SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants*:**

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background

1. Name of proposed project, if applicable:
Lynnwood Place Boardwalk.

2. Name of applicant:
Wakefield Alderwood, LLC.

3. Address and phone number of applicant and contact person:

1457 130th Ave NE
Bellevue, WA98005

425.864.3644
Ed Babbitt

4. Date checklist prepared:
April 8, 2024

5. Agency requesting checklist:
City of Lynnwood

6. Proposed timing or schedule (including phasing, if applicable):
Construction is expected to begin once all necessary permits and approvals have been received. All construction shall occur within a WDFW-designated fish window between July 1st and September 30th.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
No plans for future additions, expansions, or future activities related to this proposal.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
Critical Areas Submittal (Critical Areas Report, December 21, 2023, prepared by Talasaea Consultants, Inc) required by City of Lynnwood.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
None to our knowledge.

10. List any government approvals or permits that will be needed for your proposal, if known.
Building Permit (City of Lynnwood. Approved with conditions).
Hydraulic Project Approval (WDFW).

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)
The proposed project includes the construction of a pedestrian trail and boardwalk adjacent to and paralleling the south side of Maple Road between Alderwood Mall Parkway and Ash Way in Lynnwood, WA. The trail will have two connection points to the existing sidewalks. One will be on the intersection of Maple Road and Alderwood Mall Parkway, and another on Maple Road and Ash Way. Two sections of the trail will be an elevated boardwalk supported by four-inch pin pile footings over a Category III wetland and a Type F stream. The other section will be on-grade sidewalk within the wetland buffer.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you

are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project site is not a defined parcel, and is adjacent to parcel 00372800300101 and parcel 00372800300203. The site is bounded by Maple Road to the north, a commercial-residential zone to the south and west, and Ash Way to the east. The majority of the Site is in the Public Land Survey System location SW¼ of the SW¼ of Section 11, Township 27 North, Range 4 East, Willamette Meridian (W.M.). Please refer to Figure 1 and Figure 2 in the Critical Areas Report prepared by Talasaea Consultants, Inc dated December 21, 2023. The proposed work (trail and boardwalk construction, and mitigation plantings) will be within a 35-foot proximity of the road edge.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:

(circle one) **Flat**, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

Site topography generally slopes down from north to south. The steepest slope near the edge of Maple Road is approximately 8%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The Natural Resource Conservation Service (NRCS) maps Mukilteo muck as the one (1) soil type on the project site.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No evidence of unstable soil.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The concrete pedestrian trail will be installed in the level areas and the boardwalk will be installed along the sloped/bank areas and over the wetland using pin pile structure, the banks of the stream will not be graded or otherwise disturbed. Fill material will be WSDOT spec.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

The banks of the stream will not be graded or otherwise disturbed. Erosion will be none to minimal. In addition, native vegetation appropriate for upland and riparian habitats will be planted to restore the degraded wetland and stream buffer. Invasive species will be removed around the critical areas where these species occur within the trail/boardwalk development area of the Site.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Less than 1% of the entire undefined parcel will be covered by concrete (pedestrian trail).

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

A TESCP has been developed for construction of the project. Please refer to civil drawing, sheet 2 of 5 SWPPP. The project will be constructed during the dry months to minimize potential erosion related impacts. Potential stormwater, erosion and sediment impacts during construction will be addressed using BMPs, which consist of marked clearing limits, perimeter protection (silt fence or similar), inlet protection for the adjacent grated CBs and retained vegetation, etc.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Equipment operation and worker's vehicles will generate exhaust emissions to the local air during construction.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

It is expected that any offsite sources of emissions or odor will not affect the proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Standard emission control devices, in conformance with federal and state air quality standards, will be utilized during construction. Where available, the contractor will aim to improve the fuel efficiency of construction equipment by minimizing idling time, maintaining all construction equipment in proper working condition, and training equipment operators how to properly use the equipment.

3. **Water**

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Two (2) wetlands (A and B) were identified and delineated on the Site. Both wetlands are classified as Category III wetlands. Habitat score for Wetland A and B is 5.

One (1) stream (Stream A) was identified onsite. Stream A is classified as Type F. The stream flows from north to south, parallel to Ash Way. A culvert is located at the north end to convey stormwater to Stream A. The stream is adjacent to Wetland A, and its buffer overlaps with the buffer of Wetland A.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

An elevated boardwalk would be constructed over Category III wetlands and would be supported by driven four-inch-diameter steel pin piles on ten-foot spacings (please refer to structural plans).

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No fill or dredged material will be placed or removed from the surface waters or wetlands under this proposal.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
No surface water withdrawals or diversions are expected to be needed to complete this project.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
The Site does not lie within a 100-year floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
No waste materials are expected to be discharged to surface waters.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.
No groundwater will be withdrawn, and no water is planned to be discharged to groundwater.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.
Not applicable to this project.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
Stormwater runoff from sidewalks, trails, and roads will be collected in gutters and deposited into the municipal storm system. There will be an open grate on the boardwalk. Stormwater will disperse through the wetlands and generally follow the topographic contours flowing southeast, draining to Stream A.

2) Could waste materials enter ground or surface waters? If so, generally describe.
In accordance with King County and City of Lynnwood requirements, TESC measures will be implemented to prevent waste materials from entering ground or surface waters during construction.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.
No, the natural drainage pattern and discharge location will be maintained.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage

pattern impacts, if any:

The project will not alter the existing topography of the site, and TESC measures will be implemented. There will be no to minimal impact on the surface, ground, and runoff water, and drainage pattern.

4. **Plants**

a. Check the types of vegetation found on the site:

__X__deciduous tree: alder, maple, aspen, other
__X__evergreen tree: fir, cedar, pine, other
__X__shrubs
____grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

As discussed with the City to accommodate the trail and boardwalk, four trees (three deciduous trees and one birch tree) will be removed, and one tree with large canopy will be trimmed (for safety and sight clearance). Invasive species will be removed, and native trees (Oregon ash, Pacific willow, Western red cedar, and Vine maple) will be planted on Site as part of the mitigation.

c. List threatened and endangered species known to be on or near the site.

No threatened or endangered plant species are found on or near the Site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The proposed mitigation will restore the degraded wetland buffers and wetland within the project area through plantings of native vegetation appropriate for upland and riparian habitat. Invasive species will be removed as part of the mitigation.
Plant species will be chosen for a variety of qualities, including adaptation to specific water/moisture regimes, value to wildlife, value as a physical or visual barrier, pattern of growth (structural diversity), and aesthetic values. Native tree, shrub, and herbaceous species chosen can increase both the structural and species diversity of the mitigation areas, thereby increasing the value of the area to wildlife for food and cover.

e. List all noxious weeds and invasive species known to be on or near the site.

Himalayan blackberry, Reed canarygrass, English ivy.

5. **Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Birds: robins, crows, chickadees, juncos
Mammals: black-tailed deer
Amphibians: pacific chorus frog
Fish: sticklebacks, cutthroat trout, coho salmon fry; Chinook salmon and winter steelhead known to be near the site

b. List any threatened and endangered species known to be on or near the site.
Chinook salmon and winter steelhead are known to be near the site.

c. Is the site part of a migration route? If so, explain.
The site is within the Pacific Flyway for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:
The removal of invasive plant species and replanting of native species will create healthier habitat for local species. Down logs, rootwads, and stumps will be incorporated into the mitigation areas to provide ecologically important habitat features for wildlife.

f. List any invasive animal species known to be on or near the site.

No invasive animal species have been observed on or near the site.

6. **Energy and Natural Resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Not applicable to this project.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The project will not affect the potential use of solar energy by adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Not applicable to this project.

7. **Environmental Health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.
This proposed project will not create any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste.

1) Describe any known or possible contamination at the site from present or past uses.
None to our knowledge.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.
There are no known existing hazardous chemicals/conditions that might affect project development and design, including underground utilities located within the project area and in the vicinity.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.
There are no known existing hazardous chemicals being stored, used, or produced on-site.

4) Describe special emergency services that might be required.
No special emergency services will be required as a result of this proposed project activity.

5) Proposed measures to reduce or control environmental health hazards, if any:
There are no known environmental health hazards that will result from this project. There are no known hazardous materials that will be used for the project other than the use of concrete and timber. State regulations regarding safe handling of hazardous materials will be enforced during the construction process.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
The daytime and nighttime sound levels are dominated by vehicular traffic in the project vicinity from SR-525, Maple Road, Alderwood Mall Pkwy, and near local grocery stores and other shops. Typical sound from vehicle traffic and distribution trucks can be expected. No other atypical noise is expected following the completion of the proposed project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.
Short-term impacts will result from the use of construction equipment during construction. Construction will occur during daylight hours, and in compliance with all noise ordinances. Heavy equipment, hand tools and the transporting of construction materials and equipment generates construction noise. Long-term impact will result from recreation

activities (for example, cycling and jogging) related to the use of trail and boardwalk.

3) Proposed measures to reduce or control noise impacts, if any:
Construction will be performed during normal daylight hours.

8. **Land and Shoreline Use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.
The Site is undeveloped and is vegetated predominantly with a mixed coniferous and deciduous forest. A coffee shop (Gourmet Latte) and a sports complex (TOCA Soccer Center Lynnwood) are on the adjacent parcels to the southeast. The proposed project will not affect current land uses on nearby or adjacent properties.

a. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?
None to our knowledge.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:
None to our knowledge.

c. Describe any structures on the site.
The project site is undeveloped and there are no structures on the site.

d. Will any structures be demolished? If so, what?
No structures will be demolished.

e. What is the current zoning classification of the site?
The project is an undefined parcel and there is no zoning classification. The site is bounded by a planned commercial development zone to the north and south, a commercial-residential zone to the west, and SR-525 to the east.

f. What is the current comprehensive plan designation of the site?
Project site is designated as Regional Commercial zone in accordance with City of Lynnwood Comprehensive Plan's Future Land Use Map.

g. If applicable, what is the current shoreline master program designation of the site?
The site is not within any shoreline zones.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.
Two (2) wetlands (A and B) were identified and delineated on the Site. Both Wetlands A and B are classified as Category III wetlands with a habitat score of 5. Wetland A is

adjacent to Stream A. Stream A is classified as Type F with a channel width ranging between 8 and 24 feet as observed at the time of the field investigation.

i. Approximately how many people would reside or work in the completed project?

Not applicable to this project.

j. Approximately how many people would the completed project displace?

Not applicable to this project.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable to this project.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The project is designed to be consistent with City of Lynnwood land use and Critical Areas requirements. The project will not change land use; therefore, no measures are proposed.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

Not applicable to this project.

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Not applicable to this project.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Not applicable to this project.

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable to this project.

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The proposed trail and boardwalk will be ADA accessible and level to connect with existing sidewalk grades. The boardwalk will be approximately 2' higher than the top of curb. The proposed trail will be concrete, and the boardwalk will be structural timber, lumber and light duty aqua grating..

b. What views in the immediate vicinity would be altered or obstructed?

No views will be altered or obstructed.

g. Proposed measures to reduce or control aesthetic impacts, if any:

A mitigation plan is developed to improve the existing conditions of the wetlands and their associated buffers through the removal of non-native, invasive blackberries that currently form a dense thicket in the vicinity of the proposed trail and boardwalk.

11. **Light and Glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The proposed project will not produce any light or glare.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No light or glare will be produced from this project, and the project will not be a safety hazard or interfere with views.

c. What existing off-site sources of light or glare may affect your proposal?

There are no offsite sources of light or glare that could affect the project.

d. Proposed measures to reduce or control light and glare impacts, if any:

No measures to reduce or control light and glare impacts are proposed, as the project will not produce any light or glare.Not applicable to this project.

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

Recreation opportunities include: the Alderwood Mall complex (across Alderwood Mall Pkwy), Swamp Creek (across SR-525), and Pioneer Park (25 min walk from the project site). There are existing sidewalks and bike lanes connecting the project site to the above-mentioned places.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No, the project will increase access to already existing recreational opportunities.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No measures to reduce or control impacts on recreation are proposed, as none are needed.

13. **Historic and cultural preservation**

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

Applicant finds no recorded archaeological or historic sites on or near project site.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No known landmarks or evidence of Indian or historic use or occupation is known to be on or near the site.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Applicant conducted online search and no previously recorded cultural and historic resources were identified on or near the project site. Applicant has communicated with Dr. Fox with the Muckleshoot tribe about the proposed project, and no concerns have been raised on this aspect.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Based upon the Applicant's conducted background research and field survey, the project is not anticipated to impact any cultural or historic resources.

14. **Transportation**

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Onsite connection points to the existing sidewalks will be on the intersection of Maple Road and Alderwood Mall Parkway, and from Ash Way to the Interurban Trail. Please refer to civil plans or Critical Areas Mitigation Plans in the Critical Areas Report.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Bus line 107 and 166 serve the project region. Bus stops are within a 10-minute walk from the proposed project site.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Not applicable to this project.

b. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The proposed trail and boardwalk will provide an ADA-compliant connection for pedestrians, cyclists, and other users to the Interurban Trail. The project itself (which is open to public) is an improvement to the existing road system.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will not use water, rail, or air transportation.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

Not applicable to this project.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

The proposal will not interfere with, affect, or be affected by the movement of agricultural and

forest products on roads or streets in the area.

h. Proposed measures to reduce or control transportation impacts, if any:
The project will improve the existing road system, providing a more pedestrian and cyclist friendly path to connect the Interurban Tail. No additional vehicular traffic will be generated by the project. Thus, no reduction or control methods will be needed.

15. **Public Services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.
The project will not result in an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.
Not applicable to this project.

16. **Utilities**

a. Circle utilities currently available at the site:
electricity, natural gas, **water**, refuse service, **telephone**, sanitary sewer, septic system, other **culvert, storm water system**

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
No utilities are proposed for the project.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

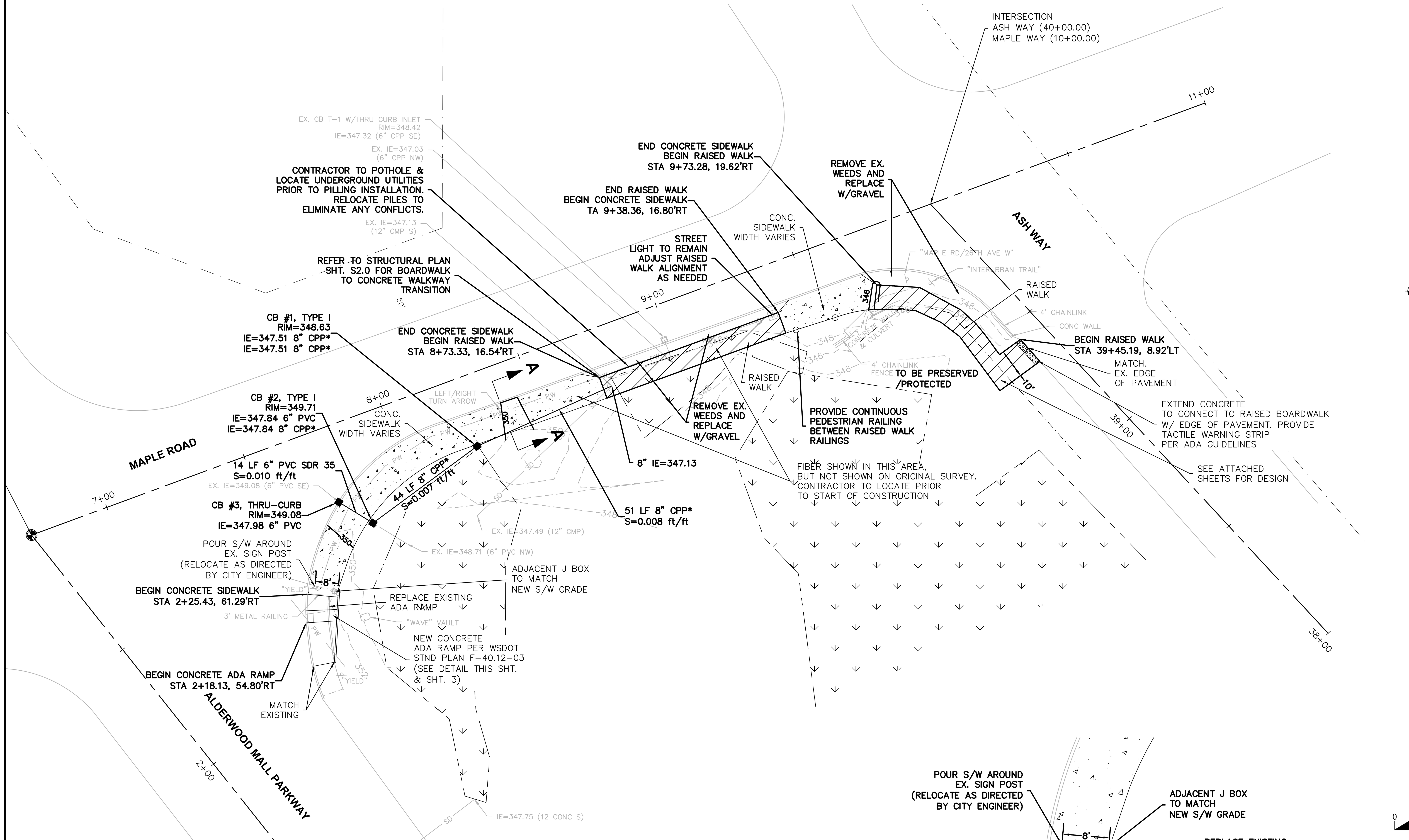
Name of signee STEVEN J. MALSAM

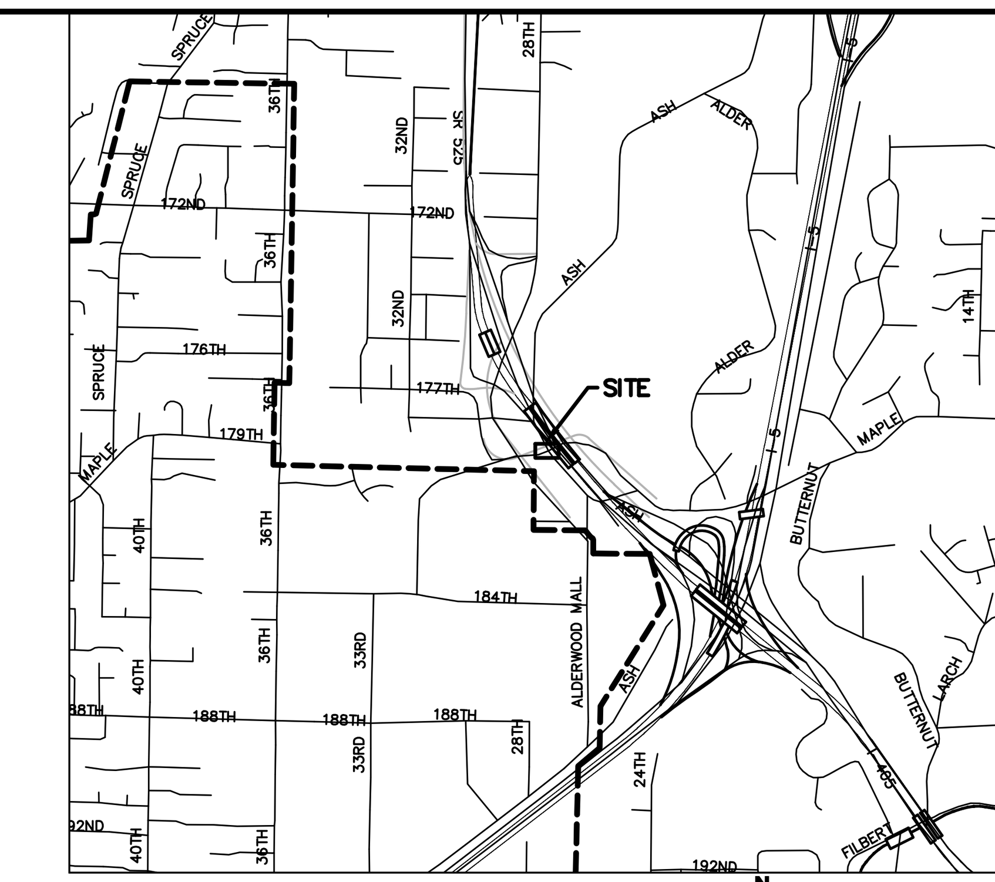
Position and Agency/Organization MIW

Date Submitted: 06/07/24

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.





VICINITY MAP

SCALE: 1" = 2,000'

BASIS OF BEARINGS

S38°28'11"E BETWEEN FOUND MONUMENTS ALONG ALDERWOOD MALL PARKWAY PER RECORD OF SURVEY AFN 8608275005

DATUM NAVD 88

BENCHMARK

SNO. CO. SURVEY CONTROL DATABASE PT. ID 1625 (WSDOT MON "IS3109") – FOUND RAILROAD SPIKE W/ "X" & "3109" IN ASPHALT SHOULDER OF S.R. 525 LOCATED ON OVERPASS NORTH OF SITE ALIGNED W/ EAST EDGE OF 26TH AVE. W.

ELEV. = 377.44'

SITE DATA

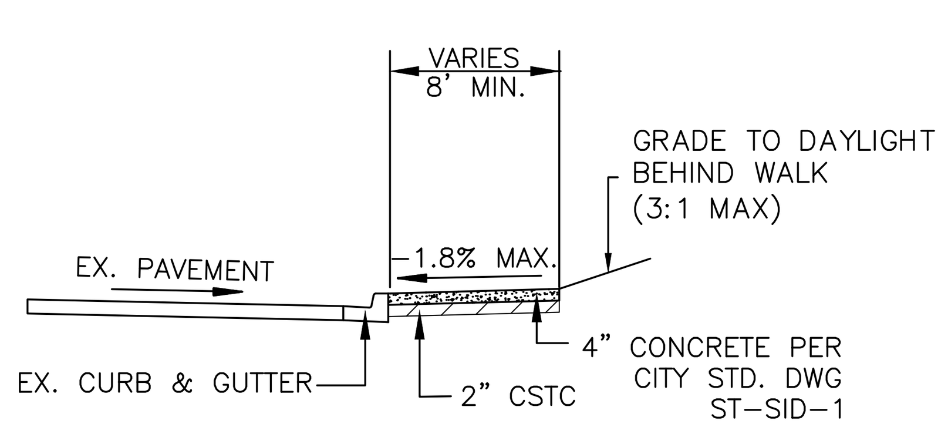
WORK AREA: MAPLE ROAD & ASH WAY LYNNWOOD, WA
PROJECT ADDRESS: 3101 184TH ST. SW, LYNNWOOD, WA 98037

CPP* NOTE:

ALL NEW CPP CALLED OUT ON PLAN SHALL BE AASHTO M252, TYPE S

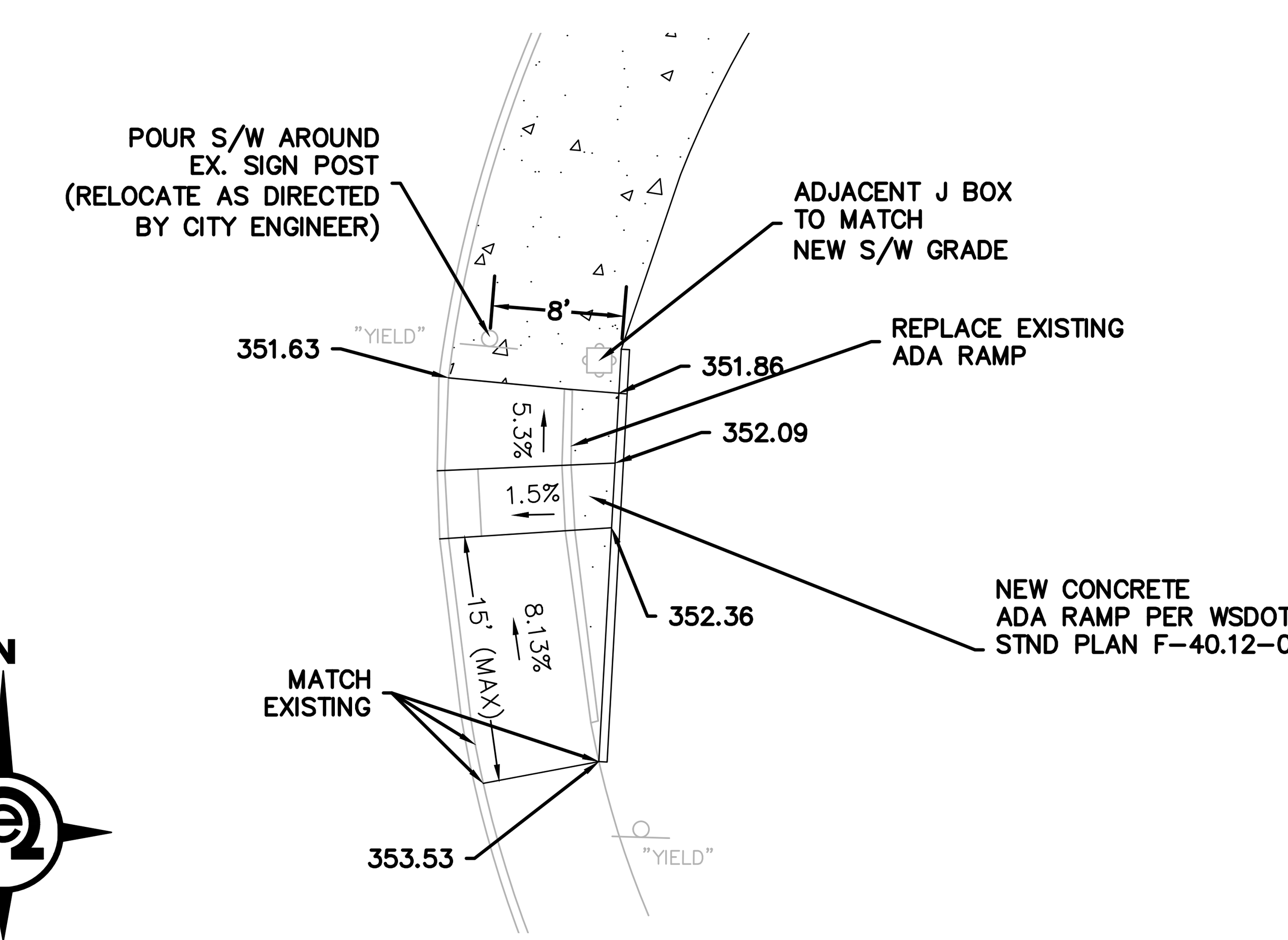
N

0 20 40 HORIZONTAL SCALE



SECTION 'A-A'

N.T.S.



N

0 10 20 HORIZONTAL SCALE

ADA DETIAL

1" = 10'

811 Know what's below. Call two business days before you dig.

DRAWING INDEX
1) COVER SHEET
2) SWPPP
3) SWPPP DETAILS
4) DETAILS
5) NOTES

TCP
–RAISED BOARDWALK DESIGN

PFN:

R#	DATE	DESCRIPTION	BY

JOSEPH M. SMELEY, PROFESSIONAL ENGINEER, 12/13/22

COVER SHEET

2707 WETMORE AVE.
EVERETT, WA 98201
t 425.903.4852
f 425.259.1958

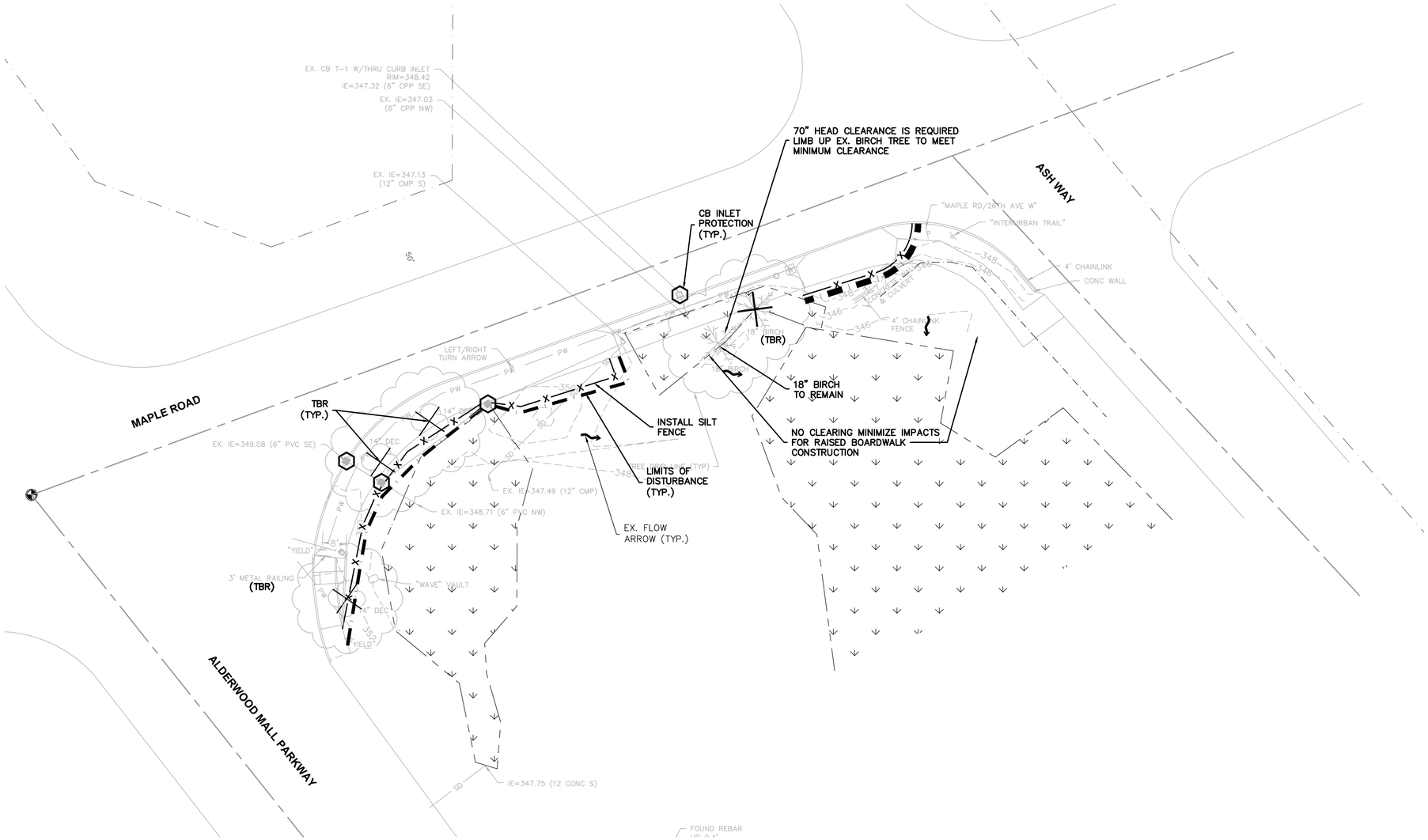
OMEGA ENGINEERING, INC.

LYNNWOOD PLACE BOARDWALK
CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

PROJ. NO.	DSN. BY:
22-0815	JMS
DATE: 12/13/2022	
SCALE: 1" = 20'	
DRAWING NO. 1 OF 5	

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.



CONSTRUCTION SEQUENCE:

* CONTACT CITY OF LYNNWOOD, 425.670.5220 AND SCHEDULE PRECONSTRUCTION MEETING.

1. CLEARING/CONSTRUCTION LIMITS SHALL BE STAKED & SILT FENCING INSTALLED.
2. CLEAR, GRUB AND REMOVE ALL VEGETATION WITHIN THE CLEARING LIMITS.
3. ROUGH GRADE SITE. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE.
4. INSTALL STORM WATER COLLECTION SYSTEM W/ SEDIMENT PROTECTION MEASURES. SEE NOTE ABOVE.
5. CONSTRUCT CURB, SIDEWALK PER PLAN. OBTAIN RIGHT-OF-WAY DISTURBANCE PERMIT PRIOR TO WORK WITHIN R.O.W.
6. INSTALL/REPAIR PAVEMENT.
7. CLEAN STORM DRAINAGE CONVEYANCE SYSTEM (DO NOT FLUSH), AFTER VEGETATION HAS BEEN ESTABLISHED.
8. WHEN SITE IS STABLE, REMOVE REMAINING TEMPORARY ESC FACILITIES.

