

Appendix D

Natural Resource Review Report

MILWAUKIE BAY PARK PHASE 3 IMPROVEMENTS

Natural Resource Review

Prepared for
2.ink Studio and North Clackamas Parks
and Recreation District

June 2022



MILWAUKIE BAY PARK PHASE 3 IMPROVEMENTS

Natural Resource Review

Prepared for
2.ink Studio and North Clackamas Parks
and Recreation District

June 2022

819 Southeast Morrison Street
Suite 310
Portland, OR 97214
503.274.2010
www.esassoc.com



Bend	Oakland	San Diego
Camarillo	Orlando	San Francisco
Delray Beach	Pasadena	Santa Monica
Destin	Petaluma	Sarasota
Irvine	Portland	Seattle
Los Angeles	Sacramento	Tampa

D202001353.00

OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

TABLE OF CONTENTS

Milwaukie Bay Park Phase 3 Improvements

	<u>Page</u>
1. Introduction.....	1
2. Site Location	1
3. Existing Site Development and Project Description	2
4. Existing WQR and HCA Conditions	4
4.1 Water Quality Resource (WQR) Area	4
4.2 Habitat Conservation Area (HCA).....	4
5. Impact Evaluation and Alternatives Analysis	5
6. Approval Criteria	13

Appendices

Appendix A Project Area Map

Appendix B Drawings

Appendix C Site Photographs

List of Drawings

Appendix B Drawings

Sheet L6.00A – Natural Resource Boundaries

- 01 Natural Resource Boundary Overlay Diagram – Existing Conditions
- 02 Natural Resource Boundary Overlay Diagram – Proposed Site Plan

Sheet L6.00B – Mitigation Plan

- 03 Natural Resource Mitigation Zone Diagram

Sheets L6.01 – L6.04 – Planting Plan Areas 1 through 4

Sheets L2.01 – L2.04 – Materials Plan Areas 1 through 4

1. INTRODUCTION

North Clackamas Parks and Recreation District (NCPRD) and the City of Milwaukie (City) are partnering to complete the Milwaukie Bay Park Phase 3 Improvements Project. The park site is located along the Willamette River in downtown Milwaukie, and the proposed project includes elements within Water Quality Resource (WQR) area and Habitat Conservation Area (HCA). Construction activities within WQR areas and HCA are regulated under Milwaukie Municipal Code (MMC) Chapter 19.402 – Natural Resources.

This Natural Resources Review report describes the site conditions and presents an impact evaluation, alternatives analysis, and mitigation proposal for WQR and HCA impacts in accordance with MMC 19.402 requirements. This report accompanies an application for land use approval and is intended to support the City’s review of the project under a Type III Natural Resources Review procedure.

2. SITE LOCATION

Milwaukie Bay Park encompasses approximately 8.5 acres of land at 11211 SE McLoughlin Blvd. in downtown Milwaukie, Clackamas County, Oregon. The park is generally situated between Johnson Creek to the north, Kellogg Creek to the south, SE McLoughlin Blvd. (Oregon Highway 99E) to the east, and the Willamette River to the west.

The proposed Phase 3 park improvements addressed in this application are located within an approximately 3.5-acre portion of the park on parts of the following tax lots: 11E35AD 00900, 01000, and 01001; 11E35AA 02200, 02300, 02400, 02500, 02600, 02700, 02800, 04700, 04800, 04900, and 05000. Parts of the existing and new permanent alignment of the Trolley Trail that is part of the park are also located outside of these parcels on four (4) segments of ODOT ROW along SE McLoughlin Blvd/OR99E. Refer to the Project Area Map in Appendix A.

The entire park site and project area are zoned by the City as Open Space (OS) and within the Willamette River Greenway overlay zone. The park is bordered by open space and residential property to the north and northwest, the Kellogg Water Resource Recovery Facility to the south, ODOT SE McLoughlin Blvd/OR99E and ROW to the east, and commercial properties in the Downtown Mixed Use (DMU) zone to the east beyond SE McLoughlin Blvd.

3. EXISTING SITE DEVELOPMENT AND PROJECT DESCRIPTION

The City adopted a plan for the park in 2010 to serve as the foundation for many agencies, community partners, and local citizens to participate in shaping park improvements over the years. Many elements of the plan have been designed and constructed over the past 12 years, including the Klein Point Overlook at the Johnson Creek confluence with the Willamette River; a new boat launch and dock; auto and boat trailer parking; a single restroom facility; a temporary Trolley Trail connection; a riverside path; riverbank stabilization and plantings; an improved access bridge over Kellogg Creek; and riverbank erosion repairs with new pedestrian beach access.

The proposed Phase 3 park improvements build on previous site improvements and include a nature-themed children's play area; a gathering/event area with an open lawn, stage and fire pit for special events; a nature-themed interactive water feature; new pathways; picnic areas; a restroom structure and shade structure; improvements to the existing Trolley Trail; public art; vegetation plantings and new stormwater management infrastructure.

- **Nature Play Area:** This area will provide a play space on three levels of the park and incorporate natural elements including rocks and logs as well as traditional and inclusive playground equipment.
- **Event Area:** The event area will comprise 20,000 square feet of open lawn space for events such as concerts, movies, festivals and plays. The area will include a platform for use as a stage or small gathering spot and a reservable community fire pit for special events. The lawn features subdrainage lines to extend seasonal usability. Mitigation measures to prevent geese from using the area include barrier vegetation and low fencing, a swale, and footbridges.
- **Interactive Water Feature:** The water feature will be a zero-depth splash pad operated by push-button activation for seasonal use. When not in operation, the area will serve as a secondary plaza with seating and natural stone elements. Water from splash pad operation will drain to the sanitary sewer system. When not in operation, rain falling on the splash pad area will be valved to drain to a swale.
- **Pathways:** A series of pathways ranging in width from 6 feet to 10 feet will be constructed and will connect all park features, including those currently at the site such as Klein Point, the existing lower riverside pathway, parking lot, and crosswalks at SE McLoughlin Blvd. The paths will feature non-slip surfaces and will be ADA accessible. The 10' wide walkways will be rated for vehicular use to allow maintenance vehicles and events-related access into the park.
- **Picnic Areas:** Picnic areas with a variety of seating types and trash receptacles will be constructed near the Trolley Trail and the water feature.

- Restroom: A two-stall restroom structure that includes a central utility room with storage will be constructed. Exterior materials will consist of board-formed concrete and finished wood. A drinking fountain and bottle filler will be located on the exterior of the structure.
- Shade Structure: A trellis will be constructed to provide shade for the adjacent picnic areas. The structure will be painted steel and designed to complement the restroom structure.
- Trolley Trail: The portion of the Trolley Trail that runs through the project site will be widened to 14 feet and tapered at north and south ends to meet existing condition (12 feet at south, 7 feet 9 inches at north). The multiuse path will be shared, with decals and signage indicating shared use in both northerly and southerly directions. Bicycle parking will also be provided near the trail.
- Public Art: A series of heron sculptures have been proposed by Confederated Tribes of Grand Ronde to be placed seasonally at the site during the annual salmon run. The concept from CTGR is being coordinated with the City and NCPRD. The CTGR proposes to lead solicitation and installation of art annually by different sculptors.
- Vegetation: Proposed plantings of native species are intended to increase tree canopy coverage, increase potential native habitat areas at the site, and mitigate impacts to natural resource areas, while protecting views of the river. The existing large coastal redwood on the site will be preserved, as will the street trees along SE McLoughlin Blvd.

A Materials Plan showing the layout of the proposed improvements is included on Sheets L2.01 through L2.04 in Appendix B.

4. EXISTING WQR AND HCA CONDITIONS

4.1 Water Quality Resource (WQR) Area

Milwaukie Bay Park is located on the east bank of the Willamette River approximately 18.5 miles upstream of the confluence with the Columbia River and approximately 7.5 miles downstream of Willamette Falls in Oregon City. Johnson Creek flows into the Willamette River at Klein Point in the northern portion of the park and project area. The Willamette River and Johnson Creek are considered 'primary protected water features' under the regulations of MMC 19.402.

As described in MMC Table 19.402.15 (Determination of WQR Location), primary protected water features have an associated vegetated corridor of 50 to 200 feet wide depending on the slopes adjacent to the feature. The U.S. Army Corps of Engineers (USACE)-published ordinary high water (OHW) elevation for the Willamette River in the project area is 18.4 feet NDVD29 vertical datum, or 21.9 feet NAVD88 vertical datum. Based on observations of field indicators, and on observations made at the site during high water conditions in past years, this OHW elevation represents a reasonable 'bankfull stage' for both the Willamette River and Johnson Creek at the confluence in the project area, for purposes of establishing the boundaries of the protected water features for measuring adjacent slopes.

The slopes adjacent to the river OHW level in the project area are less than 25% for most of the project area south of Klein Point, producing a WQR with a vegetated corridor width of 50' extending uphill from the OHW boundary. Steeper slopes are present at Klein Point and upstream along the south bank of Johnson Creek. Topographic survey contours were used to determine breaks in slopes for establishing WQR boundaries greater than 50' from OHW where slopes exceed 25%, using the methods in MMC Table 19.402.15.

The WQR area in the project area is shown on Sheet L6.00A in Appendix B of this report. The total area of WQR vegetated corridor within the project limits is approximately 33,758 square feet (0.77 acre). Approximately 7,066 square feet of this (0.16 acre) is encroached upon by impervious surface from existing park development.

4.2 Habitat Conservation Area (HCA)

The City's Natural Resources Administrative Map, adopted August 2011, identifies HCA within the project area as shown on L6.00A in Appendix B. The HCA boundaries used in this review are based on the City's Geographic Information System (GIS) mapping of the HCA. The total area of HCA mapped within the project limits is approximately 44,163 square feet (1.01 acre). Approximately 2,462 square feet (0.06 acre) of this is encroached upon by impervious surface from existing park development.

5. IMPACT EVALUATION AND ALTERNATIVES ANALYSIS

The impact evaluation and alternatives analysis requirements of MMC 19.402.12 – General Discretionary Review are listed and addressed in the following sections.

A. Impact Evaluation and Alternatives Analysis

The alternatives shall be evaluated on the basis of their impact on WQRs and HCAs, the ecological functions provided by the resource on the property, and off-site impacts within the subwatershed (6th Field Hydrologic Unit Code) where the property is located. The evaluation and analysis shall include the following:

1. Identification of the ecological functions of riparian habitat found on the property, as described in Subsection 19.402.1.C.2.

Response:

Vegetated Corridors to Separate Protected Water Feature from Development

The vegetated corridor along the Willamette River and Johnson Creek on the western portion of the site separates those water bodies from the existing park development, and from SE McLoughlin Blvd. and downtown Milwaukie to the east. The functional vegetated corridor, which contains native trees, shrubs, and groundcover and provides some wildlife habitat and water quality benefit, is limited to the portions of the site below the existing Riverside Path, which meanders through the park in a generally north-south direction above the top of the bank. Vegetation within the WQR/HCA above and east of the Riverside Path consists mainly of lawn.

Microclimate and Shade

The shoreline in the project area has a narrow band of riparian vegetation (~35' to 50' wide for most of its length) with intermittent large-tree canopy coverage and smaller trees and shrubs throughout. The vegetated corridor in the northern part of the project area – north of the stone access steps that were constructed in 2018 – has larger trees and more substantial canopy coverage than the corridor in the southern part of the site, which has riparian vegetation that was planted more recently as part of previous phases of park development. Larger trees along the Willamette River at the site are primarily black cottonwood, with bigleaf maple at the northern end of the site above Johnson Creek. The trees and native shrubs provide some shading and microclimate temperature regulation in a narrow band along the water. Those functions are lacking in WQR and HCA areas uphill of the Riverside Path.

Streamflow Moderation and Water Storage

The shoreline vegetation along the Willamette River through the project area provides some bank roughness for attenuating high-flow velocities. Moderate bank slopes for portions of the shoreline accommodate some water storage function during high flows, with water levels maintained below the Riverside Path during ordinary high-water flows. Much of the site within and outside of WQR and HCA is within the 100-year floodplain.

Water Filtration, Infiltration, and Natural Purification

The vegetated shoreline below the Riverside Path provides some opportunity for water filtration, infiltration, and natural purification for overland runoff from uphill portions of the park, which currently consist primarily of lawn and pedestrian paths. A stormwater treatment basin collects and treats runoff from the adjacent vehicle parking lot in the southern portion of the project area, discharging flows to the Willamette River within the vegetated corridor.

Large Wood Recruitment and Retention and Natural Channel Dynamics

The larger trees along the shoreline in the project area are a potential large wood source, and the project reach of shoreline has moderate potential for large wood recruitment from upstream sources. The shoreline along the park has received bank stabilization treatments during previous phases of park development that have included boulders, log crib walls, and plantings intended to discourage bank erosion, channel migration, and impacts to park development.

Organic Material Sources

The trees, shrubs, and herbaceous vegetation in the narrow riparian band along the river and creek below the Riverside Path provide a source of organic material to those streams.

2. An inventory of vegetation, sufficient to categorize the existing condition of the WQR per Table 19.402.11.C, including the percentage of ground and canopy coverage materials within the WQR.

Response: For the purposes of categorizing the existing condition of the WQR per Table 19.402.11.C, there are two main vegetation community types at the site that can generally be described as: (1) a riparian plant community that extends from the water up the bank to the existing Riverside Path and the Klein Point Overlook path, and (2) maintained park lawn on the uphill side of the paths.

Riparian Plant Community (Class B – Marginal)

Species composition and tree canopy coverage varies by location through the riparian zone, but the overall WQR condition in the riparian zone below the existing park riverside paths is most appropriately classified as Class B (Marginal), based on the combination of trees, shrubs, and groundcover having at least 80% coverage throughout the zone, with 25-50% canopy coverage. While high canopy (large tree) coverage is less than 25% on parts of the shoreline, particularly in the southern portion where recent park development and shoreline bank stabilization/planting work has occurred, small (low canopy) native trees are present and will grow over time.

The largest trees in the riparian zone consist of black cottonwood (*populus trichocarpa*), with red alder (*alnus rubra*) and willow (*willow spp.*) also present along the Willamette River and bigleaf maple (*Acer macrophyllum*) and a burr oak (*Quercus macrocarpa*) at the far north end of the site along Johnson Creek. Native shrubs in the riparian zone include Pacific ninebark (*Physocarpus capitatus*), rose spirea (*Spirea douglasii*), snowberry (*Symphocarpus mollis*), mock orange (*Philadelphus lewisii*), and tall Oregon grape (*Berberis aquifolium*), with coverages typically in the 30% to 70% range. Groundcover is dense along much of the shoreline (coverage of 100% or more), with a mix of native and non-native species that vary by location and include horsetail (*Equisetum arvense*), rye grass (*Elmus sp.*), velvet grass (*Holcus lanatus*), cleavers (*Galium arpine*), Canada

thistle (*Cirsium arvense*), meadow barley (*Hordeum brachyantheum*), Roemer's fescue (*Festuca romeri*), cutleaf geranium (*Geranium dissectum*), vetch (*Vicia americana*), teasle (*Dipsacus fullonum*), and western dock (*Rumex occidentalis*).

Park Lawn (Class C – Poor)

The dominant plant community within the portion of the WQR on the uphill side of the riverside paths is maintained lawn with no trees or shrubs. The groundcover plant species in this community are dominated by lawn grass (*Poa sp.*), with species including narrow-leaf plantain (*Plantago lanceolata*), common daisy (*Bellis perennis*), common dandelion (*Tanacetum vulgare*), clover (*Trifolium repens*), and Hairy cat's ear (*Hypochaeris radicata*) also present.

3. An assessment of the water quality impacts related to the development, including sediments, temperature and nutrients, sediment control, and temperature control, or any other condition with the potential to cause the protected water feature to be listed on DEQ's 303(d) list.

Response: The Willamette River is currently on DEQ's 303(d) list for parameters including cyanide, aldrin, dieldrin, ethylbenzene, hexachlorobenzene, DDT and DDE, PCBs, biocriteria, PAHs, and temperature. Johnson Creek is on DEQ's 303(d) list for parameters including temperature, biocriteria, endosulfan, PCBs, PAHs, and endrin aldehyde. The proposed project is unlikely to cause the addition of any parameters to DEQ's 303(d) list for the Willamette River or Johnson Creek.

The project's potential for water quality impacts includes the short-term increased potential for erosion and sediment transport during construction as a result of ground disturbance. Erosion and sediment control measures will be implemented during construction to manage those concerns, as required by City regulations and the NPDES Construction Stormwater Permit from DEQ that will be obtained for disturbance in excess of 1 acre. The proposed site revegetation plans will stabilize the site after construction, and long-term issues with erosion and sediment are not expected after construction with the proposed stormwater management.

Stormwater runoff from approximately 0.66 of new impervious surfaces introduced by the project will be managed and treated for water quality through a combination of a new vegetated swale, use of an existing on-site stormwater basin (for the parking lot and SW portion of the proposed work area), and use of pervious pavement for the Trolley Trail to infiltrate runoff on-site. The new impervious surfaces are predominantly non-pollution generating impervious surface (e.g., pedestrian paths and non-vehicular park features), and the project does not introduce operational changes that would substantially increase the risk of pollutant discharges to the river or creek (i.e., the site remains a park with no introduction of hazardous material storage or point source discharges). The stormwater management is being designed to meet requirements of the City and the City of Portland's Stormwater Management Manual, as described in the Preliminary Stormwater Management Report (Zucker Engineering and Design, 2022) included with the land use application.

The project is not expected to result in temperature impacts to the receiving waters, as it would not remove any trees from the riparian zone and would plant approximately 165 trees in WQR/HCA zones. Pet waste will continue to need to be managed appropriately at the park to limit nutrient contributions to surface waters. The project is not expected to increase other sources of nutrients;

fertilizer use would not increase as the total area of lawn is reduced by this project. Geese mitigation strategies in the proposed design may reduce waste from geese that currently is a source of nutrients that can be discharged to the waterways through overland flow during storm events.

- 4. An alternatives analysis, providing an explanation of the rationale behind choosing the alternative selected, listing measures that will be taken to avoid and/or minimize adverse impacts to designated natural resources, and demonstrating that:**
- a. No practicable alternatives to the requested development exist that will not disturb the WQR or HCA.**

Response: There are no practicable alternatives that could entirely avoid impacts to the WQR or HCA. The proposed park improvements meet a need and City planning direction specific to Milwaukie Bay Park; other sites without WQR or HCA are not an option. Mapped HCA extends well into the site's interior, and impacts could not be avoided even if all project elements were moved even farther away from the river than proposed. WQR boundaries are closer to the river but still extend far enough into the site that the WQR encompasses previously permitted and constructed park elements (paths) that the proposed project elements need to connect and integrate with.

