAL POLICIES AND PROCEDURES

The operation and management of the Treasure Island and Yerba Buena Island parks system must follow all appropriate policies and procedures. Staff should develop and follow best practices in the oversight, management, and performance of all tasks related to the maintenance of the parks system.

Parks system staff, as well as any and all contractors, will be required to follow several specific sets of guidelines, including but not limited to City and County of San Francisco Municipal Codes and other relevant governmental policies for the performance of work in the public realm. In addition, the Treasure Island Development Authority (TIDA) will produce a Yerba Buena Island and Treasure Island (YBI/TI) Parks Code and YBI/TI Parks rules and regulations. All staff, subcontractors, vendors, and their employees shall be required to follow these guidelines, codes, and rules.

2.2 ENVIRONMENTAL POLICIES AND PROCEDURES

2.2.1 Goals and Objectives

The redevelopment plans for Yerba Buena and Treasure Island include ambitious sustainability goals. The layout of the street grid, location of housing, and the development of pedestrian and bike infrastructure is all designed to maximize solar orientation, open space and habitat area, and to encourage walking and biking. Additionally, many of the parks are designed to minimize water use through the use of primarily native, drought tolerant species. Many planting areas are also intended to function as habitat. The operations and maintenance of the park spaces must strive to continue this ambitious legacy and incorporate environmentally-friendly practices and procedures throughout the maintenance process. Maintenance practices must seek to reduce water use in cleaning and irrigation, and reduce electricity and fossil fuel consumption with the goal of eliminating fossil fuel use wherever possible. These energy and resource goals apply to both parks energy use and maintenance vehicles and equipment. Additionally, maintenance staff must eliminate or limit the use of chemical pesticides and fertilizers and follow habitat-friendly guidelines. Specific recommendations can be found in the later chapters of this manual and in the resources listed below.

2.2.2 LEED ND Certification

The redevelopment's Developer Environmental Sustainability Obligations require the project to achieve LEED for Neighborhood Development (LEED-ND) gold status. LEED-ND Gold is achieved with a minimum of 60 points, while LEED-ND Platinum is a minimum of 80 points. In the fall of 2016, the Treasure Island and Yerba Buena Island Development Plan was submitted and achieved LEED-ND Platinum Plan certification from the U.S. Green Building Council, with a total of 87 points. The final LEED-ND Platinum Project certification will be documented and submitted upon build-out of the project (or of project phases, such as at the completion of Phases 1, 2, and 3, with subsequent final certification for additional phases coming later). Credit points relevant to the management of the parks (and their associated buildings) are listed below and are currently being tracked and implemented in the project.

- Habitat management (SLL c9: Long-Term Conservation Management)
- Water Conservation/Outdoor Irrigation and Planting (GIB c4: Water-Efficient Landscaping)
- Energy-Efficient Infrastructure (GIB c13: Infrastructure Energy Efficiency)
- Light Pollution (GIB c17: Light Pollution Reduction)
- Building Energy Efficiency (GIB p2 and c2: Building Energy Performance)
- Indoor Water Efficiency (GIB Credit 3: Indoor Water Use Reduction)
- Educational Program (ID C3: Signage and Education)

2.2.3 San Francisco Bay Plan (BCDC)

All areas of Treasure Island and Yerba Buena Island under the jurisdiction of the Bay Conservation and Development Commission (BCDC) must adhere to the policies described in the San Francisco Bay Plan (https://bcdc.ca.gov/plans/sfbay_plan). This document sets in place protective measures to preserve the ecological health and sustainable public use of the San Francisco Bay and its coastal zone.

2.2.4 Bay-Friendly Landscape Guidelines (Re-Scape)

All work done in the parks of Treasure Island and Yerba Buena Island are required to follow the Bay-Friendly Landscape Guidelines (https://rescapeca.org/wp-content/uploads/2016/01/BFLG-Complete.pdf). These guidelines were developed as a means by which to reduce waste, support habitat diversity, and set in place sustainable systems in the course of designing, constructing, and maintaining landscapes within the San Francisco Bay watershed. See the 'Landscape' section of this chapter for more information on this policy.

2.2.5 City and County of San Francisco Ordinances and Requirements

The TI/YBI Parks System is owned by the Treasure Island Development Authority. As a result, there are a variety of City and County of San Francisco ordnances and obligations influencing elements of the operation of the TI/YBI Parks System, to include:

- San Francisco Integrated Pest Management Ordinance
- San Francisco Green Purchasing Ordinance
- San Francisco Precautionary Principle Ordinance
- San Francisco Mandatory Recycling and Composting Ordinance
- San Francisco Administrative Code

2.3 GENERAL LEVELS OF SERVICE

The Treasure Island and Yerba Buena Island Parks System includes a wide range of park and open spaces with varying scales, programs, facilities, and usage intensities. To address this variation, the operations and maintenance requirements for each park are defined by three Levels of Service: base, high, and low. The Levels of Service provide a framework to optimize staffing and budget allocations and ensure a consistent but appropriate level of maintenance for each park.

Some spaces will require more regular care due to their program, intensity of usage or design elements, while other spaces are deliberately designed to be more low maintenance and will not require as much attention. For example, the Ferry Plaza and Terminal will see a high level of activity on a daily basis, whereas the natural areas on Yerba Buena Island will have lower usage and a different maintenance regime.

The Levels of Service framework provides an overarching guide for specific tasks within the engineering, landscape and janitorial departments. The charts on the following pages outline how the three levels of service differ across each discipline and specific tasks. The base level of service is the default for most spaces and describes the standard maintenance protocols. The high level of service includes additional or more frequent tasks. Similarly, the low level of service outlines when less frequent service is warranted.

Each park space is assigned a level of service in each of the engineering, landscape and janitorial tasks based on its design, location or anticipated level of usage. A chart outlining the level of service can be found at the beginning of each parks section in Chapter 3. These levels of service assignments have been used to develop the estimated budgets and Frequency Schedules specific to each park. The specific and special requirements for each park are defined in Section 3. In time, the level of service assignments should be re-evaluated and adjusted to reflect the actual conditions and usage.

MAINTENANCE LEVELS	ENGINEERING			
	Utility Systems	Paving	Restroom Facilities	Furniture, Fixtures, & Equipment
HIGH	- Provide a higher level of inspection, reporting, and repair of utility systems based on intensity of use and importance of public safety and operations. - Start-up to include inspection of all faucets, toilets, lighting systems, and other machinery to ensure all is in working order, and information logged, including any repairs. - Follow a maintenance protocol to routinely inspect all systems and perform minor repairs or adjustments immediately, in advance of problems occurring. - Repairs to all site features should be done immediately with available personnel and materials from back stock.	- Higher frequency and intensity of inspection and non-emergency repairs are prioritized.	- Provide a high level of inspection, reporting, and repairs to restroom facilities as required to ensure public safety and functionality of restrooms. - Repairs to be scheduled during normal maintenance time and prioritized.	- Provide a high level of inspection, reporting, repair and replacement of furniture, fixtures and equipment. - Furnishings to be inspected daily with hazards and graffiti to be repaired immediately, when discovered. - Preventative coatings applied as needed and at least two times per year to any fixtures or furniture.
BASE	- Provide inspection, reporting, and repairs to all utility systems as required to ensure public safety, park operations and long-term functionality of systems. - Daily startup includes reading and documenting all utilities and site meters (water, gas, electrical). - Emergencies and hazards shall be identified and repaired as promptly as possible and as needed to ensure public safety and operations. - All non-emergency repairs will be monitored, reported, and scheduled for repair during as needed. - Full monitoring and maintenance program to be implemented weekly, monthly, quarterly, and annually.	- Regular inspection and reporting on all paving surfaces to ensure compliance with ADA requirements, safety and durability of surfaces. - Emergencies and Hazards shall be identified and repaired as promptly as possible and as needed to ensure public safety and operations. - All non-emergency repairs will be monitored, reported, and scheduled for repair during as needed during normal maintenance periods.	- Provide regular inspection, reporting, and repairs to all restroom facilities as required to ensure public safety and functionality of restrooms. - Repairs to be scheduled during normal maintenance time.	- Provide regular inspection, reporting, repair and replacement of furniture, fixtures and equipment. - Furnishings to be inspected daily with hazards and graffiti to be repaired within 24 hours. - Broken/damaged items to be removed and replaced with back stock during routine maintenance schedule. - Painted surfaces or other finishes to be inspected for flaking, rust or other issues, and fixed during routine maintenance schedule. - Preventative coatings applied annually to any fixtures or furniture. - Wood surface oils applied as needed. Oil finishes performed monthly on furnishings near the water. - Equipment: preventative maintenance quarterly, repairs as needed.
LOW	- Provide a lower level of inspection, reporting, and repair of utility systems based on intensity of use and importance of public safety and operations. - Read and document all utilities and site meters (water, gas, electrical) once a week.	- Lower frequency and intensity of inspection and scheduling of non-emergency repairs	- Not applicable: lower standard of care not recommended for restrooms.	- Provide a lower level of inspection, reporting, repair and replacement of furniture, fixtures and equipment. - Furnishing should be inspected weekly. Problems identified and minor repairs performed during routine maintenance schedule. - Broken/damaged items must be replaced, with a work order developed to purchase replacements.

MAINTENANCE LEVELS	LANDSCAPE: Irrigation & Water Management	LANDSCAPE: Trees & Understory Plant Care	LANDSCAPE: Lawn & Turf Care
HIGH	- Higher levels of monitoring, irrigation management, and repair based on location, scale, type and complexity of landscape. - Inspect systems and lateral lines weekly for leaks, drips and broken heads. - Daily inspection and management of spray irrigation systems and all lawn areas.	- Higher level of monitoring, soils management, pruning, weeding, and plant removal/replacement based on location, scale, type and complexity of landscape. - Semi-annual soil testing and organic fertilization as required based on species. - Annual or semi-annual tree pruning as required to ensure public safety, structure/aesthetic quality and long-term health of trees. - Annual arborist visit and report. - High level of weeding to prevent invasive plant issues and maintenance aesthetic quality of landscape consistent with design intent.	- Provide a high level of turf maintenance, mowing, and soil management for high use areas and athletic fields. - Grass height maintained according to species/variety of grass and purpose and water management scheduled around each activity. - Regular inspection, aeration, fertilization and renewal. - Free and clear of weeds and divots at all times. - Athletic Fields will require immediate response to daily restoration needs by scheduled activities, with preparation immediately before and after use.
BASE	- Moderate levels of monitoring, irrigation management, and repair based on location, scale, type and complexity of landscape. - Complete annual audit of irrigation systems and water usage - Inspect systems regularly for clogged heads or drip systems and to ensure timers working properly. - Water meters read two times per week to detect any leaks. - Mainline leaks repaired immediately.	- Moderate level of monitoring, soils management, pruning, weeding, and plant removal/replacement based on location, scale, type and complexity of landscape. - Annual soil testing and organic fertilization as required based on species. - Tree pruning as required to ensure public safety and long-term tree health. - Annual arborist visit and report, first year and every three years. - Regular weeding to prevent invasive plant issues and maintenance aesthetic quality of landscape consistent with design intent. - Annual review, removal and replacement of understory and groundcover plantings.	- Provide regular turf maintenance, mowing, and soil management for general purpose and moderate use lawn areas. - Mowing as needed to maintain appropriate lawn height based on turf type and use. - Weed Control: inspect and hand-pull weeds weekly. - Regular monitoring and treatment for pests through Integrated Pest Management Program. - Aeration, thatching and re-seeding two times annually. - Soil testing annually, amend soil in accordance with test results. - Before events, develop mitigation and restoration plan to occur immediately after.
LOW	- Lower levels of monitoring, irrigation management, and repair based on location, scale, type and complexity of landscape. - Applies to natural areas and opens spaces with temporary, limited, or no irrigation.	- Lower level of monitoring, soils management, pruning, weeding, and plant removal/replacement based on location, scale, type and complexity of landscape. - Soil testing and organic fertilization as required based on visual inspections and general health of plants. - Tree pruning as required to ensure public safety and long-term health of trees. - Arborist visit and reports based on inspection and reporting of tree health and issues. - Low level of weeding to prevent invasive plant issues and maintenance aesthetic quality of landscape consistent with design intent. - Limited review, removal and replacement of understory and groundcover plantings in large landscapes and natural areas.	- Not applicable

MAINTENANCE LEVELS	JANITORIAL: Furnishings & Fixtures	Paving	Waste Management	Graffiti	Restroom Facilities
HIGH	- Provide daily inspection and cleaning of furnishings.	- In high-traffic areas, hardscape should be swept or blown daily or twice daily to ensure a safe and clean surface. - Steam clean twice monthly.	- Waste collection for high use areas with monitoring of waste receptacles three times daily. Collection of waste from receptacles at 4/5 capacity in morning, mid-day and afternoon as needed. - Water's edge: Litter and debris removed three times per day, morning and afternoon. - Litter and trash removal at a higher level in picnic areas.	- Graffiti inspection should be done daily. Mitigation measures and/or removal should be completed within immediately.	- Restrooms cleaned thoroughly three times a day, with spot inspections and restocking every 20-30 minutes during high volume times. - High and low cleaning twice a year.
BASE	- Provide a moderate level of inspection and cleaning of furnishings, daily to weekly depending on use patterns.	- Hardscape should be swept or blown regularly to ensure a safe and clean surface. - Steam clean monthly. - Report any trip and fall hazards immediately to the engineering department	- Waste collection for moderate use areas with monitoring of waste receptacles twice daily. Collection of waste from receptacles at 4/5 capacity in morning and afternoon as needed. - Hand collection, raking, sweeping and/or blowing of litter should be done early in morning 7 days per week. Hot spots checked throughout the day. - Water's edge: Litter and debris removed twice a day, morning and afternoon. - Extra receptacles provided during special events in strategic locations or specific areas of increased attendance.	- Graffiti inspection should be done daily. Mitigation measures and/or removal should be completed within 24 hours.	- Restrooms inspected and cleaned thoroughly three times a day. - Paper towel dispensers, soap dispenser and toilet paper should be restocked regularly based on inspections and every hour during high volume times. - Restrooms inspected, stocked, and any necessary repairs reported to engineering department daily. - Large volume events may require a restroom monitor to be on hand for the duration of the event. - Hours of operation should adjusted for both low usage periods and during weather conditions that diminish use. - High and low detailing annually.
LOW	- Provide a lower level of inspection and cleaning of furnishings, weekly to monthly, depending on use patterns.	- Hardscape should be swept or blown as needed to ensure a safe and clean surface. - Steam clean quarterly or as needed based on use patterns.	- Waste collection for low use areas with monitoring of waste receptacles once daily. Collection of waste from receptacles at 4/5 capacity as needed. - Hand removal, raking, and blowing of litter and debris on paths and trails should be done periodically as needed to maintain a safe and debris free surface.	- Graffiti inspection should be done regular based on use patterns. Mitigation measures and/or removal should be completed within 48 hours.	- Not applicable

2.4 MANAGEMENT

2.4.1 Management Overview

Management staff are responsible for ensuring that all parks and open space on Treasure Island and Yerba Buena Island are safe and accessible. The parks are intended to integrate with the Treasure Island and Yerba Buena Island communities and have been designed to celebrate the distinct character of the islands, to engage the waterfront in a sensitive way, and to provide diverse program to all residents and visitors. As managers of the public space, staff should ensure that all actions enhance the sustainability of the parks system, strengthen ecological infrastructure, and provide opportunities for interpretative education and recreational pursuits for the public.

2.4.2 Management Structure

The management of the public space at Treasure Island and Yerba Buena Island should be executed by a professional staff that reports to TIDA. At the initial opening of the public space, the management staffing will consist of a part-time General Manager who has a strong background in place-making, public space property management and preferably a background in asset management.

The General Manager will be responsible for the overall management of the operations and maintenance of the parks and open spaces, including general maintenance and engineering services, landscape maintenance, and janitorial services, as well as any special conditions or events. The General Manager will be responsible for all areas and components of the park improvements as shown on the plans, specifications, and project manuals provided for each park as they are added to the Parks system. The General Manager will coordinate closely with TIDA management and administration to ensure that parks and open space operations are integrated with island wide management and services.

In addition, a full-time Stationery Engineer, preferably with parks and mixed-use experience will be available to oversee repairs, inspections, certifications, licensing and testing.

After subsequent phases of the parks come on-line, the General Manager would become full time and an Assistant Property Manager and a Utility Engineer will join the staff. Further additions to staff will be evaluated as future phases of the parks and open space are developed.

2.4.3 Administration

The General Manager will oversee that the following systems are put in place for the management of Treasure Island and Yerba Buena Island parks and open space:

<u>Communications</u>

- A contacts list will be created for the property by the management company, and will include:
    - Contacts for Management Staff
    - Contacts for TIDA
    - Contacts for all Subcontractors
    - Contacts for all Park vendors
    - Contacts for all Community and Neighboring Organizations
    - Security Phone
    - Emergency Contacts

- Radios or equivalent communication system will be in place for management, engineering, landscaping and janitorial staff to communicate while on site. This should also be coordinated with security personnel for the islands.

- Weekly Calendars:
    - A weekly calendar will be developed and distributed to staff.
    - The calendar has all pertinent information including any events or non-routine maintenance scheduled the parks throughout the week.
    - Questions regarding the calendar should be referred to management.

- Monthly Calendars:
    - A monthly calendar will also be distributed by the Office Administrator.
    - This calendar is not as detailed as the weekly calendar, but will have information regarding events and shows further into the future.
    - Questions regarding the monthly calendar should be referred to management.

- Staffing & Staff Meetings:
  - On-site management staff includes a general manager, engineer and property assistant. Other key on-site personnel are the site supervisors for landscaping and janitorial services.
  - The weekly staff meeting will include all the above parties depending on the issues to be discussed. It is a good practice to include the site supervisors for the first half hour to discuss operational problems or upcoming events and then move on to other issues with the management staff only.

- Visitor Attendance:
  - The attendance at the TI/YBI Open Space may be of great interest to the TIDA and other parties, such as the San Francisco Visitors and Convention Bureau for promotional reasons. These numbers could also be of great interest to management for budgetary reasons. In accordance with TIDA's direction, staff may be asked to keep Attendance numbers in the open spaces of the islands.

- Work Order Procedures:
  - The General Manager will ensure that a work order system is place for all conditions that need to be addressed in the open spaces of the two islands.
    - Work orders should be entered by Management in a work order log.
    - Copies of work orders should be distributed to the correct department (Engineering, Landscaping or Janitorial
    - Work order progress should be tracked and reported at staff meetings.
    - Inspection should be conducted before closing of work orders.
    - Work orders should be documented in monthly reports.

- Document retention
  - The General Manager will ensure that all necessary documentation is kept on site, including all copies of warranties and operations manuals with property specifications.
  - Engineers will keep copies of all blueprints stored on site.

Key Control

The parks and open space system must have a strict key-control program to maintain safety to its property, its employees, and the general public. Under the procedures, managers are to pay utmost attention in safeguarding the keys to all properties. No one is allowed to take property keys home. All employees must return signed out keys to the site office at the end of the shift.

Incidents & Condition Reports

Incident reports must be filled out whenever there is a major incident in or around the open space. Any incident involving an injury, theft, vandalism, assault or emergency services call should have an accompanying incident report. When preparing an incident report, as much information as possible should be noted about the situation, i.e. names of those involved, badge numbers of police, case numbers, times, actions taken, etc. This in-depth information should be included in the final written incident report. The final incident report should be distributed to the Security Manager and the General Manager for review and investigation.

Condition reports should be filled out whenever a condition is reported by an employee in the field. Condition reports should include as much information as necessary to remedy the given condition, i.e. what, when, where and action needed. Examples of conditions needing reports include: graffiti, minor damage to property, required light replacement, cleaning needed, etc. Condition reports should be distributed to the Security binder, Security Manager's mailbox, and the Office Administrator for correction.

Inspection

The entire site will be regularly inspected by staff as dictated by frequency schedules. Action items are immediately reported to their respective departments. To facilitate an in-depth inspection, the staff is required to complete the inspection checklist. Each department supervisor is responsible for following up on any condition that concerns them. Management will notify the department supervisor of any concerns that may come up in the process of the daily inspections. Sample reports and forms for inspection reports, incidents and conditions reports, work orders, and inspection checklists are included in Appendix 4.4.

Safety and Emergency Procedures

City and County of San Francisco public safety agencies respond to fire, medical and law enforcement emergencies in the Parks. Management is required to develop and maintain appropriate procedures for identifying, observing and reporting public safety emergencies occurring inside the Parks.

Management shall also develop, maintain and regularly exercise incident response plans which further define specific emergency incidents and Parks personnel roles and responsibilities in responding to such incidents. Management may also require the creation of event-specific emergency plans for permitted activities and events held in the Parks.

2.5 ENGINEERING

2.5.1 Engineering Overview

Engineering personnel assist in maintaining the parks by conducting visual inspections with management staff, providing guidance on repairs, overseeing repairs to infrastructure, furniture and fixtures, troubleshooting issues before they arise, and maintaining thorough records of site plans, infrastructure, and facilities. The engineering team will also work with management to complete certifications and all inspections.

General Engineering Tasks

Engineering will maintain and keep logs of tool inventories, parts inventories, and the safety data sheet binder. Engineering will maintain all current and historical records regarding hazardous waste materials and annual tests.

Engineering will maintain all site plans, renderings, and operations manuals for each park and parcel. They will also keep an up to date vendor inventory for replacement and repair for all park furnishings and fixtures.

Engineering staff will track all water meter accounts monthly and report water meters to management. They will also maintain current and historical records of bioswale and backflow certifications for each park.

Engineering will log all monthly maintenance, tasks, meetings and any other pertinent information in a monthly report to be submitted to management every month.

Separately, engineering will maintain an attic stock for lighting, pavers, stabilized crushed stone, and other materials used for repairs and replacement throughout the parks.

2.5.2 Utility Systems

Parks and open space utility systems will be overseen by the general manager and the stationary engineer. These systems will include storm drainage, lighting and electrical, and water systems. The stationary engineer will ensure compliance with all rules and regulations, verify that testing is completed, and maintain all certifications.

Storm Drainage

Engineering is responsible for the following tasks related to the storm drainage system:

- Monitoring Storm drain system
- Pre-rainy system review
- Periodic review during the rainy system to review issues
- Drain clean-out

During the rainy season, storm drains need to be free and clear of debris to ensure proper water flow. The drains need to be serviced: cleaning, snaking, and jetting should occur toward the end of the dry season in order to be prepped for the rainy season.

Stormwater Treatment Facilities

The San Francisco Public Utilities Commission (SFPUC) has primary responsibility for oversight and permitting of projects to ensure compliance with Federal and State water quality regulations. As defined in the SFPUC Stormwater Management Requirements and Design Guidelines, each phase and drainage area includes an approved Stormwater Control Plan that defines where and how stormwater management and treatment will provided. In general, stormwater treatment facilities have been aggregated and combined as larger facilities within the parks and open space areas.

- Engineering will be responsible for monitoring and inspections of the stormwater facilities consistent with approved final stormwater control plans (SCP) and the BMP Maintenance Schedule and Inspection Checklists included in those documents.
- The SCP's for each stormwater treatment area are included in Appendix 4.9.

Lighting & Electrical

Engineering will regularly inspect lighting and electrical systems and schedule maintenance and repairs to ensure public safety, energy efficiency, and long-term system sustainability.

Lighting should be inspected regularly during rounds as staff work through the scheduled rotation of parks maintenance. Light audits should be conducted per the frequency schedules. Tasks include inspection of lights, time clocks, photo sensors, and cleaning of reflectors. Light audits should be on a continuum and conducted on a system wide basis. Re-lamping should happen within a regularly scheduling lamping plan that is scheduled in accordance of the wattage hours of the light. Damaged or burned out light systems should be repaired during the normal maintenance schedule, unless it is a hazard or security issue for the public. Bulb replacement should be done within a timely manner after the outage is reported. Light poles should be checked regularly and remain free of stickers and graffiti.

In all parks, damaged systems should be repaired in a timely manner. For larger issues such as grounded wires, investigate the problem and repair as necessary. Any adjustments made during the day are verified at night during evening patrols. The levels of service and frequency schedules outline the minimum timeline for the inspections, repairs and audits listed above.

Engineering will conduct electrical repairs as follows: for tripped breakers, make a first attempt to reset the breaker. If breaker trips again look for identifiable problems to fixtures and damaged, water intrusion. Once identified separate fixture from rest of the circuit and confirm the circuit is holding and fixture is responsible for trip breaker. Repair as needed or replace. Recessed, ground, and bollard lighting that is not water tight and/or has been infiltrated with water, the fixture will need to be removed and drained. The light should be inspected to determine why the water is present and whether the light requires a new sealant or gasket. Pole lights above 12 feet in height will need to be serviced with a boom or scissor lift. This task requires two people for safety.

Water Systems

Potable water systems

- Conduct visual inspection of drinking fountains and other potable water equipment to ensure the traps are not clogged with debris, sand, hair, or food. Monthly preventative maintenance should be conducted on drinking fountains; check for accurate flows and examine to ensure the kit is working appropriately.
- Monitor points of connection, main valves and meters.
- Observe and report poor water quality.
- Log, report and repair systems as necessary.

Non-potable water systems

- Monitor points of connection, main valves and meters.
- Log, report and repair systems as necessary.
- Refer to special features within individual parks maintenance plans for information regarding water features.

Irrigation (potable and recycled water systems)

- Refer to Section 2.6.2: Water Management and Irrigation Systems Maintenance for irrigation maintenance requirements.
- Treasure Island will be served by a recycled water system from the Treasure Island Waste Water Recovery Facility being built and operated by the San Francisco Public Utilities Commission (SFPUC). Irrigation water compliant with State of California Title 22 requirements for irrigation water will be provided from the facility via a recycled water distribution system. The system will not be operational upon completion of the early phase parks and therefore they will be served by potable water for some period. The exact timing of the completion and operation of recycled water system will need to be coordinated with landscape maintenance and operations and coordination of the system cutover process will be critical.
- Engineering will be responsible for monitoring and managing points of connection, back flow prevention equipment and electrical services to controllers.

2.5.3 Paving

Standard and Enhanced Concrete

Paved areas should be monitored two ways. First, a visual inspection for tripping hazards and cracks should be completed. Second, a more detailed inspection should take place periodically to ensure concrete is sound and in good shape. Settlement issues, such as cavities developing under concrete slabs, need to be investigated thoroughly and repaired as needed to address public safety. Repairs to all concrete paving areas shall match the original paving type and specifications, unless otherwise directed by TIDA.

For emergency repairs, a concrete re-surfacer can used be to make a repair until the pavement can be replaced by a bonded concrete contractor.

For high traffic areas where people tend to have lunch or picnic, such as picnic tables and benches, pressure washing and sealing the concrete should be done monthly during spring and summer with an invisible stain blocker sealant. General pressure washing should be done once a month or as needed based on inspections during spring and summer in non-high traffic areas.

Concrete Unit Pavers

Follow the same general protocols for concrete unit pavers as standard concrete care and maintenance with the addition of visual inspection daily for raised or buckled pavers.

Where there is potential for trip and falls, cone the area for safety, and investigate the issue. For example, with tree roots, determine location and work back to the tree line to make a complete repair. During repairs, remove all tree roots and impediments, and reinstall pavers.
When fixing pavers, installation of an 18-24 inch deep interlocking root barrier for all trees located within 5 feet of the paving line is recommended. For larger paving jobs, consult with and hire a contractor.
Repairs to all concrete unit paving areas shall match the original pavers and specifications, unless TIDA directs otherwise.

Asphalt

Same protocols apply for asphalt as standard concrete care and maintenance.

Perform regular visual inspection. When large cracks or sink holes develop, emergency repairs can be made with a quick patch asphalt. For larger jobs, contractors are required to inspect and determine the cause of the sink hole and make repairs as necessary. Repairs to all asphalt areas shall match the original specifications, unless TIDA directs otherwise.