LEGEND

- CLEARING LIMITS
- SILT FENCE
- CB INLET PROTECTION

N

0 20 40
HORIZONTAL SCALE

811
Know what's below.
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days before you dig.

PFN:

CONTRACTORS NOTES:

- CONTRACTOR TO MINIMIZE VEGETATION DISTURBANCE BETWEEN AREA OF WORK & CRITICAL AREAS. ALL EXCAVATED MATERIAL SHALL BE PLACED ON ROAD SIDE OF WORK AREA OR IMMEDIATELY IN TRUCK FOR OFF SITE STORAGE DISPOSAL.
- CB INLET PROTECTION SHALL BE INSTALLED IN ALL STORM DRAIN INLETS DOWNSLOPE AND WITH IN 500 FEET OF A DISTURBED OR CONSTRUCTED AREA.

TEMPORARY EROSION AND SEDIMENTATION CONTROL NOTES

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED, AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN (INCLUDING INDIVIDUAL TREES TO BE SAVED) SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED AS OUTLINED ON THE TYPICAL CONSTRUCTION SEQUENCE AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.
6. CONSTRUCTION ACCESS TO THE SITE SHALL BE ONLY AS SHOWN ON THE APPROVED PLANS. ALL VEHICLES LEAVING THE SITE, ONTO PUBLIC RIGHTS-OF-WAY, SHALL BE CLEANED TO PREVENT "TRACKING" OF MUD, DIRT OR OTHER DEBRIS.
7. THE CONTRACTOR SHALL CLEAN ACCESS STREETS AND RIGHT-OF-WAY AT LEAST DAILY OR MORE FREQUENTLY AS MAY BE NECESSARY AND SO DIRECTED BY THE CITY OF LYNNWOOD (CITY). DO NOT CONVEY STREET DEBRIS INTO THE STORM SYSTEM.
8. CLEAN OR REMOVE AND REPLACE INLET PROTECTION DEVICES WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. STOCKPILES SHALL BE LOCATED IN SAFE AREAS AND ADEQUATELY PROTECTED BY TEMPORARY SECURED PLASTIC COVER, SEEDING OR MULCHING. HYDROSEEDING IS PREFERRED.
10. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2 INCHES.
11. ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 2 DAYS BETWEEN OCTOBER 1ST TO MAY 31ST OR 7 DAYS BETWEEN JUNE 1ST TO SEPTEMBER 30TH. SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, TEMPORARY EROSION AND MULCHING, NETTING, EROSION BLANKETS, ETC.).
12. VEGETATION SHALL BE ESTABLISHED ON AREAS DISTURBED OR ON AREAS OF CONSTRUCTION AS NECESSARY TO MINIMIZE EROSION. AREAS TO BE ROUGH GRADED WITH FINISHED GRADING TO FOLLOW NEAR PROJECT COMPLETION ARE TO BE SEEDED WITH ANNUAL, PERENNIAL OR HYBRID RYE GRASS. THIS ALSO INCLUDES PERIMETER DIKES AND THE SEDIMENT BASIN EMBANKMENT. HYDROSEEDING IS PREFERRED.
13. IMMEDIATELY FOLLOWING FINISH GRADING, PERMANENT VEGETATION WILL BE APPLIED AS APPROVED PER THE APPROVED PLANS, CURRENT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARDS AND SPECIFICATIONS AND THE CITY REQUIREMENTS.
14. ADDITIONAL BEST MANAGEMENT PRACTICES (BMP) MAY BE REQUIRED AT ANY TIME DURING CONSTRUCTION.

R#	DATE	DESCRIPTION	BY

12/13/22

SWPPP

2707 WETMORE AVE.
EVERETT, WA 98201
t 425.903.4852
f 425.259.1958

OMEGA ENGINEERING, INC.

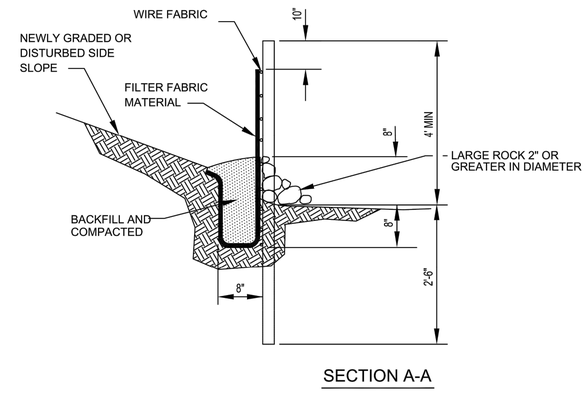
LYNNWOOD PLACE BOARDWALK

CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

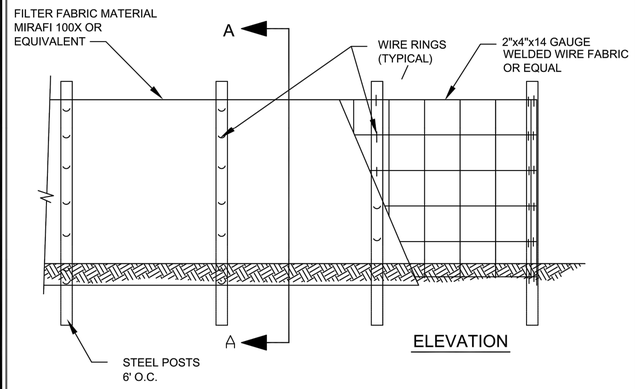
PROJ. NO.	DSN. BY:
22-0815	JMS
DATE: 12/13/2022	
SCALE: 1" = 20'	
DRAWING NO. 2 OF 5	

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.

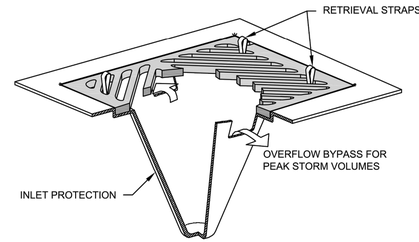


SECTION A-A



ELEVATION

LYNNWOOD WASHINGTON PUBLIC WORKS	SILT FENCE	DRAWING NUMBER	STD2-5
		SCALE	NONE
		REVISION DATE	11/05
	I:\Standard_Plans	DEPARTMENT	PW



NOTES:

1. INSERT SHALL BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES ONE-THIRD FULL. DISPOSE OF ACCUMUALTED SEDIMENT ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS.
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.
4. BELOW INLET GRATE DEVICES SHALL BE PREFABRICATED UNITS SPECIFICALLY DESIGNED FOR INLET PROTECTION AND SHALL REMAIN SECURELY ATTACHED TO THE DRAINAGE STRUCTURE WHEN LOADED WITH SEDIMENT AND DEBRIS TO ONE-THIRD TOTAL CAPACITY.

LYNNWOOD WASHINGTON PUBLIC WORKS	INLET PROTECTION	DRAWING NUMBER	ES-TESC-4
		SCALE	NONE
		REVISION DATE	06/22
	ES-TESC-4-Inlet-Protection.dwg	DEPARTMENT	PW

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R#	DATE	DESCRIPTION	BY

12/13/22

SWPPP DETAILS

2707 WETMORE AVE.
EVERETT, WA 98201
t 425.903.4852
f 425.259.1958

OMEGA ENGINEERING, INC.

LYNNWOOD PLACE BOARDWALK

CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

PROJ. NO.	DSN. BY:
22-0815	JMS

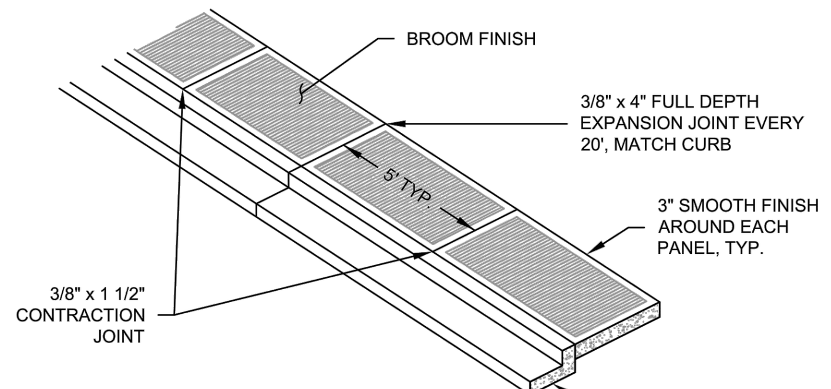
DATE: 12/13/2022

SCALE: N.T.S.

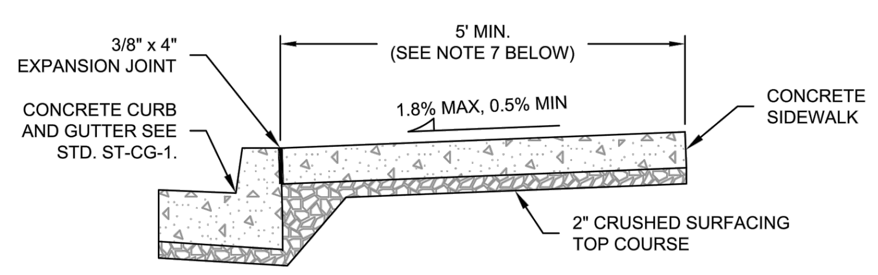
DRAWING NO. 3 OF 5

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.



PLAN VIEW



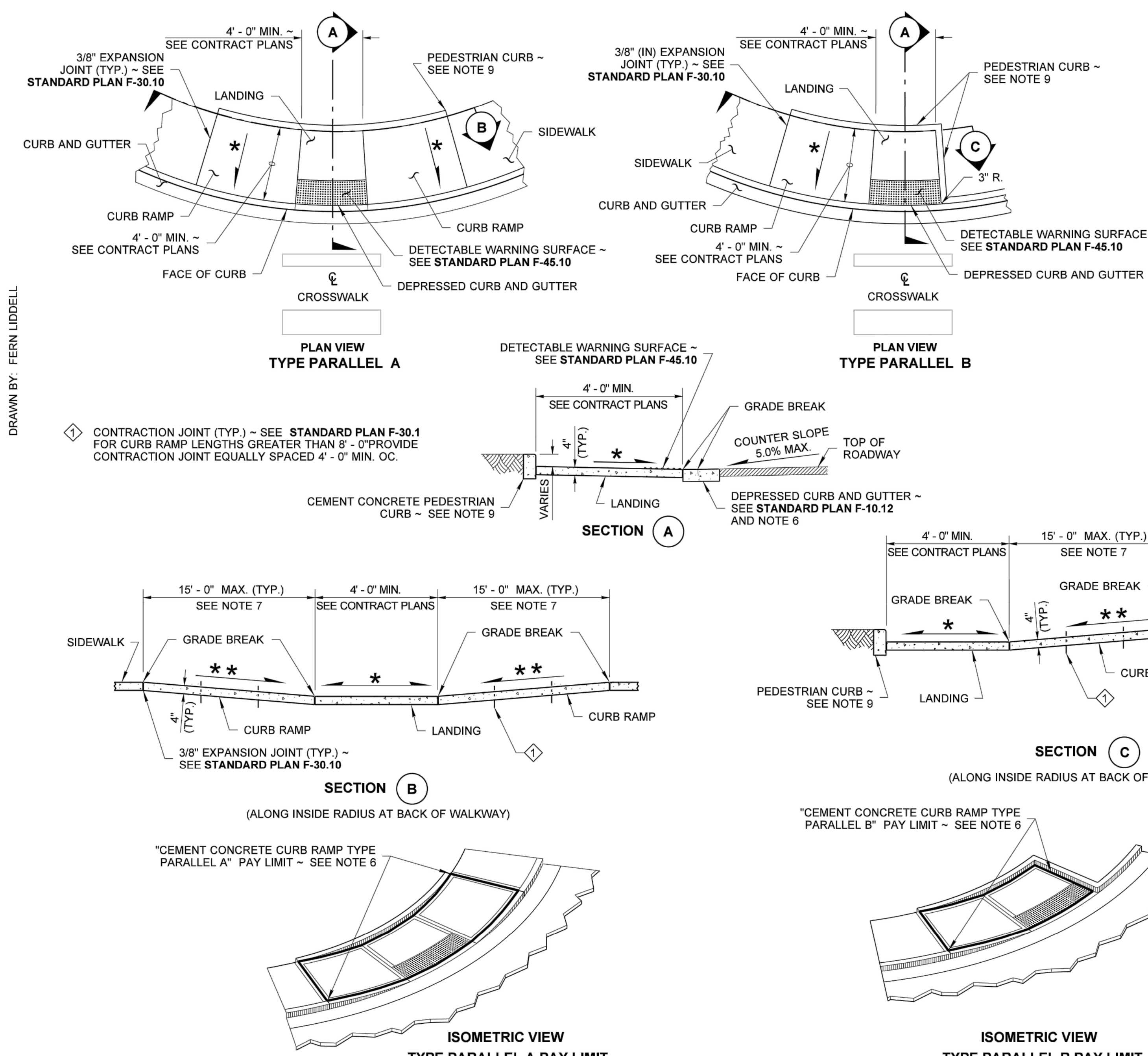
TYPICAL SECTION

NOTES:

1. SIDEWALKS SHALL BE 4" THICK IN NON-TRAFFIC AREAS, 6" THICK IN TRAFFIC AREAS & BEHIND ROLLED CURB.
2. FINISHING, CURING, FORM WORK, PLACEMENT AND MATERIALS SHALL CONFORM TO THE CURRENT WSDOT SPECS.
3. FULL DEPTH EXPANSION JOINTS SHALL GENERALLY BE PLACED TO MATCH THOSE PLACED IN ADJACENT CURB & GUTTER, WITH MAXIMUM SPACING OF 20 FEET. CONTRACTION JOINTS SHALL BE PLACED EVERY 5 FEET. FINAL SPACING DETERMINATION SHALL BE DECIDED BY THE CITY IN THE FIELD.
4. SUBGRADE SHALL BE COMPACTED AS SPECIFIED IN WSDOT STANDARDS AND SPECIFICATIONS.
5. THE FINISHED SIDEWALK SHALL BE COVERED BY CURING COMPOUND, WATERPROOF PAPER OR PLASTIC SHEETING IN THE EVENT OF RAIN OR OTHER INCLEMENT WEATHER.
6. ALL JOINTS SHALL BE CLEANED AND EDGED WITH AN EDGER HAVING A 1/8" RADIUS.
7. SIDEWALKS ARE TYPICALLY 5' WIDE, EXCEPT 7' IN SOME COMMERCIAL AREAS, OR AS APPROVED BY THE PUBLIC WORKS DIRECTOR. SIDEWALKS ARE WIDER THAN 7' IN CERTAIN ZONES (E.G. CITY CENTER).

LYNNWOOD WASHINGTON PUBLIC WORKS	CONCRETE SIDEWALK	DRAWING NUMBER	ST–SID–1
	ST-SID-1-Concrete-Sidewalk.dwg	SCALE	NONE
		REVISION DATE	02/22
		DEPARTMENT	PW

DRAWN BY: FERN LIDDELL



NOTES

1. At marked crosswalks, the connection between the landing and the roadway must be contained within the width of the crosswalk markings.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances on any part of the Curb Ramp or Landing, or in the Depressed Curb and Gutter where the Landing connects to the roadway.
4. See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
5. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
6. The Bid Item "Cement Concrete Curb Ramp Type __" does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
7. The Curb Ramp length is not required to exceed 15 feet (unless otherwise shown in the Contract Plans). When applying the 15-foot max. length, the running slope of the curb ramp is allowed to exceed 8.3%. Use a single constant slope from bottom of ramp to top of ramp to match into the sidewalk over a horizontal distance of 15 feet. Do not include abutting landing(s) in the15-foot max. measurement. When a ramp is constructed on a radius, the 15-foot max. length is measured on the inside radius along the back of the walkway.
8. Curb Ramps and Landings shall receive a broom finish. See **Standard Specifications 8-14.**
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will be no material to retain.

LEGEND

↔	SLOPE IN EITHER DIRECTION
*	1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX.)
**	7.5% OR FLATTER RECOMMENDED FOR DESIGN/ FORMWORK (8.3% MAX.) ~ SEE NOTE 7

R. SCOTT ZELLER STATE OF WASHINGTON 28680 REGISTERED PROFESSIONAL ENGINEER

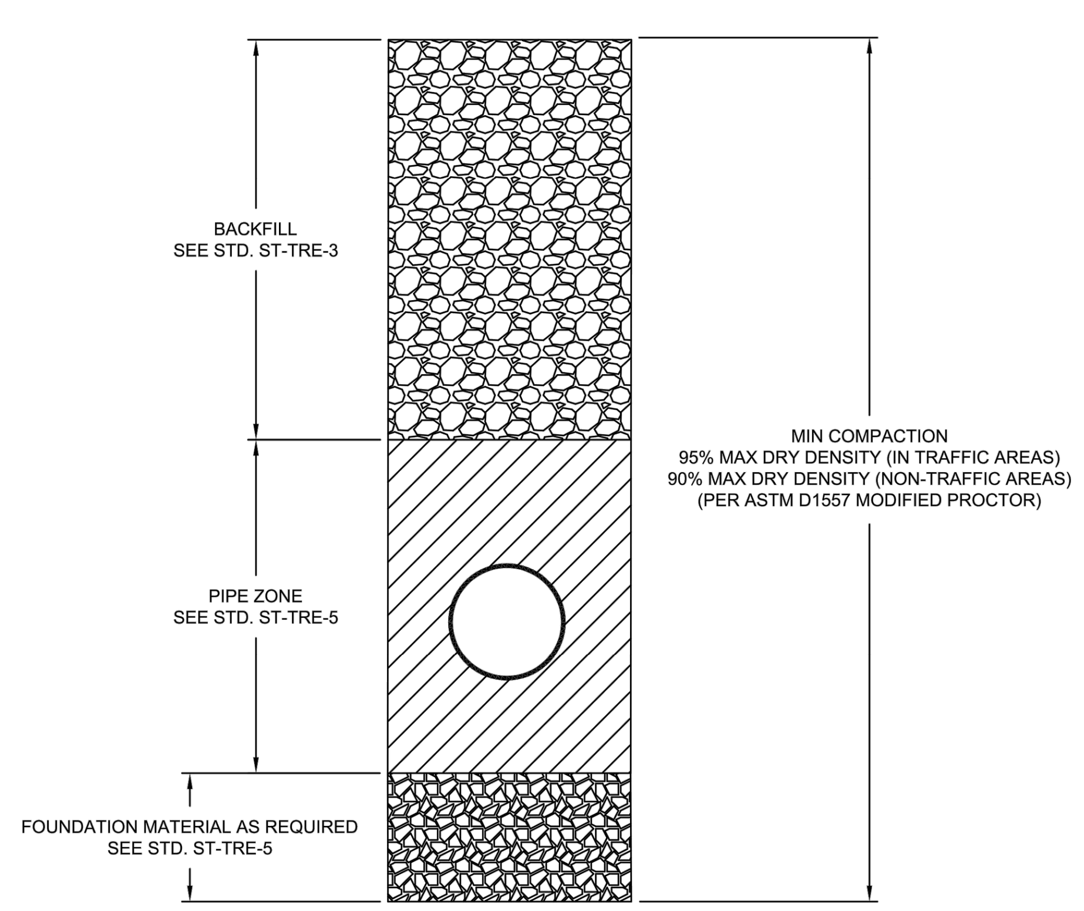
[illegible] Zeller, Scott Jun 24 2016 7:19 AM

PARALLEL CURB RAMP

STANDARD PLAN F-40.12-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff — Carpenter, Jeff Jun 29 2016 2:27 PM
STATE DESIGN ENGINEER
Washington State Department of Transportation

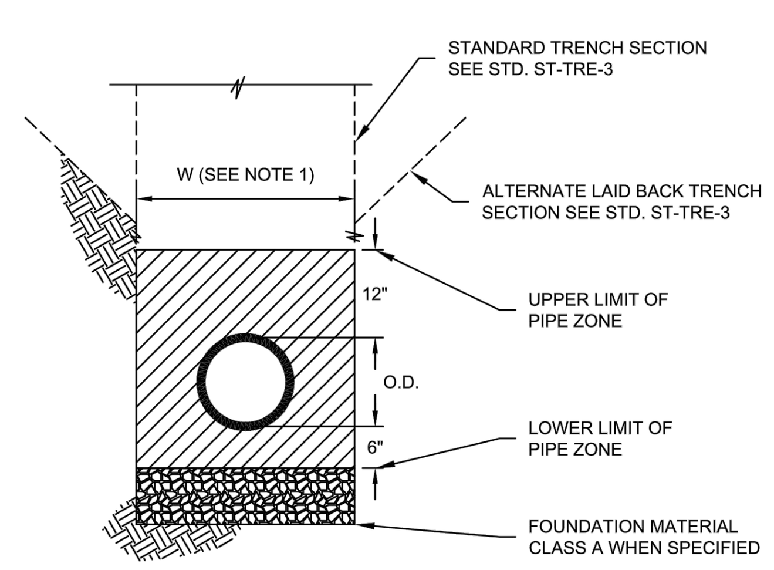


SECTION

NOTES:

1. ALL BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES BEFORE COMPACTION UNLESS AUTHORIZED BY THE ENGINEER DUE TO THE CHARACTER OF THE MATERIAL AND THE COMPACTING EQUIPMENT.
2. EACH LIFT SHALL BE MECHANICALLY COMPACTED TO THE REQUIRED DENSITY PRIOR TO PLACING SUCCEEDING LIFTS OF BACKFILL MATERIAL.
3. COMPACTION TESTS SHALL BE AS REQUIRED BY THE CITY INSPECTOR, BUT IN NO CASE LESS THAN 2 TESTS EVERY 200 FEET OF TRENCH (ONE AT SUBGRADE AND ONE AT 50% OF TRENCH DEPTH).

LYNNWOOD WASHINGTON PUBLIC WORKS	TYPICAL TRENCH COMPACTION	DRAWING NUMBER	ST–TRE–6
	ST-TRE-6-Typical-Trench-Compaction.dwg	SCALE	NONE
		REVISION DATE	12/20
		DEPARTMENT	PW



SECTION: PIPE BEDDING

NOTES:

1. LIMITS OF TRENCH
   W = MAXIMUM WIDTH OF TRENCH
   FOR PIPES 15" OR LESS IN DIAMETER W= 40" MINIMUM.
   FOR PIPES 18" OR GREATER IN DIAMETER W= 1 1/2 X I.D. + 18".
2. GRAVEL BACKFILL FOR PIPE ZONE BEDDING SHALL BE EQUAL TO WSDOT 9-03.12 (3).
3. TRENCH DAMS SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR FOR IMPERMEABLE SOILS ON SLOPES.
4. ALL FOUNDATION MATERIAL, IF REQUIRED, SHALL BE FOUNDATION MATERIAL CLASS "A" PER WSDOT SPEC 9-03.17.
5. COMPACTION SHALL COMPLY WITH WSDOT SPEC 2-06. SEE LYNNWOOD STD. ST-TRE-6 FOR ADDITIONAL INFORMATION.

LYNNWOOD WASHINGTON PUBLIC WORKS	BEDDING FOR PIPE	DRAWING NUMBER	ST–TRE–5
	ST-TRE-5-Pipe-Bedding-in-Trench.dwg	SCALE	NONE
		REVISION DATE	12/20
		DEPARTMENT	PW

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R#	DATE	DESCRIPTION	BY

JOSEPH M. SMEBY STATE OF WASHINGTON 38835 REGISTERED PROFESSIONAL ENGINEER 12/13/22

DETAILS

2707 WETMORE AVE.
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OMEGA ENGINEERING, INC.

LYNNWOOD PLACE BOARDWALK

CITY OF LYNNWOOD, WASHINGTON

PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

PROJ. NO. 22-0815	DSN. BY: JMS
DATE: 12/13/2022	
SCALE: N.T.S.	
DRAWING NO. 4 OF 5	

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE ACCORDING TO THE LATEST ADDITION OF "STANDARD SPECIFICATIONS FOR MUNICIPAL PUBLIC WORKS CONSTRUCTION" PREPARED BY WASHINGTON STATE CHAPTER, AMERICAN PUBLIC WORKS ASSOCIATION (APWA), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), CITY OF LYNNWOOD STANDARD PLANS AND PLAN NOTES, SPECIFICATIONS AND ANY CONDITIONS OF APPROVAL. IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL ENGINEER OF RECORD TO CORRECT ANY ERROR, OMISSIONS, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE CITY OF LYNNWOOD.

2. ALL CONSTRUCTION IS SUBJECT TO INSPECTION BY THE CITY OF LYNNWOOD. THE CONTRACTOR SHALL NOTIFY THE CITY OF THEIR SCHEDULE IN SUFFICIENT TIME TO PERMIT INSPECTION PRIOR TO AND DURING WORK. FOR ONLINE INSPECTION REQUESTS AND MANAGING YOUR PERMITS GO TO **HTTP://DBS.LYNNWOODWA.GOV** AND REGISTER YOUR ACCOUNT.

3. BEFORE ISSUANCE OF PERMITS, CONSTRUCTION OR ANY DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING IS REQUIRED BETWEEN THE CITY OF LYNNWOOD INSPECTOR, THE APPLICANT AND THE APPLICANT'S CONSTRUCTION REPRESENTATIVE. TO SCHEDULE A PRECONSTRUCTION MEETING CONTACT NICK STOKES AT 425 670-5220 OR **NSTOKES@LYNNWOODWA.GOV**

4. ALL WORK WITHIN THE SITE AND CITY OF LYNNWOOD RIGHT OF WAY SHALL BE SUBJECT TO INSPECTION BY THE CITY'S INSPECTOR. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR IN SUFFICIENT TIME TO PERMIT INSPECTION PRIOR TO AND DURING WORK.

5. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE DEVELOPER'S ENGINEER AND PERMITTING AGENCY AND SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION.

6. WORK NOT READY FOR A REQUESTED INSPECTION UPON THE ARRIVAL OF THE CITY OF LYNNWOOD INSPECTOR MUST BE RESCHEDULED FOR INSPECTION AND A RE-INSPECTION FEE MAY BE IMPOSED.

7. THE CONTRACTOR SHALL KEEP A SET OF PLANS ON SITE AT ALL TIMES FOR RECORDING "AS-BUILT" INFORMATION.

8. AN ELECTRONIC PDF FILE OF THE AS-BUILT PLANS STAMPED AND SIGNED BY A LICENSED SURVEYOR AND/OR THE DESIGN ENGINEER SHALL BE SUBMITTED TO THE CITY OF LYNNWOOD AT THE COMPLETION OF CONSTRUCTION. IN ADDITION, A SURVEY SHALL BE PROVIDED AS NECESSARY TO VERIFY FINAL GRADES, STORM AND SEWER INVERT ELEVATIONS AND ADA ROUTE COMPLIANCE, AS PROVIDED BY THE CONTRACTOR AND/OR THE SURVEYOR UPON COMPLETION OF THE PROJECT.

9. THE LOCATION OF UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITIES SHOWN HERE ARE FOR THE RPOSE OF ASSISTING THE CONTRACTOR IN LOCATING SAID UTILITIES. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION CENTER (1-800-424-5555 OR 811) 48 HOURS MINIMUM PRIOR TO THE BEGINNING OF CONSTRUCTION TO REQUEST UTILITY LOCATIONS. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS AND EASEMENTS AS REQUIRED BY THE CITY OF LYNNWOOD PUBLIC WORKS DEPARTMENT.

11. CONSTRUCTION NOISE SHALL BE LIMITED AS PER LYNNWOOD MUNICIPAL CODE (SECTION 10.12.300) FROM 7AM TO 6PM (M-F). WEEKEND WORK PROHIBITED UNLESS APPROVED PER LMC10.12.300.

12. DATUM SHALL BE CITY OF LYNNWOOD (NAVD88) UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS. THE BENCHMARK SHALL TIE TO THE CITY OF LYNNWOOD BENCHMARK LIST.

13. APPROVAL MUST BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS BEFORE ANY STRUCTURES, FILL OR OBSTRUCTIONS, INCLUDING FENCES, ARE LOCATED WITHIN ANY DRAINAGE EASEMENT, FLOOD PLAIN OR NATIVE GROWTH PROTECTION EASEMENT. STRUCTURES SHALL NOT BE PERMITTED WITHIN 15 FEET OF THE TOP OF BANK OF ANY CHANNEL OR POND (LMC13.40.070).

14. WHERE CONSTRUCTION IS CARRIED OUT IN AREAS NOT SPECIFIED ON THE PLANS AND WHICH HAVE EXISTING IMPROVEMENTS, APPROPRIATE MEASURES SHALL BE TAKEN TO RESTORE SUCH AREAS TO CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR AS REQUIRED BY THE CITY OF LYNNWOOD DEPARTMENT OF PUBLIC WORKS.

15. OFF SITE PREMISE STAGING OR STORAGE AREAS SHALL REQUIRE A WRITTEN RELEASE FROM THE AFFECTED PROPERTY OWNER. IN ADDITION, A RELEASE FROM THE CITY SHALL BE REQUIRED DESIGNATING THAT DAMAGE TO CITY PROPERTY IS NEGLIGIBLE OR NON-EXISTENT.

16. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF EMPLOYEES ON THE PROJECT AND SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE, AND MUNICIPAL SAFETY LAWS AND BUILDING CODES. THE CONTRACTOR SHALL ERECT AND PROPERLY MAINTAIN, AT ALL TIMES, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR PROTECTION OF WORKMEN AND THE PUBLIC; SHALL POST DANGER SIGNS WARNING AGAINST KNOWN OR UNUSUAL HAZARDS; AND SHALL DESIGNATE A RESPONSIBLE MEMBER OF THEIR ORGANIZATION ON THE CONSTRUCTION SITE WHOSE DUTY SHALL BE THE PREVENTION OF ACCIDENTS.

17. THE DEVELOPER SHALL PROVIDE STREET NAME AND TRAFFIC CONTROL SIGNS (E.G. STOP OR DEAD END). ALL TRAFFIC MARKINGS AND SIGNAGE TO BE PER THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND CITY OF LYNNWOOD CURRENT STANDARDS. SIGNS ARE TO BE INSTALLED BY THE DEVELOPER PRIOR TO ANY BUILDING CONSTRUCTION WITHIN THE PROJECT SITE.

STORM DRAINAGE NOTES

1. SEE GENERAL PLAN NOTES FOR ADDITIONAL REQUIREMENTS.

2. ALL REQUIRED STORM WATER RETENTION/DETENTIONFACILITIES SHALL BE CONSTRUCTED AND OPERABLE PRIOR TO PAVING AND BUILDING CONSTRUCTION UNLESS OTHERWISE APPROVED BY LYNNWOOD DEPARTMENT OF PUBLIC WORKS.

3. ALL PIPES WITHIN THE PUBLIC RIGHT-OF-WAY SHALL MEET CURRENT WSDOT/APWA STANDARDS AND SPECIFICATIONS AND/OR AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS AND SHALL BE INSTALLED PER WSDOT SECTION 7-08.

4. BACKFILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE OR PIPE-ARCH IN LAYERS WITH A LOOSE AVERAGE DEPTH OF 6 INCHES, COMPACTED TO A DENSITY OF 95%. REFER TO WSDOT STD. SPEC. 7-08.3(3) AND STD. SPEC. 2-03.3(14)C, METHOD B & C.

5. WHERE SHOWN ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER OR DIRECTOR OF PUBLIC WORKS, THE EXISTING MANHOLES, CATCH BASINS, OR INLETS SHALL BE ADJUSTED TO THE GRADE AS STAKED. ALL PIPE AND STRUCTURES SHALL BE STAKED FOR SURVEY LINE AND GRADE PRIOR TO THE START OF CONSTRUCTION. ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND DIRECTOR OF PUBLIC WORKS PRIOR TO COMMENCING CONSTRUCTION.

6. ALL STORM CATCH BASINS WITH A DEPTH OVER 5 FEET TO FLOW LINE SHALL BE TYPE 2 STRUCTURES PER CURRENT WSDOT/APWA STANDARDS. ALL TYPE 1 AND 2 STRUCTURES SHALL BE PROVIDED WITH LOCKING BOLTS. LADDER ACCESS IS REQUIRED ON ALL TYPE 2 STRUCTURES WHEN 4 FEET OR GREATER IN DEPTH AS MEASURED TO THE INSIDE FINISH FLOOR OR AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

7. DEVELOPER TO PROVIDE A CERTIFIED ELECTRONIC VIDEO RECORD OF STORM DRAINAGE CONSTRUCTION AFTER FINAL CLEANING. FINAL CLEANING AS REQUIRED PER WSDOT SPEC7-04.3(1) AND AS DIRECTED BY THE CITY OF LYNNWOOD PUBLIC WORKS INSPECTOR.