- b. Development in the WQR and/or HCA has been limited to the area necessary to allow for the proposed use.**

Response: The proposed project revisits and advances park improvements envisioned in the 2010 Milwaukie Riverfront Park Master Plan and Program (e.g., amphitheater, play area, restroom, water feature) and incorporates comments received on desired park elements through an extensive community engagement process completed in 2018-2019. The proposed design limits WQR/HCA impacts to the extent practicable while still meeting the key community objectives for the park.

The available space in the park is constrained by the Willamette River to the west and SE McLoughlin Blvd. to the east. The proposed design reflects an effort to move as much of the heavily programmed areas (playground, water feature, plaza, and restroom) away from the river and to the highest portion of the site practicable, to limit both WQR/HCA impacts and floodplain impacts. Public comments received during the outreach process also expressed a strong preference to keep elements such as the water feature and playground away from SE McLoughlin Blvd along the site's eastern perimeter as much as possible.

The proposed design balances site constraints and public concerns, while retaining the key park elements envisioned in the 2010 master plan and program. Further limiting impacts to WQR and HCA would likely mean eliminating programmed elements from the park.

- c. If disturbed, the WQR can be restored to an equal or better condition in accordance with Table 19.402.11.C; and the HCA can be restored consistent with the mitigation requirements of Subsection 19.402.11.D.2.**

Response: WQR and HCA disturbances will be mitigated based on the WQR requirements in Table 19.402.11.C and HCA standards in 19.402.11.D.2, as discussed in the mitigation plan subsections of 19.402.12.A.6 below.

d. Road crossings will be minimized as much as possible.

Response: The project does not involve road crossings.

5. Evidence that the applicant has done the following, for applications proposing routine repair and maintenance, alteration, and/or total replacement of existing structures located within the WQR:

- a. Demonstrated that no practicable alternative design or method of development exists that would have a lesser impact on the WQR than the one proposed. If no such practicable alternative design or method of development exists, the project shall be conditioned to limit its disturbance and impact on the WQR to the minimum extent necessary to achieve the proposed repair/maintenance, alteration, and/or replacement.**
- b. Provided mitigation to ensure that impacts to the functions and values of the WQR will be mitigated or restored to the extent practicable.**

Response: The proposed project does not involve the routine repair and maintenance, alteration, or total replacement of existing structures within the WQR. These criteria do not apply.

6. A mitigation plan for the designated natural resource that contains the following information:

a. A description of adverse impacts that will be caused as a result of development.

Response: The project will involve temporary construction activity and permanent project elements within WQR areas and HCA. Approximately 25,136 square feet (0.58 acre) of WQR and 34,492 square feet (0.79 acre) of HCA will be temporarily disturbed and revegetated as part of the construction. Approximately 6,808 square feet of WQR (0.16 acre) and 9,671 square feet (0.22 acre) of HCA will be permanently disturbed by park structures or pavements, for a total combined WQR/HCA impact of about 16,479 square feet (0.38 acre).

There is overlap between WQR and HCA on the site, and as noted on the impact tables in the plans (Sheet L6.00A), where there is overlap the impact area in the numbers above show the impact allocated to HCA rather than WQR. This approach allows for an accurate depiction of total combined WQR/HCA impacts for the project and applies the more prescriptive mitigation requirements for HCAs in 19.402.11.D.2 to a larger share of the combined impact area.

b. An explanation of measures that will be taken to avoid, minimize, and/or mitigate adverse impacts to the designated natural resource; in accordance with, but not limited to, Table 19.402.11.C for WQRs and Subsection 19.402.11.D.2 for HCAs.

Response: As described in this report, the functional vegetated riparian corridor in Milwaukie Bay Park is located below the existing riverside paths, with areas above the paths consisting of maintained park landscaping (primarily open lawn), with sidewalk and parking lot in the WQR in the southern portion of the project area. Importantly, the project design avoids and minimizes impacts to ecological functions by not introducing new development to the functional vegetated corridor below the existing paths. All project elements will be at or above the level of the existing paths along the river and to the Klein Point Overlook.

The project as designed requires no in-water work or removal of trees or shrubs in the functional riparian corridor below the existing paths. Tree protection measures will be installed prior to ground disturbing activities to ensure trees are not inadvertently impacted. Erosion and sediment control measures will be implemented to minimize temporary impacts to the Willamette River and Johnson Creek during construction.

Temporary WQR/HCA disturbance areas will be restored to conditions better than the existing condition, and mitigation plantings are proposed in designated areas to compensate for permanent impacts within WQR area and HCA, as shown on Sheet L6.00B in Appendix A.

Plant schedules are shown on Sheets L6.01 – L6.04 in Appendix A. The plant schedules identify mitigation trees and shrubs needed to meet the HCA mitigation standards of 19.402.11.D.2 (Mitigation Option 2), which requires planting native trees and shrubs at a rate of 5 trees and 25 shrubs per 500 sq. ft. of HCA disturbance area, which for this project requires 97 trees and 484 shrubs for the 9,671 sq. ft. of permanent HCA impact. The proposed HCA mitigation plantings will cover an area of approximately 14,500 sq. ft., or approximately 1.5 times the HCA permanent impact area and will meet HCA mitigation planting standards for size, spacing, and diversity as outlined in 19.402.11.B.

A separate WQR mitigation area is shown on Sheet L6.00B to address the permanent impacts to 6,808 sq. ft. of WQR impact. WQR mitigation is intended to address the requirements of Table 19.402.11.C, which for Class C (Poor) condition WQR requires mitigation to:

- Restore and mitigate disturbed areas with native species from the Milwaukie Native Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site.
- Plant and/or seed all bare areas to provide 100% surface coverage.
- Inventory and remove debris and noxious materials.

The proposed WQR mitigation plantings include a mix of native and ornamental trees and shrubs, with total proposed WQR tree numbers meeting the 5 trees/500 sq. ft. of disturbance area threshold for HCAs. At approximately 10,200 square feet, the proposed WQR mitigation zone is approximately 1.5 times the permanent WQR impact area. All bare areas within the mitigation zone will be planted or seeded to provide 100% surface coverage, and debris and noxious materials will be inventoried and removed prior to planting.

The proposed HCA and WQR mitigation will occur on-site and in areas within or contiguous with existing HCA and WQR areas. Overall, the proposed project will remove no riparian trees and shrubs and will plant at least 165 trees of predominantly native species and at least 511 native shrubs, providing an ecological lift to the site in terms of vegetation diversity, habitat structure, and water quality functions.

c. Sufficient description to demonstrate how the following standards will be achieved:

(1) Where existing vegetation has been removed, the site shall be revegetated as soon as practicable.

Response: Revegetation of disturbed areas will be done as early as practicable in the construction schedule to stabilize soils and initiate plant establishment. Construction is estimated to occur from approximately March 2023 to February 2024, which would allow woody vegetation to be installed towards the end of the construction period, with no delay needed to avoid installation during dry summer conditions.

(2) Where practicable, lights shall be placed so that they do not shine directly into any WQR and/or HCA location. The type, size, and intensity of lighting shall be selected so that impacts to habitat functions are minimized.

Response: The walkways that comprise the Riverside Pathway, within the WQR on the western portion of the site, will utilize existing bollard lights in that area on the outside (uphill side) of the path. The path will continue to be lit to a calculated average of 0.5 footcandles to meet City code requirements for lighting of walkways.

Lighting for the Trolley Trail portion of the project on the eastern part of the site, which is mostly outside of WQR and HCA with the exception of the northern project limits, will be provided by existing light posts, two relocated light posts, and two new light posts proposed with this project. The new and relocated lights proposed for the Trolley Trail are intended to better distribute lighting along the trail to a calculated average of 1.0 footcandle and meet City code standards for safety.

Internal pathways between the Riverside Path and the Trolley Trail will not be lit, recognizing that redundant lighting between the two main trails is unnecessary for safe movement through the park and would unnecessarily introduce new lighting within WQR and HCA areas.

(3) Areas of standing trees, shrubs, and natural vegetation will remain connected or contiguous; particularly along natural drainage courses, except where mitigation is approved; so as to provide a transition between the proposed development and the designated natural resource and to provide opportunity for food, water, and cover for animals located within the WQR.

Response: As described in this report, the areas of natural trees, shrubs, and groundcover within WQR and HCA on the site are located on the downhill side of the existing riverside paths. That existing functional vegetated corridor will be maintained by this project, as the proposed

improvements are located along and above the existing riverside paths and will not involve removal of the existing natural riparian vegetation.

- d. A map showing where the specific mitigation activities will occur. Off-site mitigation related to WQRs shall not be used to meet the mitigation requirements of Section 19.402.**

Response: Proposed mitigation areas are shown on Sheet L6.00B in Appendix A. The proposed mitigation is on-site in areas within or contiguous with existing WQR and HCA. No off-site mitigation is proposed.

- e. An implementation schedule; including a timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting; as well as a contingency plan. All in-stream work in fish-bearing streams shall be done in accordance with the allowable windows for in-water work as designated by ODFW.**

Response: Construction of the project is planned for approximately March 2023 to February 2024. Removal of any existing artificial debris, noxious materials, and invasive species will occur in the planting areas prior to planting. Mitigation plantings will be installed during the construction period, likely during the latter part of the schedule and within the MMC-recommended planting windows of December 1 to April 15 for bare root trees and October 15 to April 30 for potted plants. Monitoring and maintenance of the mitigation plantings will be performed for a minimum of two years to ensure a minimum 80% survival rate. An annual report on the survival rate of the mitigation plantings will be prepared and submitted to the City for two years after plant installation.

The project will not involve any in-stream work subject to the limitations of ODFW-designated in-water work windows.

6. APPROVAL CRITERIA

The approval criteria from MMC 19.402.12 – **General Discretionary Review** are listed and addressed in the following sections.

B. Approval Criteria

1. **Unless specified elsewhere in Section 19.402, applications subject to the discretionary review process shall demonstrate how the proposed activity complies with the following criteria:**

- a. **Avoid**

The proposed activity avoids the intrusion of development into the WQR and/or HCA to the extent practicable. The proposed activity shall have less detrimental impact to the designated natural resource than other practicable alternatives, including significantly different practicable alternatives that propose less development within the resource area.

Response: As described in responses to 19.402.12.A.4 in this report, the project avoids development into the WQR and HCA to the extent practicable and avoids new development within the functional vegetated corridor entirely (i.e., that area of trees, shrubs, and herbaceous species along the river below the existing riverside paths).

An alternatives analysis was performed during the planning and preliminary design phases of this project, with three alternatives shared with the public during 2018-2019 outreach efforts. The alternatives analysis explored different layouts and amenity highlights while all attempting to capture the common key programmed elements for the park. The alternative selected to advance into final design (Alternative 1 – “Flow”) had equal or lesser WQR/HCA impacts than the other two alternatives (Alternative 2- “Fluvial” and Alternative 3 – “Vista”). Additionally, WQR/HCA impacts were further avoided as the Alternative 1 design was advanced from the preliminary stage to the design proposed in the land use application, by shifting the playground location farther away from the river and removing from the design a river overlook that would have extended into the vegetated corridor on the west side of the existing Riverside Path.

- b. **Minimize**

If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the designated natural resource, then the proposed activity within the resource area shall minimize detrimental impacts to the extent practicable.

- (1) **The proposed activity shall minimize detrimental impacts to ecological functions and loss of habitat, consistent with uses allowed by right under the base zone, to the extent practicable.**

Response: The proposed park improvements are consistent with the “Parks and open space” uses permitted outright in the Open Space zone under MMC 19.304.2. The proposed project minimizes habitat loss and detrimental impacts to ecological functions and habitat loss by siting all new development outside of the functional vegetated corridor on the river and creek

banks below the existing riverside paths, and mitigating for impacts to WQR/HCA areas consisting mostly of park landscaping (lawn) through planting of trees, shrubs, and groundcover within and adjacent to existing WQR/HCA.

- Vegetated Corridors to Separate Protected Water Feature from Development: The project will preserve the site's existing functional vegetated corridor of trees, shrubs, and groundcover located adjacent to the river and creek below the existing park development (riverside paths).
- Microclimate and Shade: The project's complete avoidance of tree and shrub removal along the river and creek, and the addition of trees and shrubs to the site as proposed in the planting plan, minimizes microclimate and shade impacts.
- Streamflow Moderation and Water Storage: The project will maintain bank roughness by avoiding vegetation removal and grading below the existing riverside paths. Based on the proposed grading plan, the project will result in a net cut of approximately 200 cubic yards of material from the 100-year floodplain and will not result in a rise in 100-year flood water surface elevations.
- Water Filtration, Infiltration, and Natural Purification: The project maintains these functions immediately adjacent to the river and creek by leaving the existing vegetated corridor below the Riverside Path undisturbed. Where soil infiltration rates are suitable on the upper portion of the site, the project will use permeable pavement for Trolley Trail improvements to infiltrate stormwater from new path surface. Stormwater runoff from other proposed new impervious surfaces will be collected and filtered through vegetated treatment prior to discharge to the Willamette River.
- Large Wood Recruitment and Retention and Natural Channel Dynamics: Impacts to large wood recruitment potential and natural channel dynamics are avoided and minimized by the project with the retention of all trees within vegetated corridor below the Riverside Pathway and the avoidance of disturbance below OHW or on the banks below the existing paths.
- Organic Material Sources: The retention of existing shoreline vegetation and the proposed addition of at least 165 trees and over 500 shrubs would minimize impacts to organic material sources.

(2) To the extent practicable within the designated natural resource, the proposed activity shall be designed, located, and constructed to:

- (a) Minimize grading, removal of native vegetation, and disturbance and removal of native soils; by using the approaches described in Subsection 19.402.11.A, reducing building footprints, and using minimal excavation foundation systems (e.g., pier, post, or piling foundation).**

Response: The project will incorporate the impact minimization measures of MMC 19.402.11.A for work in WQR areas and HCA as follows:

- Work areas will be marked to reduce potential damage to the WQR and/or HCA.
- Trees in WQRs or HCAs will not be used as anchors for stabilizing construction equipment.
- Native soils disturbed during development shall be conserved on the property.
- An erosion and sediment control plan will be prepared in compliance with requirements set forth in the City’s Public Works Standards.
- Site preparation and construction practices will be followed that prevent drainage of hazardous materials or erosion, pollution, or sedimentation to any WQR adjacent to the project area.
- Stormwater from new impervious surfaces associated with the project will be managed to meet City stormwater management requirements, including treatment of the pollution reduction design storm. The site is adjacent and discharges to the Willamette River, which is exempt from flows control requirements.
- Prior to construction, the WQR and/or HCA that is to remain undeveloped will be flagged, fenced, or otherwise marked and will remain undisturbed. Such markings will be maintained until construction is complete.
- The construction phase of the development will be done in such a manner as to safeguard the resource portions of the site that have not been approved for development.
- As described in the response to 19.402.12.A.6.c.2, the proposed lighting plan has been developed to minimize impact to habitat functions, using existing bollard lighting for the Riverside Pathway and existing/relocated/new lights for the Trolley Trail to meet safety requirements, while leaving internal pathways unlit to avoid redundant lighting and unnecessary lighting impacts to WQR/HCA.
- All work on the property will conform to a construction management plan prepared according to Subsection 19.402.9. The construction management plan will be submitted to the City’s Engineering Department

(b) Minimize adverse hydrological impacts on water resources.

Response: The project site discharges directly to the Willamette River, and the proposed site improvements will not substantially change river hydrology. The project minimizes impacts from new impervious surface by incorporating permeable pavement into the Trolley Trail improvements to infiltrate stormwater in place where infiltration rates are suitable, and will ensure proposed new and existing stormwater treatment systems are adequately sized for treatment and conveyance in accordance with City and Portland Stormwater Management

Manual requirements. Flows control requirements do not apply to sites that discharge directly to the Willamette River.

(c) Minimize impacts on wildlife corridors and fish passage.

Response: The project involves no elements below the OHW level of the Willamette River and will not affect fish passage. The project minimizes impacts on wildlife corridors along the river by keeping the proposed project elements above and outside of the existing vegetation (trees, shrubs, and groundcover) along the river below the existing Riverside Pathway.

(d) Allow for use of other techniques to further minimize the impacts of development in the resource area; such as using native plants throughout the site (not just in the resource area), locating other required landscaping adjacent to the resource area, reducing light spill-off into the resource area from development, preserving and maintaining existing trees and tree canopy coverage, and/or planting trees where appropriate to maximize future tree canopy coverage.

Response: The project includes plantings of native species within and outside of resources areas to increase overall tree canopy coverage at the site. An existing large coastal redwood on the site will be preserved, as will the street trees along SE McLoughlin Blvd.

c. Mitigate

If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the designated natural resource, then the proposed activity shall mitigate for adverse impacts to the resource area. All proposed mitigation plans shall meet the following standards:

(1) The mitigation plan shall demonstrate that it compensates for detrimental impacts to the ecological functions of resource areas, after taking into consideration the applicant's efforts to minimize such detrimental impacts.

Response: As presented in this report, the project would permanently impact a total combined HCA/WQR area of approximately 0.38 acres consisting mostly of lawn. To compensate for permanent impacts to ecological functions (and the potential for future ecological functions by replacing lawn with pavement/structures), the project includes approximately 0.57 acre of designated mitigation area that would be planted with native trees, shrubs, and groundcover, increasing the vegetation diversity, habitat structure, and tree canopy coverage for the site. Impacts on water quality and hydrologic functions from new impervious surfaces would be mitigated through the proposed stormwater management approach, which will infiltrate where feasible, treat the water quality design storm, and include adequately sized conveyance to direct discharges to the Willamette River in accordance with City stormwater management requirements.

- (2) Mitigation shall occur on the site of the disturbance, to the extent practicable. Off-site mitigation for disturbance of WQRs shall not be approved. Off-site mitigation for disturbance of HCAs shall be approved if the applicant has demonstrated that it is not practicable to complete the mitigation on-site and if the applicant has documented that they can carry out and ensure the success of the off-site mitigation as outlined in Subsection 19.402.11.B.5. In addition, if the off-site mitigation area is not within the same subwatershed (6th Field Hydrologic Unit Code) as the related disturbed HCA, the applicant shall demonstrate that it is not practicable to complete the mitigation within the same subwatershed and that, considering the purpose of the mitigation, the mitigation will provide more ecological functional value if implemented outside of the subwatershed.**

Response: The proposed mitigation is on-site within Milwaukie Bay Park. Off-site mitigation is not proposed.