Stabilized Crushed Stone Paving

Perform regular visual inspection. Stabilized crushed stone paving areas are required to meet California CBC Title 24 and City of San Francisco, accessibility requirements for surface firmness and smoothness. Maintain the paving surfaces as recommended by the crushed stone paving stabilizer manufacturer (refer to project specifications). In cases where larger areas need to be removed and replaced, contract with a qualified contractor to replace the paving based on the project specifications or a TIDA approved alternative that meets California CBC Title 24 requirements and is approved by the San Francisco Public Works, Accessibility Coordinator.

2.5.4 Furniture, Fixtures, and Equipment

Site Furniture Maintenance and Replacement
Furniture, fixtures, and equipment (FF&E) includes all site furnishings and signage. Management and engineers should refer to warranties and operations manuals, both to ensure that warranties are enforced, and that replaced items are done as "like for like." Site features such as benches, picnic tables, sports courts equipment, bike racks should be cleaned regularly and be in good operating order. Site furnishings should be inspected for missing or loose bolts, graffiti, etc.

Depending on the designer's specifications and recommendations, wood benches and wood features should either be left to develop a patina or should be sealed with linseed oil or a designer recommended sealer.

Surfaces should be repaired, repainted, or replaced when their appearances or functionality are compromised. Likewise, all signage should be repaired or replaced when appearances or functionality are compromised.

2.5.5 Restroom Facilities
Engineers will be responsible for inspection, repair, and maintenance of all restrooms systems as noted below.

Plumbing and Fixtures
Engineers will be responsible for inspecting all plumbing and fixtures in restrooms, keeping all plumbing lines clear, and drains scoped to prevent blockages. They will ensure that all fixtures are properly attached and in good repair.

Lighting/Electrical
Engineers will develop and implement a lamping program for restroom facilities to ensure that all lighting in restrooms is operational. This program will also include checking for sound frequencies to ensure that proper lamps are in place and there is no buzzing and humming. They will repair and replace as necessary. Engineers will also check and repair any lighting panels and switches and inspect for loose circuitry.
Mechanical Systems
Engineers will follow a preventative maintenance plan to keep restroom mechanics operating continuously, such as hand dryers, any restroom HVAC.

Sanitary Systems
Engineers will regularly inspect sanitary systems based on a developed schedule, and provide clean-outs of these systems when necessary.

2.5.6 Mechanical Systems
Engineers will maintain all mechanical systems, including pumps, motors, HVAC and other systems. Routine inspections will be done, and repairs will be performed as necessary.

2.5.7 Vehicles and Conveyances
Engineers will ensure that all vehicles are licensed and insured for use on the property.
All vehicles on the property should be maintained according to manufacturer's recommendations.

Vehicle use should be monitored, and all staff trained in the proper use of the equipment, including verification of appropriate and necessary staff licensing and insurance, and safe operation of these vehicles.

2.6 LANDSCAPE

2.6.1 Landscape Maintenance Overview

The parks and open spaces on Treasure Island and Yerba Buena Island include a diverse mix of landscape typologies and a corresponding mixture of maintenance requirements ranging from the management of active recreation areas, play spaces and urban plazas to native landscapes and restored natural areas on Yerba Buena Island and the Northern Shoreline Park on Treasure Island. This section of the manual outlines system wide goals, requirements, and guidance for overall landscape maintenance. Each park requires its own landscape maintenance regime based on the scale, type, and location of different landscape areas. Refer to the specific park sections for detailed information about each park.

Landscape personnel are responsible for the management and care of:

- Irrigation systems
- Soils health
- Trees
- Turf and understory planting
- Integrated pest management
- On-Site nursery (optional)

<u>Landscape Establishment – A Proactive Approach</u>

Each of the landscape areas will be covered by an establishment maintenance period and plant warranty according the project specifications. In general, the maintenance period will extend for one year following significant completion. This will provide an incentive for the construction contractors to provide quality soils, plant material and installation that fosters successful establishment. Refer to the Planting Specifications in Appendix 4.13 for warranty information. A key aspect of the maintenance planning is to ensure a seamless transition from the establishment maintenance contractor to the TIDA maintenance team and potential contractors. It is important to note that the maintenance period covered by the construction contract may change and will require coordination on a park to park basis to ensure a successful transition of maintenance responsibilities.

The first one to three years following installation require a proactive maintenance approach. During this time landscape maintenance and management practices need to be calibrated in response to the performance of the landscape. It will be the responsibility of the maintenance team to make objective observations of the landscape and provide assessment of what is working, and what is not. These observations will inform decisions on adjustments to the irrigation systems, organic soils amendment, drainage issues, care and replacement or removal/thinning of understory plant material, tree health and pruning, and weed control.

During years one through three of establishment, understory plantings will require monitoring and replacement to establish continuous plant cover. Weeding and invasive monitoring is especially important during establishment to preclude the exotic invasives from out-competing the desired plant material. Decisions should be informed by the successes and failures observed. Fast growing grasses and perennials should be removed where they are crowding slower-growing shrubs. Spreading plants will need thinning where they encroach on pathways or structures. Tree stakes and guys require close monitoring so that they provide adequate support without girdling or causing damage as the tree grows. Sustained tree health will also require close monitoring of soil moisture conditions and identification of limitations in the root environment, as well as prompt identification and treatment of insects and pathogen in accordance with IPM principles as contained in the City's IPM Ordinance.

Irrigation management and monitoring is particularly important during this stage, to ensure the health of trees, and the establishment of the understory. Periodic deep watering is essential to the establishment of deep root systems.

<u>Maintaining the Landscape – An Adaptive Approach</u>

The long-term landscape maintenance program will continue to evolve as the landscape matures. As a dynamic system, the landscape will require adaptive management, and maintenance decisions tuned according to the performance of the landscape over time. Landscape personnel and contractors shall possess awareness and knowledge of the ecology of the greater Bay Area bioregion, and shall be trained on visual identification of the tree and plant species present throughout the park system, as well as of invasive plants requiring removal.

Tree pruning will focus on branching structure, end weight and appearance. Regular subordination pruning will be required where lateral stems may become in conflict with pathway, lighting or other structures. As the canopy matures, certain understory plant species will be shaded out and the understory character will need to evolve accordingly. Depending on the location and the case, these species may be replaced.

In other cases, the area under the trees may be mulched and the leaf clutter will remain. Ongoing water management and irrigation monitoring is a critical practice.

Understory plantings will require periodic re-evaluation after every three to four years. Some of the shorter-lived species will reach the end of their productive life cycle and require removal and replacement. Woody shrubs will require structural pruning for shape, reduced where encroaching on pathways or structures, or removal where overcrowded. Perennial and grass plantings will also require periodic infill/refreshing.

Sustainable Landscape Management

The landscape has the potential to serve as a model for sustainable landscape management by employing a range of sustainable maintenance practices, including green waste management, water management and irrigation efficiency, organic soil treatments, and integrated pest management. While many sustainable practices are cost neutral, others will have budget implications. This document presumes that the Treasure Island and Yerba Buena Island landscapes are maintained with sustainable practices including the adoption of Bay Friendly Landscape Guidelines:

- Landscaping in harmony with the natural conditions of the San Francisco Bay watershed
- Reducing waste and recycling materials
- Nurturing healthy soils while reducing fertilizer use
- Conserving water, energy, and topsoil
- Using integrated pest management to minimize chemical use
- Reducing storm water runoff and air pollution
- Protecting and enhancing wildlife habitat and diversity

2.6.2 Water Management & Irrigation Systems Maintenance

System Standards and Phasing Considerations

The Phase 1 landscape irrigation systems have been coordinated across the parks and open spaces to include standard controller systems, valves, components etc. Based on the duration of the phasing of the landscape, with some landscape areas being completed 10 – 20 years in the future it is anticipated that the systems will evolve. It will be incumbent upon the landscape management team to coordinate with future design team to ensure that irrigation systems are standardized and consistent with previous phases as much as is practicable.

The system has been designed in accordance with Bay Friendly Landscape Guidelines and the San Francisco Water Efficient Landscape requirements. Required water use is optimized through proper plant selection, location, and water use hydrozones. Medium to high water using plants and turf are minimized. The high efficiency irrigation system utilizes subsurface in-line-emitter drip, with high efficiency rotors limited to lawn areas. The system includes a smart central control, automatic flow sensing, and emergency shut-off devices among other features.

Reference Documents and Appendices

Refer to the Irrigation Systems Specifications for more information. The construction contractor for each park/open space is required to provide a compilation of all submitted components along with As-built irrigation drawings indicating final system layout and design and the As-Built Irrigation Plans to be provided by the construction contractor for each park.

Potable and Recycled Water Areas and Management Considerations

Yerba Buena Island Parks will be served by potable water systems and will not be connected to the recycled water system on Treasure Island.

Treasure Island will be served by a recycled water system from the Treasure Island Waste Water Recovery Facility being built and operated by the San Francisco Public Utilities Commission (SFPUC). Irrigation water compliant with State of California Title 22 requirements will be provided from the facility via a recycled water distribution system. The system will not be operational upon completion of the early phase parks and therefore they will be served by potable water for some period. The exact timing of the completion and operation of recycled water system will need to be coordinated with landscape maintenance . Coordination of the system change over process will be critical.

Once the parks are being irrigated with recycled water it will be imperative for the landscape maintenance manager to coordinate with the SFPUC to monitor water quality parameters with a specific emphasis on TDS, Salinity, Chloride, and pH. Soil testing for the same parameters will also be essential to monitor salinization of top soils. At this point the exact quality of the recycled water is not known. Recycled water quality or salinity is also likely to change over time as the uses on the island evolve and the entire sewer system is replaced, thereby eliminating salt water intrusion. This will require close coordination with the SFPUC facility operators. Based on water quality and soil samples it may be necessary to periodically blend potable water into the irrigation system to reduce salinity. In cases of multi-year drought when rainy season storm events are not adequate to flush salts from the upper soil profile it may be necessary to take the recycled water system off line and run several deep water cycles of potable water to flush the soils and also to flush the irrigation system to prolong the functionality of components. Refer to the 'Irrigation Recycled Water Target Parameters' in Appendix 4.10 for desired recycled water target ranges.

Irrigation System Monitoring and Management

General objectives of irrigation system monitoring and management are:

- To run watering schedules that provide only the minimal water needed for proper plant growth and health, based on water use needs of the specific plant material.
- To adjust and tune watering schedules according to seasonal weather fluctuations.
- To ensure deep rooting of trees and shrubs.
- To deliver a precise and efficient amount of water to ground cover and turf grass plantings.
- To minimize waste due to evaporation, overspray, runoff, system leaks, or equipment malfunction.
- To monitor and repair and replace components as necessary to ensure optimum system function.

Water use and irrigation systems maintenance tasks include:

- Annual spring systems start-up includes inspection of each zone for small leaks in the dripline or fittings, lateral line breaks, and clogged or misaligned nozzles. Minor repairs and systems adjustments are expected. Valves are checked for proper operation from the controller, valve box pits are inspected and cleaned. Wire connections are checked and verified they are operational. Inspect and clean all drip filters. Ensure all dripline flush valves and air relief valve boxes are visible and clean of debris. Verify all pressure regulators on the drip valves are set to the required pressure. A diagnostic summary report is provided by the Landscape Maintenance Contractor that photo-documents systems conditions and includes recommendations for repairs and improvements.
- Regular monitoring of irrigation systems based on the frequency schedules for each park through visual inspections and high flow alerts. All repairs should be made within a 24-hour period. A running log or inspection report shall be maintained, including station numbers and the related problem in weekly updates. See Appendix 4.4 for sample inspection reports.

- All hydrozones should be inspected once a month and at the onset/occurrence of seasonal changes (i.e. strong wind, fog, heavy rain, heat etc.). These seasonal and microclimatic changes can have rapid effects on plants and adjustments should aim to respond to these changes as soon as they happen. Inspect the entire system by operating every valve via the remote control and verify all valves are operating properly. Visually inspect for any leaks in the dripline system and verify all drip indicators are operational.
- Flush irrigation system through quick coupling valve at furthest point from water source once a year and as often as necessary to keep the system free of sand and other debris. Inspect and flush fertigation system as required.
- In-season irrigation systems inspections are conducted monthly or more frequently as required. Systems breaks are repaired prior to the next required irrigation cycle. Irrigation technician and crew leaders monitor landscape areas for plant stress or other signs of irrigation system deficiencies or malfunctions and check, adjust, and repair systems.
- Soil moisture sensors and soil core samples should be used to monitor moisture levels on a monthly basis. Adjust irrigation programs accordingly.
- For tree establishment, watering should be sustained and monitored for proper soil moisture at tree root balls. Additionally, backfill at tree pits is critical during the first year. In subsequent years, ongoing monitoring remains important. Special attention is required for specimen trees to ensure proper soil moisture and irrigation efficiency. The texture of the soil the trees originally grew in and the sandy soil outside of the root ball have different water requirements and soil gas exchange rates.
- For understory plan establishment, watering should be sustained and monitored for proper soil moisture. After the plans are established (generally within 1-3 years) the irrigation should be reduced to a level that maintains plant health and growth. After establishment many California native plants thrive without much summer water and overwatering may reduce the lifespan of these plants.

<u>Specimen Tree Soil Moisture Monitoring Tasks:</u>

- Visual Inspection: First 6 months – daily. Thereafter – per frequency schedule.
- Soil probing to a depth of 2 feet to 3 feet at problematic trees: first 6 months – weekly; thereafter – monthly or as needed.
- Monthly arborist inspection and reviews of moisture monitoring and irrigation data as required to ensure successful establishment and tree health.

<u>Remedial Actions:</u>

- Supplemental water jetting/topical hand watering, as needed.
- Alteration to the tree irrigation rings or bubblers, such as removal, addition and/or isolation of rings.
- Controller programming modifications, as required.
- Monitor and track amount of supplemental water being delivered, make adjustments as data reveals patterns.
- In general, for tree root ball long-term moisture monitoring, water application to the root ball should be reduced as the trees become established and the roots develop into the surrounding sandy soil. Soil moisture at root ball and extended root zone shall be monitored through weekly visual inspections. Where problems are found, an Arborist shall be consulted and additional monitoring and remedial protocols immediately implemented. These include soil probe inspections, review of irrigation water application, and alteration to the tree irrigation, such as removal, and/or isolation of rings or bubblers.

<u>Controller Programming Guidelines:</u>

Refer to Appendix 4.12: As-builts and Appendix 4.13: Construction Drawings and Specifications for controller type.

- Watering schedules should be based on soil moisture monitoring and sensors, as well as weather based watering. Having both of those capabilities is a huge asset and should be utilized as a base level practice.
- Controller programming should consider the following criteria:
    - Each program is dedicated to specific plant material and/or planting zone.
    - Each station has a location identifier, plant type, and irrigation type included.
    - Monitor and adjust watering times each week and respond to weather changes and soil moisture.
    - Provide slow, deep watering when feasible.
    - Additional watering shall occur during long periods of severe heat and drying winds and reduced watering shall be used during extended periods of cool rainy weather.
    - Do not over-water plantings.
    - Use multiple-start times and short run times to prevent run-off.
    - Whenever possible, irrigation shall be scheduled between 10:00 pm. and 5:00 am. to avoid irrigating during times of high wind or high temperature.

- Flow Sensor should be enabled and flow limits should be setup for each valve.
- Assign all valves to the most similar representative moisture sensor (same water use plant material, same irrigation type, exposure, etc.).
- Allow moisture sensors to monitor and adjust valve watering times based on moisture levels in soil.
- Never keep to a strict, automatic schedule unless developed through prolonged site specific experience.
- Check the rootball moisture of newly installed plants as well as the surrounding soil moisture on a regular basis. Depending upon your soil and the plant's container mix, it is possible for the soil to be damp to moist, and the rootball may be totally dry (this condition is usually associated with heavy soils). Always be sure that the rootball of newly planted plants is moist (not wet) to help encourage the roots to grow into the surrounding soil.
- If a plant is wilted, check the soil. If the soil is moist, do not water. Cut the plant back instead. If the soil is dry, water.

<u>Annual Irrigation Audit:</u>

Annual irrigation audits shall be completed by the Landscape Maintenance Contractor indicating the amount of water used in each park in each month of the year. This information should be compiled and compared against prior year audit and estimated irrigation requirements based upon ET and this information should be used to evaluated and used to improve management and make schedule adjustments.

<u>System Maintenance</u>

- Leaking valves or pipes: Leaks can occur as a result of weather damage, damage from shovels and other sharp tools, vandalism, tree roots, and normal aging of the system. Leaks from valves and pipes may be large and very obvious. Smaller leaks may not show up immediately and will require some detective work. Replace or repair damaged valves and pipes.
- Broken or missing heads: Damage can occur to sprinkler heads from lawn mowers, vandalism, improperly installed heads, and normal wear and tear. Replace damaged or missing heads immediately installing heads on swing pipe allows the head to "float" in the soil and reduces the damage that can result from lawn mowers and other heavy objects.
- Clogged Nozzle: Clogged nozzles occur as a result of debris entering the irrigation system, a dirty water source, and normal wear and tear. Flush system at the beginning of the irrigation system, install screens on sprinkler heads, replace clogged nozzles, and improve system filtration.
- Seal Leaks: Over time, dirt and debris can wear out the wiper seal resulting in leaks around the top of the spray head. If the spray head consists of a single unit the entire head must be replaced; with some spray heads it is possible to screw off the top of the sprinkler head and replace.

<u>Spray and Rotor Irrigation Maintenance:</u>

- Sunken heads: It is not uncommon for sprinkler heads to settle over time. The weight of lawn mowers and other heavy equipment on wet turf can cause the heads to settle. Grass clipping, soil, and other debris can build up around heads resulting in a head that doesn't clear the grass adequately and disrupts the spray pattern. Current best management practices call for higher mowing heights - older systems may have been designed for shorter turf. Heads can be raised by using taller sprinkler bodies, or installing risers. Cutting turf away from heads is another solution but must be done seasonally.
- Tilted heads: Lawn mowers and wet soil can cause newly installed sprinkler heads to tilt resulting in uneven coverage. If possible install the sprinkler head on swing pipe and move the head out of the line of mowers and other equipment that may cause the head to settle or shift. Otherwise reposition the head and pack the soil around it carefully.
- Misaligned heads: Misaligned heads result in overwatering parts of the landscape and brown spots in other areas of the landscape. Realign heads according to manufacturer's instructions.
- Overspray (runoff): Overspray can result in poor distribution uniformity, overwatering, and runoff on hardscapes. Reduce or eliminate overspray by adjusting system pressure, adjusting nozzles, or installing the proper size and type of nozzle.
- Pressure Problems: High pressure causes problems such as misting from spray heads and rapid rotation of impact rotors resulting in poor coverage and potential damage to the irrigation system. Installation or adjustment of a pressure regulator or installation of pressure regulating heads can eliminate the problem. Failure of heads to pop-up or rotate is often a symptom of low water pressure.
- Incorrect Spray Arc: Observe the spray pattern of the sprinkler heads on each zone and adjust the pattern if possible. If necessary, replace the nozzle with one that has the correct spray pattern. Spray heads located adjacent to paving areas and pathways are regularly adjusted to minimize overspray. Older systems in particular may need to be updated with different nozzles as manufacturers are making nozzles to fit strips and narrow areas.

2.6.3 Soils Management and Fertility

Plant health and vigor is maintained through a multitude of sustainable organic methods, proper soil management, irrigation, water management, pruning, and replacement plant selection. The Landscape Maintenance Contractor will develop soil fertility programs based on site specific soil testing and monitoring of plant health.

Soil Management Tasks

- Monitor soil conditions as part of general maintenance activities and moisture probing.
- Soil Compaction: Identify areas that have been compacted by use or maintenance activities and take measures to loosen soils. Consult with arborist for treatment of soils within tree root zones.
- Soil moisture and aeration monitoring: Where landscape areas appear to have a heavy, boggy soil type that seems slow to drain, spot amend with fast draining material like lava rock, sand, or gravel, and create aeration holes to help improve growth conditions for upland plant species in low lying or overspray areas. This is an example of changing the condition to support the species, versus swapping out the plant for another more moisture tolerant species.
- Soil Testing: Provide horticultural soil testing for soil texture, pH, organic matter, air/water content, hydraulic conductivity (drainage rate), major and micronutrients. Provide (1qt) samples from the top 6-inches and 18-inch depth to an certified horticultural soil testing lab as follows:
    - During Establishment (years 1 – 3): Test once per year, one test in each park for each major type of planting area/palette per the planting plans.
    - Ongoing: Test at least once every 3 years as outlined above, and as needed to address plant health based on field observations of plant health.
- Refer to Park Construction Documents for Planting Palettes and soils plans.
- Customized applications of microbial soil inoculants (compost tea) and other organic soil amendment products based on results of soil test nutritional reports. Apply compost tea – a water extract of mature compost nutrients including a wide variety of macro and micronutrients and beneficial microorganisms diffused into the extract from the compost during the "brewing" process. For more information see: www.composttea.org, www.attar.org, or www.foodweb.com.
- Do not use synthetic, quick-release fertilizers.
- The basic fertility program incorporates the use of natural amendments and products (see Organic Materials Review Institute (www.omri.org).
- Compost: apply compost at trees based on soil tests and arborist recommendations. Composting at shrubs and perennial beds shall be as needed but generally not required. Compost shall be free of weed seeds, dark brown in color, and have a nutrient analysis available from the producer.
- Use blood and bone meal, fishmeal kelp, or other naturally-derived fertilizers that release nutrients in a 1 to 4-month time frame.
- Feed turf, especially after aeration, by topdressing with finely screened compost, ¼" applied 2 to 4 times per year.

Mulching:

Mulching planted areas will help control weeds, moderate the temperature of the soil, and encourage gas exchange to the roots by preventing the formation of a dense crust to the surface of the soil. Mulches also aid in preventing soil compaction by providing a cushioning effect over the soil surface. Monitor and replenish mulch according to planting types and specified mulches (i.e. organic, gravel, etc.) in the park construction documents. Unless otherwise noted, maintain a minimum of 3 inches of mulch.

- Always keep organic mulches away from the crown of the plant. Usually six inches away from the base of a small plant is sufficient. In this area, apply rock or organic mulches about three to four inches deep. Due to the heat in this area, most organic mulches will decompose in a very short time (often within a single year), and need to be replenished regularly to provide the desired benefits.
- As a general rule, do not mulch Californian desert plants with organic materials.
- In general leaf drop and plant litter should be left in planting areas to provide a natural cycle of humus production and nutrients. In some cases larger leaf drop from trees during the fall season may be required so that leaf drop doesn't cover smaller understory plants.
- At California native oak trees, avoid removing leaves as they drop from the tree – designate areas under the tree canopy away from hard surfaces and storm drains as natural leaf repository. Leaves should be picked up if they carry disease that can infect other plants, prevent low growing plants from receiving light, or if they can clog storm drains.

2.6.4 Tree Care

There are a wide range of tree and shrub pruning methods employed by Landscape Maintenance Contractors depending on the plant type, location, and design intent of the plant selection. The overall care objective is to maintain each tree and plant type to minimize unnecessary pruning, improve structure, and maximize flowering and other visual aspects of each species in a healthy, vigorous state of growth. A primary concern with tree care pruning is that a knowledgeable and certified personnel understand the primary guidelines and conduct the work.

General Information and Qualifications

- The trees in the project have been selected with their mature height in mind. Therefore, pruning should not be done to reduce overall height of the trees or to keep all trees at arbitrary height or spread. Trees should not be "topped" or "stub" cut. Reasons for pruning include: fire hazard abatement, lighting, path clearance, building clearances, structural safety and aesthetic appearance.

- Pruning terms and definitions are in accordance with the ANSI A300 Pruning Standards and Best Management Practices. Pruning treatments and goals must be clearly defined prior to the beginning of any pruning activity. Pruning specifications will be based upon the tree species and defining the areas to be pruned, the average size of the pruning wound and the percentage of total foliage that can be removed.

- Additional ecological considerations include limited/minimal pruning during the bird breeding season (February through August, with the peak nesting being March through June). Nesting surveys shall take lace prior to any pruning or other tree maintenance occurring during the nesting season. More significant pruning on fast growing trees may be appropriate, and "windowing" in riparian vegetation increases food production rates. Pruning to open the canopy in oaks allows filtered light to reach the ground, increasing ecological productivity and opportunities for growth in the understory.

- Avoiding uniformity in the pruning will help retain the structural diversity within the canopy that birds rely on to hide their nests. It also allows for a greater diversity of invertebrate life. Shifting and alternating pruning methods and locations where possible will help maximize niches in the canopy. In other words, it is better not to prune every tree on campus the same way all at once. Though counterintuitive from the maintenance side of things, this non-standardized way of managing biomass mimics nature and is therefore superior for the local ecology (i.e. it's good to have heavily pruned trees next to a lightly pruned, dense tree). Finally, there may be an opportunity to install nesting boxes for "secondary cavity obligate" songbirds. These include, but are not limited to, Western Bluebirds, Chestnut-backed Chickadee, Oak Titmouse, and Bewick's Wren.

- Maintenance personnel performing tree inspections or pruning are expected to report any tree-related safety concerns. This includes decayed stems, included or weak bark attachments, unstable crown attachments, etc.

- While trees have been inspected and selected for good root formation at the nursery, it is not always possible to identify problems such as circling roots during nursery selection. Any trees that show signs of circling and/or girdling roots shall be identified and either root pruned or replaced when the defect cannot be sufficiently mitigated.

- Pruning frequency: During the first few years, all trees should be pruned annually or as needed to ensure health and safety of the urban forest. This includes minor tipping of stems with pruning cuts often less than ¼-inch for subordination prior to later removal of branches.

- Arborist and tree care qualifications:
  - An ISA certified arborist and tree care company is expected to be utilized for all large tree care operations and maintenance practices.
  - All tree pruning is to be undertaken by personnel qualified as an ISA Certified Arborist or Certified Tree Worker with current certification credentials.

- Arborist or Tree Care specialist inspection frequency:
  - 1st Year: spring and summer – monthly, fall & winter – twice monthly
  - 2nd Year: spring and summer – quarterly, fall & winter – monthly
  - 3rd and subsequent years: all seasons – quarterly

- Staking and guying of trees:
    - Inspect stakes at least once a month to check for rubbing that causes bark wounds
    - Staking and guy cables should be removed as soon as the tree is considered to be stable
    - Removal of stakes: completely remove stakes and ties. Repair grade, infill soils as needed to fill any voids. Inspect tree trunk and branches and report any damage to Project Arborist.
    - Removal of guys: detach cables from tree trunk and branches. Coil cables and neatly stable to ground at point where cable enters the soil. Remove cables from anchor system only at direction of owner or facilities manager. Inspect tree trunk and branches and report any damage to Project Arborist.
    - Stability can be checked by moving the trunk to see if the roots show signs of movement
    - Repair/replace stakes, ties, guys as needed

Early Structural Pruning

The managing Landscape Architect should provide information regarding the height of the first permanent branch, branch spacing and information regarding subordination pruning. All personnel performing subordination or other structural pruning must have a clear understanding of the desired form of a particular tree and how to achieve it.

Early structural pruning is determined based on mature tree form and scaffold structure. The purpose of early pruning is to reduce the size of the wound resulting from removal of temporary branches. This is accomplished through early branch removal and subordination of branches to be removed later. Guidelines for early structural pruning can be found at: http://www.azlca.com/uploads/documents/04-tree-pruning-guide.pdf.

This pruning approach first identifies stems that will either be removed in time or require regular subordination to allow the branch to remain within a designated space. It is best undertaken often as this allows for smaller wounds. Proper early subordination of lower permanent branches will help to avoid a "hedged" look along pathways as well as the need to make larger pruning wounds. More significant pruning on fast growing trees may be appropriate, particularly when subordination pruning is appropriate to avoid creating larger pruning wounds created from less frequent pruning.

The primary goals of early pruning include:

- Elimination or mitigation weak stem attachments: Smaller stems with poor attachments should be removed. Larger branches that cannot be removed should be subordinated to mitigate co-dominance. This is accomplished through regular pruning of only one of the stems to promote a difference is stem diameter.