8. DRAINAGE OUTLETS (STUB-OUTS) SHALL BE PROVIDED FOR EACH INDIVIDUAL LOT, UNLESS OTHERWISE APPROVED BY THE CITY OF LYNNWOOD. STUB-OUTS SHALL CONFORM TO THE FOLLOWING:

a) EACH OUTLET SHALL BE SUITABLY LOCATED AT THE LOWEST ELEVATION ON THE LOT, SO AS TO SERVICE ALL FUTURE ROOF DOWNSPOUTS AND FOOTING DRAINS, DRIVEWAYS, YARD DRAINS, AND ANY OTHER SURFACE OR SUBSURFACE DRAINS NECESSARY TO RENDER THE LOTS SUITABLE FOR THEIR INTENDED USE.

b) EACH OUTLET SHALL HAVE FREE FLOWING, POSITIVE DRAINAGE TO AN APPROVED STORM WATER CONVEYANCE SYSTEM OR AN APPROVED OUTFALL LOCATION.

c) OUTLETS ON EACH LOT SHALL BE LOCATED WITH A PRESSURE TREATED 2"X4". EACH MARKER BOARD SHALL BE CLEARLY IDENTIFIABLE, PROTECTED AND STUBBED 5 FEET ABOVE THE FINISH GRADE.

d) ALL PIPE MATERIAL SHALL CONFORM TO THE APPROVED PLANS AND/OR CURRENT WSDOT/APWA STANDARDS AND SPECIFICATIONS. ALL SUBSTITUTIONS ARE SUBJECT TO APPROVAL BY THE ENGINEER AND CITY OF LYNNWOOD DIRECTOR OF PUBLIC WORKS PRIOR TO CONSTRUCTION.

e) 12 TO 14 GAUGE TRACER WIRE OR LOCATING TAPE SHALL BE INSTALLED AS REQUIRED BY THE CITY OF LYNNWOOD PUBLIC WORKS INSPECTOR.

f) DRAINAGE EASEMENTS ARE REQUIRED FOR DRAINAGE SYSTEMS DESIGNED TO CONVEY FLOWS THROUGH INDIVIDUAL LOTS. VERIFICATION AND APPROVAL IS REQUIRED PRIOR TO CONSTRUCTION.

g) THE APPLICANT/CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUB-OUT CONVEYANCE LINES WITH RESPECT TO THE UTILITIES (E.G. POWER, GAS, TELEPHONE, TELEVISION).

h) ALL INDIVIDUAL STUB-OUTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT HOME OWNER, SHALL BE A MINIMUM OF 4 INCH DIAMETER, AND SHALL BE PROVIDED WITH BACKFLOW PROTECTION AS REQUIRED.

GRADING NOTES

1. REFER TO GENERAL PLAN NOTES FOR FURTHER REQUIREMENTS.

2. GRADING SHALL NOT RESULT IN ANY ADDITIONAL WATER TO ADJOINING PROPERTY. IF ADDITIONAL WATER DOES RESULT, THE APPLICANT WILL SUBMIT A PLAN OF CORRECTIVE ACTION FOR CITY APPROVAL AND WILL COMMENCE WITH THAT ACTION IMMEDIATELY UPON NOTICE FROM CITY.

3. THE CONTRACTOR SHALL OBTAIN APPROVAL FOR ALL FILL AND ROAD CONSTRUCTION MATERIAL WITHIN THE CITY OF LYNNWOOD RIGHT OF WAY FROM THE DIRECTOR OF PUBLIC WORKS PRIOR TO ITS USE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND REPAIRING EXISTING IMPROVEMENTS, AS REQUIRED, UNTIL CONSTRUCTION IS APPROVED BY THE CITY OF LYNNWOOD PUBLIC WORKS DEPARTMENT.

5. THE CITY SHALL VERIFY AND APPROVE ALL BACKFILL TRENCHES AND ROADWAY SUBGRADE PRIOR TO PAVING. THE CITY OF LYNNWOOD IS TO BE PROVIDED WITH THE DENSITY REPORT FROM A CERTIFIED "TESTING LAB" SHOWING SATISFACTORY COMPACTION PER WSDOT 2-06.3(14)D. ALL SUBGRADE PREPARATORY REQUIREMENTS SHALL CONFORM TO SECTION 2-06 OF THE WASHINGTON STATE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

6. A PRECONSTRUCTION SOILS INVESTIGATION SHALL BE REQUIRED AS NEEDED TO EVALUATE SOILS STABILITY.

7. THE MAXIMUM CUT/FILL SLOPE SHALL NOT EXCEED TWO FEET HORIZONTAL TO ONE FOOT VERTICAL UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS. AT NO TIME SHALL THE TOE OF ANY FILL SLOPE BE NEARER TO THE PROPERTY LINE THAN 1/2 THE FILL HEIGHT WITH A MINIMUM OF 2 FEET. CUT SLOPES SHALL NOT BE NEARER TO A PROPERTY LINE THAN 1/5 THE HEIGHT OF THE CUT WITH A MINIMUM OF 2 FEET.

8. ALL RETAINING STRUCTURES FOUR (4) FEET IN HEIGHT OR CARRYING A SURCHARGE SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER EXPERIENCED IN SOILS MECHANICS.

9. A PERFORMANCE BOND IS REQUIRED FOR CONCURRENTLY REVIEWED EARLY GRADE PERMITS. THE BOND SHALL BE RECEIVED PRIOR TO THE ISSUANCE OF THE EARLY GRADE PERMIT AND SHALL NOT BE RELEASED UNTIL APPROVED BY THE CITY OF LYNNWOOD DIRECTOR OF PUBLIC WORKS.

10. ALL NATIVE GROWTH PROTECTION AREAS SHALL BE LEFT IN A SUBSTANTIALLY NATURAL STATE. NO CLEARING, GRADING, FILLING, BUILDING CONSTRUCTION OR PLACEMENT, FENCE CONSTRUCTION, OR ROAD CONSTRUCTION OF ANY KIND SHALL OCCUR WITHIN THESE AREAS; PROVIDED THAT UNDERGROUND UTILITY LINES AND DRAINAGE DISCHARGE SWALES MAY CROSS SUCH AREAS UTILIZING THE SHORTEST ALIGNMENT POSSIBLE IF, AND ONLY IF, NO FEASIBLE ALIGNMENT IS AVAILABLE WHICH WOULD AVOID SUCH A CROSSING. REMOVAL OF VEGETATION BY THE PROPERTY OWNER SHALL BE LIMITED TO THAT WHICH IS DEAD, DISEASED OR HAZARDOUS, AND THEN ONLY WITH THE PERMISSION OF THE CITY OF LYNNWOOD DEPARTMENT OF PUBLIC WORKS.

11. SPECIAL INSPECTION BY AN APPROVED GEOTECHNICAL FIRM IS REQUIRED AS DIRECTED BY THE CITY OF LYNNWOOD DIRECTOR OF PUBLIC WORKS. INSPECTION REPORTS SHALL BE SUBMITTED TO THE CITY OF LYNNWOOD FOR REVIEW, COMMENT AND APPROVAL PRIOR TO PUBLIC WORKS FINAL APPROVAL OF THE WORK.

811

Know what's below.
Call two business
days before you dig.

PFN:

R#	DATE	DESCRIPTION	BY

JOSEPH M. SMEBY, PROFESSIONAL ENGINEER — 12/13/22

NOTES

OMEGA ENGINEERING, INC.
2707 WETMORE AVE.
EVERETT, WA 98201
t 425.903.4852
f 425.259.1958

LYNNWOOD PLACE BOARDWALK
CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

PROJ. NO.	DSN. BY:
22-0815	JMS
DATE: 12/13/2022	
SCALE: N.T.S.	
DRAWING NO. 5 OF 5	

GENERAL NOTES

THE FOLLOWING NOTES APPLY EXCEPT WHERE SHOWN OTHERWISE

CODE: INTERNATIONAL BUILDING CODE IBC (2018)

STRUCTURAL LOADS

PEDESTRIAN LIVE LOADS: 100 PSF

ROOF SNOW LOADS: GROUND SNOW LOAD, Pg = 25PSF

WIND LOADS:
ULTIMATE DESIGN WIND SPEED = 98 MPH
WIND EXPOSURE: 'B'
Kzt= 1.0

EARTHQUAKE LOADS:
SEISMIC OCCUPANCY CATEGORY: II
SEISMIC IMPORTANCE FACTOR, IE = 1
MAPPED ACCELERATIONS, Ss = 1.278 S1 = 0.45
SITE CLASS = C
DESIGN ACCELERATIONS, Sds = 1.022 Sd1 = 0.45
SEISMIC DESIGN CATEGORY: D

SHOP DRAWINGS
SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED, AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED. SUBMITTAL REVIEW IS FOR GENERAL CONFORMANCE ONLY; THIS REVIEW DOES NOT CHECK DIMENSIONS OR QUANTITIES.

FOUNDATIONS
FOUNDATIONS TO BE SUPPORTED ON 4" DIA STEEL PIN PILES. SEE FOUNDATION NOTES ON S2.0 FOR ADDITIONAL INFO.

TIMBER:
STRUCTURAL TIMBER AND LUMBER TO BE STRESS GRADE HEM-FIR OR DOUGLAS FIR AS FOLLOWS:

USE	SPECIES	GRADE	FB
2 X/ 3X/ 4X BEAMS/POST	DOUGLAS FIR	NO. 2	900 PSI
6 X BEAMS/POST	DOUGLAS FIR	NO. 1	1350PSI

WOOD AND WOOD BASED MATERIALS USED IN CONTACT WITH SOIL, CONCRETE OR MASONRY, INSTALLED WITHIN 1" OF CONCRETE OR MASONRY, OR EXPOSED TO MOISTURE EITHER INTERIOR OR EXTERIOR, SHALL BE TREATED WITH AN APPROVED PRESERVATIVE PER THE "PRESERVATIVE TREATMENT" SECTION BELOW. SOLID BLOCKING OF NOT LESS THAN 2" NOMINAL THICKNESS SHALL BE PROVIDED AT ENDS AND AT ALL SUPPORTS OF JOISTS AND RAFTERS. BETWEEN SUPPORTS PROVIDE BLOCKING OR BRIDGING AT 8' - 0" O.C.

ALL SILL PLATES AT SHEAR WALLS TO BE 3X_ PRESERVATIVE TREATED DOUGLAS-FIR #2, U.N.O. ON THE PLANS. SILL PLATES SHALL HAVE A MOISTURE CONTENT OF NOT GREATER THAN 19% BEFORE BEING COVERED WITH INSULATION, INTERIOR WALL FINISH, FLOOR COVERING OR OTHER MATERIAL.

ALL STUD WALL SILL AND TOP PLATE MEMBERS SHALL BE SURFACE-DRIED (S-DRY) LUMBER (MOISTURE CONTENT = 19% OR LESS DURING FRAMING). ALL STUDS AND POSTS MAY BE SURFACE-GREEN (S-GREEN) LUMBER (MOISTURE CONTENT = 19% TO 23% DURING FRAMING) OR S-DRY LUMBER. THE MOISTURE CONTENT OF THE FRAMING SHALL BE LESS THAN 12 % PRIOR TO INSTALLATION OF GYPSUM WALLBOARD SHEATHING.

STRUCTURAL STEEL:
WIDE FLANGE SHAPES TO BE ASTM A992,FY=50 KSI.
CHANNELS, ANGLES, AND PLATES TO BE ASTM A36, FY=36 KSI.
PIPE COLUMNS TO BE ASTM A53, GRADE B, FY=35 KSI.
HSS RECTANGULAR AND SQUARE STRUCTURAL TUBE TO BE ASTM A500, GRADE B, FY=46 KSI.
HSS ROUND STRUCTURAL TUBE TO BE ASTM A500, GRADE B, FY=42 KSI.

ALL STEEL EXCEPT STEEL EMBEDDED IN CONCRETE SHALL BE GIVEN ONE SHOP COAT OF APPROVED PAINT. ALL STEEL AND CONNECTION HARDWARE EXPOSED TO WEATHER TO BE HOT DIPPED GALVANIZED. WELDS TO BE 3/16" MINIMUM CONTINUOUS FILLET, BY CERTIFIED WELDERS USING E70XX ELECTRODES. ALL WELDING SHALL BE PERFORMED IN STRICT ADHERENCE TO A WRITTEN WELDING PROCEDURE SPECIFICATION (WPS) PER AWS D1.8. ALL WELDING PARAMETERS SHALL BE WITHIN THE ELECTRODE MANUFACTURER'S RECOMMENDATIONS. WELDING PROCEDURES SHALL BE SUBMITTED TO THE OWNER'S TESTING AGENCY FOR REVIEW BEFORE STARTING FABRICATION OR ERECTIONS. COPIES OF THE WPS SHALL BE ON SITE AND AVAILABLE TO ALL WELDERS AND THE SPECIAL INSPECTOR.

STEEL TO STEEL BOLTED CONNECTIONS ARE SHOWN TO BE BEARING-TYPE CONNECTIONS USING A325 BOLTS WITH THREADS INCLUDED IN THE SHEAR PLANE. HOLE SIZE SHALL BE IN ACCORDANCE WITH AISC SPECIFICATION FOR BEARING CONNECTION AND BOLTS SHALL BE TIGHTENED TO SNUG-TIGHT CONDITION. WHERE BOLTS ARE NOTED A325SC, CONNECTIONS SHALL BE FRICTION-TYPE CONNECTIONS WITH BOLTS TENSIONED AND USING APPROPRIATE HARDENED STEEL WASHERS AS REQUIRED BY AISC STANDARDS.

SUBMIT SHOP DRAWINGS PREPARED BY AN EXPERIENCED DETAILER FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS TO BE COMPLETE, SHOWING ALL WELDS AND MATERIAL GRADES. PROVIDE A PLAN LOCATION OR DETAIL REFERENCE FOR EACH SHOP DRAWING. FOR MINOR STEEL-TO-STEEL CONNECTIONS OF 12" AND SMALLER STEEL MEMBERS: IF AN EXPLICIT CONNECTION IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, DETAILER IS TO PROPOSE A CONNECTION SIMILAR TO THE CONNECTIONS ON THE DRAWINGS OR PER AISC STANDARD CONNECTIONS. ON THE SHOP DRAWING, CLOUD THE CONNECTION AND STATE "VERIFY." SHOP DRAWINGS NOT MEETING THESE CONDITIONS WILL BE REJECTED. REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR DESIGN INTENT ONLY, AND DOES NOT INCLUDE VERIFICATION OF DIMENSIONS AND QUANTITIES. VERIFICATION OF DIMENSIONS AND QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

STEEL FABRICATORS AND DETAILERS: BASE BID TO INCLUDE STEEL DETAILER AND FABRICATOR TIME AND COSTS FOR ROUTINE CONSTRUCTION QUESTIONS. ROUTINE CONSTRUCTION QUESTIONS INCLUDE DIMENSIONAL QUESTIONS AND MINOR FRAMING QUESTIONS. ROUTINE CONSTRUCTION QUESTIONS ARE PART OF THE NORMAL CONSTRUCTION PROCESS, AND ARE TO BE INCLUDED IN THE BASE BID.

WOOD CONNECTORS:
WHERE THE STRUCTURE IS LOCATED IN SDC A, B OR C CHANGE 3"X3"X1/4" PLATE WASHERS TO "STANDARD" WASHERS.

SILL BOLTS TO BE 3/4" DIAMETER EMBEDDED 7" INTO THE CONCRETE. MAXIMUM SPACING OF SILL BOLTS SHALL BE 48" O.C. AT DESIGNATED SHEARWALLS SILL BOLT SPACING SHALL BE PER THE PLANS. USE GALVANIZED 3" X 3" X 1/4" PLATE WASHERS, WITH HOLES NO GREATER THAN 3/16" LARGER THAN THE BOLT DIAMETER AT ALL SHEARWALL SILL BOLTS. PROVIDE A MINIMUM OF TWO BOLTS EACH PIECE. PROVIDE ONE BOLT AT EACH END OF EACH PIECE, NOT LESS THAN 6" AND NOT MORE THAN 12" FROM THE END.

BOLT HEADS AND NUTS BEARING AGAINST WOOD TO BE PROVIDED WITH MALLEABLE IRON WASHERS EXCEPT ON STEEL BEAM NAILERS USE CUT WASHERS. NAILERS TO STEEL BEAMS SHALL BE ATTACHED WITH 5/8" BOLTS AT 3' - 0" O.C. STAGGERED.

NAILS SHALL CONFORM TO REQUIREMENTS OF ASTM F 1667 AND HAVE A MINIMUM BENDING STRENGTH OF 90 KSI FOR SHANK DIAMETERS BETWEEN .142" AND .177". ALL WOOD-TO-WOOD NAILING SHALL BE PER IBC TABLE 2304.10.1. IF PLANS AND DETAILS SPECIFY 8D, 10D OR 16D NAILS, THEY SHALL HAVE THE FOLLOWING PROPERTIES:

8D = 0.131" DIA X 2-1/2"
10D = 0.148" DIA X 3"
16D = 0.162" DIA X 3-1/2"

ALL SUBSTITUTIONS SHALL HAVE THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD PRIOR TO USE.

LIGHT GAUGE METAL FRAMING CONNECTORS AND THEIR REQUIRED FASTENERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, OR APPROVED EQUAL.

ALL FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED STEEL WITH A G185 SPECIFICATION OR TYPE 304 & 316 STAINLESS STEEL. TYPE 304 AND 316 STAINLESS STEEL SHOULD BE USED FOR ALL CONNECTORS AND FASTENERS IN CONTACT WITH AZCA TREATED WOOD AND SOME VARIATIONS OF ACQ TREATED WOODS. HOT-DIPPED GALVANIZED STEEL SHOULD NEVER COME IN CONTACT WITH STAINLESS STEEL.

STRUCTURAL GLUED-LAMINATED LUMBER:
SHALL BE FABRICATED TO THE REQUIREMENTS OF ANSI/AITC A190.1. LUMBER SHALL BE VISUALLY GRADED WESTERN SPECIES, COMBINATION 24F-V4 FOR SIMPLE BEAMS, 24F-V8 FOR CANTILEVER BEAMS AND COLUMNS. LAMINATED MEMBERS TO BE AITC CERTIFIED. ADHESIVES USED IN THE GLULAM MANUFACTURING PROCESS SHALL CONFORM TO AITC 405 FOR WET USE ADHESIVES.

PRESERVATIVE TREATMENT:
ALL LUMBER, TIMBER, PLYWOOD, GLUE-LAMINATED AND OTHER COMPOSITE LUMBER THAT IS IN CONTACT WITH CONCRETE OR MASONRY OR EXPOSED TO WEATHER SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH CURRENT AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA) PRESERVATIVE (P) STANDARDS. THESE MEMBERS SHALL BE TREATED WITH AN APPROVED PRESERVATIVE IN ACCORDANCE WITH CURRENT AWPA COMMODITY (C) STANDARDS AND THE AWPA USE CATEGORY SYSTEM (UCS). WHEREVER POSSIBLE, PRECUT ALL MATERIAL BEFORE TREATMENT. HANDLE TREATED LUMBER IN ACCORDANCE WITH AWPA M4 STANDARDS.

FIELD CUTS, HOLES (SUCH AS ANCHOR BOLT HOLES IN TREATED SILL PLATES) AND PENETRATION DAMAGE SHALL BE TREATED IN ACCORDANCE WITH THE CURRENT AWPA M4 STANDARDS. THE MOST COMMONLY AVAILABLE PRESERVATIVE MEETING THE REQUIREMENTS OF STANDARD M4 IS A COPPER NAPHTHENATE SOLUTION CONTAINING AT LEAST 2% COPPER. CERTAIN DAP, WM BARR, CUPRINOL, BEHR, GREEN'S, JASCO, HENRY AND FIELDS PRESERVATIVE PRODUCTS CONTAIN THIS METAL CONTENT.

ALL FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED OR TYPE STAINLESS STEEL. SEE THE "WOOD CONNECTORS" SECTION.

DEFERRED SUBMITTALS:
THE FOLLOWING ITEMS ARE CONSIDERED TO BE DEFERRED SUBMITTALS UNDER SECTION 107.3.4.1 OF THE INTERNATIONAL BUILDING CODE AND MUST BE SUBMITTED TO THE ARCHITECT OR THE ENGINEER FOR REVIEW. SUBMITTALS TO INCLUDE FULL, DETAILED DESIGN, DRAWINGS, AND CALCULATIONS SIGNED BY A PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. DESIGNS SIGNED BY AN ENGINEER WHO IS NOT LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED WILL BE REJECTED WITHOUT REVIEW. THESE ITEMS WILL THEN BE FORWARDED TO THE BUILDING OFFICIAL FOR APPROVAL. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

- PIN PILES

SPECIAL INSPECTIONS

SPECIAL INSPECTION SCHEDULE

REQUIRED INSPECTIONS AND VERIFICATIONS FOR WOOD

TYPE	CONTINUOUS	PERIODIC	REFERENCE STANDARD	IBC REFERENCE
DECK PLANKS : VERIFY DECK THICKNESS AND GRADE, NAIL SIZE AND SPACING, BOLTING AND BACKWALL ANCHORAGE.		X		1705.5.1
RAILING SYSTEM (RAILS AND POSTS) : VERIFY SIZE AND GRADE, NAIL SIZE AND SPACING, BOLTING ANCHORAGE.		X		1705.11.1

SPECIAL INSPECTION SCHEDULE

REQUIRED INSPECTIONS AND VERIFICATIONS FOR PIN PILES

TYPE	CONTINUOUS	PERIODIC	REFERENCE STANDARD	IBC REFERENCE
STEEL PIN PILE INSTALLATION.	X			IBC 1705.9

REQUIRED INSPECTIONS AND VERIFICATIONS FOR STEEL CONSTRUCTION

TYPE	FREQUENCY OF INSPECTIONS	REFERENCE STANDARD
1. THE FABRICATOR'S QCI SHALL INSPECT THE FOLLOWING AS A MINIMUM, AS APPLICABLE:		AISC 360 CH. M AND N TABLE N5.4-1
a. SHOP WELDING, HIGH STRENGTH BOLTING AND DETAILS IN ACCORDANCE WITH AISC 360, SECTION N5.	PER AISC	TABLE N5.4-2 TABLE N5.4-3
b. SHOP CUT AND FINISHED SURFACES IN ACCORDANCE WITH AISC 360, SECTION M2.	PER AISC	TABLE N5.6-1 TABLE N5.6-2
c. SHOP HEATING FOR STRAIGHTENING, CAMBERING AND CURVING IN ACCORDANCE WITH AISC 360, SECTION M2.1.	PER AISC	TABLE N5.6-3
d. TOLERANCES FOR SHOP FABRICATION IN ACCORDANCE WITH THE CODE OF STANDARD PRACTICE, SECTION 6.4.	PER AISC	CODE OF STANDARD PRACTICE SEC. 6
2. THE ERECTOR'S QCI SHALL INSPECT THE FOLLOWING AS A MINIMUM, AS APPLICABLE:		
a. FIELD WELDING, HIGH STRENGTH BOLTING AND DETAILS IN ACCORDANCE WITH AISC 360, SECTION N5.	PER AISC	AISC 360 CH. M AND N TABLE N5.4-1
b. STEEL DECK IN ACCORDANCE WITH SDI STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR INSTALLATION OF STEEL DECK	PER AISC	TABLE N5.4-2 TABLE N5.4-3
c. HEADED STEEL STUD ANCHOR PLACEMENT AND ATTACHMENT I ACCORDANCE WITH SECTION N5.4	PER AISC	TABLE N5.6-1 TABLE N5.6-2
d. FIELD CUT SURFACES IN ACCORDANCE WITH AISC 360, SECTION M2.2.	PER AISC	TABLE N5.6-3
e. FIELD HEATING FOR STRAIGHTENING IN ACCORDANCE WITH AISC 360, SECTION M2.1.	PER AISC	
f. TOLERANCES FOR FIELD ERECTION IN ACCORDANCE WITH THE CODE OF STANDARD PRACTICE, SECTION 7.13.	PER AISC	CODE OF STANDARD PRACTICE SEC. 7
3. QAI SHALL BE PERFORMED BY OTHERS. ALL REQUIRED INSPECTION AND NON-DESTRUCTIVE TESTING, AS APPLICABLE, SHALL BE IN ACCORDANCE WITH AISC 360	PER AISC & IBC	AISC 360 CH. M AND N

STRUCTURAL SUBMITTAL: REPORTS, CERTIFICATES, AND OTHER DOCUMENTS RELATED TO STRUCTURAL SPECIAL INSPECTIONS AND TESTS AS STATED BELOW AND AS PERFORMED PER SCHEDULE PROVIDED ON THIS SHEET SHOULD BE SUBMITTED BY CONTRACTOR TO THE BUILDING DEPARTMENT. THE CERTIFICATES OF COMPLIANCE ARE REQUIRED TO STATE THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

NOTE: ALL TESTING AND INSPECTIONS AS STIPULATED IN THIS SHEET TO BE CONDUCTED ONLY BY QUALIFIED SPECIAL INSPECTORS.

REVISION	DATE

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33827
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www.psm-engineers.com

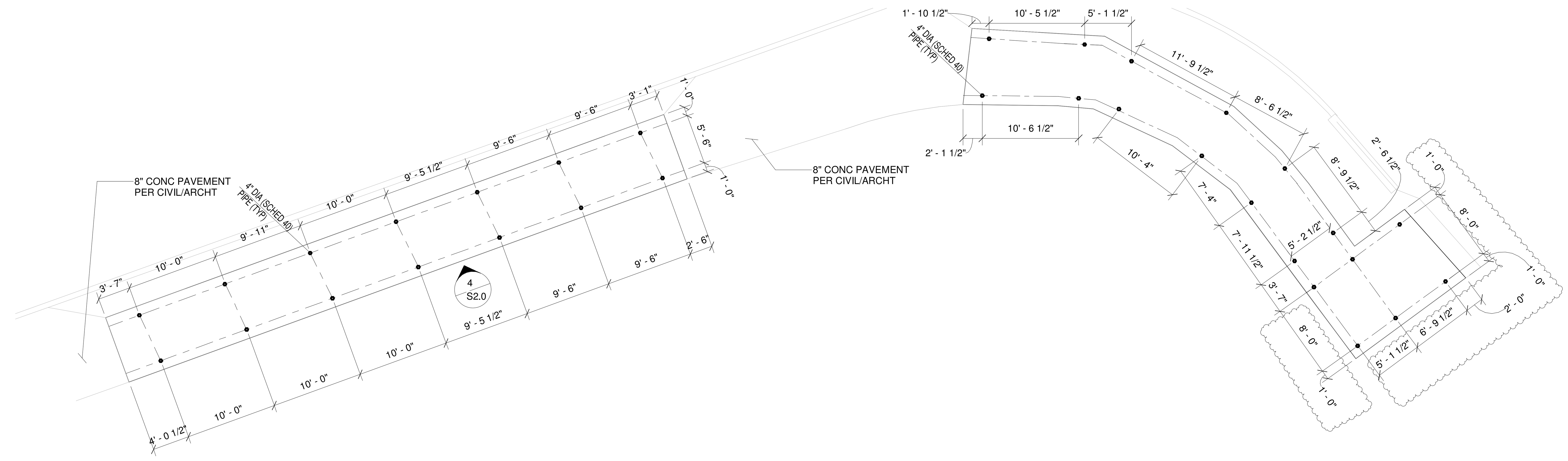
Boardwalk - Lynnwood Place
Lynnwood, Washington

SHEET CONTENTS:
GENERAL NOTES AND SPECIAL INSPECTIONS

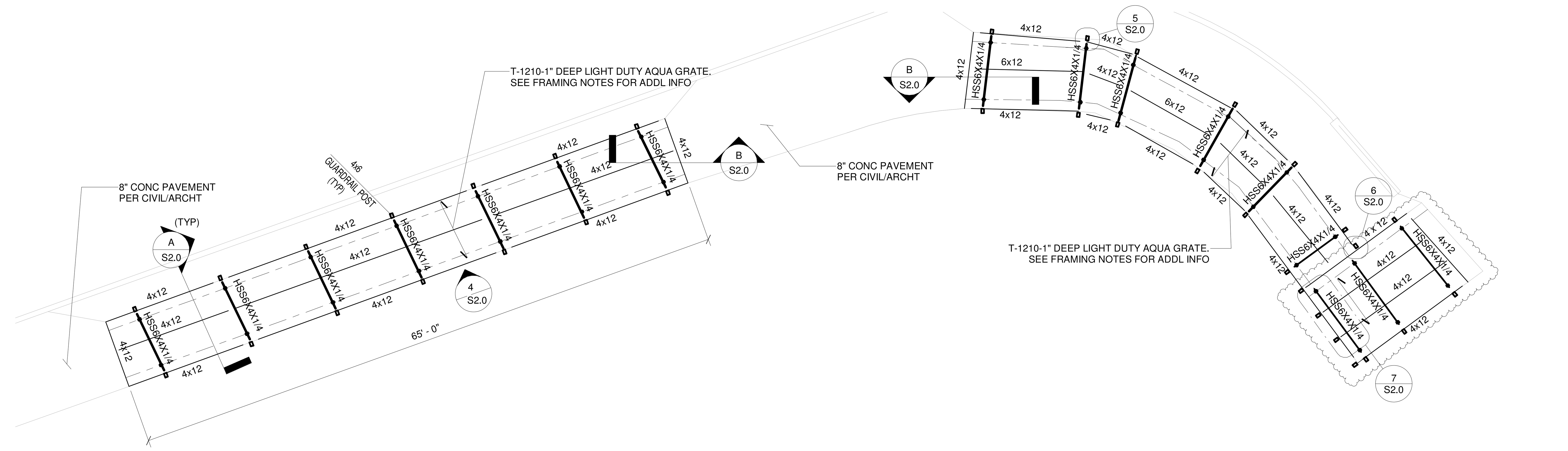
JOB No.	22096
DWN BY:	SMV
CHKD BY:	PSM
DATE:	12/14/22

SHEET No.