- (3) All revegetation plantings shall use native plants listed on the Milwaukie Native Plant List.**

Response: The planting plan includes native tree, shrub, and groundcover species as shown on Sheets L6.01-L6.04. Native trees proposed for mitigating HCA impacts per the 5 trees/500 sq. ft. disturbance area criterion include cascara buckthorn (*Rhamnus purshiana*), red alder (*Alnus rubra*), and Pacific dogwood (*Cornus nuttallii*). Native shrubs proposed for HCA mitigation for meeting the 25 shrubs/500 sq. ft. disturbance area criterion include Oregon grape (*Mahonia aquifolium*), kinnikinnick (*Arctostaphylos uva-ursi*), and snowberry (*Symphcarpos albus*). Additional native plant species, along with some ornamental trees and grasses suitable for the park setting, are also included in the planting plan.

- (4) All in-stream work in fish-bearing streams shall be done in accordance with the allowable windows for in-water work as designated by ODFW.**

Response: The project would not involve work below the OHW level of any stream. This criterion does not apply.

- (5) A mitigation maintenance plan shall be included and shall be sufficient to ensure the success of the planting. Compliance with the plan shall be a condition of development approval.**

Response: Monitoring and maintenance of the mitigation plantings will be performed for a minimum of two years to ensure a minimum 80% survival rate. An annual report on the survival rate of the mitigation plantings will be prepared and submitted to the City for two years after plant installation.

Appendix A

Project Area Map



SOURCE: ESA, 2021; ESRI, 2022; METRO RLIS, 2022


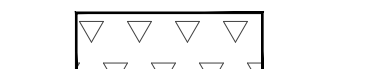

Milwaukie Bay Park Phase 3 Improvements

Figure 1
Project Area

Appendix B

Drawings

LEGEND

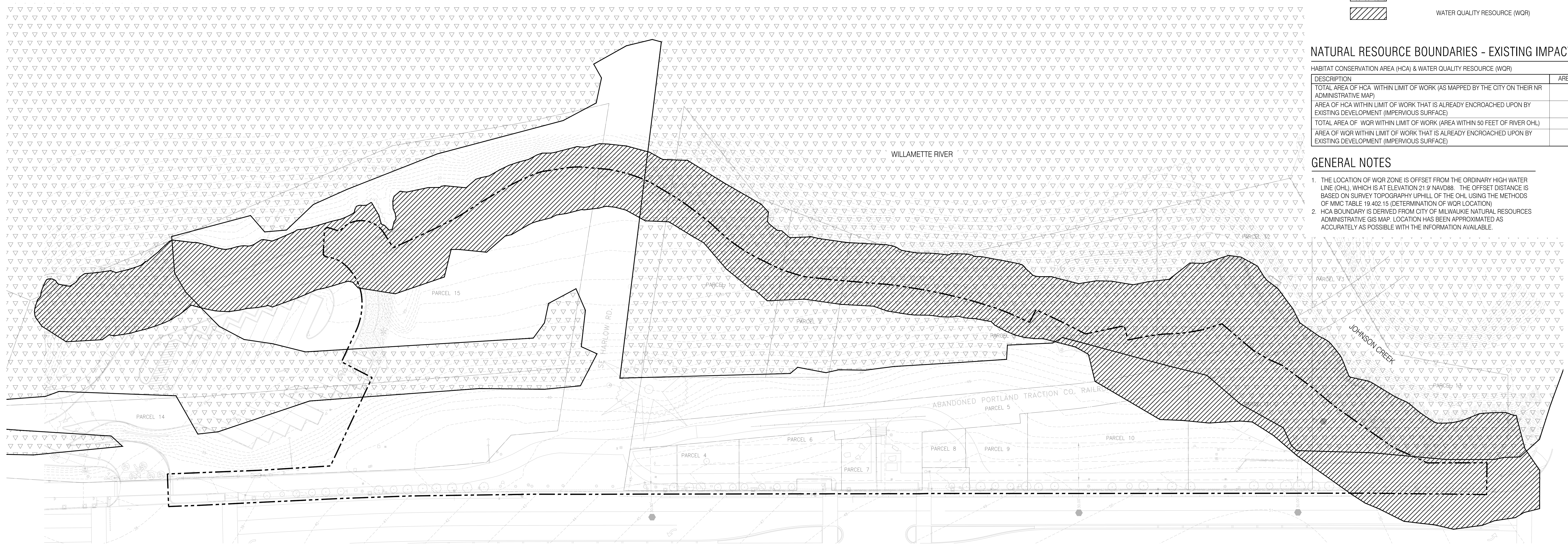
-  WORK LIMIT LINE
-  HABITAT CONSERVATION AREA (HCA)
-  WATER QUALITY RESOURCE (WOR)

NATURAL RESOURCE BOUNDARIES - EXISTING IMPACT

HABITAT CONSERVATION AREA (HCA) & WATER QUALITY RESOURCE (WOR)	
DESCRIPTION	AREA (SQ. FT.)
TOTAL AREA OF HCA WITHIN LIMIT OF WORK (AS MAPPED BY THE CITY ON THEIR NR ADMINISTRATIVE MAP)	44,163
AREA OF HCA WITHIN LIMIT OF WORK THAT IS ALREADY ENCLOSED UPON BY EXISTING DEVELOPMENT (IMPERVIOUS SURFACE)	2,462
TOTAL AREA OF WOR WITHIN LIMIT OF WORK (AREA WITHIN 50 FEET OF RIVER OHL)	33,758
AREA OF WOR WITHIN LIMIT OF WORK THAT IS ALREADY ENCLOSED UPON BY EXISTING DEVELOPMENT (IMPERVIOUS SURFACE)	7,066



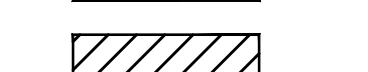
GENERAL NOTES

- THE LOCATION OF WOR ZONE IS OFFSET FROM THE ORDINARY HIGH WATER LINE (OHL) WHICH IS AT ELEVATION 21.9 NAVD88. THE OFFSET DISTANCE IS BASED ON SURVEY TOPOGRAPHY UPHILL OF THE OHL USING THE METHODS OF MMC TABLE 19.402.15 (DETERMINATION OF WOR LOCATION)
- HCA BOUNDARY IS DERIVED FROM CITY OF MILWAUKIE NATURAL RESOURCES ADMINISTRATIVE GIS MAP. LOCATION HAS BEEN APPROXIMATED AS ACCURATELY AS POSSIBLE WITH THE INFORMATION AVAILABLE.



01 NATURAL RESOURCE BOUNDARY OVERLAY DIAGRAM - EXISTING CONDITIONS

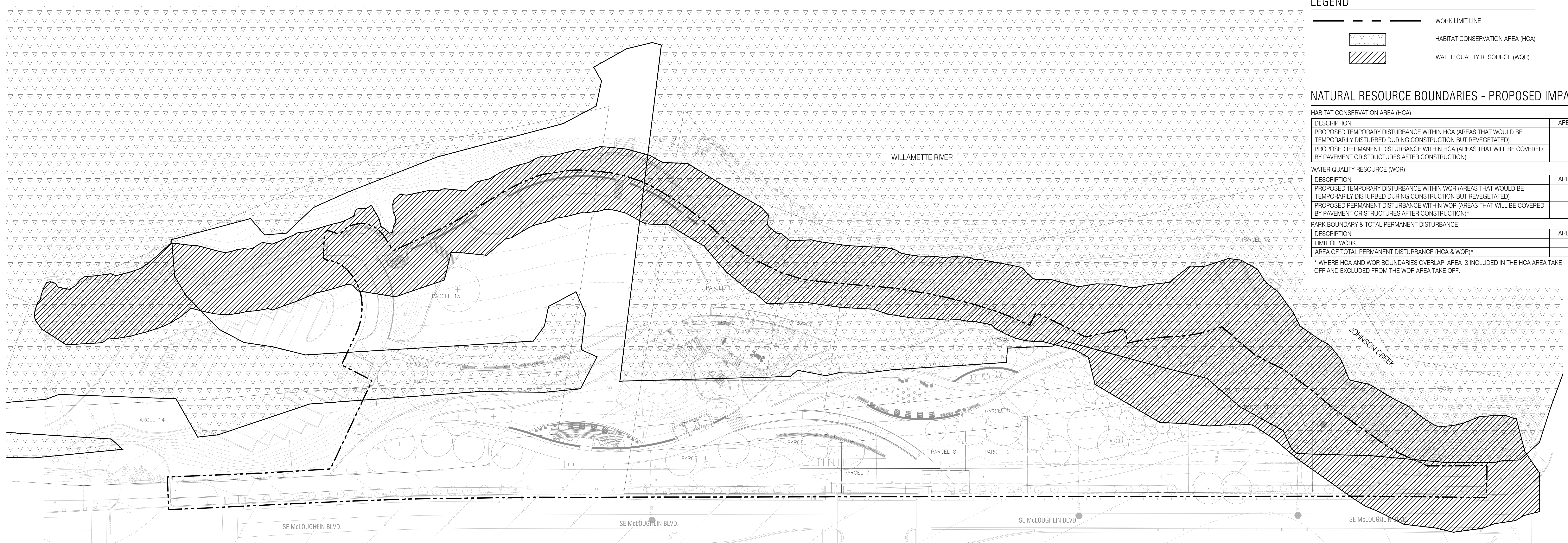
LEGEND

-  WORK LIMIT LINE
-  HABITAT CONSERVATION AREA (HCA)
-  WATER QUALITY RESOURCE (WOR)

NATURAL RESOURCE BOUNDARIES - PROPOSED IMPACT

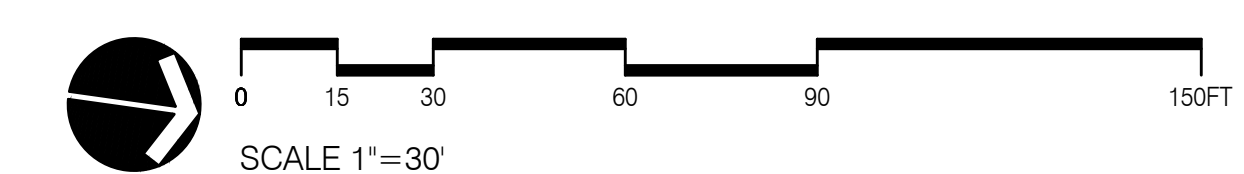
HABITAT CONSERVATION AREA (HCA)	
DESCRIPTION	AREA (SQ. FT.)
PROPOSED TEMPORARY DISTURBANCE WITHIN HCA (AREAS THAT WOULD BE TEMPORARILY DISTURBED DURING CONSTRUCTION BUT REVEGETATED)	34,492
PROPOSED PERMANENT DISTURBANCE WITHIN HCA (AREAS THAT WILL BE COVERED BY PAVEMENT OR STRUCTURES AFTER CONSTRUCTION)	9671
WATER QUALITY RESOURCE (WOR)	
DESCRIPTION	AREA (SQ. FT.)
PROPOSED TEMPORARY DISTURBANCE WITHIN WOR (AREAS THAT WOULD BE TEMPORARILY DISTURBED DURING CONSTRUCTION BUT REVEGETATED)	25,136
PROPOSED PERMANENT DISTURBANCE WITHIN WOR (AREAS THAT WILL BE COVERED BY PAVEMENT OR STRUCTURES AFTER CONSTRUCTION)*	6,808
PARK BOUNDARY & TOTAL PERMANENT DISTURBANCE	
DESCRIPTION	AREA (SQ. FT.)
LIMIT OF WORK	151,453
AREA OF TOTAL PERMANENT DISTURBANCE (HCA & WOR)*	16,479

* WHERE HCA AND WOR BOUNDARIES OVERLAP, AREA IS INCLUDED IN THE HCA AREA TAKE OFF AND EXCLUDED FROM THE WOR AREA TAKE OFF.



02 NATURAL RESOURCE BOUNDARY OVERLAY DIAGRAM - PROPOSED SITE PLAN

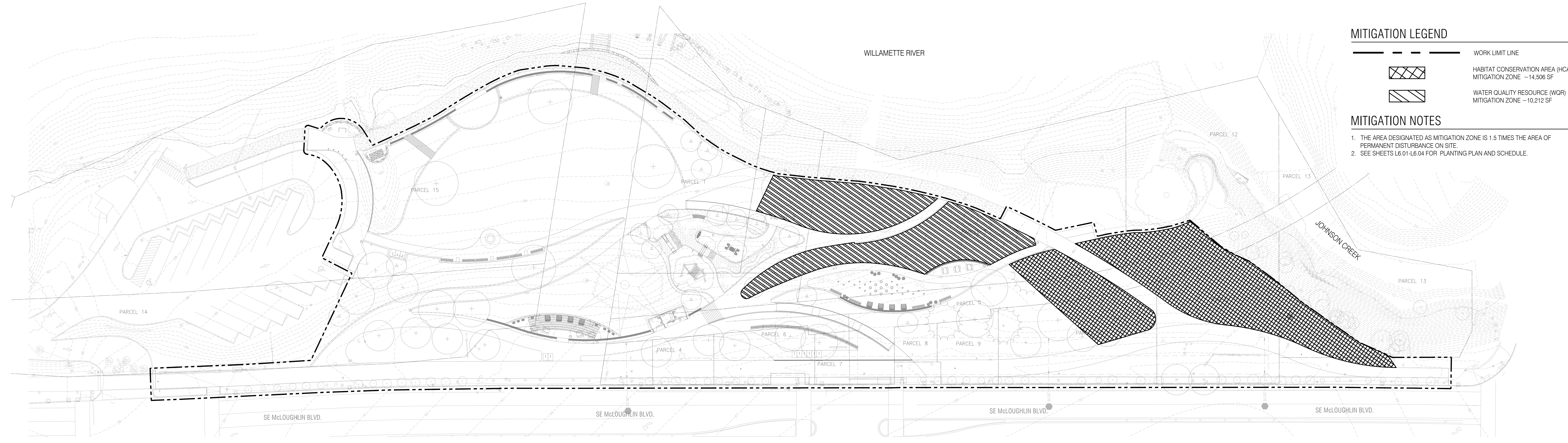
NOT FOR CONSTRUCTION



REVISIONS

DATE	DESCRIPTION	BY

DRAWING SET SCALE: 1"=30' (FOR ALL DIMENSIONS UNLESS OTHERWISE NOTED). SCALE INDICATED THROUGHOUT THIS SET IS NOT ACCURATE. VERIFY SCALE PRIOR TO USING DRAWINGS.
 DATE: 08/03/2022



MITIGATION LEGEND

--- WORK LIMIT LINE

[Cross-hatched] HABITAT CONSERVATION AREA (HCA) MITIGATION ZONE ~14,506 SF

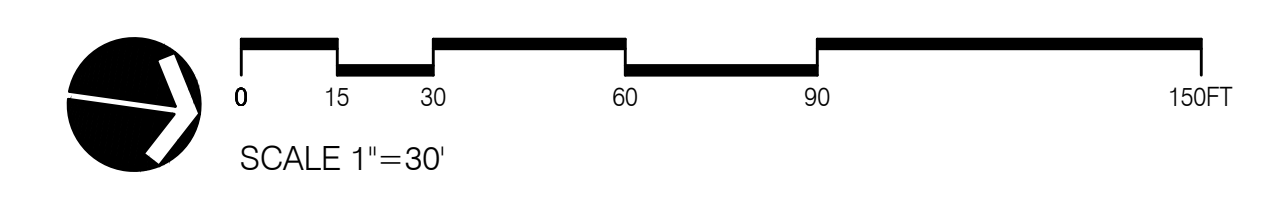
[Diagonal-hatched] WATER QUALITY RESOURCE (WQR) MITIGATION ZONE ~10,212 SF

MITIGATION NOTES

1. THE AREA DESIGNATED AS MITIGATION ZONE IS 1.5 TIMES THE AREA OF PERMANENT DISTURBANCE ON SITE.
2. SEE SHEETS L6.01-L6.04 FOR PLANTING PLAN AND SCHEDULE.

03 NATURAL RESOURCE MITIGATION ZONE DIAGRAM

NOT FOR CONSTRUCTION



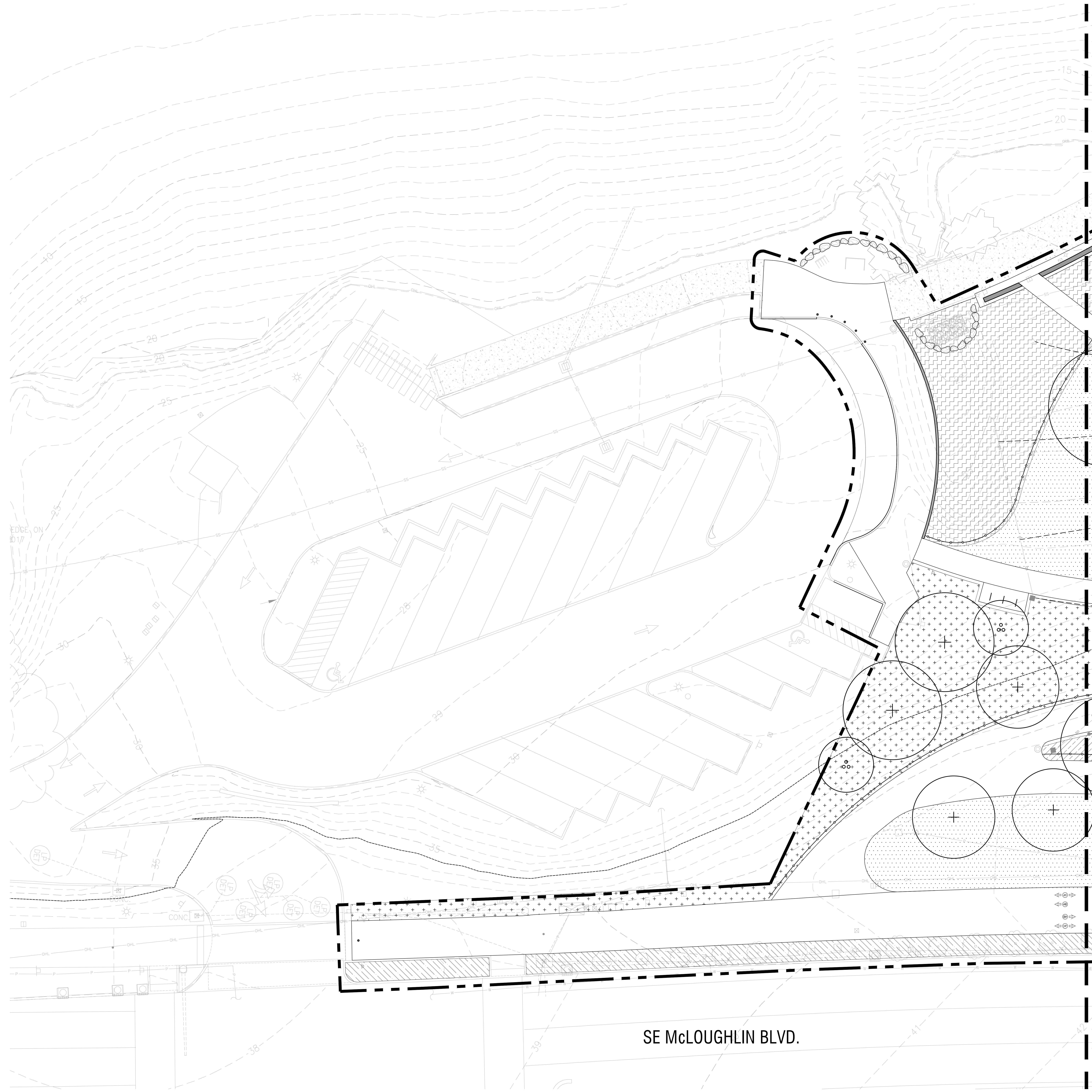
MILWAUKIE BAY PARK
 100% Design Development
 PROJECT ADDRESS
 DATE: 08/03/2022
 SCALE: AS NOTED
 DRAWN BY: JW

REVISIONS		
DATE	DESCRIPTION	BY

MITIGATION PLAN

L6.00B

ONE INCH = TWENTY FEET SCALE
 IF THIS BAR DOES NOT MEASURE 1 INCH IN LENGTH, THE SCALE INDICATED THROUGHOUT THIS SET IS NOT ACCURATE. VERIFY SCALE PRIOR TO USING DRAWINGS.