- Determination of height for the first permanent branch: This is based upon species and location. The managing Landscape Architect shall designate branch height based upon site conditions and tree species.

- Vertical branch spacing: This is the range of vertical distance between branches, primarily based upon the tree species.

- Subordination of lower lateral stems to remain: Branches can be retained lower on the trunk of the tree but require regular pruning to control the size.

Mature Tree Pruning

A number of oak trees are currently large enough to be included in this category. The primary directives for pruning of mature trees are:

- ANSI A300 Pruning Standards: All pruning must be in accordance with the standards. All pruning terms are defined in this publication.
- Pruning Goals Defined: Prior to beginning any serious pruning, the goals and procedures must be clear. This includes the average diameter of pruning cuts and the location and percentage of foliage to be removed.
- Thinning Cuts Only: Pruning wounds on mature trees must not exceed 1 inch in diameter. Average pruning wound diameter is to be no larger than twice the diameter of the new terminal stem. The primary focus of pruning is branch end-weight reduction, subordination of lateral branch for lighting and pathways clearance, and aesthetic appearance.
- Minimize Live Foliage Removal: Less foliage removal is always better. Trees that appear stressed are not to be pruned. Foliage removal during any pruning after early structural pruning must not exceed 10% of the total live foliage. It is best to prune more often and remove less foliage during any one pruning cycle.
- Where to Prune: Most pruning will be administered to lateral branches. Heavy lateral stems can be pruned to remove 1/3 of the foliage within the outer 1/3 of the stem. Though some interior foliage can be removed, a sufficient level of interior foliage must be maintained.
- Subordination of Encroaching Lateral Stems: Whenever it is clear that a lateral stem meant to remain is developing in a manner that will result in future obstruction, pruning must be administered regularly. This should occur two or more times per year to minimize the amount of foliage removal at any one time and generate smaller pruning wounds. Average pruning wound size should be ½ inch and not to exceed ¾ inch. Fast growing tips can be removed with the thumb nail.

A certified Arborist shall provide recommendations concerning any pruning where cuts 3 inches or larger are involved. No pruning cuts larger than 3 inches shall be performed without Arborist approval. All pruning shall be specified by species, tree number, areas to be pruned, average pruning wound size, and percentage of foliage to be removed (example: oak tree, lateral branch end-weight reduction, thinning cuts with average pruning wound size of ½ inch in diameter with a maximum of 10% of the foliage removed).

Watering/Irrigation

Refer to Water Management and Irrigation Systems Section.

Mulching

To help conserve moisture, place 2 to 4 inches of mulch, such as wood chips or shredded bark, around trees. Mulches also help control weeds, moderate soil temperatures, and reduce the risk of mechanical damage to tree trunks from errant lawnmowers and string trimmers. When mulching trees, do not place mulch against the tree's trunk. Keep the mulch at least 6 inches away from the trunk of the tree. Mulch piled against the tree trunk may create favorable conditions for fungal cankers, root rots, insects, and rodents.

2.6.5 Understory Plant Care and Pruning

Understory plantings consist of woody (mostly evergreen) shrubs, evergreen sub-shrubs or perennials, deciduous (herbaceous) perennials, and ornamental grasses. These are arranged in either mixed plantings or massed groundcover. In general, plants should not be hedged, shaped or pruned into shapes unless as noted in specific park landscape maintenance sections. Refer to the planting exhibits and guidance provided in each Park maintenance section for specific requirements.

<u>Watering and Irrigation</u>

Refer to the Water Management and Irrigation System Maintenance Section.

<u>Soil Health and Fertility</u>

Refer to the Soil Management and Fertility Section. Soil health should be maintained through the application of mulch, organic compost, compost teas and other organic fertilizers. Synthetic soluble fertilizers should not be used in understory planting areas.

<u>Mulch</u>

Apply twice a year to maintain 2 – 4 inch mulch layer.

General guidelines:

- Plants shall be maintained for health and vigor, as well as natural form.

- Plants shall be removed or replaced as needed based on health and vigor.

- Remove all broken, overgrown, unsightly, unsafe, diseased, and insect or wind damaged growth immediately.

- Trimming and pruning of woody plants should be limited to key areas such as the edge of path, dead plants. Regular pruning throughout the growing season is done to harvest flowers, remove dead or diseased foliage or branches, and to create light penetration and airflow to the interior of the plant in order to increase bloom and overall plant health. The goal of pruning shrubs is to help them develop their natural beauty and fulfill their purposes in the landscape. Shrubs should be allowed to grow into each other so that they form a mass planting. Gardeners should not attempt to keep the shrubs from touching each other or prune the shrubs into balled or boxed shapes (except where plantings are designated as “hedges”).

- Seasonal pruning and deadheading of perennials and grasses shall completed per park frequency schedules. General guidelines are as follows:
    - Evergreen perennials shall be trimmed annually to remove spent flowers, reduce rank or sprawling growth, and to encourage flush of new growth and flowering. Trimming should be timed with plant specific bud development and blooming cycle. A good baseline for annual pruning should be to remove from one half to two-thirds growth.
    - Deciduous (herbaceous) perennials shall be dead-headed periodically during their flowering cycle. Plants should be cut back to the ground annually in the early spring and as dictated by the specific plant species.
    - Perennial bunch grasses shall be cut back to within 4 inches of the ground annually. Bunch grasses may require annual de-thatching by hand and/or rake to remove thatch.

<u>Vine Pruning and Training</u>

Special plantings of vines occur in selected areas of the parks. These plantings require care and pruning techniques specific to their intended purpose.

Vines require training to encourage and control growth and achieve the design intent. All vines are planted adjacent to some type of structure – cables, wood or steel vertical or horizontal trellising, or other architectural support. As the vines grow and mature limbs shall be tied with horticultural tape, twine, or simply threaded around support cables or members to direct and maintain vertical growth. Most vines will also require annual or semi-annual pruning to thin rank or tangled growth, remove spent flowers, and to maintain neat appearance. Deciduous vines shall be pruned when completely dormant and to encourage flowering. Vine management effort should also include specific inspections for rat traffic and rat nests.

<u>Plant Removal and Replacement</u>

As the understory planting establishes and matures certain species and groupings will require periodic replacement and restoration. Years 1-3 is a critical period during which maintenance activities will be evolving based on how the plantings are performing and establishing. Where plants are failing due to an incompatible cultural condition, the main decision is whether to change the condition or change the plant species. This will need to be determined on a case by case basis. A program for annual or semi-annual replacement shall be instituted.

As the landscape matures into the 4 to 10-year period, some of the plant material will take on an un-manicured appearance and in some cases, die-back will occur. Also, as tree canopies mature, the amount of light for certain understory species may be reduced significantly and there may be a need to evaluate the existing plant types and either remove completely or thin the stand to accommodate this change in their environment. Ultimately, certain species or areas will require removal and replacement. At this stage an adaptive replacement program is required to sustain the general intent of the park design and landscape.

- Annual Replacement: A limited amount of perennial or semi-annual plant material will be replaced in select locations to provide seasonal variety. Defective (dead, damaged or missing) or inadequately established plants shall be replaced annually, semi-anally or as directed by TIDA. Refer to specific park plans for these areas.

- Remove the old plant, root, and rooted soil from the ground and dispose of off-site.

- Replacement plants should be of equivalent species must be of at least the same size, age, and quality as the original stock.

- Where plant replacement disturbs irrigation equipment, the Maintenance Contractor shall repair the irrigation equipment in-kind or as otherwise directed by TIDA.

- In some places, where conditions are adjusted and new plants are to be put in, larval food plants and pollinator plants should be infused into vacant locations. Not all plants are created equal when it comes to their local pollinator value. Ideally, landscape plants that will produce and feed specific pollinators including native bees, butterflies and other desirable insects are emphasized.

- An additional ecological concern is that these understory areas are likely breeding sites for cup nesting songbirds and native butterflies. Maintenance staff should know the local breeders (butterfly larvae, cup nesting songbirds) and be on the lookout for their signs during maintenance activities. Pruning activities should take place in the winter, late summer and fall to avoid disrupting peak breeding activities in the spring and summer.

- Preferred Planting Seasons:
  - Native plants: The optimal time for planting all plants of the Californian Floristic Province is in late fall.
  - Annuals: plant during the late fall.
  - Shrubs: plant during the rainy season from fall to late spring.
  - Sub-shrubs and perennials: plant in the fall or late winter to spring.
  - Riparian plants: plant at any time of the year, though best and easiest when planted from late fall to early winter.

2.6.6 Lawn and Turf Maintenance

The following section includes guidance for maintenance of general purpose lawn areas within the parks. It does not include guidance for maintenance of sports fields or intensive use recreation areas. These will be added to the document under the Sports Park or other sections as applicable in future phases. The primary general use lawn type specified for the parks is Turf Type Tall Fescues.

<u>Turf-type tall fescue</u>

Turf-type tall fescue has a much thinner blade width. They were developed specifically for lawns and are the type used by professional turf managers. There are dozens of varieties with many new varieties on the market from the last few years. Most will produce a dark green, beautiful lawn. Since tall fescue is a bunch type grass and does not spread, it is necessary to overseed occasionally to maintain turf thickness. The best time of the year to overseed is in the fall. This gives the seed time to germinate, grow and develop sufficient root depth before the summer heat arrives in the following year. Tall fescue is probably the second most widely used cool season grass with a broad area of adaptation. Tall Fescue has high wear tolerance and for this reason, is often used on sports fields and playgrounds. It has the ability to withstand high temperatures and is used in areas where other cool season grasses would fail.

<u>Water and Irrigation</u>

The most important thing about watering is to water deeply, preferably in the morning hours. The soil should be wet to a depth of three or four inches. After watering, wait several days until the grass appears to suffer from heat or drought stress. It will begin to change color to a bluish green. The color results from the grass blade folding to conserve water, thus showing the lighter underside of the grass. When this is apparent, it is time to water again. The purpose for watering like this is to force the roots to grow deeper. This will enable the grass to endure extended periods of heat without damage. Frequent, shallow watering encourages shallow rooting which is not good for the grass or utility bills. If shallow rooting occurs, any extended periods of heat could cook the roots and harm the grass.

<u>Mowing</u>

Tall fescue should be mowed at heights no lower than 2 inches. Improved varieties can be mowed at heights of 1.5 in the cooler parts of the year. During the summer months, the grass should be mowed at 3 or 4 inches. It is the same for grass growing in heavy shade. The extra length of the grass blades also helps as a deterrent to weeds, as the environment in longer grass is less conducive to weed germination and growth.

<u>Overseeding</u>

Overseeding is important with tall fescue. A blade of grass only lives an average of 40 days before it dies. Grass must continue to produce new blades to replace the ones that are dying back. Eventually, its production of new grass blades will fall behind the rate of older ones dying back. To keep fescue young and healthy requires overseeding. Many professionals overseed every year or every other year. The best method for planting grass seed is by using a rotary spreader.

For cool season grasses, including tall fescue, the best time for planting grass seed is in the fall. The second best time for planting grass seed is in the spring. The biggest problem with spring is that the grass may not have time to develop sufficient rooting before the summer heat arrives.

When overseeding established lawns, use approximately 4 pounds of seed per 1000 square feet. If seeding bare soil use a rate of approximately 6-8 pounds per 1000 square feet. Lightly rake a thin layer of soil over the seed and keep the soil moist until germination.

<u>Fertilization</u>

The amount of fertilizer to apply to a lawn is usually given in “pounds of nitrogen per 1000 square feet.” Regardless of the percent of nitrogen listed on the bag, apply the correct amount using the following principles. Fescue should be fertilized at 3-5 pounds of nitrogen per year per 1000 square feet. Three quarters of the nitrogen is applied in the fall. During the hot summer months, high nitrogen fertilizers should not be applied, or if necessary, use only slow release. Organic fertilizers can be used in the summer months. Organics are slow release using the soil micro-organism to break down the organic matter. Apply the fertilizer using a rotary spreader instead of a drop spreader. Rotary spreaders are more forgiving and easier to use. Using a drop spreader can create streaked lawns after the turf is fertilized.

2.6.7 Integrated Pest Management

Integrated Pest Management will comply with all requirements of San Francisco's Integrated Pest Management (IPM) Ordinance (Chapter 3, San Francisco Environment Code). A system wide IPM program consistent with the San Francisco Integrated Pest Management Ordinance. IPM Ordinance requirements for City-owned facilities will be developed to set action thresholds, monitor and identify invasive plant species, pests, control and eliminate pests, identify specific causes for galls, disease and discoloration, and to diagnose before removal actions need to be taken.

The Landscape Maintenance Contractor shall maintain and develop a list of known invasive plant species, known significant insect pests and where they occur, as well as a watch list for known pollinators, butterfly larvae and other desirable insects. The maintenance staff shall be trained in and familiar with commonly observed insect/plant relationships in the landscape and on the various signs and indicators of negative impacts on the Parks systems landscaping caused by pests.

Weed Control

The choice of specific weed management tactics depends on the weeds present and the types of planting. Because of the many variables, weeds in landscape plantings are usually controlled by a combination of sustainable methods, including hand weeding, mulching, steaming, and, in limited instances, targeted herbicide applications.

The ultimate goal of weed control is to eliminate the seeding of invasive plants on-site. Pre-emptive weeding approaches include understanding weed germination and growth timelines an outlining an order of operations tied to the life cycle of each weed. Maintenance operations personnel should be able to identify hidden and unwelcome weed species such as grasses, look-alikes, and wind born or aerially seeded weeds amongst the intentional plantings.

- All plant containers and planting beds shall be kept weed free.
- Weeds should be removed at the root level whenever possible.
- Pavement and stone joints in curbs, fountains, and all pedestrian and vehicular pavement areas, including decomposed granite areas, shall be kept weed free.
- Coordinate weed control protocols with aeration, thatch control, reseeding and irrigation schedule.
- After pulling weeds, smooth out disturbed soil and replace mulch to original condition.
- Avoid frequent soil cultivations that destroy shallow roots and break the barrier of the soil surface.

Herbicide application must adhere to all IPM Ordinance requirements, which include, but are not limited to: Using pesticides as a last resort, using only pesticides on the current SF Reduced Risk Pesticide List, posting notifications of all pesticide applications three days before treatment, leaving these postings for at least four days after treatment, and reporting all pesticide use in a format acceptable to the San Francisco Department of the Environment. Under the IPM ordinance, a written recommendation from a licensed Agricultural Pest Control Advisor (PCA) is required for any pesticide use. PCA recommendations for each Park will be developed and maintained as a component of the Parks weed control program.

<u>Insect and Parasite Control</u>

Insects and parasites shall be controlled with methods consistent with the IPM Ordinance and as recommended by a licensed pest control specialist. Specific options for physical or biological control or exclusion of pests are dependent on the pest(s) and the overall site conditions

<u>Vertebrate control</u>

Vertebrate pests shall be controlled with methods consistent with the IPM Ordinance and local and state laws, and as recommended by a licensed pest control specialist. Eliminating the sources of attraction for vertebrate pests, including food, water and shelter, shall be prioritized as proactive methods of pest control.

<u>Plant pathogen and disease control</u>

Some plant diseases are temporary – seasonal or transient diseases require little or no effort. Others will be an ongoing struggle. Most native grasses, forbs and shrubs are relatively resistant to full on disease outbreaks due to their long history with local ecosystems.

2.6.8 On-Site Nursery Option

TIDA may decide to develop and manage an on-site nursery to grow plants for the parks system. An on-site nursery could provide several operations and maintenance benefits:

- It would allow for cultivation of replacement plantings for the open spaces on the islands
- The nursery could be used to ensure a supply of plants that are not readily available in the market, particularly native species proposed within certain parks and natural areas. In addition the nursery would provide replacement plant material that has been acclimatized to the island conditions.
- The nursery could also reduce landscaping replacement costs by growing from seed or small starter plants which are considerably less expensive than mature specimens.
- The nursery also has the benefit of reducing environmental impacts of transporting mature plants to the islands and could provide job training and economic development opportunities.
- Sales to the public twice a year would assist in funding the nursery.

The nursery location, scale, management and operations would need to be coordinated by TIDA. A minimum of 1- 2 acres should be devoted to the nursery. Access should be separate and controlled so that it is not open to the public, except for the above-mentioned sales.

2.6.9 Mulch and Tree/Plant Debris Management

Mulch is identified throughout this chapter as a material critical to successful landscape operations within the Parks. There is also a significant carbon conservation achieved by maintaining an on-Island "closed loop" of Parks materials reuse whenever possible.

Landscape operations shall maintain an Island-wide program for management and reuse of plant and tree debris generated in the Parks, including managing an on-Island facility where mulch generation and plant/tree debris collection and staging occurs.

2.7 JANITORIAL

Janitorial will perform general janitorial tasks, including maintaining all furniture, fixtures and equipment, cleaning of all paved surfaces, waste management, graffiti removal, and cleaning services for the restrooms.

2.7.1 Exterior and Grounds

<u>Walls and Exterior Surfaces</u>

- Inspect and clean surfaces on a daily basis or as specified by frequency tables.
- Immediately remove postings.
- Clean glass walls and doors (interior and exterior) quarterly

<u>Woodwork</u>

- Clean and treat with wood preservatives per the specifications and the manufacturer's recommendations.
- Treat as needed, in consultation with TIDA, to maintain a consistent color as the woodwork ages over time.
- Inspect regularly for cracking, splintering or other damage.

<u>Children's Play Areas</u>

Provide daily janitorial service to children's play areas including the play equipment. Daily service includes blowing, sweeping, removal of chalk and any graffiti, wipe down of equipment, benches, waste cans and tables. Monthly detailing to occur during high season Spring and Summer that includes pressure washing and sealing pavement under picnic tables and benches.

<u>Dog Parks</u>

Provide daily janitorial service to any dog park areas; tasks include:

- <u>Gravel</u>
  - Spray gravel with an enzyme cleaner and odor eliminator (example: Consume), blow any turf areas, remove any dog waste, restock dog bags and service waste cans.
  - Twice a year, re-distribute the gravel to the center and perform some re-grading of gravel.
- <u>Turf</u>
  - Blow and hose of areas with a safe, non-abrasive cleaner (example: Simple Green Daily).
  - Hose and spot clean around trash receptacles, benches, fire hydrants and other play equipment, gates and corners of the parks.
  - Coordinate with Landscaping to ensure the park is saturated via irrigation daily for at least 30 minutes to flush urine and waste from turf.

<u>Events</u>

Additional janitors will be provided when large private events are scheduled. Refer to the TIDA Events Guidelines for more information (Appendix 4.7).

2.7.2 Furnishings, Fixtures, and Equipment

<u>Site Furniture</u>

- Maintain per manufacturer's recommendations.
- Inspect per frequency tables for necessary maintenance or repair and report to Engineering and/or Management via condition report.
- Regular cleaning and washing of surfaces.

<u>Signage</u>

- Visually inspect all park signage daily.
- Clean as needed to remove dirt or rust. Recommend using Brillo pads for rust removal. Polish quarterly.
- Immediately remove any postings, stickers or graffiti.

<u>Children's Play Equipment & Site Furnishings</u>

- Clean and disinfect play equipment daily as prescribed by Park Management.
- Ensure rubber mat play ground is hosed off sprayed regularly.
- Sweeping and raking sand regularly.
- Garbage removal from trash cans and planter beds daily.
- Spot cleaning around picnic tables regularly.

2.7.3 Paving

Hardscape

- Sweep daily and hose down as necessary.
- Inspect weekly for lifted, separated, cracked or other damaged paving.
- Clean all hardscape per the frequency schedules. Steam clean concrete and colored asphalt as needed; clean (buff) stone pavers with a stone scrubber machine as needed.
- Keep paving free of any plant materials.

2.7.4 Litter Control and Waste Collection

Janitorial will provide litter control throughout the parks system daily. All external trash receptacles should be serviced and wiped down every morning (or as needed depending on park use intensity). All recyclable glass, metal, and paper should be kept separate, as provided by the trash receptacles. Litter should be removed immediately from all paths, café areas, and public sidewalks adjacent to all park parcels. Remove litter and debris from shoreline area along the Bay and beach areas. Properly dispose of all rubbish, green waste, and recycling materials in the appropriate trash bins.

Janitorial staff will coordinate with Management and TIDA to ensure that litter control and servicing of waste cans is adequate for special events or high use periods such as the 4th of July. Janitors should deliver all collected materials to site yard for compacting, sorting and disposal. Refer to Section 2.8: Waste Management and 2.9: Maintenance Facilities for additional information.

2.7.5 Graffiti

Graffiti should be removed from all surfaces in all locations. This will assist in controlling proliferation. In general, graffiti should be addressed in 24 hours. For graffiti that needs further effort to remove, janitorial will fill out a condition report for follow up with Engineering.

- Remove graffiti as soon as possible when sighted. For graffiti that is difficult to remove, report to Engineering, especially on delicate or painted surfaces.
- For stone, cement or other hard surfaces, power-washing may help.
- For Furniture, Fixtures and Equipment, remove and treat for graffiti pursuant to the specifications and manufacturer's recommendations.
- For Artwork, report to Engineering/Management immediately, and only remove by following directions to graffiti removal approved for the particular art work the artist or conservator.

2.7.6 Restroom Facilities

Restrooms require a high level of service in all cases and locations. Depending on locations, restroom inspection and restocking frequencies of service should be adjusted to reflect activation and foot traffic increases. Janitorial staff will provide daily janitorial service to the public restrooms at all locations. In general, restrooms should be cleaned and re-stocked early in the morning before restroom opens, and again after the lunch hour. Restrooms should be inspected several times daily.

Special events

Janitorial will provide a restroom attendant for additional hours of operation, outside of the regular schedule , during special events, or other events as requested by Park Management.

- Require the restroom attendant to immediately advise any individual whom he or she suspects of violating any portion of the Treasure Island Rules & Regulations, or of engaging in behavior which may be offensive to other users of the Treasure Island facilities, to stop the offending behavior, and should the behavior continue, the attendant shall immediately advise the Treasure Island security staff of the situation and request its assistance.
- Janitorial will maintain restroom condition reports, which detail items for repair due to use or vandalism.

Restroom Service Specifications

Janitorial will provide the following daily services (seven times per week):

- Restock all restrooms with supplies, including paper towels, toilet tissue, seat covers, feminine bags, changing table covers, and hand soap, as required.
- Wash and polish all mirrors, dispensers, faucets, flush meters and brightwork with non-scratch disinfectant cleaner.
- Wipe dry all sinks.
- Polish all stainless steel thoroughly.
- Wash and sanitize all toilets, toilet seats, urinals, sinks and showers with non-scratch disinfectant cleaner.
- Remove stains, descale toilets, urinals and sinks, as required.
- Mop all restroom floors with disinfectant solution.
- Empty and sanitize all waste, sanitary napkin and tampon receptacles.
- Remove all restroom trash.
- Disinfect and polish all partitions, tile walls, dispensers, doors and receptacles.

Janitorial will provide the following services on a weekly basis:

- Dust all low reach and high reach areas, including, but not limited to, structural ledges, mirror tops, partition tops and edges, air conditioning diffusers and return air grilles within buildings.

Janitorial will provide the following services on a monthly basis:

- Wipe down all tile walls and metal partitions. Partitions shall be left clean and streak free after this work.
- Clean all ventilation grills.
- Dust all doors and door jambs.
- Dust or vacuum trim work.

Janitorial will provide the following services on a quarterly basis:

- Thoroughly scrub clean and reseal all ceramic tile floors, using approved sealers.

2.7.7 Site Office

The site office for operations should have the following janitorial services as part of the maintenance of the space.

Janitorial will provide the following daily services (seven times per week):

- Vacuum and spot clean any carpets.
- Dust mop all resilient and composition floors with treated dust mops. Damp mop to remove spills and water stains as required.
- Dust all desks, office furniture, and conference room tables with treated dust cloths
- Empty all wastepaper baskets and other trash containers. Wipe exterior of containers and change liners as needed.
- Adhere to building recycling program. Remove paper or cardboard to designated recycling area.
- Remove all trash from floors and place in the designated trash areas.
- Remove fingerprints, dirt smudges, graffiti, etc., from all door frames, glass partitions, light switches, and walls.
- Return chairs and wastebaskets to proper positions.
- Clean, sanitize and polish drinking fountains and/or water dispensers. Empty waste water as needed.

Janitorial will provide the following services on a weekly basis:

- Dust inside of all door jambs
- Wipe clean and polish all brightwork
- Edge vacuum all carpeted areas

Janitorial will provide the following services on a monthly basis:

- Dust all high reach areas including, but not limited to, tops of door frames, structural and furniture ledges, air-condition diffusers and return grilles, tops of partitions, picture frames, and other exterior surface high reach areas
- Dust all low reach areas including, but not limited to, chair rungs, structural and furniture ledges, baseboards, window sills, door louvers, wood paneling, molding, and other exterior surface low reach areas
- Sanitize all telephone receivers

Janitorial will provide the following services on a quarterly basis:

- Clean window coverings.

Janitorial Closet Service Specifications

Janitorial will provide the following services daily (seven times a week):

- Maintain the service closet in a neat and orderly fashion.
- Discard any old chemicals and general trash.
- Sweep and/or mop flooring.
- Clean and disinfect slop sink.

Health and Safety

Janitorial will provide the following services at all times:

- Ensure that all cleaning chemicals are labeled and placed in a locked box in the Janitorial Closet and that the necessary Materials Safety Data Sheets ("MSDS") for the cleaning chemicals used at Treasure Island are current and are posted in the Janitorial Closet.
- Keep the Safety Handbook in the Janitorial Closet.
- Post emergency phone numbers in the Janitorial Closet.
- Comply with all local, state, and federal health and safety laws.

2.8 WASTE MANAGEMENT

The waterfront and nearby parks presents a unique challenge with extensive exposed shoreline and active public spaces. These spaces should be managed with an eye to improving the environment, reducing and reusing waste and protecting the parks, shoreline and Bay from environmental impacts. In this vein, management will oversee a centralized maintenance facility for the parks at YBI/TI. This will need to be proactively managed and coordinated with the permitted waste hauler and TIDA. Management should follow best practices and foster a culture of stewardship amongst all staff. The waste management process outlined below is included for reference. The final waste management plan will need to be coordinated with the permitted waste hauler and TIDA based on logistics, phasing, waste diversion targets, costs and other requirements. The general manager will be responsible for facilities' permits,compliance, and coordination with TIDA regarding community and environmental concerns.

Collection

Staff will collect waste in the open space at regular intervals as defined in the Level of Service Matrix. Routes for collection shall be developed and coordinated with TIDA and will need to be adjusted to address project phasing and new parks. Management will adjust as more parks are opened in the future.

Green Waste

Janitorial and Landscape staff will be required to collect green waste (trimmings, grass clippings, leaf debris etc.) from landscape maintenance operations for composting and reuse in the landscape, or for transport to composting facilities provided by the permitted waste hauler.

General Waste and Recycling

Recycling will be sorted out from the general trash stream, and compacted for pick-up. Items such as metals, clean wood, tires and other materials will be separated from bottles, cans, and plastics.

Sorting

Staff at the maintenance yard will use a process that sorts waste into separate waste streams. They will be separating waste by type and receiving facility. The facilities for storage of materials prior to pick up will be in the maintenance yard. Staff will determine facilities' waste acceptance criteria, and follow those protocols. When materials are not recyclable, some waste requires special handling for safe and effective burial in the landfill. This applies to materials such as asbestos, bulky items, and construction waste. Staff will separate waste before disposal. Staff performing sorting will undergo regular training with the City's designated waste hauler to assure updated awareness on items eligible for removal from the waste stream.

Separate the following from regular waste:

- Cardboard
- Organics
- Metals
- Electrical and Electronic Waste
- Hazardous Waste
- Construction & Demolition (C&D)
- Clean wood and brushing
- Tires
- Bulky items (furniture, desks, chairs, etc.)
- Appliances

Staff will sort by type:

- Compost
- Recycling Materials
- Landfill Materials that can't be put in the other streams

Waste Reduction

Staff should look for opportunities to reduce and prevent waste from being created. Every public space has its own character, style and culture that must be accounted for in planning, activating, operating and maintaining a site.