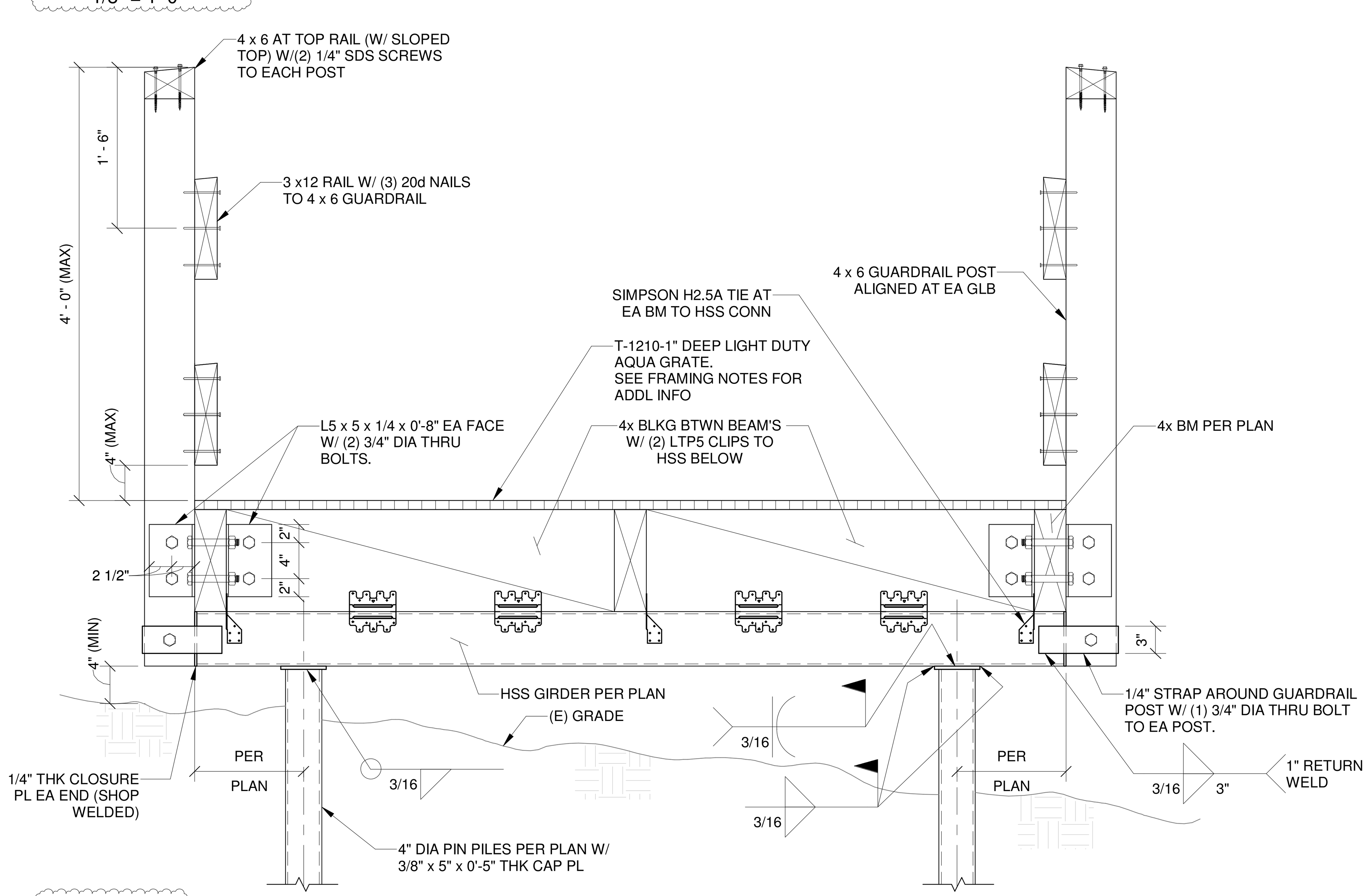
S1.0



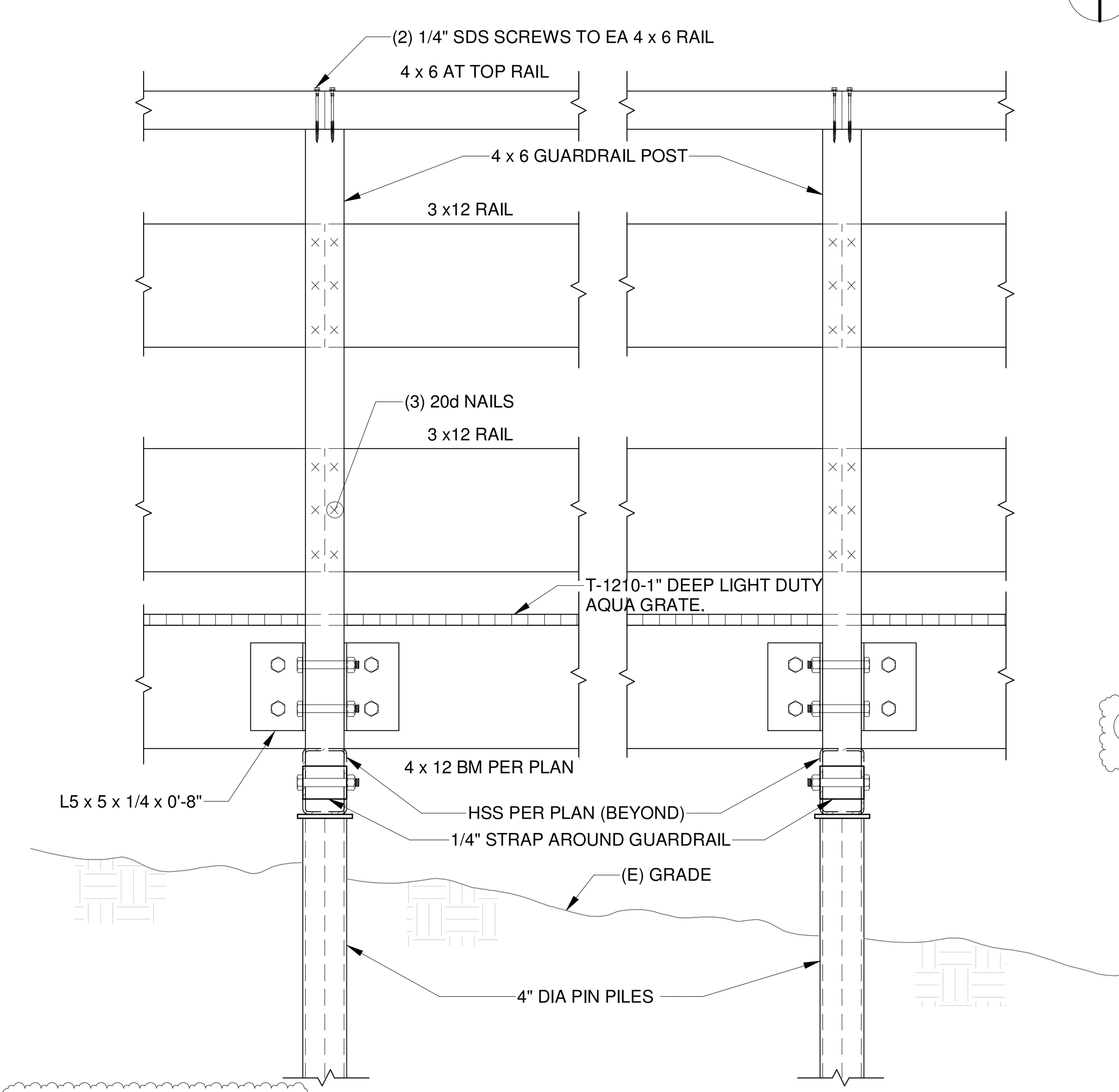
1 PIN PILE LAYOUT PLAN
1/8" = 1'-0"



2 FRAMING PLAN
1/8" = 1'-0"



A SECTION
1" = 1'-0"



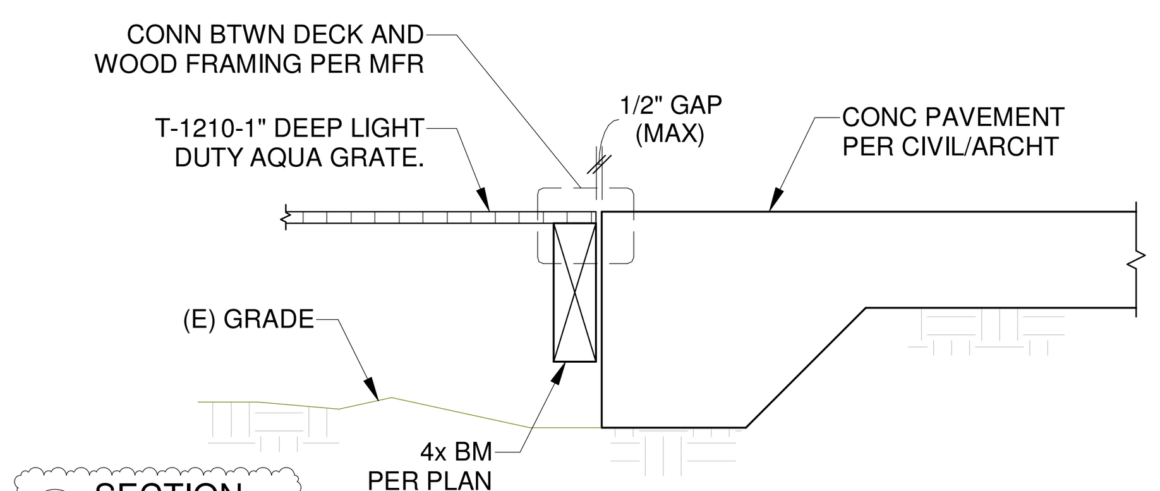
4 PARTIAL ELEVATION
1" = 1'-0"

FOUNDATION NOTES

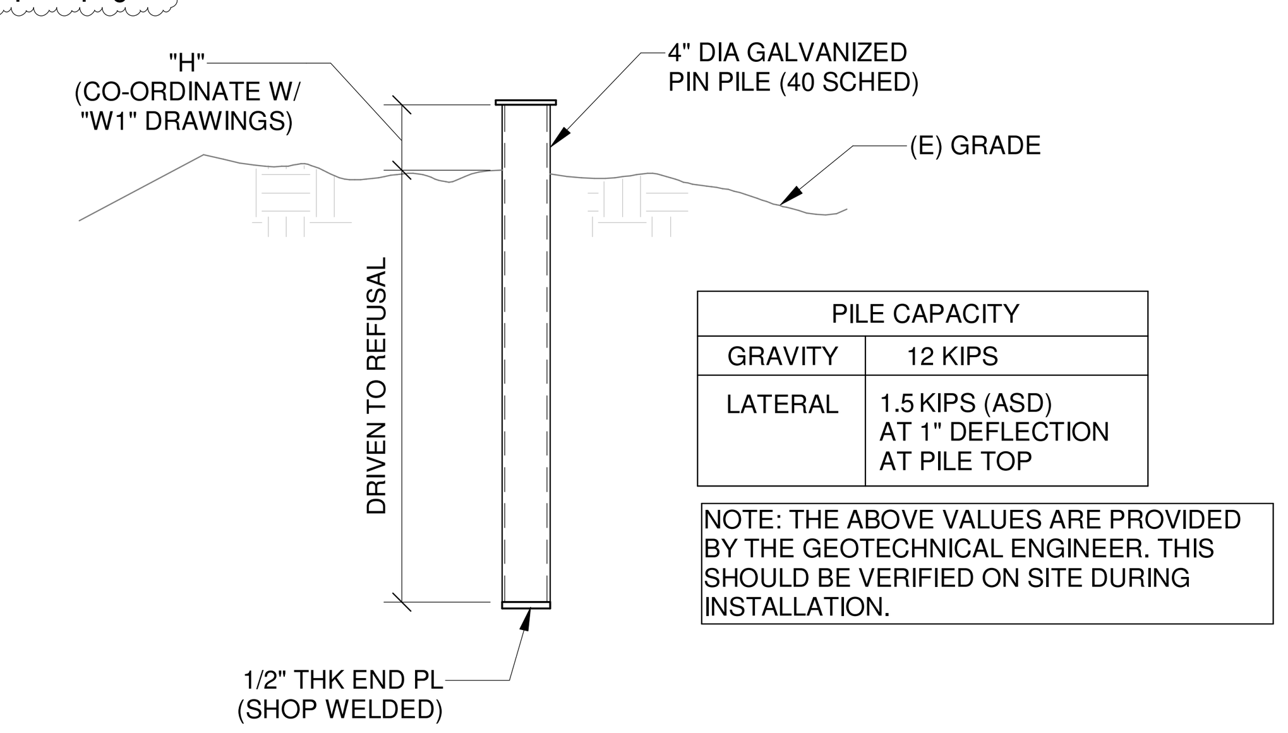
1. DRAWINGS TO BE READ IN CONJUNCTION WITH GEOTECHNICAL CONSULTANT DRAWING SHEET "W1". DIMENSIONS AND LAYOUT OF PIN PILES ARE CONTROLLED BY THESE DRAWINGS. ANY DISCREPANCY IN DIMENSION AND LAYOUT BETWEEN THESE AND STRUCTURAL DRAWINGS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION.
2. STEEL PIN PILES TO BE GALVANIZED AND DRIVEN TO REFUSAL TO ACHIEVE A CAPACITY AS DETAILED IN 3/S2.0.
3. PILES TO BE DRIVEN VERTICALLY PLUMB. SEE GEOTECHNICAL REPORT OF THIS PROJECT FOR ADDITIONAL INSTALLATION REQUIREMENTS.
4. GC TO ENSURE INSTALLATION OF NEW PIN PILES DOES NOT FOUL WITH ANY EXISTING UNDERGROUND UTILITY LINES. IN CASE OF ANY CONFLICT REPORT TO EOR BEFORE PROCEEDING FURTHER.
5. SEE S1.0 FOR GENERAL NOTES AND SPECIAL INSPECTIONS.

FRAMING NOTES

1. ALL WOOD FRAMING MEMBERS TO BE PT PER GENERAL NOTES SECTION OF THIS PROJECT.
2. ALL STEEL FRAMING AND ITS CONNECTION HARDWARE TO BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.
3. THE DESIGN SECTIONS REFERENCED ON DRAWINGS SPECIFY "T-1210 1" DEEP LIGHT DUTY" TO BE PULTRUDED GRATING SYSTEM WITH MATERIAL PROPERTIES CONFORMING TO MFR'S STANDARD AS SPECIFIED IN "AQUA GRATE PEDESTRIAN GRATING MANUAL" FROM FIBERGRATE MFR. AN ALTERNATE GRATING PRODUCT FROM DIFFERENT MFR CONFORMING TO DESIGN REQUIREMENTS OF THIS PROJECT MAY BE SUBMITTED BY GC FOR APPROVAL TO EOR. GRATING TO BE ANCHROED AND SECURED OVER WOOD FRAMING AS PER MFR'S REQUIREMENTS.
4. SPECIAL CARE TO BE TAKEN TO FIELD WELD GALVANIZED STEEL MEMBERS.



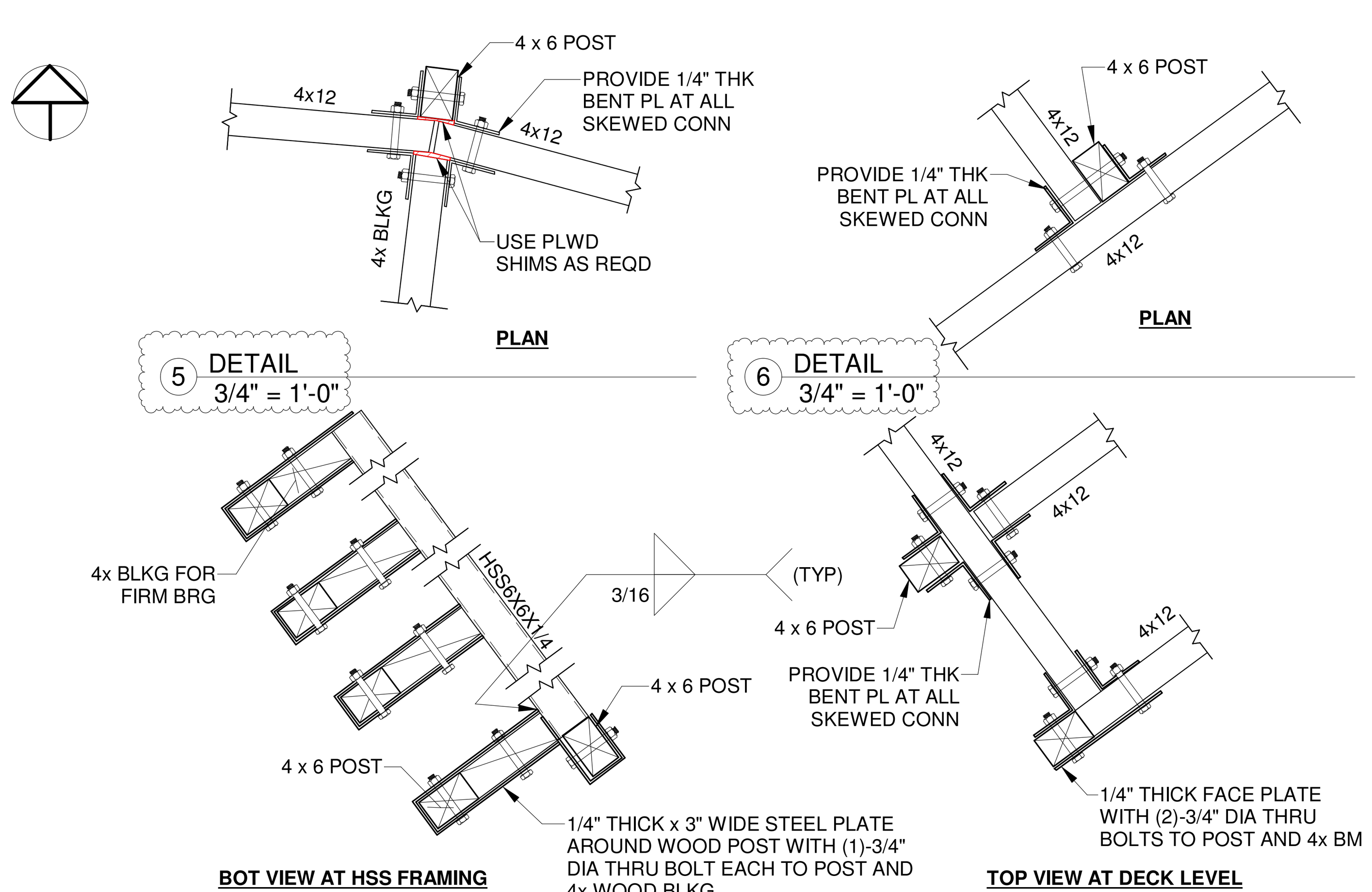
B SECTION
3/4" = 1'-0"



PILE CAPACITY	
GRAVITY	12 KIPS
LATERAL	1.5 KIPS (ASD) AT 1" DEFLECTION AT PILE TOP

NOTE: THE ABOVE VALUES ARE PROVIDED BY THE GEOTECHNICAL ENGINEER. THIS SHOULD BE VERIFIED ON SITE DURING INSTALLATION.

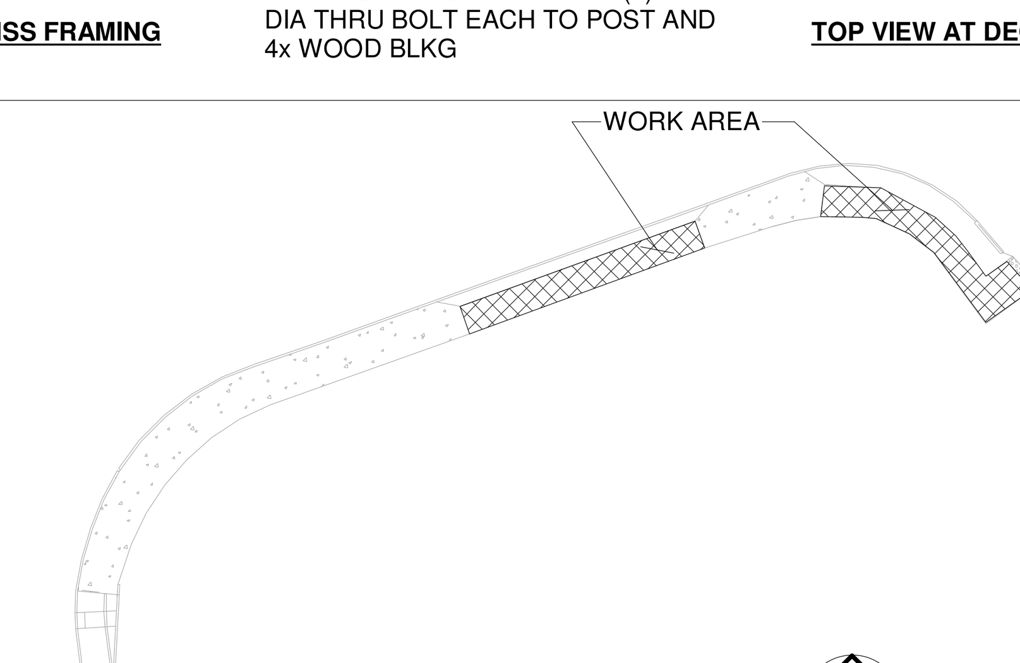
3 TYPICAL PIN PILE INSTALLATION DETAIL
3/4" = 1'-0"



5 DETAIL
3/4" = 1'-0"

6 DETAIL
3/4" = 1'-0"

7 DETAIL
3/4" = 1'-0"



KEY PLAN

REVISION	DATE

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www.psm-engineers.com

Boardwalk - Lynnwood Place
Lynnwood, Washington

SHEET CONTENTS:
PLANS, SECTIONS, ELEVATION AND DETAILS

JOB No.	22096
DWN BY:	SMV
CHKD BY:	PSM
DATE:	12/14/22

SHEET No.
S2.0

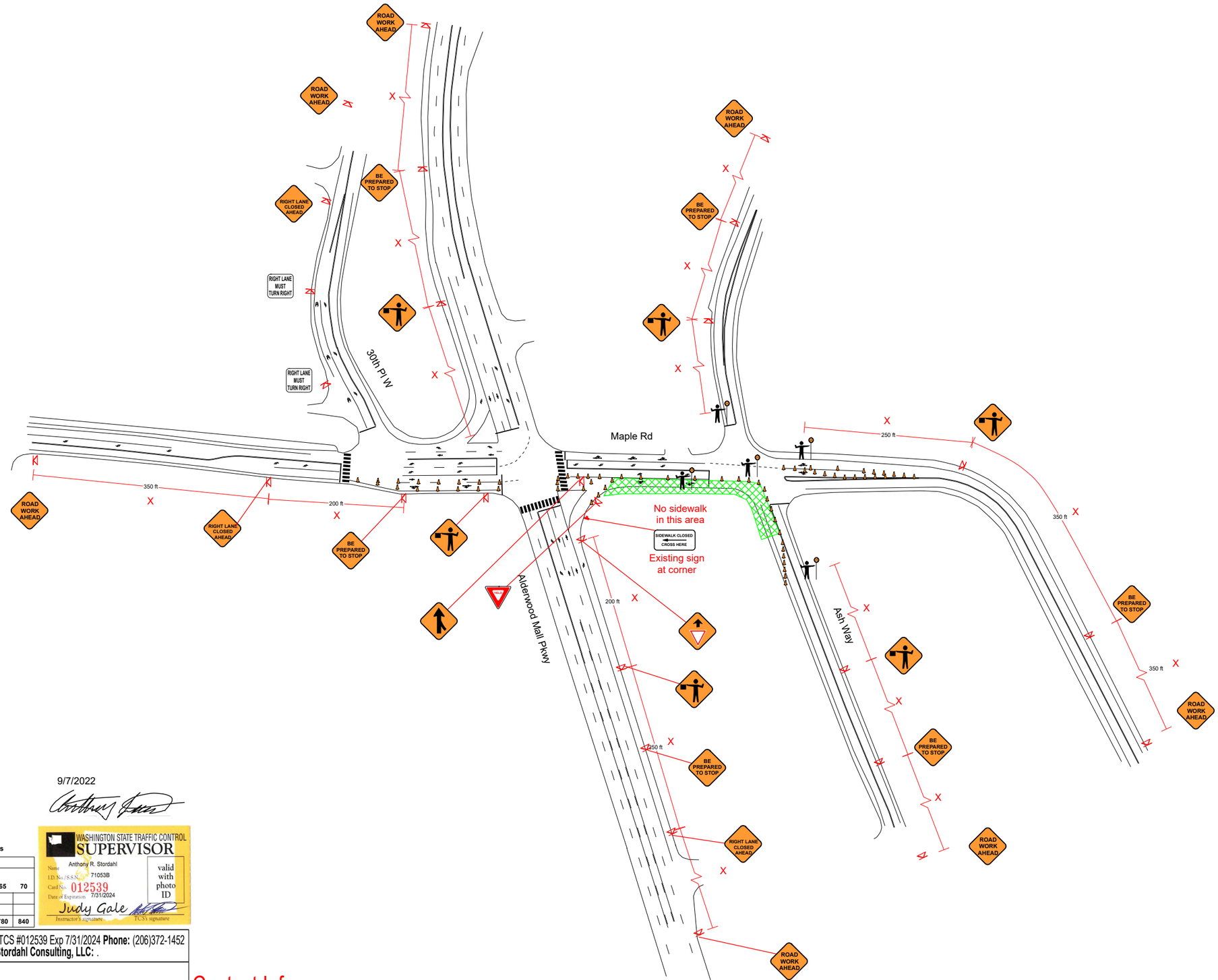
TCP: 3128 Maple Rd S

All Signs & Spacing to conform to the MUTCD

SPEED LIMIT 35

N

Scale: 100 ft



Legend

- Work Area
- Delineator
- Class B Sign
- flagger

Manifest

7 x	W20-1 road work ahead
6 x	W20-7a flagger
67 x	Delineator
3 x	W20-5 right lane closed ahead
2 x	R3-7R Rt lane must turn rt
6 x	W20-7b be prepared to stop
1 x	W3-2a yield ahead
1 x	R1-2 yield
1 x	W4-1 traffic entering (R)

CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

SIGN SPACING=X (FEET) (1)		
FREEWAYS & EXPRESSWAYS	55/70 MPH	1500±(OR AS PER MUTCD)
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS & URBAN ARTERIALS	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

ALL SIGNS ARE 48" X 48" BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

(1) All spacing may be adjusted to accommodate interchange ramps, at-grade intersections, and driveways.
(2) The spacing may be reduced in urban areas to fit roadway conditions

MINIMUM TAPER LENGTH (L) IN FEET										
Lane Width Feet	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	265	450	500	550			
11	115	165	225	295	495	550	605	660		
12	125	180	245	320	540	600	660	720	780	840

9/7/2022

WASHINGTON STATE TRAFFIC CONTROL SUPERVISOR
Name: Anthony R. Stordahl
ID No / S.S.N.: 71053B
Card No: 012539
Date of Expiration: 7/31/2024
valid with photo ID
Judy Gale
Instructor's signature — TCSS signature

Date: 9/7/2022 **Author:** Anthony Stordahl, TCS #012539 Exp 7/31/2024 **Phone:** (206)372-1452
Email: antstordahl@yahoo.com **Anthony Stordahl Consulting, LLC:** .

Comments:

Work Hours: Monday – Friday 7AM to 4PM
Type of Work: Trail Bridge and sidewalk

Contact Info:
Barry Ward
425-754-1907

AABCO BARRICADE CO.

CRITICAL AREAS REPORT

LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

Prepared for:
Steve Malsam
Wakefield Properties
1457 130th Ave NE
Bellevue, WA 98005

Prepared by:
TALASAEA CONSULTANTS, INC.
15020 Bear Creek Rd NE
Woodinville, WA 98077

21 December 2023

Critical Areas Report

Lynnwood Boardwalk
Lynnwood, Washington

Prepared for:

Steve Malsam
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Prepared by:

Talasaea Consultants, Inc.
15020 Bear Creek Road NE
Woodinville, WA 98077
(425) 861-7550

21 December 2023

EXECUTIVE SUMMARY

PROJECT NAME: Lynnwood Boardwalk

CLIENT: Steve Malsam, Wakefield Properties

PROJECT LOCATION: Lynnwood, Washington, Snohomish County

PROJECT STAFF: Bill Shiels, Principal; David Teesdale, PWS, Senior Ecologist; Eva Parker, Senior Landscape Architect, PLA; Tianyi Hao, Landscape Architect.

PROPOSED PROJECT: The proposed project includes the construction of a pedestrian trail and boardwalk adjacent to and paralleling the south side of Maple Road between Alderwood Mall Parkway and Ash Way in Lynnwood, WA. The trail will have two connection points to the existing sidewalks. One will be on the intersection of Maple Road and Alderwood Mall Parkway, and another on Maple Road and Ash Way. Two sections of the trail will be an elevated boardwalk supported by four-inch pin pile footings over a Category III wetland and a Type F stream. The other section will be on-grade sidewalk within the wetland buffer.

FIELD SURVEY: Talasaea staff conducted Site visits in February 2022 to perform initial wetland delineations, wetland ratings, and stream typing. Additional Site visits were conducted in November 2023 to confirm the ordinary high water mark (OHWM) of the stream.

DETERMINATION: Two (2) wetlands (A and B) were identified and delineated on the Site. The northern portion of Wetland A was fully surveyed. The southern portion, far from the proposed construction areas was not surveyed Both wetlands are classified as Category III wetlands with habitat scores of 5. The standard buffer width is 105 feet according to Lynnwood Municipal Code. Wetland A is adjacent to Stream A. Stream A is classified as Type F, with a channel width ranging between 12 and 24 feet at the time of the field investigation. Type F streams in the City of Lynnwood have a 100-foot standard buffer width measured landward from the delineated ordinary high water mark (OHWM), or from the top-of-bank if the OHWM cannot be determined.

HYDROLOGY: Hydrology for the two on-site wetlands is supported, in part, by shallow groundwater seepage from the slope north and south of the site. Hydrology for Stream A is supported by a wetland north of Maple Road, nearby stormwater outfalls under Maple Road, and from surface water runoff from the adjacent sidewalks. Water from Wetland A enters the stream at two locations; one near the wing walls for the culvert under Maple Road, and the other approximately 70 feet to the southeast.

SOILS: The Natural Resource Conservation Service (NRCS) maps Mukilteo muck as the one (1) soil type on the project site.

VEGETATION: The Site consists mostly of native forest and scrub-shrub vegetation including Douglas-fir, western hemlock, red alder, salmonberry, and evergreen huckleberry. The western portion and northern portion of the Site have thickets of Himalayan blackberry.

ASSESSMENT OF DEVELOPMENT IMPACTS: The boardwalk will be elevated and supported by driven 4-inch-diameter pin piles on 10-foot spacings. The proposed walkway will have two segments: one will be approximately 56 feet in length and will cross Wetland A, and the other will be approximately 67 feet and will be constructed at the corner of Maple Road and Ash Way. No direct infill of the wetland will occur, resulting in no direct wetland impacts. The construction of the elevated boardwalk will have 294 sf of temporary wetland impacts. The other segment of the boardwalk will be built along the outer portion of the stream's left bank. No crossing is proposed for Stream A. Pin piles in Stream 2 will be driven to less than 9 feet below the OHWM, resulting in no

direct adverse impact on the stream system. The construction of the elevated boardwalk will have 233 sf of temporary stream impact. The total temporary wetland buffer impact will be 458 sf for the two segments of the boardwalk. On-grade sidewalk within the wetland buffer will result in 1,812 sf of permanent buffer impact. All construction shall occur within a WDFW-designated fish window between July 1st and September 30th.

PROPOSED MITIGATION: To mitigate the unavoidable impacts associated with the trail and boardwalk construction, a combination of wetland and stream enhancement and buffer enhancement measures will be used. The proposed mitigation will restore 1,357 sf of wetland, 985 sf of stream, and 3,478 sf of degraded wetland and stream buffer through plantings of native vegetation appropriate for upland and riparian habitats. Invasive species will be removed around the critical areas and buffer where these species occur within the development area of the Site.

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LIST OF FIGURES

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LIST OF TABLES

LIST OF APPENDICES

Chapter 1. INTRODUCTION

1.1 Purpose of Report

This report is the result of an existing conditions study for the property (referred to hereinafter as "Site") south of Maple Road between Alderwood Mall Parkway and Ash Way in Lynnwood, Washington. The purpose of this report is to identify and describe the critical areas (wetlands, streams, fish, and wildlife habitat areas, etc.) on or within the vicinity of the Site. This report will provide and describe the following information:

- General Property Description;
- Methodology for Critical Areas Investigation;
- Results of Existing Conditions Background Review and Field Investigation;
- Regulatory Review;
- Description of the Proposed Project;
- Impacts and Mitigation;
- Maintenance and Contingency Plan; and
- Monitoring Plan.

1.2 Statement of Accuracy

Stream and wetland assessments and classifications were conducted by trained professionals at Talasaea Consultants, Inc., and adhered to the protocols, guidelines, and generally accepted industry standards available at the time the work was performed. The conclusions in this report are based on the results of analyses performed by Talasaea Consultants and represent our best professional judgment. To that extent and within the limitation of project scope and budget, we believe the information provided herein is accurate and true to the best of our knowledge. Talasaea Consultants does not warrant any assumptions or conclusions not expressly made in this report or based on information or analyses other than what is included herein.

1.3 Qualifications

Field investigations and evaluations were conducted by Talasaea staff including Bill Shiels, Principal; David Teesdale, PWS, Senior Ecologist; Tianyi Hao, Landscape Technician; and Eva Parker, Landscape Architect. Bill Shiels has a Bachelor's Degree in Biology from Central Washington University and a Master's Degree in Biological Oceanography from the University of Alaska. He has over 40 years of experience in wetland delineations and mitigations. David Teesdale has a Bachelor's Degree in Biology from Grinnell College, Iowa, and a Master's Degree in Ecology from Illinois State University. He has over 20 years of experience in wetland delineations and biological evaluations. The mitigation design was prepared by Eva Parker, Professional Landscape Architect, License #1289. Eva has over 30 years of experience in environmental planning, mitigation and landscape design, and project management.

Chapter 2. GENERAL PROPERTY DESCRIPTION AND LAND USE

2.1 Project Location

The project Site is not a defined parcel, and is adjacent to parcel 00372800300101 and parcel 00372800300203 (**Figure 1** and **Figure 2**). The site is bounded by Maple Road to the north, a commercial-residential zone to the south and west, and Ash Way to the east. The majority of the Site is in the Public Land Survey System location SW¼ of the SW¼ of Section 11, Township 27 North, Range 4 East, Willamette Principal Meridian (W.M.).

