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Critical Areas Study

Lake Forest Park Lakefront Improvements Project

SEPTEMBER 19, 2025

LAKE FOREST PARK
WASHINGTON

Cory Mattson, Community Programs Planner
17425 Ballinger Way NE
Lake Forest Park, WA 98155

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Prepared by:

Roen Hohlfeld
Ecologist, ISA Certified Arborist®
rhohlfeld@facetnw.com

Kenny Booth, AICP
Senior Planner
kbooth@facetnw.com

FACET

Kirkland Office
750 6th Street S
Kirkland, WA 98033
425.822.5242

The information contained in this report is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria outlined in the methods section. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, state, and federal regulatory authorities. No other warranty, expressed or implied, is made.

Table of Contents

List of Figures

List of Tables

1. Introduction

1.1 **Background and Purpose**

The purpose of this study is to document potential critical area impacts associated with the proposed Lakefront Park Improvements Project in the City of Lake Forest Park, Washington (Figure 1). The project area is located at 17337, 17345, and 17347 Beach Drive NE (parcels #403010-0035, -0040, and -0050). Parcel 403010-0050 is developed with the existing Lyon Creek Waterfront Preserve, including two stream bridges and a viewing pier. Parcel 403010-0035 is developed with the remnant remains of four buildings. Parcel 403010-0040 is developed with three buildings, two remnant buildings, and a pier. All three parcels are almost entirely encumbered by critical areas and their corresponding buffers.

According to the City's critical area maps and studies performed by Facet, the northern portion of the parcels include seismic hazard areas, while the southern portion of the parcels contain several wetlands. Additionally, Lyon Creek flows through the western portion of parcel no. 403010-0050 into Lake Washington. The buffer associated with Lyon Creek encompasses the majority of the parcel, as well as the western portion of parcel no. 403010-0040. The length of stream included in the project area is approximately 290 feet.

The project proposes to improve public waterfront access through the transition of two recently acquired single-family residential properties (parcels 403010-0035 and -0040) into a public waterfront park. The project design aims to be respective of the natural habitat and features of the site, preserve and enhance existing features that represent the historical narrative of Lake Forest Park, and consider the current and future responsibilities of the City. The newly acquired properties and associated improvements will be integrated with the existing Lyon Creek Waterfront Preserve to form one continuous public park, with recreational uses focused on the two newly acquired parcels and the existing Preserve maintained as natural area (see Appendix A for 70% Design Plans.).

Lake Forest Park Municipal Code (LFPMC) 16.16.100 and the City's Shoreline Master Program (SMP) (Ordinance 1042, Appendix A), Sections 100 and 110 require preparation of a critical areas study that adequately evaluates probable impacts that may result from the proposed project. This study summarizes the findings of the wetland and stream delineation report and documents potential sensitive area impacts and proposed mitigation.

1.2 **Location**

The study area is defined as parcels 403010-0035, -0040, and -0050, totaling approximately 3.3-acres in size (Figure 1). It is located in the City of Lake Forest Park in Section 10 of Township 26 North, Range 04 East. The subject parcels are located in the Lake Washington-Sammamish River drainage basin of the Cedar-Sammamish Water Resource Inventory Area (WRIA 8). The "Action Area" is delineated for the purposes of the Endangered Species Act and includes all areas that the project will affect either directly, indirectly, and/or cumulatively, and is not merely the immediate area involved in the project.

City of Lake Forest Park Lakefront Park Community Center Project

Legend

Project Area and Action Area

Lakeforest City Limits

0 250 500 1,000 Feet

Project Location

Site Address: 17337, 17345, & 17347 Beach Drive NE, Lake Forest Park, WA

Parcels: #403010-0035, -0040, & -0050

Prepared for: City of Lake Forest Park

Facet Project #2303.0384.02

Notes: *Print Date: 12/27/2024*

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Figure 1. Project location.

2. Existing Conditions

2.1 **Landscape Setting**

The project area is within the Lyon Creek watershed. Lyon Creek originates from wetlands in the Cities of Mountlake Terrace and Brier, north of Lake Forest Park. The Lyon Creek watershed has an area of about 3.8 square miles, sloping from a high elevation of 550 feet down to 20 feet above sea level at the outlet, and is located primarily in the City of Lake Forest Park.

The existing Lyon Creek Waterfront Preserve supports a mix of native, non-native, and ornamental deciduous and herbaceous vegetation in a narrow riparian zone, which is bordered by shoreline areas intended for public use. The Preserve is characterized by a natural area with previously installed mitigation plantings along Lyon Creek, located centrally on the parcel.

Tree species on the Preserve parcel include Douglas-fir (*Pseudotsuga menziesii*), western hemlock (*Thuja plicata*), and black cottonwood (*Populus trichocarpa*); shrub and herbaceous vegetation includes rhododendron (*Rhododendron macrophyllum*), vine maple (*Acer circinatum*), osoberry (*Oemeleria cerasiformis*), beaked hazelnut (*Corylus cornuta*), lady fern (*Pteridium aquilinum*), sword fern (*Polystichum munitum*), and other native species. Some invasives are also present along the creek bank in the park, including Himalayan blackberry (*Rubus armeniacus*), reed canarygrass (*Phalaris arundinacea*), and ivy (*Hedera helix*). The Preserve also includes a pedestrian trail with two creek crossings as well as a viewing dock structure extending into Lake Washington. A small parking area is located at the park entry at the northwest end of the parcel.

Adjacent to the Waterfront Preserve, the two newly acquired parcels currently have several cabins, and a garage structure clustered around the northwest portion of the site. The various buildings are connected by paved paths and compacted gravel driveways. These parcels are characterized by a large, maintained lawn area and ornamental vegetation, including several large, mature trees. A bulkhead is located along Lake Washington in the southeastern part of the site; the parcels also include a dock structure.

Site topography is generally flat, with Lake Washington located at the relatively low elevation point along the southeast boundary of the project area. The surrounding area is characterized by high-intensity residential land use.

2.2 **Zoning, Use, and Development**

The project area is zoned single family residential (RS 7,200). The surrounding parcels are also primarily zoned single family residential. The shoreline designation is a mix of Urban Conservancy (UC) and Shoreline Residential (SR). North of the subject properties, parcels are zoned for mixed use and single family residential, which residential, commercial, and government uses occupy. The area is fairly developed and population density ranges from 3,500-5,500 people per square mile[1].

1. [1] "*U.S. Census website*". *United States Census Bureau. Retrieved December 19, 2012.*

Lyon Creek Waterfront Preserve is a .89-acre passive park located across from the Lake Forest Park Town Center. The Preserve is a former single family residential property that was purchased and converted into a public preserve in the late 1990s. In 2015, a stream improvement project re-established the floodplain of Lyon Creek by clearing, grading, and constructing a berm to contain flood water to the limits of the property. The area was restored with native vegetation.

2.3 Critical Areas

Critical areas in the City of Lake Forest Park include wetlands and streams, critical aquifer recharge areas (CARAs), fish and wildlife habitat areas, geological hazards, and frequently flooded areas. See Figure 2.

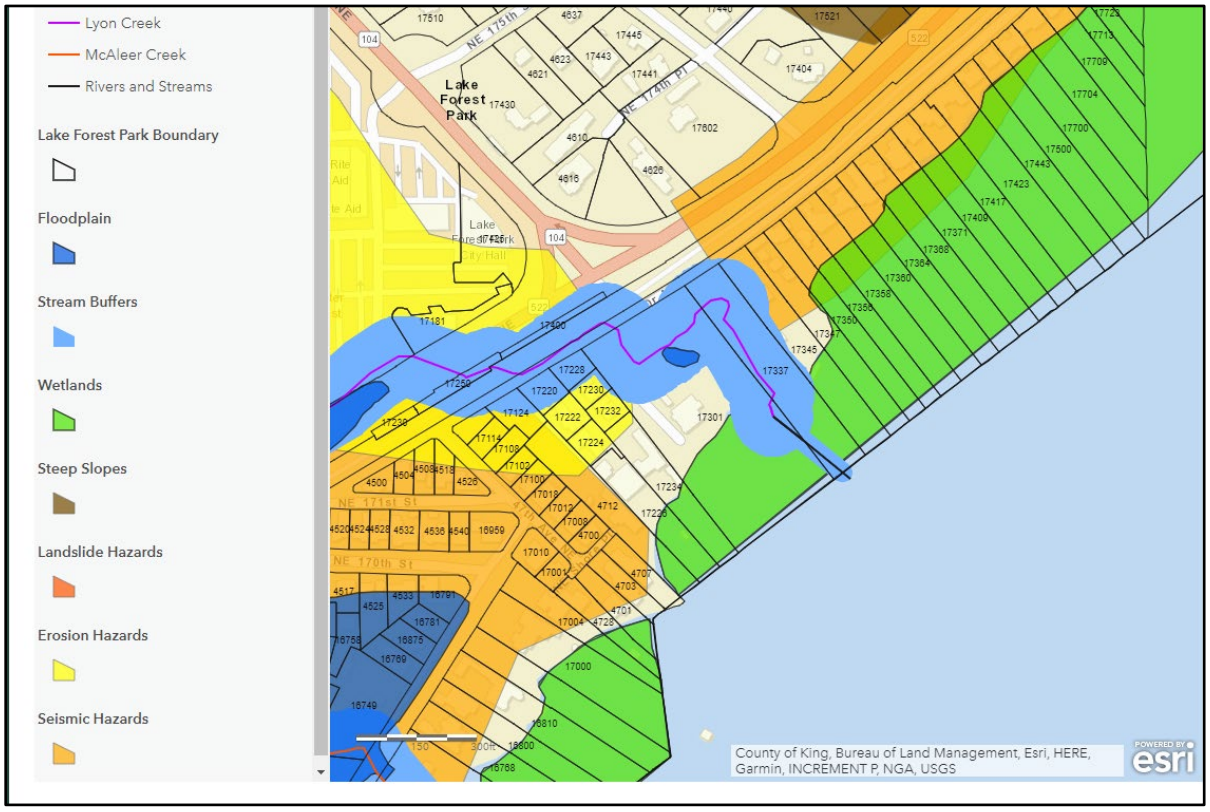

Figure 2. Critical areas mapped by Lake Forest Park Interactive Map

2.3.1 Wetlands and Streams

Critical areas within the proposed project area include Lyon Creek, Lake Washington and three wetlands that were delineated by Facet staff in 2023 (formerly DCG/Watershed 2023). These critical areas fall under the jurisdiction of the SMP. A portion of Lyon Creek also falls within the jurisdiction of the City's Critical Areas Ordinance which is codified in LFPMC 16.16. Wetland buffers are detailed in the LFP SMP *Appendix A-Environmentally Sensitive Areas-Regulations in Shoreline Jurisdiction*. Regulatory compliance is discussed in further detail in Section 3 below. A summary of the critical area classifications, categories and required standard buffer widths is provided in Table 1.

Table 1. Summary of wetland and streams and required buffers per Lake Forest Park SMP.

Feature Name	Classification	Category	Habitat Score	Buffer (ft)	Setback (ft)
Wetland A	Lake-Fringe	III	5 (<19*)	75	15
Wetland B	Lake-Fringe	III	5 (<19*)	75	15
Wetland C	Riverine	III	6 (20-28*)	125	15
Lyon Creek	Type 1	n/a	n/a	115	15
Lake Washington	Type S	n/a	n/a	n/a	50
**Habitat score translated per the State of Washington Department of Ecology guidelines.*					

Lake Washington, a shoreline of statewide significance, is located in the southern portion of the project area. The ordinary high water mark (OHWM) constitutes the limits of this waterbody.

One stream (Lyon Creek) is located in the western portion of the study area. The OHWM along left and right banks constitutes the limits of this feature. The stream enters the northwest corner of the Waterfront Preserve and flows south to Lake Washington along the western boundary of the parcel. OHWM indicators such as flowing water, defined bed and bank characteristics, scour, sorted sediments, and hydrophytic vegetation were observed along the stream channel. Lyon Creek is a low gradient stream with a channel width of approximately 10-feet. The streambed is composed of fine sediments, cobble, and small boulders. Riparian vegetation, including a forested canopy and understory vegetation overhangs the stream banks throughout the project area. Large woody debris is present, however stream channel complexity, such as pools and braiding, is limited.

Three wetlands (Wetland A, B, and C) were identified and delineated within the project area as summarized in Tables 2, 3, and 4.

Table 2. Wetland A assessment summary.

WETLAND A – Assessment Summary											
Location:	Parcels #403010-0035 & -0040; Lake Forest Park										
WRIA / Sub-basin:	Cedar-Sammamish watershed (WRIA 8) / Lake Washington- Sammamish River sub-basin										
	2014 Western WA Ecology Rating:	Category III									
	Buffer Width and Buffer Setback:	75-foot standard buffer and 15-foot setback									
	Wetland Size:	Approx. 2,500 SF									
	Cowardin Classification(s):	Palustrine Emergent Palustrine Forested									
	HGM Classification(s):	Lake-Fringe									
	Wetland Data Sheet(s):	DP-2									
	Upland Data Sheet (s):	DP-6, DP-7, DP-9									
Vegetation	Tree stratum:	*Alnus rubra, Salix matsudana*									
	Shrub stratum:	*Rubus bifrons*									
	Herb stratum:	*Poa* sp., *Lysimachia vulgaris, Phalaris arundinacea, Hedera helix*									
Soils	Soil survey:	Urban land – Alderwood complex, 0 to 5 % slopes									
	Field data:	Redox Dark Surface (F6)									
Hydrology	Source:	Lake-fringe, high water table									
	Field data:	Geomorphic Position (D2), FAC-Neutral Test (D5)									
Wetland Functions											
	Improving Water Quality			Hydrologic			Habitat				
Site Potential	H	**M**	L	H	M	**L**	H	M	**L**		
Landscape Potential	**H**	M	L	**H**	M	L	H	M	**L**		
Value	H	**M**	L	**H**	M	L	**H**	M	L	**TOTAL**	
Score Based on Ratings	7			7			5			19	

Table 3. Wetland B assessment summary.

WETLAND B – Assessment Summary											
Location:	Parcels #403010-0035 & -0040; Lake Forest Park										
WRIA / Sub-basin:	Cedar-Sammamish watershed (WRIA 8) / Lake Washington- Sammamish River sub-basin										
	2014 Western WA Ecology Rating:	Category III									
	Buffer Width and Buffer Setback:	75-foot standard buffer and 15-foot setback									
	Wetland Size:	Approx. 1,125 SF									
	Cowardin Classification(s):	Palustrine Emergent									
	HGM Classification(s):	Lake-Fringe									
	Wetland Data Sheet(s):	DP-3									
	Upland Data Sheet (s):	DP-11, DP-12, DP-13									
Vegetation	Tree stratum:	*n/a*									
	Shrub stratum:	*n/a*									
	Herb stratum:	*Poa* sp.*, Iris pseudacorus, Lotus corniculatus, Phalaris arundinacea, Persicaria maculosa*									
Soils	Soil survey:	Urban land – Alderwood complex, 0 to 5 % slopes									
	Field data:	Sandy Redox (S5)									
Hydrology	Source:	Lake-fringe, high water table									
	Field data:	Geomorphic Position (D2), FAC-Neutral Test (D5)									
Wetland Functions											
	Improving Water Quality			Hydrologic			Habitat				
Site Potential	H	**M**	L	H	M	**L**	H	M	**L**		
Landscape Potential	**H**	M	L	**H**	M	L	H	M	**L**		
Value	H	**M**	L	H	**M**	L	**H**	M	L	**TOTAL**	
Score Based on Ratings	7			6			5			18	

Table 5. Wetland C assessment summary.