Compaction

In order to reduce waste storage space requirements and costs waste may be processed in on-site compactor(s) at the waste management facility. Using the compactor, waste should be compacted to fullness levels dictated by the manufacturer. Engineers should be fully versed in the procedures, and should train all staff that use the compactor to operate safely, and according to procedures outlined in the compactor manual.

Communication

Staff will incorporate waste training and proper equipment as part of orientation, post signs on bins, and ensure responsibilities for managing waste are understood. Management will reach out to coordinate with any entities in the open space, such as restaurants and other vendors.

Monitoring and Reporting

Management will ensure the monitoring and reporting of Waste Sorting plan is a fundamental best practice and will be a key component of the Waste Recycling Strategy.

Waste Management Phasing

As the parks system grows, waste generation is expected to increase. Anticipating future waste management needs is a crucial. A three phase plan can be implemented:

- Start-up Phase
- Implementation Phase
- Expansion Phase

See Appendix 4.2 for more information regarding waste management facilities.

2.9 MAINTENANCE, WASTE MANAGEMENT AND COMPOSTING FACILITIES

In order to manage the wide variety of parks and open spaces on Treasure Island and Yerba Buena Island, a maintenance facility that includes a site office, storage facilities, and a maintenance yard will need to be developed. In general, the facility will serve all maintenance staff and will provide a maintenance office with restrooms, space for equipment and materials storage, and performance of repairs. The yard will also have parking for maintenance staff and vehicles.

The scale and location of the maintenance yard and waste management facilities will evolve and grow with the development of the park system. It is expected that a smaller, temporary area will be provided by TIDA during early stages of park development. The operations and maintenance team and/or contractor will need to coordinate closely with TIDA to manage and coordinate facility needs.

This manual includes recommendations for a system-wide maintenance facility as required to meet parks and open space maintenance requirements for the complete park system. In addition to the maintenance yard, requirements for waste management and composting facilities are also included. Refer to Appendix 4.2 for a detailed description of the facilities.

2.9.1 Management and Administrative Offices

Office space should be available to the General Manager and support staff, allowing for oversight to be close to the property rather than remote. Staff should have space for all materials, forms and office supplies, and keep manuals, binders and documents related to the management of the open space system on site. These supplies and any office equipment should be kept in the inventory of the maintenance yard, and files of all property related documents should be maintained.

2.10 ARTWORK MAINTENANCE

The selection and placement of public art though the parks system of Treasure Island and Yerba Buena Island is guided by a partnership between TIDA and the San Francisco Arts Commission. The Treasure Island Arts Master Plan sets forth a vision for the arts program, a curatorial framework and objectives, identifies potential sites for art placement, and describes the processes that will govern the implementation of the arts program. The arts program will consist of historic pieces from the Golden Gate International Exposition as well as newly commissioned works. The art program also envisions temporary works that may be rotated periodically.

In order to preserve the art work in best condition, visual inspection and maintenance will be performed by operations and maintenance staff to ensure that the art continues to be an attraction and amenity to the open space and the community surrounding the parks. Art work should be inspected during rounds by Management, Engineering, and Janitorial. Condition reports should be generated for anything that cannot be accomplished by the engineering or janitorial staff during their regular rounds.

All open space art work should be maintained in accordance with the recommendations from the artists and/or their conservators. With some art pieces, repairs and maintenance may need to be done by art restoration specialists. Detailed art descriptions and guidelines for maintenance (provided by the San Francisco Art Commission) can be found in Appendix 4.14 – Public Art Locations and Maintenance Guidelines. Note that this Appendix will need to be maintained and updated as new artworks are installed, artworks are removed etc.

3.5 BUCKEYE GROVE MAINTENANCE GUIDELINES

3.5.0 PARK OVERVIEW & DESIGN INTENT

The Buckeye Grove site is part of the centralized stormwater treatment system, cleaning stormwater runoff from the Yerba Buena Island streets and the future western residential parcels. The site is also a public open space featuring an uphill bike path and native habitat planting. The bicycle path funnels cyclists off the streets and allows them to bypass the steep grades of Macalla Street with a series of switchbacks. Between the switchbacks the stormwater bio-treatment areas are graded into the steep hillside of the site. Concrete retaining walls frame the treatment basins while concrete and rock gabion forebays mark the entry point of the stormwater into each basin. These forebays act to slow the water as it enters the basins avoiding erosion and allowing the water to pond evenly.

A few trees were preserved on the site through construction. A couple of large California Buckeye trees sit near the top of the slope on the eastern side of the site. To the west a coast live oak tree remains and at the lower area of the site, another coast live oak was transplanted from elsewhere on Yerba Buena Island.

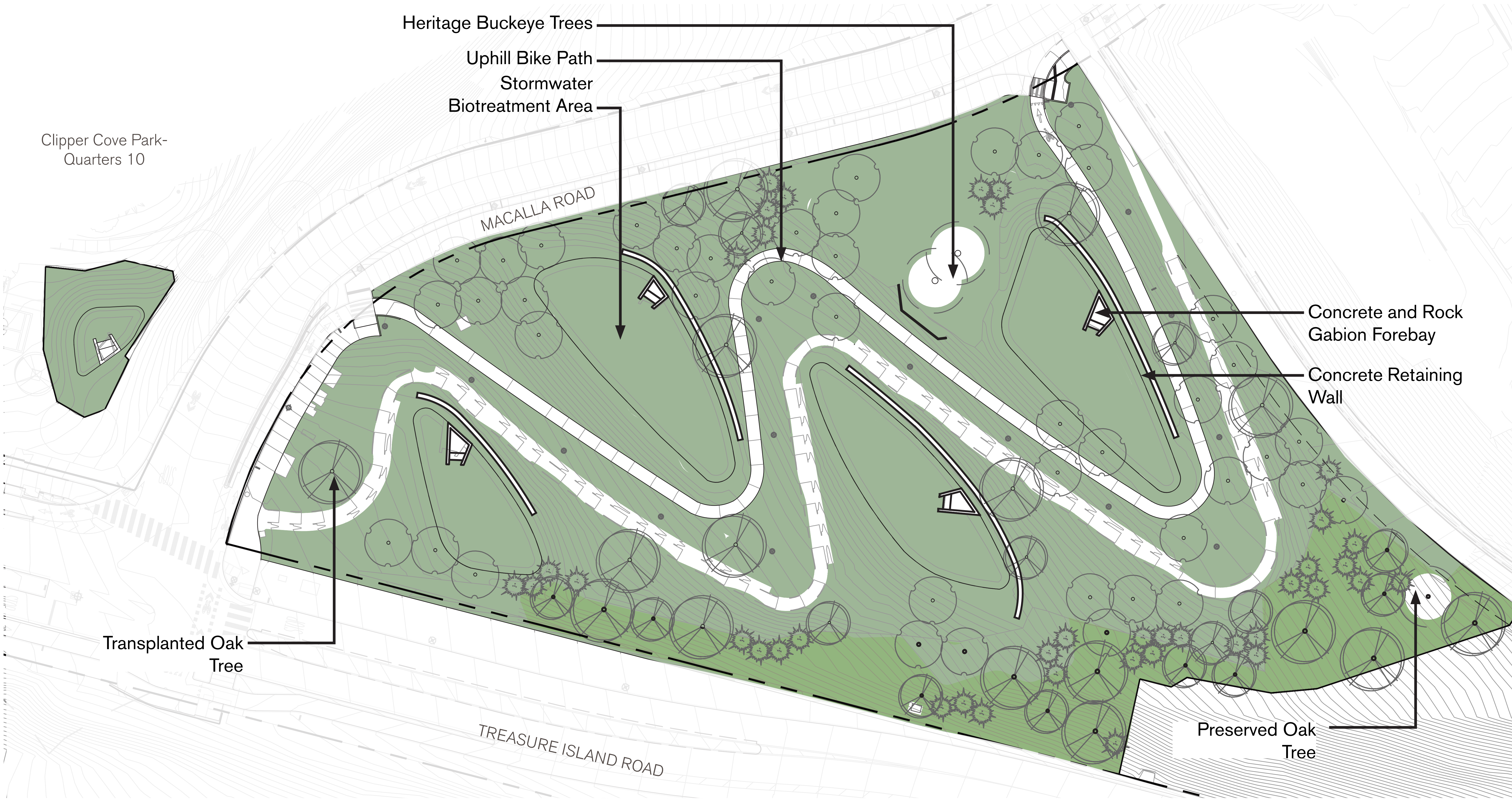
Ecologists and the San Francisco Department of the Environment advised on the planting palette at Buckeye Grove. The palette includes upland plants (outside of the stormwater bio-treatment areas) and plants that can handle periodic inundation within the ponding areas of the treatment areas. The plants are all local natives and were mostly contact grown by the Literacy for Ecological Justice native plant nursery on Treasure Island.

Figure 3.5.1: Buckeye Grove location

3.5.1 LEVELS OF SERVICE

The San Francisco Public Utilities Commission sets requirements for the maintenance of stormwater treatment infrastructure. See the Stormwater Control Plan for more information on maintenance and annual reporting requirements.

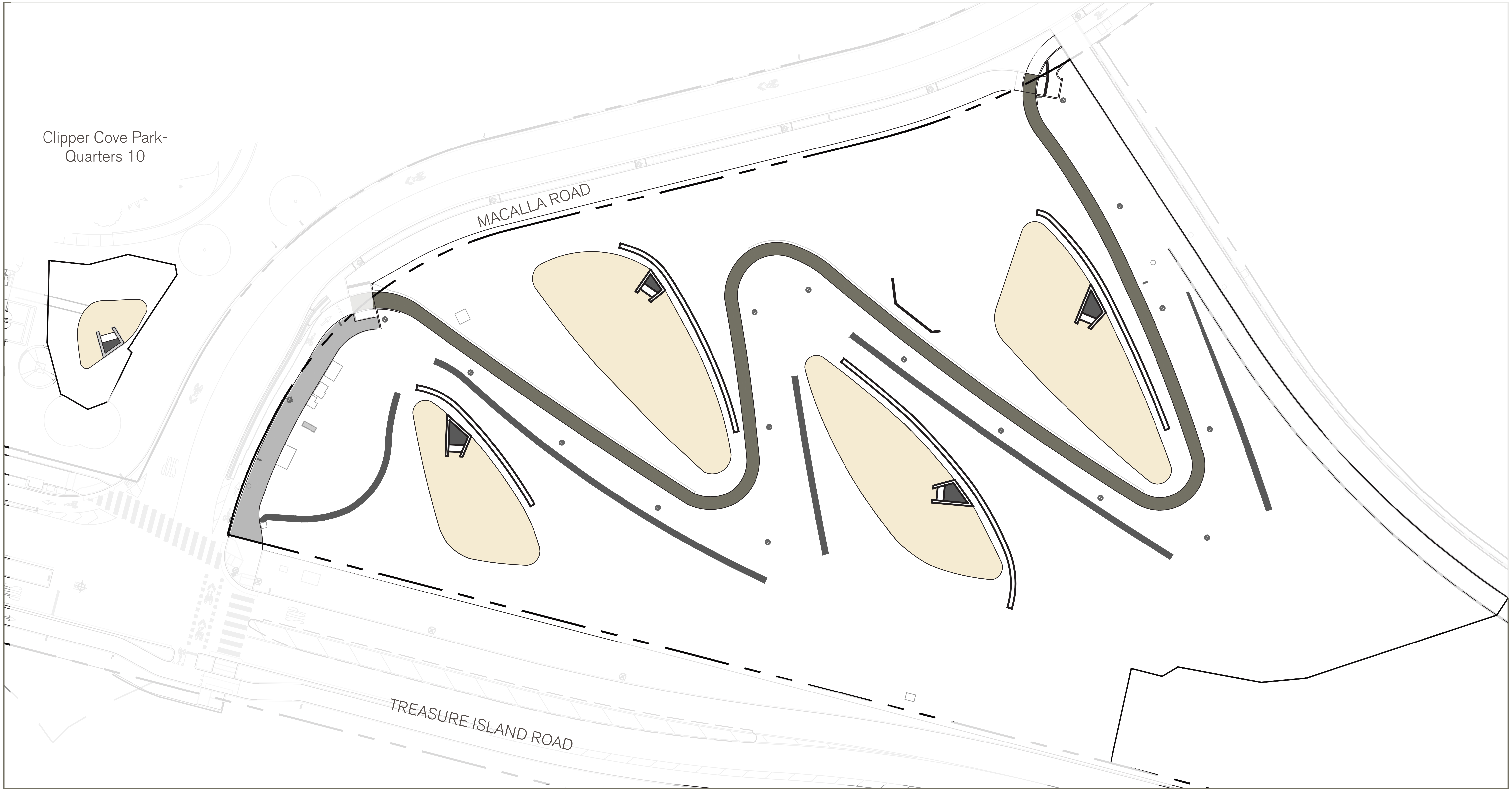
Buckeye Grove is intended to be a low-maintenance native California landscape.



BUCKEYE GROVE
SITE OVERVIEW

BUCKEYE GROVE
TREE & UNDERSTORY PLANTING

NOTE: Please refer to planting plans in landscape construction documents for plant species. See Appendix X.XX.



BUCKEYE GROVE
PAVING

NOTE: Please refer to materials plans and specifications in landscape construction documents. See Appendix X.XX.

Asphalt Paving

Concrete

Cobble Forebay

Gravel Mulch

BUCKEYE GROVE
PARK INFRASTRUCTURE

3.5.2 MANAGEMENT

Provide weekly management service to The Rocks Dog Park tasks include:

- Weekly inspection of landscaping, irrigation, paving and site furnishings
- Weekly inspection of gates, fence lines, water fountains
- Management works with staff daily to assign tasks and schedule maintenance items

3.5.3 ENGINEERING

Refer to frequency tables for all schedules related to Engineering services for Buckeye Grove. Tasks by category are described below.

<u>Utility Systems</u>

- <u>Stormwater Treatment Areas</u>
  See the Stormwater Control Plan for maintenance and annual reporting requirements.

- <u>Lighting</u> *(see specifications for further information on light fixtures and parts)*

- <u>Electrical</u>
  See *Engineering, System-wide Chapter.*

- <u>Storm Drainage</u>
  See *Engineering, System-wide Chapter.*

- <u>Irrigation system</u>
  - Irrigation of the upland planting is intended for establishment only.
  - The lowest BTA (BB-YBI-1.4) is irrigated from the Clipper Cove Park system at Quarters 10.

<u>Paving</u>
Buckeye Grove features an asphalt paving bicycle paths. See drawings and specifications for further information on paving materials, color, type, finish, and manufacturer's maintenance recommendations. Refer to *Engineering, System-wide Chapter.*

<u>Site Furnishings</u>

- Sculptural Salvaged Wood
  - Sculptural Salvaged wood stumps (Eucalyptus):

3.5.4 LANDSCAPE

The palette is designed for bird and pollinator habitat and is intended to blend with the adjacent trails and Habitat Management Plan areas. California natives are largely drought tolerant and do not require summer watering past the initial establishment period. The plants within the stormwater biotreatment areas are generally higher water use and will require continued irrigation during the dry season.

The landscape was originally planted with a wide-variety of species with the intent that species that are successful can replace those that do not thrive on the site, whether by natural spreading or through replacement by the landscape maintenance team.

See specifications and planting plans for further information on tree varietals, plantings, irrigation specs and other fixtures. See *Section 2.6: Landscape* in the *System-wide Guidelines* for planting maintenance requirements not described below.

Slopes:
- Steep slopes throughout the site require may regular maintenance and replacement of mulch material., especially after storm events.

Buckeye Tree Care:
- Two heritage buckeye trees grow near the top of the site. These trees have sustained some structural damage and were reinforced with cabling by an arborist. These trees should be periodically reviewed by a professional arborist to determine whether additional reinforcement is required.

Understory Plant Care and Pruning:

- Flowering plants: Ceanothus, California poppies, yarrow, monkey flower, saliva and other flowering plants require regular pruning throughout the growing season. This is done to harvest flowers, remove dead or diseased foliage or branches, and to create light penetration and airflow to the interior of the plant in order to increase bloom and overall plant health.

- The steep slopes at Buckeye Grove will require consistent monitoring during the rainy season to address drainage and erosion. Periodic repair and erosion control measures may be necessary. Maintaining the health of planting on these slopes is a joint effort between Engineering and Landscaping.

Irrigation Controller Warranty
See System-wide guidelines and Specifications for cut sheets for irrigation parts and controllers.

3.5.5 JANITORIAL

Features of note included in Buckeye Grove include the following:

Sculptural Elements
- Salvaged Eucalyptus Pieces

3.4 CAUSEWAY PARK MAINTENANCE GUIDELINES

3.4.0 PARK OVERVIEW & DESIGN INTENT

Causeway Park is found at the southwest corner of Treasure Island and serves as a major stormwater treatment park for the island. The park has a series of stepped bio-filtration facilities that are interconnected to a stormwater pump station that pumps stormwater through the bio-filtration facilities as part of the water treatment process. Along the shoreline edge is a long walkway that connects from public street to Waterfront Plaza. The walkway provides views of the San Francisco Skyline and San Francisco Bay. The 3-acre facility has significant views of the San Francisco Skyline and San Francisco Bay. The park is anticipated to have a high level of visitors throughout the year to allow walking along the shoreline and connect to the island trail system.

The park is broken into 2 significant bio-filtration facilities. The first in the southern end is the long multi-stepped facility with walls defining 5 distinctive sub-basins. On the northern end is a single large facility.

Figure 3.4.1: Causeway Park location

3.4.1 LEVELS OF SERVICE

The Causeway location is a prominent location and services a significant responsibility as part of the island-wide stormwater treatment facilities. Visitors of the island will come to the park connecting to island-wide facilities to the north or south.

Other areas of the park consist of native and low-maintenance plantings and require minimum work to maintain. Many of the large planting areas of the site are not publicly accessible which requires less frequent maintenance.

Situated between the major bio-filtration facilities is a major PUC outflow facility that takes the treated stormwater and releases it into the bay. Within the 20-foot easement is a major access vault where a reinforced planting bed was installed to allow vehicle access to the vault for any service.

This chapter is intended to provide information on park information elements for Causeway Park that are not described in System-wide Guidelines. For standard park elements. See System-wide Guidelines for maintenance requirements and further information on levels of service.

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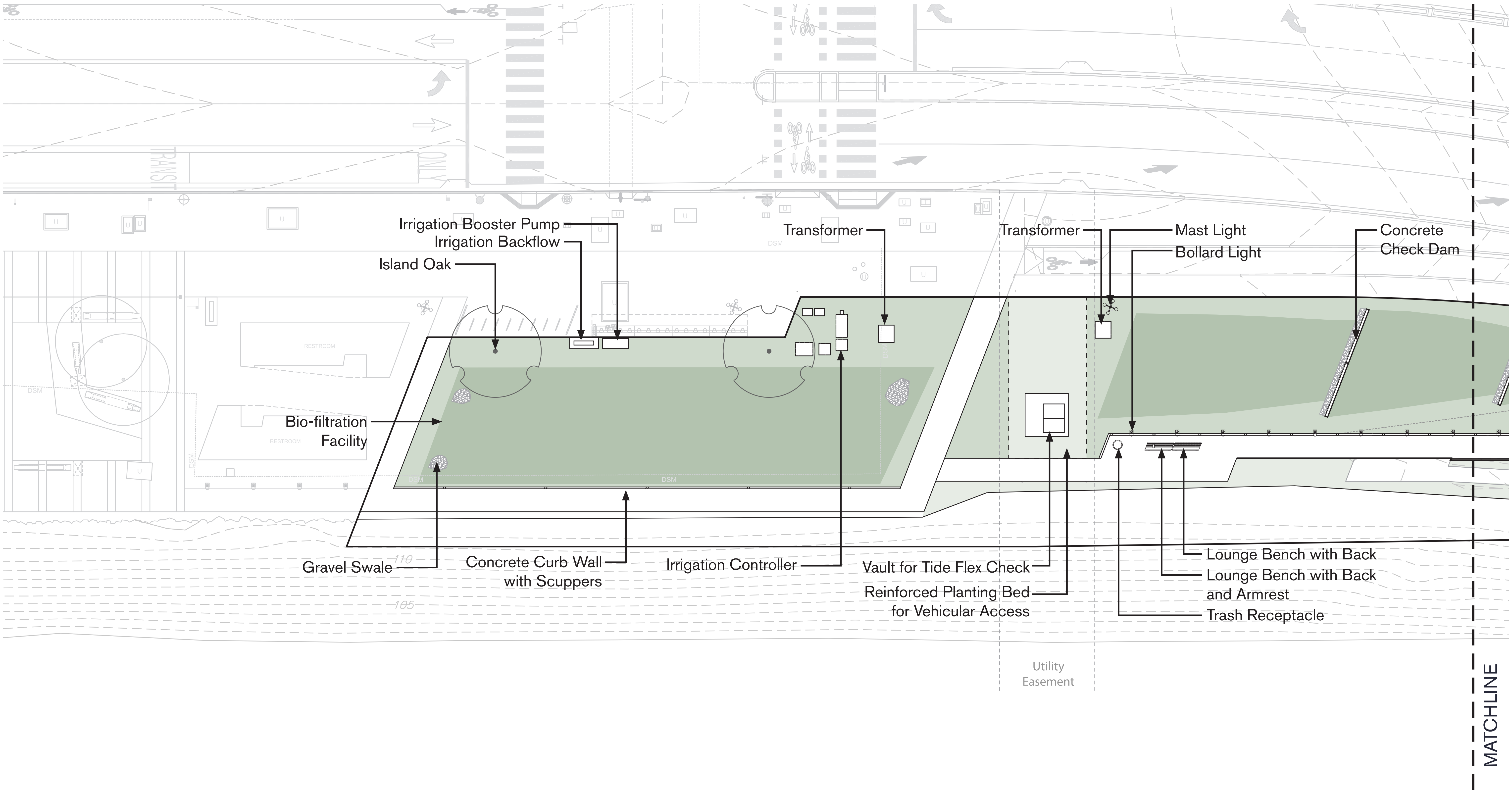
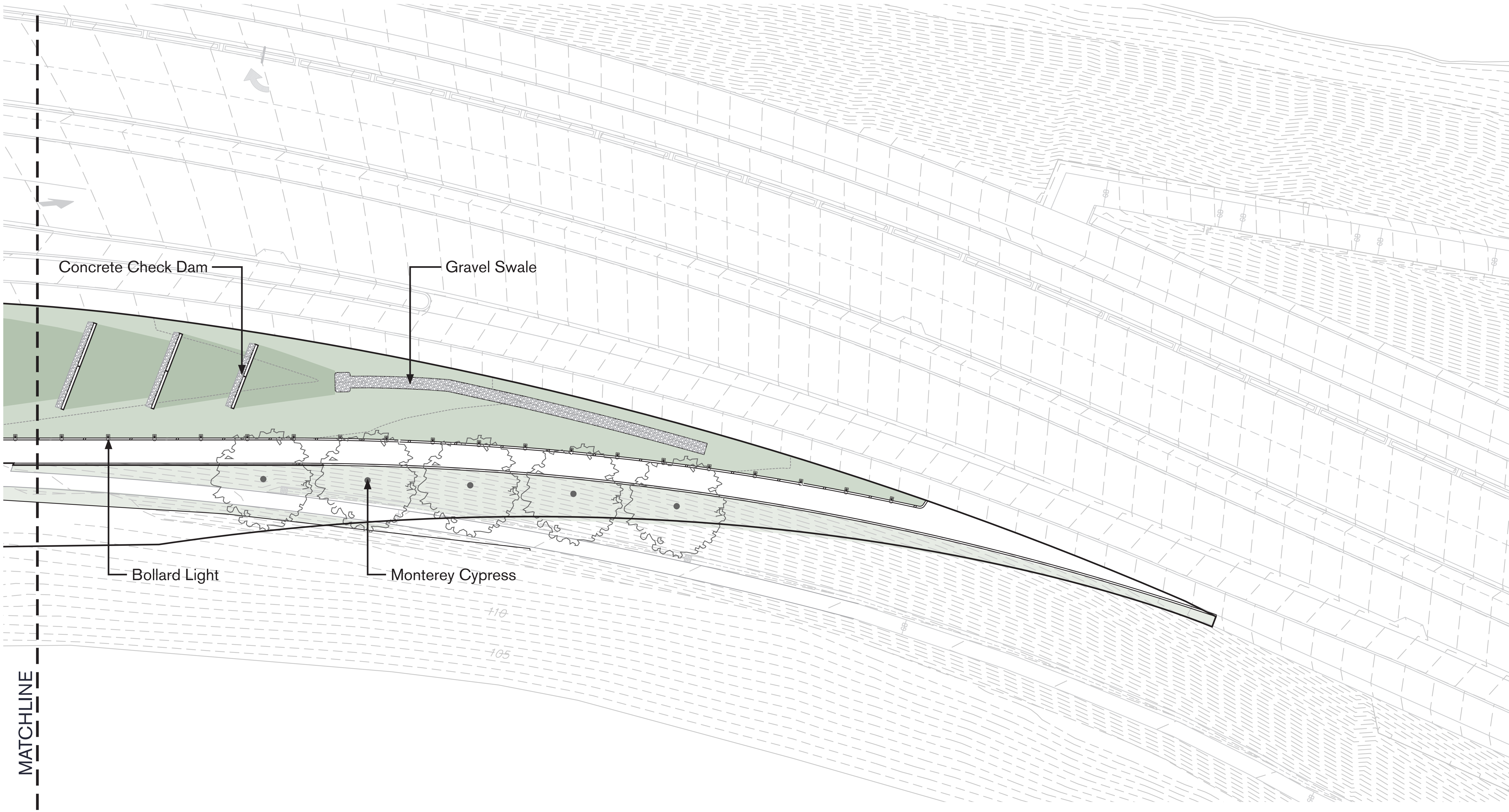
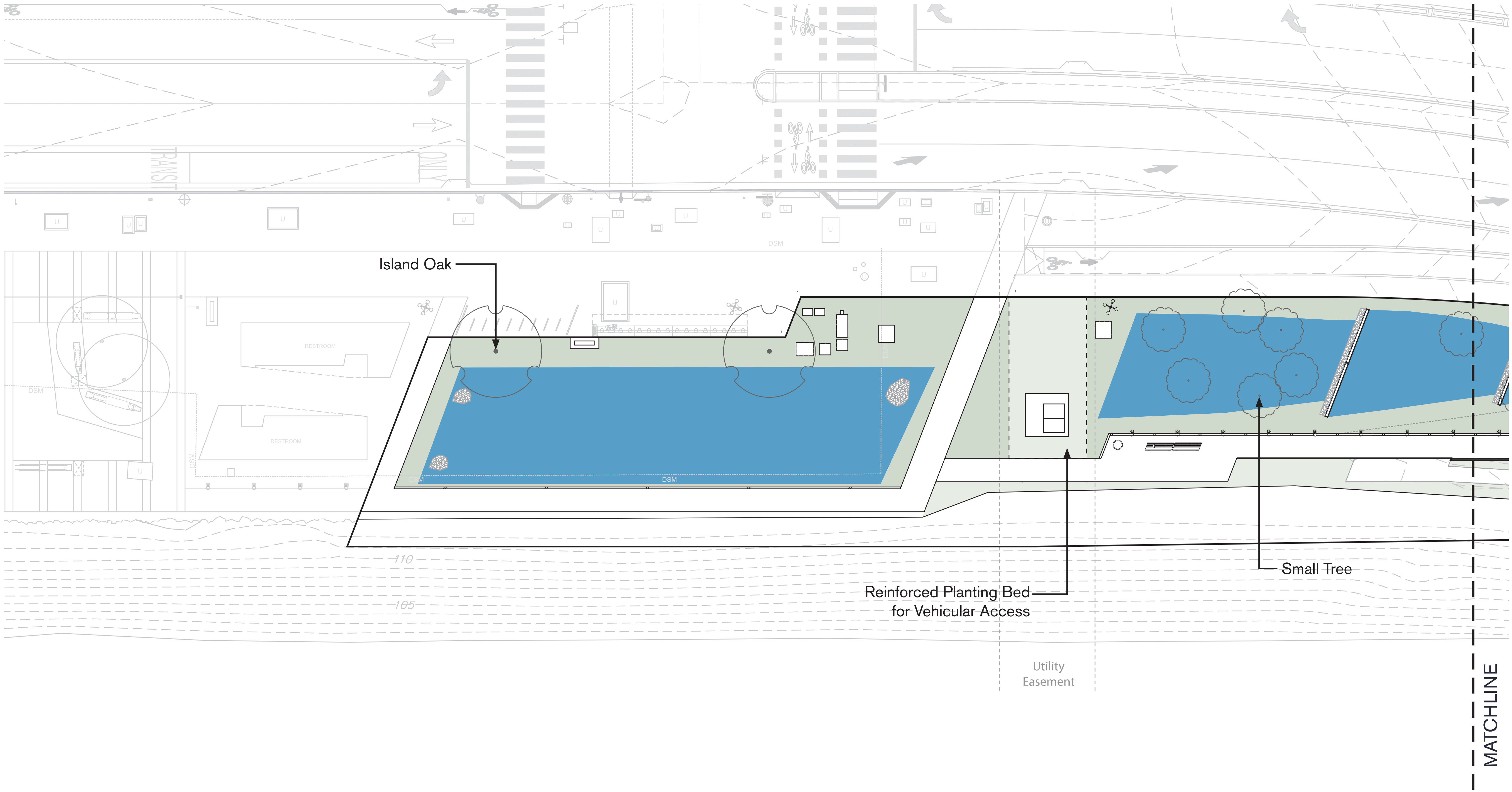