2.2 General Property Description

The Site is undeveloped and is vegetated predominantly with a mixed coniferous and deciduous forest. Site topography generally slopes down from north to south. A stream flows along the

Site's eastern boundary. No construction activities have been documented in the area. No building exists within the Site. The Site consists mostly of native forest and scrub-shrub vegetation.

Chapter 3. METHODOLOGY

The critical areas analysis of the Site involved a two-part effort. The first part consisted of a preliminary assessment of the Site and the immediate surrounding area using published environmental information. This information included:

1) Wetland and soil information from resource agencies;
2) Critical areas information from the City of Lynnwood and Snohomish County;
3) GIS analysis of orthophotography and LiDAR imagery; and,
4) Relevant studies completed or ongoing in the vicinity of the Site.

The second part consisted of Site investigations where direct observations and measurements of existing environmental conditions were made. Observations included plant communities, soils, hydrology, and stream conditions. This information was used to help characterize the Site and define the limits of critical areas on-site for regulatory purposes.

3.1 Background Data Reviewed

Background information from the following sources was reviewed before field investigations:

- U.S. Fish and Wildlife Service (USFWS) Wetlands Online Mapper (U.S. Fish and Wildlife Service n.d.);
- Natural Resources Conservation Service (NRCS), Web Soil Survey ("Web Soil Survey - Home" 2023);
- Snohomish County Planning & Development Services (PDS) Map Portal ("PDS Map Portal | Snohomish County, WA - Official Website" 2023);
- Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) Database on the Web (Washington State Department of Fish and Wildlife 2023);
- City of Lynnwood Municipal Code;
- Snohomish County Code (Snohomish County 2023);
- Orthophotography from Earth Explorer (United States Geological Service 2023), Google Earth (Google 2023); and Historic Aerials ("NETRonline: Historic Aerials" 2023); and
- LiDAR derived and manipulated from the Washington State Department of Natural Resources (DNR) LiDAR Portal ("Washington LiDAR Portal" 2023).

3.2 Field Investigation

Talasaea staff conducted Site visits in February 2022 to perform initial wetland delineations, wetland ratings, and stream typing. An additional site visit was conducted in November 2023 to confirm the ordinary high water mark (OHWM) of the stream.

Wetland determinations were made using the routine approach described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (U.S. Army Corps of Engineers 2010).

Plant species were identified according to the taxonomy of Hitchcock and Cronquist (Hitchcock and Cronquist 2018) (Hitchcock, *et al.* 2018). Taxonomic names were updated, and plant wetland status was assigned according to *the National Wetland Plant List*, *Version 3.5* (U. S. Army Corps of Engineers 2020). Wetland classes were evaluated with the U.S. Fish and Wildlife Service's system of wetland classification (Cowardin *et al*. 1979). Vegetation was

considered hydrophytic if greater than 50% of the dominant plant species had a wetland indicator status of facultative or wetter (*i.e.,* facultative, facultative wetland, or obligate wetland).

Wetland hydrology was evaluated based on the presence of hydrologic indicators listed in the Corps' Regional Supplement. These indicators are separated into Primary Indicators and Secondary Indicators. To confirm the presence of wetland hydrology, one (1) Primary Indicator or two (2) Secondary Indicators must be demonstrated. Indicators of wetland hydrology may include, but are not necessarily limited to: drainage patterns, drift lines, sediment deposition, watermarks, stream gauge data and flood predictions, historic records, visual observation of saturated soils, and visual observation of inundation.

Soils on the Site were considered hydric if one or more of the hydric soil indicators listed in the Corps' Regional Supplement were present. Indicators include the presence of organic soils, reduced, depleted, or gleyed soils, or redoximorphic features in association with reduced soils.

Chapter 4. RESULTS

4.1 Analysis of Existing Information

The following sources provided information on Site conditions based on data compiled from agency resources and publicly available resources from local government:

4.1.1 USFWS Wetlands Online Mapper (National Wetlands Inventory)

The National Wetlands Inventory (NWI) shows a Freshwater Forested/Shrub Wetland that is Palustrine, Forested, Persistent, Seasonally Flooded (PFOC) on the Site (**Figure 3**). The NWI also shows one Freshwater Emergent Wetland, classified as Palustrine, Emergent, Persistent, Semi-permanently Flooded (PEM1F), southwest of the Site, and one Palustrine Scrub-Shrub Wetland that is seasonally flooded (PSSC) northeast of the Site.

4.1.2 Natural Resources Conservation Service Soils Data (NRCS)

The NRCS Web Soil Mapper maps Mukilteo muck on the Site (**Figure 4**).

4.1.3 WDFW Priority Habitat and Species (PHS) on the Web

WDFW PHS on the Web maps one priority habitat, an aquatic freshwater forested/shrub wetland (PFOC), on the Site (**Figure 5**).

4.1.4 Snohomish County PDS Mapper

Snohomish County PDS maps one wetland and one non-fish habitat seasonal stream on the Site, across the entire parcel (**Figure 6**).

4.2 Analysis of Existing Field Conditions

Two wetlands (Wetlands A and B) were identified and delineated on the Site. The northern portion of Wetland A was surveyed, while its southern portion was not delineated since development will only affect the northern part of the area along the road. Wetland B is located east of the intersection of Maple Road and Alderwood Mall Parkway. Both wetlands are classified as Category III wetlands with a habitat score of 5. The standard wetland buffer in the City of Lynnwood is 105 feet.

One stream (Stream A) was identified on-site. Stream A is classified as a Type F stream per the guidance provided by the *WDFW Fish Passage Inventory, Assessment, and Prioritization Manual* (Barrett and Zweifel 2019). Type F streams in Lynnwood have a 100-foot standard buffer width ("Ch. 17.10 Environmentally Critical Areas" 2023). Although the stream is classified by Snohomish County and Washington Department of Fish and Wildlife as a Type N stream,

habitat that could support fish is present, therefore warranting the Type F rating per WAC 222-13-031. Stream A flows from north to south, parallel to Ash Way. A culvert is located at the north end to convey Stream A under Maple Road. A second culvert located approximately 450 feet southeast of the culvert under Maple Road conveys Stream A under Ash Way. The buffer for Stream A overlaps the buffer of Wetland A.

4.2.1 Wetland A

Wetland A is a palustrine, scrub-shrub depressional wetland located on the eastern half of the Site (**Sheet W1.0**). Wetland A is rated as a Category III wetland with a habitat score of 5. Category III wetlands with a habitat score of 5 have a 105-ft standard buffer per LMC §17.10.052 ("Ch. 17.10 Environmentally Critical Areas" 2023).

Woody vegetation associated with Wetland A includes western red cedar (*Thuja plicata*), red alder (*Alnus rubra*), willows (*Salix* spp.), salmonberry (*Rubus spectabilis*), and Indian plum (*Oemleria cerasiformis*). English ivy (*Hedera helix*), Himalayan blackberry (*Rubus armeniacus*), creeping buttercup (*Ranunculus repens*), common lady fern (*Athyrium filix-femina*), and stinging nettle (*Urtica dioica*) were also present within the wetland.

Soils within the wetland are generally a very dark brown (10YR 2/1 to 10YR 2/2), with a brownish-yellow layer (2.5Y 3/1) found approximately 6-10 inches below the surface. No redoximorphic features were observed.

Hydrology for Wetland A is supported by high groundwater, possibly coming from the hillslope north of the wetland. The water disperses through the wetland and generally follows the topographic contours flowing southeast, draining to Stream A. A berm separates Stream A from Wetland A in the north near the culvert. Overbank flooding of Stream A will not affect the water level in Wetland A. A high water table and saturation were common hydrology indicators throughout the wetland. Water is impounded in the wetland.

4.2.2 Wetland B

Wetland B is a palustrine, scrub-shrub depressional wetland located on the western side of the Site (**Sheet W1.0**). Wetland B is rated as a Category III wetland with a habitat score of 5.

Woody vegetation within Wetland B includes red alder (*Alnus rubra*), big-leaf maple (*Acer macrophyllum*), and salmonberry (*Rubus spectabilis*). Himalayan blackberry (*Rubus armeniacus*), reed canary grass (*Phalaris arundinacea*), and broadleaf cattail (*Typha latifolia*) are also present.

Soils within the wetland were generally a very dark brown (10YR 2/1 to 10YR 2/2) with a dark brown (10YR 3/3) layer found approximately 14-18 inches below the surface. Redoximorphic features were found within a 10BG 4/1 layer 12-14 inches below the surface that is classified as a reduced matrix.

Hydrology for Wetland B is provided by a high water table during drier periods. The water disperses evenly through the wetland and flows south, downslope. A high groundwater table and saturation were common hydrology indicators throughout the wetland.

4.2.3 Stream A

Talasaea staff confirmed the presence of Stream A on-site.

The stream originates off-site, north of the property. It then flows downgradient, before flowing into Maple Creek at the southeast corner of the property. The location of Stream A is roughly depicted in the same location as the stream shown on the Snohomish County PDS Map Portal (**Figure 6**). Stream A is a seasonal non-fish habitat stream based on water typing guidance provided by WAC 222-16-030 and 222-16-031, which is consistent with the City of Lynnwood critical area regulations. However, Site conditions and the Fish Passage Report from

Washington Department of Fish and Wildlife indicate the potential presence of fish in this stream. Stream A is, therefore, categorized as a Type F stream with a standard 100-foot buffer. At the time of our Site visit, the stream channel ranged from 12-24 feet in width, with depths ranging from a few inches to a few feet. This stream channel is presumed to flow seasonally during normal weather conditions.

4.3 Fish and Wildlife Priority Habitat Assessment

We evaluated critical areas habitats within 200 feet of the Site using information from several resource agencies. These include Washington State PHS on the Web (Washington State Department of Fish and Wildlife 2023), the Statewide Integrated Fish Distribution Web Map (The Northwest Indian Fisheries Commission 2023), the Washington Department of Fish and Wildlife SalmonScape online mapper (Washington Department of Fish and Wildlife 2023), StreamNet (Pacific States Marine Fisheries Commission 2023), the Washington Department of Natural Resources FPA online mapper ("Forest Practices Application Mapping Tool (FPAMT)" 2023), Snohomish County' PDS Map Portal ("PDS Map Portal | Snohomish County, WA - Official Website" 2023).

One stream was identified on the PDS Map Portal, flowing along the Site's eastern boundary. This stream is named "Maple 525 Creek," by Snohomish County (Stream A in this report), and is indicated as non-fish-bearing along its reach adjacent to the Site. None of the other sources listed above map any stream in the vicinity of Maple 525 Creek.

PHS does not map any fish, bird, or mammal species within 200 feet of the Site. One wetland is mapped approximately 80 feet west of the Site. However, the aerial image shows that this wetland, if it existed, had been completely developed.

Finally, the FEMA Flood Map Service ("FEMA Flood Map Service Center" 2023) shows that the Site is outside of the 100-yr flood plain for Swamp Creek. FEMA does not show Maple 525 Creek in its online mapping service.

Chapter 5. REGULATORY REVIEW

5.1 City of Lynnwood Critical Areas Regulations

The Site is subject to all applicable critical area regulations outlined in the Lynnwood Municipal Code (LMC) Chapter 17.10 Environmentally Critical Areas. Critical areas regulated by this chapter include wetlands, streams, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat areas. The Site contains two (2) wetlands and one (1) stream regulated by LMC Chapter 17.10. The wetlands were evaluated and rated, and buffers were determined according to the requirements of LMC 17.10.050 Wetland delineation and rating system. According to LMC 17.10.052, the standard wetland buffers are applicable if the minimization measures outlined in LMC 17.10.052 table are implemented. The Client intends to apply all required measures outlined in LMC 17.10.052 table (**Table 1**); thus, the standard wetland buffers are applicable.

Table 1. Standard Wetland Buffers (LMC 17.10.052 table)

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate activity that generates noise away from the wetland • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, 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 the wetland while ensuring that the wetland is not dewatered • Establish covenants limiting the use of pesticides within 150 feet of wetlands • 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 (per PSAT publication on LID 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 the wetland and its buffer in a separate tract or protect it with a conservation easement
Dust	• Use best management practices to control dust
Disruption of corridors or connections	• Maintain connections to offsite areas that are undisturbed • Restore corridors or connections to offsite habitats by replanting

The streams were evaluated and their buffers were determined according to the requirements of LMC 17.10.070 for Stream Typing and LMC 17.10.071 for Stream buffers. **Table 2** provides a regulatory summary of these features according to LMC requirements. In addition to the buffer requirements, additional 15-foot building setbacks (BSBL) are required per LMC 17.10.060 and LMC 17.10.080.

Table 2. Critical Areas Regulatory Summary

	Wetland Category	Habitat Points	Stream Type	Standard Wetland Buffer[1,2]	Standard Stream Buffer[1,2]
LMC:	17.10.050	17.10.052	17.10.070	17.10.052	17.10.071
Wetland A	III	5	N/A	105 feet	N/A
Wetland B	III	5	N/A	105 feet	N/A
Stream A	N/A	N/A	F	N/A	100 feet

[1] The wetland and stream buffers provided in this table are standard buffers and no buffer reductions or additions have been applied.
[2] An additional 15-foot building setback (BSBL) is required in addition to standard critical area buffer widths.

5.2 State and Federal Regulations

Wetlands and streams on the Site are subject to applicable State and Federal regulations. Wetland impacts are regulated at the Federal level by Sections 404 and 401 of the Clean Water Act. The U.S. Army Corps of Engineers (Corps) is responsible for administering compliance with Section 404 via the issuance of Nationwide or Individual Permits for any fill or dredging activities within wetlands under Corps jurisdiction. Any project that is subject to Section 404 permitting is also required to comply with Section 401 Water Quality Certification, which is administered by the Washington State Department of Ecology (WDOE). No direct impacts to wetlands, streams, or other "waters of the U.S." are proposed for the current Site development plan. Therefore, the project will not need to apply for any Section 404 Nationwide or Individual Permits or Section 401 Water Quality Certification.

This also applies to the Washington Department of Fish and Wildlife which issues hydraulic project approvals (HPAs) for projects affecting State waters. An HPA will be required since the boardwalk will be constructed over a stream. Only a few four-inch pin piles will be below the OHWM. There will be no direct effects on the stream below its ordinary high-water marks. It is important to note that the boardwalk will be constructed parallel to the stream channel, not across it. So, should any debris be carried down the stream channel, it would not be likely to collect on the boardwalk and would more likely occur should the boardwalk be constructed across the stream.

Chapter 6. PROPOSED DEVELOPMENT, BUFFER MODIFICATIONS & ASSESSMENT OF IMPACTS

6.1 Proposed Development

The proposed project will construct a pedestrian trail and boardwalk adjacent to the south side of Maple Road and Ash Way. On-site connection points to the existing sidewalks will be on the intersection of Maple Road and Alderwood Mall Parkway, and on Maple Road and Ash Way. The proposed trail and boardwalk will be ADA-compliant with the path no less than seven feet wide. Two sections of the system will be elevated boardwalks supported by driving four-inch-diameter pin piles on ten-foot spacings (**Appendix D**). The remaining section will be on concrete sidewalk.

6.2 Assessment of Impacts

All proposed impacts are associated with the trail and boardwalk construction. About 56 feet of the boardwalk will be directly above Wetland A. Four-inch-diameter pin piles will be used to hold the structure without direct infill of the wetland. No direct wetland impacts will occur. Approximately 294 sf of wetland will be temporarily impacted due to construction activities. A few pin piles will reside below the OHWM. Piles will be less than 9 feet from the left bank. The

proposed boardwalk will be along the stream's left bank without any crossing, therefore no direct stream infill will occur, resulting in no direct adverse stream impacts. The construction will result in approximately 233 sf of temporary stream impact. Approximately 458 sf of wetland buffer will be temporarily impacted during the construction of the boardwalk, and 1,812 sf will be permanently impacted because of the on-grade sidewalk (**Sheet W2.0**).

Chapter 7. CONCEPTUAL MITIGATION

To provide mitigation for the unavoidable impacts associated with the trail and boardwalk construction, the Client will use a combination of wetland and stream enhancement, and buffer enhancement measures. The proposed mitigation will restore 1,357 sf of wetland, 985 sf of stream, and 3,478 sf of degraded wetland and stream buffer through plantings of native vegetation appropriate for upland and riparian habitat. Invasive species will be removed around the critical areas and buffer where these species occur within the Site. Mitigation is designed to increase accessible habitat, bank stability, and the Site's hydroperiod, while decreasing sedimentation, surface runoff, and erosion. A summary of the proposed mitigation is provided in **Table 3.**

7.1 Proposed Mitigation

7.1.1 Wetland and Wetland Buffer Enhancement

Per LMC 17.10.030, "enhancement means actions performed to improve the condition of existing degraded wetlands or other critical areas so that the functions they provide are of a higher quality; enhancement activities usually attempt to change plant communities within existing wetlands from nonnative communities to native scrub-shrub or forested communities."

Invasive plant species are prevalent in Wetlands A and B, and in their buffers adjacent to Maple Road and Alderwood Mall Parkway. These plant species, such as Himalayan blackberry, slow water velocities or trap sediments. The client proposes to enhance the northern portion of the Site (areas close to Maple Road and Alderwood Mall Parkway, and including the construction area) including the removal of invasive plant species, the planting of native plant species, and the installation of habitat features such as down logs, root wads, and stumps. These features will provide shelter for small animals, and the slow decay of woody features contributes nutrients to the whole area. In total, 4,835 sf of wetland and its buffer will be rehabilitated (**Sheet W2.0**).

7.1.2 Stream and Stream Buffer Enhancement

Stream A and its surrounding areas do not have a prevalence of invasive species; however, dense overgrown vegetation and debris to the south of the proposed boardwalk along the wetland could potentially block water flow. Controlled cleaning and clearing will be done to ensure a healthy water movement. Slope areas along Stream A will be planted with deep-rooted, slope-stabilizing plant species to mitigate temporary construction impact. Any invasive species identified will also be removed. Rootwads will be placed near the stream bank to direct flow and create habitats for fish and mammals. Approximately 985 sf of the stream will be enhanced. These efforts are intended to improve both the physical and biological function of the stream and its buffer by improving bank stability, decreasing sedimentation, and increasing the overall quality and availability of habitat. In total, 3,478 sf of steep slopes within stream and wetland buffers will be enhanced (**Sheet W2.0**).

Table 3. Mitigation Summary

Mitigation Type	Area Mitigated
Wetland Enhancement	1,357 sf
Wetland Buffer Enhancement	3,478 sf
Stream Enhancement	985 sf
Total Mitigation Area[1]	**5,820 sf**

[1] Buffer of Stream A is within the buffer of Wetland A. Overlapped areas are counted only once.

7.2 Mitigation Design Elements

7.2.1 Planting Plan

Plant species will be chosen for a variety of qualities, including adaptation to specific water regimes, value to wildlife, value as a physical or visual barrier, pattern of growth (structural diversity), and aesthetic values. Native tree, shrub, and herbaceous species were chosen to increase both the structural and species diversity of the mitigation areas, thereby increasing the value of the area to wildlife for food and cover. Planting will occur during the dormant season (late fall, winter, or early spring) to maximize the chance for successful plant establishment and survival. We expect that seeds and berries from adjacent native species will be recruited naturally (wind, rain, birds) into the mitigation areas and will enhance species diversity and cover over time.

7.2.2 Habitat Features

Down logs, rootwads, and stumps will be incorporated into the mitigation areas to provide ecologically important habitat features for wildlife. All woody material shall be coniferous species (western red cedar, Douglas fir, western hemlock, or Sitka spruce (*Picea sitchensis*)) obtained from the Project Site or imported if necessary.

Down logs and stumps provide the slow release of nutrients as the wood decays, and provide cover for amphibians, small mammals, and other wildlife. Rootwads placed in Stream A will reduce the energy flow along the streambank interface so that riparian vegetation can provide the necessary bank protection and habitat values. Rootwads also generate turbulence that creates streambed scour and provides cover and substrate for aquatic organisms. The stream and buffer enhanced with large woody debris will help support fish, if present, and downstream where fish are known to be present.

7.2.3 Temporary Irrigation System

A temporary irrigation system is not anticipated to be needed for enhancement plantings within existing vegetated wetlands and their buffer areas. Buffer plantings shall be installed in the dormant season to help reduce transplant shock and encourage successful establishment. These plants shall be watered immediately after installation and shall have supplemental irrigation during the dry season if drought stress is evident during the establishment period (generally the first growing season after planting). Supplemental irrigation can be provided by water tank trucks or by hand, if necessary.

7.3 Mitigation Goals, Objectives, and Performance Standards

The primary goal of the mitigation is to replace the functions and values lost through development impacts to the critical areas and their buffers. The mitigation goals will be evaluated through the objectives and performance standards generally described below.

Objective A: Create structural and plant species diversity in the mitigation areas. Enhancement will include planting a wide variety of native evergreen and deciduous trees, shrubs, and emergent plants to increase biological support and water quality functional values of Stream A. The new plantings will be monitored for survival, species diversity, and minimum coverage either through percent areal cover or stem density calculations.

Performance Standard A1: *Fifteen (15) species of desirable native plant species shall be present during the monitoring period. Species may be comprised of both installed plants and naturally colonized native vegetation.*

Performance Standard A2: *Percent aerial cover of desirable native species must be >10% by the end of Year 1, >30% by the end of Year 3, and >50% by the end of Year 5. Woody coverage may be composed of planted, existing, and recolonized native species; however, to maintain species diversity, at no time shall a recolonized species (*e.g.*, red alder) compose more than 35% of the total calculated areal woody coverage*.

Performance Standard A3: *Percent survival of planted woody species must be at least 100% at the end of Year 1 (per contractor warranty), and at least 80% for each subsequent year of the monitoring period.*

Objective B: Limit the amount of invasive and exotic species within these mitigation areas.

Performance Standard B1: *No more than 10% cover of non-native or invasive plant species including, but not limited to, all Class A, B, and C weeds on the King County Noxious Weed List, will occur in the buffer areas during the monitoring period.*

Objective C: Increase the overall habitat functions of the enhancement area by incorporating habitat features (*e.g.*, root wads, down logs, and stumps as appropriate).

Performance Standard C1: *All installed habitat features shall be present at the time of the as-built evaluation. Upon receiving approval from the City, a performance standard specific to the quantity and type of habitat features installed may be added*.

Objective D: Ensure streambed and bank stability are retained in mitigation areas.

Performance Standard D1: *Performance standards will follow the Bank Stability standards outlined in EPA's Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers* (Barbour 2001; 1999)*. Each bank will be assessed for evidence of erosion or bank failure and assigned a condition category of either poor (evidence of erosion on 60-100% of bank), marginal (evidence of erosion on 30-60% of bank), suboptimal (evidence of erosion on 5-30% of bank), or optimal (less than 5% of the bank is affected).*

Chapter 8. MITIGATION SEQUENCING

8.1 Mitigation Sequencing

The following provides the general sequence of activities anticipated to be necessary to complete this mitigation project. Some of these activities may be conducted concurrently as the project progresses. Per LMC 17.10.030, when an alteration to a critical area is proposed, such alteration should be avoided, minimized, or compensated for in the following order of preference:

A. Avoiding impacts altogether by not taking a certain action or parts of an action;

Avoiding the impacts is not possible since the project is at the direction of the City of Lynnwood. The proposed impacts are resulting from the building of access connections to existing sidewalks and boardwalk pilings. The trail and boardwalk footprint has been minimized to avoid impacts to the wetland and stream as much as possible. Pin piles will be used to avoid direct impacts to the wetland and stream.

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

Actions being taken to reduce adverse impacts during construction are addressed in Section 8.2 below. In addition, the number of pilings in Wetland A will be kept to a minimum. Pilings below the OHWM of Stream A will be less than 2 feet from the left bank, minimizing impacts to water flow.

C. Rectifying the impact by repairing, rehabilitating, or restoring the affected critical area;

The Client proposes to enhance the northern portion of the Site (areas close to Maple Road and Alderwood Mall Parkway, including the construction area) including the removal of invasive plant species, the planting of native plant species, and the installation of habitat features such as down logs, root wads, and stumps.

D. Reducing or eliminating the impact over time by preservation or maintenance operations during the life of the development proposal;

It will not be possible to eliminate the impacts to Wetland A, Stream A, and their associated buffers. The proposed trail and boardwalk will be permanent.

E. Compensating for the impact by replacing, enhancing, or providing substitute critical areas;

See **Section 7.1** of this report for the critical areas mitigation plan.

F. Monitoring the impact and taking appropriate corrective measures.

A full performance monitoring plan is discussed in **Chapter 9** below.

8.2 Construction Sequencing

The following provides the general sequence of activities anticipated to be necessary to complete this mitigation plan. Some of these activities may be conducted concurrently as the project progresses.

1. Conduct an onsite meeting between the Contractor, Talasaea Consultants, and the Owner's Representative to review the project plans, staging/stockpile areas, and material disposal areas;
2. Survey clearing limits and install silt fence and any other erosion and sedimentation control BMPs per the civil plans;
3. Clear and grub non-native/invasive vegetation from buffer areas, as indicated on appropriate mitigation plan sheets;
4. De-compact soils in cleared buffer areas;
5. Amend soils as needed to provide nine inches of planting medium;
6. Place habitat features, including down logs, stumps, and rootwads;
7. Install plant material as indicated on the planting plan;

8. Add three inches of bark mulch to all buffer areas;
9. Install temporary irrigation, if necessary; and
10. Install rail fence and critical area signs.

8.3 Post-Construction Approval

Talasaea Consultants shall notify the City of Lynnwood when the mitigation planting is completed for a final Site inspection and subsequent final approval. Once final approval is obtained in writing, the performance monitoring period will begin.

8.4 Post-Construction Assessment

Once construction is approved, a qualified wetland ecologist/biologist from Talasaea Consultants shall conduct a post-construction assessment. The purpose of this assessment will be to establish baseline conditions at Year 0 of the monitoring period. A Baseline Assessment report will be submitted to the City of Lynnwood after planting is complete.

Chapter 9. MONITORING PLAN

9.1 Monitoring Plan

Once the mitigation is approved by all agencies involved, a qualified wetland ecologist/biologist from Talasaea Consultants will conduct a post-construction baseline assessment. The purpose of this assessment will be to establish baseline conditions at Year 0 of the required monitoring period. A Baseline Assessment report, including as-built drawings, will be submitted to all permitting agencies. The as-built plan set will depict any field changes to plantings or other features to the original approved and permitted restoration plan.

9.2 Monitoring Schedule

Performance monitoring of the mitigation areas will be conducted according to all applicable code/regulatory requirements and permit conditions. The monitoring period will be conducted for a minimum of five years per City requirements. Monitoring will be conducted according to the schedule presented in **Table 4** below and will be performed by a qualified ecologist/biologist.

Table 4: Performance Monitoring Schedule

Year	Date	Maintenance Review	Performance Monitoring	Report Due to Agencies
Year 0, As-built and Baseline Assessment	Year 0	X	X	X
1	Spring	X	X	
	Fall	X	X	X
2	Spring	X	X	
	Fall	X	X	X
3	Spring	X		
	Fall	X	X	X
4	Spring	X		
	Fall	X	X	
5	Spring	X		
	Fall	X	X	X*

*Obtain final approval from the City (presumes performance criteria are met).

9.3 Monitoring Reports

Each monitoring report will adhere to applicable City requirements. The reports will include: 1) Project Overview, 2) Requirements, 3) Summary Data, 4) Maps and Plans, and 5) Conclusions. If the performance criteria are met, monitoring for the City will cease at the end of year five (5).

9.4 Monitoring Methods

The following monitoring methods may be used to evaluate the approved performance standards.

9.4.1 Methods for Monitoring Vegetation Survival

Vegetation monitoring methods may include counts; photo-points; random sampling; sampling plots, quadrats, or transects; stem density; visual inspection; and/or other methods deemed appropriate by the permitting agency. Vegetation monitoring components shall include general appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weed cover.

Permanent vegetation sampling plots, quadrats, and/or transects will be established at selected locations to adequately sample and represent all of the plant communities within the mitigation project area. The number, exact size, and location of transects, sampling plots, and quadrats will be determined at the time of the baseline assessment.

The percent aerial cover of woody vegetation will be evaluated using point-intercept sampling methodology. Using this methodology, a tape will be extended between two permanent markers at each end of an established transect. Woody vegetation intercepted by the tape will be identified, and the intercept distance recorded. Percent cover by species will then be calculated by adding the intercept distances and expressing them as a total proportion of the tape length.

Percent aerial cover of herbaceous vegetation (emergent plant communities) will be measured using quadrats and/or sampling plots. Quadrats may be randomly located within the herbaceous community or may be located along established transects.

The established vegetation sampling locations will be monitored and compared to the baseline data during each performance monitoring event to aid in determining the success of plant establishment. Percent survival of woody vegetation will be evaluated in a 10-foot-wide strip along an established transect. The species and location of all woody vegetation within this area will be recorded at the time of the baseline assessment and will be evaluated during each monitoring event to determine percent survival.

9.4.2 Photo Documentation

Locations will be established within the mitigation area from which panoramic photographs will be taken throughout the monitoring period. These photographs will document the general appearance and relative changes within the plant community. A review of the photos after the 5-year monitoring period will provide a semi-quantitative representation of plant survival. Photo point locations will be shown on a map and submitted with the baseline assessment report and subsequent performance monitoring reports.

9.4.3 Wildlife

Birds, mammals, reptiles, amphibians, and invertebrates observed in the wetland, stream, and buffer areas (either by direct or indirect means) will be identified and recorded during scheduled monitoring events, and at any other times observations are made. Direct observations include actual sightings, while indirect observations include tracks, scat, nests, songs, or other indicative signs. The kinds and locations of the habitat with the greatest use by each species will be noted, as will any breeding or nesting activities.

9.4.4 Site Stability

Observations will be made of the general stability of soils, slopes, and banks in the mitigation areas during each monitoring event. Any erosion on the adjacent slopes will be recorded and corrective measures will be taken.

9.4.5 Water Quality

Water quality will be assessed qualitatively; unless it is evident there is a serious problem. In such an event, water quality samples will be taken and analyzed in a laboratory for suspected parameters. Qualitative assessments of water quality include:

- oil sheen or other surface films,
- abnormal color or odor of water,
- stressed or dead vegetation or aquatic fauna,
- turbidity, and
- absence of aquatic fauna.

Chapter 10. MAINTENANCE AND CONTINGENCY

Eleven (11) maintenance reviews will be performed according to the schedule presented in **Table 4** to address any conditions that could jeopardize the success of the mitigation project. Following maintenance reviews by the biologist or ecologist, required maintenance on the Site will be implemented within ten business days of submission of a maintenance memo to the maintenance contractor and permittee.

Established performance standards for the project will be compared to the Spring and Fall monitoring results to judge the success of the mitigation. If, during the monitoring period, there appears to be a significant problem with achieving the performance standards, the permittee shall work with the City to develop a Contingency Plan to get the project back into compliance with the performance standards. Contingency plans can include, but are not limited to, the following actions: additional plant installation, erosion control, bank stabilization, modifications to hydrology, and plant substitutions of type, size, quantity, and/or location. If required, a Contingency Plan shall be submitted to the City by December 31st of any year when deficiencies are discovered.

The following list includes examples of maintenance (M) and contingency (C) actions that may be implemented during the monitoring period. This list is not intended to be exhaustive, and other actions may be implemented as deemed necessary.

- Following each maintenance review, replace all dead woody plant material (M).
- Replace dead plants with the same species or a substitute that meets mitigation plan goals and objectives, subject to Talasaea and agency approval (C).
- Re-plant area after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.) (C).
- After consulting with City staff and other permitting agencies, minor excavations, if deemed to be more beneficial to the existing conditions than currently exists, will be made to correct surface drainage patterns (C).
- Remove/control weedy or exotic invasive plants (*e.g.*, English ivy, reed canary grass, Himalayan blackberry, purple loosestrife, *etc.*) manually. Use of herbicides or pesticides within the mitigation area would only be implemented if other measures failed or were considered unlikely to be successful and would require prior agency approval. All nonnative vegetation must be removed and disposed of off-site (C & M).
- Weed all trees and shrubs to the dripline and provide 3-inch-deep mulch rings, 24 inches in diameter for shrubs and 36 inches in diameter for trees (M).
- Remove trash and other debris from the mitigation areas twice a year (M).
- Selectively prune woody plants at the direction of Talasaea Consultants to meet the mitigation plan's goal and objectives (e.g., thinning and removal of dead or diseased portions of trees/shrubs) (M).