AREA 2: SEE SHEET L6.02

AREA 2: SEE SHEET L6.02

PLANTING SCHEDULE

TREES				
SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	CERCIDIPHYLLUM JAPONICUM*	TBD	AS SHOWN	TBD
	KATSURA			
+	RHAMNUS PURSHIANA*(M)	1/2 IN CALIPER	12 O.C.	32
	CASCARA BUCKTHORN			
+	QUERCUS GARRYANA*	TBD	AS SHOWN	TBD
	OREGON WHITE OAK			
+	ALNUS RUBRA*(M)	1/2 IN CALIPER	12 O.C.	32
	RED ALDER			
+	INCENSE CEDAR	TBD	AS SHOWN	TBD
	CALOCEDRUS DECURRENS			
+	BETULA NIGRA	TBD	AS SHOWN	TBD
	RIVER BIRCH			
+	CORNUS NUTTALLI*(M)	1/2 IN CALIPER	12 O.C.	33
	PACIFIC DOGWOOD			
+	ACER MACROPHYLLUM*	TBD	AS SHOWN	TBD
	BIG LEAF MAPLE			
+	QUERCUS VELUTINA	TBD	AS SHOWN	TBD
	BLACK OAK			
+	QUERCUS CHRYSOLEPIS	TBD	AS SHOWN	TBD
	CANYON LIVE OAK			
+	FRAXINUS LATIFOLIA*	TBD	AS SHOWN	TBD
	OREGON ASH			
+	KOUSA DOGWOOD	TBD	AS SHOWN	TBD
	CHINESE DOGWOOD			
QUANTITY OF TREES FOR HCA MITIGATION EA				97
TOTAL EA				165

UPLAND				
SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	POLYSTICHUM MUNITUM**	1 GAL	3' O.C.	TBD
	SWORD FERN			
/	MAHONIA AQUIFOLIUM**	1 GAL	4' O.C.	170
	OREGON GRAPE			
/	ARCTOSTAPHYLOS UVA-URSI**	1 GAL	8' O.C.	170
	KINKININICK			
/	FESTUCA CALIFORNICA**	1 GAL	1' O.C.	TBD
	CALIFORNIA FESCUE			
/	ERIOPHYLLUM LANATUM**	1 GAL	3' O.C.	TBD
	WOOLLY SUNFLOWER			
/	SYMPHYCARPUS ALBUS**	1 GAL	5' O.C.	171
	COMMON SNOWBERRY			
/	ACHILLEA MILLEFOLIUM**	1 GAL	3' O.C.	TBD
	COMMON YARROW			
TOTAL SQ FT				21,975
APPROXIMATE QUANTITY OF CONTAINER SHRUBS FOR MITIGATION EA				511

ORNAMENTAL				
SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
x	CALAMAGROSTIS x ACUTIFLORA	TBD	AS SHOWN	TBD
	FEATHER REED GRASS			
x	MAHONIA SOFT CARESS PP20183	TBD	AS SHOWN	TBD
	SOFT CARESS MAHONIA			
x	JUNIPERUS CONFERTA	TBD	AS SHOWN	TBD
	PACIFIC BLUE SHORE JUNIPER			
x	PENNISETUM ALOPECUROIDES HAMELN	TBD	AS SHOWN	TBD
	HAMELN FOUNTAIN GRASS			
TOTAL SQ FT				960

GRASSLAND				
SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	WILDFLOWER SEED MIX**	N/A	N/A	TBD
	SPECIES VARY			
+	FESTUCA CALIFORNICA**	1 GAL	TBD	TBD
	CALIFORNIA FESCUE			
+	DESCHAMPSIA CESPITOSA**	1 GAL	5' O.C.	TBD
	TUFTED HAIRGRASS			
+	FESTUCA SUBULATA**	1 GAL	5' O.C.	TBD
	BEARDED FESCUE			
+	ELYMUS GLAUCUS**	1 GAL	5' O.C.	TBD
	BLUE WILDRYE			
+	FESTUCA ROEMERI**	1 GAL	5' O.C.	TBD
	ROEMER'S FESCUE			
+	POA SECUNDA**	1 GAL	5' O.C.	TBD
	PINE BLUEGRASS			
+	CAMASSIA OLIVAMASH**	1 GAL	5' O.C.	TBD
	COMMON CAMAS			
+	MAHONIA AQUIFOLIUM**	TBD	5' O.C.	508
	OREGON GRAPE			
+	ARCTOSTAPHYLOS UVA-URSI**	TBD	8' O.C.	217
	KINKININICK			
TOTAL SQ FT				16,802
APPROXIMATE QUANTITY OF CONTAINER SHRUBS FOR MITIGATION EA				725

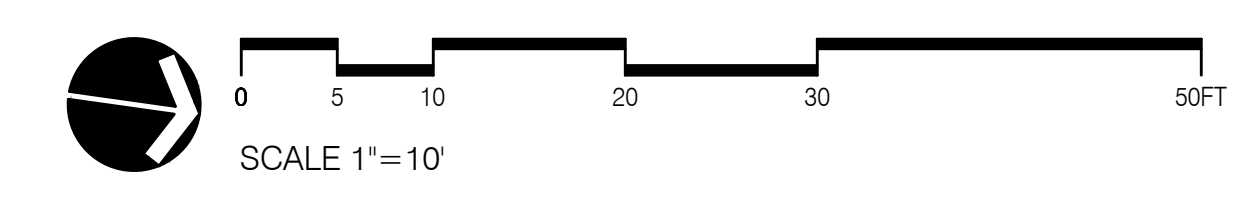
RIPARIAN				
SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	ELYMUS GLAUCUS**	TBD	2' O.C.	TBD
	BLUE WILD RYE			
/	ISANTI RED-OSIER DOGWOOD	TBD	12' O.C.	TBD
	CORNUS SERICEA ISANTI			
/	LUPINUS BICOLOR**	TBD	AS SHOWN	TBD
	MINIATURE LUPINE			
/	FESTUCA ROEMERI**	TBD	1' O.C.	TBD
	ROEMER'S FESCUE			
/	IRIS TENAX**	TBD	1' O.C.	TBD
	OREGON IRIS			
/	JUNCUS PATENS ELK BLUE**	TBD	2' O.C.	TBD
	ELK BLUE CALIFORNIA GRAY RUSH			
/	NATIVE SWALE MIX**			
	MEADOW BARLEY, CALIFORNIA OATGRASS, BLUE WILDRYE, ROEMER'S FESCUE, TUFTED HAIRGRASS, SPIKE BENT GRASS, WATER FOXTAIL, SLENDER HAIRGRASS	N/A	N/A	TBD
TOTAL SQ FT				6,717

TURF				
SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	FESTUCA ARLINDINACEA	TBD	N/A	TBD
	TALL FESCUE			
TOTAL SQ FT				25,618

ORNAMENTAL INFILL				
SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	ORNAMENTAL PLANTING - 30% INFILL AROUND EX. PLANTINGS, SPECIES TBD (MATCH EXISTING)	TBD	TBD	TBD
TOTAL SQ FT				5,982 (TOTAL) 1,794 (30%)

* DESIGNATES TREES IDENTIFIED ON MILWAUKIE NATIVE TREE LIST
 ** DESIGNATES PLANTS IDENTIFIED AS NATIVE ON PORTLAND PLANT LIST
 (M) DESIGNATES TREES REQUIRED FOR NATURAL RESOURCE MITIGATION

NOT FOR CONSTRUCTION



2ink Studio | Landscape Architecture
 150 NE Sun Avenue, Suite 200
 Portland, Oregon 97232-4645
 www.2inkstudio.com

REGISTERED
 LANDSCAPE ARCHITECT
 OREGON

MILWAUKIE BAY PARK
 100% Design Development

DATE: 05/03/2022
 DRAWN BY: JMWJ
 SCALE: AS NOTED

REVISIONS

NO.	DESCRIPTION	BY

PLANTING PLAN
 AREA 1

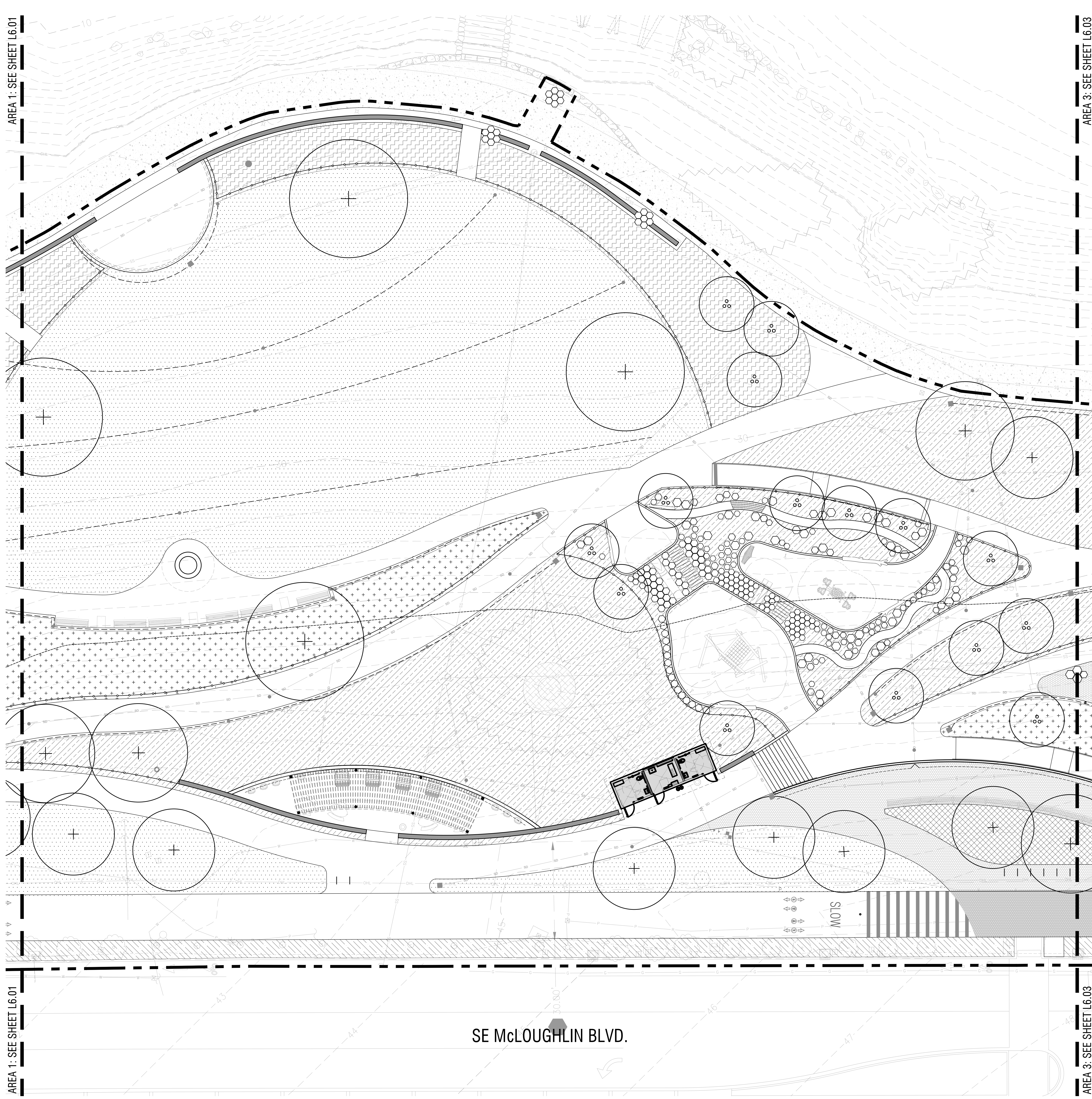
L6.01

AREA 1: SEE SHEET L6.01

AREA 1: SEE SHEET L6.01

AREA 3: SEE SHEET L6.03

AREA 3: SEE SHEET L6.03



PLANTING SCHEDULE

TREES

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	CERCIDIPHYLLUM JAPONICUM* KATSURA	TBD	AS SHOWN	TBD
+	RHAMNUS PURSHIANA*(M) CASCARA BUCKTHORN	1/2 IN CALIPER	12 O.C.	32
+	QUERCUS GARRYANA* OREGON WHITE OAK	TBD	AS SHOWN	TBD
+	ALNUS RUBRA*(M) RED ALDER	1/2 IN CALIPER	12 O.C.	32
+	INCENSE CEDAR CALOCEDRUS DECURRENS	TBD	AS SHOWN	TBD
+	BETULA NIGRA RIVER BIRCH	TBD	AS SHOWN	TBD
+	CORNUS NUTTALLI*(M) PACIFIC DOGWOOD	1/2 IN CALIPER	12 O.C.	33
+	ACER MACROPHYLLUM* BIG LEAF MAPLE	TBD	AS SHOWN	TBD
+	QUERCUS VELUTINA BLACK OAK	TBD	AS SHOWN	TBD
+	QUERCUS CHRYSOLEPIS CANYON LIVE OAK	TBD	AS SHOWN	TBD
+	FRAXINUS LATIFOLIA* OREGON ASH	TBD	AS SHOWN	TBD
+	KOUSA DOGWOOD CHINESE DOGWOOD	TBD	AS SHOWN	TBD
QUANTITY OF TREES FOR HCA MITIGATION EA				97
TOTAL EA				165

UPLAND

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	POLYSTICHUM MUNITUM** SWORD FERN	1 GAL	3 O.C.	TBD
+	MAHONIA AQUIFOLIUM** OREGON GRAPE	1 GAL	4 O.C.	170
+	ARCTOSTAPHYLOS UVA-URSI** KINNIKINNICK	1 GAL	8 O.C.	170
+	FESTUCA CALIFORNICA** CALIFORNIA FESCUE	1 GAL	1 O.C.	TBD
+	ERIOPHYLLUM LANATUM** WOOLLY SUNFLOWER	1 GAL	3 O.C.	TBD
+	SYMPHYCARPUS ALBUS** COMMON SNOWBERRY	1 GAL	5 O.C.	171
+	ACHILLEA MILLEFOLIUM** COMMON YARROW	1 GAL	3 O.C.	TBD
TOTAL SQ FT				21,975
APPROXIMATE QUANTITY OF CONTAINER SHRUBS FOR MITIGATION EA				511

ORNAMENTAL

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	CALAMAGROSTIS x ACUTIFLORA FEATHER REED GRASS	TBD	AS SHOWN	TBD
+	MAHONIA SOFT CARESS PP20183 SOFT CARESS MAHONIA	TBD	AS SHOWN	TBD
+	JUNIPERUS CONFERTA PACIFIC BLUE SHORE JUNIPER	TBD	AS SHOWN	TBD
+	PENNISETUM ALPECEUROIDES HAMELN HAMELN FOUNTAIN GRASS	TBD	AS SHOWN	TBD
TOTAL SQ FT				960

GRASSLAND

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	WILDFLOWER SEED MIX** SPECIES VARY	N/A	N/A	TBD
+	FESTUCA CALIFORNICA** CALIFORNIA FESCUE	1 GAL	TBD	TBD
+	DESCHAMPSIA CESPITOSA** TUFTED HAIRGRASS	1 GAL	5 O.C.	TBD
+	FESTUCA SUBULATA** BEARDED FESCUE	1 GAL	5 O.C.	TBD
+	ELYMUS GLAUCUS** BLUE WILDRIE	1 GAL	5 O.C.	TBD
+	FESTUCA ROEMERI** ROEMER'S FESCUE	1 GAL	5 O.C.	TBD
+	POA SECUNDA** PINE BLUEGRASS	1 GAL	5 O.C.	TBD
+	CAMASSIA QUAMASH** COMMON CAMAS	1 GAL	5 O.C.	TBD
+	MAHONIA AQUIFOLIUM** OREGON GRAPE	TBD	5 O.C.	508
+	ARCTOSTAPHYLOS UVA-URSI** KINNIKINNICK	TBD	8 O.C.	217
TOTAL SQ FT				16,802
APPROXIMATE QUANTITY OF CONTAINER SHRUBS FOR MITIGATION EA				725

RIPIARIAN

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	ELYMUS GLAUCUS** BLUE WILD RYE	TBD	2 O.C.	TBD
+	ISANTI RED-OSIER DOGWOOD CORNUS SERICEA ISANTI	TBD	12 O.C.	TBD
+	LUPINUS BICOLOR** MINIATURE LUPINE	TBD	AS SHOWN	TBD
+	FESTUCA ROEMERI** ROEMER'S FESCUE	TBD	1 O.C.	TBD
+	IRIS TENAX** OREGON IRIS	TBD	1 O.C.	TBD
+	JUNCUS PATENS ELK BLUE** ELK BLUE CALIFORNIA GRAY RUSH	TBD	2 O.C.	TBD
+	NATIVE SWALE MIX** MEADOW BARLEY, CALIFORNIA OATGRASS, BLUE WILDRIE, ROEMER'S FESCUE, TUFTED HAIRGRASS, SPIKE BENT GRASS, WATER FOXTAIL, SLENDER HAIRGRASS	N/A	N/A	TBD
TOTAL SQ FT				6,717