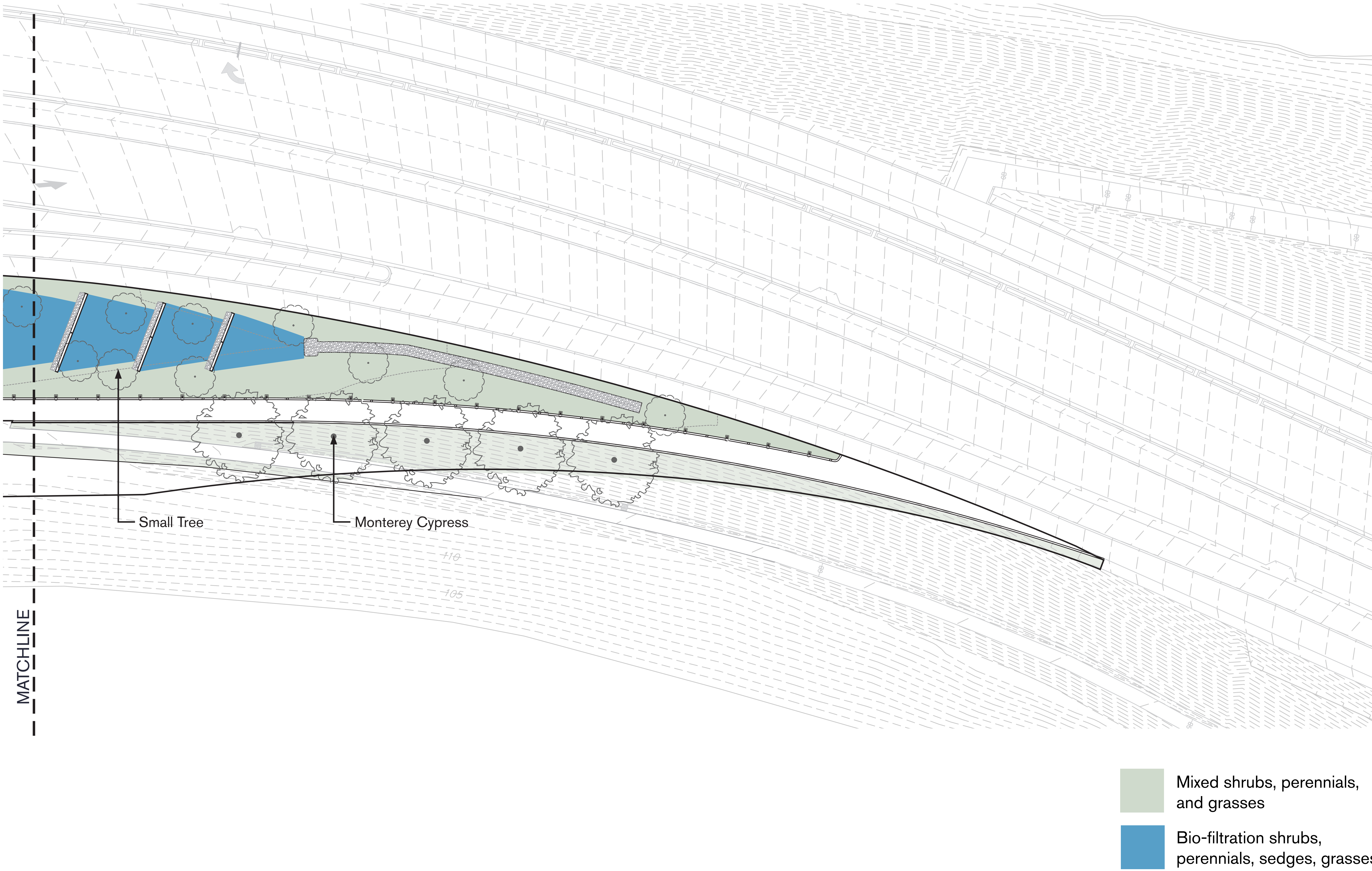
CAUSEWAY PARK
SITE OVERVIEW

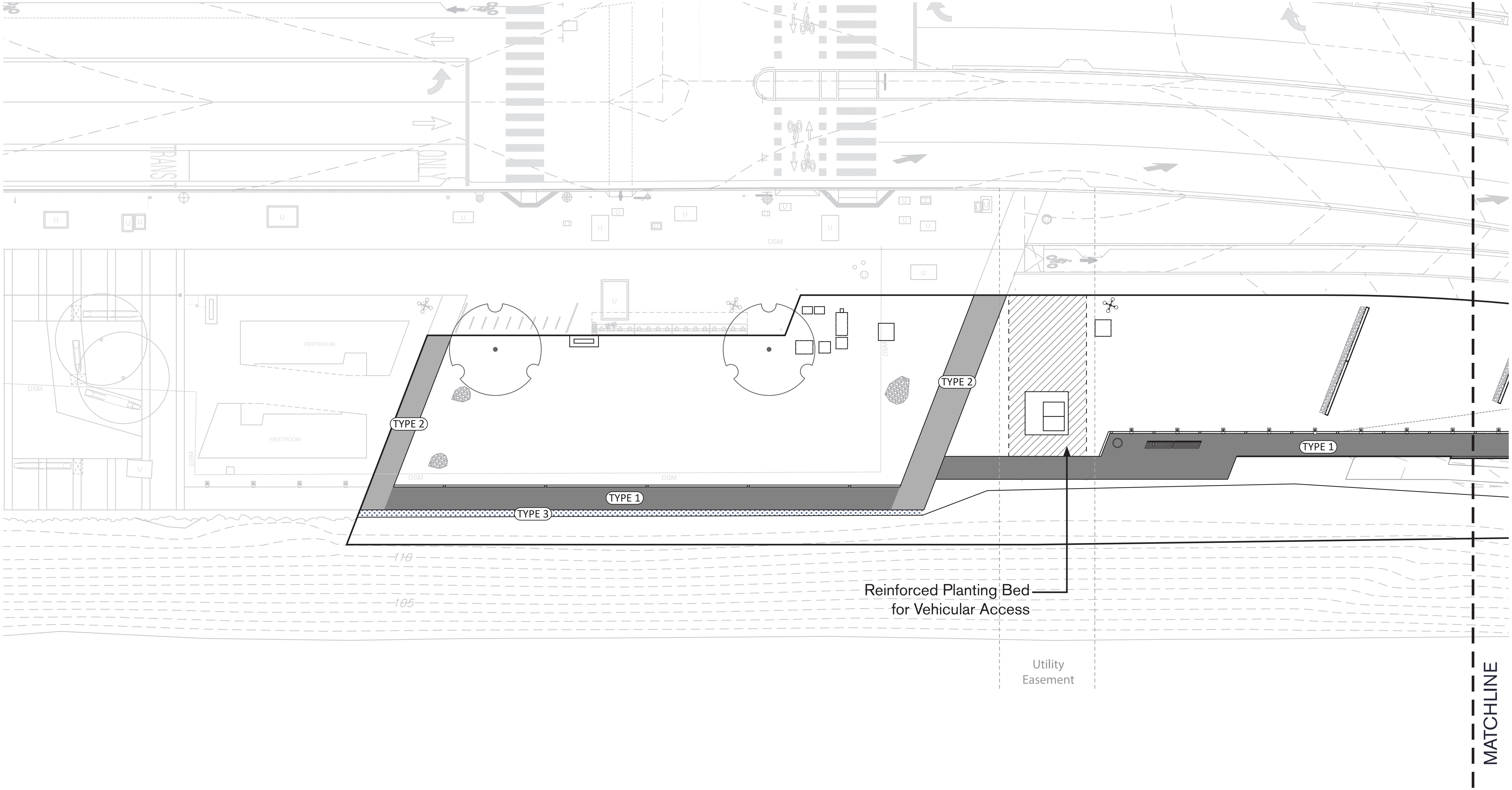

Concrete Check Dam
Gravel Swale
Bollard Light
Monterey Cypress
MATCHLINE
110
105



CAUSEWAY PARK
TREE & UNDERSTORY PLANTING

NOTE: Please refer to planting plans in landscape construction documents for plant species. See Appendix X.XX.

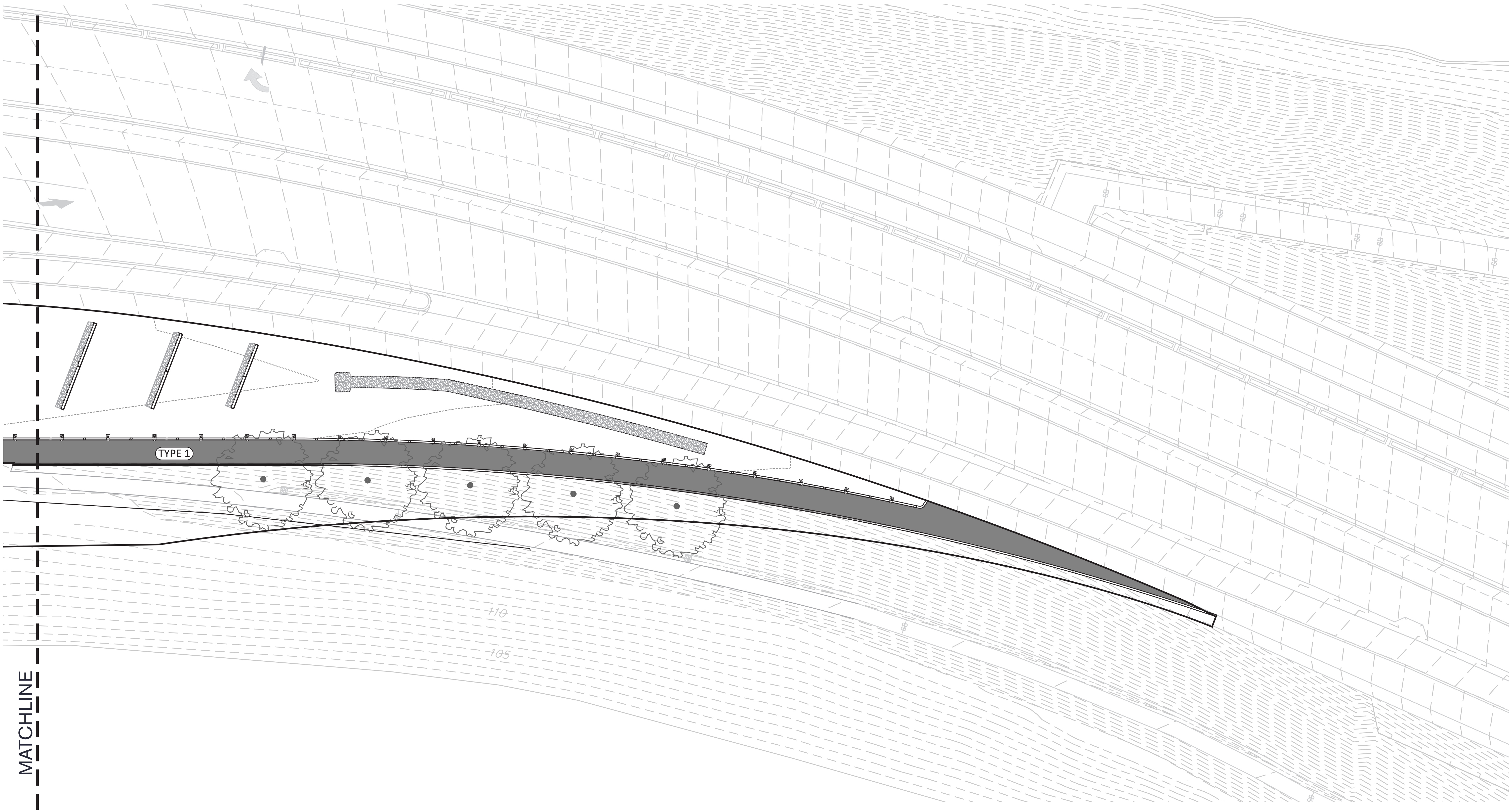

MATCHLINE
Small Tree
Monterey Cypress
110
105
Mixed shrubs, perennials, and grasses
Bio-filtration shrubs, perennials, sedges, grasses



CAUSEWAY PARK

PAVING

NOTE: Please refer to materials plans and specifications in landscape construction documents. See Appendix X.XX.



Type 1 - Medium Gray - Sandblast Finish

Type 2 - Light Gray - Sandblast Finish

Type 3 - Blue Shall Mulch

3.4.2 MANAGEMENT

Provide weekly management services including:

- Weekly inspection of landscaping, site furnishings, irrigation, and paving.
- Weekly inspection of bio-filtration facilities to ensure no obstructions within the structures.
- Oversight of operations with the ferry service assures safety, and accessibility relationship to access the public bus system, access to island-wide trails, and residential areas.

3.4.3 ENGINEERING

Refer to frequency tables for all schedules related to Engineering service for Causeway Park; tasks by category are described below.

Utility Systems

- Lighting (see specifications for further information on light fixtures and parts)
  - Re-lamping should happen with a regularly scheduled lamping plan that is scheduled in accordance with the wattage hours of the bulbs.
  - Bulb replacement should be done within a timely manner after the outage is reported to mitigate safety issues.
  - Inspect the operational timing of the timing clock to reset for daylight savings time.
  - Decorative bollard lighting should be inspected monthly during rounds of normal maintenance operations. Inspect bollards to ensure fixtures are not vandalized and oriented in the correct orientation.
  - Metal surfaces are powder coated with a color match to RAL #7024. Chips and scratches can be addressed by providing touch-up treatments through custom-blended paints.

- Electrical
  - See Engineering, System-wide Chapter.
  - The system controller is in Causeway Park and is interconnected to electrical equipment located within the Waterfront Plaza which includes power services for Ferry Terminal, and lighting services.
  - Electrical equipment is also located within the Causeway Park that controls the stormwater pump station.

- Storm Drainage
  - See Engineering, System-wide Chapter.

- Potable water and non-potable water systems
  - Monthly preventative maintenance of irrigation equipment and booster pump to ensure the irrigation system has proper pressure.

Paving

Waterfront Plaza paving systems consist of a variety of color and textured concrete surfaces. See drawings and specifications for further information on paving materials, color, type finish, and manufacturers' maintenance recommendations See frequency tables for inspection and maintenance schedules. Refer to Engineering, System-wide Chapter.

Site Furnishings

- General
  - All metal surfaces of fabrications of site furnishings for benches, and trash receptacles are powder coated by manufacturer color matching to RAL #7024. Painted metal surfaces are to be cleaned and repaired with custom blended paints matching to RAL color.
  - All wood surfaces used in the fabrication of benches and trash receptacles use thermally modified ash provided with sealant. The choice of wood is for long durability and is sustainable. For future treatment as the wood ages on a yearly cycle inspect all wood

surfaces and if needs to be cleaned and adjusted wood will need to be sanded, prepared with color stain, and resealed. The products to be used for the treatment of wood from Messmer's Inc. Products include:

- Messmer's UV Plus – Deck Stain – Natural

- Catalog Benches and Trash Receptacles
    - Prefabricated of metal and wood. The color for metal treatment (Dusk Gray) is similar to the standardized RAL color. The selection of the manufacturer's standard color is a proximity color match.

3.4.4 LANDSCAPE

The planting design at Causeway Park is intended to mesh with the endemic plants of the island. The park planting design restores habitat while also creating memorable, more formal spaces that frame views of the Bay. Planting areas are designed to accommodate large bio-filtration facilities. Within the plantings are plantings of tree species of Island Oaks and Monterey Cypress that frame views of San Francisco and San Francisco Bay.

See specifications and planting plans for further information on tree varietals, plantings, irrigation specifications, and other fixtures. Refer to frequency tables for pruning and plant care schedules. See Section 2.6: Landscape in the System-wide Guidelines for planting maintenance requirements not described below.

Understory Plant Care and Pruning:

- Flowering and Perennial plants: Ribes and salvia other flowering plants require regular pruning throughout the growing season. This is done to remove dead or diseased foliage or branches and create light penetration and airflow to the interior of the plant in order to increase bloom and overall plant health.
- Ornamental grasses, sedges, and rushes are to be pruned yearly to rejuvenate plants for the next growing season.

Irrigation Controller Warranty:

See System-wide guidelines and Specifications for cut sheets for irrigation parts and controllers. The location of the point of connection and controller operations is within Causeway Park. The irrigation system is interconnected to Waterfront Plaza and Island Shoreline Entrance Drive. Attention is to be on the booster pump to ensure the pressure is always adequate.

3.4.5 JANITORIAL

See spec sheets for further information on site furnishings and maintenance recommendations for specific wood and metal fixtures. Refer to frequency tables for pruning and plant care schedules. Features of note included in Waterfront Plaza include the following:

Site Furnishings

- Bench seating
- Trash Receptacles

3.1 PANORAMA PARK AND SIGNAL POINT MAINTENANCE GUIDELINES

3.1.0 PARK OVERVIEW & DESIGN INTENT

Found at the top of Yerba Buena Island, Panorama Park and Signal Point combine to make a 5-acre scenic destination that provides a variety of passive recreational spaces and overlooks with views to Treasure Island, San Francisco, and the San Francisco Bay. The parks are anticipated to have a high level of visitors throughout the year from across the region.

The park is divided into two sections. Panorama Park is encircled by Yerba Buena Island Road, private residences, and a potential hotel site. Signal Point borders Coast Guard property to the east and is also surrounded by private residences. Both parks are accessible via entrances on Yerba Buena Island Road. Both parks are connected to the larger parks system via a shuttle bus, pedestrian and bike routes, and the Yerba Buena Island trail system, which includes a series of publicly-accessible stairs through the private residence parcels. Accessible parking is available at Signal Point on Signal Road and in the parking lot located adjacent to the water tanks on Yerba Buena Island Road.

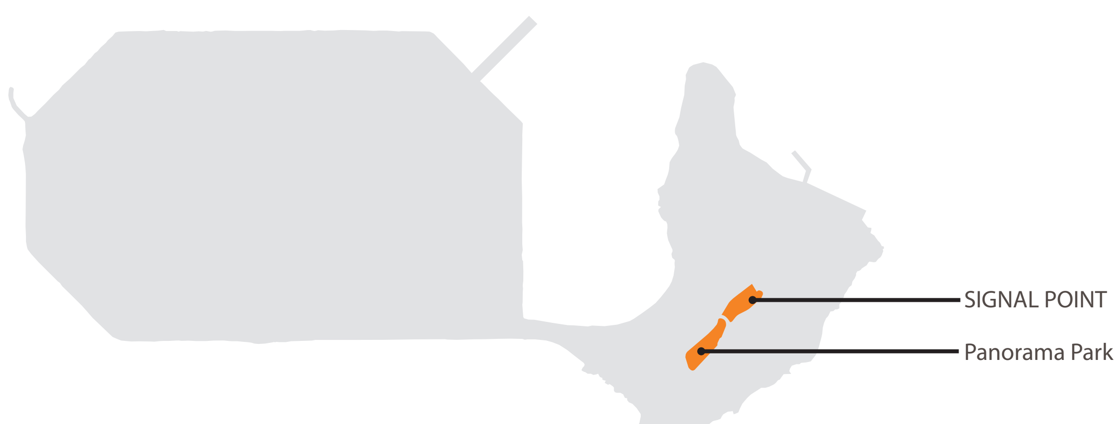


Figure 3.1.1: Park Location

The design of Panorama Park and Signal Point was inspired by relationship between the cultural and ecological histories of the site. Both parks incorporate preserved site elements built by the Navy before the redevelopment of Yerba Buena Island, such as stairs, walls, water tank structures, paths, and vegetation including heritage status oak trees. The focal point of Panorama Park is an overlook plaza constructed atop a repurposed, concrete water tank. This overlook also includes wood seating, planting areas, and sculptures installed per the Treasure Island Arts Master Plan. Signal Point offers seating and viewing opportunities on an adapted tank structure in addition to native planting areas and oak groves.

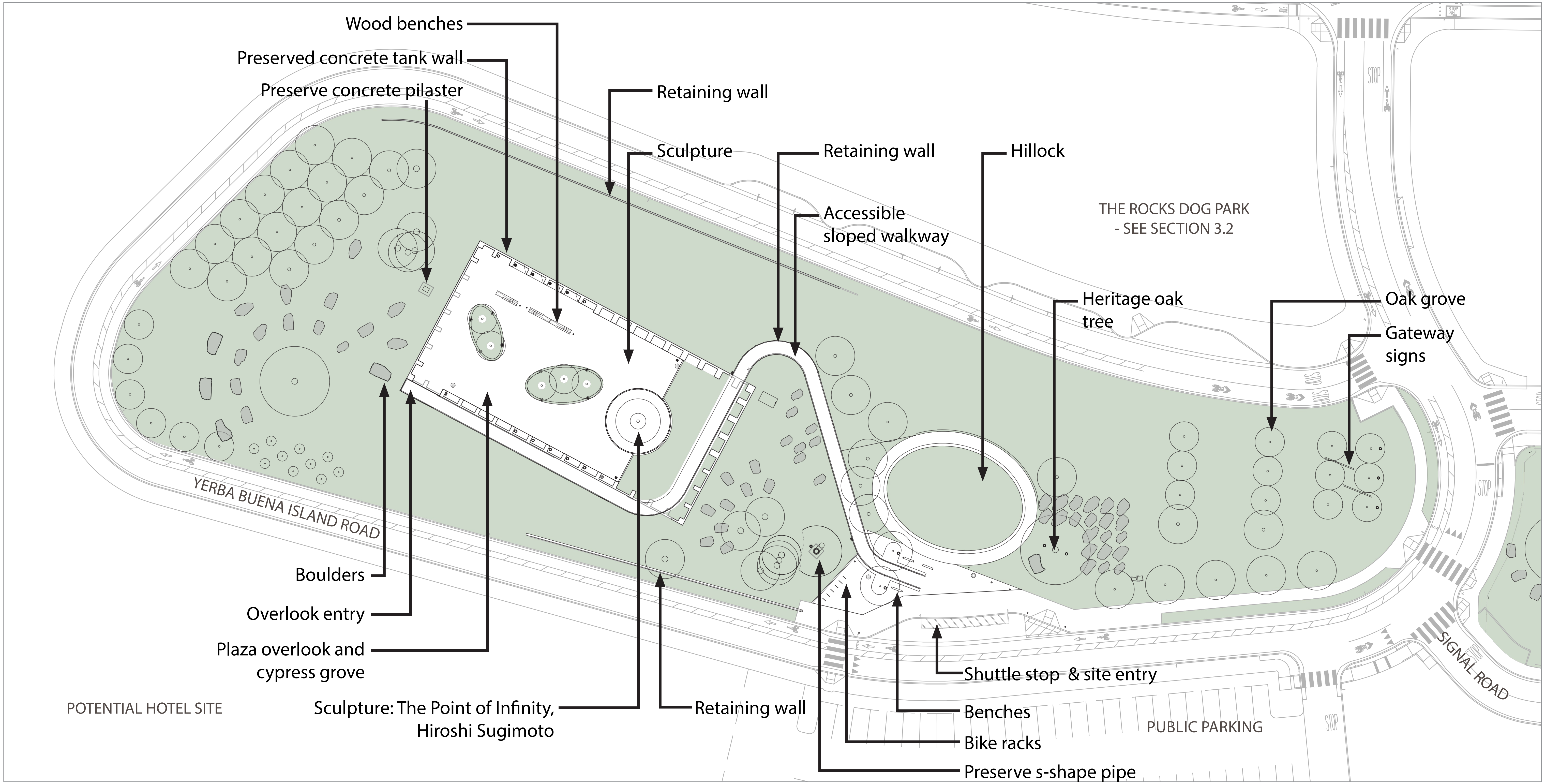
3.1.1 LEVELS OF SERVICE

Due to Panorama Park and Signal Point's prominent location, diverse elements, and expansive views, it is anticipated to attract a high level of visitors: from neighborhood residents, to Bay Area visitors, and tourists from farther afield. Visitor activity at the park is anticipated to occur in the smaller, concentrated areas of the overlooks. As such, overlooks at both Infinity and Signal Point have been ascribed a higher level of service necessitating more frequent repair, cleaning, and oversight. Site furnishings and planting areas at the overlooks require 'Level 1' maintenance.

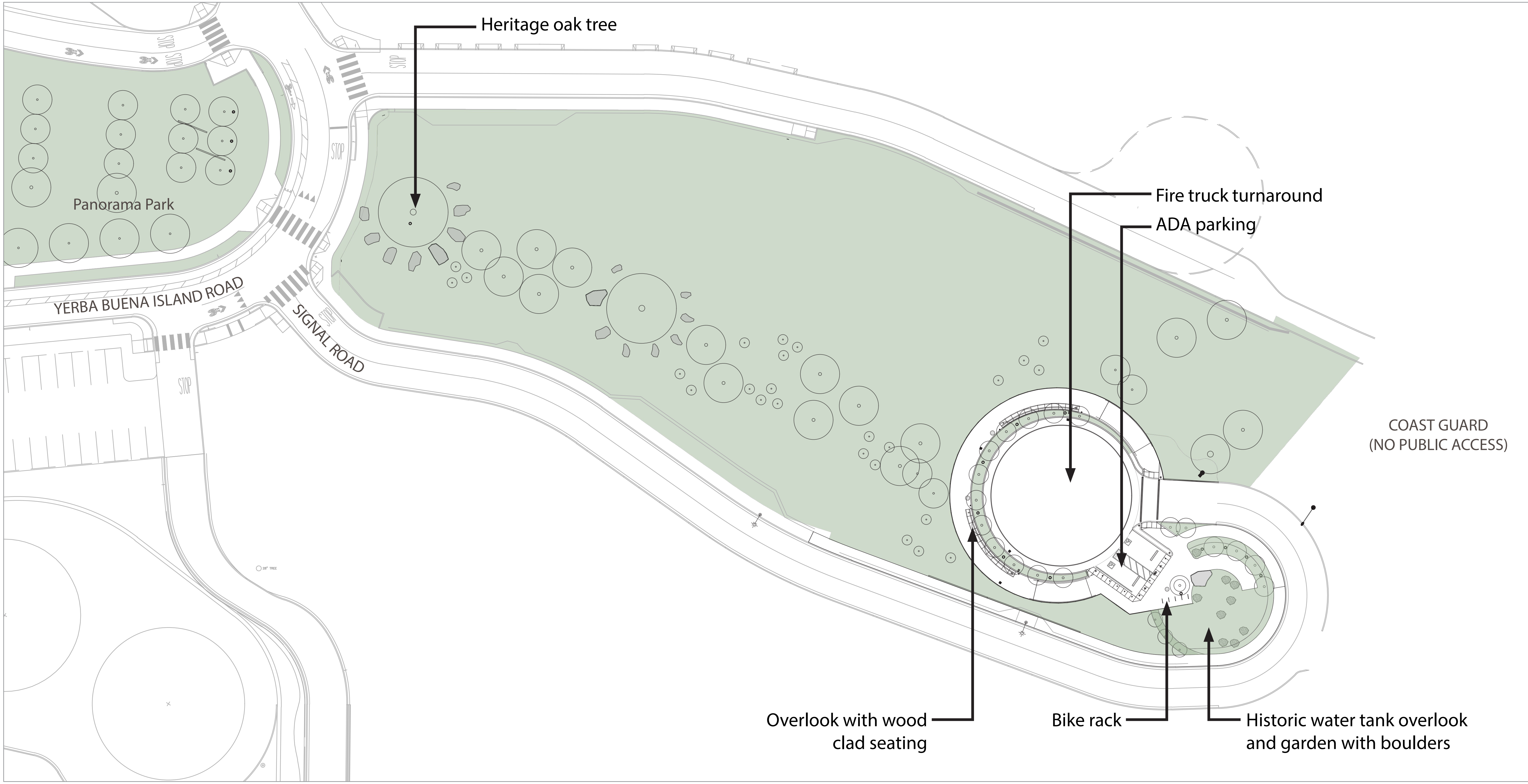
Other areas of the park consist of low maintenance native habitat planting and have been designated with a lower level of service. Many of these areas are not intended to be accessed by the public and thus require less frequent maintenance. Planting areas incorporate native species that have low water needs and require less pruning than planting located at overlooks.