WETLAND C – Assessment Summary			
Location:	Parcels #403010-0050; Lake Forest Park		
WRIA / Sub-basin:	Cedar-Sammamish watershed (WRIA 8) / Lake Washington- Sammamish River sub-basin		
	2014 Western WA Ecology Rating:	Category III	
	Buffer Width and Buffer Setback:	125-foot standard buffer and 15-foot setback	
	Wetland Size:	Approx. 0.25 acres	
	Cowardin Classification(s):	Palustrine Emergent Palustrine Scrub-shrub Palustrine Forested	
	HGM Classification(s):	Riverine, Lake-Fringe	
	Wetland Data Sheet(s):	DP-4	
	Upland Data Sheet (s):	DP-5	
Vegetation	Tree stratum: Shrub stratum: Herb stratum:	*Alnus rubra, Thuja plicata, Fraxinus latifolia* *Acer circinatum, Cornus sericea, Physocarpus capitatus, Rubus bifrons* *Persicaria maculosa, Solanum dulcamara, Carex obnupta, Phalaris arundinacea, Impatience capensis*	
Soils	Soil survey: Field data:	Urban land – Alderwood complex, 0 to 5 % slopes Redox Dark Surface (F6)	
Hydrology	Source: Field data:	Lyon Creek, lake-fringe Geomorphic Position (D2), FAC-Neutral Test (D5)	

Wetland Functions										
	Improving Water Quality			Hydrologic			Habitat			
Site Potential	H	**M**	L	H	**M**	L	H	**M**	L	
Landscape Potential	**H**	M	L	**H**	M	L	H	M	**L**	
Value	H	M	**L**	H	M	**L**	**H**	M	L	**TOTAL**
Score Based on Ratings	6			6			6			18

2.3.2 Fish and Wildlife Habitat Areas

Priority Habitat and Priority Species are defined in the Lake Forest SMP as:

Priority Habitat *- A habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:*

- *Comparatively high fish or wildlife density;*
- *Comparatively high fish or wildlife species diversity;*
- *Fish spawning habitat;*
- *Important wildlife habitat;*
- *Important fish or wildlife seasonal range;*
- *Important fish or wildlife movement corridor;*
- *Rearing and foraging habitat;*
- *Important marine mammal haul-out;*
- *Refugia habitat;*
- *Limited availability;*
- *High vulnerability to habitat alteration;*
- *Unique or dependent species; or*
- *Shellfish bed.*

A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (such as oak woodlands or eelgrass meadows). A priority habitat may also be described by a successional stage (such as, old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife.

Priority Species *- Species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria listed below.*

> *(a) Criterion 1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the department of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.*
>
> *(b) Criterion 2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.*
>
> *(c) Criterion 3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.*

(d) Criterion 4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered.

An Official Species List of threatened and endangered species under the jurisdiction of the US Fish and Wildlife Service (USFWS) that may occur in the project area was also compiled and downloaded from the USFWS Information Planning and Conservation (IPaC) website on July 23, 2024 and December 22, 2024. Endangered Species Act (ESA)-listed species under the jurisdiction of USFWS potentially present within the project area include bull trout (*Salvelinus confluentus*), marbled murrelet (*Brachyramphus marmoratus*), yellow-billed cuckoo (*Coccyzus americanus),* North American wolverine *(Gulo gulo luscus*), Northwestern pond turtle *(Actinemys marmorata),* and monarch butterfly *(Danaus Plexippus)*. In addition, the National Marine Fisheries Service (NMFS) Critical Habitat Mapper shows the project area is also located within designated critical habitat for Puget Sound Chinook salmon (*Oncorynchus mykiss*).

The Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species Mapper was also queried on July 23, 2024 and December 22, 2024. The report included resident coastal cutthroat (*Oncorhynchus clarki*), Coho (Oncorhynchus kisutch), winter steelhead (*Oncorhynchus mykiss*), sockeye (*Oncorhynchus nerka*) and little brown bat (*Myotis lucifugus*). Fish species are reported to occur in Lyon Creek and little brown bat is reported to occur in the general area, however specific locations are not reported.

Critical habitat for Chinook salmon includes Lake Washington (Watershed Code 17110012-03) of the Puget Sound ESU (U.S. Office of the Federal Register, 2 September 2005)Critical habitat for bull trout of the Coastal-Puget Sound DPS also includes Lake Washington, which is in Critical Habitat Unit 28 – Puget Sound (U.S. Office of the Federal Register, 18 October 2010). Lake Washington is not designated as critical habitat for Puget Sound steelhead. The project area does not contain critical habitat for the other species listed on Ipac.

Fish and wildlife species present in the project area will be further described in the Biological Evaluation (BE) for the project and impacts will be minimized via measures prescribed by USFWS and NMFS.

Table 6. Federally listed species reported through IPac.

Common Name	Scientific Name	Federal Status	Comments
North American Wolverine	*Gulo gulo luscus*	Threatened	No critical habitat has been designated for this species.
Marbled Murrelet Population: U.S.A. (CA, OR, WA)	*Brachyramphus marmoratus*	Threatened	There is final critical habitat for this species. Your location does not overlap the critical habitat.
Yellow-billed Cuckoo Population: Western U.S. DPS	*Coccyzus americanus*	Threatened	There is final critical habitat for this species. Your location does not overlap the critical habitat.
Northwestern Pond Turtle	*Actinemys marmorata*	Proposed Threatened	No critical habitat has been designated for this species.
Bull Trout Population: U.S.A., coterminous, lower 48 states	*Salvelinus confluentus*	Threatened	There is final critical habitat for this species. Your location overlaps the critical habitat.
Monarch Butterfly	*Danaus plexippus*	Candidate	No critical habitat has been designated for this species.
Bull Trout	*Salvelinus confluentus*	Final	
Chinook Salmon (Puget Sound ESU)	*Oncorhynchus tshawytscha*	Threatened-Final	

Table 7. Federally listed species reported through PHS.

Common Name	Scientific Name	Federal Status	State Status	Comments
Resident Coastal Cutthroat	*Oncorhynchus clarki:*	N/A	N/A	Lyon Creek
Coho, Stock Name: Lake Washington/Sammamish Tribs	*Oncorhynchus kisutch*	Candidate	N/A	Lyon Creek

Winter Steelhead	*Oncorhynchus mykiss*	N/A	N/A	Lyon Creek
Sockeye- Stock Name: Lake Washington Beach Spawning Sockeye	*Oncorhynchus nerka*	Not Warranted	N/A	Lyon Creek
Little Brown Bat	*Myotis lucifugus*	N/A	N/A	Polygon represents one or more records of the species occurrence

3. Regulatory Compliance

3.1.1 City of Lake Forest Park

In Lake Forest Park, sensitive areas, including wetlands and streams outside of shoreline jurisdiction, are regulated under Chapter 16.16 of the Lake Forest Park Municipal Code (Environmentally Critical Areas), while areas within 200 feet of Lake Washington are regulated by the SMP (Ordinance 1042). Wetland designations are established pursuant to LFPMC 16.16.040.AA and SMP Appendix A, 40.AA.

3.1.2 Shoreline Master Program (SMP)

In addition to sensitive area regulations pertaining to streams and wetlands, the shoreline of Lake Washington is subject to the City's SMP. Shorelands located within 200 feet of the Lake Washington OHWM and associated wetlands, including Wetlands A, B, and C, fall under shoreline jurisdiction. Therefore, Wetlands A, B and C are specifically regulated by Appendix A of the SMP, *Environmentally Sensitive Areas Regulations in Shoreline Jurisdiction*.

General activities proposed for the project within shoreline jurisdiction (and within either the wetlands and/or wetland/stream buffers) include structure demolition and reconstruction, surfacing and trail construction, parking lot expansion, viewing platform and pier construction, and critical area restoration. The SMP's Appendix A contains a limited list of allowed alterations in wetlands and wetland buffers. However, regulation 330.A states: "Exceptions to the wetlands requirements may be allowed only if it is determined by the Shoreline Administrator that the development site proposal will enhance or protect the wildlife habitat, natural drainage or other functions and will be consistent with the purposes of these regulations and this Master Program." Additionally, SMP regulation 360.A states: "Alterations to streams and buffers may be allowed only as follows: In accordance with a sensitive area study." Please refer to the Stream and Wetland Buffer Alterations section below for more information.

The project area is located within the Urban Conservancy and Shoreline Residential environment designations of the SMP. In the Urban Conservancy environment, water-oriented recreation, public access, and restoration activities are allowed. However, shoreline modifications, such as the proposed grading and filling, require a Shoreline Conditional Use Permit (SCUP). The City may approve these

conditional uses if they can demonstrate compliance with the SMP and the SCUP review criteria, and if they are "…compatible with conserving, protecting and restoring ecological conditions of the shoreline." Please see the associated SCUP Narrative document for further information on compliance with the required criteria.

SHORELINES

Lake Washington is a shoreline of statewide significance and regulated under the Lake Forest Park Municipal Code SMP. The SMP currently classifies the subject parcels' shoreline environment designations as Shoreline Residential and Urban Conservatory. Per SMP Chapter 7.1, on Shoreline Residential lots with a depth of 100-feet of greater, a standard shoreline setback of 50-feet is required; Urban Conservancy lots also require a 50-foot standard setback.

SMP Chapter 7 provides specific details on shoreline use policies and regulations. Specifically, SMP Section 7.10 outlines policies related to recreational uses in shoreline jurisdiction. New recreational structures, other than those that are accessory or water-dependent, shall be set back 50-feet from the OHWM (SMP 7.10.A).

STREAMS

The lower reach of Lyon Creek is located within shoreline jurisdiction and is therefore regulated under the City's SMP. Per SMP Appendix A - *Environmentally Sensitive Areas Regulations in Shoreline Jurisdiction*, Section 40.X, "streams that are fish passable from Lake Washington are presumed to be Type 1." Generally, Type 1 streams are fish-bearing streams, used by fish for spawning, rearing, or migration. Per WAC 22-16-031, stream segments with a defined channel of two feet in width or greater and with a gradient of 16% or less are presumed to have fish use. Lyon Creek meets these parameters and is therefore a Type 1 stream. The City requires Type 1 streams located within the shoreline jurisdiction to have a standard 115-foot buffer (SMP Section 350.A). Additionally, all buildings and structures must also have a 15-foot setback from the edge of the stream buffer (SMP Section 350.M).

WETLANDS

Wetland A, B, and C are all located, at least partially, within shoreline jurisdiction and are therefore associated wetlands regulated under the City's SMP. The SMP states that, "Wetlands shall be rated according to the *Washington State Wetland Rating System for Western Washington* (Department of Ecology 2004, or as revised)" (SMP Section 40.AA). As such, the wetlands delineated for the project have been classified using the *2014 Update to the Western Washington Rating System* (Publication #14-06-029) (Rating System). However, Lake Forest Park's SMP was adopted in 2013, and utilizes the 2004 *Western Washington Rating System* scoring; as such, scoring has been translated per the State of Washington Department of Ecology guidelines to determine required buffer widths.

According to SMP Section 320.A, wetlands are rated as one of four categories based upon the Rating System and wetland buffers are determined based upon a combination of the wetland category and habitat score. Wetlands A, B, and C are each Category III wetlands. Wetland A and Wetland B have habitat scores of 5 points each; Wetland C has a habitat score of 6 points. Per SMP Section 320.A, Wetland A and Wetland B each require a standard buffer width of 75 feet; Wetland C requires a

standard buffer width of 125 feet. Similar to streams, a minimum 15-foot setback from the wetland buffer is also required (SMP Section 320.G).

STREAM AND WETLAND BUFFER ALTERATIONS

Generally, alterations of streams, wetlands, and associated buffers in shoreline jurisdiction are prohibited. However, per SMP Section 330.A, standard wetland requirements may allow for exceptions if "the development site proposal will enhance or protect the wildlife habitat, natural drainage or other functions and will be consistent with the purposes of these regulations and this Master Program." Crossings through a wetland may be allowed when no possible alternative exists. In such a case, impacts must be minimized and mitigation for unavoidable impacts shall be provided. Additionally, wetland hydrology should not be altered, habitat functions should not be disturbed, and construction shall be scheduled during periods of low water tables (SMP Section 330.G).

All three on-site wetlands have been designated as Category III wetlands. Category III wetlands within shoreline jurisdiction require a 75-foot and 125-foot standard buffer, respectively. Lyon Creek is designated as a Type 1 stream per LFPMC 16.16.040.X and SMP Appendix A, 40.X. Type 1 streams both within, and outside, shoreline jurisdiction require a 115-foot standard buffer. Pursuant to SMP Appendix A, 40.DD, Lyon Creek is also designated as a wildlife habitat conservation area.

The proposal seeks to make recreational improvements within portions of the on-site stream and wetland buffers pursuant to SMP Section 330.A and 360.A. Please refer to the section below for narrative responses to the compliance criteria for these provisions.

SMP 330.A-Wetlands-Permitted alterations

A. Exceptions to the wetlands requirements may be allowed only if it is determined by the Shoreline Administrator that the development site proposal will enhance or protect the wildlife habitat, natural drainage or other functions and will be consistent with the purposes of these regulations and this Master Program.

The project site is heavily encumbered by the on-site stream, wetlands, and associated buffers. To achieve a successful design for a public park that provides adequate water-oriented recreational amenities to the community, alterations to critical area buffers are necessary. This has been proposed in a manner that will enhance and protect wildlife habitat and natural functions of the critical areas. The alterations are consistent with the goals, policies, and regulations of the SMP.

The following SMP policies have been established to enhance and protect wildlife habitat and critical area natural functions and support the proposed project:

Policy 4.8.3 *Consider implementing tools to provide incentives for restoration such as: modifying the buffers that would apply to the restored areas or allowing a greater range of uses or flexible development standards (i.e. – setbacks, height limits, lot coverage) on properties providing restoration and/or affected by restoration buffers.*

Policy 5.3.3 *Development should be permitted only in those shoreline areas that are environmentally capable of supporting the proposed use, and in a manner that protects and enhances the shoreline environment and its resources.*

Policy 5.3.7 *Development Regulations should require the preservation of shoreline ecological functions, taking into account the environmental limitations and sensitivity of the shoreline area, the level of infrastructure and services available, and other comprehensive planning considerations.*

Policy 5.4.1 *In regulating uses in the Urban Conservancy shoreline environment, first priority should be given to public access and water-oriented uses that support ecological conservation and restoration.*

Policy 5.4.5 *The ecological functions of Lyon Creek Waterfront Preserve and other publicly owned lands should be preserved, enhanced, restored, and maintained.*

Policy 5.4.6 *Urban Conservancy areas should include, but are not limited to, interpretive trails, benches, and viewpoints, as appropriate.*

Policy 5.4.8 *The City should set the example for redevelopment and restoration of public properties by requiring low impact development techniques to be utilized for City projects. The City should encourage low impact development for other public projects, i.e. – the Burke Gilman Trail enhancement.*

Policy 5.4.9 *New development and substantial redevelopment should protect and restore shoreline ecological functions with particular emphasis on protecting and enhancing salmon habitat.*

Appendix B: Restoration Plan

Goal 2 *Maintain or enhance fish and wildlife habitat during all life stages and maintain functional corridors linking these habitats.*

Goal 3 *Increase quality, width, and diversity of native vegetation in protected corridors adjacent to stream and lake habitats to provide safe migration pathways for fish and wildlife, food, nest sites, shade, perches, and organic debris. Strive to control non-indigenous plants or weeds that are proven harmful to native vegetation or habitats.*

Currently, large portions of onsite critical area buffers are ecologically low functioning, particularly on parcels #40301000-35 and -40. Five remnant buildings are located within critical area buffers on these parcels, with remaining buffer areas dominated by impervious hardscape, ornamental landscaping, and maintained lawn. On parcel #40301000-50, the Wetland C and Lyon Creek buffers contain recreational improvements including compacted trails within the floodplain and both banks as well as footbridges crossing the creek. These improvements have led to both formal and informal recreational uses of the Wetland C and Lyon Creek buffers that decrease their ecological functions. Furthermore, trees on site and within critical area buffers have been densely planted for the purpose of screening between the preserve and former single family use, which inhibits their ability to thrive and function as habitat. The completed project at maturity will provide improved stream, wetland, and buffer functions.

The project design minimizes adverse impacts to water quality and fish and wildlife resources by placing development as far from Lyon Creek, Lake Washington, and onsite wetlands as feasible and by

implementing restoration and mitigation measures. Based upon an analysis of on-site critical areas and buffers, the proposed park amenities have been clustered in the northern portion of the project site to minimize impacts as much as possible. The amenities proposed with the furthest intrusions of wetland and stream buffer are the interpretive trails, benches, and viewing platforms along Lyon Creek and Wetland C. However, these proposed amenities are supported by Policy 5.4.6. above. Moreover, the construction and rehabilitation of the recreational features surrounding Wetland C and Lyon Creek will improve their ecological function. All recreational improvements will be removed from the right bank of Lyon Creek to concentrate recreational opportunities to one side. Split-rail fencing and railing will be installed to prevent unauthorized intrusion into the creek buffer. The existing footbridge on the north end of parcel 40301000-50 will be carefully removed and re-sited as a replacement pathway to the existing viewing platform downstream. In doing so, compacted gravel will be removed from the floodplain and replaced with an elevated bridge. The existing downstream viewing platform will have the entrance to the right bank closed. Finally, the existing viewing platform and proposed new viewing platforms will be constructed of open grated decking. Overall, the project will result in a net improvement in critical area and critical area buffer functions. For more information on proposed improvements and alterations to the critical area buffers, please see Appendix A: 70% Design Plans.