TURF

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	FESTUCA ARLINDINACEA TALL FESCUE	TBD	N/A	TBD
TOTAL SQ FT				25,618

ORNAMENTAL INFILL

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	ORNAMENTAL PLANTING - 30% INFILL AROUND EX. PLANTINGS, SPECIES TBD (MATCH EXISTING)	TBD	TBD	TBD
TOTAL SQ FT				5,982 (TOTAL) 1,794 (30%)

* DESIGNATES TREES IDENTIFIED ON MILWAUKIE NATIVE TREE LIST
 ** DESIGNATES PLANTS IDENTIFIED AS NATIVE ON PORTLAND PLANT LIST
 (M) DESIGNATES TREES REQUIRED FOR NATURAL RESOURCE MITIGATION



MILWAUKIE BAY PARK

100% Design Development

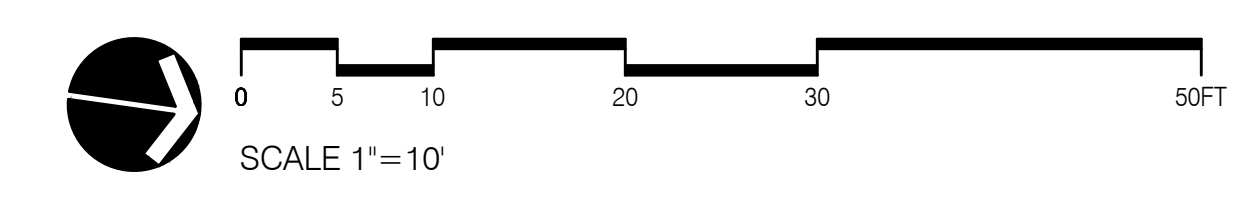
REVISIONS

DATE	DESCRIPTION	BY

PLANTING PLAN
AREA 2

L6.02

NOT FOR CONSTRUCTION



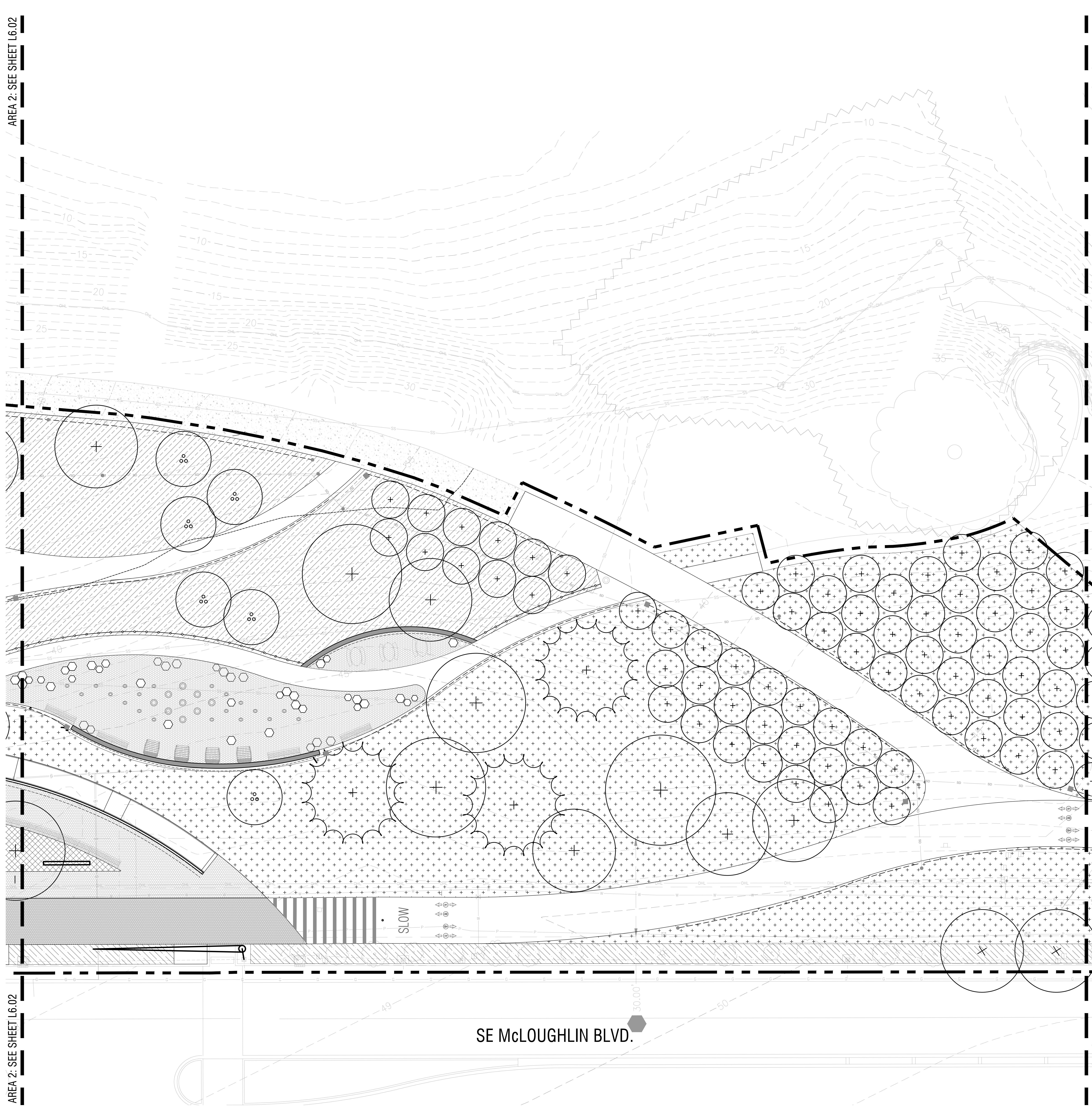
PROJECT ADDRESS: 150 SE 5th Avenue, Suite 200, Portland, Oregon 97204-4645
 DATE: 05/03/2022
 DRAWN BY: JMWJ
 SCALE: AS NOTED

AREA 2: SEE SHEET L6.02

AREA 2: SEE SHEET L6.02

AREA 4: SEE SHEET L6.04

AREA 4: SEE SHEET L6.04



PLANTING SCHEDULE

TREES

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	CERCIDIPHYLLUM JAPONICUM* KATSURA	TBD	AS SHOWN	TBD
	RHAMNUS PURSHIANA*(M) CASCARA BUCKTHORN	1/2 IN CALIPER	12 O.C.	32
+	QUERCUS GARRYANA* OREGON WHITE OAK	TBD	AS SHOWN	TBD
	ALNUS RUBRA*(M) RED ALDER	1/2 IN CALIPER	12 O.C.	32
+	INCENSE CEDAR CALOCEDRUS DECURRENS	TBD	AS SHOWN	TBD
	BETULA NIGRA RIVER BIRCH	TBD	AS SHOWN	TBD
+	CORNUS NUTTALLI*(M) PACIFIC DOGWOOD	1/2 IN CALIPER	12 O.C.	33
	ACER MACROPHYLLUM* BIG LEAF MAPLE	TBD	AS SHOWN	TBD
+	QUERCUS VELITINA BLACK OAK	TBD	AS SHOWN	TBD
	QUERCUS CHRYSOLEPIS CANYON LIVE OAK	TBD	AS SHOWN	TBD
+	FRAXINUS LATIFOLIA* OREGON ASH	TBD	AS SHOWN	TBD
	KOUSA DOGWOOD CHINESE DOGWOOD	TBD	AS SHOWN	TBD
QUANTITY OF TREES FOR HCA MITIGATION EA				97
TOTAL EA				165

UPLAND

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	POLYSTICHUM MUNITUM** SWORD FERN	1 GAL	3 O.C.	TBD
	MAHONIA AQUIFOLIUM** OREGON GRAPE	1 GAL	4 O.C.	170
+	ARCTOSTAPHYLOS UVA-URSI** KINNIKINICK	1 GAL	8 O.C.	170
	FESTUCA CALIFORNICA** CALIFORNIA FESCUE	1 GAL	1 O.C.	TBD
+	ERIOPHYLLUM LANATUM** WOOLLY SUNFLOWER	1 GAL	3 O.C.	TBD
	SYMPHYCARPOS ALBUS** COMMON SNOWBERRY	1 GAL	5 O.C.	171
+	ACHILLEA MILLEFOLIUM** COMMON YARROW	1 GAL	3 O.C.	TBD
	TOTAL SQ FT			
APPROXIMATE QUANTITY OF CONTAINER SHRUBS FOR MITIGATION EA				511

ORNAMENTAL

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	CALAMAGROSTIS x ACUTIFLORA FEATHER REED GRASS	TBD	AS SHOWN	TBD
	MAHONIA SOFT CARESS PP20183 SOFT CARESS MAHONIA	TBD	AS SHOWN	TBD
+	JUNIPERUS CONFERTA PACIFIC BLUE SHORE JUNIPER	TBD	AS SHOWN	TBD
	PENNISETUM ALOPECUROIDES HAMELN HAMELN FOUNTAIN GRASS	TBD	AS SHOWN	TBD
TOTAL SQ FT				960

GRASSLAND

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	WILDFLOWER SEED MIX** SPECIES VARY	N/A	N/A	TBD
	FESTUCA CALIFORNICA** CALIFORNIA FESCUE	1 GAL	TBD	TBD
+	DESCHAMPSIA CESPITOSA** TUFTED HAIRGRASS	1 GAL	5 O.C.	TBD
	FESTUCA SUBULATA** BEARDED FESCUE	1 GAL	5 O.C.	TBD
+	ELYMUS GLAUCUS** BLUE WILDRYE	1 GAL	5 O.C.	TBD
	FESTUCA ROEMERI** ROEMER'S FESCUE	1 GAL	5 O.C.	TBD
+	POA SECUNDA** PINE BLUEGRASS	1 GAL	5 O.C.	TBD
	CAMASSIA QUAMASH** COMMON CAMAS	1 GAL	5 O.C.	TBD
+	MAHONIA AQUIFOLIUM** OREGON GRAPE	TBD	5 O.C.	508
	ARCTOSTAPHYLOS UVA-URSI** KINNIKINICK	TBD	8 O.C.	217
TOTAL SQ FT				16,802
APPROXIMATE QUANTITY OF CONTAINER SHRUBS FOR MITIGATION EA				725

RIPARIAN

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	ELYMUS GLAUCUS** BLUE WILD RYE	TBD	2 O.C.	TBD
	ISANTI RED-OSIER DOGWOOD CORNUS SERICEA ISANTI	TBD	12 O.C.	TBD
+	LUPINUS BICOLOR** MINIATURE LUPINE	TBD	AS SHOWN	TBD
	FESTUCA ROEMERI** ROEMER'S FESCUE	TBD	1 O.C.	TBD
+	IRIS TENAX** OREGON IRIS	TBD	1 O.C.	TBD
	JUNCUS PATENS ELK BLUE** ELK BLUE CALIFORNIA GRAY RUSH	TBD	2 O.C.	TBD
+	NATIVE SWALE MIX** MEADOW BARLEY, CALIFORNIA OATGRASS, BLUE WILDRYE, ROEMER'S FESCUE, TUFTED HAIRGRASS, SPIKE BENT GRASS, WATER FOXTAIL, SLENDER HAIRGRASS	N/A	N/A	TBD
	TOTAL SQ FT			

TURF

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	FESTUCA ARLUNDINACEA TALL FESCUE	TBD	N/A	TBD
	TOTAL SQ FT			

ORNAMENTAL INFILL

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	ORNAMENTAL PLANTING - 30% INFILL AROUND EX. PLANTINGS, SPECIES TBD (MATCH EXISTING)	TBD	TBD	TBD
	TOTAL SQ FT			

* DESIGNATES TREES IDENTIFIED ON MILWAUKIE NATIVE TREE LIST
 ** DESIGNATES PLANTS IDENTIFIED AS NATIVE ON PORTLAND PLANT LIST
 (M) DESIGNATES TREES REQUIRED FOR NATURAL RESOURCE MITIGATION



MILWAUKIE BAY PARK
 100% Design Development
 PROJECT ADDRESS: [REDACTED]
 DATE: 05/03/2022
 SCALE: AS NOTED
 DRAWN BY: JMWJ

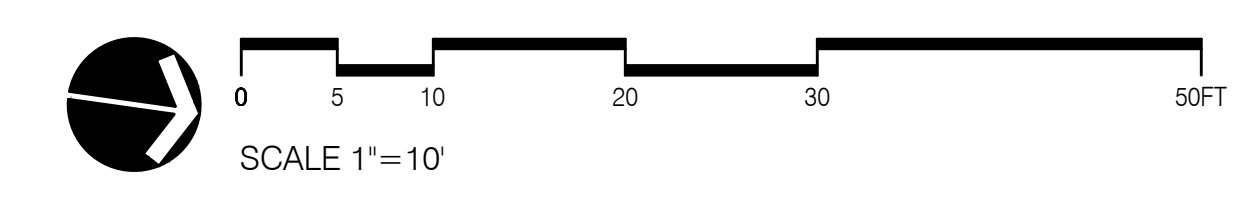
REVISIONS

DATE	DESCRIPTION	BY

PLANTING PLAN
 AREA 3

L6.03

NOT FOR CONSTRUCTION

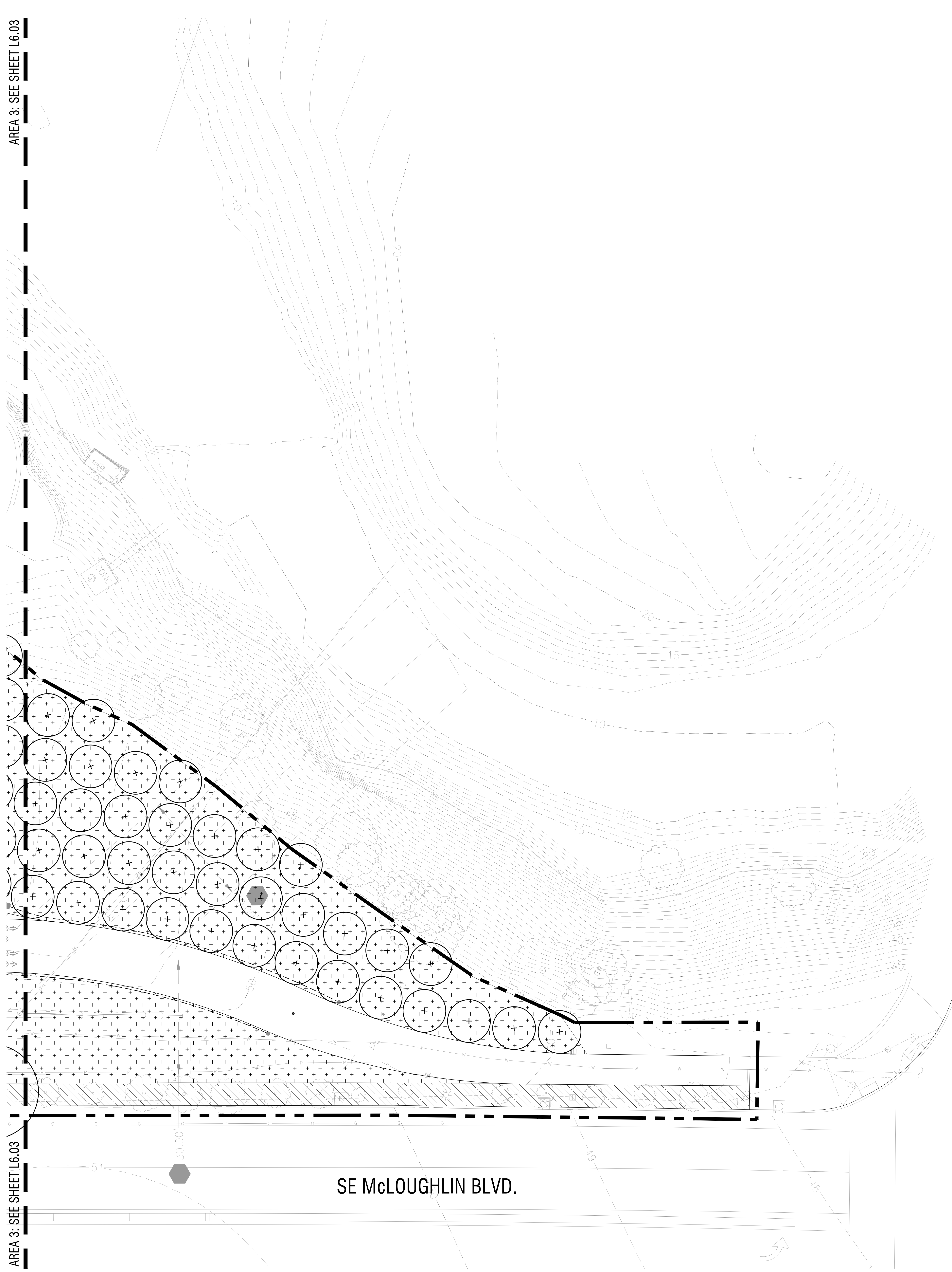


AREA 3: SEE SHEET L6.03

AREA 3: SEE SHEET L6.03

NOT FOR CONSTRUCTION

SE McLOUGHLIN BLVD.