The tables to the right (Figures 3.3 and 3.4) provide further information on the specific level of service designations for these parks by category.

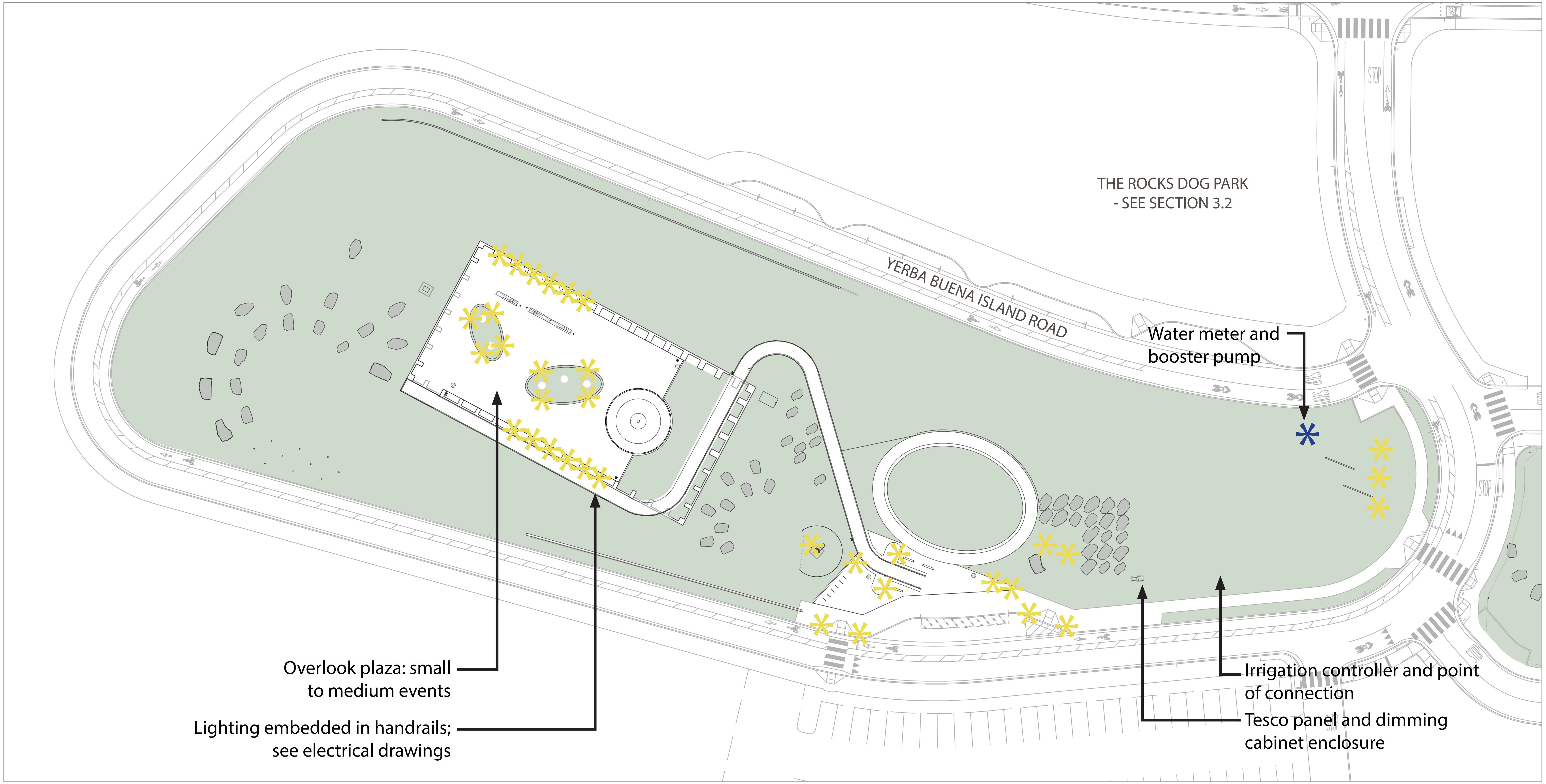
This chapter is intended to provide information on park elements specific to Panorama Park and Signal Point that are not described in System-wide Guidelines. For standard park elements, see System-wide Guidelines for maintenance requirements and further information on levels of service.



PANORAMA PARK
SITE OVERVIEW



SIGNAL POINT
SITE OVERVIEW



PANORAMA PARK
PARK & EVENT INFRASTRUCTURE

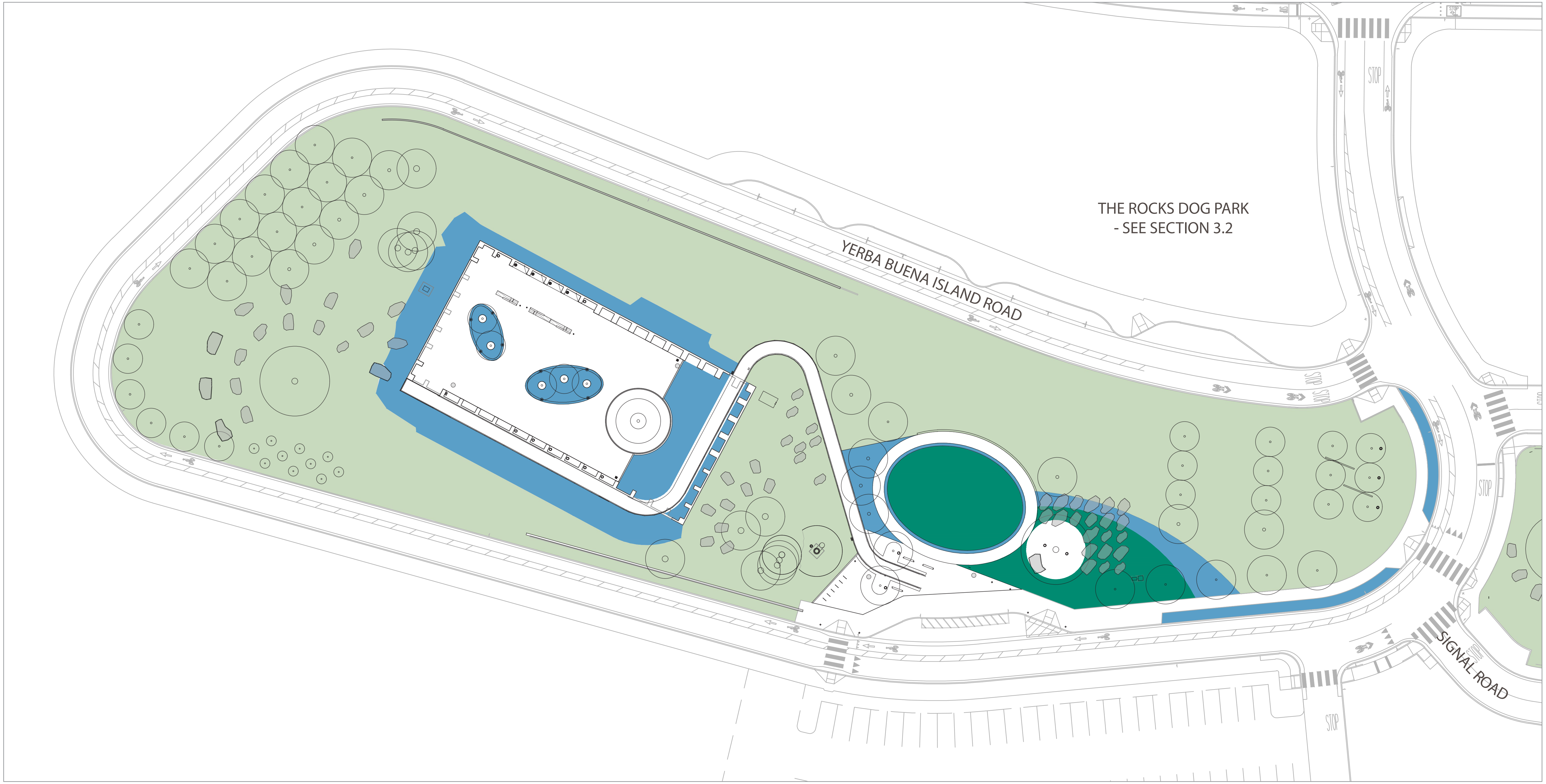
NOTE: No vehicular access to Panorama Park

GFI outlet

Lighting

Irrigation point of connection and water meter with booster pump

SIGNAL POINT
PARKS & EVENT INFRASTRUCTURE



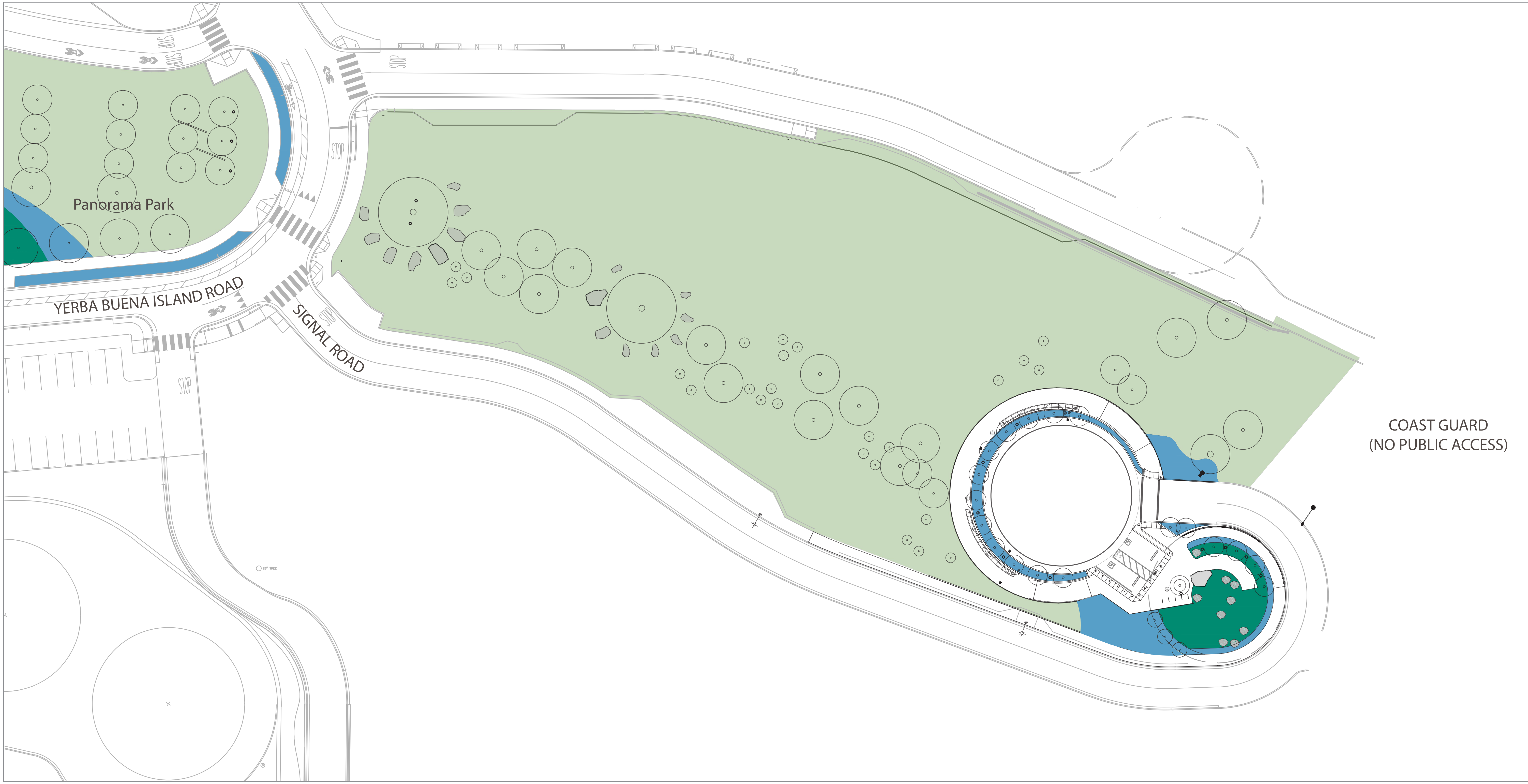
PANORAMA PARK
TREE & UNDERSTORY PLANTING

NOTE: Please refer to planting plans in landscape construction documents for plant species. See Appendix X.XX.

Native meadow

No mow lawn

Mixed shrubs, perennials, and grasses



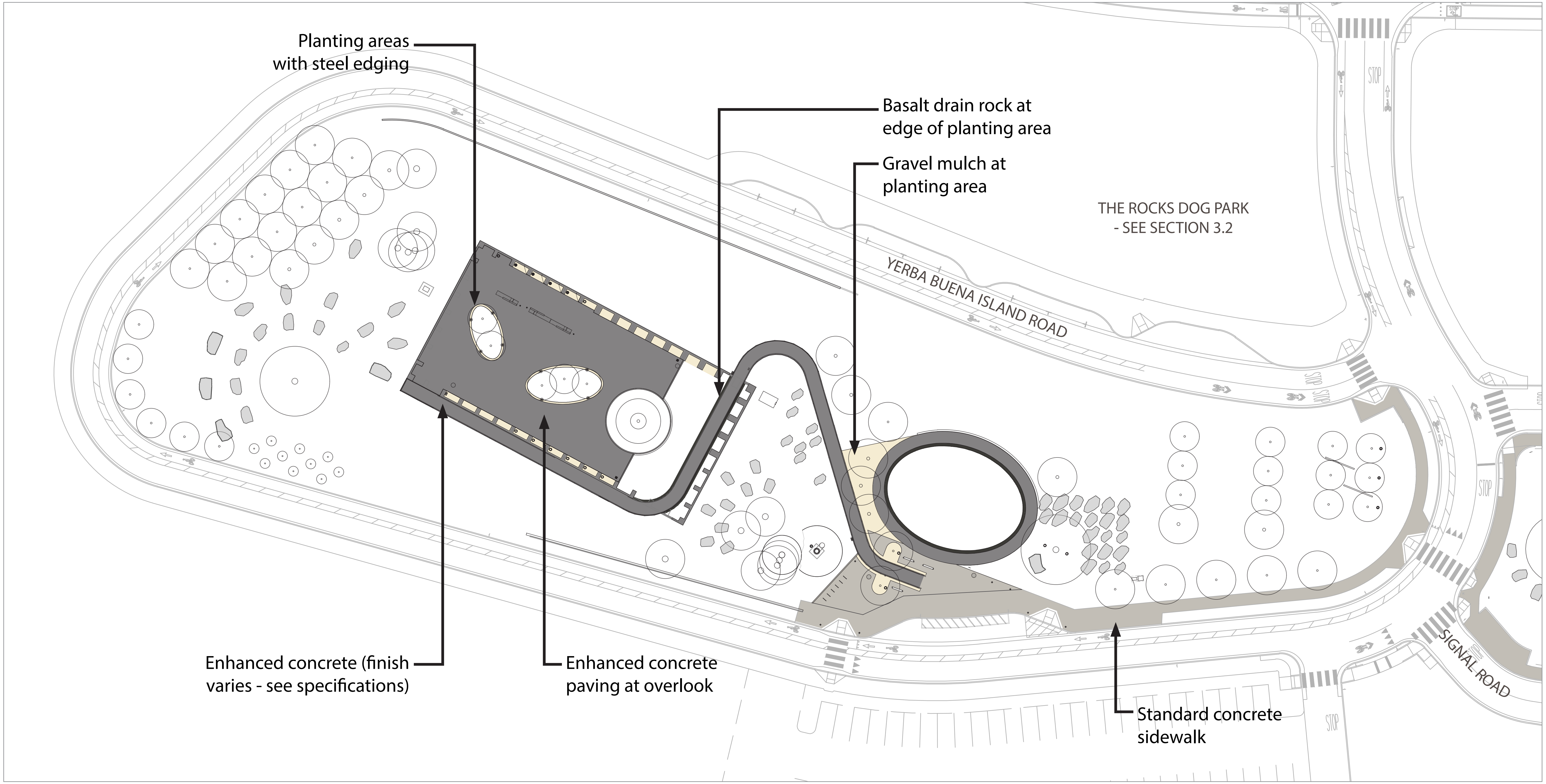
SIGNAL POINT
TREE & UNDERSTORY PLANTING

NOTE: Please refer to planting plans in landscape construction documents for plant species. See Appendix X.XX.

Native meadow

No mow lawn

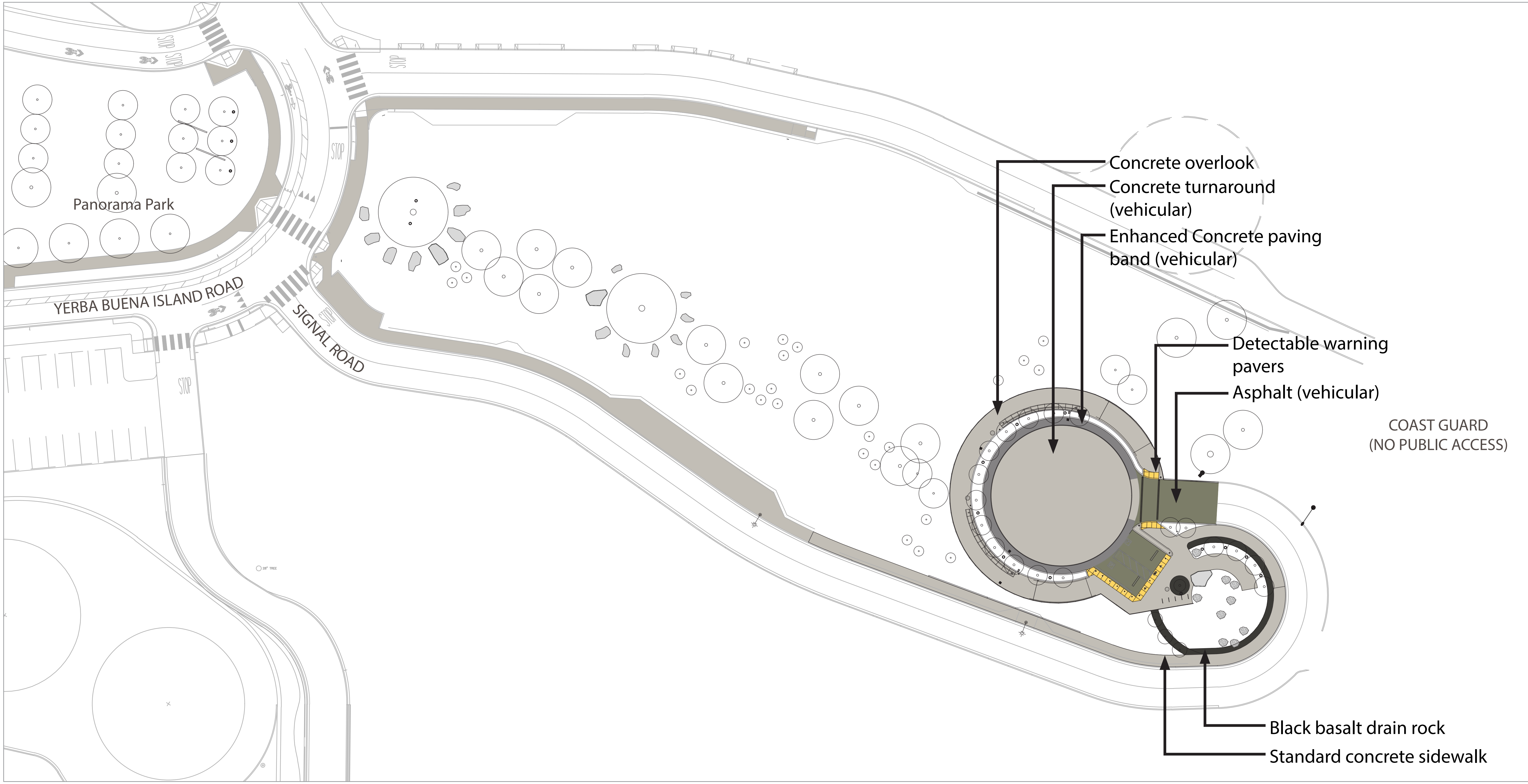
Mixed shrubs, perennials, and grasses



PANORAMA PARK
PAVING

NOTE: Please refer to materials plans and specifications in landscape construction documents. See Appendix X.XX.

Standard concrete	Gravel mulch
Enhanced concrete	Basalt drain rock



SIGNAL POINT PAVING

NOTE: Please refer to materials plans and specifications in landscape construction documents. See Appendix X.XX.

3.1.2 MANAGEMENT

Provide weekly management service to Panorama Park and Signal Point; tasks include:

- Weekly inspection of landscaping, irrigation, pavers, pathways and site furnishings
- Weekly inspection of gates, fence lines, water fountains and turf areas
- Management works with staff daily to assign tasks and schedule maintenance items
- Oversight of occasional small/medium events; safety, and accessibility, relationship to residential neighborhood, and habitat impacts and management.

3.1.3 ENGINEERING

Refer to frequency tables for all schedules related to Engineering services for Panorama Park and Signal Point; tasks by category are described below.

Utility Systems

- Lighting (see specifications for further information on light fixtures and parts)
    - Re-lamping should happen within a regularly scheduling lamping plan that is scheduled in accordance of the wattage hours of the light.
    - Bulb replacement should be done within a timely manner after the outage is reported to mitigate safety issues.
    - Set reminders to reset lighting time clocks to reset for daylight savings time
    - Secondary/decorative lighting should be inspected monthly during rounds as staff work through the park.
    - Handrail Lighting will need to be inspected to ensure ballasts are in proper working order. Inspect for signs of damage.
    - Bullet cast light bulbs will need to be inspected to ensure lights are not burnt out and in good working order.
    - Maintain the enclosures of remote drivers and dimming cabinet. During maintenance all wiring connections between luminaires and remote power supplies to be reviewed as well as automatic time-clock and operational control system.
    - Dimming level and re-adjustment of lighting scence setting per Specifications.

- Electrical
  See Engineering, System-wide Chapter.

- Storm Drainage
  See Engineering, System-wide Chapter.

Paving

Panorama Park and Signal Point feature concrete paving at both overlooks and on access walkways. Concrete types vary and include custom imprints, integral color, and various finishes. See drawings and specifications for further information on paving materials, color, type, finish, and manufacturer's maintenance recommendations. See frequency tables for inspection and maintenance schedules. Refer to Engineering, System-wide Chapter.

Site Furnishings and FFE

- Benches
    - Wood Furnishings (Ipe): Ipe is a durable, long lasting hardwood. Benches should be inspected regularly for graffiti and stain. Refer to the spec sheet regarding the brand of sealant or paint that is recommended for a particular species of wood on the picnic table or bench.
    - Graffiti removal can be dealt with through pressure washing and/or sanding. Note - sanding of Ipe requires protective gear because the sawdust is toxic to inhale.

- Mechanical Systems
    - See Engineering, System-wide Chapter.

3.1.4 LANDSCAPE

Planting design at Panorama Park and Signal Point is intended to mesh with the endemic plants of the island. The park planting design restores habitat while also creating memorable, more formal spaces that frame views of the Bay and integrate with historic structures on site. Planting areas include native meadows, pine groves, Oak woodland areas, and larger, more ornamental shrub planting along the edges of overlooks. Native planting areas include both seeded and planted material, with species such as sages, manzanita, monkey flower, wildflowers, various fescues, foothill stipa, ceanothus. Tree species include native California Buckeyes and Coast Live Oaks and Monterey Cypress. California natives are largely drought tolerant and do not require summer watering past the initial establishment period.

See specifications and planting plans for further information on tree varietals, plantings, irrigation specs and other fixtures. Refer to frequency tables for pruning and plant care schedules. See Section 2.6: Landscape in the System-wide Guidelines for planting maintenance requirements not described below.

<u>Understory Plant Care and Pruning:</u>

- No-Mow Turf (fescues): rake down in the winter for full growth in the spring and summer.

- Native Planted Slopes : Native plants seeded and planted on slopes do not require extensive maintenance. Removal of invasive plant material is the most important maintenance task in the early years of establishing native plant communities. Native plant areas which struggle to establish should be reseeded or replanted with native plants and infill planting can help to supplement all areas to more quickly establish the ecological communities. While native plants are drought tolerant, they may need supplemental watering during establishment to ensure they are successful. Native plant areas should be consistently reviewed to confirm establishment and identify invasive plants before they take over.

- Flowering plants: Ceanothus, California Poppies, Golden Yarrow, and other flowering plants require regular pruning throughout the growing season. This is done to harvest flowers, remove dead or diseased foliage or branches, and to create light penetration and airflow to the interior of the plant in order to increase bloom and overall plant health.

- Dymondia: Planted in a high use area at the Panorama Park overlook; take special care to ensure that planting is well maintained.
    - After establishment, Dymondia is drought-tolerant; however, it benefits from an occasional watering when weather is especially hot and dry.
    - Dymondia never needs mowing, but division will keep the stand vibrant and healthy if the plants eventually become overcrowded. Dymondia benefits from detailing to keep

3.1.5 JANITORIAL

See spec sheets for further information on site furnishings and maintenance recommendations for specific wood, metal fixtures and paint. Refer to frequency tables for pruning and plant care schedules. Features of note included in Panorama Park and Signal Point include the following:

Metal railings

- Painted galvanized steel railing

Site Furnishings

- Bench seating at overlooks
- Bike racks
- Boulders

3.1.6 SPECIAL FEATURES

Sculptures

Panorama Park has a large, stainless steel art piece, The Point of Infinity by Hiroshi Sugimoto. See Section 2.10 for more information regarding the public art on Treasure and Yerba Buena Islands. Specific information regarding the care and maintenance of this sculpture to be provided by SF Arts Commission.

Salvage Tanks/Overlooks – Concrete

- Pressure wash monthly
- Remove graffiti immediately – product recommendation is Elephant Snot.
- Exposed aggregate top-of-wall finish with rebar - epoxy coating and waterproofing sealant.

3.1.7 EVENT INFRASTRUCTURE

Panorama Park and Signal Point do not have the capacity to hold large events. For smaller events under 50 people, such as family or neighborhood gatherings, event power is located at the overlooks in both Panorama Park and Signal Point.