The SMP has set goals and policies geared towards the protection and enhancement of critical areas and specifically Lyon Creek. Although the project requires the alteration of the critical area buffers on site, the project will enhance the critical areas by increasing the quality and diversity of native vegetation and protecting these areas into the future. Critical areas will be protected on-site by newly established split rail fencing. The project design also includes 1,130 square feet of wetland mitigation and 4,470 square feet of wetland buffer mitigation. The altered buffers will better serve the critical areas than what currently exists and allow for new recreational facilities that will increase public access to the shoreline of Lake Washington, which is in line with the goals and policies set forth by the SMP. For more information on project mitigation to critical areas, please see Section 6, Mitigation, of this report and Appendix B: Mitigation Plan.

The proposed project will balance increasing ecological functions of the onsite critical areas and providing public shoreline recreational opportunities, which the SMP seeks to accomplish. These properties can support passive and active recreational opportunities for the public, as they partially have in recent years. The City has a unique opportunity to expand these amenities with the purchase of parcels #40301000-35 and -40, and with this proposal can set an example for redevelopment and restoration of public properties through the reworking of the trail network in the buffer and the adaptive reuse of the residential property for public use. These will require continued buffer alteration, but in a manner that will improve the ecological function of the critical areas.

The following SMP policies have been established to enhance and protect wildlife habitat and critical area natural functions and the proposed project will adhere to them:

Policy 8.2.1 *All clearing and grading activities should be designed and conducted to minimize impacts to wildlife habitat; to minimize sedimentation of creeks, streams, ponds, lakes, wetlands, and other water bodies; and to minimize degradation of water quality.*

Policy 8.2.3 *Adverse environmental and shoreline impacts of clearing and grading should be avoided wherever possible through proper site planning, construction timing and practices, bank stabilization, soil bioengineering and use of erosion and drainage control methods. Maintenance of drainage controls should be a high priority to ensure continuing, effective protection of habitat and water quality.*

Policy 8.2.4 *Cleared and disturbed sites remaining after completion of construction should be promptly replanted with native vegetation or with other species as approved by the City.*

Policy 8.2.5 *All clearing and grading activities should be designed with the objective of maintaining natural diversity in vegetation species, age, and cover density.*

Modification of vegetation associated with the project includes the removal of invasive species and planting native species within critical areas and their buffers. The goal of the mitigation plan is to achieve no net loss of ecological function and fish and wildlife habitat. A construction and replanting plan will be scheduled in a manner that minimizes impacts to water quality and wildlife habitat. The construction plans will include a Temporary Erosion and Sediment Control plan. A monitoring and maintenance plan for new plantings will be required as part of the critical area restoration process to ensure success of the newly introduced native vegetation. Compliance with SMP Section 330.A is presented below.

1. The applicant shall submit a report prepared by a qualified professional. The report shall assess the habitat, water quality, storm water detention, ground water recharge, and erosion protection functions of the buffer; assess the effects of the proposed modification on those functions, and address other criteria listed in this subsection. The report shall include specific recommendations for mitigation including, but not limited to, construction techniques or design, drainage, or density specifications.

This critical areas study constitutes the required report for buffer alteration requests. Additionally, a wetland delineation report, dated December4, 2023 was prepared for the project by a qualified professional and included required assessments of resources per the SMP.

2. If a wetland is located in a flood hazard area, the applicant shall notify in writing the affected parties and the appropriate responsible officials of the proposed alterations before undertaking any alteration.

Wetland C is partially located in a flood hazard area within the 100-year floodplain of Lyon Creek. The City will notify affected parties and appropriate responsible officials through the National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), and permitting processes.

3. Introduction of nonnative plant material or wildlife into any wetland or buffer is prohibited unless authorized by a city-approved non-native plant list or a state or federal permit or approval.

The proposed project includes a restoration and mitigation plan that includes invasive species removal and nonnative plant material will not be introduced. Planting and revegetation activities will be conducted with appropriate native species.

SMP 360.A Streams-Permitted alterations

Alterations to streams and buffers may be allowed only as follows:

A. In accordance with a sensitive area study.

This critical areas study constitutes the requested sensitive area study. Additionally, a BE will be submitted to USFWS and NMFS during ESA consultation. A wetland delineation and arborist report have also been completed for the project area.

As mentioned in the section above, the project site is heavily encumbered by the onsite stream, wetlands, and associated buffers. The buffer of Lyon Creek is currently impacted by recreational amenities on both banks, within the floodplain, and overwater. To achieve a successful design for a public park that provides adequate water-oriented recreational amenities to the community, alterations to critical area buffers are necessary. However, this has been proposed in a manner that will enhance and protect wildlife habitat and natural functions. Through removal of improvements on the right bank, open grated decking construction for existing and new viewing platforms, replacement of compacted gravel trail areas on the left bank, and mitigation plantings, the proposal seeks to improve the ecological functioning of the Lyon Creek buffer. For more information on proposed improvements and alterations to the critical area buffers, please see Appendix A: 70% Design Plans. For more information on project mitigation to critical areas, please see Section 6, Mitigation, of this report and Appendix B: Mitigation Plan.

B. If a stream is located in a flood hazard area, the applicant shall notify affected parties in writing, as well as the appropriate responsible officials, of proposed alterations prior to any alteration.

There is a flood hazard area associated with the 100-year floodplain of Lyon Creek. The City will notify affected parties and appropriate responsible officials through the National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), and permitting processes.

C. Introduction of nonnative plant material or wildlife into any stream or buffer is prohibited unless authorized by a city-approved non-native plant list or a state or federal permit or approval.

The proposed project includes a restoration and mitigation plan that includes invasive species removal and nonnative plant material will not be introduced. Planting and revegetation activities will be conducted with appropriate native species.

SMP Policy 7.10.9

Public access should not contribute to the net loss of ecological functions of Lake Forest Park's environmentally sensitive areas, such as wetlands and wildlife habitat.

As described in more detail in Section 6.8, the proposed project will not result in a net loss of ecological functions, including those functions associated with wetlands and wildlife.

3.1.3 Critical Areas Ordinance

The Critical Areas Ordinance (CAO) is codified in LFPMC 16.16 and implements goals and policies of the Washington State Growth Management Act. Critical areas include wetlands; streams; areas with a critical recharging effect on aquifers used for potable water; fish and wildlife habitat conservation areas; frequently flooded areas; and geologically hazardous areas such as erosion hazard areas, landslide

hazard areas, seismic hazard areas, and steep-slope hazard areas. Critical areas also includes any buffers established by this chapter, or any buffer or setback established by state law or other City ordinance that serves to protect critical areas.

A major critical area permit is required for all activities requiring earthwork within a critical area or critical area buffer. All work authorized by a critical area permit shall be conducted using the best management practices (BMPs) that result in the least amount of impact to the critical areas, including tree and vegetation protection, construction management, erosion and sedimentation control, water quality protection, and regulation of chemical applications. The City may observe the use of BMPs as necessary to ensure that the activity does not result in degradation to the critical area.

STREAMS

Type F streams include natural waters other than Type S, which are within the bankfull widths of the channels and periodically inundated and are regulated under the Critical Areas Ordinance with a 115-foot buffer. Portions of Lyon Creek extend outside of shoreline jurisdiction and therefore falls under the jurisdiction of the CAO.

LFPMC 16.16.360.A Streams-Permitted alterations

Alterations to streams and buffers may be allowed only as follows:

A. In accordance with a critical area study.

This document is a critical areas study and outlines compliance with permitted stream and buffer alterations. In addition, a BE will be submitted to USFWS and NMFS during ESA consultation. A wetland delineation and arborist report have also been completed for the project area.

As mentioned in the sections above, the project site is heavily encumbered by the onsite stream, wetlands, and associated buffers. The buffer of Lyon Creek is currently impacted by recreational amenities on both banks, within the floodplain, and overwater. To achieve a successful design for a public park that provides adequate water-oriented recreational amenities to the community, alterations to critical area buffers are necessary. However, this has been proposed in a manner that will enhance and protect wildlife habitat and natural functions. Through removal of improvements on the right bank, open grated decking construction for existing and new viewing platforms, replacement of compacted gravel trail areas on the left bank, and mitigation plantings, the proposal seeks to improve the ecological functioning of the Lyon Creek buffer. For more information on proposed improvements and alterations to the critical area buffers, please see Appendix A: 70% Design Plans. For more information on project mitigation to critical areas, please see Section 6, Mitigation, of this report and Appendix B: Mitigation Plan.

WETLANDS

All three on-site wetlands, wholly or partially, are located within shoreline jurisdiction, and therefore, are subject solely to the requirements of the City's SMP, as described above.

FISH AND WILDLIFE HABITAT AREAS

Fish and wildlife habitat conservation areas (FWHAs) are defined as an area that is managed for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term and isolated subpopulations are not created, as defined in WAC 365-190-130 and RCW 36.70A.030. Fish and wildlife habitat conservation areas also include nonaquatic areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. These lands are managed for maintaining species in a wild state in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. FWHAs that must be considered for classification and designation include:

> *1. Priority habitats;*
>
> *2. Areas where endangered, threatened, and sensitive species, or priority species, have a primary association;*
>
> *3. Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat;*
>
> *4. Waters of the state;*
>
> *5. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity; or*
>
> *6. State natural area preserves and natural resource conservation areas.*

FWHAs are regulated under LFPMC 16.16.380. Permitted activities within FWHAs and associated buffers are determined based upon best available science (BAS) and other policies including federal, state, or local regulations. Those avoidance/minimization measures and proposed mitigation actions described elsewhere in this report for the stream, wetlands, and corresponding buffers also apply to the on-site FWHAs. Overall, a net improvement in ecological function within FWHAs will result from the project.

FREQUENTLY FLOODED AREAS

Frequently flooded areas in the City are regulated pursuant to LFPMC Chapter 16.20. The project area includes the Lyon Creek floodplain. See Figure 3 for mapped floodplain.

Figure 3. Flood hazard areas mapped by Ecology's Washington State Coastal Atlas.[2]

GEOLOGIC HAZARDS

Geologic hazards include erosion hazards, landslide hazards, seismic hazards, and steep slope hazards and are addressed in LFPMC 16.16.280-310. Seismic hazard areas are identified on the City of Lake Forest Park Interactive Critical Areas Map[3] in the northwestern portion of the project area.

Per LFPMC 16.16.300, development proposals for developments other than single-family residences may require review standards of critical facilities based on larger earthquake recurrence intervals and implementation of measures to mitigate the risk are implemented that meet accepted engineering standards for safety. (Ord. 1150 §1, 2017; Ord. 930 §2, 2005)

CRITICAL AQUIFER RECHARGE AREAS (CARAS)

CARAs are regulated by LFPMC 16.16.420. The Lake Forest Park Water District Aquifer (LFPWDA) is mapped within the project area. A technical report was prepared by Associated Earth Sciences, Inc for the Lake Forest Park Water District in 2016 that delineated CARAs in Lake Forest Park.[4] King County has conducted long-term water level monitoring in five monitoring wells completed in the LFP Aquifer between the HV and MC wellfields since 2003 (King County, 2015; CDM Smith, 2012). The susceptibility rating for soils of the aquifer in the Project Area is "1-slow permeability". The susceptibility rating for geology of the aquifer in the Project Area is "3-sand and gravel". The susceptibility rating for depth to water of the aquifer in the Project Area is "3-0-10 ft". The overall susceptibility rating is "high."

[2] https://gis.ecology.wa.gov/portal/apps/webappviewer/index.html?id=7779e901b22340f8892c8dcb1181a677
[3] https://www.cityoflfp.gov/610/Interactive-Maps
[4] https://www.lfpwd.org/wp-content/uploads/news/2016_aesi_lfpwd_cara_report.pdf

4. Project Description

The project proposes to improve public waterfront access through the transition of two recently acquired single-family residential properties (parcels 403010-0035 and -0040) into a public waterfront park. The project design aims to be respective of the natural habitat and features of the site, preserve and enhance existing features that represent the historical narrative of Lake Forest Park, and consider the current and future responsibilities of the City.

The newly acquired properties and associated improvements will be integrated with the existing Lyon Creek Waterfront Preserve to form one continuous public park. New project improvements will be focused on the two recently acquired parcels, nos. 403010-0035 and -0040, while the existing public preserve parcel will be modified to reduce public access to the creek buffer and sensitive area at the creek's outfall to Lake Washington. New project improvements will include a new parking area, access paths, play structure, nature viewing platforms, and new swimming and paddling dock. The open lawn and natural beach will be preserved in place for public use. Three buildings and six remnant buildings are present on the site, including a primary single-family dwelling unit, open-air carport, enclosed garage, and five smaller accessory structures. The primary dwelling unit and one of the accessory units will be renovated for flexible community use. The remaining structures will be permanently removed from the site. A picnic shelter will be reconstructed within the footprint of one accessory structure. A bathhouse will be constructed within the footprint of the garage building. The two existing docks present on parcels no. 403010-0040 and 403010-0050 will be removed and consolidated into a single dock designed for public water access uses. An existing footbridge crossing Lyon Creek is proposed to be relocated from the creek and reinstalled within the creek's floodplain.

5. Impacts Assessment

5.1 **Direct Impacts**

A total of 3,895 square feet of direct shoreline impacts are proposed with the project. Impacts include construction of a new dock and swimming platform in Lake Washington. These new water-related structures will replace the two existing wooden docks, which currently impact 2,200 square feet of the lake. No proposed work will directly impact on-site wetlands.

Although the total square footage of proposed direct impacts is larger than those that will be removed, the proposed dock will, overall, improve water quality and habitat conditions within the lake compared to current conditions. Existing wooden docks will be replaced with a single new dock, consolidating water access to one overwater structure. Currently one of the existing docks is located near the mouth of Lyon Creek; the other dock abuts one of the on-site wetlands and requires users to walk directly through the critical area. Locating the new dock away from these critical areas will reduce ongoing wetland disturbance and provide salmonids with better habitat near Lyon Creek.

Dock design, materials, and construction techniques will utilize BMPs such as grated decking, non-toxic materials, and finishes, avoiding side skirts and overwater lighting, completing in-water work within approved work windows, and using floating sediment curtains. These BMPs will ensure that impacts are minimized and are consistent with the best available science to create more favorable habitat conditions for juvenile salmonids, minimize disturbance during bald eagle nesting season and salmon migration, and eliminate leaching associated with older dock structures.

5.2 Indirect Impacts

Proposed park improvements will result in a total of 13,135 square feet of new permanent buffer impacts. A net total of 5,940 square feet of existing hardscape surfacing within buffers will be demolished with the project. Additionally, construction of the new park design will require 8,383 square feet of temporary buffer impacts. It is estimated that 43 significant trees will require removal with the project; however, the majority of remaining impacts will occur in areas where existing structures, hardscape, ornamental landscaping, and maintained lawn are located. Proposed features that result in permanent and temporary buffer impacts are located further from the Preserve parcel that contains Lyon Creek and the associated riverine wetland.

5.3 Impact Summary

Total proposed permanent impacts are summarized in Table 8 below. Temporary impacts will also occur in portions of on-site buffers, and total 8,383 square feet.

Table 8. Impact Summary

Feature	New Permanent Critical Area Impact (SF)	New Permanent Buffer/Setback Impact (SF)
Lk. Wash.	3,895	1,350
Lyon Creek	---	11,910
Wetlands	---	12,345
Total*	**3,895**	**13,135**

* Totals overlap due to overlapping critical area buffers. Refer to mitigation plan in Appendix B for complete breakdown.

6. Mitigation

6.1 Mitigation Sequencing

Attempts to avoid and minimize impacts to on-site critical areas and buffers have been taken. The sections below address SMP 130 and LFPMC 16.16.130 *Mitigation Sequencing*.