Chapter 11. FINANCIAL GUARANTEES

Per LMC 17.10.140, the City may require financial guarantees to ensure mitigation associated with a development proposal is completed. This section of the LMC outlines the bond's nature as follows:

> *The director may require the applicant, whose development proposal is subject to a mitigation plan, to post a performance, maintenance, and monitoring bond or other security instrument in a form and amount determined sufficient to guarantee that the proposed mitigation plan is satisfactory in meeting performance and the end of five years. The bond amount shall be no less than 125 percent of the estimated cost of the mitigation project including any plant materials, soil amendments, temporary irrigation, signs and monuments, and monitoring proposed. The duration of maintenance and monitoring obligations shall be no less than five years unless determined otherwise by the director after consideration of the success or failure of the proposed mitigation. The director shall release the security upon determining that the mitigation plan has achieved satisfactory success. The performance standards of the mitigation plan shall be agreed upon by the director and the applicant during the review process and shall be specified in the mitigation plan.*

Chapter 12. SUMMARY

The project Site is adjacent to parcel 00372800300101 and parcel 00372800300203. The Site is bounded by a planned commercial development zone to the north and south, a commercial-residential zone to the west, and SR-525 to the east. The majority of the Site is in Public Land Survey System location SW¼ of the SW¼ of Section 11, Township 27 North, Range 4 East, Willamette Principal Meridian (W.M.).

Site topography generally slopes down from north to south. The Site is currently undeveloped and vegetated with a mixed coniferous and deciduous forest. Alderwood Mall Boulevard, Maple Road and Ash Way define the western, northern, and eastern boundaries of the Site. The parcel adjacent to the south is undeveloped.

Two wetlands (A and B) were identified and delineated on the Site (the northern portion of Wetland A is fully surveyed, however the southern portion far from proposed construction is not surveyed). Wetlands A and B are classified as Category III wetlands with habitat scores of 5. The standard buffer is 105-foot according to Lynnwood Municipal Code. Wetlands A is adjacent to Stream A. Stream A is classified as a Type F with a channel width ranging between 12 and 24 feet at the time of the field investigation. Type F stream in the City of Lynnwood has a 100-foot standard buffer width measured landward from the delineated ordinary high water mark (OHWM), or from the top-of-bank if the OHWM cannot be determined.

The proposed project includes the construction of a pedestrian trail and boardwalk adjacent to the south side of Maple Road. On-site connection points to the existing sidewalks will be on the intersection of Maple Road and Alderwood Mall Parkway, and from Ash Way to the Interurban Trail. The proposed system will be ADA-compliant with a path no less than a 7 feet width. Two sections of the system will be an elevated boardwalk supported by four-inch pin pile footings over a Category III wetland and a Type F stream. The other section will be on-grade sidewalk within the wetland buffer.

All proposed impacts are associated with the trail and boardwalk construction. About 56 feet of the boardwalk will be directly above Wetland A. Four-inch-diameter pin piles will be used to hold the structure without direct infill of the wetland. No direct wetland impacts will occur.

294 sf of wetland will be temporarily impacted due to construction activities. A few pin piles will reside below the OHWM. Piles will be less than 9 feet from the left bank. The proposed boardwalk will be along the Stream's left bank without any crossing, therefore no direct stream infill will occur, resulting in no direct adverse stream impacts. The construction will have 233 sf of temporary stream impact. 458 sf of wetland buffer will be temporarily impacted during construction for the boardwalk, and 1,812 sf will be permanently impacted as a result of the on-grade sidewalk. All construction shall occur within a WDFW-designated fish window between July 1st and September 30th.

To mitigate for the unavoidable impacts associated with the trail and boardwalk construction, the Client will use a combination of wetland enhancement and buffer enhancement measures. The proposed mitigation will restore 1,357 sf of wetland, 985 sf of stream, and 3,478 sf of degraded wetland and stream buffer through plantings of native woody vegetation appropriate for upland and riparian habitats. Invasive species will be removed around the critical areas and their associated buffers where these species occur within the Site. Mitigation is designed to increase accessible habitat, bank stability, and the Site's hydroperiod, while decreasing sedimentation, surface runoff, and erosion.

Chapter 13. REFERENCE

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FIGURES

SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 NORTH, RNG 4 E, WM.

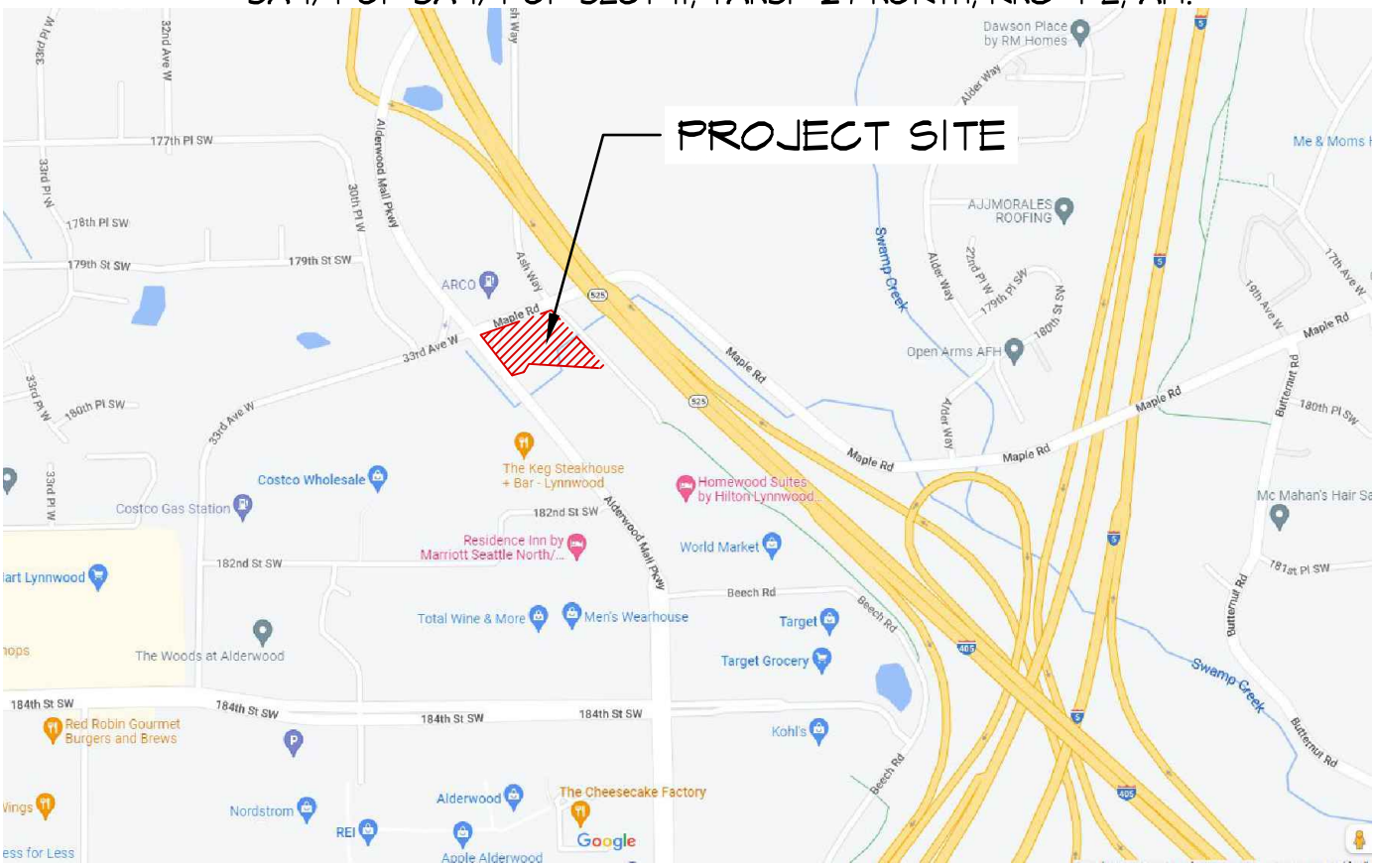

IMAGE SOURCE: GOOGLE MAPS, WWW.MAPS.GOOGLE.COM (ACCESSED 14 NOV 2022)

DRIVING DIRECTIONS:

1. LEAVE FROM LYNNWOOD CITY HALL (19100 44TH AVE W, LYNNWOOD, WA 98036) HEAD NORTH TOWARD 44TH AVE W;
2. TURN RIGHT TOWARD 44TH AVE W;
3. TURN LEFT ONTO 44TH AVE W;
4. TURN RIGHT ONTO MAPLE RD;
5. CONTINUE ONTO 179TH ST SW;
6. TURN RIGHT ONTO 30TH PL W;
7. 30TH PL W TURNS LEFT AND BECOMES 33RD AVE W;
8. TURN RIGHT ONTO ALDERWOOD MALL PKWY;
9. ARRIVE AT DESTINATION

NORTH

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FIGURE #1

VICINITY MAP & DRIVING DIRECTIONS
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

DESIGN	DRAWN	PROJECT
	TH	1927

SCALE: NTS
DATE: 11-14-2022
REVISED:

Z:\DRAWING\1900-1999\TAL1927\Plans\TAL-1927 Figure 2022-11.dwg

SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 NORTH, RNG 4 E, WM.

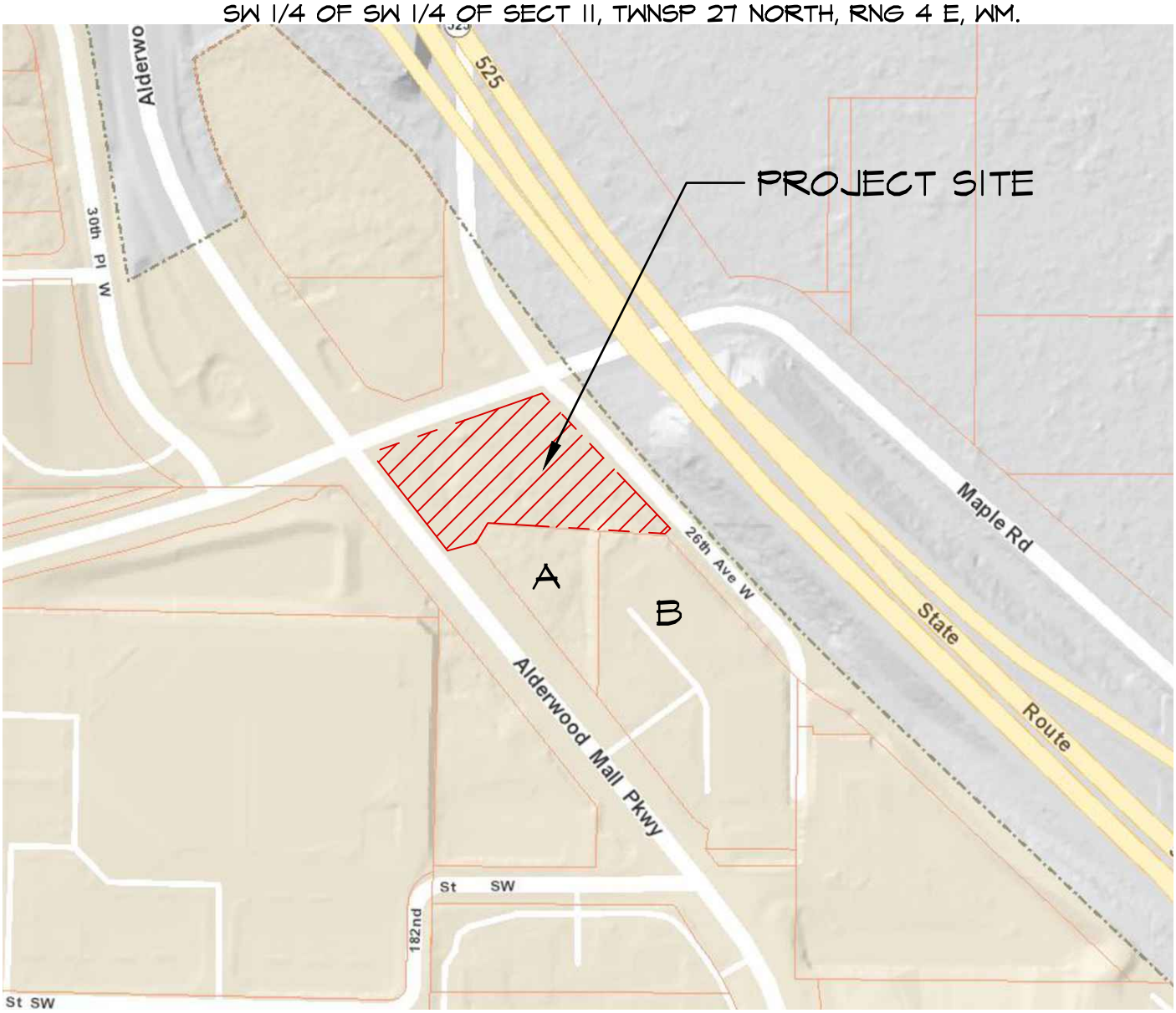

IMAGE SOURCE: KING COUNTY IMAP;
HTTPS://SCOPI.SNOCO.ORG/HTML5VIEWER/INDEX.HTML?CONFIGBASE=HTTPS://SCOPI.SNOCO.ORG/GEOCORTEX/ESSENTIALS/REST/SITES/SCOPI/VIEWERS/SCOPI/VIRTUALDIRECTORY/RESOURCES/CONFIG/DEFAULT
(ACCESSED 14 NOV 2022)

A PARCEL ID: 00372800300101
B PARCEL ID: 00372800300203

NOTE: SITE IS NOT A DEFINED PARCEL.

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N.T.S.

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FIGURE #2

PARCEL MAP
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

DESIGN	DRAWN	PROJECT
	TH	1927

SCALE: NTS
DATE: 11-14-2022
REVISED:

2

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SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 NORTH, RNG 4 E, WM.

LEGEND

TYPE	DESCRIPTION
R4SBC	RIVERINE; INTERMITTENT; STREAMBED; SEASONALLY FLOODED
PABFX	PALUSTRINE; AQUATIC BED; SEMIPERMANENTLY FLOODED; EXCAVATED
PFOC	PALUSTRINE; FORESTED; SEASONALLY FLOODED
PEMIF	PALUSTRINE; EMERGENT; PERSISTENT; SEMIPERMANENTLY FLOODED
PSSC	PALUSTRINE; SCRUB-SHRUB; SEASONALLY FLOODED

SOURCE: U.S. FISH AND WILDLIFE SERVICE, (JAN 2015). NATIONAL WETLANDS INVENTORY WEBSITE, U.S. DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE, WASHINGTON D.C. HTTP://WWW.FWS.GOV/WETLANDS/DATA/WETLAND-CODES.HTML (ACCESSED 14 NOV 2022)

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FIGURE #3

NATIONAL WETLANDS INVENTORY
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

DESIGN	DRAWN	PROJECT
	TH	1927
SCALE	NTS	
DATE	11-14-2022	3
REVISED		

Z:\DRAWING\1900-1999\TAL1927\Plans\TAL-1927 Figure 2022-11.dwg

SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 NORTH, RNG 4 E, WM.

LEGEND

TYPE	DESCRIPTION, SLOPES
3	ALDERWOOD GRAVELLY SANDY LOAM, 15 TO 30 PERCENT SLOPES
5	ALDERWOOD-URBAN LAND COMPLEX, 2 TO 8 PERCENT SLOPES
6	ALDERWOOD-URBAN LAND COMPLEX, 8 TO 15 PERCENT SLOPES
18	EVERETT VERY GRAVELLY SANDY LOAM, 8 TO 15 PERCENT SLOPES
32	MCKENNA GRAVELLY SILT LOAM, 0 TO 8 PERCENT SLOPES
34	MUKILTEO MUCK
78	URBAN LAND

SOURCE: SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE, WEB SOIL SURVEY. AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.NRCS.USDA.GOV/. ACCESSED (14 NOV 2022).

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FIGURE #4

NRCS SOILS MAP
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

DESIGN	DRAWN	PROJECT
	TH	1927

SCALE: NTS
DATE: 11-14-2022
REVISED:

4

Z:\DRAWING\1900-1999\TAL1927\Plans\TAL-1927 Figure 2022-11.dwg

SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 NORTH, RNG 4 E, WM.

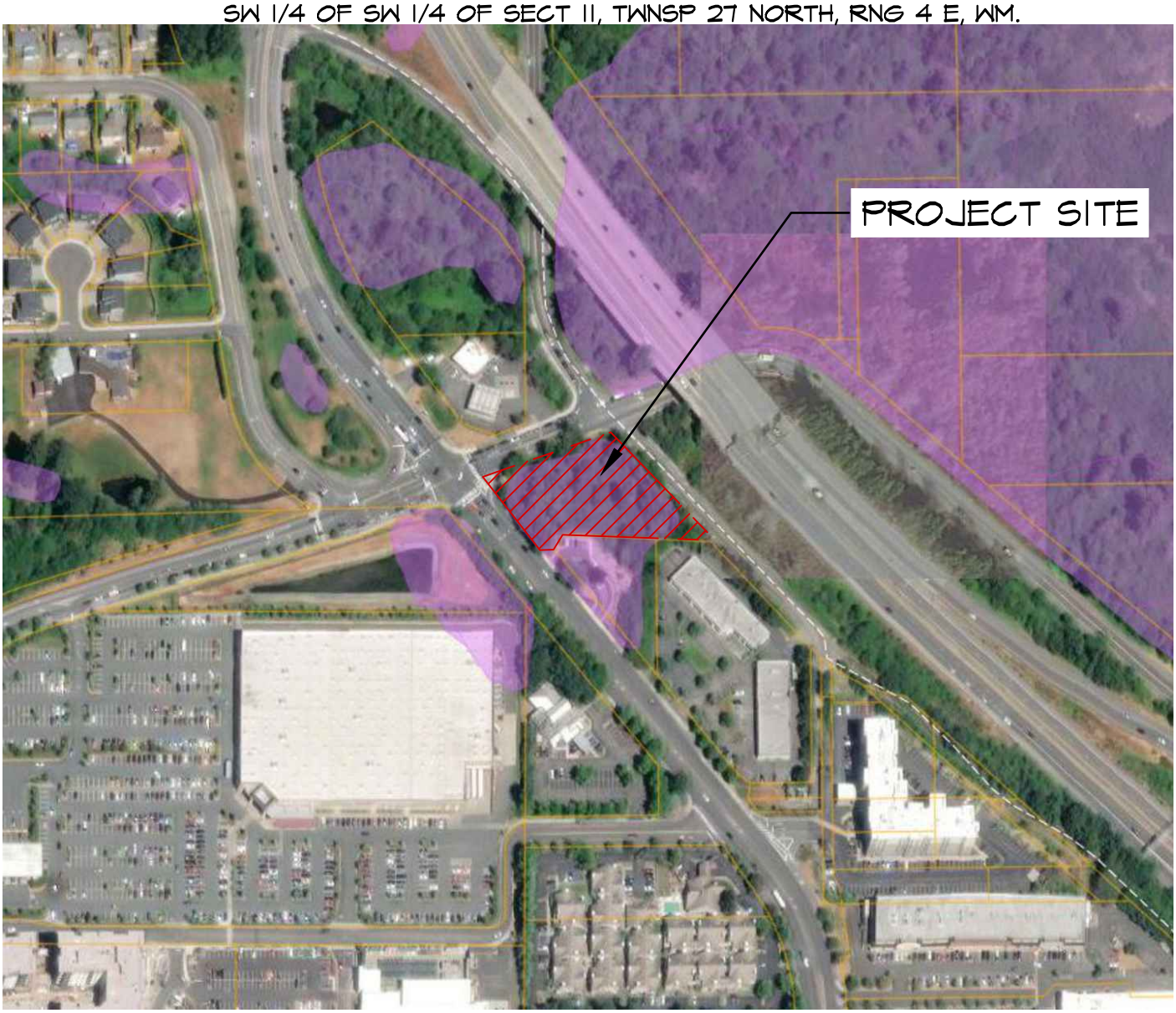

IMAGE SOURCE: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE (WDFW) PRIORITY HABITATS AND SPECIES (PHS) DATABASE ON THE WEB HTTPS://GEODATASERVICES.WDFW.WA.GOV/HP/PHS/; (ACCESSED 14 NOV 2022)

Parcels

PHS Public Points

PHS Public Lines

PHS Public Polygons
AS MAPPED

PRIORITY AREA: AQUATIC HABITAT
(FRESHWATER FORESTED/SHRUB WETLAND)

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FIGURE #5

PRIORITY HABITATS AND SPECIES MAP
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

DESIGN	DRAWN	PROJECT
	TH	1927
SCALE	NTS	
DATE	11-14-2022	5
REVISED		

Z:\DRAWING\1900-1999\TAL1927\Plans\TAL-1927 Figure 2022-11.dwg

SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 NORTH, RNG 4 E, WM.

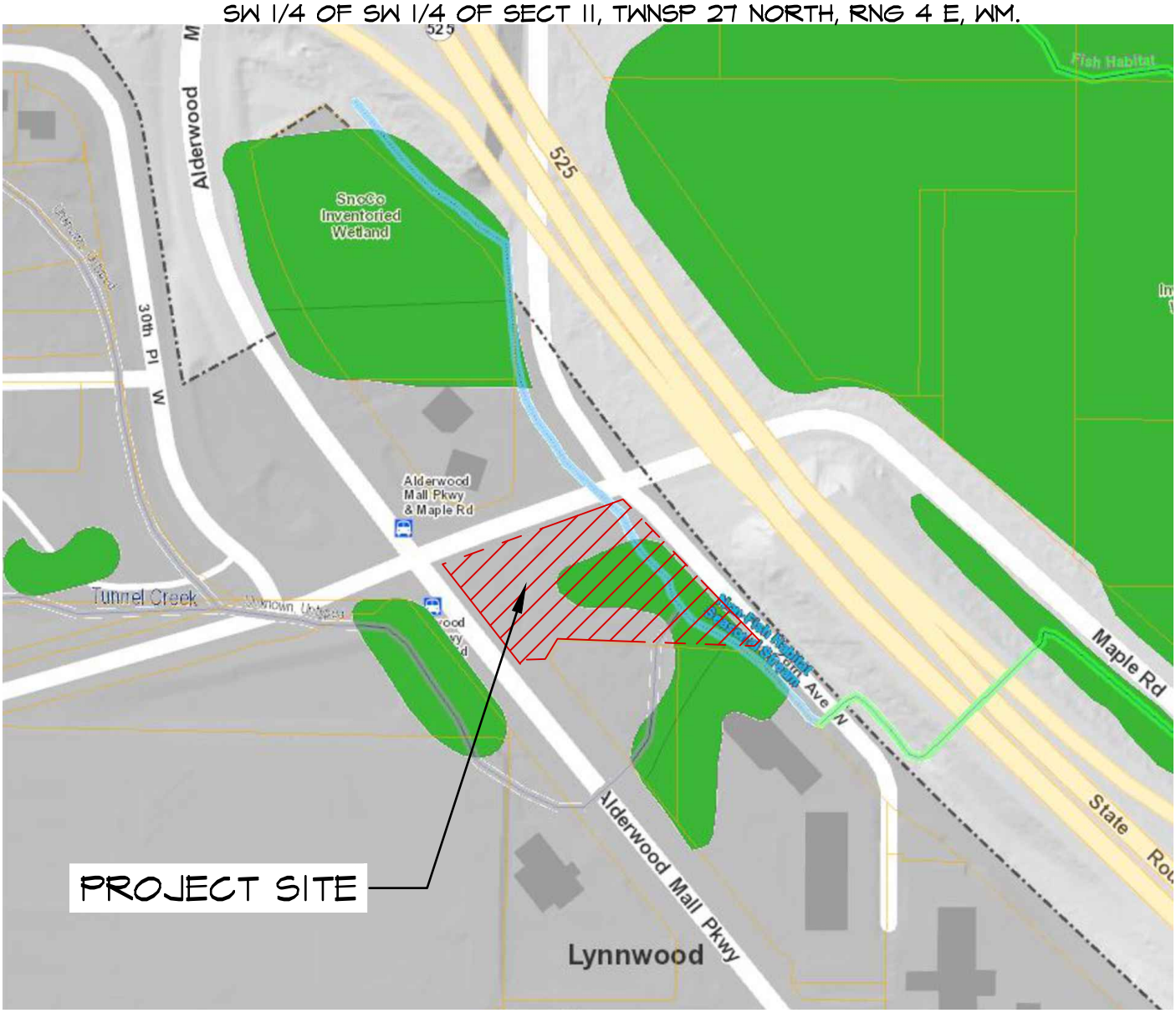

IMAGE SOURCE: SNOHOMISH COUNTY PDS MAP PORTAL.
HTTPS://GISMAPS.SNOCO.ORG/HTML5VIEWER/INDEX.HTML?VIEWER=PDSMAPPORTAL
(ACCESSED 14 NOV 2022)

- Snohomish County Wetland
- Non-fish Habitat Seasonal
- Fish Habitat

NORTH
N.T.S.

TALASAEA CONSULTANTS, INC.
Resource & Environmental Planning
15020 Bear Creek Road Northeast
Woodinville, Washington 98077
Bus (425)861-7550 - Fax (425)861-7549

FIGURE #6

SNOHOMISH COUNTY PDS MAP PORTAL
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

DESIGN	DRAWN	PROJECT
	TH	1927

SCALE: NTS
DATE: 11-14-2022
REVISED:

6

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APPENDIX A

Wetland Determination Data Forms, Talasaea Consultants, 2023

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: TAL-1927 Lynnwood Boardwalks City/County: Lynnwood, Snohomish County Sampling Date: 02/11/2022
Applicant/Owner: Steve Malsam State: WA Sampling Point: TP-A1
Investigator(s): J. Prater Section, Township, Range: 11-27-04/SW-11-27-04
Landform (hillslope, terrace, etc): Terraced depression Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): A Lat: 47.83541018 Long: -122.27011423 Datum: NAD83
Soil Map Unit Name: Mukilteo Muck NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30)			
1. *Alnus rubra* / Red alder	85	Yes	FAC
2. *Salix lucida ssp. lasiandra* / Pacific willow	15	No	NI
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Alnus rubra* / Red alder	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Urtica dioica* / Stinging nettle	2	Yes	FAC
2. *Athyrium filix-femina* / Common ladyfern	2	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. *Rubus armeniacus* / Himalayan blackberry	4	Yes	FAC
2.			
	4	= Total Cover	

% Bare Ground in Herb Statum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	108	x 3 =	324
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	123 (A)		399 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: TP-A1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2	100					Silt Loam	
6-10	2.5Y 3/1	100					Silt Loam	
10-18	10YR 2/1	100					Silt Loam	Organic, egg smell

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 7

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: TAL-1927 Lynnwood Boardwalks City/County: Lynnwood, Snohomish County Sampling Date: 02/11/2022
Applicant/Owner: Steve Malsam State: WA Sampling Point: TP-A2
Investigator(s): J. Prater & T. Nightengale, Talasaea Section, Township, Range: NW-14-27-04/SW-11-27-04
Landform (hillslope, terrace, etc): Hill slope Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): A Lat: 47.83541433 Long: -122.2702285 Datum: NAD83
Soil Map Unit Name: Mukilteo Muck NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No ____

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra* / Red alder	60	Yes	FAC
2. *Salix lucida* / Shining willow	15	Yes	FACW
3.			
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rubus spectabilis* / Salmon berry, Salmonberry	15	Yes	FAC
2. *Alnus rubra* / Red alder	15	Yes	FAC
3.			
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Ranunculus repens* / Crowfoot, Creeping buttercup	95	Yes	FAC
2. *Urtica dioica* / Stinging nettle	10	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. *Rubus armeniacus* / Himalayan blackberry	5	Yes	FAC
2.			
	5	= Total Cover	

% Bare Ground in Herb Statum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	200	x 3 =	600
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	215 (A)		630 (B)

Prevalence Index = B/A = 2.93

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: TP-A2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	100					Silt Loam	
12-24	10YR 2/2						Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 22

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: TAL-1927 Lynnwood Boardwalks | City/County: Lynnwood, Snohomish County | Sampling Date: 02/11/2022
Applicant/Owner: Steve Malsam | State: WA | Sampling Point: TP-A3
Investigator(s): J. Prater & T. Nightengale, Talasaea | Section, Township, Range: NW-14-27-04/SW-11-27-04
Landform (hillslope, terrace, etc): | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): A | Lat: 47.835905 | Long: -122.27044933 | Datum: NAD83
Soil Map Unit Name: Mukilteo Muck | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? Yes No

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Thuja plicata* / Western red cedar, Western red cedar, Canoe	70	Yes	FAC
2. *Salix lucida* / Shining willow	25	Yes	FACW
3. *Alnus rubra* / Red alder	25	Yes	FAC
4.			
	120	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Salix lucida* / Shining willow	60	Yes	FACW
2.			
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. *Hedera helix* / English ivy	5	Yes	FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Statum 50

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	85	x 2 =	170
FAC species	95	x 3 =	285
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	185 (A)		475 (B)

Prevalence Index = B/A = 2.57

Hydrophytic Vegetation Indicators:
- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: TP-A3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Silt Loam	
10-18	10YR 2/2						Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 10

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 5

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: TAL-1927 Lynnwood Boardwalks City/County: Lynnwood, Snohomish County Sampling Date: 02/11/2022
Applicant/Owner: Steve Malsam State: WA Sampling Point: TP-A4
Investigator(s): J. Prater Section, Township, Range: NW-14-27-04/SW-11-27-04
Landform (hillslope, terrace, etc): Terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): A Lat: 47.83594287 Long: -122.27054847 Datum: NAD83
Soil Map Unit Name: Mukilteo Muck NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Thuja plicata* / Western red cedar, Western red cedar, Canoe	40	Yes	FAC
2. *Alnus rubra* / Red alder	35	Yes	FAC
3.			
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Salix lucida ssp. lasiandra* / Pacific willow	65	Yes	FACW
2.			
3.			
4.			
5.			
	65	= Total Cover	
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. *Hedera helix* / English ivy	85	Yes	FACU
2.			
	85	= Total Cover	

% Bare Ground in Herb Statum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	65	x 2 =	130
FAC species	75	x 3 =	225
FACU species	85	x 4 =	340
UPL species	0	x 5 =	0
Column Totals:	225 (A)		695 (B)

Prevalence Index = B/A = 3.09

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: TP-A4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Fine Sndy Lm	High organic content
10-18	10YR 2/1	100					Muck	Highly organic

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 11

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 8

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: TAL-1927 Lynnwood Boardwalks | City/County: Lynnwood, Snohomish County | Sampling Date: 02/23/2022
Applicant/Owner: Steve Malsam | State: WA | Sampling Point: TP-A5
Investigator(s): J. Prater & T. Nightengale, Talasaea | Section, Township, Range: NW-14-27-04/SW-11-27-04
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): convex | Slope (%): 1
Subregion (LRR): A | Lat: 47.83590821 | Long: -122.27061221 | Datum: NAD83
Soil Map Unit Name: Mukilteo Muck | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Thuja plicata* / Western red cedar, Western red cedar, Canoe	45	Yes	FAC
2. *Alnus rubra* / Red alder	10	No	FAC
3.			
4.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Alnus rubra* / Red alder	15	Yes	FAC
2. *Oemleria cerasiformis* / Oso berry	15	Yes	FACU
3. *Thuja plicata* / Western red cedar, Western red cedar, Canoe	4	No	FAC
4.			
5.			
	34	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Athyrium filix-femina* / Common ladyfern	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	15	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. *Hedera helix* / English ivy	95	Yes	FACU
2.			
	95	= Total Cover	

% Bare Ground in Herb Statum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	89	x 3 =	267
FACU species	110	x 4 =	440
UPL species	0	x 5 =	0
Column Totals:	199 (A)		707 (B)

Prevalence Index = B/A = 3.55

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: TP-A5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/1	100					Muck	
14-18	10YR 2/1	100					Mucky Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 14

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 13

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: TAL-1927 Lynnwood Boardwalks | City/County: Lynnwood, Snohomish County | Sampling Date: 02/11/2022
Applicant/Owner: Steve Malsam | State: WA | Sampling Point: TP-B1
Investigator(s): J. Prater & T. Nightengale, Talasaea | Section, Township, Range: NW-14-27-04/SW-11-27-04
Landform (hillslope, terrace, etc): | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): A | Lat: 47.83559367 | Long: -122.27095917 | Datum: NAD83
Soil Map Unit Name: Mukilteo Muck | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? Yes X No

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra* / Red alder	50	Yes	FAC
2. *Acer macrophyllum* / Bigleaf maple, Big-leaf maple	30	Yes	FACU
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rubus spectabilis* / Salmon berry, Salmonberry	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Phalaris arundinacea* / Reed canary grass	75	Yes	FACW
2. *Urtica dioica* / Stinging nettle	10	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. *Rubus armeniacus* / Himalayan blackberry	10	Yes	FAC
2.			
	10	= Total Cover	

% Bare Ground in Herb Statum

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	75	x 2 =	150
FAC species	80	x 3 =	240
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	185 (A)		510 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:
- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: TP-B1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					Silt Loam	
4-12	10YR 2/2						Silt Loam	
12-14	10BG 4/1	98	10YR 6/6	2	RM	M	Clay	
14-18	10YR 3/3						Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Clay

Depth (inches): 12"

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 14

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 12

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: TAL-1927 Lynnwood Boardwalks City/County: Lynnwood, Snohomish County Sampling Date: 02/11/2022
Applicant/Owner: Steve Malsam State: WA Sampling Point: TP-B2
Investigator(s): J. Prater & T. Nightengale, Talasaea Section, Township, Range: NW-14-27-04/SW-11-27-04
Landform (hillslope, terrace, etc): Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): A Lat: 47.83564883 Long: -122.27099467 Datum: NAD83
Soil Map Unit Name: Mukilteo Muck NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes No X

Is the Sampled Area within a Wetland? Yes No X

Remarks:
A water table at 22 inches below the soil surface during the winter wet season suggests that wetland hydrology does not exist.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra* / Red alder	35	No	FAC
2. *Acer macrophyllum* / Bigleaf maple, Big-leaf maple	35	No	FACU
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rubus spectabilis* / Salmon berry, Salmonberry	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Phalaris arundinacea* / Reed canary grass	75	Yes	FACW
2. *Typha latifolia* / Broadleaf cattail, Broad-leaved cattail	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. *Rubus armeniacus* / Himalayan blackberry	20	Yes	FAC
2.			
	20	= Total Cover	

% Bare Ground in Herb Statum

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5	
FACW species	75	x 2 =	150	
FAC species	70	x 3 =	210	
FACU species	35	x 4 =	140	
UPL species	0	x 5 =	0	
Column Totals:	185	(A)	505	(B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: TP-B2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22	10YR 2/2	100					Fine Sndy Lm	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 22

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX B

Wetland Rating Forms & Figures, Talasaea Consultants, 2023

Wetland name or number: Click or tap here to enter text.