3.7 WATERFRONT PLAZA MAINTENANCE GUIDELINES

3.7.0 PARK OVERVIEW & DESIGN INTENT

Waterfront Plaza is found at the southwest corner of Treasure Island and will serve as the ferry operations terminal for the island to San Francisco. The 1.5-acre facility has significant views of the San Francisco Skyline and San Francisco Bay. The park is anticipated to have a high level of visitors throughout the year once the commuting operations from the island to San Francisco are in full swing.

The park is broken into 3 sections. Ferry Plaza which will serve as the future terminal for ferry operations. The plaza will include a future terminal building within a plaza that includes seating and planting. Bathroom facilities are in the southern end of the plaza which will include new public restrooms and lastly in the north are bio-filtration facilities, future arts plaza, and walkway connections to City Side Park.

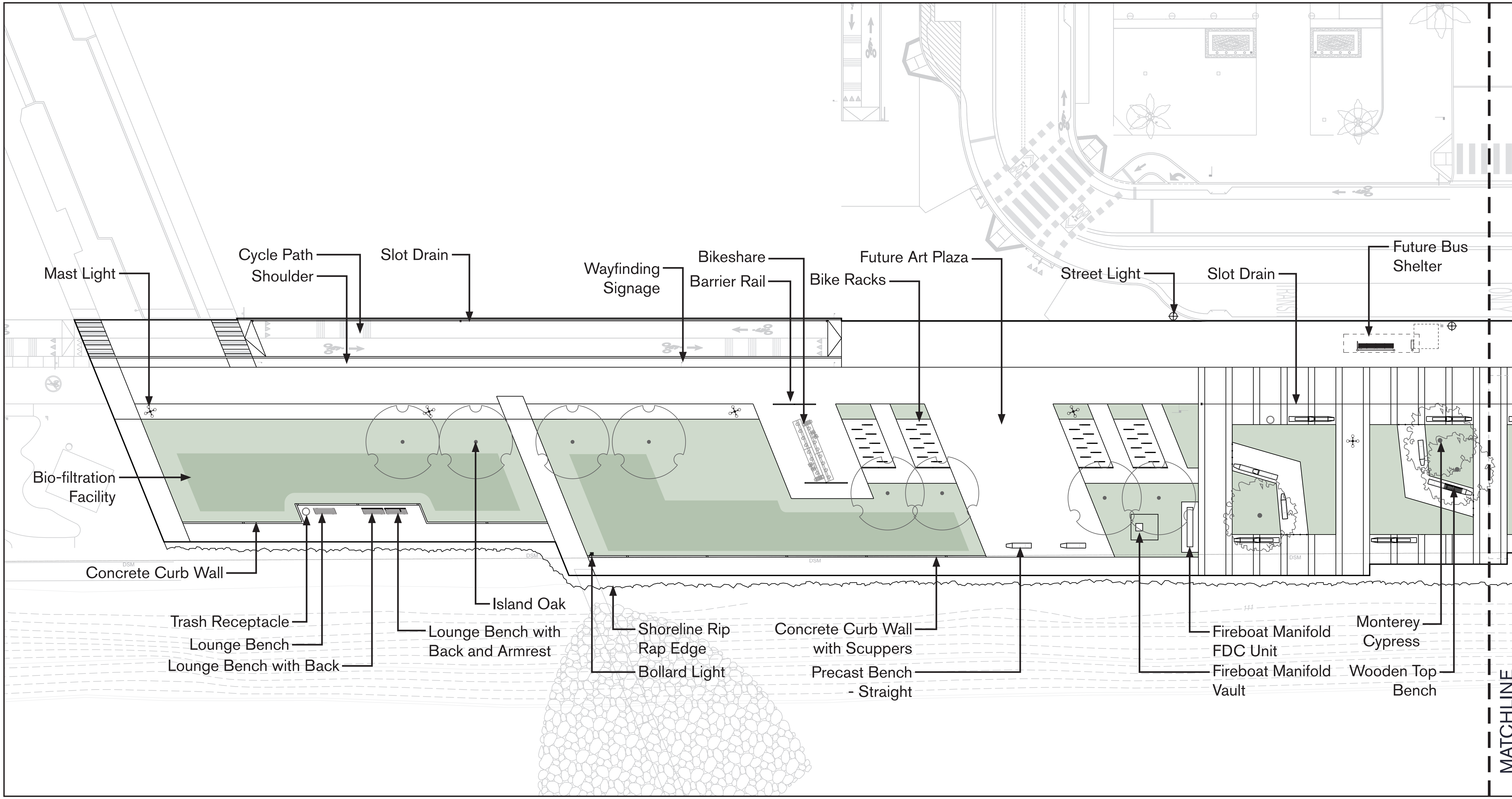
Figure 3.7.1: Waterfront Plaza location

3.7.1 LEVELS OF SERVICE

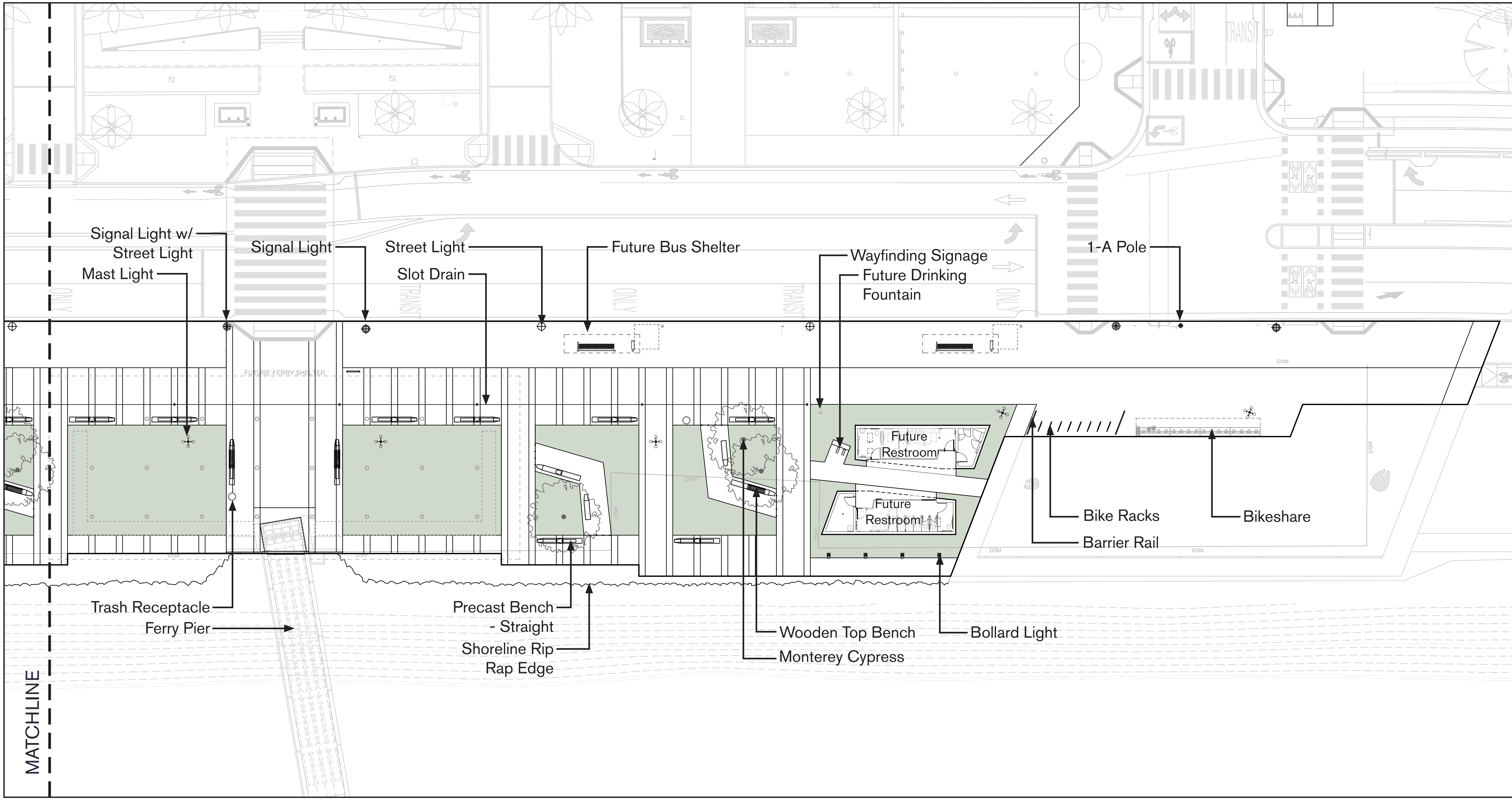
The Waterfront Plaza location is at a prominent location and services a significant responsibility as a gateway to the island it is anticipated that a high level of visitors will use the ferry service to access the island. Visitors of the island will come to the park and either walk to the house, connect to the island-wide bus service, or visit historic Building 1, Clipper Cove, and Causeway Park.

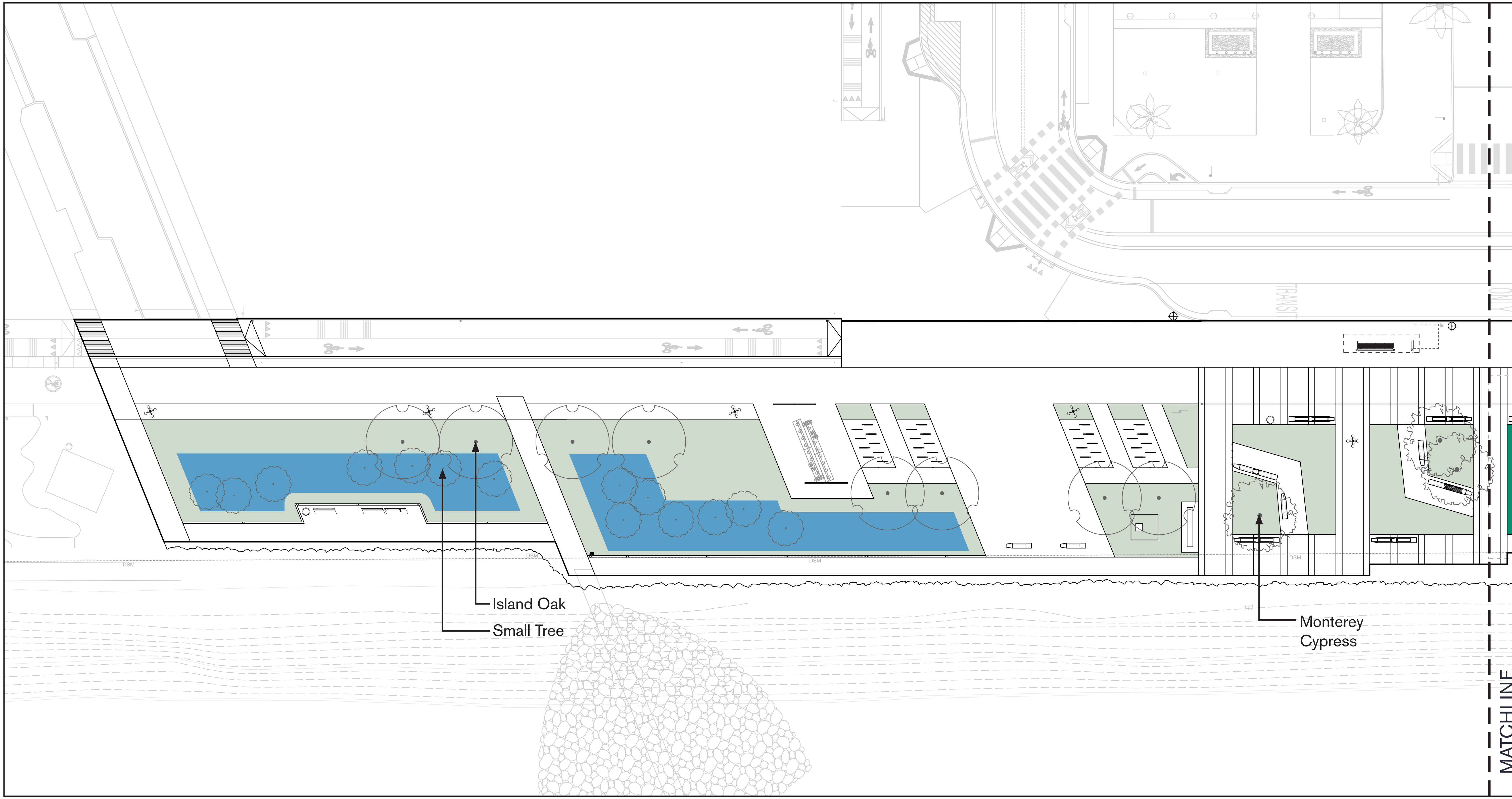
Other areas of the park consist of native and low-maintenance plantings and require minimum work to maintain. Many of the large planting areas of the site are not publicly accessible which requires less frequent maintenance. The large lawn areas within the plaza serve as an interim planting treatment and will be removed and replaced when the ferry building is installed.

This chapter is intended to provide information on park information on elements for Waterfront Plaza that are not described in System-wide Guidelines. For standard park elements. See System-wide Guidelines for maintenance requirements and further information on levels of service.



WATERFRONT PLAZA
SITE OVERVIEW

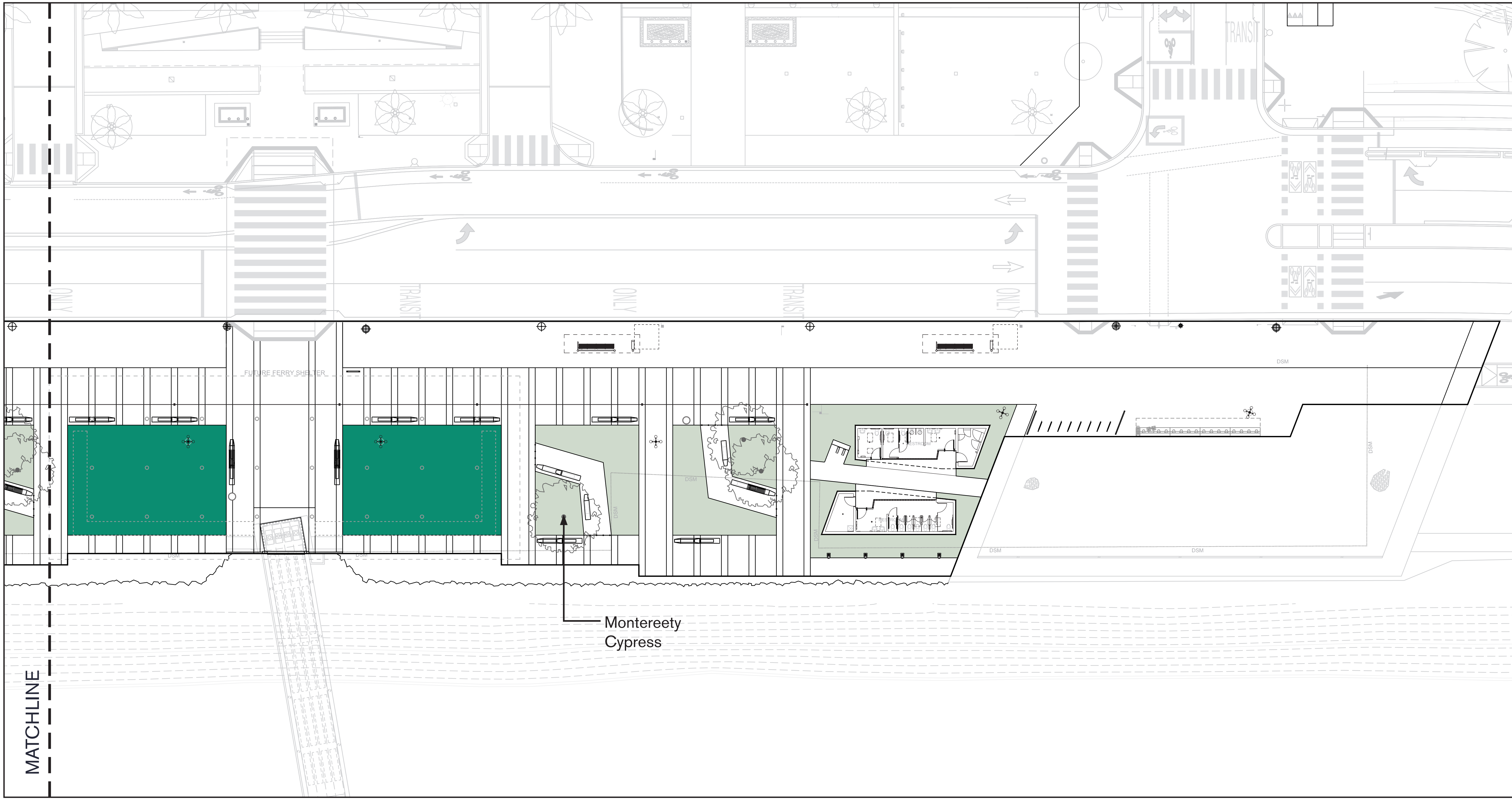

Signal Light w/
Street Light
Mast Light
Signal Light
Street Light
Slot Drain
Future Bus Shelter
Wayfinding Signage
Future Drinking
Fountain
1-A Pole
FUTURE FERRY SHELTER
Future
Restroom
Future
Restroom
Bike Racks
Barrier Rail
Bikeshare
Trash Receptacle
Ferry Pier
Precast Bench
- Straight
Shoreline Rip
Rap Edge
Wooden Top Bench
Monterey Cypress
Bollard Light
MATCHLINE
TRANSIT
ONLY



WATERFRONT PLAZA

TREE & UNDERSTORY PLANTING

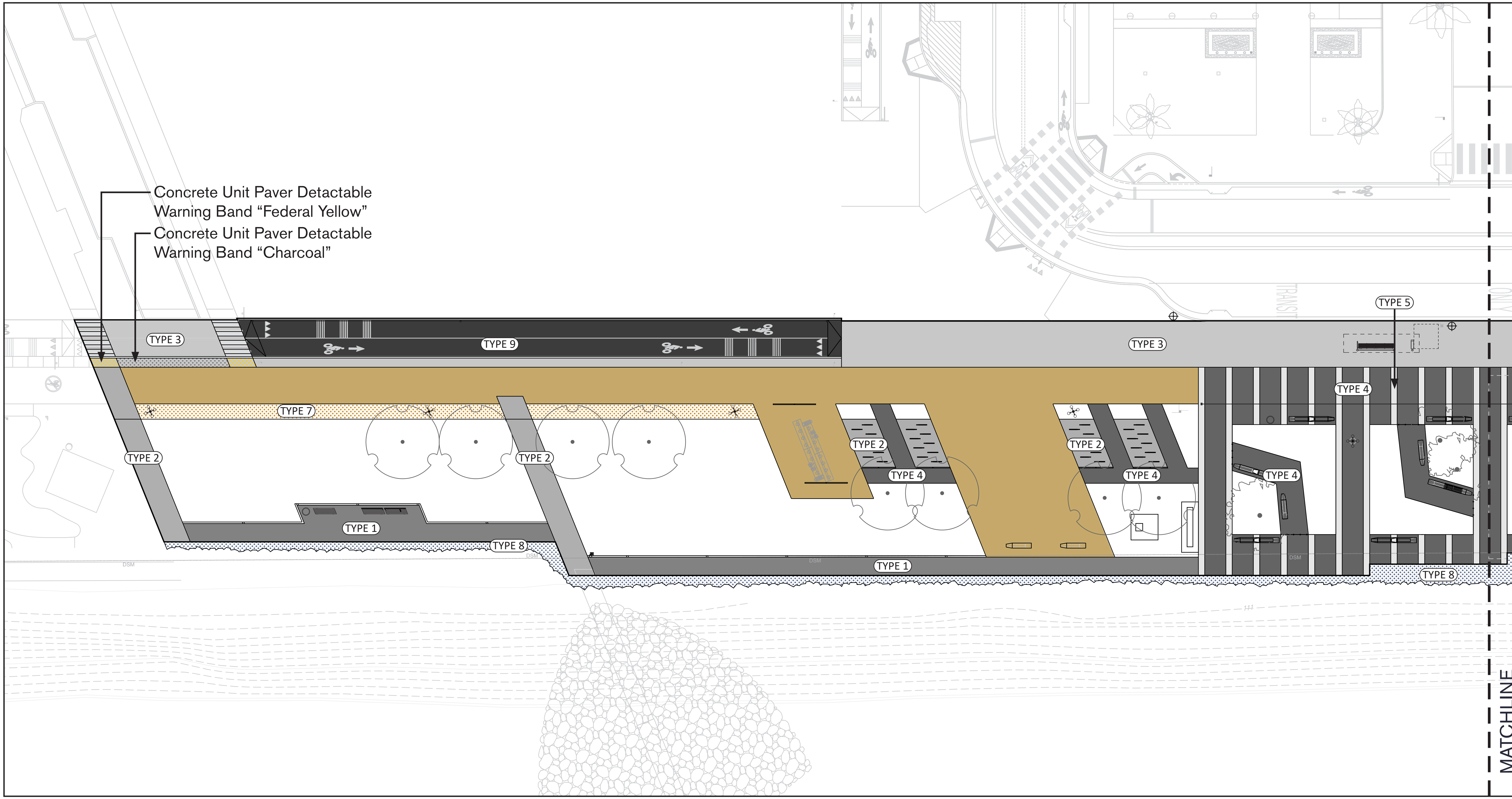
NOTE: Please refer to planting plans in landscape construction documents for plant species. See Appendix X.XX.



Interim Lawn

Mixed shrubs, perennials, and grasses

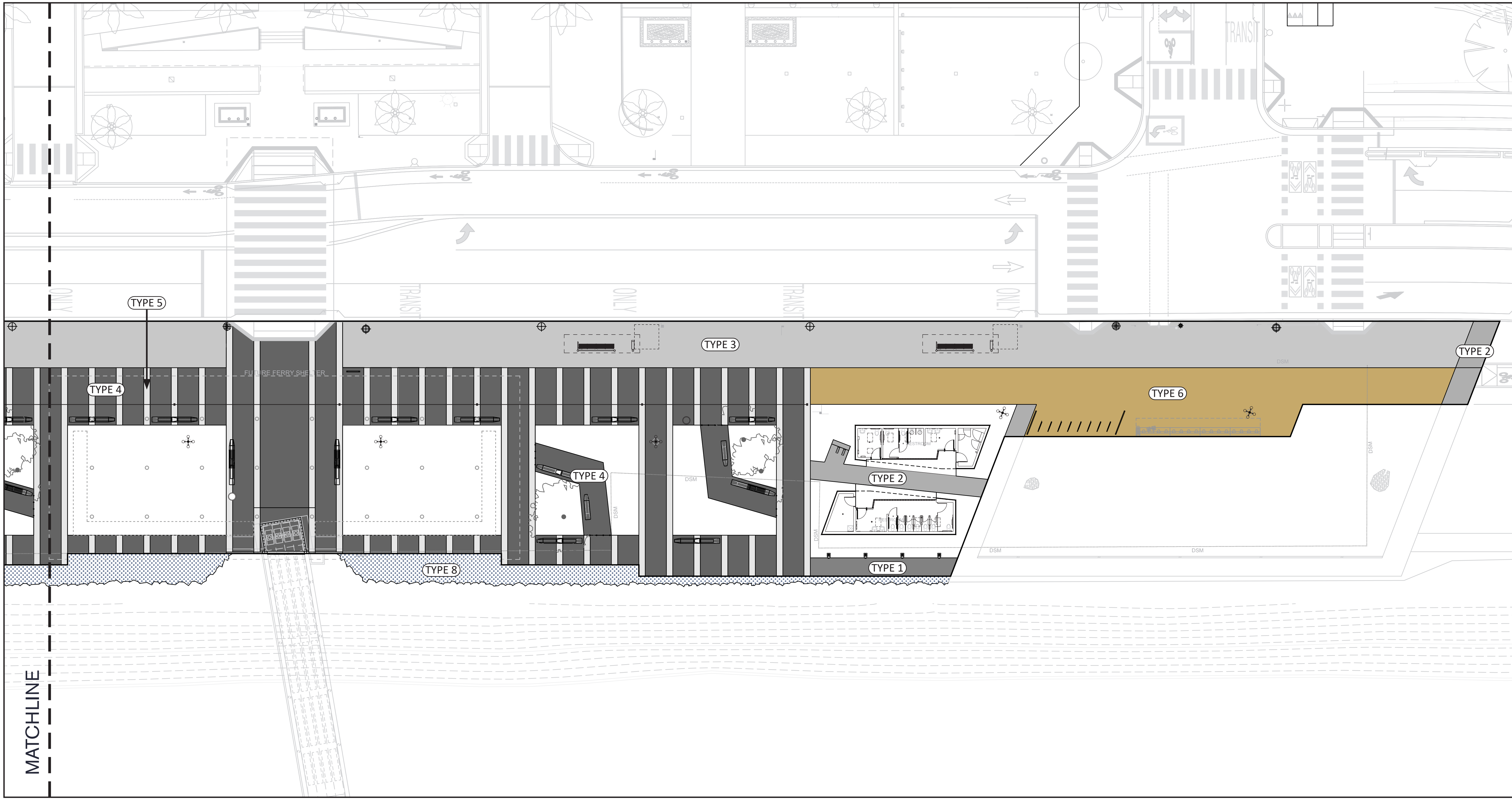
Bio-filtration shrubs, perennials, sedges, grasses



WATERFRONT PLAZA

PAVING

NOTE: Please refer to materials plans and specifications in landscape construction documents. See Appendix X.XX.



Type 1 Concrete- Medium Gray - Sandblast Finish

Type 2 Concrete - Light Gray - Sandblast Finish

Type 3 Concrete - Standard Gray - City Standard

Type 4 Concrete - Dark Gray - Heavy Sandblast Finish

Type 5 Concrete - Very Light Gray - Sandblast Finish

Type 6 Concrete - Palomino - Heavy Sandblast Finish

Type 7 - Reinforced GravelPave

Type 8 - Blue Shall Mulch

Type 9 - Asphalt

3.7.2 MANAGEMENT

Provide weekly management services including:

Weekly inspection of landscaping, site furnishings, water fountains, irrigation, and paving.

Weekly inspection of bio-filtration facilities to ensure no obstructions within the structures.

Weekly inspection of lawn area and provide weekly cutting.

Oversight of operations with the ferry service assures safety, and accessibility relationship to access the public bus system, access to island-wide trails, and residential areas.

3.7.3 ENGINEERING

Refer to frequency tables for all schedules related to Engineering service for Waterfront Plaza; tasks by category are described below.

Utility Systems

- Lighting (see specifications for further information on light fixtures and parts)
    - Re-lamping should happen with a regularly scheduled lamping plan that is scheduled in accordance with the wattage hours of the bulbs.
    - Bulb replacement should be done within a timely manner after the outage is reported to mitigate safety issues.
    - Inspect the operational timing of the timing clock to reset for daylight savings time.
    - Decorative bollard lighting should be inspected monthly during rounds of normal maintenance operations. Inspect bollards to ensure fixtures are not vandalized and oriented in the correct orientation.
    - Metal surfaces are powder coated with a color match to RAL #7024. Chips and scratches can be addressed by providing touch-up treatments through custom-blended paints.
- Electrical
    - See Engineering, System-wide Chapter.
    - The system controller for Waterfront Plaza is interconnected to electrical equipment located within the Causeway Park which includes power services for Ferry Terminal, and lighting services.
- Storm Drainage
    - Slot drains are to be inspected monthly to ensure no obstructions. Review all inline catch basins and remove all obstructions.
    - See Engineering, System-wide Chapter.
- Potable water and non-potable water systems
    - Monthly preventative maintenance of water fountains to clear drains, ensure proper water pressure, and remove any obstructions.

Paving

Waterfront Plaza paving systems consist of a variety of color and textured concrete surfaces. See drawings and specifications for further information on paving materials, color, type finish, and manufacturers' maintenance recommendations See frequency tables for inspection and maintenance schedules. Refer to Engineering, System-wide Chapter.