6.2 Avoidance

Avoiding impacts to environmentally sensitive areas by avoiding actions or parts of actions;

Avoidance of all impacts with a no-build alternative would result in the continuation of existing conditions. Currently large portions of buffer areas are ecologically low functioning, particularly on parcels #40301000-35 and -40. Five buildings, or the remnant remains of, are located within critical area buffers on these parcels, with remaining buffer areas dominated by impervious hardscape, ornamental landscaping, and maintained lawn. Additionally, a bulkhead and wooden dock are located on Lake Washington.

Parcel #4030100050 functions as a Preserve and is currently the only parcel of the three open to public use. On-site buffer areas on this parcel are currently developed with a small parking lot, pedestrian trails which include two stream crossings, and several seating areas. Mitigation plantings are installed around the stream, however invasive vegetation is extensive in areas. A second wooden dock is present on the Preserve parcel, with signage indicating that water access is prohibited. Currently the City does not possess any properties that allow for public access to Lake Washington. A no-build alternative would perpetuate this lack of public access.

Due to extensive buffer encumbrances, the majority of proposed park features cannot be located outside of critical area buffers. However, the proposed parking lot is sited in the northern portion of the park so that it avoids on-site buffers to the greatest extent feasible. Additionally, a large bike parking area adjacent to the lot is located entirely outside of buffer areas. This amenity, in combination with on-site parking that is limited to seven load/unload-only stalls and three accessible stalls, will encourage park visitors to utilize alternative transportation such as cycling.

6.3 Minimization

Minimizing impacts by limiting the degree or magnitude of the action by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

Per LFPMC 16.16.320 the following measures are required to minimize impacts to wetlands. These measures will be incorporated into project design and construction.

Table 9. Source of disturbance and minimization requirements

Disturbance	Required measures to minimize impacts if applicable to proposal
Lights	Direct lights away from wetland

Disturbance	Required measures to minimize impacts if applicable to proposal
Noise	Locate activity that generates noise away from wetland
	If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source
	For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry, establish an additional 10-foot heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered
	Establish covenants limiting use of pesticides within 150 feet of wetland
	Apply integrated pest management
Stormwater runoff	Retrofit stormwater detention and treatment for roads and existing adjacent development
	Prevent channelized flow from lawns that directly enters the buffer
	Use low impact development techniques
Change in water regime	Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	Use privacy fencing or plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion
	Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	Use best management practices to control dust

In addition to these requirements, the following measures will be applied:

Minimization techniques were used during the design process to limit impacts to on-site critical areas and associated buffers. The majority of active park uses, including the parking lot, bike parking area, kayak storage, office building, community building, restroom facilities, and playground, and are proposed to be clustered in the northern portion of the park to concentrate buffer impacts as far from on-site critical areas as feasible. The parking lot is sited to utilize unencumbered portions of the park to the greatest extent practical.

Proposed active uses are primarily sited in existing lawn areas, hardscape surfaces, and within the footprint of existing structures that will be demolished, minimizing new impacts to native vegetation and reducing new impervious areas as much as possible. A public restroom is proposed to be built

within the footprint of an existing garage structure that will be demolished, minimizing new buffer impacts associated with this new park amenity. Similarly, the proposed kayak storage area will utilize the footprint of an existing building that will be demolished with the project. Additionally, two existing buildings will be renovated to provide flexible space for community use (i.e., community events and gathering, workspace for city staff and/or park operations), thus reducing the need for new construction in the park for these facilities.

In addition to minimizing vegetation impacts and the creation of new impervious areas, standard BMPs including temporary erosion and sediment control measures will be implemented during construction and low impact development (LID) techniques will be utilized where appropriate. Construction will be conducted in a manner that minimizes erosion and other impacts to the greatest extent possible. Required lighting will include shields to prevent light pollution in the park and native vegetation screening will be provided between high use and critical areas.

6.4 Rectification

Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

Existing critical area and buffer impacts will be rectified by demolishing select structures or other features currently located in the park. The proposed demolition of both dock structures extending into Lake Washington will occur. Existing critical area impacts to be removed also include two pilings and two bulkhead features located in the lake. Additionally, 5,940 square feet of buffer impacts associated with existing structures and hardscape areas will be eliminated from the park and will be restored with native plantings.

6.5 Reduction

Reducing or eliminating the impact over time through preservation and/or maintenance operations;

The wetland and buffer mitigation areas will be monitored for a period of up to five years to ensure success of the mitigation actions over time. Fencing and signage will be provided to reduce intrusion into the critical areas and prevent future impacts. All compensatory mitigation areas will be preserved and maintained to ensure successful establishment of a diverse assemblage of native trees and shrubs. Impacts will be reduced over time as the compensatory mitigation areas mature.

6.6 Compensation

Compensating for the impact by replacing, enhancing, or providing substitute critical areas and/or buffers;

As mitigation for unavoidable impacts to on-site critical areas and associated buffers, 1,130 square feet of wetland and 4,470 square feet of buffer areas within the park will be enhanced with the removal of non-native species and the planting of new native vegetation. Additionally, 5,940 square feet of existing buffer impacts and 2,350 square feet of existing critical area impacts will be removed and restored in place. 8,383 square feet of temporary buffer impacts required to complete park

improvements will also be restored with native plants. A complete summary of mitigation quantities can be seen in Table 10 below.

The proposed mitigation plantings will add structural and species diversity to an otherwise minimally functioning buffer and wetland. Native vegetation will support local wildlife use the site by providing forage, nesting, refuge, and perching opportunities. Enhancing on-site wetland areas with dense native woody vegetation will also improve ecological functions by decreasing and slowing runoff, trapping sediments and pollution, and reducing erosion. Native trees and shrubs proposed near Lyon Creek will also enhance riparian conditions which directly affect water quality, hydrological function, and instream habitat with shading, contribution of autochthonous materials, and large woody debris recruitment.

Additional mitigation details can be found in the mitigation plan (Appendix B) and Section 6.8 includes a detailed functional lift analysis.

Table 10. Mitigation Summary

Feature	Critical Area Mitigation (SF)	Buffer/Setback Mitigation (SF)	Enhancement of Prior Mitigation Areas – Critical Areas + Buffers + Setback (SF)
Lk. Wash.	---	3,990	3,780
Lyon Creek	---		20,655
Wetlands	1,130	4,470	6,840
Total*	**1,130**	**4,470**	**20,655**

* Totals overlap due to overlapping critical area buffers. Refer to mitigation plan in Appendix B for complete breakdown.

6.7 Monitoring

Monitoring the impact and/or hazard and making appropriate corrective measures when necessary

A five-year maintenance and monitoring program is proposed as part of this project. Under this plan, two monitoring visits will take place per year, one in spring and one in late summer/early fall. The spring visit will function as a maintenance review, ensuring that the site is in a condition to meet the late season performance standard requirements. The late summer/early fall visit will function as the official reporting document to the City. This document will be submitted to the City in order to report progress and establishment of the mitigation and restoration areas. The maintenance and monitoring period will be approached as a collaborative adaptive management effort between the monitoring

team, client, and maintenance crew, ensuring that appropriate corrective measures are taken as early as possible to guarantee success.

6.8 Functional Lift Analysis

As described in Section 5, the proposed project will result in permanent impacts to critical areas and buffers. Additional temporary impacts to buffers will also occur. Temporary impacts will be restored with native vegetation and permanent impacts will be compensated for through implementation of a comprehensive mitigation plan. The plan includes the restoration and enhancement of significant portions of the on-site wetland and stream buffers, including within shoreline jurisdiction.

Mitigation will specifically include new native plantings within portions of Weland A and new native plantings within overlapping wetland/stream buffers. Species include shore pine, Douglas-fir, western redcedar, vine maple, red-osier dogwood, beaked hazelnut, twinberry, tall Oregon grape, Pacific wax myrtle, osoberry, Pacific ninebark, thimbleberry, salmonberry, snowberry, evergreen huckleberry, Douglas aster, deer fern, salal, dull Oregon grape, wood sorrel, and western sword fern. Proposed plantings will include adequate soil amendment and standard spacing. Mitigation has been designed consistent with the requirements of the City's municipal code, including the SMP. The comprehensive mitigation plan can be seen in Appendix B.

The proposed mitigation plan seeks to enhance existing wetland, wetland buffer, stream buffer, and shoreline ecological functions through a comprehensive increase in native species. The plan will result in an increase in native structural and species diversity. Additionally, water quality, habitat functions, and hydrologic function will be improved. The improvement in vegetative diversity will increase wildlife foraging and cover opportunities. Increased density of native plantings will further screen the stream/wetland system from the adjacent developed and active use areas of the park. Functionality of the stream and stream buffer will receive direct benefits from implementation of the mitigation plan. Specifically, water quality will be improved through the addition of dense, woody shrubs, which will provide for an increase in the filtration of pollutants. Thus, fish present in the stream will not be negatively impacted by the proposed project. In addition, habitat and wildlife that may frequent the stream and buffer, and wetlands areas will benefit from an increase in foraging and cover opportunities.

Within wetland buffers, proposed impacts will be mitigated at a ratio of 1.29:1; overall no net loss of wetland/buffer functions will occur. Within the stream buffer, proposed impacts will be mitigated at a ratio of 1.45:1; overall, no net loss stream/buffer functions will occur. Within shoreline jurisdiction, proposed impacts will be mitigated at a ratio of 1.12:1; overall, no net loss of shoreline ecological functions will occur. Table 11 below includes a detailed assessment of these functions, both in the site's existing conditions, and the post-construction condition.

Table 11. Functional Lift Analysis

Function	Current Condition	Proposed Condition	Net Condition
Water Quality	Lyon Creek, Lake Washington, and on-site wetlands receive untreated stormwater runoff from impervious surfaces such as hardscapes, walkways, and the adjacent roadway system that are clustered in the northern portion of the project site. Sparse areas of vegetation along Lyon Creek allow dogs to enter the stream, causing bank erosion, sedimentation, and decreased water quality. Older dock structures and piles constructed with treated lumber contribute to the degradation of Lake Washington's water quality.	Hardscape and maintained lawn located near on-site wetlands and Lyon Creek will be enhanced with native vegetation. Dense plants will allow for increased trapping and binding of sediments and nutrients, and filtration of other pollutants. Increasing the density of vegetation and installing split rail fencing along Lyon Creek will discourage dogs from entering the stream and degrading water quality by increasing erosion and sedimentation. Pet waste stations and litter receptacles will also improve water quality. Treated lumber/piles will be removed from Lake Washington.	Overall, water quality will be improved with the project by converting areas of hardscape and lawn near critical areas to native vegetation. The installation of dense woody plants and split rail fencing will improve water quality by discouraging intrusions into Lyon Creek. Water quality in Lake Washington will be improved through the conversion of treated piles to steel piles.
Hydrology	The presence of maintained lawn, derelict buildings, and hardscape areas concentrated in the northern portion of the park promote stormwater runoff. Direct runoff to Lyon Creek does not include flow control to slow and detain peak flows. The northern dock abuts the lake fringe wetland, requiring park users to walk directly through the wetland, reducing infiltration capacity by compacting soils.	Where conditions allow, pervious pavement will be utilized for stormwater infiltration. A raised pervious deck will also be constructed to allow for infiltration and reduce runoff and soil compaction. On-site stormwater BMPs such as bioretention will be utilized to ensure that runoff is not concentrated or discharged directly to Lyon Creek, Lake Washington, or on-site wetlands. This will avoid the alteration of stream flows and wetland hydroperiods. Additionally, planting dense woody shrubs and trees will intercept rain and slow surface flows.	Overall, hydrology functions will be improved by converting impervious surfaces and lawn areas to native vegetation and through the implementation of various BMPs.

Function	Current Condition	Proposed Condition	Net Condition
Habitat	On-site habitat is generally concentrated on the Preserve parcel where native vegetation has been planted in the stream and wetland buffers. The remainer of the park is dominated by derelict buildings, hardscape, ornamental landscaping, and maintained lawn, providing limited habitat. Two overwater crossings are present on Lyon Creek and pedestrian trails are located on the stream's left and right banks introducing disturbances that discourage wildlife use of the Preserve parcel. Two older docks that do not comply with current standards are present in the park. The southern dock is located near Lyon Creek's mouth, providing shaded conditions that discourage migrating juvenile salmons.	Two existing docks will be removed, and one larger dock and swim platform will be constructed using BMPs such as grated decking, non-toxic materials, and finishes, and avoiding side skirts. Consolidating the docks and locating the new dock further from the mouth of Lyon Creek will provide better in-water habitat to migrating salmonids. Increased density of native plantings will further screen Lyon Creek and on-site wetlands from the adjacent developed and active use areas of the park. Increased vegetative diversity will also improve wildlife foraging and cover opportunities.	Consolidation of docks and improved dock structures using current standards will provide more favorable habitat conditions for juvenile salmonids. Increasing structural and species diversity of native vegetation will improve wildlife habitat and separate active park uses from the Preserve parcel.

6.9 Regulatory Compliance

Proposed mitigation measures will be carried out in compliance with all applicable provisions of the City's municipal code, including the SMP, as follows.

SMP 120 Mitigation and monitoring

B. Mitigation of sensitive area impacts shall be conducted according to an approved mitigation plan that shall describe the existing functions and values of the affected sensitive areas, the nature and extent of impacts to those areas, proposed mitigation measures to offset those impacts. The mitigation plan shall also contain a drawing that illustrates the compensatory mitigation elements. The plan and/or drawing shall list plant materials and other habitat features to be installed.

Appendix B of this report includes the proposed mitigation for the project. The plan includes detailed drawings of proposed mitigation plantings, including selected species. Section 6.8 above includes an assessment of existing functions provided by the on-site critical areas, along with a summary of the anticipated post-project functions provided by these features.

C. The applicant shall submit a monitoring and maintenance program prepared by a qualified professional that shall, at a minimum include the following:

1. The goals and objectives for the mitigation plan;

2. The criteria for assessing the mitigation;

3. A monitoring plan that includes annual site visits by a qualified professional, with annual progress reports submitted to the Shoreline Administrator and that lasts for a period sufficient to establish that performance standards have been met as determined by the Shoreline Administrator, but no less than five years;

4. A contingency plan; and

5. A signed copy of the written contract with a qualified professional who will perform the monitoring program. The contract shall incorporate the terms of the required monitoring program.

As described in Section 6.7, the proposed project will include a monitoring program.

SMP 340 Wetlands – Mitigation Requirements

B. Restoration shall be required when a wetland or its buffer is altered in violation of these regulations or other applicable standards. To the extent practicable and applicable, restoration will conform to the following minimum requirements:

1. The original wetland shape and form shall be replicated, including its depth, width, length and gradients at the original location;

2. The original soil types and configuration should be restored;

3. The wetland edge and buffer configuration shall be restored to original condition;

4. The wetland edge and buffer shall be replanted with native vegetation which recreates the original in species, sizes and densities; and

5. The original wetland functions shall be restored, including but not limited to hydrologic and biologic functions.

Mitigation will be provided to compensate for unavoidable impacts to the on-site wetland buffers. As detailed in the mitigation plan provided in Appendix B, areas of wetland buffer will be replanted and enhanced with native vegetation, as a means of restoring hydrologic and biologic functions. As described in Section 6.8, the project will result in no net loss of wetland functions.

E. Enhancement may be allowed when a wetland or buffer will be altered pursuant to a development proposal, but the wetlands water quality or wildlife habitat functions will be improved. Minimum requirements for enhancement shall be established in administrative rules.

Mitigation will be provided to compensate for unavoidable impacts to the on-site wetland buffers. As detailed in the mitigation plan provided in Appendix B, areas of wetland buffer will be replanted and enhanced with native vegetation, as a means of improving the wetland's water quality and wildlife habitat functions. As described in Section 6.8, the project will result in no net loss of wetland functions.

H. Monitoring shall be required in accordance with Section 120.

As described in Section 6.7, the proposed project will include a monitoring program, as outlined in Section 120.

SMP 370 Streams – Mitigation requirements

D. Replacement or enhancement will be required when a stream or buffer is altered pursuant to an approved development proposal. There will be no net loss of stream functions on a development proposal site and no impact on stream functions above or below the site due to approved alterations.

As described in Section 5, the proposed project will result in impacts to the Lyon Creek buffer. Impacts will be compensated for through implementation of a comprehensive mitigation plan. As described in Section 6.8, proposed mitigation measures will result in no net loss of stream functions.