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit:
Rated by DRT Trained by Ecology? ☒ Yes ☐ No Date of training 10-2015
HGM Class used for rating Depressional Wetland has multiple HGM classes? ☒ Y ☐ N

NOTE: **Form is not complete without the figures requested** *(figures can be combined)*. Source of base aerial photo/map _____

OVERALL WETLAND CATEGORY (based on functions ☒ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

☐ **Category I** – Total score = 23 - 27
☐ **Category II** – Total score = 20 - 22
☒ **Category III** – Total score = 16 - 19
☐ **Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
			Circle the appropriate ratings	
Site Potential	M	L	M	
Landscape Potential	M	H	L	
Value	H	H	M	TOTAL
Score Based on Ratings	7	7	5	19

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC		CATEGORY
Estuarine	☐	**I II**
Wetland of High Conservation Value	☐	**I**
Bog	☐	**I**
Mature Forest	☐	**I**
Old Growth Forest	☐	**I**
Coastal Lagoon	☐	**I II**
Interdunal	☐	**I II III IV**
None of the above		☒

Wetland name or number: Click or tap here to enter text.

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 N, RNG 4 E, WM.

IMAGE SOURCE: AERIAL IMAGERY DERIVED FROM GOOGLE SATELLITE. FIGURES GENERATED BY TALASAEA CONSULTANTS, 2023)

LEGEND

FORESTED

NORTH

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FIGURE #1

COWARDIN CLASSES
LYNNWOOD BOARDWALK
LYNNWOOD, WA

DESIGN	DRAWN	PROJECT
	KF	1927

SCALE: NTS
DATE: 12-15-2023
REVISED:

1

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SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 N, RNG 4 E, WM.

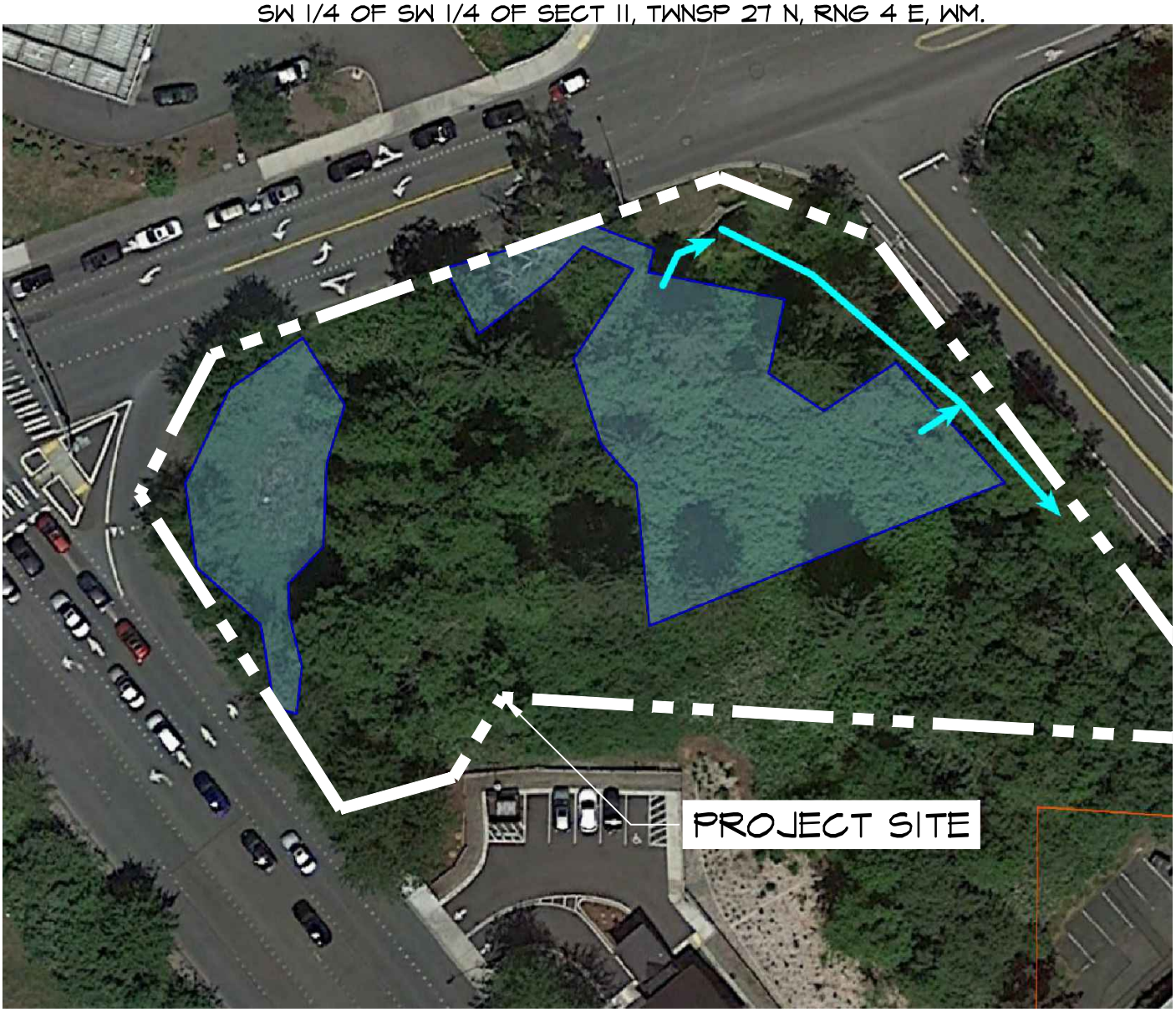

IMAGE SOURCE: AERIAL IMAGERY DERIVED FROM GOOGLE SATELLITE. FIGURES GENERATED BY TALASAEA CONSULTANTS, 2023)

LEGEND

SATURATED

STREAM

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FIGURE #2

HYDROPERIODS
LYNNWOOD BOARDWALK
LYNNWOOD, WA

DESIGN	DRAWN	PROJECT
	KF	1927

SCALE: NTS

DATE: 12-15-2023

REVISED

2

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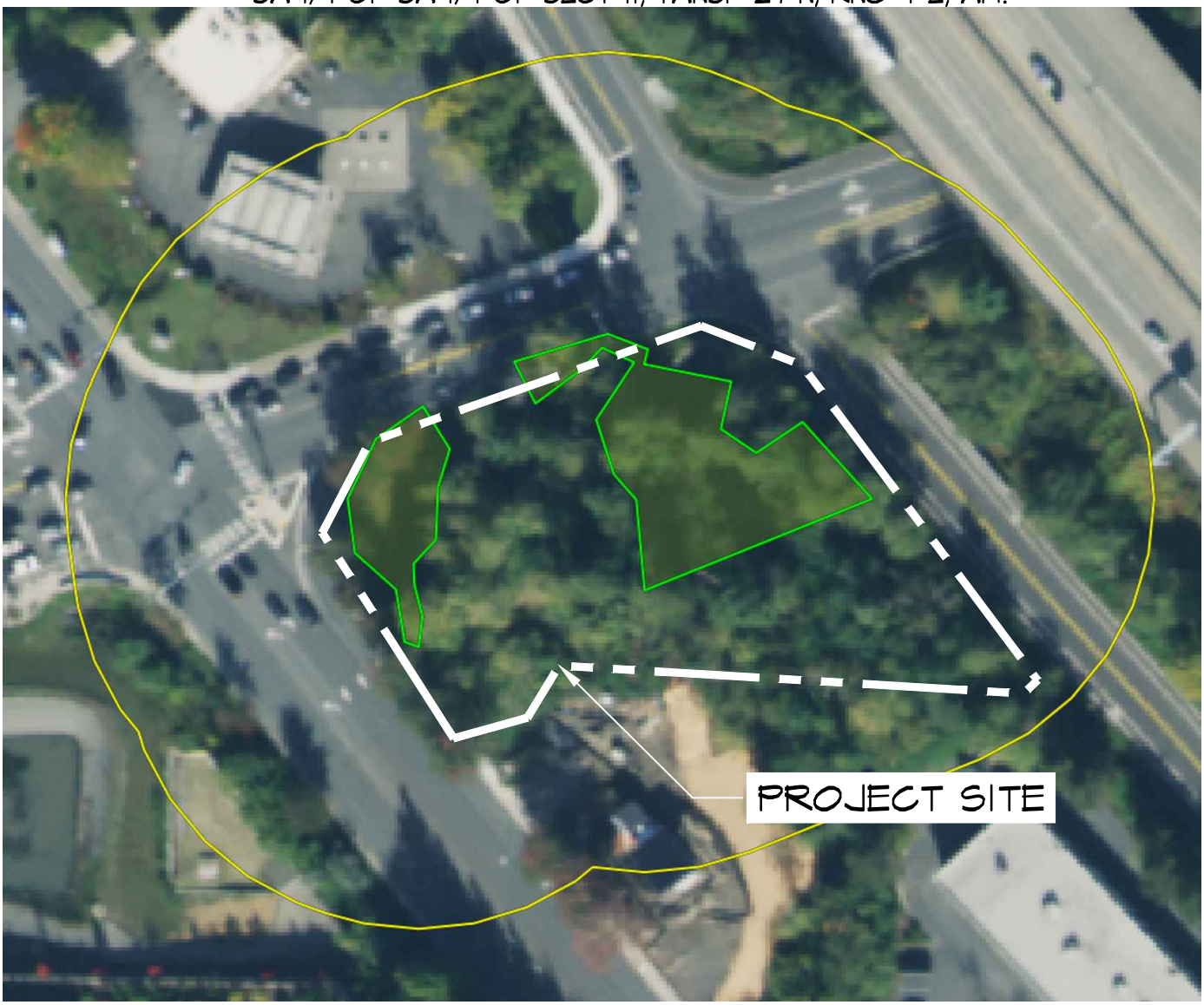

IMAGE SOURCE: AERIAL IMAGERY DERIVED FROM GOOGLE SATELLITE. FIGURES GENERATED BY TALASAEA CONSULTANTS, 2023)

LEGEND

FRESHWATER FORESTED/ SHRUB WETLAND (NWI)

150' BOUNDARY

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FIGURE #3

150-FT BOUNDARY
LYNNWOOD BOARDWALK
LYNNWOOD, WA

DESIGN	DRAWN	PROJECT
	KF	1927

SCALE NTS

DATE 12-15-2023

REVISED

3

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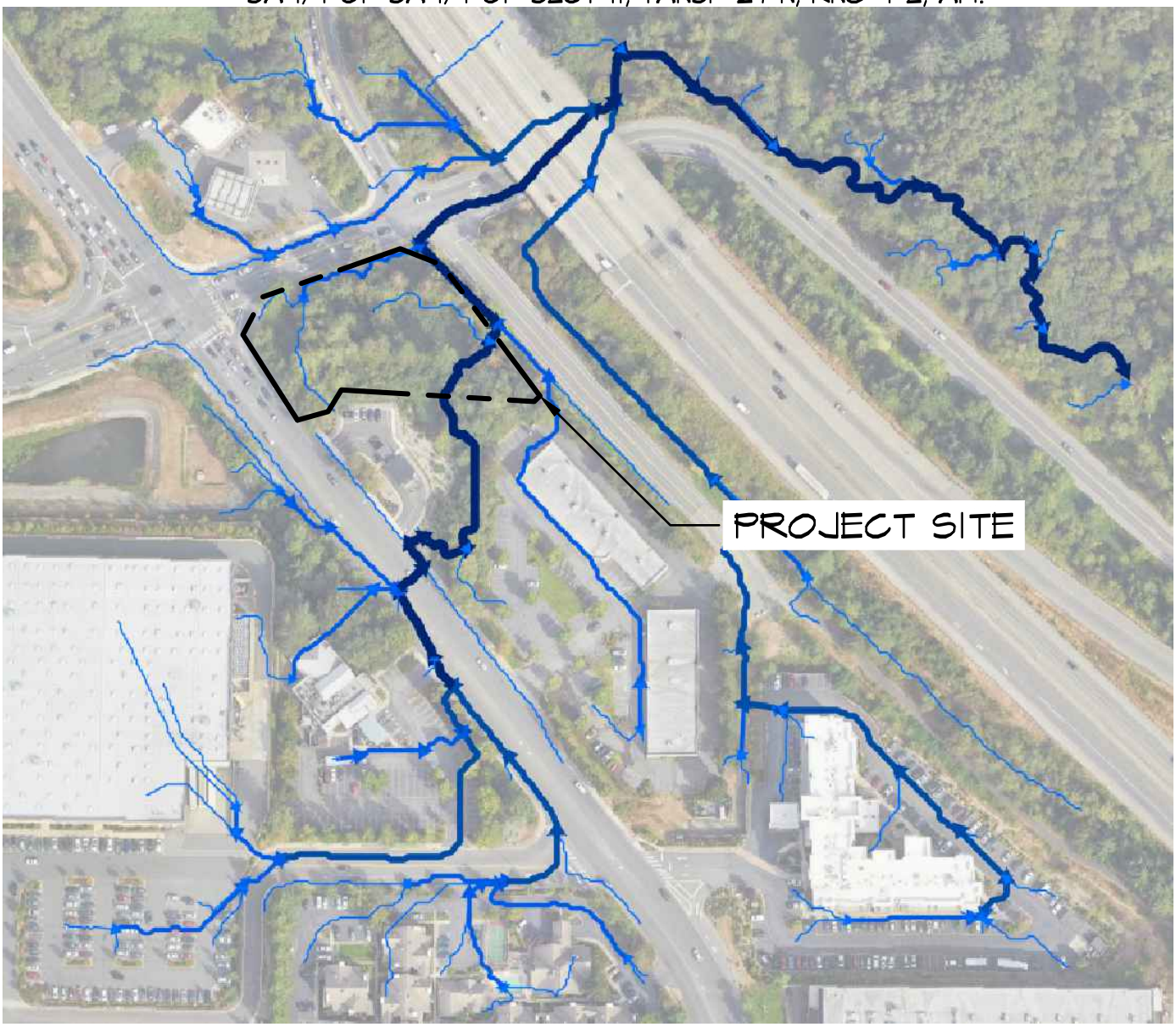

IMAGE SOURCE: AERIAL IMAGERY DERIVED FROM GOOGLE SATELLITE. FIGURES GENERATED BY TALASAEA CONSULTANTS, 2023)

LEGEND

STREAM ORDER

1
2
3
4

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FIGURE #4

WATERSHED MAP
LYNNWOOD BOARDWALK
LYNNWOOD, WA

DESIGN	DRAWN	PROJECT
	KF	1927

SCALE: NTS

DATE: 12-15-2023

REVISED:

4

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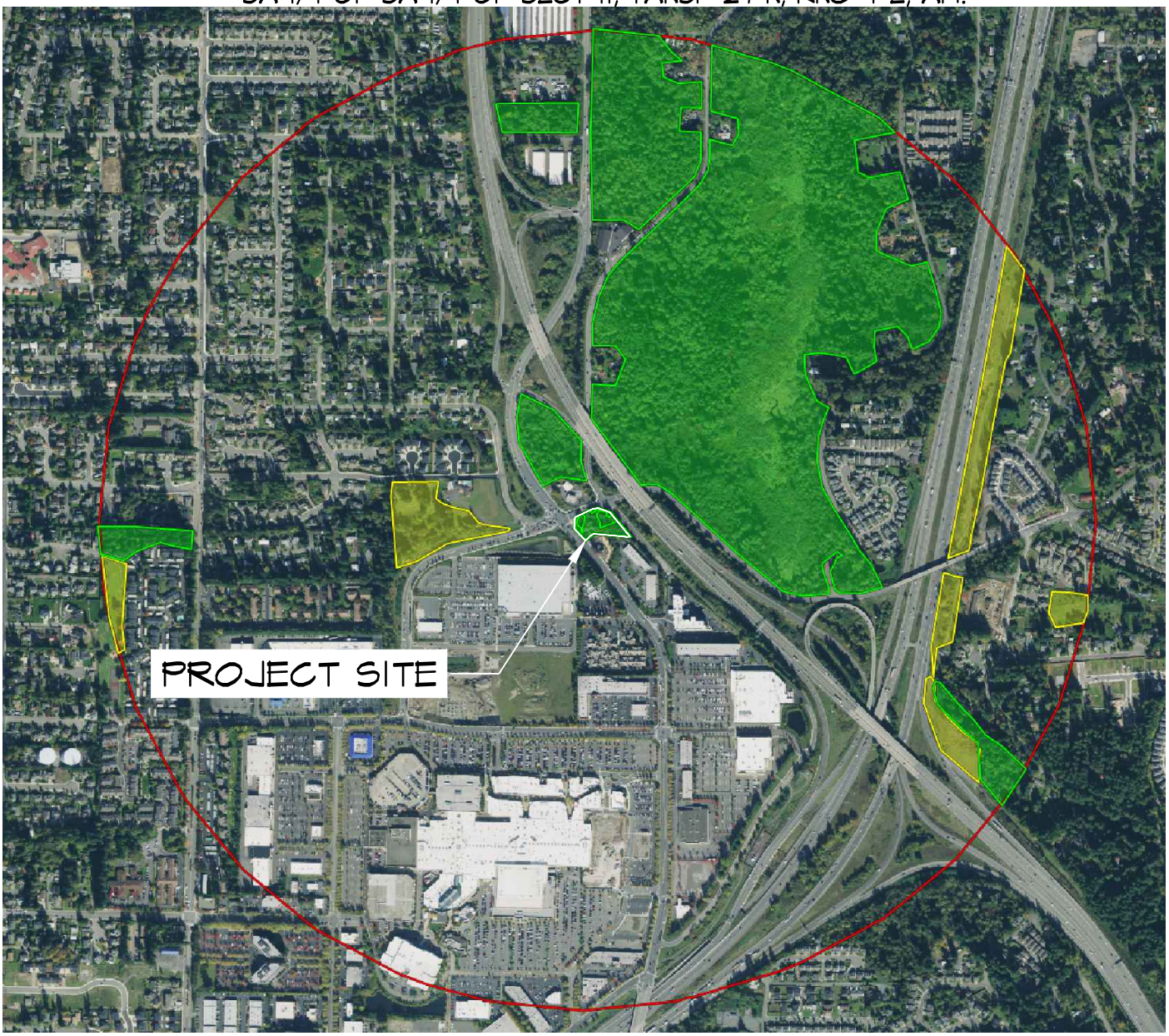

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LEGEND

- RELATIVELY UNDISTURBED HABITAT
- MODERATE/LOW INTENSITY LAND USE
- 1 KM RADIUS

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FIGURE #5

1 KM POLYGON
LYNNWOOD BOARDWALK
LYNNWOOD, WA

DESIGN	DRAWN	PROJECT
	KF	1927

SCALE: NTS
DATE: 12-15-2023
REVISED:

5

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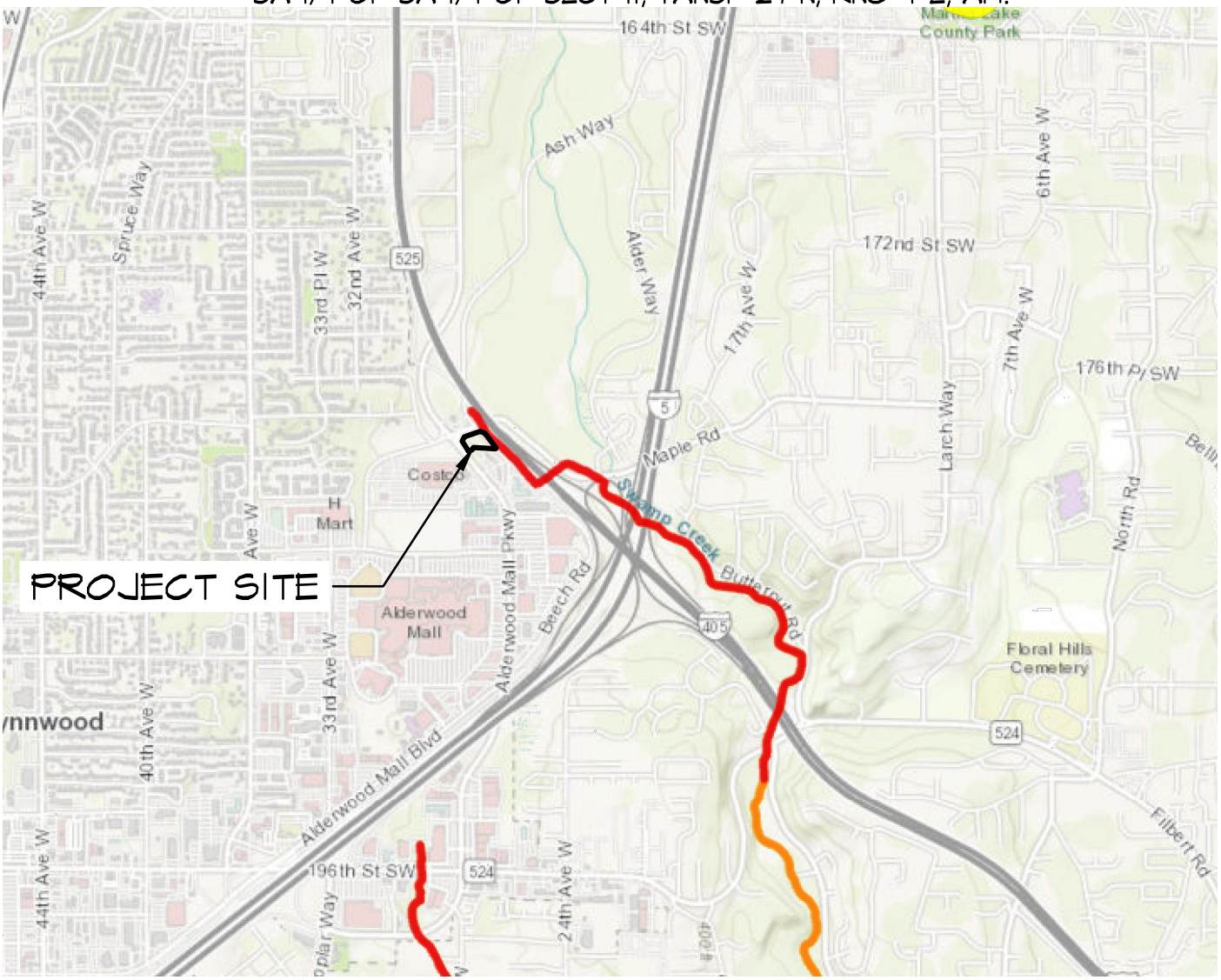

IMAGE SOURCE: AERIAL IMAGERY DERIVED FROM GOOGLE SATELLITE. FIGURES GENERATED BY TALASAEA CONSULTANTS, 2023)

LEGEND

Assessed Water/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

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FIGURE #6

303(d) MAP
LYNNWOOD BOARDWALK
LYNNWOOD, WA

DESIGN	DRAWN	PROJECT
	KF	1927

SCALE: NTS
DATE: 12-15-2023
REVISED:

6

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SW 1/4 OF SW 1/4 OF SECT 11, TWNSP 27 N, RNG 4 E, WM.

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Swamp Creek
Fecal Coliform Bacteria
Total Maximum Daily Load

Water Quality Improvement Report
and
Implementation Plan

June 2006
Publication Number 06-10-021

Printed on Recycled Paper

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FIGURE #7

WRIA 8 TMDLs
LYNNWOOD BOARDWALK
LYNNWOOD, WA

DESIGN	DRAWN	PROJECT
	KF	1927

SCALE: NTS
DATE: 12-15-2023
REVISED:

7

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Wetland name or number: Click or tap here to enter text.

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

☒ NO – go to 2 ☐ **YES** – the wetland class is **Tidal Fringe** – go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

☐ **NO – Saltwater Tidal Fringe (Estuarine)** ☐ **YES – Freshwater Tidal Fringe**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☒ NO – go to 3 ☐ **YES** – The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?

___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size; ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

☒ NO – go to 4 ☐ **YES –** The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

☐ The water leaves the wetland **without being impounded**.

☐ NO – go to 5 ☒ **YES –** The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

☐ The overbank flooding occurs at least once every 2 years.

☒ NO – go to 6 ☐ **YES** – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

Wetland name or number: Click or tap here to enter text.

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7 ☒ **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8 ☐ **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number: Click or tap here to enter text.

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions).* Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1 Add the points in the boxes above	6

Rating of Site Potential If score is: ☐ **12-16 = H** ☒ **6-11 = M** ☐ **0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source: Click or tap here to enter text. Yes = 1 No = 0	1
Total for D 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: ☐ **3 or 4 = H** ☒ **1 or 2 = M** ☐ **0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	4

Rating of Value If score is: ☒ **2-4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number: Click or tap here to enter text.

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	0
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	0
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4 Add the points in the boxes above	3

Rating of Site Potential If score is: ☐ **12-16 = H** ☐ **6-11 = M** ☒ **0-5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1
Total for D 5 Add the points in the boxes above	3

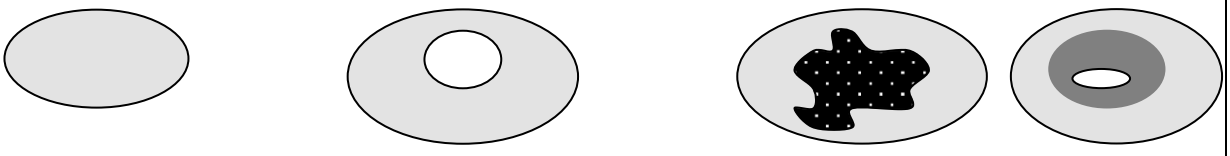
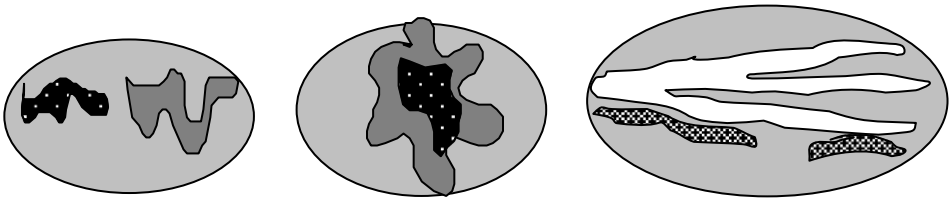
Rating of Landscape Potential If score is: ☒ **3 = H** ☐ **1 or 2 = M** ☐ **0 = L** *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* points = 0 There are no problems with flooding downstream of the wetland. points = 0	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	2
Total for D 6 Add the points in the boxes above	3

Rating of Value If score is: ☒ **2-4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number: Click or tap here to enter text.

These questions apply to wetlands of all HGM classes. HABITAT **FUNCTIONS** - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.* ☐ Aquatic bed — 4 structures or more: points = 4 ☐ Emergent — 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) — 2 structures: points = 1 ☒ Forested (areas where trees have > 30% cover) — 1 structure: points = 0 *If the unit has a Forested class, check if:* ☒ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	1
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*). ☐ Permanently flooded or inundated — 4 or more types present: points = 3 ☐ Seasonally flooded or inundated — 3 types present: points = 2 ☐ Occasionally flooded or inundated — 2 types present: points = 1 ☒ Saturated only — 1 type present: points = 0 ☒ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ **Lake Fringe wetland** — **2 points** ☐ **Freshwater tidal wetland** — **2 points**	1
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species.* ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*** If you counted: > 19 species — points = 2 5 - 19 species — points = 1 < 5 species — points = 0	1
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*  **None** = 0 points **Low** = 1 point **Moderate** = 2 points All three diagrams in this row are **HIGH** = 3points 	2

Wetland name or number: Click or tap here to enter text.

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☒ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ☒ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	2
Total for H 1 Add the points in the boxes above	7

Rating of Site Potential If score is: ☐ **15-18 = H** ☒ **7-14 = M** ☐ **0-6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?

H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat 0.1 **+** [(% moderate and low intensity land uses)/2] 0 **=** 0.1% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 18 **+** [(% moderate and low intensity land uses)/2] 1 **=** 19% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	0
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	-2

Rating of Landscape Potential If score is: ☐ **4-6 = H** ☐ **1-3 = M** ☒ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?

H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If score is: ☐ **2 = H** ☒ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number: Click or tap here to enter text.

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

☐ **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multilayered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

☐ **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

☒ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

☒ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

☐ **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

☐ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number: Click or tap here to enter text.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt ☐ Yes –Go to **SC 1.1** ☐ No= **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? ☐ Yes = **Category I** ☐ No - Go to **SC 1.2**	No
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are *Spartina*, see page 25) ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. ☐ The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	No
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☐ Yes – Go to **SC 2.2** ☐ No – Go to **SC 2.3** SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = **Category I** ☐ No = **Not a WHCV** SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes – **Contact WNHP/WDNR and go to SC 2.4** ☐ No = **Not a WHCV** SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = **Category I** ☐ No = **Not a WHCV**	No
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? ☐ Yes – Go to **SC 3.3** ☐ No – Go to **SC 3.2** SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? ☐ Yes – Go to **SC 3.3** ☐ No = **Is not a bog** SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = **Is a Category I bog** ☐ No – Go to **SC 3.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? ☐ Yes = **Is a Category I bog** ☐ No = **Is not a bog**	No

Wetland name or number: Click or tap here to enter text.

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.*** ☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. ☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). ☐ Yes = **Category I** ☐ No = **Not a forested wetland for this section**	No
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks ☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* ☐ Yes – Go to **SC 5.1** ☐ No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. ☐ The wetland is larger than $^1/_{10}$ ac (4350 ft^2) ☐ Yes = **Category I** ☐ No = **Category II**	No
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: ☐ Long Beach Peninsula: Lands west of SR 103 ☐ Grayland-Westport: Lands west of SR 105 ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109 ☐ Yes – Go to **SC 6.1** ☐ No = **not an interdunal wetland for rating** SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? ☐ Yes = **Category I** ☐ No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? ☐ Yes = **Category II** ☐ No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? ☐ Yes = **Category III** ☐ No = **Category IV**	No
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	N/A

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Wetland name or number: Click or tap here to enter text.