Site Furnishings

- General
    - All metal surfaces of fabrications of site furnishings for benches, and trash receptacles are powder coated by manufacturer color matching to RAL #7024. Painted metal surfaces are to be cleaned and repaired with custom blended paints matching to RAL color.

- All wood surfaces used in the fabrication of benches and trash receptacles use thermally modified ash provided with sealant. The choice of wood is for long durability and is sustainable. For future treatment as the wood ages on a yearly cycle inspect all wood surfaces and if needs to be cleaned and adjusted wood will need to be sanded, prepared with color stain, and resealed. The products to be used for the treatment of wood is from Messmer's Inc. Products include:
- Messmer's UB Plus – Deck Stain – Natural Color

- Precast Benches with Wood Topper
    - Precast Concrete with custom metal and wood toppers.
    - Graffiti removal can be dealt with through pressure washing.

- Catalog Benches and Trash Receptacles
    - Prefabricated of metal and wood. The color for metal treatment (Dusk Gray) is similar to the standardized RAL color. The selection of the manufacturer's standard color is a proximity color match.

- Bicycle Racks and Barrier Rails
    - Fabricated of stainless steel.
    - Maintenance to involve cleaning and removing any surface rusting.

3.7.4 LANDSCAPE

The planting design at Waterfront Plaza is intended to mesh with the endemic plants of the island. The park planting design restores habitat while also creating memorable, more formal spaces that frame views of the Bay. Planting areas include lawns and large bio-filtration plantings. Within the plantings are plantings of tree species of Island Oaks and Monterey Cypress that frame views of San Francisco and San Francisco Bay.

See specifications and planting plans for further information on trees, plantings, irrigation specifications, and other fixtures. Refer to frequency tables for pruning and plant care schedules. See Section 2.6: Landscape in the System-wide Guidelines for planting maintenance requirements not described below.

Understory Plant Care and Pruning:

- No-Mow Turf (fescues): rake down in the winter for full growth in the spring and summer.
- Manicured Lawn: The lawn area located center of the Ferry Plaza is a temporary lawn that should be kept clean and cut regularly.
- Flowering and Perennial plants: Ribes and salvia other flowering plants require regular pruning throughout the growing season. This is done to remove dead or diseased foliage or branches and create light penetration and airflow to the interior of the plant in order to increase bloom and overall plant health.
- Ornamental grasses, sedges, and rushes are to be pruned yearly to rejuvenate plants for the next growing season.

Irrigation Controller Warranty:

See System-wide guidelines and Specifications for cut sheets for irrigation parts and controllers. The location of the point of connection and controller operations is interconnected to Causeway Park.

3.7.5 JANITORIAL

See spec sheets for further information on site furnishings and maintenance recommendations for specific wood and metal fixtures. Refer to frequency tables for pruning and plant care schedules. Features of note included in Waterfront Plaza include the following:

<u>Metal railings</u>

- Stainless steel railing

<u>Site Furnishings</u>

- Bench seating
- Bike racks
- Trash Receptacles
- Boulders
- Directional Signage

3.7.6 SPECIAL FEATURES

<u>Sculpture Plaza</u>

In the near future, within a large location in the northern section of the park is an area dedicated to future sculpture. At that time the area could be reorganized to accommodate the sculpture.

3.3 WILLOW BRIDGE PARK MAINTENANCE GUIDELINES

3.3.0 PARK OVERVIEW & DESIGN INTENT

Willow Bridge Park is part of the centralized stormwater treatment system, cleaning stormwater runoff from the Yerba Buena Island streets and the future eastern residential parcels. The site sits at the base of the Bay Bridge and is also a public open space featuring a pedestrian path, seating and native habitat planting. A planted swale directs water through the site to the various stormwater bio-treatment areas. A pedestrian path weaves through the basins and over a series of culverts.

Ecologists and the San Francisco Department of the Environment advised on the planting palette at Buckeye Grove. The palette includes upland plants (outside of the stormwater bio-treatment areas) and plants that can handle periodic inundation within the ponding areas of the treatment areas. The plants are all local natives and were mostly contact grown by the Literacy for Ecological Justice native plant nursery on Treasure Island.

Figure 3.3.1: Willow Bridge Park location

3.3.1 LEVELS OF SERVICE

The San Francisco Public Utilities Commission sets requirements for the maintenance of stormwater treatment infrastructure. See the Stormwater Control Plan for more information on maintenance and annual reporting requirements.

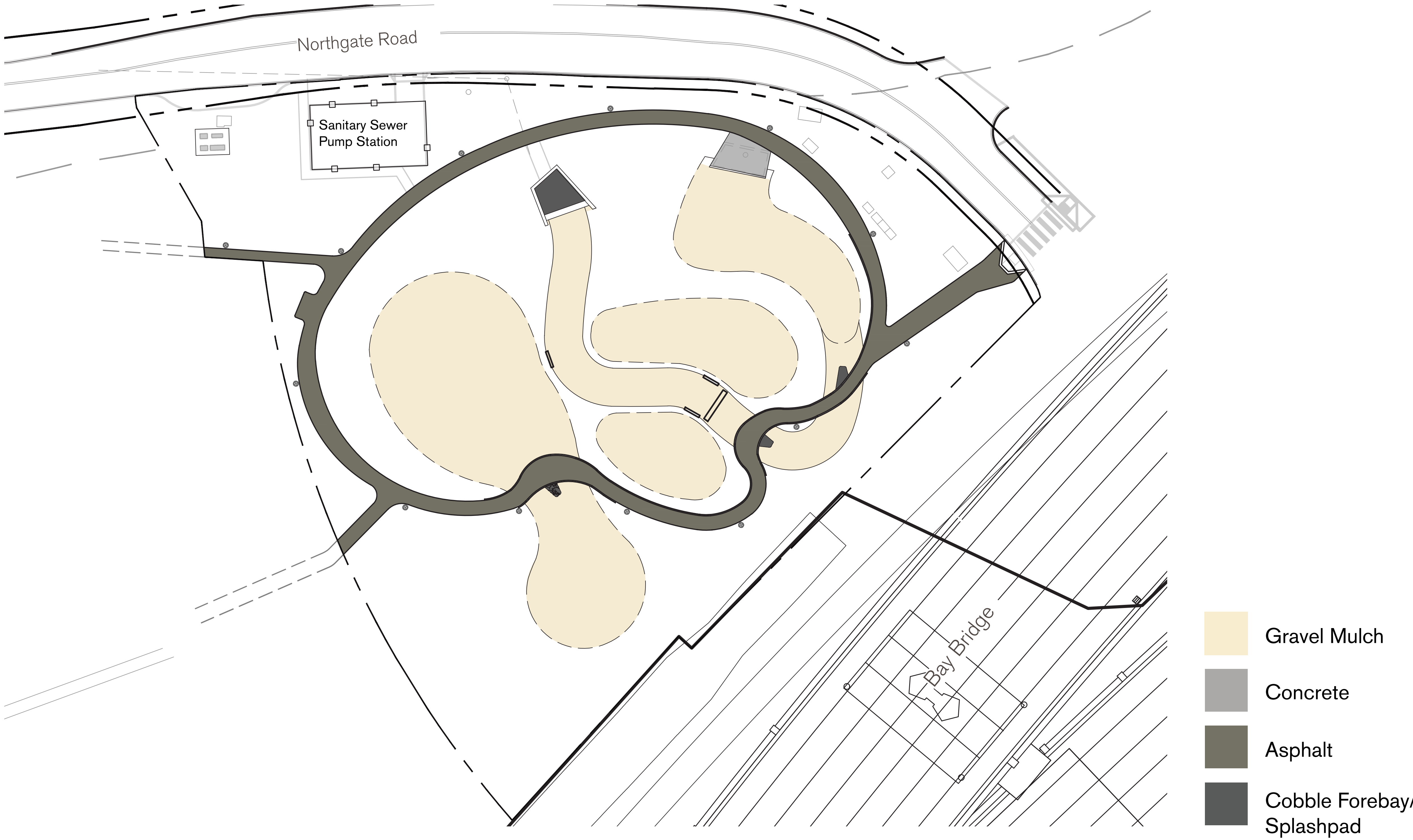
Willow Bridge Park is intended to be a low-maintenance native California landscape.

WILLOW BRIDGE PARK
SITE OVERVIEW

WILLOW BRIDGE PARK

TREE & UNDERSTORY PLANTING

NOTE: Please refer to planting plans in landscape construction documents for plant species. See Appendix X.XX.



WILLOW BRIDGE PARK
PAVING

NOTE: Please refer to materials plans and specifications in landscape construction documents. See Appendix X.XX.

WILLOW BRIDGE PARK
INFRASTRUCTURE

NOTE: Please refer to materials plans and specifications in landscape construction documents. See Appendix X.XX.

* Lighting

* Irrigation point of connection and water meter

3.3.2 MANAGEMENT

Provide weekly management service to Willow Bridge Park tasks include:

- Weekly inspection of landscaping, irrigation, paving and site furnishings
- Weekly inspection of gates, fence lines, water fountains
- Management works with staff daily to assign tasks and schedule maintenance items

3.3.3 ENGINEERING

Refer to frequency tables for all schedules related to Engineering services for Willow Bridge Park; tasks by category are described below.

Stormwater Treatment System

- Adjustable Weirs: The stormwater is distributed from the forebay through a planted swale, over concrete weirs into the bio-treatment areas on the site. The weirs are designed with an attached steel to be adjustable to ensure even distribution of water in case of future settling. See the Stormwater Control Plan and landscape construction documents for more details.
- See the Stormwater Control Plan for maintenance and annual reporting requirements.

Utility Systems

- Lighting *(see specifications for further information on light fixtures and parts).*

- Electrical
  See *Engineering, System-wide Chapter.*

- Irrigation system
  - Irrigation of the upland planting is intended for establishment only.

  See *Engineering, System-wide Chapter.*

Paving
Willow Bridge Park includes asphalt paving. See drawings and specifications for further information on paving materials, color, type, finish, and manufacturer's maintenance recommendations. Refer to *Engineering, System-wide Chapter.*

Site Furnishings and FFE

- Benches
  - Wood Furnishings: The wood furnishings are intended to weather and do not require reapplication of oils or seals to maintain their finish.
  - Graffiti removal can be dealt with through pressure washing and/or sanding.

- Mechanical Systems
  - See *Engineering, System-wide Chapter.*

3.3.4 LANDSCAPE

The palette is designed for bird and pollinator habitat and is intended to blend with the adjacent trails and Habitat Management Plan areas. California natives are largely drought tolerant and do not require summer watering past the initial establishment period. The plants within the stormwater biotreatment areas are generally higher water use and will require continued irrigation during the dry season.

The landscape was originally planted with a wide-variety of species with the intent that species that are successful can replace those that do not thrive on the site, whether by natural spreading or through replacement by the landscape maintenance team.

See specifications and planting plans for further information on tree varietals, plantings, irrigation specs and other fixtures. See *Section 2.6: Landscape* in the *System-wide Guidelines* for planting maintenance requirements not described below.

<u>Understory Plant Care and Pruning:</u>

- Flowering plants: Ceanothus, California poppies, yarrow, monkey flower, saliva and other flowering plants require regular pruning throughout the growing season. This is done to harvest flowers, remove dead or diseased foliage or branches, and to create light penetration and airflow to the interior of the plant in order to increase bloom and overall plant health.

<u>Irrigation Controller Warranty</u>
See System-wide guidelines and Specifications for cut sheets for irrigation parts and controllers.

3.3.5 JANITORIAL

Features of note included in Willow Bridge Park include the following:

<u>Site Furnishings</u>
- Bench seating: spot clean as needed.

3.2 THE ROCKS DOG PARK MAINTENANCE GUIDELINES

3.2.0 PARK OVERVIEW & DESIGN INTENT

Terraced into the steep slope between Macalla Road and Yerba Buena Road and adjacent to Infinity Point, The Rocks Dog Park will provide a fenced, off-leash area for the island's resident canines. This park is a social space for both dogs and their owners, and includes seating areas for people to gather while their dogs exercise and explore. The dog park serves the adjacent residents of Yerba Buena Island, but is part of the public park network and open to all

The dog park is intended to blend with the overall naturalistic character of Yerba Buena Island using salvaged native rock, reclaimed eucalyptus wood and native plants. The upper area of the dog park is accessible from Yerba Buena Road and a stair or sloped walkway leads visitors down to a lower level. Seating and rocks are tucked into the hillside providing a comfortable sense of enclosure for the park.

Figure 3.2.1: The Rocks Dog Park location

The dog park is divided into a small gathering space and a long dog run. The small social space is a concrete area for dogs to play around and over an embedded "rock scramble." The rock scramble, built of salvaged greywacke boulders found during the excavation of infrastructure projects on Yerba Buena Island, frames seating areas where dog owners can gather. The dog run is 120 feet long by 30 feet wide for more boisterous running and ball catching. A series of rock piles within the dog run divide the space into smaller 'rooms' and give dogs and people an opportunity to explore.

3.2.1 LEVELS OF SERVICE

Dog parks require a high level of service to maintain a clean and odor-free environment. Areas that are frequent soiled with dog waste should be assessed daily. The materials within the dog park fence enclosure are intended to be durable and easy to clean.

Carefully monitor the health of plants and trees within the dog park for any stress due to excess dog waste. The planting surrounding the park consists of low maintenance native habitat planting and do not require a high level of service.

THE ROCKS DOG PARK
SITE OVERVIEW

THE ROCKS DOG PARK

TREE & UNDERSTORY PLANTING

NOTE: Please refer to planting plans in landscape construction documents for plant species. See Appendix X.XX.

Native meadow

Mixed shrubs, perennials, and grasses

THE ROCKS DOG PARK

PAVING

NOTE: Please refer to materials plans and specifications in landscape construction documents. See Appendix X.XX.

3.2.2 MANAGEMENT

Provide weekly management service to The Rocks Dog Park tasks include:

- Weekly inspection of landscaping, irrigation, paving and site furnishings
- Weekly inspection of gates, fence lines, water fountains
- Management works with staff daily to assign tasks and schedule maintenance items

3.2.3 ENGINEERING

Refer to frequency tables for all schedules related to Engineering services for Hilltop Park; tasks by category are described below.

Utility Systems

- Lighting *(see specifications for further information on light fixtures and parts)*
  - Re-lamping should happen within a regularly scheduling lamping plan that is scheduled in accordance of the wattage hours of the light.
  - Bulb replacement should be done within a timely manner after the outage is reported to mitigate safety issues.
  - Set reminders to reset lighting time clocks to reset for daylight savings time

- Electrical
  See *Engineering, System-wide Chapter.*

- Storm Drainage
  See *Engineering, System-wide Chapter.*

- Potable water & non-potable water systems
  - Monthly preventative maintenance of water fountains to clear drains, filters and change kits as needed
  - Inspect water fountains for debris, mulch, dirt, pebbles, sand other obstructions

Paving
The Rocks Dog Park features concrete paving at the entry, stairs, sloped walkway and lower gathering space. The concrete is natural gray with a broom finish. The dog run area is crushed stone which will need to be washed and periodically redistributed or relenished with additional crushed stone. See drawings and specifications for further information on paving materials, color, type, finish, and manufacturer's maintenance recommendations. Refer to *Engineering, System-wide Chapter.*

Site Furnishings and FFE

- Benches
  - Wood Furnishings (Eucalyptus): The bench backs are made of Eucalyptus wood from trees that were removed from Yerba Buena Island. Benches should be inspected regularly for graffiti. The intent is for the benches to have a natural patina without finish or paint.
  - Graffiti removal can be dealt with through pressure washing and/or sanding.
- Fencing
  - The intent is for the fence to have a natural redwood patina.
  - The gate should be regularly monitored to ensure the gate is latching properly.

- Mechanical Systems
  - See *Engineering, System-wide Chapter.*

3.2.4 LANDSCAPE

Heavy use by dogs makes it difficult for plants to establish. Minimal understory planting is planned within the fenced enclosure of the Dog Park. Trees are proposed to create shade and fit with the larger YBI landscape, but are planted within protected boulder areas to help avoid damage from dogs. YBI native plants surround the Dog Park and blend with the adjacent trails and Habitat Management Plan areas. California natives are largely drought tolerant and do not require summer watering past the initial establishment period.

See specifications and planting plans for further information on tree varietals, plantings, irrigation specs and other fixtures. See *Section 2.6: Landscape* in the *System-wide Guidelines* for planting maintenance requirements not described below.

Understory Plant Care and Pruning:

- Flowering plants: Ceanothus, California poppies, yarrow, monkey flower, saliva and other flowering plants require regular pruning throughout the growing season. This is done to harvest flowers, remove dead or diseased foliage or branches, and to create light penetration and airflow to the interior of the plant in order to increase bloom and overall plant health.

- The steep slopes surrounding the Dog Park will require consistent monitoring during the rainy season to address drainage and erosion. Periodic repair and erosion control measures may be necessary. Maintaining the health of planting on these slopes is a joint effort between Engineering and Landscaping.

Irrigation Controller Warranty
See System-wide guidelines and Specifications for cut sheets for irrigation parts and controllers.

3.2.5 JANITORIAL

The Dog Park requires daily janitorial service to remove waste, clean the paving areas, empty the trash and restock the dog waste bag dispenser. Hose and spot clean around trash receptacles, benches, boulders, gates and corners of the parks.

Features of note included in the Dog Park include the following:

Fencing
- Redwood and Galvanized steel railing

Custom Site Furnishings
- Bench seating at overlooks
- Bike racks
- Boulders

Other Site Furnishings
- Dog Waste Bag Dispenser
- Trash Cans
- Drinking Fountain

Treasure Island Development Authority
Scope and Frequency

Included Areas are:

Vista Point
Landing Park
Hilltop Park (Signal and Panorama Park
Dog Park
Stormwater Garden East and West
Causeway Improvement
Seven Seas
Macalla / Northgate RD

Lawn Care	Daily	Weekly	Bi-weekly	Monthly	X/year	As needed	Comments
Perennial bed							
Leaf litter removal	X						
Neat appearance	X						
Trash removal	X						
Inspect lawn	X						
Mow and clipping removal		X					
Invasives control (hand pulling)		X				X	hydroseed consisting of mix of native perennials, grasses, and annuals
Pest control							
a) monitor		X					
b) treat						X	Herbicide use must conform with PCA Recs
Mow		X					
Edge		X					
Fertilizer				X			
Mulch replenishment				X			
Aeration					4		
Remove and replace dead plants						X	
Dethatch						X	
Overseed turf after events						X	

Tree/shrub care	Daily	Weekly	Bi-weekly	Monthly	X/year	As needed	Comments
Tree							
Shrubbery							
Leaf litter removal	X						
Neat appearance	X						
Trash removal	X						
Inspect shrubs	X						
Invasives control (hand pulling)		X				X	
Pest control							
a) monitor		X					
b) Treat trees						X	Herbicide use must conform with PCA Recs
Fertilizer				X			
Mulch replenishment				X			
Pruning - size					4	X	
Pruning - tree roots						X	
Raise plants that have settled						X	

Paved Areas	Daily	Weekly	Bi-weekly	Monthly	X/year	As needed	Comments
Concrete							
Gravel							
Stairway							
Litter leaf removal	X						
Neat appearance	X						
Trash removal	X						
Invasives control (hand pulling)		X				X	

Dog play area	Daily	Weekly	Bi-weekly	Monthly	X/year	As needed	Comments
Dog play area							
Wash boulders and dog play area	X						
Litter leaf removal	X						
Trash removal	X						
Neat appearance	X						
Invasives control (hand pulling)		X					

Specialized equipment and infrastructure	Daily	Weekly	Bi-weekly	Monthly	X/year	As needed	Comments
Empty trash cans	X						
Wash drinking fountain	X						
Wash benches	X						
Wash trash cans		X					

Irrigation systems	Daily	Weekly	Bi-weekly	Monthly	X/year	As needed	Comments
Irrigation programing	X					X	
Irrigation check	X						
Irrigation inspection					1		
Clean valve boxes					1		
Irrigation report					1		To include water usage information
Replace controller batteries					1		

Special considerations	Daily	Weekly	Bi-weekly	Monthly	X/year	As needed	Comments
Site reviews/inspections		2X					
Soil moisture checks			X				
Landscape maintenance report				X			
Herbicide/pesticide application report				X			As needed
Irrigation report					1		To include water usage information
Vista Point/Pier 2-E		X					

[RUBICON ENTERPRISES FIRST AMENDMENT TO PROFESSIONAL SERVICE AGREEMENT]

Resolution Approving and Authorizing the Execution of a First Amendment to the Professional Services Agreement between the Treasure Island Development Authority and Rubicon Enterprises, Inc., a California nonprofit public benefit corporation, to increase the annual Scope of Services and not to exceed Contract Amount for Fiscal Year 2024-2025.

WHEREAS, Former Naval Station Treasure Island is a military base located on Treasure Island and Yerba Buena Island (together, the "Base"), which is currently owned by the United States of America, acting by and through the Department of the Navy; and,

WHEREAS, The Base was selected for closure and disposition by the Base Realignment and Closure Commission in 1993, acting under Public Law 101-510, and its subsequent amendments; and,

WHEREAS, Under the Treasure Island Conversion Act of 1997, which amended Section 33492.5 of the California Health and Safety Code and added Section 2.1 to Chapter 1333 of the Statutes of 1968 (the “Act”), the California Legislature (i) designated the Authority as a redevelopment agency under California redevelopment law with authority over the Base upon approval of the City’s Board of Supervisors, and (ii) with respect to those portions of the Base which are subject to Tidelands Trust, vested in the Authority the authority to administer the public trust for commerce, navigation and fisheries as to such property; and,

WHEREAS, The Board of Supervisors approved the designation of the Authority as a redevelopment agency for Treasure Island in 1997; and,

WHEREAS, On January 24, 2012, the Board of Supervisors rescinded designation of the Authority as the redevelopment agency for Treasure Island under California Community Redevelopment Law in Resolution No. 11-12; and such rescission does not affect Authority's status as the Local Reuse Authority for Treasure Island or the Tidelands Trust trustee for the portions of Treasure Island subject to the Tidelands Trust, or any of the other powers or authority; and,

WHEREAS, The Authority has negotiated and endorsed a proposed Base Closure Homeless Assistance Agreement and Option to Lease Real Property (the “Homeless Assistance Agreement”) with One Treasure Island ("One TI"), a consortium of California nonprofit corporations organized to utilize the resources of the Base to help fill gaps in the continuum of care for homeless persons and families, pursuant to the Base Closure Community Redevelopment and Homeless Assistance Act of 1994; and,

WHEREAS, In 2011, the Authority and One TI executed the Amended and Restated Base Closure Homeless Assistance Agreement (“Amended Homeless Assistance Agreement”) and approved by the Board of Supervisors in Resolution no. 243-11; and,

WHEREAS, Within the Amended Homeless Assistance Agreement is the Jobs and Equal Opportunity Program (“JEOP”) which describes job training and employment opportunities for One TI’s member organizations for formerly homeless and economically disadvantaged San Franciscans; and,

WHEREAS, The Authority wishes to support One TI pursuant to the Base Closure Community Redevelopment, Homeless Assistance Act of 1994, and Amended Homeless Assistance Agreement; and,

WHEREAS, Rubicon Enterprises, Inc., a California nonprofit public benefit corporation (“Rubicon”) and a member organization of ONE TI, and Rubicon has represented and warranted that it is qualified to perform the landscape maintenance services required by the Authority as set forth under the proposed contract; and, WHEREAS, The Authority's purchasing policy and procedures authorize non-competitive negotiations for contracts in furtherance of the Homeless Assistance Agreement; and,

WHEREAS, For over twenty-nine years, Rubicon has been providing landscape services to Treasure and Yerba Buena Islands through its Landscape Services Division, and the current contract expires June 30, 2025; and,

WHEREAS, On June 12, 2024, the Authority Board of Directors approved a Professional Services Agreement (the "Agreement") with Rubicon, to provide Landscape Maintenance Services on Treasure and Yerba Buena Islands, along with natural resources management services on Yerba Buena Island and as needed landscape services to newly accepted parks and open spaces on Treasure and Yerba Buena Islands, however, the Agreement did not provide funding for scheduled daily/routine Landscape Maintenance Services to these newly accepted parks and open spaces, and did not include parks and open spaces that were approved by the Authority Board in May and June 2024, namely Treasure Island Landing, also called Waterfront Plaza and Causeway Park, as Authority staff anticipated coming back to the Authority Board in the beginning of the new fiscal year to provide a comprehensive landscape maintenance service program for all of the newly facilities; and,

WHEREAS, Under the existing contract, Rubicon provides landscape services on Treasure and Yerba Buena Islands for a month to month term commencing on July 1, 2024 through June 30, 2025, for a total not to exceed amount of $1,850,000.00--- Schedule of payments include: (i) Routine and adjunct services are for five days a week for an amount not to exceed $122,000.00 per month totaling $1,464,000.00; (ii) $2,500.00 per month totaling $30,000.00 for landscape services at Vista Point and Pier E2; and (iii) amount not to exceed

$356,000.00 total, payable upon monthly invoice, for defined natural resources management services on Yerba Buena Island; and,

WHEREAS, Project Staff and Rubicon have negotiated a First Amendment to the Professional Services Agreement (the "First Amendment") commencing on October 1, 2024 to increases the annual Scope of Services to address these new parks and open spaces and includes a routine and adjunct landscape maintenance services schedule that is for five days a week for maintenance of newly accepted Panorama / Signal Point Parks (Hilltop Parks), The Rocks Dog Park (YBI Dog Park), Causeway Park, and Treasure Island Landing Park, along with Stormwater Garden West and Stormwater Garden East, and increases the level of funding by $326,250.00 to support these new areas coming online due to completed development activity, and increases funding in the natural resources management services on Yerba Buena Island to $428,500.00; and,

WHEREAS, Compensation for these increased services shall not exceed $2,248,750.00 for FY 2024-2025 - Schedule of payments include: (i) Routine and adjunct services are for five days a week for an amount not to exceed $122,000.00 per month commencing on July 1, 2024 through June 30, 2025 totaling $1,464,000.00; (ii) $2,500.00 per month per month commencing on July 1, 2024 through June 30, 2025 totaling $30,000.00 for landscape services at Vista Point and Pier E2; (iii) Landscape services in the TI/YBI Parks Systems and Yerba Buena Island stormwater collection gardens for five days a week for an amount not to exceed $36,250.00 per month commencing on October 1, 2024 through June 30, 2025 totaling $326,250.00; and (iv) amount not to exceed $428,500.00, payable upon monthly invoice, for defined natural resources management services on Yerba Buena Island; now, therefore be it

RESOLVED, That the Authority hereby authorizes the Treasure Island Director or his designee to execute the First Amendment to the Professional Services Agreement (the "First Amendment") with Rubicon effective October 1, 2024, and expiring on June 30, 2025, for an amount not to exceed Two Million Two Hundred Forty-Eight Thousand Seven Hundred and Fifty Dollars ($2,248,750.00), in substantially the form attached hereto as Exhibit A; and be it

FURTHER RESOLVED, That the Board of Directors hereby authorizes the Treasure Island Director or his designee to enter into any additions, amendments or other modifications to the First Amendment that the Treasure Island Director or his designee determines in consultation with the City Attorney are in the best interests of the Authority, that do not materially increase the obligations or liabilities of the Authority, that do not materially reduce the rights of the Authority, and are necessary or advisable to complete the preparation and approval of the First Amendment, such determination to be conclusively evidenced by the execution and delivery by the Treasure Island Director or his designee of the documents and any amendments thereto.

CERTIFICATE OF SECRETARY

I hereby certify that I am the duly elected Secretary of the Treasure Island Development Authority, a California nonprofit public benefit corporation, and that the above Resolution was duly adopted and approved by the Board of Directors of the Authority at a properly noticed meeting on September 11, 2024.

____

Jeanette Howard, Secretary