No Net Loss

The proposed project will comply the various SMP regulations providing for no net loss of shoreline ecological functions, including, but not limited to:

6.4.H - Land clearing, grading, filling and alteration of natural drainage features and land forms shall be limited to the minimum necessary for development. Surface drainage systems or substantial earth modifications involving greater than 500 cubic yards of material shall be designed by a professional engineer. These designs shall seek to prevent maintenance problems, avoid adverse impacts to adjacent properties or shoreline features, and result in no net loss of shoreline ecological functions.

As described in Section 6.1, impacts and alterations have been designed to avoid and minimize impacts to the extent feasible. Section 6.8 includes a summary of shoreline/critical areas functions that will result from the project. As described, the project will result in no net loss of shoreline ecological functions.

7.10.B - Private and public recreation areas shall protect existing native vegetation in the shoreline area and restore vegetation impacted by development activities. Recreational use and development shall result in no net loss of shoreline ecological functions. Mitigation shall be provided as necessary to meet this requirement. Failure to meet this standard will result in permit denial. The City may request necessary studies by qualified professionals to determine compliance with this standard.

As described in Section 6.1, impacts and alterations have been designed to avoid and minimize impacts and to preserve existing native vegetation where possible. Mitigation will be provided to compensate for unavoidable impacts to the extent feasible, and as described in Section 6.8, the project will result in no net loss of shoreline ecological functions.

8.2.G.2 - Alteration of the natural landscape shall only be allowed in association with a permitted shoreline use or development with limited exceptions as set forth below:

Modification of vegetation in association with a legal, non-conforming use or development provided that said modification is conducted in a manner consistent with this Master Program and results in no net loss to ecological functions or critical fish and wildlife habitats.

As described in Section 6.1, impacts and alterations have been designed to avoid and minimize impacts and to preserve the natural landscape where possible. Mitigation will be provided to compensate for unavoidable impacts to the extent feasible, and as described in Section 6.8, the project will result in no net loss of shoreline ecological functions.

7. Summary

The proposed project area is within the jurisdiction of the City's SMP and CAO and contains critical areas including wetlands, Lyon Creek, and associated floodplain, CARAs, fish and wildlife areas, and geologic hazard areas. The project seeks to alter the associated buffers of the on-site stream and wetlands to provide adequate facilities for a public waterfront park. Although the buffer areas will be altered, they will be ecologically enhanced compared to what currently exists. The project will create minor permanent and temporary impacts to critical areas, however these impacts will be minimized and mitigated per the City's SMP and CAO as well as other federal, state, and local policies. A mitigation plan has been prepared for the project.

Mitigation actions for the project include:

- Restoration planting
- Remove old timber docks (both of them)
- Remove dock from wetland
- Remove armoring from wetland and shoreline
- Move dock farther from creek mouth
- Construct a new dock to current best standards (i.e., no creosote, fewer support piers, grated decking, higher elevation above the OHWM)
- Keep the Preserve overlook, but replace timber surface w/ grated decking and modify railing to prevent access to south creek bank
- Relocate the Preserve bridge, replace surface if needed
- Remove all trails and recreational access south of creek

This Critical Areas Study outlines project compliance with regulations pertaining to critical areas and buffers within the SMP and CAO jurisdictions. As outlined herein, the proposed project will result in an overall net improvement in critical area and critical area buffer functions. In addition, the project will result in no net loss of shoreline ecological functions.

8. References

Anderson, P.S. et al. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. (Publication #16-06-029). Olympia, WA: Shorelands and Environmental Assistance Program, Washington Department of Ecology.

Department of Ecology (Ecology). 2018. July 2018 Modifications for Habitat Score Ranges. Modified from Wetland Guidance for CAO Updates, Western Washington Version. (Publication #16-06-001). Accessed 8/16/18: https://fortress.wa.gov/ecy/publications/parts/1606001part1.pdf.

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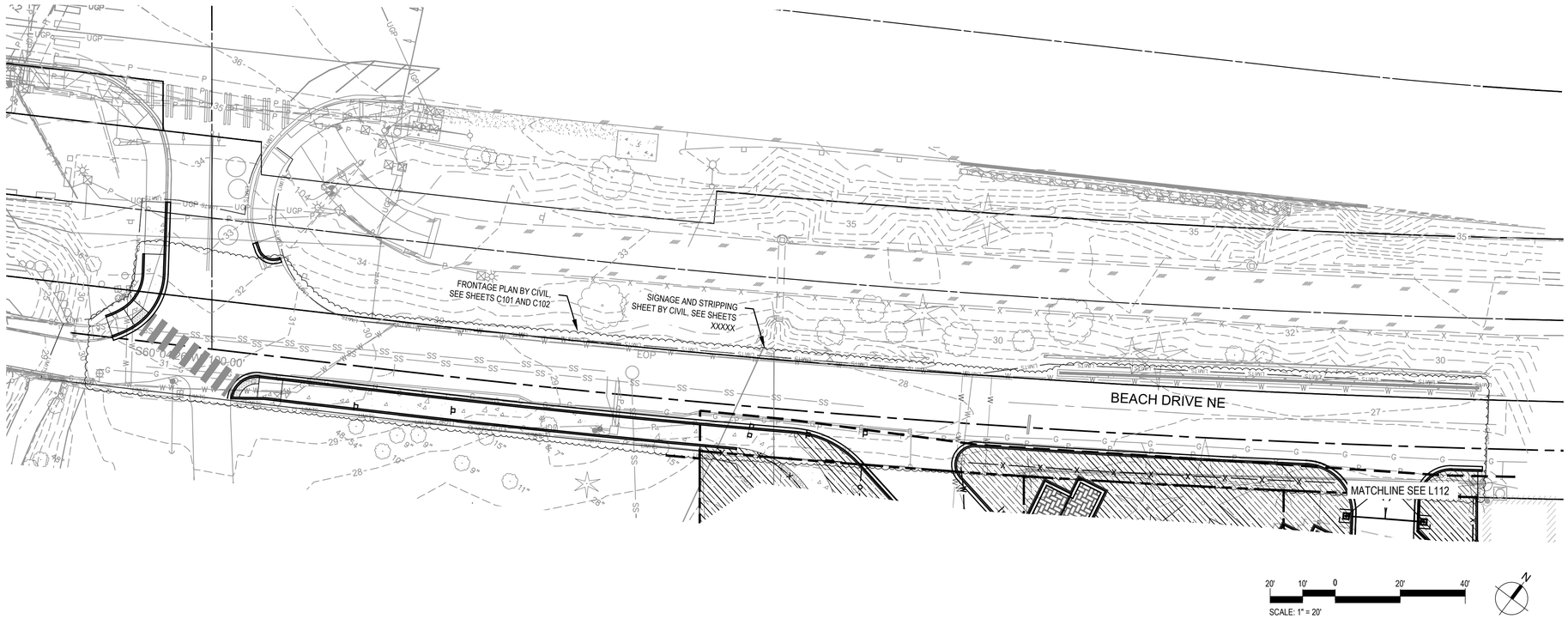
Mersel, M.K. and Lichvar, R.W. 2014. A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States. ERDC/CRREL TR-14-13.

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). ed. J.

S. Wakely, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2015. National Engineering Handbook, Part 650 Engineering Field Handbook, Chapter 19 Hydrology Tools for Wetland Identification and Analysis. ed. R. A. Weber. 210-VI-NEH, Amend. 75. Washington, DC.

APPENDIX A: 70% Design Plans



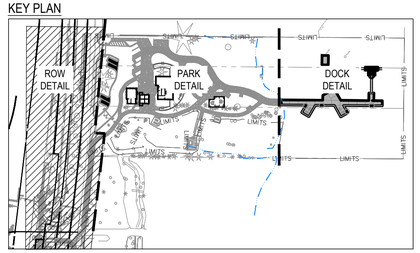
LEGEND

- LIMIT OF WORK
- WETLAND BOUNDARY (DELINEATED)
- WETLAND BOUNDARY (NOT DELINEATED)
- ORDINARY HIGH WATER MARK (OHWM)
- SPLIT RAIL FENCE
- GUARDRAIL
- DOCK RAILING
- ASPHALT - GRIND AND OVERLAY
- ASPHALT - FULL DEPTH
- CONCRETE PAVING - VEHICULAR GRADED
- CONCRETE PAVING
- PLANTING AREA
- BIORETENTION PLANTING AREA
- LAWN AREA
- ENGINEERED WOOD FIBER AREA
- RAISED PERMEABLE DECK STRUCTURE
- BACKLESS BENCH

LEGEND

- BACKED BENCH
- RECLAIMED BENCH
- PORCH SWING BENCH
- LITTER RECEPTACLE
- PET WASTE STATION
- OUTDOOR SHOWER
- DETECTABLE WARNING SURFACE
- PICNIC TABLE
- PLAY STRUCTURE

KEY PLAN



NO.	DATE	BY	REVISION

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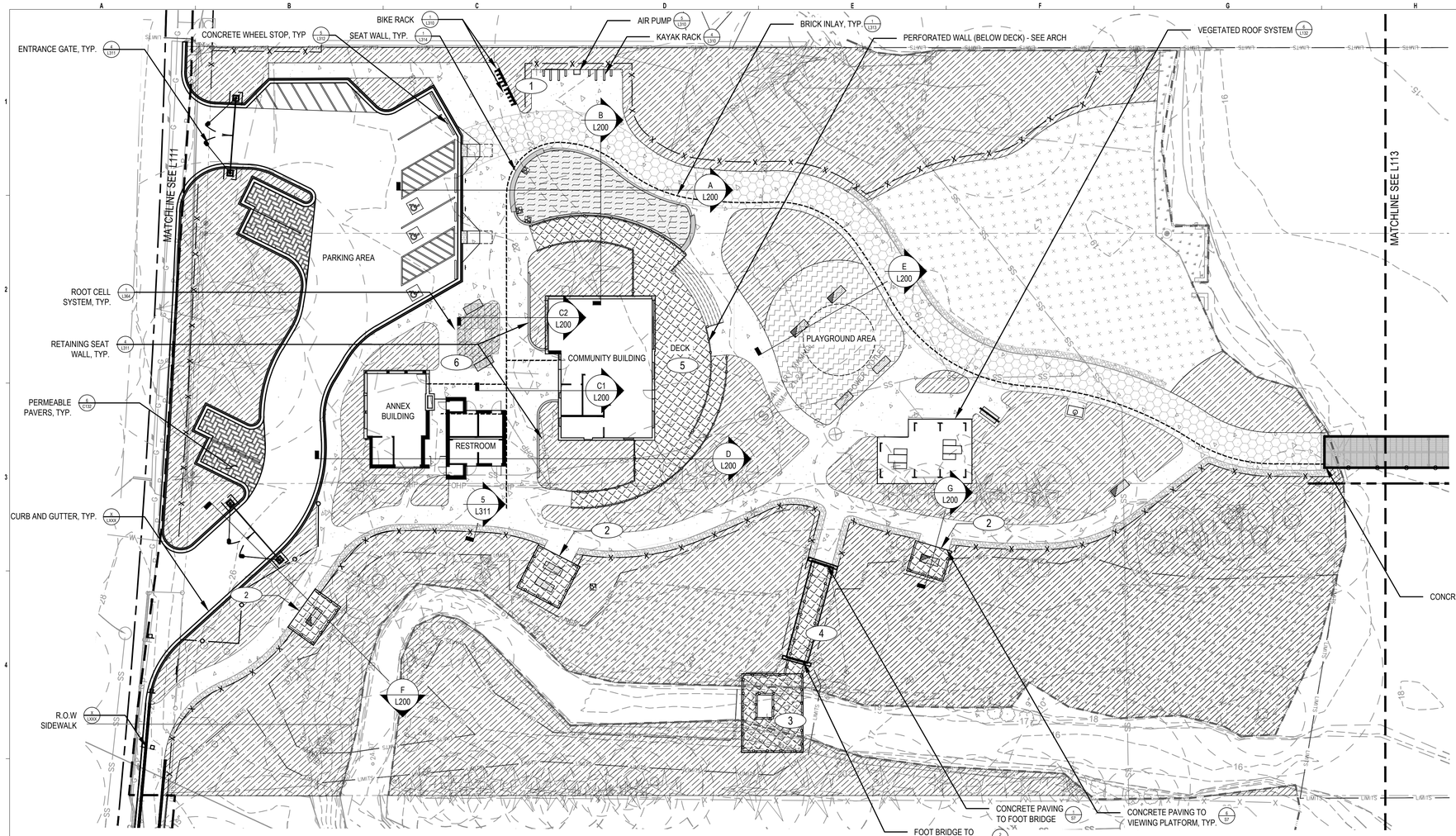
70% DESIGN

SITE PLAN

DATE: 9/15/2025

PLAN NUMBER:
L111
SHEET — OF 113

CHECKED BY:
DRAWN BY:
DESIGNED BY:
PROJECT MANAGER:
PRINCIPAL:



LEGEND

- LIMIT OF WORK
- WETLAND BOUNDARY (DELINEATED)
- WETLAND BOUNDARY (NOT DELINEATED)
- ORDINARY HIGH WATER MARK (OHWM)
- SPLIT RAIL FENCE
- GUARDRAIL
- DOCK RAILING
- ASPHALT - GRIND AND OVERLAY
- ASPHALT - FULL DEPTH
- CONCRETE PAVING - VEHICULAR GRADED
- CONCRETE PAVING
- PLANTING AREA
- BIORETENTION PLANTING AREA
- LAWN AREA
- ENGINEERED WOOD FIBER AREA
- RAISED PERMEABLE DECK STRUCTURE
- BACKLESS BENCH

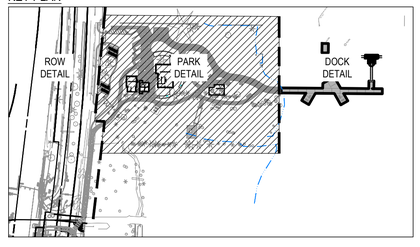
LEGEND

- BACKED BENCH
- RECLAIMED BENCH
- PORCH SWING BENCH
- LITTER RECEPTACLE
- PET WASTE STATION
- OUTDOOR SHOWER
- DETECTABLE WARNING SURFACE
- PICNIC TABLE
- PLAY STRUCTURE

KEY NOTES

1. BIKE AND KAYAK RACKS WITH AIR PUMP STATION
2. VIEWING PLATFORM WITH BENCH AND RAILING
3. RENOVATED VIEWING DECK
4. RELOCATED FOOTBRIDGE
5. SEE SHEET A.200B FOR DECK DETAILS
6. PLANTING WITH ROOT CELL SYSTEM

KEY PLAN



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70% DESIGN

SITE PLAN

DATE: 9/15/2025

PLAN NUMBER:
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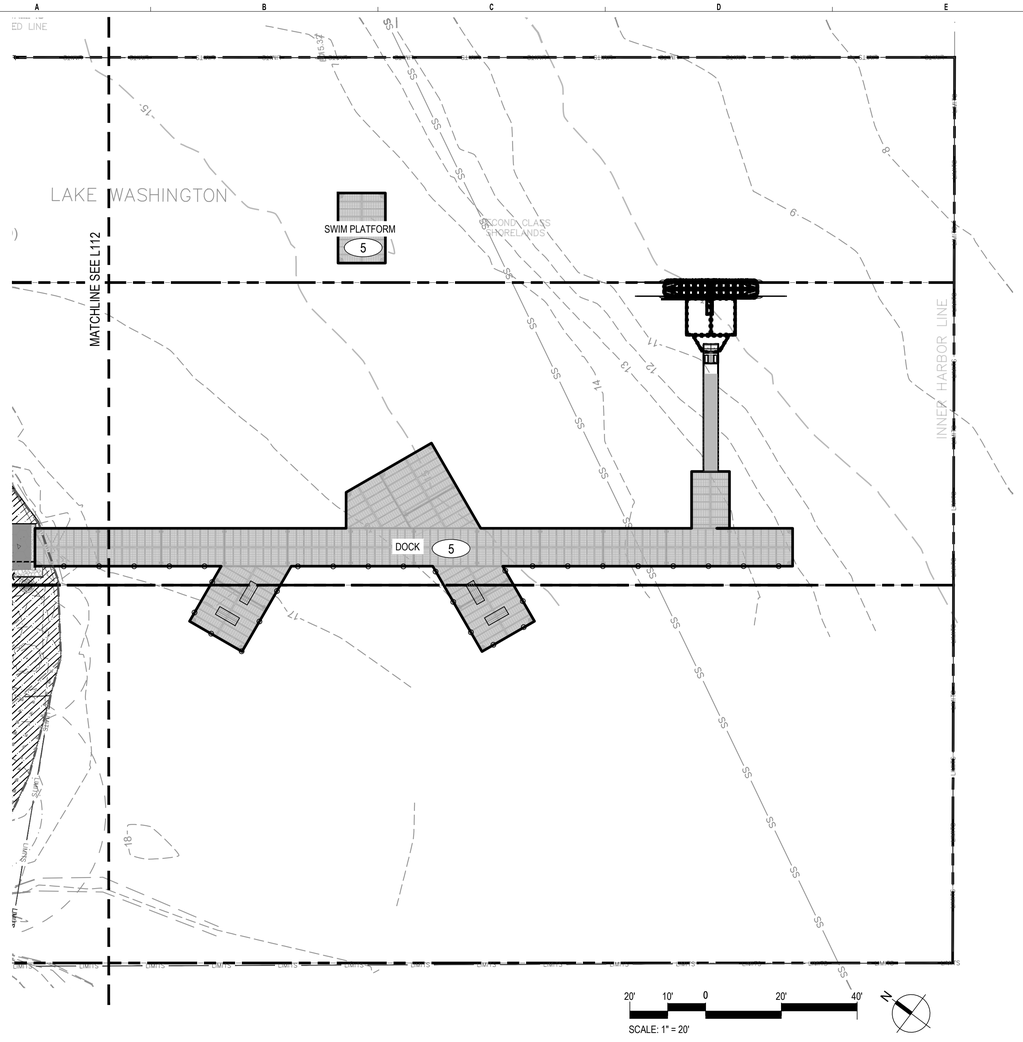
SHEET — OF 113