PLANTING SCHEDULE

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	CERCIDIPHYLLUM JAPONICUM* KATSURA	TBD	AS SHOWN	TBD
	RHAMNUS PURSHIANA*(M) CASCARA BUCKTHORN	1/2 IN CALIPER	12 O.C.	32
+	QUERCUS GARRYANA* OREGON WHITE OAK	TBD	AS SHOWN	TBD
	ALNUS RUBRA*(M) RED ALDER	1/2 IN CALIPER	12 O.C.	32
+	INCENSE CEDAR CALOCEDRUS DECURRENS	TBD	AS SHOWN	TBD
	BETULA NIGRA RIVER BIRCH	TBD	AS SHOWN	TBD
+	CORNUS NUTTALLI*(M) PACIFIC DOGWOOD	1/2 IN CALIPER	12 O.C.	33
	ACER MACROPHYLLUM* BIG LEAF MAPLE	TBD	AS SHOWN	TBD
+	QUERCUS VELUTINA BLACK OAK	TBD	AS SHOWN	TBD
	QUERCUS CHRYSOLEPIS CANYON LIVE OAK	TBD	AS SHOWN	TBD
+	FRAXINUS LATIFOLIA* OREGON ASH	TBD	AS SHOWN	TBD
	KOUSA DOGWOOD CHINESE DOGWOOD	TBD	AS SHOWN	TBD
QUANTITY OF TREES FOR HCA MITIGATION EA				97
TOTAL EA				165

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	POLYSTICHUM MUNITUM** SWORD FERN	1 GAL	3' O.C.	TBD
	MAHONIA AQUIFOLIUM** OREGON GRAPE	1 GAL	4' O.C.	170
/	ARCTOSTAPHYLOS UVA-URSI** KINNIKINNICK	1 GAL	8' O.C.	170
	FESTUCA CALIFORNICA** CALIFORNIA FESCUE	1 GAL	1' O.C.	TBD
/	ERIOPHYLLUM LANATUM** WOOLLY SUNFLOWER	1 GAL	3' O.C.	TBD
	SYMPHYCARPOS ALBUS** COMMON SNOWBERRY	1 GAL	5' O.C.	171
/	ACHILLEA MILLEFOLIUM** COMMON YARROW	1 GAL	3' O.C.	TBD
	TOTAL SQ FT			
APPROXIMATE QUANTITY OF CONTAINER SHRUBS FOR MITIGATION EA				511

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	CALAMAGROSTIS x ACUTIFLORA FEATHER REED GRASS	TBD	AS SHOWN	TBD
	MAHONIA SOFT CARESS PP20183 SOFT CARESS MAHONIA	TBD	AS SHOWN	TBD
/	JUNIPERUS CONFERTA PACIFIC BLUE SHORE JUNIPER	TBD	AS SHOWN	TBD
	PENNISETUM ALOPECUROIDES HAMELN HAMELN FOUNTAIN GRASS	TBD	AS SHOWN	TBD
TOTAL SQ FT				960

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
+	WILDFLOWER SEED MIX** SPECIES VARY	N/A	N/A	TBD
	FESTUCA CALIFORNICA** CALIFORNIA FESCUE	1 GAL	TBD	TBD
+	DESCHAMPSIA CESPITOSA** TUFTED HAIRGRASS	1 GAL	5' O.C.	TBD
	FESTUCA SUBULATA** BEARDED FESCUE	1 GAL	5' O.C.	TBD
+	ELYMUS GLAUCUS** BLUE WILD RYE	1 GAL	5' O.C.	TBD
	FESTUCA ROEMERI** ROEMER'S FESCUE	1 GAL	5' O.C.	TBD
+	POA SECUNDA** PINE BLUEGRASS	1 GAL	5' O.C.	TBD
	CAMASSIA QUAMASH** COMMON CAMAS	1 GAL	5' O.C.	TBD
+	MAHONIA AQUIFOLIUM** OREGON GRAPE	TBD	5' O.C.	508
	ARCTOSTAPHYLOS UVA-URSI** KINNIKINNICK	TBD	8' O.C.	217
TOTAL SQ FT				16,802
APPROXIMATE QUANTITY OF CONTAINER SHRUBS FOR MITIGATION EA				725

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	ELYMUS GLAUCUS** BLUE WILD RYE	TBD	2' O.C.	TBD
	ISANTI RED-OSIER DOGWOOD CORNUS SERICEA ISANTI	TBD	12' O.C.	TBD
/	LUPINUS BICOLOR** MINIATURE LUPINE	TBD	AS SHOWN	TBD
	FESTUCA ROEMERI** ROEMER'S FESCUE	TBD	1' O.C.	TBD
/	IRIS TENAX** OREGON IRIS	TBD	1' O.C.	TBD
	JUNCUS PATENS ELK BLUE** ELK BLUE CALIFORNIA GRAY RUSH	TBD	2' O.C.	TBD
/	NATIVE SWALE MIX** MEADOW BARLEY, CALIFORNIA OATGRASS, BLUE WILD RYE, ROEMER'S FESCUE, TUFTED HAIRGRASS, SPIKE BENT GRASS, WATER FOXTAIL, SLENDER HAIRGRASS	N/A	N/A	TBD
	TOTAL SQ FT			

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	FESTUCA ARUNDINACEA TALL FESCUE	TBD	N/A	TBD
	TOTAL SQ FT			

SYM	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	QUANTITY
/	ORNAMENTAL PLANTING - 30% INFILL AROUND EX. PLANTINGS, SPECIES TBD (MATCH EXISTING)	TBD	TBD	TBD
	TOTAL SQ FT			

* DESIGNATES TREES IDENTIFIED ON MILWAUKIE NATIVE TREE LIST
 ** DESIGNATES PLANTS IDENTIFIED AS NATIVE ON PORTLAND PLANT LIST
 (M) DESIGNATES TREES REQUIRED FOR NATURAL RESOURCE MITIGATION

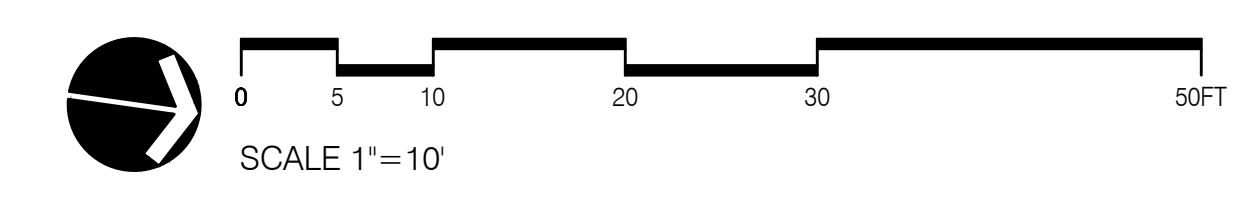


MILWAUKIE BAY PARK
 100% Design Development
 PROJECT ADDRESS: DRAWN BY: JMWJ
 DATE: 05/03/2022 SCALE: AS NOTED

NO.	DATE	DESCRIPTION	BY

PLANTING PLAN
 AREA 4

L6.04

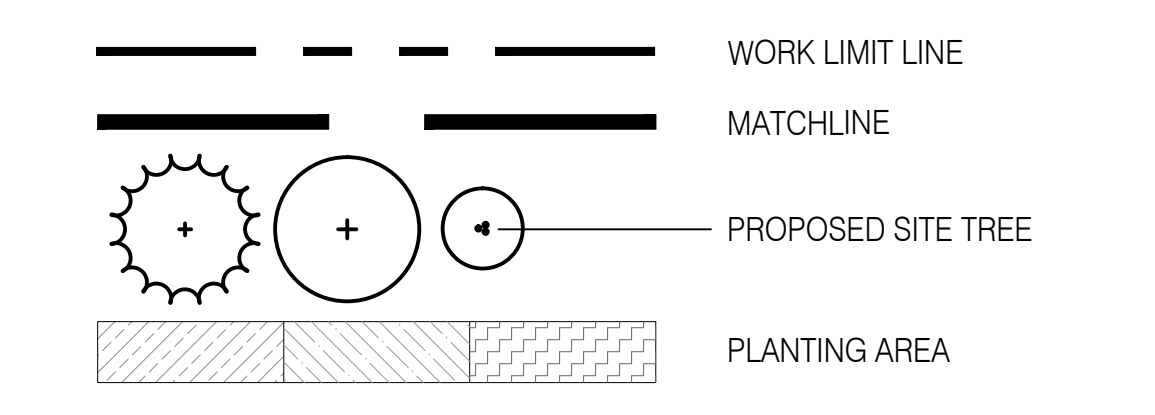


DATE	DESCRIPTION	BY

MATERIALS PLAN
 AREA 1

L2.01

LEGEND



DETAIL KEYNOTES

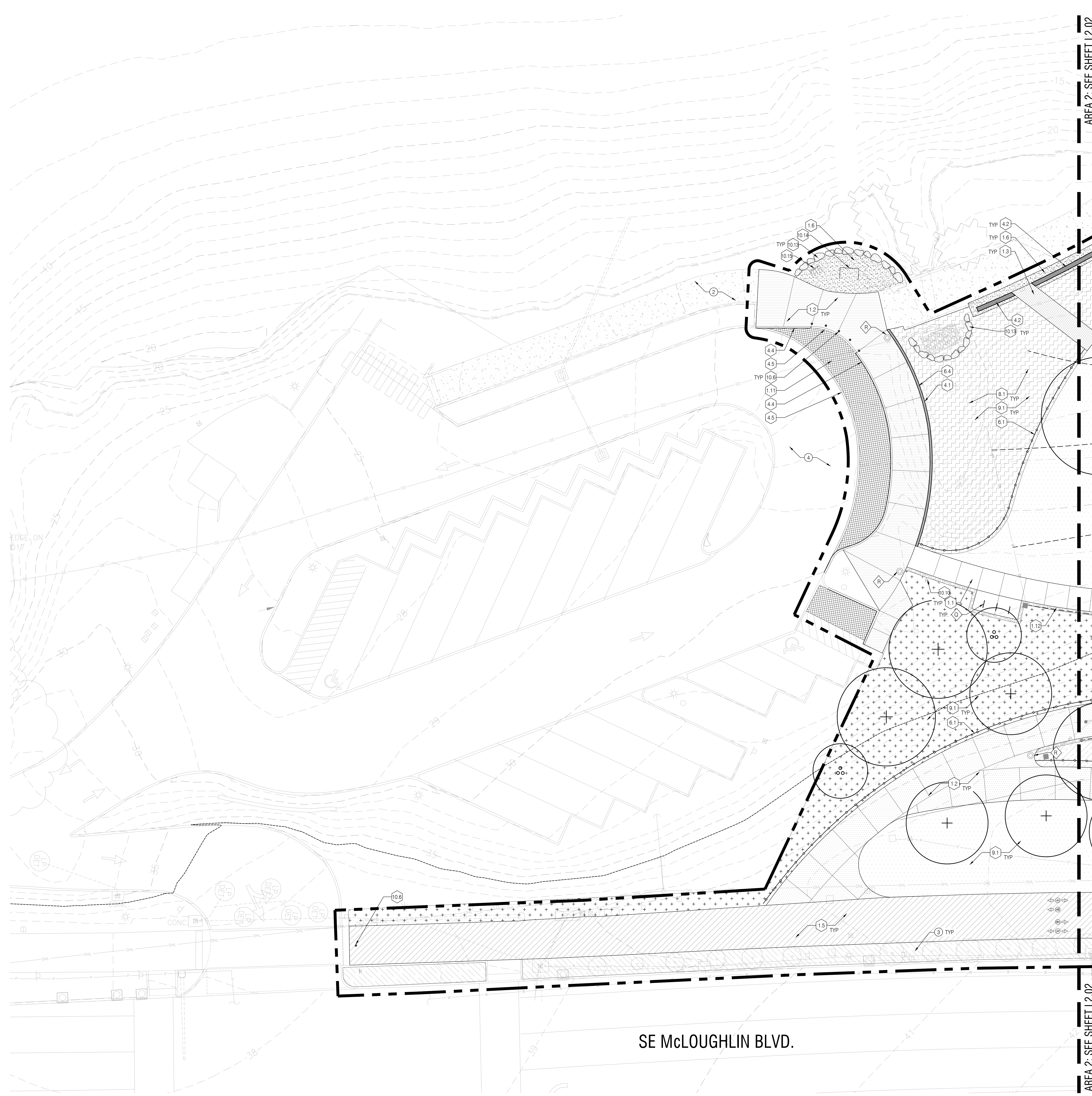
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
PAVEMENT, RAMPS, CURBS				
1.1	CONCRETE PAVING - PEDESTRIAN	01A.7.20	XLXX, XLXX	XLXX, XLXX
1.2	CONCRETE PAVING - VEHICULAR	02A.7.20	XLXX, XLXX	XLXX, XLXX
1.3	PEDESTRIAN BRIDGE OVER BIOSWALE	06A.7.20	XLXX, XLXX	XLXX, XLXX
1.4	CONCRETE UNIT PAVERS	03A.7.20	XLXX, XLXX	XLXX, XLXX
1.5	TROLLEY TRAIL PAVING - PERMEABLE ASPHALTIC CONCRETE	04A.7.20	XLXX, XLXX	XLXX, XLXX
1.6	GRAVEL PAVING	05A.7.20	XLXX, XLXX	XLXX, XLXX
1.7	RUBBER TILE PLAY SURFACING	08A.7.20	XLXX, XLXX	XLXX, XLXX
1.8	PAVERS - MATCH KLEIN POINT	03A.7.20	XLXX, XLXX	XLXX, XLXX
1.9	REINFORCED TURF PAVING	07A.7.20	XLXX, XLXX	XLXX, XLXX
1.10	CONCRETE STAGE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.11	MATCH EXISTING PARKING LOT PAVERS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.12	RIP RAP - 2'-4" RIVER ROCK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.13	BARK MULCH	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
JOINING				
2.1	SCORE JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
2.2	EXPANSION JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
2.3	DOWEL JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
STEPS				
3.1	CONCRETE STAIR	05A.7.30	XLXX, XLXX	XLXX, XLXX
3.2	STONE STEPS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
WALLS				
4.1	BOARD FORMED CONCRETE RETAINING WALL	10I.7.30	XLXX, XLXX	XLXX, XLXX
4.2	BOARD FORMED CONCRETE SEAT WALL	01A.7.30	XLXX, XLXX	XLXX, XLXX
4.3	BOARD FORMED CONCRETE KNEE WALL AT STAGE	02A.7.30	XLXX, XLXX	XLXX, XLXX
4.4	6" WIDE RAISED CURB	04A.7.30	XLXX, XLXX	XLXX, XLXX
4.5	6" WIDE FLUSH CURB	05A.7.30	XLXX, XLXX	XLXX, XLXX
4.6	BOARD FORMED CONCRETE LOW KNEE WALL	03A.7.30	XLXX, XLXX	XLXX, XLXX
SITE FURNISHINGS				
5.1	SEE FURNISHINGS SCHEDULE	L2.10	XLXX, XLXX	XLXX, XLXX
RAILINGS, BARRIERS, FENCING				
6.1	GOOSE & LANDSCAPE FENCING	2A.7.31	XLXX, XLXX	XLXX, XLXX
6.2	HANDRAIL	07.08A.7.30	XLXX, XLXX	XLXX, XLXX
6.3	PLAYGROUND FENCING	01A.7.31	XLXX, XLXX	XLXX, XLXX
6.4	GUARDRAIL	09A.7.30	XLXX, XLXX	XLXX, XLXX
LANDSCAPE LIGHTING				
7.1	NOT SHOWN, SEE ELECTRICAL PLAN	SEE ELECTRICAL	XLXX, XLXX	XLXX, XLXX
DRAINAGE				
8.1	DRAINAGE SWALE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
PLANTING, SOILS, LANDSCAPE				
9.1	PLANTING AREA	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
9.2	COLUMNAR BASALT LANDSCAPE BOULDER	01A.7.51	XLXX, XLXX	XLXX, XLXX
9.3	EXISTING TREE(S) TO REMAIN (CANOPY LINE SHOWN)	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
MISCELLANEOUS SITE FEATURES				
10.1	INTERACTIVE WATER FEATURE	01A.7.60	XLXX, XLXX	XLXX, XLXX
10.2	RESTROOM BUILDING	SEE ARCH	XLXX, XLXX	XLXX, XLXX
10.3	OVERHEAD SHADE TRELIS	SEE ARCH	XLXX, XLXX	XLXX, XLXX
10.4	FIRE PIT	08A.7.31	XLXX, XLXX	XLXX, XLXX
10.5	SEE PLAY EQUIPMENT SCHEDULE	L2.10	XLXX, XLXX	XLXX, XLXX
10.6	REMOVABLE BOLLARD	05A.7.50	XLXX, XLXX	XLXX, XLXX
10.7	PARK ENTRY SIGN	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.8	NEW TRAFFIC SIGNAL	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.9	SCULPTURE BASE (1 of 3)	01A.7.40	XLXX, XLXX	XLXX, XLXX
10.10	TROLLEY TRAIL SIGNAGE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.11	THERMOPLASTIC PAVEMENT MARKINGS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.12	MISC. PARK SIGN, EXACT LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.13	SALVAGED LANDSCAPE BOULDER	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.14	KAYAK RACK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.15	LIFE JACKET RACK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.16	WATER FEATURE PUSH BUTTON	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX

GENERAL NOTES

- ALL PLANTING AREAS SHALL BE FULLY IRRIGATED. SEE IRRIGATION PLANS AND NARRATIVE FOR MORE INFORMATION.

KEYNOTES

- JUNCTION LOCATION TBD.
- EXISTING CONCRETE PAVING TO REMAIN.
- EXISTING PLANTING AREA TO REMAIN.
- EXISTING ASPHALTIC CONCRETE PAVING TO REMAIN.

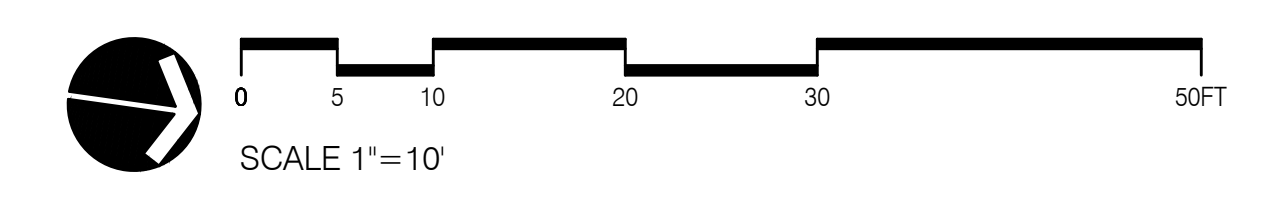


AREA 2: SEE SHEET L2.02

AREA 2: SEE SHEET L2.02

SE McLOUGHLIN BLVD.