LEGEND

- LIMIT OF WORK
- WETLAND BOUNDARY (DELINEATED)
- WETLAND BOUNDARY (NOT DELINEATED)
- ORDINARY HIGH WATER MARK (OHWM)
- SPLIT RAIL FENCE (A/L312)
- GUARDRAIL (1A/L316)
- DOCK RAILING (3/L315)
- ASPHALT - GRIND AND OVERLAY (A/L312)
- ASPHALT - FULL DEPTH (A/L313)
- CONCRETE PAVING - VEHICULAR GRADED (A/L313)
- CONCRETE PAVING (A/L314)
- PLANTING AREA
- BIORETENTION PLANTING AREA
- LAWN AREA
- ENGINEERED WOOD FIBER AREA
- RAISED PERMEABLE DECK STRUCTURE
- BACKLESS BENCH (A/L316)

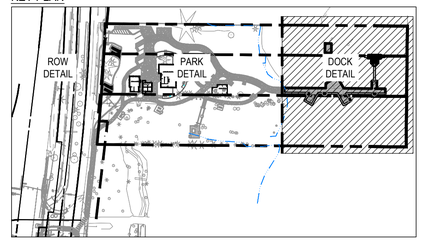
LEGEND

- BACKED BENCH (1/L317)
- RECLAIMED BENCH (1/L317)
- PORCH SWING BENCH (1/L317)
- LITTER RECEPTACLE (1/L317)
- PET WASTE STATION (1/L317)
- OUTDOOR SHOWER (1/L317)
- DETECTABLE WARNING SURFACE (A/L320)
- PICNIC TABLE (2/L317)
- PLAY STRUCTURE

KEY NOTES

1. BIKE AND KAYAK RACKS WITH AIR PUMP STATION
2. VIEWING PLATFORM WITH BENCH AND RAILING
3. RENOVATED VIEWING DECK
4. RELOCATED FOOTBRIDGE
5. SEE SHEET A.200B FOR DECK DETAILS
6. PLANTING WITH ROOT CELL SYSTEM

KEY PLAN



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SITE PLAN

DATE: 9/15/2025
PLAN NUMBER:
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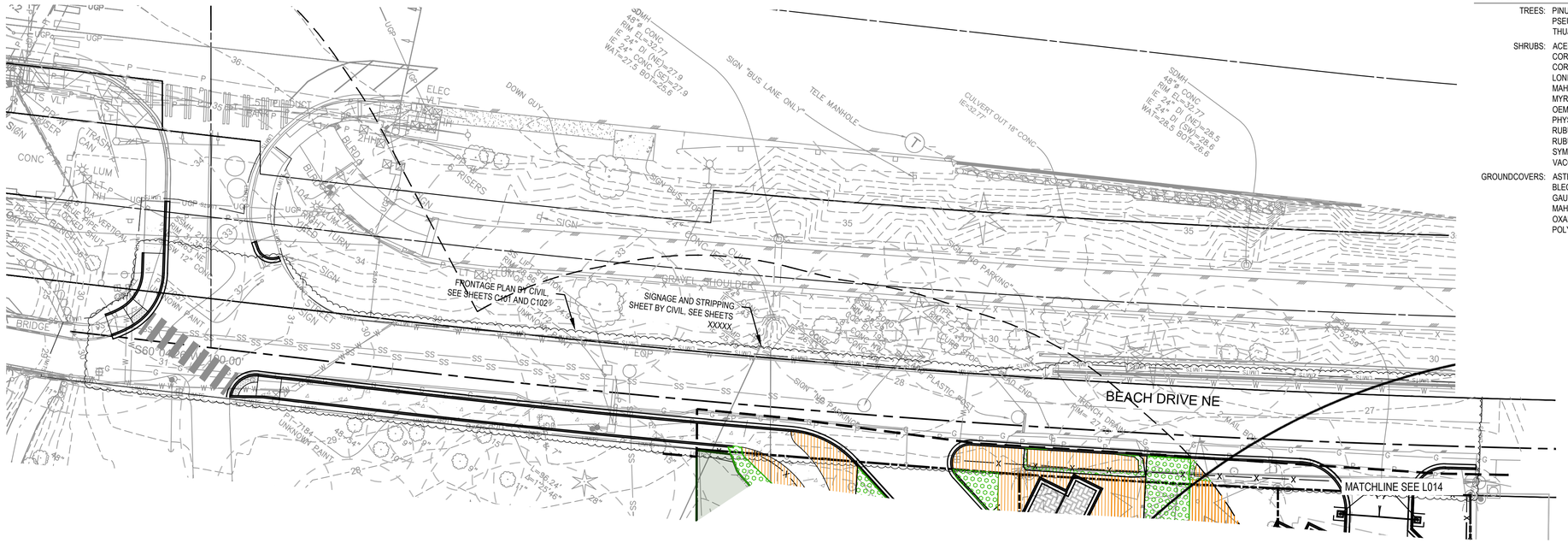
SHEET — OF 113

APPENDIX B: Mitigation Plan



CANDIDATE PLANT LIST

TREES:
- PINUS CONTORTA / SHORE PINE
- PSEUDOTSUGA MENZIESII / DOUGLAS-FIR
- THUJA PLICATA / WESTERN REDCEDAR

SHRUBS:
- ACER CIRCINATUM / VINE MAPLE
- CORNUS SERICEA / RED OSIER DOGWOOD
- CORYLUS CORNUTA / BEAKED HAZELNUT
- LONICERA INVOLUCRATA / TWINBERRY
- MAHONIA AQUIFOLIUM / TALL OREGON GRAPE
- MYRICA CALIFORNICA / PACIFIC WAX MYRTLE
- OEMLERIA CERASIFORMIS / OSOBERRY
- PHYSOCARPUS CAPITATUS / PACIFIC NINEBARK
- RUBUS PARVIFORUS / THIMBLEBERRY
- RUBUS SPECTABILIS / SALMONBERRY
- SYMPHORICARPUS ALBUS / SNOWBERRY
- VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY

GROUNDCOVERS:
- ASTER SUBSPICATUS / DOUGLAS ASTER
- BLECHNUM SPICANT / DEER FERN
- GAULTHERIA SHALLON / SALAL
- MAHONIA NERVOSA / DULL OREGON GRAPE
- OXALIS OREGANA / WOOD SORREL
- POLYSTICHUM MINITUM / WESTERN SWORD FERN

LEGEND

- LIMIT OF WORK
- WETLAND BOUNDARY (DELINEATED)
- WETLAND BOUNDARY (NOT-DELINEATED)
- ORDINARY HIGH WATER MARK (OHWM)
- COMBINED CRITICAL AREA BUFFER
- SHORELINE SETBACK (50')
- SHORELINE JURISDICTION (200')
- WETLAND MITIGATION AREA (1,130 SF)
- WETLAND BUFFER MITIGATION AREA (4,470 SF)
- EXISTING BUFFER IMPACT TO BE RESTORED (5,940 SF)
- EXISTING CRITICAL AREA IMPACT TO BE REMOVED (2,350 SF)
- TEMPORARY BUFFER IMPACT TO BE RESTORED WITH NATIVE PLANTINGS (12,775 SF)
- TEMPORARILY IMPACTED LAWN RESTORED TO ENGINEERED WOOD CHIPS (1,315 SF)
- PRIOR MITIGATION/RESTORATION AREAS TO BE FURTHER ENHANCED (20,655 SF - NOT INCLUDED IN MITIGATION SQUARE FOOTAGES)

NOTES

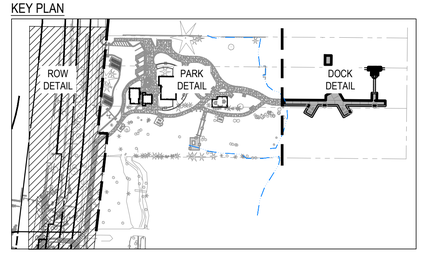
1. CRITICAL AREAS WERE DELINEATED BY FACET ON OCTOBER 9 AND 31, 2023.

	IMPACTS (SEE SHEETS L010-L012)			MITIGATION								
	A	B	C	D	E	F	G	H	I	J		
	NEW PERMANENT CRITICAL AREA IMPACT (SF)	NEW PERMANENT BUFFER IMPACT (SF)	TOTAL PROPOSED BUFFER IMPACT-EXISTING AND NEW (SF)	EXISTING CRITICAL AREA IMPACT TO BE RESTORED (SF)	EXISTING BUFFER IMPACT TO BE RESTORED WITH NATIVE PLANTINGS (SF)	TEMPORARY BUFFER IMPACTS TO BE RESTORED WITH NATIVE PLANTINGS (SF)*	NEW CRITICAL AREA MITIGATION (SF)	NEW CRITICAL AREA BUFFER MITIGATION (SF)	PRIOR MITIGATION AREA TO BE ENHANCED WITH NATIVE PLANTINGS (SF)	TOTAL PROPOSED NATIVE PLANTING AREA (SF)	NET GAIN OR (LOSS)	TOTAL PROPOSED NATIVE PLANTING TO IMPACT RATIO
										E+F+G+H+I	*(D+E+F+G+H) - (A+B)*	J/C
COMBINED CRITICAL AREA TOTALS	**3,895**	**13,135**	**32,213**	**2,350**	**5,940**	**8,383**	**1,130**	**4,470**	**20,655**	**40,578**	**5,243**	**1.26**
LAKE WASHINGTON	3,895	N/A	N/A	2,200	N/A	N/A	N/A	N/A	N/A	N/A	**(1,695)**	**N/A - WATER BODY**
SHORELINE SETBACK 50'	N/A	1,350	6,775	30	440	1,435	1,130	3,990	3,780	10,775	**5,675**	**1.59**
LYON CREEK	-	N/A	N/A	105	N/A	N/A	N/A	N/A	N/A	N/A	**105**	**N/A - WATER BODY**
LYON CREEK BUFFER 115'	N/A	9,865	22,535	-	5,460	6,605	-	-	20,655	32,720	**2,200**	**1.45**
LYON CREEK BUILDING SETBACK 15'	N/A	2,045	4,148	-	100	975	-	-	-	1,075	**(970)**	**0.26**
100-YEAR FLOODPLAN	N/A	185	971	170	910	-			9,275	10,185	**895**	**10.49**
WETLAND A	-	N/A	N/A	-	N/A	N/A	1,130	N/A	-	1,130	**1,130**	**N/A - NO IMPACT**
WETLAND B	-	N/A	N/A	30	N/A	N/A	N/A	N/A	-	-	**30**	**N/A - NO IMPACT**
WETLAND C	-	N/A	N/A	20	N/A	N/A	N/A	N/A	6,840	6,840	**20**	**N/A - NO IMPACT**
WETLAND BUFFERS (COMBINED)	N/A	12,345	30,978	135	5,770	8,078	1,130	4,470	20,655	40,103	**7,238**	**1.29**
SHORELINE JURISDICTION (200')	-	12,625	30,543	-	4,145	9,580	1,130	4,470	14,745	34,070	**6,700**	**1.12**

* EXCLUDES AREAS OF PRIOR MITIGATION

**THE TABLE ABOVE SHOWS IMPACTS AND RESTORATION/MITIGATION BY CRITICAL AREA. MANY OF THE TOTALS OVERLAP DUE TO OVERLAPPING CRITICAL AREA BUFFERS. REFER TO THE PROJECT TOTAL FOR A COMPLETE ANALYSIS OF IMPACTS AND CORRESPONDING MITIGATION/RESTORATION.

KEY PLAN



20' 10' 0 20' 40'

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PRINCIPAL:

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STATE OF WASHINGTON
AMBER V. MIKLUCAK
#22760
REGISTERED LANDSCAPE ARCHITECT

PRELIMINARY

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LAKE FOREST PARK LAKEFRONT IMPROVEMENTS

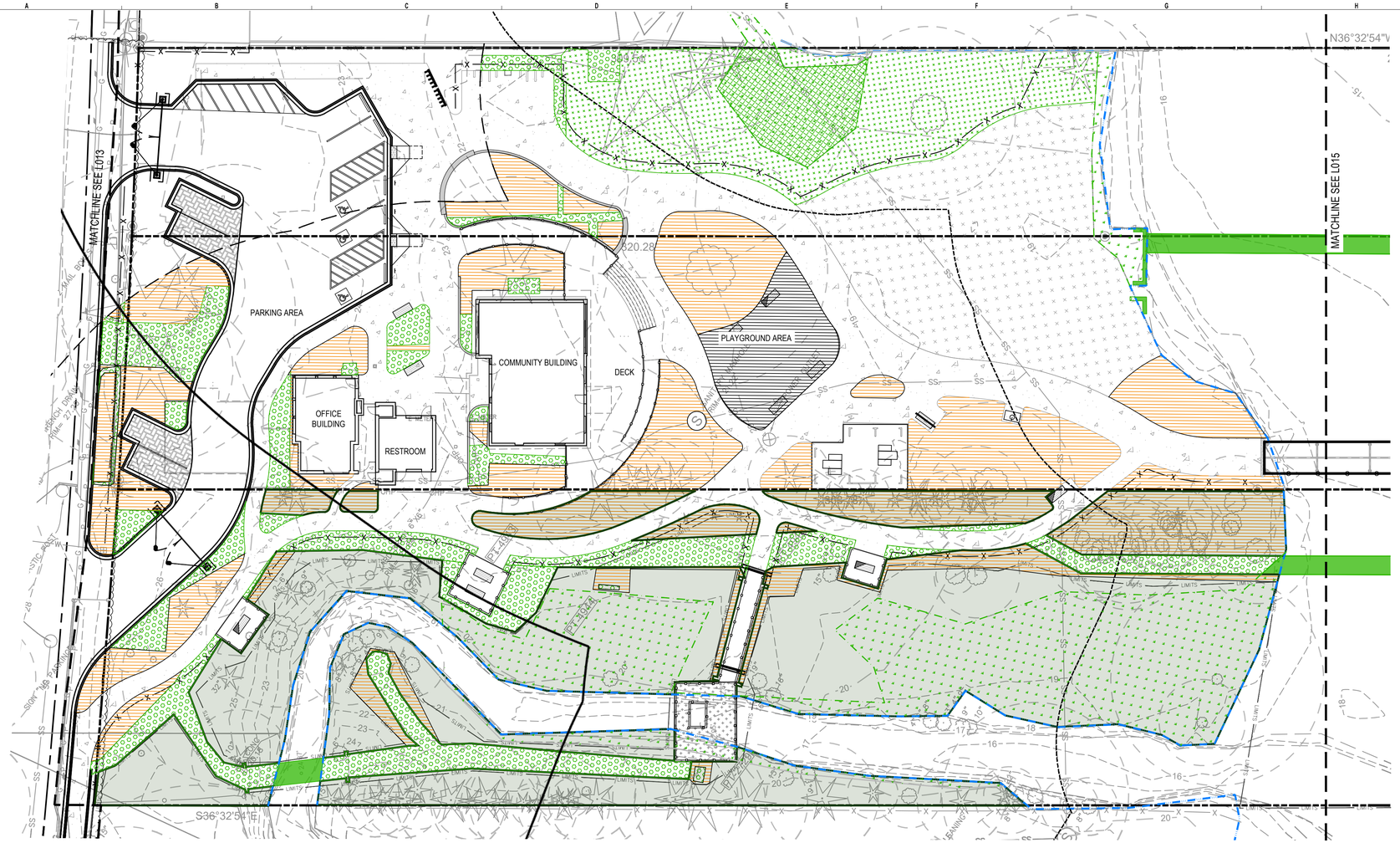
17337, 17345, & 17347 BEACH DR NE
LAKE FOREST PARK, WA 98155
2303.0384.02

70% DESIGN

MITIGATION PLAN

DATE: 9/15/2025

PLAN NUMBER:
L013
SHEET — OF 113



CANDIDATE PLANT LIST

TREES:	PINUS CONTORTA / SHORE PINE
	PSEUDOTSUGA MENZIESII / DOUGLAS-FIR
	THUJA PLICATA / WESTERN REDCEDAR
SHRUBS:	ACER CIRCINATUM / VINE MAPLE
	CORNUS SERICEA / RED OSIER DOGWOOD
	CORYLUS CORNUTA / BEAKED HAZELNUT
	LONICERA INVOLUCRATA / TWINBERRY
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	GAULTHERIA SHALLON / SALAL
	MAHONIA NERVOSA / DULL OREGON GRAPE
	OXALIS OREGANA / WOOD SORREL
	POLYSTICHUM MINITUM / WESTERN SWORD FERN

LEGEND

- LIMIT OF WORK
- WETLAND BOUNDARY (DELINEATED)
- WETLAND BOUNDARY (NOT-DELINEATED)
- ORDINARY HIGH WATER MARK (OHWM)
- COMBINED CRITICAL AREA BUFFER
- SHORELINE SETBACK (50')
- SHORELINE JURISDICTION (200')
- WETLAND MITIGATION AREA (1,130 SF)
- WETLAND BUFFER MITIGATION AREA (4,470 SF)
- EXISTING BUFFER IMPACT TO BE RESTORED (5,940 SF)
- EXISTING CRITICAL AREA IMPACT TO BE REMOVED (2,350 SF)
- TEMPORARY BUFFER IMPACT TO BE RESTORED WITH NATIVE PLANTINGS (12,775 SF)
- TEMPORARILY IMPACTED LAWN RESTORED TO ENGINEERED WOOD CHIPS (1,315 SF)
- PRIOR MITIGATION/RESTORATION AREAS TO BE FURTHER ENHANCED (20,655 SF - NOT INCLUDED IN MITIGATION SQUARE FOOTAGES)

NOTES

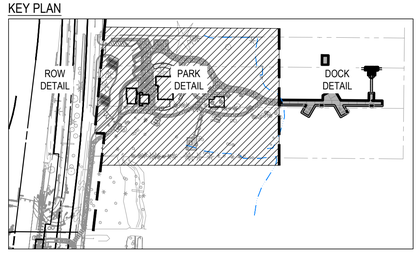
1. CRITICAL AREAS WERE DELINEATED BY FACET ON OCTOBER 9 AND 31, 2023.

	IMPACTS (SEE SHEETS L010-L012)			MITIGATION								
	A	B	C	D	E	F	G	H	I	J		
	NEW PERMANENT CRITICAL AREA IMPACT (SF)	NEW PERMANENT BUFFER IMPACT (SF)	TOTAL PROPOSED BUFFER IMPACT-EXISTING AND NEW (SF)	EXISTING CRITICAL AREA IMPACT TO BE RESTORED (SF)	EXISTING BUFFER IMPACT TO BE RESTORED WITH NATIVE PLANTINGS (SF)	TEMPORARY BUFFER IMPACTS TO BE RESTORED WITH NATIVE PLANTINGS (SF)*	NEW CRITICAL AREA MITIGATION (SF)	NEW CRITICAL AREA BUFFER MITIGATION (SF)	PRIOR MITIGATION AREA TO BE ENHANCED WITH NATIVE PLANTINGS (SF)	TOTAL PROPOSED NATIVE PLANTING AREA (SF) E+F+G+H+I	NET GAIN OR (LOSS) (D+E+F+G+H) - (A+B)	TOTAL PROPOSED NATIVE PLANTING TO IMPACT RATIO J/C
COMBINED CRITICAL AREA TOTALS	**3,895**	**13,135**	**32,213**	**2,350**	**5,940**	**8,383**	**1,130**	**4,470**	**20,655**	**40,578**	**5,243**	**1.26**
LAKE WASHINGTON	3,895	N/A	N/A	2,200	N/A	N/A	N/A	N/A	N/A	N/A	**(1,695)**	**N/A - WATER BODY**
SHORELINE SETBACK 50'	N/A	1,350	6,775	30	440	1,435	1,130	3,990	3,780	10,775	**5,675**	**1.59**
LYON CREEK	-	N/A	N/A	105	N/A	N/A	N/A	N/A	N/A	N/A	**105**	**N/A - WATER BODY**
LYON CREEK BUFFER 115'	N/A	9,865	22,535	-	5,460	6,605	-	-	20,655	32,720	**2,200**	**1.45**
LYON CREEK BUILDING SETBACK 15'	N/A	2,045	4,148	-	100	975	-	-	-	1,075	**(970)**	**0.26**
100-YEAR FLOODPLAN	N/A	185	971	170	910	-			9,275	10,185	**895**	**10.49**
WETLAND A	-	N/A	N/A	-	N/A	N/A	1,130	N/A	-	1,130	**1,130**	**N/A - NO IMPACT**
WETLAND B	-	N/A	N/A	30	N/A	N/A	N/A	N/A	-	-	**30**	**N/A - NO IMPACT**
WETLAND C	-	N/A	N/A	20	N/A	N/A	N/A	N/A	6,840	6,840	**20**	**N/A - NO IMPACT**
WETLAND BUFFERS (COMBINED)	N/A	12,345	30,978	135	5,770	8,078	1,130	4,470	20,655	40,103	**7,238**	**1.29**
SHORELINE JURISDICTION (200')	-	12,625	30,543	-	4,145	9,580	1,130	4,470	14,745	34,070	**6,700**	**1.12**

* EXCLUDES AREAS OF PRIOR MITIGATION

**THE TABLE ABOVE SHOWS IMPACTS AND RESTORATION/MITIGATION BY CRITICAL AREA. MANY OF THE TOTALS OVERLAP DUE TO OVERLAPPING CRITICAL AREA BUFFERS. REFER TO THE PROJECT TOTAL FOR A COMPLETE ANALYSIS OF IMPACTS AND CORRESPONDING MITIGATION/RESTORATION.

KEY PLAN



SCALE: 1" = 20'

NO.	DATE	BY	REVISION

BASE MAP TOPOGRAPHY PROVIDED BY OTHERS. DCG/WATERSHED CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING FEATURES AND CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT DCG/WATERSHED PRIOR TO CONSTRUCTION.

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70% DESIGN

MITIGATION PLAN

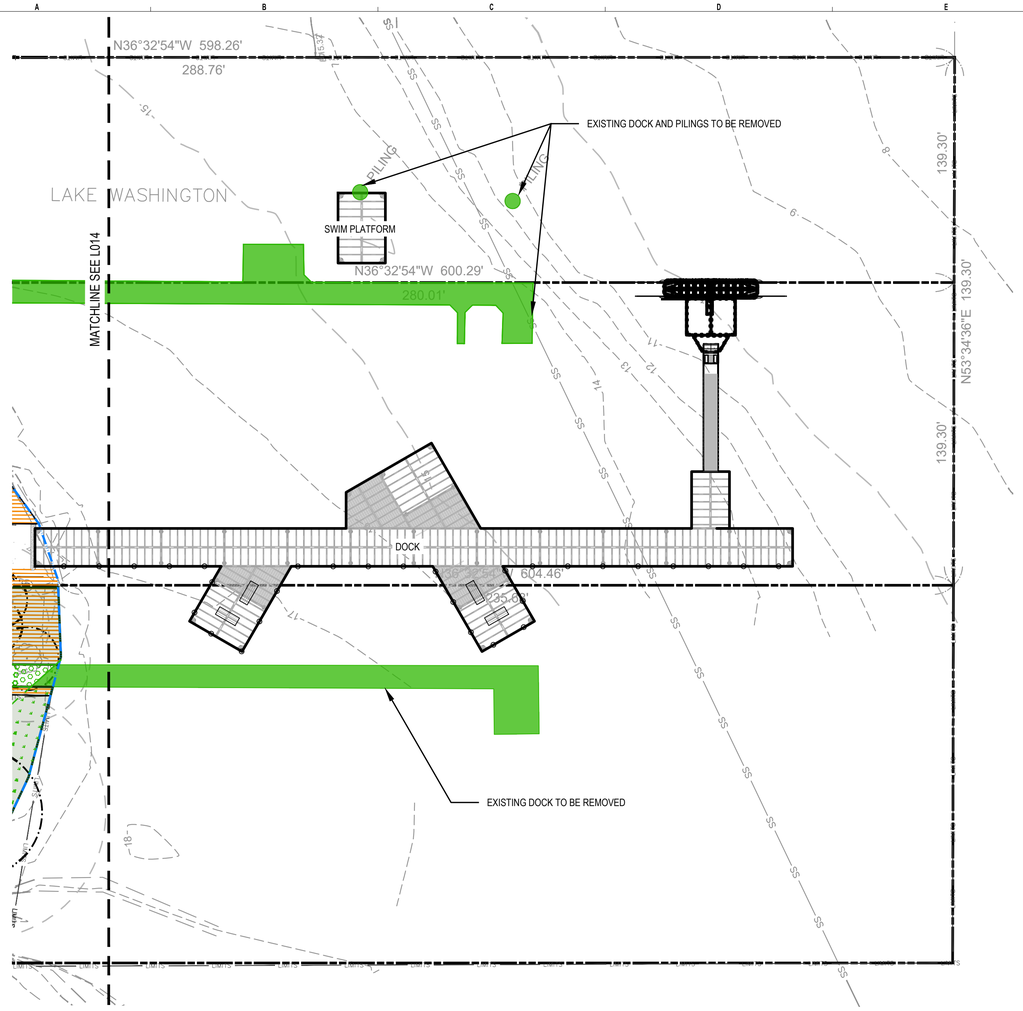
DATE: 9/15/2025

PLAN NUMBER:

L014

SHEET — OF 113

CHECKED BY:
DRAWN BY:
DESIGNED BY:
PROJECT MANAGER:
PRINCIPAL:



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	IMPACTS (SEE SHEETS L010-L012)			MITIGATION								
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	NEW PERMANENT CRITICAL AREA IMPACT (SF)	NEW PERMANENT BUFFER IMPACT (SF)	TOTAL PROPOSED BUFFER IMPACT-EXISTING AND NEW (SF)	EXISTING CRITICAL AREA IMPACT TO BE RESTORED (SF)	EXISTING BUFFER IMPACT TO BE RESTORED WITH NATIVE PLANTINGS (SF)	TEMPORARY BUFFER IMPACTS TO BE RESTORED WITH NATIVE PLANTINGS (SF)*	NEW CRITICAL AREA MITIGATION (SF)	NEW CRITICAL AREA BUFFER MITIGATION (SF)	PRIOR MITIGATION AREA TO BE ENHANCED WITH NATIVE PLANTINGS (SF)	TOTAL PROPOSED NATIVE PLANTING AREA (SF) *E+F+G+H+I*	**NET GAIN OR (LOSS)** ***(D+E+F+G+H) - (A+B)***	**TOTAL PROPOSED NATIVE PLANTING TO IMPACT RATIO** **J/C**
COMBINED CRITICAL AREA TOTALS	**3,895**	**13,135**	**32,213**	**2,350**	**5,940**	**8,383**	**1,130**	**4,470**	**20,655**	**40,578**	**5,243**	**1.26**
LAKE WASHINGTON	3,895	N/A	N/A	2,200	N/A	N/A	N/A	N/A	N/A	N/A	**(1,695)**	**N/A - WATER BODY**
SHORELINE SETBACK 50'	N/A	1,350	6,775	30	440	1,435	1,130	3,990	3,780	10,775	**5,675**	**1.59**
LYON CREEK	-	N/A	N/A	105	N/A	N/A	N/A	N/A	N/A	N/A	**105**	**N/A - WATER BODY**
LYON CREEK BUFFER 115'	N/A	9,865	22,535	-	5,460	6,605	-	-	20,655	32,720	**2,200**	**1.45**
LYON CREEK BUILDING SETBACK 15'	N/A	2,045	4,148	-	100	975	-	-	-	1,075	**(970)**	**0.26**
100-YEAR FLOODPLAN	N/A	185	971	170	910	-			9,275	10,185	**895**	**10.49**
WETLAND A	-	N/A	N/A	-	N/A	N/A	1,130	N/A	-	1,130	**1,130**	**N/A - NO IMPACT**
WETLAND B	-	N/A	N/A	30	N/A	N/A	N/A	N/A	-	-	**30**	**N/A - NO IMPACT**
WETLAND C	-	N/A	N/A	20	N/A	N/A	N/A	N/A	6,840	6,840	**20**	**N/A - NO IMPACT**
WETLAND BUFFERS (COMBINED)	N/A	12,345	30,978	135	5,770	8,078	1,130	4,470	20,655	40,103	**7,238**	**1.29**
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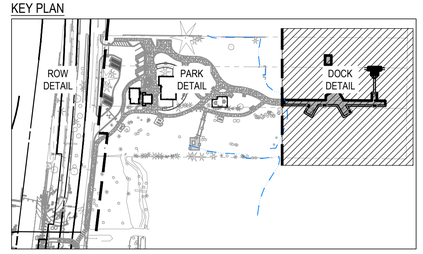
KEY PLAN



20' 10' 0 20' 40'

SCALE: 1" = 20'

NO.	DATE	BY	REVISION

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70% DESIGN

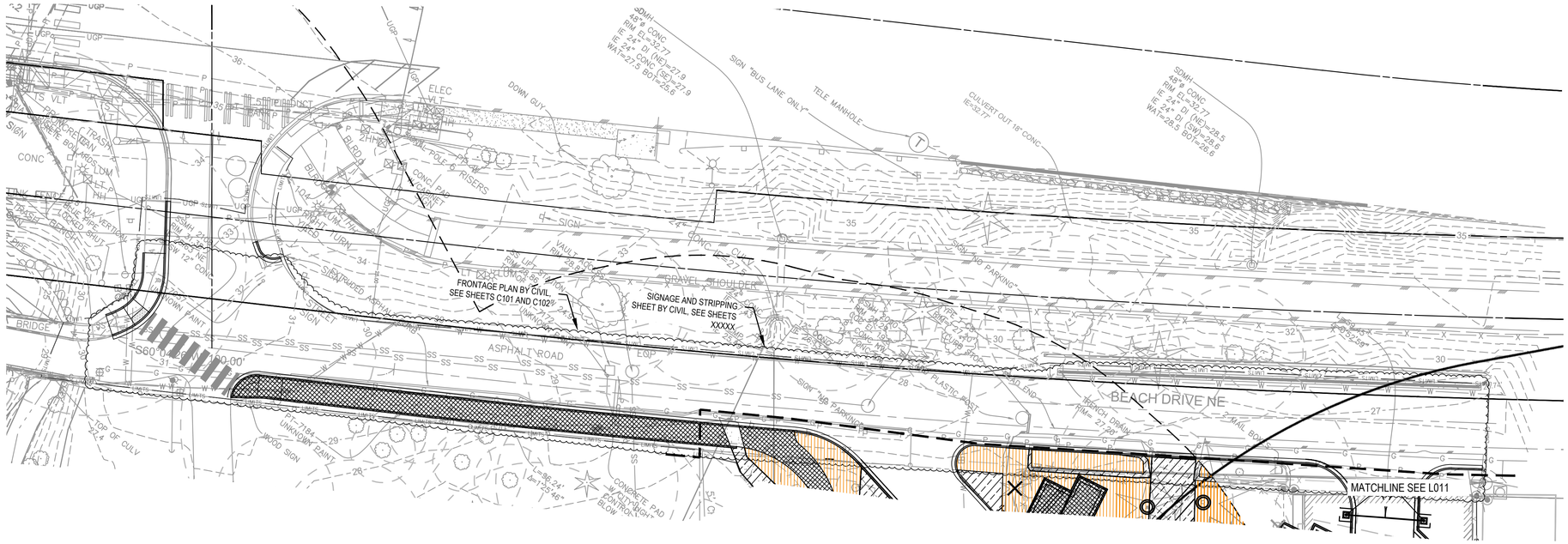
MITIGATION PLAN

DATE: 9/15/2025

PLAN NUMBER:
L015
SHEET — OF 113

CHECKED BY:
DRAWN BY:
DESIGNED BY:
PROJECT MANAGER:
PRINCIPAL:

APPENDIX C: Impact Analysis



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- EXISTING SIGNIFICANT TREES TO BE REMOVED (42 TOTAL)
- EXISTING LANDMARK TREES TO BE REMOVED (1 TOTAL)
- EXISTING NON-SIGNIFICANT TREES TO BE REMOVED (8 TOTAL)
- EXISTING NON-SIGNIFICANT TREES TO REMAIN
- EXISTING LANDMARK TREES TO REMAIN

NOTES

1 CRITICAL AREAS WERE DELINEATED BY FACET ON OCTOBER 9 AND 31, 2023.

	IMPACTS			MITIGATION (SEE SHEET L013-L015)								
	A	B	C	D	E	F	G	H	I	J		
	NEW PERMANENT CRITICAL AREA IMPACT (SF)	NEW PERMANENT BUFFER IMPACT (SF)	TOTAL PROPOSED BUFFER IMPACT- EXISTING AND NEW (SF)	EXISTING CRITICAL AREA IMPACT TO BE RESTORED (SF)	EXISTING BUFFER IMPACT TO BE RESTORED WITH NATIVE PLANTINGS (SF)	TEMPORARY BUFFER IMPACTS TO BE RESTORED WITH NATIVE PLANTINGS (SF)*	NEW CRITICAL AREA MITIGATION (SF)	NEW CRITICAL AREA BUFFER MITIGATION (SF)	PRIOR MITIGATION AREA TO BE ENHANCED WITH NATIVE PLANTINGS (SF)	TOTAL PROPOSED NATIVE PLANTING AREA (SF)	NET GAIN OR (LOSS)	TOTAL PROPOSED NATIVE PLANTING TO IMPACT RATIO
										E+F+G+H+I	*(D+E+F+G+H) - (A+B)*	J/C
COMBINED CRITICAL AREA TOTALS	**3,895**	**13,135**	**32,213**	**2,350**	**5,940**	**8,383**	**1,130**	**4,470**	**20,655**	**40,578**	**5,243**	**1.26**
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SHORELINE SETBACK 50'	N/A	1,350	6,775	30	440	1,435	1,130	3,990	3,780	10,775	**5,675**	**1.59**
LYON CREEK	-	N/A	N/A	105	N/A	N/A	N/A	N/A	N/A	N/A	**105**	**N/A - WATER BODY**
LYON CREEK BUFFER 115'	N/A	9,865	22,535	-	5,460	6,605	-	-	20,655	32,720	**2,200**	**1.45**
LYON CREEK BUILDING SETBACK 15'	N/A	2,045	4,148	-	100	975	-	-	-	1,075	**(970)**	**0.26**
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WETLAND A	-	N/A	N/A	-	N/A	N/A	1,130	N/A	-	1,130	**1,130**	**N/A - NO IMPACT**
WETLAND B	-	N/A	N/A	30	N/A	N/A	N/A	N/A	-	-	**30**	**N/A - NO IMPACT**
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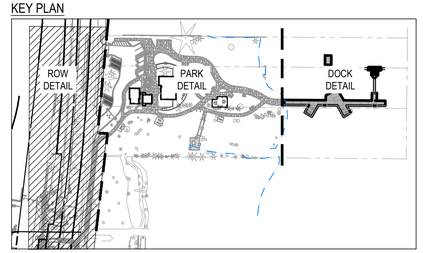

20' 10' 0 20' 40'

N

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2303.0384.02

70% DESIGN

IMPACT ANALYSIS

DATE: 9/15/2025

PLAN NUMBER:

L010

SHEET --- OF 113

FILE LOCATION: Z:\SHARED\PROJECTS\ACTIVE\2023\02303.0384.02 - LFP LAKEFRONT PARK PH 2\DRAWINGS\CAD-REVIT\90% PERMIT REVISIONS\L013-L015_IMPACTS ANALYSIS.DWG - ORIGINAL SHEET SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES) - LAST MODIFIED BY: AMANDA SANELLI
PRINCIPAL: ED PROJECT MANAGER: ED DESIGNED BY: JL DRAWN BY: MH CHECKED BY: ED

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										E+F+G+H+I	*(D+E+F+G+H) - (A+B)*	J/C
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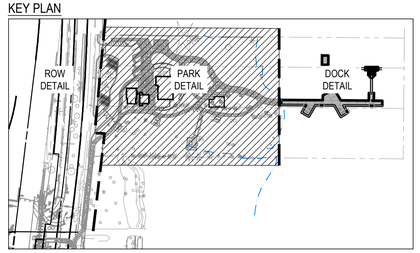
LAKE WASHINGTON	3,895	N/A	N/A	2,200	N/A	N/A	N/A	N/A	N/A	N/A	**(1,695)**	**N/A - WATER BODY**
SHORELINE SETBACK 50'	N/A	1,350	6,775	30	440	1,435	1,130	3,990	3,780	10,775	**5,675**	**1.59**
LYON CREEK	-	N/A	N/A	105	N/A	N/A	N/A	N/A	N/A	N/A	**105**	**N/A - WATER BODY**
LYON CREEK BUFFER 115'	N/A	9,865	22,535	-	5,460	6,605	-	-	20,655	32,720	**2,200**	**1.45**
LYON CREEK BUILDING SETBACK 15'	N/A	2,045	4,148	-	100	975	-	-	-	1,075	**(970)**	**0.26**
100-YEAR FLOODPLAN	N/A	185	971	170	910	-			9,275	10,185	**895**	**10.49**
WETLAND A	-	N/A	N/A	-	N/A	N/A	1,130	N/A	-	1,130	**1,130**	**N/A - NO IMPACT**
WETLAND B	-	N/A	N/A	30	N/A	N/A	N/A	N/A	-	-	**30**	**N/A - NO IMPACT**
WETLAND C	-	N/A	N/A	20	N/A	N/A	N/A	N/A	6,840	6,840	**20**	**N/A - NO IMPACT**
WETLAND BUFFERS (COMBINED)	N/A	12,345	30,978	135	5,770	8,078	1,130	4,470	20,655	40,103	**7,238**	**1.29**
SHORELINE JURISDICTION (200')	-	12,625	30,543	-	4,145	9,580	1,130	4,470	14,745	34,070	**6,700**	**1.12**

* EXCLUDES AREAS OF PRIOR MITIGATION

**THE TABLE ABOVE SHOWS IMPACTS AND RESTORATION/MITIGATION BY CRITICAL AREA. MANY OF THE TOTALS OVERLAP DUE TO OVERLAPPING CRITICAL AREA BUFFERS. REFER TO THE PROJECT TOTAL FOR A COMPLETE ANALYSIS OF IMPACTS AND CORRESPONDING MITIGATION/RESTORATION.

KEY PLAN



20' 10' 0 20' 40'

SCALE: 1" = 20'

N

NO.	DATE	BY	REVISION

BASE MAP TOPOGRAPHY PROVIDED BY OTHERS. DCS/WATERSHED CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING FEATURES AND CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT DCS/WATERSHED PRIOR TO CONSTRUCTION.

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17337, 17345, & 17347 BEACH DR NE
LAKE FOREST PARK, WA 98155
2303.0384.02

70% DESIGN

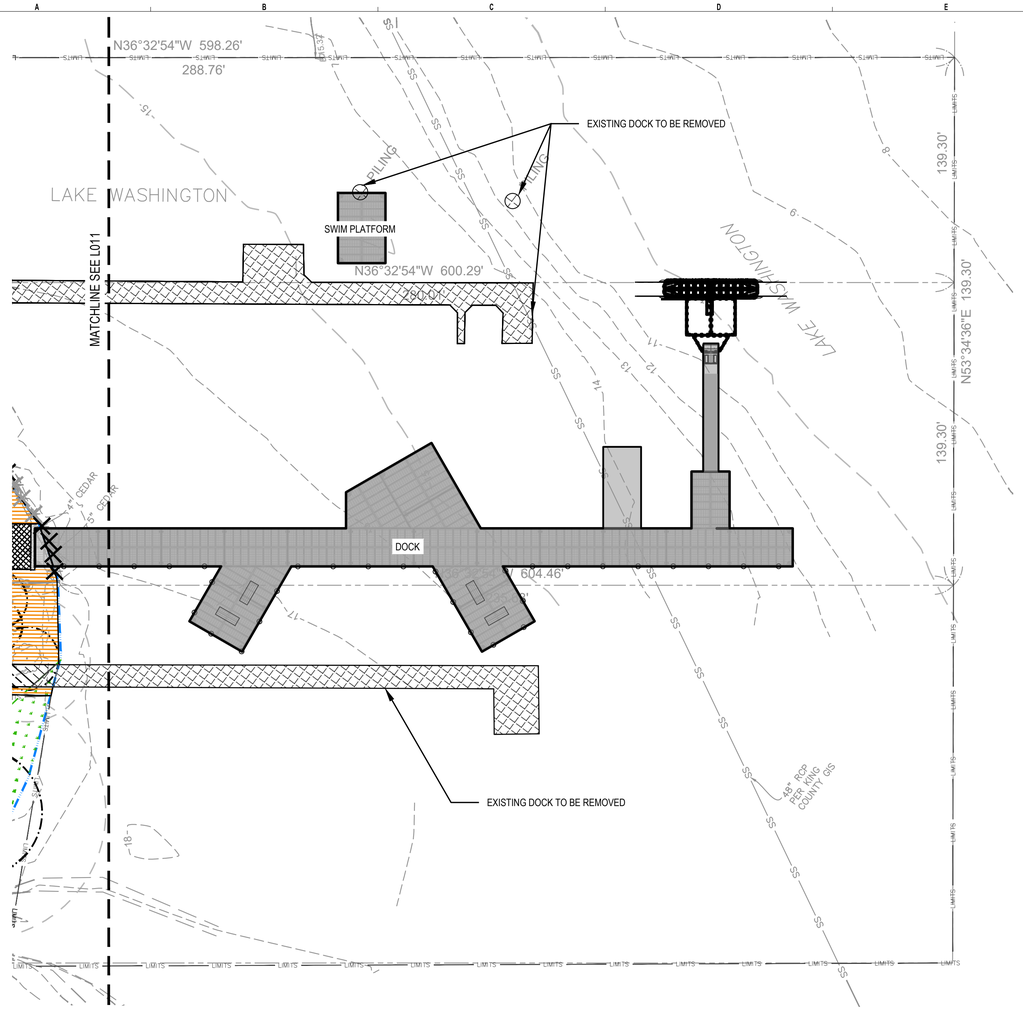
IMPACT ANALYSIS

DATE: 9/15/2025

PLAN NUMBER: L011

SHEET 11 OF 113

FILE LOCATION: Z:\SHARED\PROJECTS\ACTIVE\2023\2303.0384.02 - LFP LAKEFRONT PARK PH 2\DRAWINGS\CAD-REVIT\90% PERMIT REVISIONS\L013-L015_IMPACTS ANALYSIS.DWG - ORIGINAL SHEET SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES) - LAST MODIFIED BY: AMANDA SANELLI
PRINCIPAL: ED PROJECT MANAGER: ED DESIGNED BY: JL DRAWN BY: MH CHECKED BY: ED



LEGEND

- LIMIT OF WORK
- WETLAND BOUNDARY (DELINEATED)
- WETLAND BOUNDARY (NOT-DELINEATED)
- ORDINARY HIGH WATER MARK (OHWM)
- COMBINED CRITICAL AREA BUFFER
- 50' LAKE WASHINGTON SHORELINE SETBACK
- SHORELINE JURISDICTION (200')
- NEW PERMANENT CRITICAL AREA IMPACT (3,895 SF)
- NEW PERMANENT BUFFER IMPACT (13,135 SF)
- EXISTING CRITICAL AREA IMPACT TO BE RESTORED (2,350 SF)
- EXISTING BUFFER IMPACT TO THE RESTORED (5,940 SF)
- NEW TEMPORARY BUFFER IMPACTS TO BE RESTORED (12,775 SF)
- EXISTING SIGNIFICANT TREES TO BE REMOVED (42 TOTAL)
- EXISTING LANDMARK TREES TO BE REMOVED (1 TOTAL)
- EXISTING NON-SIGNIFICANT TREES TO BE REMOVED (8 TOTAL)
- EXISTING NON-SIGNIFICANT TREES TO REMAIN
- EXISTING LANDMARK TREES TO REMAIN

	IMPACTS			MITIGATION (SEE SHEET L013-L015)								
	A	B	C	D	E	F	G	H	I	J		
	NEW PERMANENT CRITICAL AREA IMPACT (SF)	NEW PERMANENT BUFFER IMPACT (SF)	TOTAL PROPOSED BUFFER IMPACT- EXISTING AND NEW (SF)	EXISTING CRITICAL AREA IMPACT TO BE RESTORED (SF)	EXISTING BUFFER IMPACT TO BE RESTORED WITH NATIVE PLANTINGS (SF)	TEMPORARY BUFFER IMPACTS TO BE RESTORED WITH NATIVE PLANTINGS (SF)*	NEW CRITICAL AREA MITIGATION (SF)	NEW CRITICAL AREA BUFFER MITIGATION (SF)	PRIOR MITIGATION AREA TO BE ENHANCED WITH NATIVE PLANTINGS (SF)	TOTAL PROPOSED NATIVE PLANTING AREA (SF)	NET GAIN OR (LOSS)	TOTAL PROPOSED NATIVE PLANTING TO IMPACT RATIO
										E+F+G+H+I	*(D+E+F+G+H) - (A+B)*	J/C
COMBINED CRITICAL AREA TOTALS	**3,895**	**13,135**	**32,213**	**2,350**	**5,940**	**8,383**	**1,130**	**4,470**	**20,655**	**40,578**	**5,243**	**1.26**
LAKE WASHINGTON	3,895	N/A	N/A	2,200	N/A	N/A	N/A	N/A	N/A	N/A	**(1,695)**	**N/A - WATER BODY**
SHORELINE SETBACK 50'	N/A	1,350	6,775	30	440	1,435	1,130	3,990	3,780	10,775	**5,675**	**1.59**
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WETLAND A	-	N/A	N/A	-	N/A	N/A	1,130	N/A	-	1,130	**1,130**	**N/A - NO IMPACT**
WETLAND B	-	N/A	N/A	30	N/A	N/A	N/A	N/A	-	-	**30**	**N/A - NO IMPACT**
WETLAND C	-	N/A	N/A	20	N/A	N/A	N/A	N/A	6,840	6,840	**20**	**N/A - NO IMPACT**
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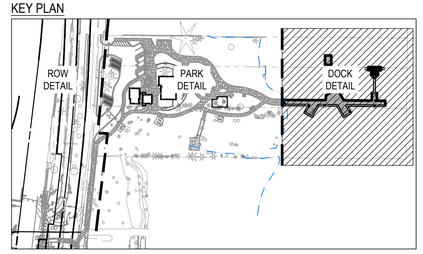
KEY PLAN



20' 10' 0 20' 40'

SCALE: 1" = 20'

NO.	DATE	BY	REVISION

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70% DESIGN

IMPACT ANALYSIS

DATE: 9/15/2025
PLAN NUMBER: L012
SHEET 12 OF 113

FILE LOCATION: Z:\SHARED\PROJECTS\ACTIVE\2023\2303.0384.02 - LFP LAKEFRONT PARK PH 2\DRAWINGS\CAD-REVIT\90% PERMIT REVISIONS\L012-L013_IMPACTS ANALYSIS.DWG - ORIGINAL SHEET SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES) - LAST MODIFIED BY: AMANDA SANELLI
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