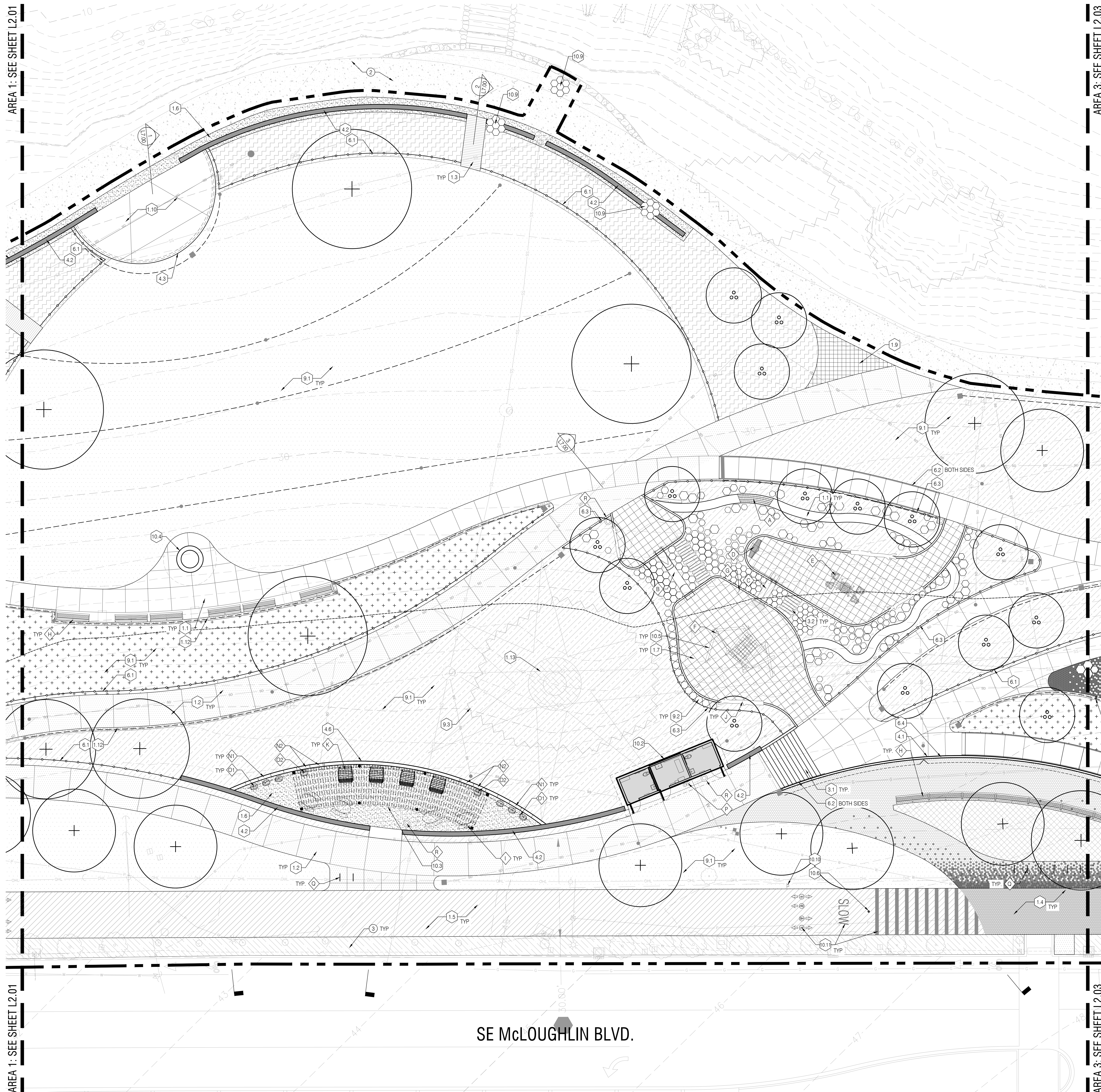
NOT FOR CONSTRUCTION



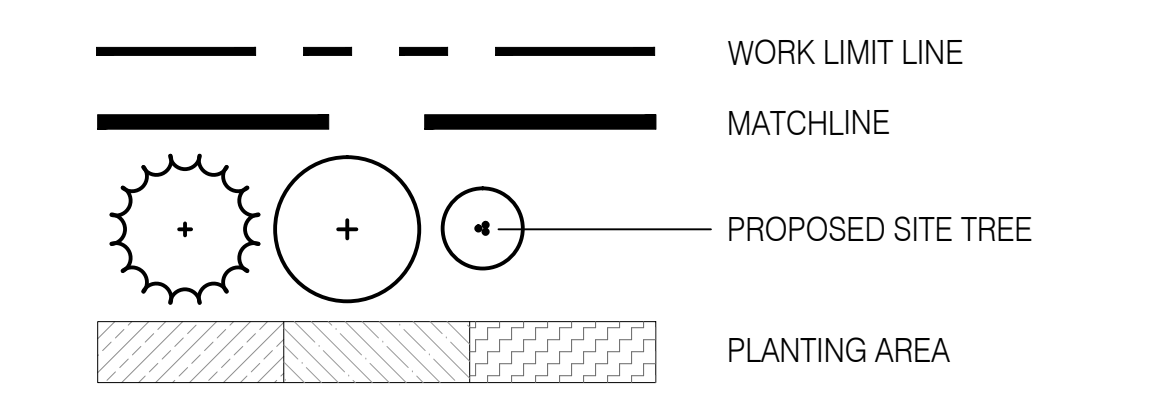
DRAWING SET SCALE: 1"=10'
 IF THIS BAR DOES NOT MEASURE 1" IN LENGTH, THE SCALE INDICATED THROUGHOUT THIS SET IS NOT ACCURATE. REPEAT SCALE PRIOR TO USING DRAWINGS.

AREA 1: SEE SHEET L2.01

AREA 3: SEE SHEET L2.03



LEGEND



DETAIL KEYNOTES

#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
10 PAVEMENT, RAMPS, CURBS				
1.1	CONCRETE PAVING - PEDESTRIAN	01A.7.20	XLXX, XLXX	XLXX, XLXX
1.2	CONCRETE PAVING - VEHICULAR	02A.7.20	XLXX, XLXX	XLXX, XLXX
1.3	PEDESTRIAN BRIDGE OVER BIOSWALE	06A.7.20	XLXX, XLXX	XLXX, XLXX
1.4	CONCRETE UNIT PAVERS	03A.7.20	XLXX, XLXX	XLXX, XLXX
1.5	TROLLEY TRAIL PAVING - PERMEABLE ASPHALTIC CONCRETE	04A.7.20	XLXX, XLXX	XLXX, XLXX
1.6	GRAVEL PAVING	05A.7.20	XLXX, XLXX	XLXX, XLXX
1.7	RUBBER TILE PLAY SURFACING	08A.7.20	XLXX, XLXX	XLXX, XLXX
1.8	PAVERS - MATCH KLEIN POINT	03A.7.20	XLXX, XLXX	XLXX, XLXX
1.9	REINFORCED TURF PAVING	07A.7.20	XLXX, XLXX	XLXX, XLXX
1.10	CONCRETE STAGE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.11	MATCH EXISTING PARKING LOT PAVERS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.12	RIP RAP - 2'-4" RIVER ROCK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.13	BARK MULCH	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
20 JOINTING				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
2.1	SCORE JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
2.2	EXPANSION JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
2.3	DOWEL JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
30 STEPS				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
3.1	CONCRETE STAIR	05A.7.30	XLXX, XLXX	XLXX, XLXX
3.2	STONE STEPS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
40 WALLS				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
4.1	BOARD FORMED CONCRETE RETAINING WALL	10A.7.30	XLXX, XLXX	XLXX, XLXX
4.2	BOARD FORMED CONCRETE SEAT WALL	01A.7.30	XLXX, XLXX	XLXX, XLXX
4.3	BOARD FORMED CONCRETE KNEE WALL AT STAGE	02A.7.30	XLXX, XLXX	XLXX, XLXX
4.4	6" WIDE RAISED CURB	04A.7.30	XLXX, XLXX	XLXX, XLXX
4.5	6" WIDE FLUSH CURB	05A.7.30	XLXX, XLXX	XLXX, XLXX
4.6	BOARD FORMED CONCRETE LOW KNEE WALL	03A.7.30	XLXX, XLXX	XLXX, XLXX
50 SITE FURNISHINGS				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
5.1	SEE FURNISHINGS SCHEDULE	L2.10	XLXX, XLXX	XLXX, XLXX
60 RAILINGS, BARRIERS, FENCING				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
6.1	GOOSE & LANDSCAPE FENCING	2A.7.31	XLXX, XLXX	XLXX, XLXX
6.2	HANDRAIL	07.08A.7.30	XLXX, XLXX	XLXX, XLXX
6.3	PLAYGROUND FENCING	01A.7.31	XLXX, XLXX	XLXX, XLXX
6.4	GUARDRAIL	09A.7.30	XLXX, XLXX	XLXX, XLXX
70 LANDSCAPE LIGHTING				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
7.1	NOT SHOWN, SEE ELECTRICAL PLAN	SEE ELECTRICAL	XLXX, XLXX	XLXX, XLXX
80 DRAINAGE				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
8.1	DRAINAGE SWALE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
90 PLANTING, SOILS, LANDSCAPE				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
9.1	PLANTING AREA	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
9.2	COLUMNAR BASALT LANDSCAPE BOULDER	01A.7.51	XLXX, XLXX	XLXX, XLXX
9.3	EXISTING TREE(S) TO REMAIN (CANOPY LINE SHOWN)	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
100 MISCELLANEOUS SITE FEATURES				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
10.1	INTERACTIVE WATER FEATURE	01A.7.60	XLXX, XLXX	XLXX, XLXX
10.2	RESTROOM BUILDING	SEE ARCH	XLXX, XLXX	XLXX, XLXX
10.3	OVERHEAD SHADE TRELIS	SEE ARCH	XLXX, XLXX	XLXX, XLXX
10.4	FIRE PIT	08A.7.31	XLXX, XLXX	XLXX, XLXX
10.5	SEE PLAY EQUIPMENT SCHEDULE	L2.10	XLXX, XLXX	XLXX, XLXX
10.6	REMOVABLE BOLLARD	05A.7.50	XLXX, XLXX	XLXX, XLXX
10.7	PARK ENTRY SIGN	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.8	NEW TRAFFIC SIGNAL	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.9	SCULPTURE BASE (1 of 3)	01A.7.40	XLXX, XLXX	XLXX, XLXX
10.10	TROLLEY TRAIL SIGNAGE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.11	THERMOPLASTIC PAVEMENT MARKINGS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.12	MISC. PARK SIGN, EXACT LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.13	SALVAGED LANDSCAPE BOULDER	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.14	KAYAK RACK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.15	LIFE JACKET RACK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.16	WATER FEATURE PUSH BUTTON	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX

GENERAL NOTES

1. ALL PLANTING AREAS SHALL BE FULLY IRRIGATED. SEE IRRIGATION PLANS AND NARRATIVE FOR MORE INFORMATION.

KEYNOTES

- ① JUNCTION LOCATION TBD.
- ② EXISTING CONCRETE PAVING TO REMAIN.
- ③ EXISTING PLANTING AREA TO REMAIN.
- ④ EXISTING ASPHALTIC CONCRETE PAVING TO REMAIN.



REGISTERED
LANDSCAPE ARCHITECT
OREGON

MILWAUKIE BAY PARK
100% Design Development

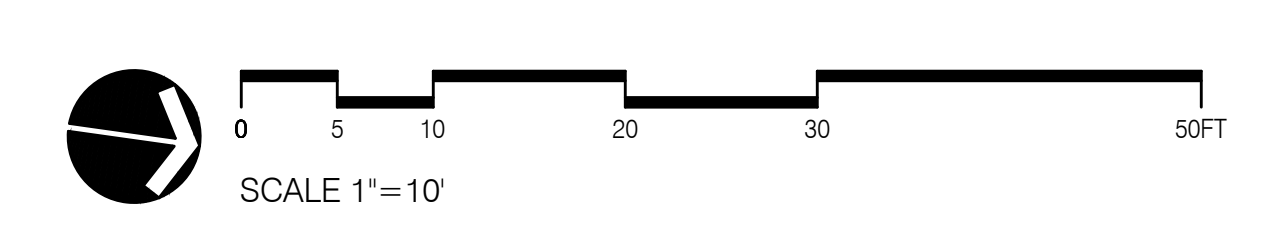
REVISIONS

DATE	DESCRIPTION	BY

MATERIALS PLAN
AREA 2

L2.02

NOT FOR CONSTRUCTION



DATE PLOTTED: 05/03/2022 10:58 AM SCALE: 1"=10' SHEET: L2.02



MILWAUKIE BAY PARK

100% Design Development

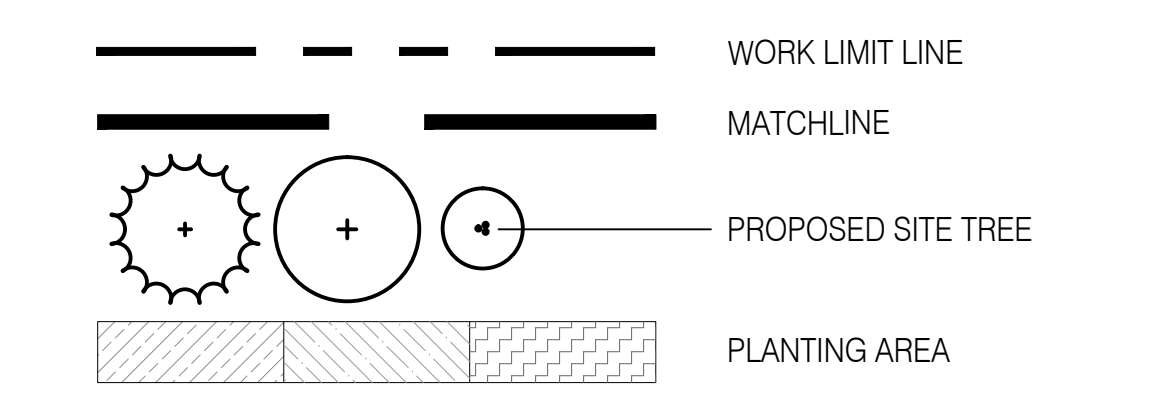
DATE: 08/03/2022 SCALE: AS NOTED DRAWN BY: JW

NO.	DATE	DESCRIPTION	BY

MATERIALS PLAN
AREA 3

L2.03

LEGEND



DETAIL KEYNOTES

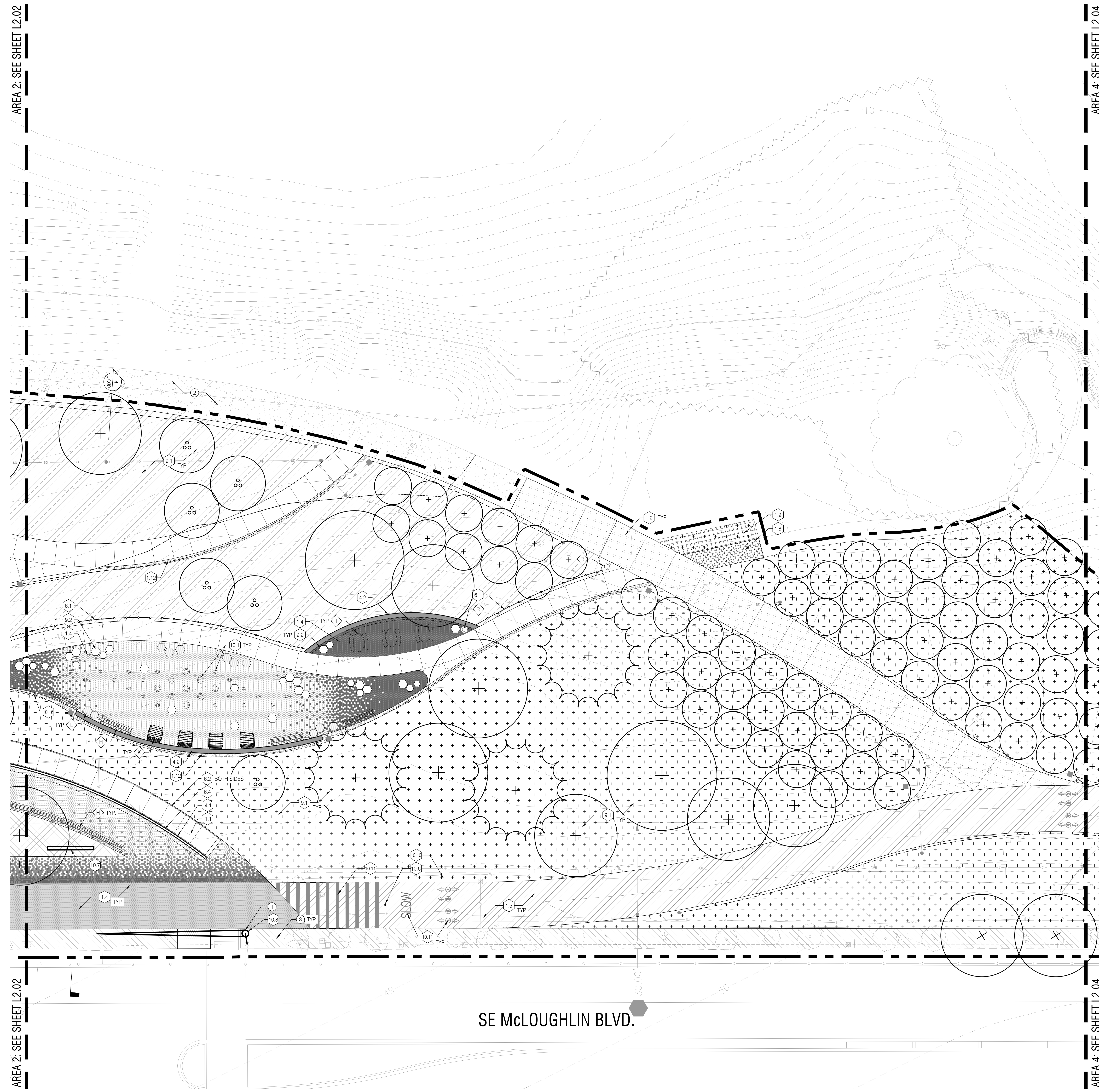
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
10 PAVEMENT, RAMPS, CURBS				
1.1	CONCRETE PAVING - PEDESTRIAN	01/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.2	CONCRETE PAVING - VEHICULAR	02/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.3	PEDESTRIAN BRIDGE OVER BIOSWALE	06/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.4	CONCRETE UNIT PAVERS	03/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.5	TROLLEY TRAIL PAVING - PERMEABLE ASPHALTIC CONCRETE	04/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.6	GRAVEL PAVING	05/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.7	RUBBER TILE PLAY SURFACING	08/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.8	PAVERS - MATCH KLEIN POINT	03/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.9	REINFORCED TURF PAVING	07/L7.20	X/LXX, X/LXX	X/LXX, X/LXX
1.10	CONCRETE STAGE	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
1.11	MATCH EXISTING PARKING LOT PAVERS	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
1.12	RIP RAP - 2" RIVER ROCK	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
1.13	BARK MULCH	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
20 JOINTING				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
2.1	SCORE JOINT, LOCATION TBD	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
2.2	EXPANSION JOINT, LOCATION TBD	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
2.3	DOWEL JOINT, LOCATION TBD	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
30 STEPS				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
3.1	CONCRETE STAIR	05/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
3.2	STONE STEPS	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
40 WALLS				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
4.1	BOARD FORMED CONCRETE RETAINING WALL	10/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
4.2	BOARD FORMED CONCRETE SEAT WALL	01/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
4.3	BOARD FORMED CONCRETE KNEE WALL AT STAGE	02/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
4.4	6" WIDE RAISED CURB	04/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
4.5	6" WIDE FLUSH CURB	05/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
4.6	BOARD FORMED CONCRETE LOW KNEE WALL	03/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
50 SITE FURNISHINGS				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
5.1	SEE FURNISHINGS SCHEDULE	L2.10	X/LXX, X/LXX	X/LXX, X/LXX
60 RAILINGS, BARRIERS, FENCING				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
6.1	GOOSE & LANDSCAPE FENCING	21/L7.31	X/LXX, X/LXX	X/LXX, X/LXX
6.2	HANDRAIL	07/08/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
6.3	PLAYGROUND FENCING	01/L7.31	X/LXX, X/LXX	X/LXX, X/LXX
6.4	GUARDRAIL	09/L7.30	X/LXX, X/LXX	X/LXX, X/LXX
70 LANDSCAPE LIGHTING				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
7.1	NOT SHOWN, SEE ELECTRICAL PLAN	SEE ELECTRICAL	X/LXX, X/LXX	X/LXX, X/LXX
80 DRAINAGE				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
8.1	DRAINAGE SWALE	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
90 PLANTING, SOILS, LANDSCAPE				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
9.1	PLANTING AREA	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
9.2	COLUMNAR BASALT LANDSCAPE BOULDER	01/L7.51	X/LXX, X/LXX	X/LXX, X/LXX
9.3	EXISTING TREE(S) TO REMAIN (CANOPY LINE SHOWN)	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
100 MISCELLANEOUS SITE FEATURES				
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
10.1	INTERACTIVE WATER FEATURE	01/L7.60	X/LXX, X/LXX	X/LXX, X/LXX
10.2	RESTROOM BUILDING	SEE ARCH	X/LXX, X/LXX	X/LXX, X/LXX
10.3	OVER-HEAD SHADE TRELIS	SEE ARCH	X/LXX, X/LXX	X/LXX, X/LXX
10.4	FIRE PIT	08/L7.31	X/LXX, X/LXX	X/LXX, X/LXX
10.5	SEE PLAY EQUIPMENT SCHEDULE	L2.10	X/LXX, X/LXX	X/LXX, X/LXX
10.6	REMOVABLE BOLLARD	05/L7.50	X/LXX, X/LXX	X/LXX, X/LXX
10.7	PARK ENTRY SIGN	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
10.8	NEW TRAFFIC SIGNAL	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
10.9	SCULPTURE BASE (1 of 3)	01/L7.40	X/LXX, X/LXX	X/LXX, X/LXX
10.10	TROLLEY TRAIL SIGNAGE	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
10.11	THERMOPLASTIC PAVEMENT MARKINGS	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
10.12	MISC. PARK SIGN, EXACT LOCATION TBD	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
10.13	SALVAGED LANDSCAPE BOULDER	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
10.14	KAYAK RACK	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
10.15	LIFE JACKET RACK	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX
10.16	WATER FEATURE PUSH BUTTON	SEE NARRATIVE	X/LXX, X/LXX	X/LXX, X/LXX

GENERAL NOTES

- ALL PLANTING AREAS SHALL BE FULLY IRRIGATED. SEE IRRIGATION PLANS AND NARRATIVE FOR MORE INFORMATION.

KEYNOTES

- JUNCTION LOCATION TBD.
- EXISTING CONCRETE PAVING TO REMAIN.
- EXISTING PLANTING AREA TO REMAIN.
- EXISTING ASPHALTIC CONCRETE PAVING TO REMAIN.



AREA 2: SEE SHEET L2.02

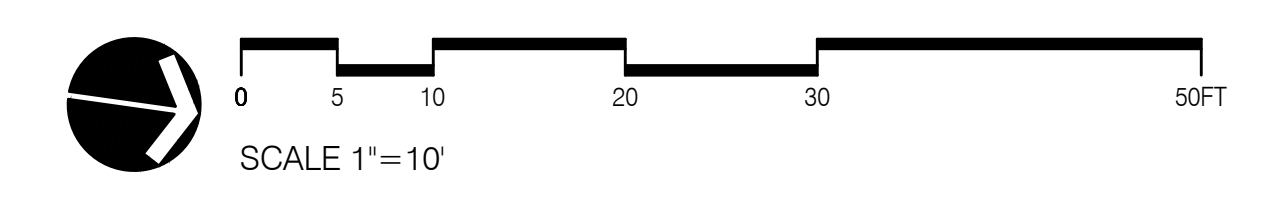
AREA 4: SEE SHEET L2.04

AREA 2: SEE SHEET L2.02

AREA 4: SEE SHEET L2.04

SE McLOUGHLIN BLVD.

NOT FOR CONSTRUCTION



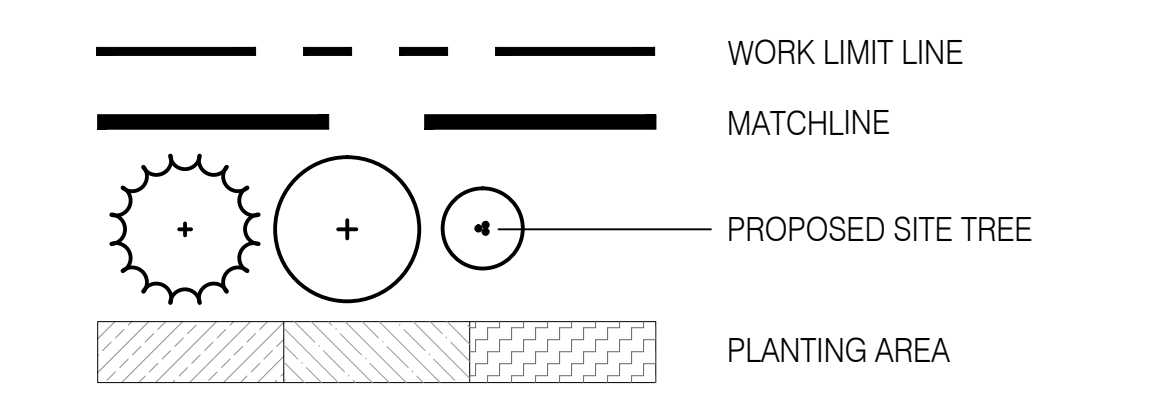
ONE INCH = FORTY FEET SCALE. IF THE BAR DOES NOT MEASURE 1 INCH IN LENGTH, THE SCALE INDICATED THROUGHOUT THIS SET IS NOT ACCURATE. REPEAT SCALE PRIOR TO USING DRAWINGS.

DATE	DESCRIPTION	BY

MATERIALS PLAN
 AREA 4

L2.04

LEGEND



DETAIL KEYNOTES

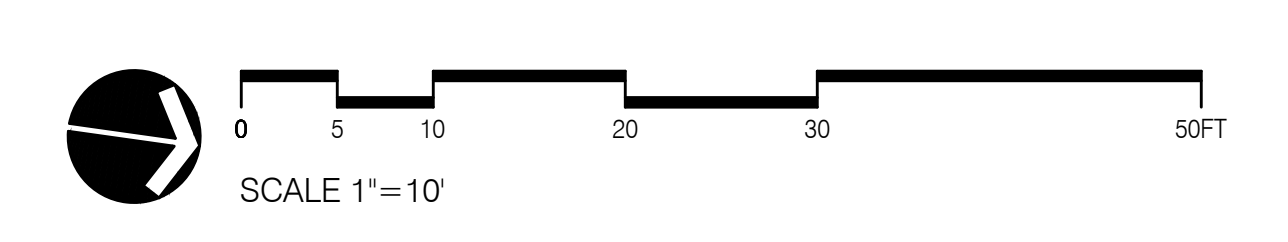
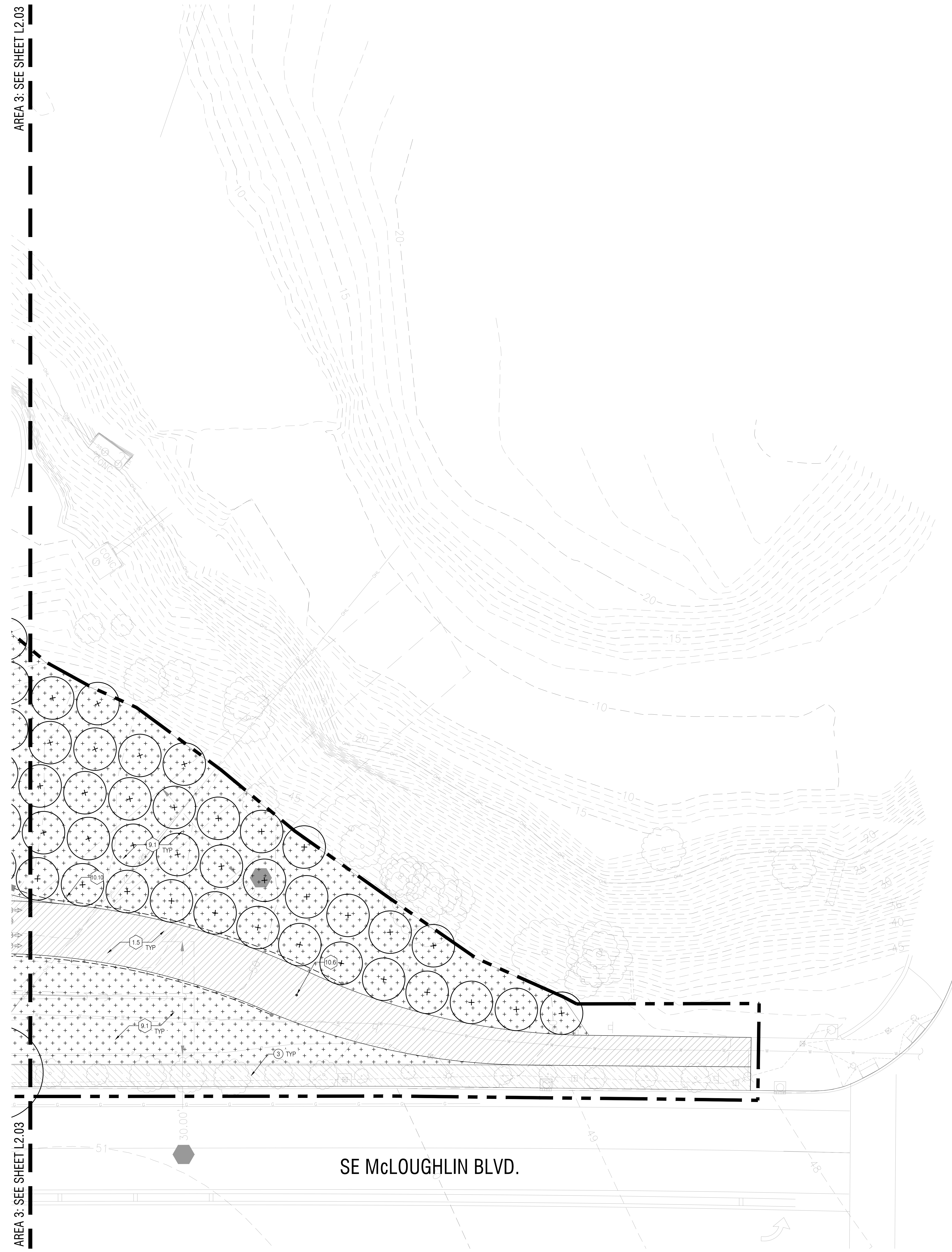
#	DESCRIPTION	DETAIL / SHEET	RELATED DETAILS	SPEC SECTIONS
1.0 PAVEMENT, RAMPS, CURBS				
1.1	CONCRETE PAVING - PEDESTRIAN	01A.7.20	XLXX, XLXX	XLXX, XLXX
1.2	CONCRETE PAVING - VEHICULAR	02A.7.20	XLXX, XLXX	XLXX, XLXX
1.3	PEDESTRIAN BRIDGE OVER BIOSWALE	06A.7.20	XLXX, XLXX	XLXX, XLXX
1.4	CONCRETE UNIT PAVERS	03A.7.20	XLXX, XLXX	XLXX, XLXX
1.5	TROLLEY TRAIL PAVING - PERMEABLE ASPHALTIC CONCRETE	04A.7.20	XLXX, XLXX	XLXX, XLXX
1.6	GRAVEL PAVING	05A.7.20	XLXX, XLXX	XLXX, XLXX
1.7	RUBBER TILE PLAY SURFACING	08A.7.20	XLXX, XLXX	XLXX, XLXX
1.8	PAVERS - MATCH KLEIN POINT	03A.7.20	XLXX, XLXX	XLXX, XLXX
1.9	REINFORCED TURF PAVING	07A.7.20	XLXX, XLXX	XLXX, XLXX
1.10	CONCRETE STAGE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.11	MATCH EXISTING PARKING LOT PAVERS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.12	RIP RAP - 2'-4" RIVER ROCK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
1.13	BARK MULCH	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
2.0 JOINTING				
2.1	SCORE JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
2.2	EXPANSION JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
2.3	DOWEL JOINT, LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
3.0 STEPS				
3.1	CONCRETE STAIR	05A.7.30	XLXX, XLXX	XLXX, XLXX
3.2	STONE STEPS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
4.0 WALLS				
4.1	BOARD FORMED CONCRETE RETAINING WALL	10I.7.30	XLXX, XLXX	XLXX, XLXX
4.2	BOARD FORMED CONCRETE SEAT WALL	01A.7.30	XLXX, XLXX	XLXX, XLXX
4.3	BOARD FORMED CONCRETE KNEE WALL AT STAGE	02A.7.30	XLXX, XLXX	XLXX, XLXX
4.4	6" WIDE RAISED CURB	04A.7.30	XLXX, XLXX	XLXX, XLXX
4.5	6" WIDE FLUSH CURB	05A.7.30	XLXX, XLXX	XLXX, XLXX
4.6	BOARD FORMED CONCRETE LOW KNEE WALL	03A.7.30	XLXX, XLXX	XLXX, XLXX
5.0 SITE FURNISHINGS				
5.1	SEE FURNISHINGS SCHEDULE	L2.10	XLXX, XLXX	XLXX, XLXX
6.0 RAILINGS, BARRIERS, FENCING				
6.1	GOOSE & LANDSCAPE FENCING	2I.7.31	XLXX, XLXX	XLXX, XLXX
6.2	HANDRAIL	07.08A.7.30	XLXX, XLXX	XLXX, XLXX
6.3	PLAYGROUND FENCING	01A.7.31	XLXX, XLXX	XLXX, XLXX
6.4	GUARDRAIL	09A.7.30	XLXX, XLXX	XLXX, XLXX
7.0 LANDSCAPE LIGHTING				
7.1	NOT SHOWN, SEE ELECTRICAL PLAN	SEE ELECTRICAL	XLXX, XLXX	XLXX, XLXX
8.0 DRAINAGE				
8.1	DRAINAGE SWALE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
9.0 PLANTING, SOILS, LANDSCAPE				
9.1	PLANTING AREA	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
9.2	COLUMNAR BASALT LANDSCAPE BOULDER	01A.7.51	XLXX, XLXX	XLXX, XLXX
9.3	EXISTING TREE(S) TO REMAIN (CANOPY LINE SHOWN)	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.0 MISCELLANEOUS SITE FEATURES				
10.1	INTERACTIVE WATER FEATURE	01A.7.60	XLXX, XLXX	XLXX, XLXX
10.2	RESTROOM BUILDING	SEE ARCH	XLXX, XLXX	XLXX, XLXX
10.3	OVERHEAD SHADE TRELIS	SEE ARCH	XLXX, XLXX	XLXX, XLXX
10.4	FIRE PIT	08A.7.31	XLXX, XLXX	XLXX, XLXX
10.5	SEE PLAY EQUIPMENT SCHEDULE	L2.10	XLXX, XLXX	XLXX, XLXX
10.6	REMOVABLE BOLLARD	05A.7.50	XLXX, XLXX	XLXX, XLXX
10.7	PARK ENTRY SIGN	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.8	NEW TRAFFIC SIGNAL	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.9	SCULPTURE BASE (1 of 3)	01A.7.40	XLXX, XLXX	XLXX, XLXX
10.10	TROLLEY TRAIL SIGNAGE	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.11	THERMOPLASTIC PAVEMENT MARKINGS	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.12	MISC. PARK SIGN, EXACT LOCATION TBD	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.13	SALVAGED LANDSCAPE BOULDER	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.14	KAYAK RACK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.15	LIFE JACKET RACK	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX
10.16	WATER FEATURE PUSH BUTTON	SEE NARRATIVE	XLXX, XLXX	XLXX, XLXX

GENERAL NOTES

- ALL PLANTING AREAS SHALL BE FULLY IRRIGATED. SEE IRRIGATION PLANS AND NARRATIVE FOR MORE INFORMATION.

KEYNOTES

- JUNCTION LOCATION TBD.
- EXISTING CONCRETE PAVING TO REMAIN.
- EXISTING PLANTING AREA TO REMAIN.
- EXISTING ASPHALTIC CONCRETE PAVING TO REMAIN.



DRAWING SET SCALE: 1"=10' IN LENGTH. THE SCALE INDICATED THROUGHOUT THIS SET IS NOT ACCURATE. KEEP SCALE PRIOR TO USING DRAWINGS.
 ONE INCH DOES NOT MEASURE 1" IN LENGTH. THE SCALE DOES NOT MEASURE 1" IN LENGTH. THE SCALE DOES NOT MEASURE 1" IN LENGTH. THE SCALE DOES NOT MEASURE 1" IN LENGTH.

Appendix C

Site Photographs



Photo 1. Looking east at the Milwaukie Bay Park shoreline from the Willamette River. Stone steps visible on bank in left of photo (6/6/22).



Photo 2. Looking southeast at the Milwaukie Bay Park shoreline from the river. Boat ramp visible at right (6/6/22).



Photo 3. Looking northeast at the Milwaukie Bay Park shoreline from the Willamette River. Large coastal redwood in park visible at right (6/6/22).



Photo 4. Looking south along the park shoreline and riverside trail from the top of the stone river access steps (6/6/22).



Photo 5. Looking north along the river shoreline and riverside path from the top of the stone steps (6/6/22).



Photo 6. Looking north within vegetated corridor along the river, from a point north of the stone steps (6/6/22).



Photo 7. Looking west over the Johnson Creek confluence with the Willamette River (6/6/22).



Photo 8. Looking upstream (northeast) along Johnson Creek from the northern portion of the park (6/6/22).



Photo 9. Looking north along the Willamette River from the southwestern portion of the park (6/6/22).



Photo 10. Looking south along the river shoreline towards the boat ramp in the southwestern portion of the park (6/6/22).



Photo 11. Looking north-northwest across the project area lawn from the southeastern portion of the project area (6/6/22).



Photo 12. Looking west-northwest from the southeastern portion of the project area towards Willamette River (6/6/22).



Photo 13. Looking southwest from the southeastern portion of the project area across the vehicle and boat trailer parking lot (6/6/22).



Photo 14. Looking south from the southeastern portion of the project area. Parking lot and access route visible at right. SE McLoughlin Blvd. visible at left (6/6/22).