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit:
Rated by DRT Trained by Ecology? ☒ Yes ☐ No Date of training 10-2015
HGM Class used for rating Depressional Wetland has multiple HGM classes? ☒ Y ☐ N

NOTE: **Form is not complete without the figures requested** *(figures can be combined)*. Source of base aerial photo/map _____

OVERALL WETLAND CATEGORY (based on functions ☒ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

☐ **Category I** – Total score = 23 - 27
☐ **Category II** – Total score = 20 - 22
☒ **Category III** – Total score = 16 - 19
☐ **Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the appropriate ratings		
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				

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC		CATEGORY
Estuarine	☐	I II
Wetland of High Conservation Value	☐	I
Bog	☐	I
Mature Forest	☐	I
Old Growth Forest	☐	I
Coastal Lagoon	☐	I II
Interdunal	☐	I II III IV
None of the above		☐

Wetland name or number: Click or tap here to enter text.

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number: Click or tap here to enter text.

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

☒ NO – go to 2 ☐ **YES** – the wetland class is **Tidal Fringe** – go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

☐ **NO – Saltwater Tidal Fringe (Estuarine)** ☐ **YES – Freshwater Tidal Fringe**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☒ NO – go to 3 ☐ **YES** – The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?

___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size; ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

☒ NO – go to 4 ☐ **YES –** The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?

☒ The wetland is on a slope (*slope can be very gradual*),
☒ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
☒ The water leaves the wetland **without being impounded**.

☐ NO – go to 5 ☒ **YES –** The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
☐ The overbank flooding occurs at least once every 2 years.

☒ NO – go to 6 ☐ **YES** – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

Wetland name or number: Click or tap here to enter text.

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7 ☒ **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☒ NO – go to 8 ☐ **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number: Click or tap here to enter text.

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions).* Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1 Add the points in the boxes above	6

Rating of Site Potential If score is: ☐ **12-16 = H** ☒ **6-11 = M** ☐ **0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source: Click or tap here to enter text. Yes = 1 No = 0	1
Total for D 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: ☐ **3 or 4 = H** ☒ **1 or 2 = M** ☐ **0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	4

Rating of Value If score is: ☒ **2-4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number: Click or tap here to enter text.

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	1
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	0
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4 Add the points in the boxes above	3

Rating of Site Potential If score is: ☐ **12-16 = H** ☐ **6-11 = M** ☒ **0-5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1
Total for D 5 Add the points in the boxes above	3

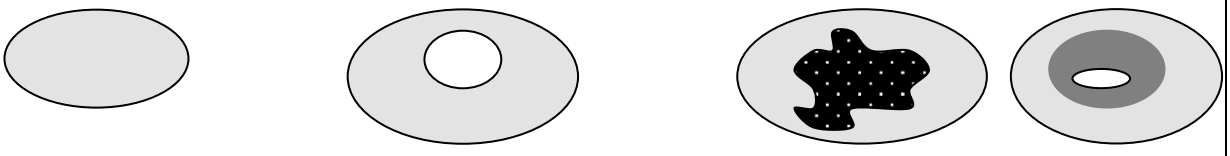
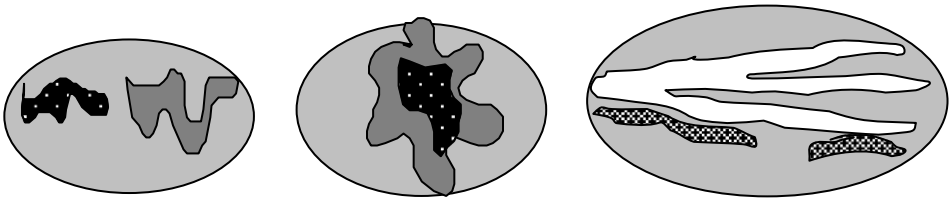
Rating of Landscape Potential If score is: ☒ **3 = H** ☐ **1 or 2 = M** ☐ **0 = L** *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* points = 0 There are no problems with flooding downstream of the wetland. points = 0	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	2
Total for D 6 Add the points in the boxes above	3

Rating of Value If score is: ☒ **2-4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number: Click or tap here to enter text.

These questions apply to wetlands of all HGM classes. HABITAT **FUNCTIONS** - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.* ☐ Aquatic bed — 4 structures or more: points = 4 ☐ Emergent — 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) — 2 structures: points = 1 ☒ Forested (areas where trees have > 30% cover) — 1 structure: points = 0 *If the unit has a Forested class, check if:* ☒ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	1
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*). ☐ Permanently flooded or inundated — 4 or more types present: points = 3 ☐ Seasonally flooded or inundated — 3 types present: points = 2 ☐ Occasionally flooded or inundated — 2 types present: points = 1 ☒ Saturated only — 1 type present: points = 0 ☒ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ **Lake Fringe wetland** — **2 points** ☐ **Freshwater tidal wetland** — **2 points**	1
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species.* ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*** If you counted: > 19 species — points = 2 5 - 19 species — points = 1 < 5 species — points = 0	1
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*  **None** = 0 points **Low** = 1 point **Moderate** = 2 points All three diagrams in this row are **HIGH** = 3points 	2

Wetland name or number: Click or tap here to enter text.

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☒ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ☒ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	2
Total for H 1 Add the points in the boxes above	7

Rating of Site Potential If score is: ☐ **15-18 = H** ☒ **7-14 = M** ☐ **0-6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?

H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat 0.1 **+** [(% moderate and low intensity land uses)/2] 0 **=** 0.1% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 18 **+** [(% moderate and low intensity land uses)/2] 1 **=** 19% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	0
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	-2

Rating of Landscape Potential If score is: ☐ **4-6 = H** ☐ **1-3 = M** ☒ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?

H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If score is: ☐ **2 = H** ☒ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number: Click or tap here to enter text.

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

☐ **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multilayered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

☐ **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

☒ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

☒ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

☐ **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

☐ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number: Click or tap here to enter text.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt ☐ Yes –Go to **SC 1.1** ☐ No= **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? ☐ Yes = **Category I** ☐ No - Go to **SC 1.2**	No
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are *Spartina*, see page 25) ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. ☐ The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	No
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☐ Yes – Go to **SC 2.2** ☐ No – Go to **SC 2.3** SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = **Category I** ☐ No = **Not a WHCV** SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes – **Contact WNHP/WDNR and go to SC 2.4** ☐ No = **Not a WHCV** SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = **Category I** ☐ No = **Not a WHCV**	No
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? ☐ Yes – Go to **SC 3.3** ☐ No – Go to **SC 3.2** SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? ☐ Yes – Go to **SC 3.3** ☐ No = **Is not a bog** SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = **Is a Category I bog** ☐ No – Go to **SC 3.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? ☐ Yes = **Is a Category I bog** ☐ No = **Is not a bog**	No

Wetland name or number: Click or tap here to enter text.

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.*** ☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. ☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). ☐ Yes = **Category I** ☐ No = **Not a forested wetland for this section**	No
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks ☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* ☐ Yes – Go to **SC 5.1** ☐ No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. ☐ The wetland is larger than $^1/_{10}$ ac (4350 ft^2) ☐ Yes = **Category I** ☐ No = **Category II**	No
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: ☐ Long Beach Peninsula: Lands west of SR 103 ☐ Grayland-Westport: Lands west of SR 105 ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109 ☐ Yes – Go to **SC 6.1** ☐ No = **not an interdunal wetland for rating** SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? ☐ Yes = **Category I** ☐ No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? ☐ Yes = **Category II** ☐ No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? ☐ Yes = **Category III** ☐ No = **Category IV**	No
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	N/A

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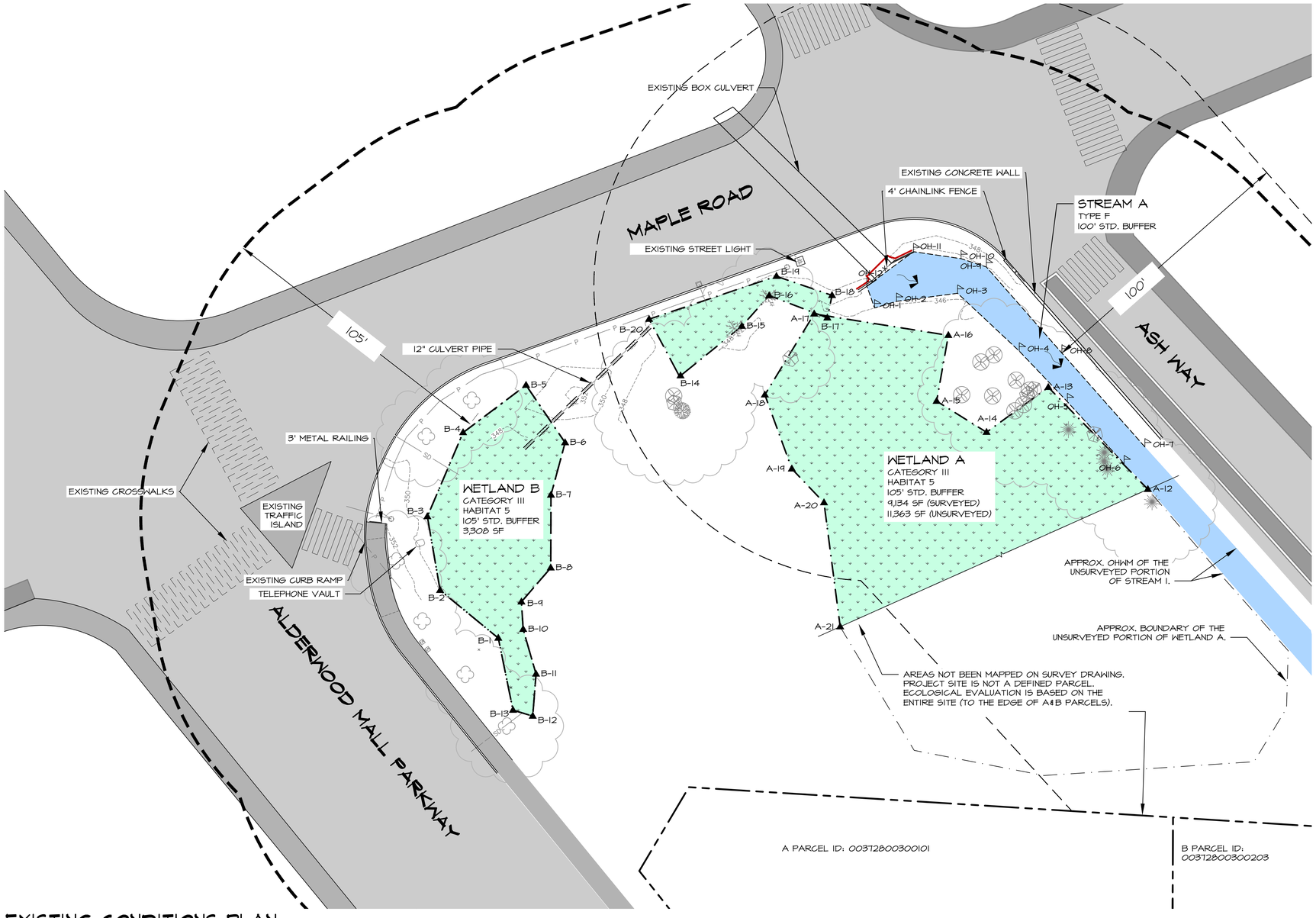
APPENDIX C

Critical Areas Mitigation Plans

(full-size 24”x36” drawings)

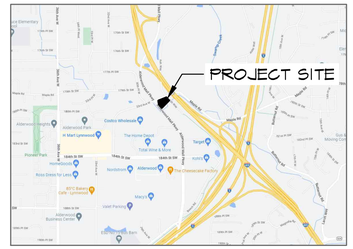
Sheet W1.0: Existing Conditions Plan
Sheet W2.0: Proposed Site Plan, Impacts & Mitigation Overview Plan
Sheet W3.0: Planting Plan
Sheet W3.1: Plant Schedule, Notes, & Details
Sheet W3.2: Planting Plan
Sheet W4.0: Planting Specifications

NW 1/4, SECTION 14, TOWNSHIP 27N, RANGE 4E & SE 1/4, SECTION 11, TOWNSHIP 27N, RANGE 4E, W.M.



VICINITY MAP

NTS



SOURCE: GOOGLE MAPS; WWW.MAPS.GOOGLE.COM (ACCESSED 04/19/2022)

NORTH

CONTACTS

APPLICANT/OWNER
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EMAIL: STEVE.MALSAM@COMCAST.NET

SURVEYOR
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ENVIRONMENTAL CONSULTANT
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CONTACT: EVA PARKER, PLA
SENIOR LANDSCAPE ARCHITECT
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CONTACT: DAVE TEESDAE
SENIOR ECOLOGIST, PWS
E-MAIL: DTEESDALE@TALASAEA.COM

SHEET INDEX

EXISTING CONDITIONS PLAN

GRAPHIC SCALE (IN FEET)
0 10 20 40
SCALE: 1"=20'

NORTH

PLAN LEGEND

- PROPERTY LINE/ PARCEL BOUNDARY
- EXISTING WETLAND (SURVEYED)
- ▲A-# WETLAND FLAG LOCATION
- •TP-# TEST PLOT LOCATION
- ⚐OHWM-# STREAM ORDINARY HIGH WATER MARK (OHWM) FLAG LOCATION
- STREAM & OHWM
- WETLAND STANDARD BUFFER
- STREAM STANDARD BUFFER
- 352 EXISTING CONTOUR *
- APPROXIMATE WETLAND BOUNDARY
- CHAINLINK FENCE
- EXISTING TREES * (DECIDUOUS, BIRCH, ALDER, CEDAR, FIR, WILLOW)
- TREE APPROX. DRIPLINE
- SD / P EXISTING UTILITIES

* NOTE: PROJECT SITE IS NOT A DEFINED PARCEL. ECOLOGICAL EVALUATION IS BASED ON THE ENTIRE SITE (TO THE EDGE OF A&B PARCELS). CONTOURS AND EXISTING TREES ARE SURVEYED FOR PART OF THE SITE.

NOT FOR CONSTRUCTION

THESE PLANS HAVE BEEN SUBMITTED TO THE APPROPRIATE AGENCIES FOR REVIEW AND APPROVAL. UNTIL APPROVED, THESE PLANS ARE:

SUBJECT TO REVISION

811 Know what's **below.** **Call** before you dig.

NOTES

1. SURVEY PROVIDED BY HARMSEN, LLC, 2822 COLBY AVE, STE 300, EVERETT, WA 98201, (425) 252-1884.
2. SOURCE DRAWING WAS MODIFIED BY TALASAEA CONSULTANTS FOR VISUAL ENHANCEMENT.

TALASAEA CONSULTANTS, INC.
Resource & Environmental Planning
15020 Bear Creek Road Northeast – Woodinville, Washington 98077
Box (425) 861-7550 – Fax (425) 861-7549

CRITICAL AREAS MITIGATION PLAN
EXISTING CONDITIONS PLAN
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

Revisions	Date	By

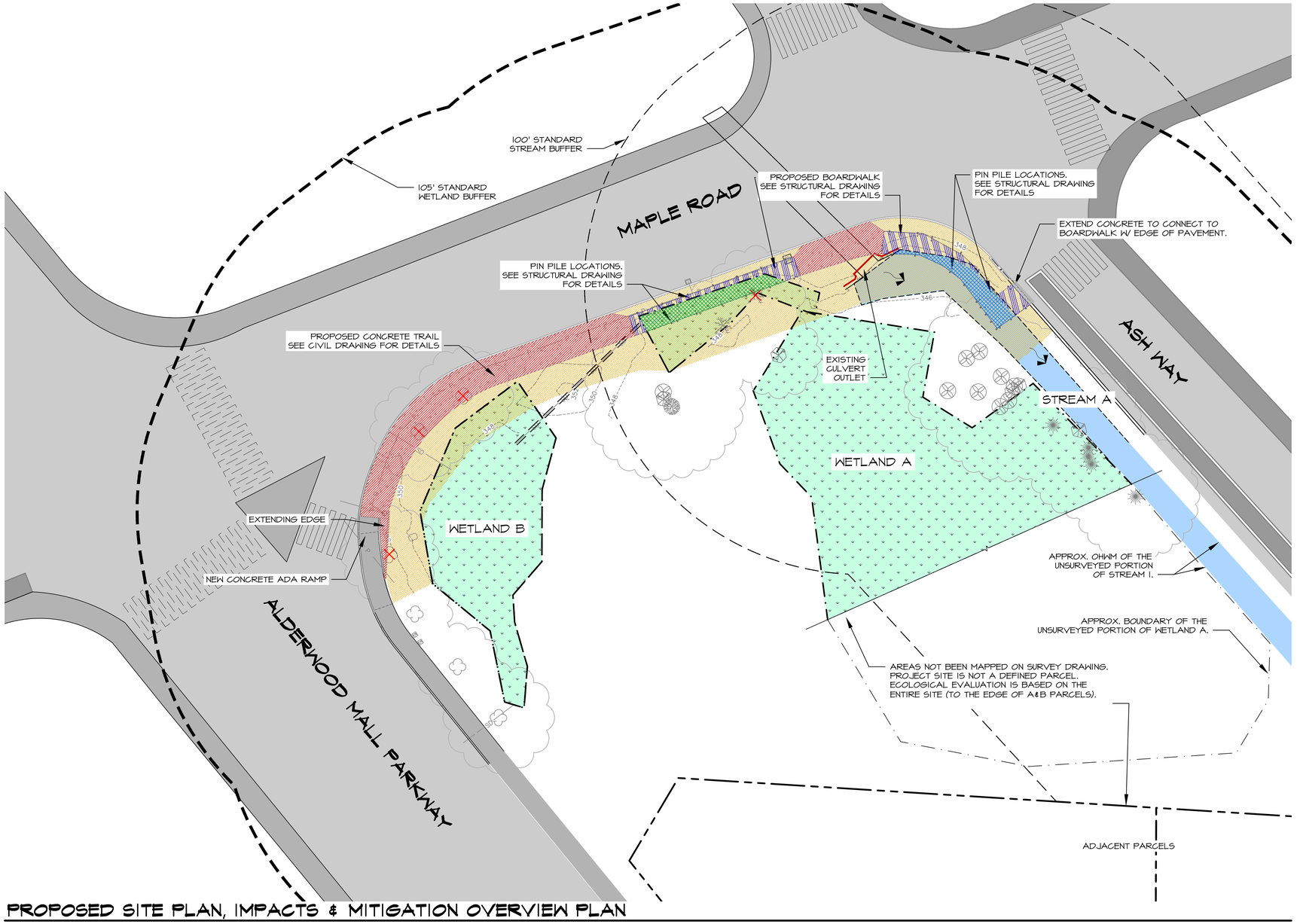
Date 11-21-2023
Scale AS NOTED
Designed
Drawn TH
Checked EP
Approved

Project # 1927

Sheet # W1.0

Z:\DRAWING\1900-1999\TAL1927\Plans\TAL-1927 WP 2023-11.dwg
Plotted: November 22, 2023

NW 1/4, SECTION 14, TOWNSHIP 27N, RANGE 4E & SE 1/4, SECTION 11, TOWNSHIP 27N, RANGE 4E, W.M.



PROPOSED SITE PLAN, IMPACTS & MITIGATION OVERVIEW PLAN

GRAPHIC SCALE (IN FEET)
0 10' 20' 40'
SCALE: 1"=20'

NORTH

PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND (SURVEYED)
- STREAM & OHWM
- WETLAND STANDARD BUFFER
- STREAM STANDARD BUFFER
- 352 EXISTING CONTOUR *
- APPROXIMATE WETLAND BOUNDARY
- EXISTING TREES * (DECIDUOUS, BIRCH, ALDER, CEDAR, FIR, WILLOW)
- TREE APPROX. DRIPLINE
- TREE FOR REMOVAL
- SD SD / P P EXISTING UTILITIES
- PROPOSED CONCRETE TRAIL
- EXISTING SIDEWALK

IMPACTS AND MITIGATION LEGEND

WETLAND & STREAM IMPACTS

TEMPORARY WETLAND IMPACTS (ELEVATED BOARDWALK ON PIN PILES)	294 SF
TEMPORARY WETLAND BUFFER IMPACTS (ELEVATED BOARDWALK ON PIN PILES)	458 SF
PERMANENT WETLAND BUFFER IMPACTS (CONCRETE TRAIL ON GRADE)	1,812 SF
TEMPORARY STREAM IMPACTS (ELEVATED BOARDWALK ON PIN PILES)	233 SF
TOTAL WETLAND BUFFER IMPACTS:	2,270 SF

MITIGATION

AREAS FOR MITIGATION / ENHANCEMENT	5,820 SF

-- WETLAND MITIGATION / ENHANCEMENT: 1,357 SF
-- STREAM MITIGATION / ENHANCEMENT: 985 SF
-- WETLAND & STREAM BUFFER MITIGATION / ENHANCEMENT: 3,478 SF

* NOTE: PROJECT SITE IS NOT A DEFINED PARCEL. ECOLOGICAL EVALUATION IS BASED ON THE ENTIRE SITE (TO THE EDGE OF A&B PARCELS). CONTOURS AND EXISTING TREES ARE SURVEYED FOR PART OF THE SITE.

NOT FOR CONSTRUCTION

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NOTES

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2. SOURCE DRAWING WAS MODIFIED BY TALASAEA CONSULTANTS FOR VISUAL ENHANCEMENT.

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Resource & Environmental Planning
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CRITICAL AREAS MITIGATION PLAN
PROPOSED SITE PLAN, IMPACTS & MITIGATION OVERVIEW PLAN
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

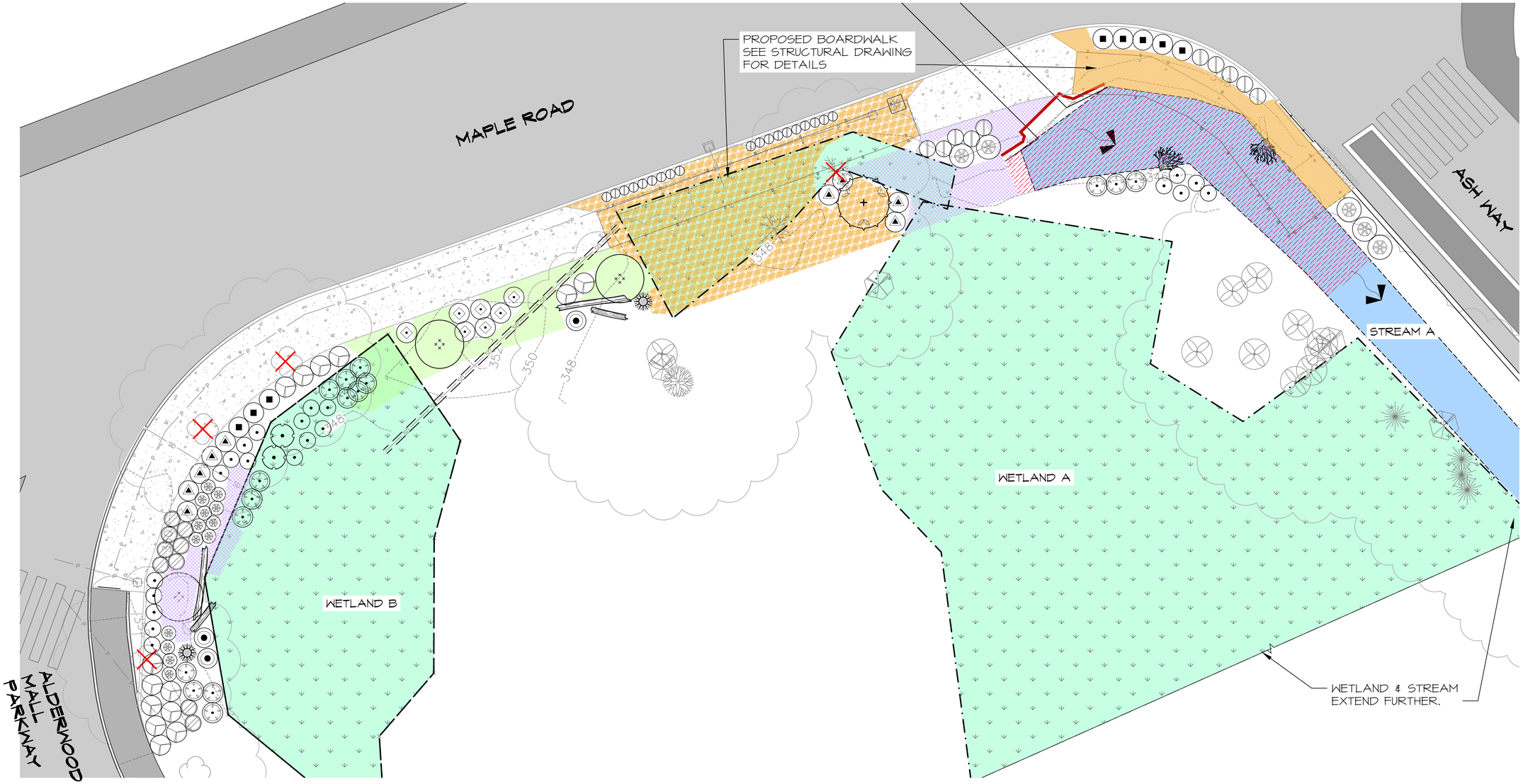
Revisions	Date	By

Date 11-21-2023
Scale AS NOTED
Designed
Drawn TH
Checked EP
Approved

Project # 1927

Sheet # W2.0

NW 1/4, SECTION 14, TOWNSHIP 27N, RANGE 4E & SE 1/4, SECTION 11, TOWNSHIP 27N, RANGE 4E, W.M.



PLANTING PLAN

GRAPHIC SCALE
(IN FEET)
0 5 10 20
SCALE: 1"=10'

NORTH

PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND (SURVEYED)
- STREAM & OHWM
- 352 EXISTING CONTOUR
- EXISTING TREES (DECIDUOUS, BIRCH, ALDER, CEDAR, FIR, WILLOW)
- TREE APPROX. DRIPLINE
- TREE FOR REMOVAL
- SD SD / P P EXISTING UTILITIES

HABITAT FEATURES

- STUMP
- DOWN LOGS
- BURIED ROOTWAD

PLANT LIST

LARGE TREES

SCIENTIFIC NAME	COMMON NAME	WL STATUS
THUJA PLICATA	WESTERN REDCEDAR	FAC
FRAXINUS LATIFOLIA	OREGON ASH	FACW
SALIX LASIANDRA	PACIFIC WILLOW	FACW

EMERGENT

SCIENTIFIC NAME	COMMON NAME	WL STATUS
CAREX OBNUPTA	SLOUGH SEDGE	OBL
SCIRPUS MICROCARPUS	SMALL-FRUITED BULRUSH	OBL
ELEOCHARIS PALUSTRIS	COMMON SPIKERUSH	OBL
SAGITTARIA LATIFOLIA	ARROWHEAD	OBL

SMALL TREES/LARGE SHRUBS

SCIENTIFIC NAME	COMMON NAME	WL STATUS
ACER CIRCINATUM	VINE MAPLE	FAC
MALUS FUSCA	WESTERN CRABAPPLE	FACW
CRATAEGUS DOUGLASII	BLACK HAWTHORN	FAC
OEMLERIA CERASIFORMIS	INDIAN PLUM	FACU
SAMBUCUS RACEMOSA	RED ELDERBERRY	FACU
SALIX SCOULERIANA	SCOULER WILLOW	FAC

MASSING SHRUBS

SCIENTIFIC NAME	COMMON NAME	WL STATUS
CORNUS SERICEA	RED-OSIER DOGWOOD	FACW
RUBUS SPECTABILIS	SALMONBERRY	FAC
RIBES SANGUINEUM	RED CURRANT	FAC
SYMPHORICARPOS ALBUS	COMMON SNOWBERRY	FACU

GROUND COVER

SCIENTIFIC NAME	COMMON NAME	WL STATUS
ARCTOSTAPHYLOS UVA-URSI	KINNICKINNICK	FACU
MAHONIA NERVOSA	CASCADE OREGON-GRAPE	NL
POLYSTICHUM MUNITUM	SWORD FERN	FACU

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CRITICAL AREAS MITIGATION PLAN
PLANTING PLAN
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

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PLANT SCHEDULE

LARGE TREES

SYMBOL	SCIENTIFIC NAME	COMMON NAME	WL STATUS	QTY	SPACING	SIZE (MIN.)	NOTES
+	FRAXINUS LATIFOLIA	OREGON ASH	FACW	1	AS SHOWN	5-6' HT.	SINGLE TRUNK, WELL BRANCHED
	SALIX LASIANDRA	PACIFIC WILLOW	FACW	16	3/SYMBOL	4' CUTTING	SINGLE TRUNK, WELL BRANCHED
	THUJA PLICATA	WESTERN REDCEDAR	FAC	3	AS SHOWN	2-3' HT.	2 GAL., FULL & BUSHY

SMALL TREES/LARGE SHRUBS

SCIENTIFIC NAME	COMMON NAME	WL STATUS	QTY	SPACING	SIZE (MIN.)	NOTES
ACER CIRCINATUM	VINE MAPLE	FAC	3	AS SHOWN	4-5' HT.	MULTI-TRUNK, WELL BRANCHED
MALUS FUSCA	WESTERN CRABAPPLE	FACW	2	AS SHOWN	4-5' HT	SINGLE TRUNK, WELL BRANCHED
CRATAEGUS DOUGLASII	BLACK HAWTHORN	FAC	9	5' O.C.	24" HT.	MULTI-CANE (3 MIN.)
OEMLERIA CERASIFORMIS	INDIAN PLUM	FACU	14	5' O.C.	24" HT.	MULTI-CANE (3 MIN.)
SAMBUCUS RACEMOSA	RED ELDERBERRY	FACU	8	5' O.C.	24" HT.	MULTI-CANE (3 MIN.)
SALIX SCOULERIANA	SCOULER WILLOW	FAC	18	3/SYMBOL	4' CUTTING	1/2" DIA. MIN., BARK INTACT

MASSING SHRUBS

SCIENTIFIC NAME	COMMON NAME	WL STATUS	QTY	SPACING	SIZE (MIN.)	NOTES
CORNUS SERICEA	RED-OSIER DOGWOOD	FACW	21	4' O.C.	1 GAL.	MULTI-CANE (3 MIN.)
RUBUS SPECTABILIS	SALMONBERRY	FAC	9	4' O.C.	1 GAL.	FULL & BUSHY
RIBES SANGUINEUM	RED CURRANT	FAC	7	5' O.C.	24" HT.	MULTI-CANE (3 MIN.)
SYMPHORICARPOS ALBUS	COMMON SNOWBERRY	FACU	30	4' O.C.	1 GAL.	MULTI-CANE (3 MIN.)

GROUND COVER

SCIENTIFIC NAME	COMMON NAME	WL STATUS	QTY	SPACING	SIZE (MIN.)	NOTES
ARCTOSTAPHYLOS UVA-URSI	KINNICKINNICK	FACU	141	24" O.C.	1 GAL.	FULL & BUSHY
MAHONIA NERVOSA	CASCADE OREGON-GRAPE	NL	443	24" O.C.	1 GAL.	FULL & BUSHY
POLYSTICHUM MUNITUM	SWORD FERN	FACU	58	36" O.C.	1 GAL.	FULL & BUSHY

EMERGENT

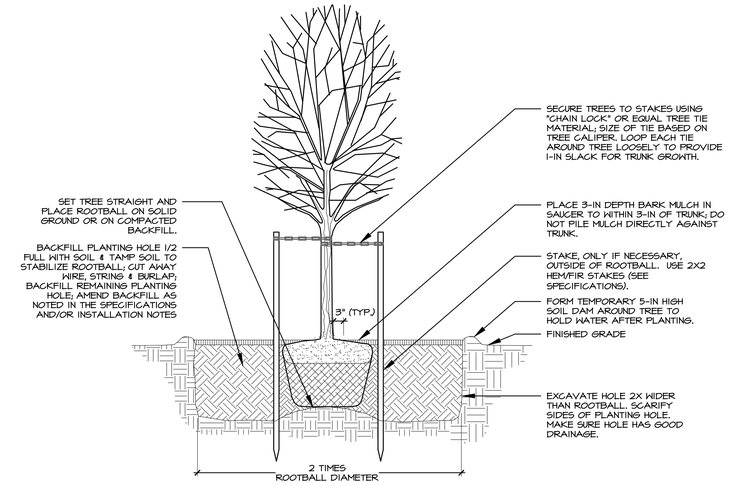
SCIENTIFIC NAME	COMMON NAME	WL STATUS	QTY	SPACING	SIZE (MIN.)	NOTES
CAREX OBNUPTA	SLOUGH SEDGE	OBL	456	18" O.C.	4" HT. CLUMP DIV.	
SCIRPUS MICROCARPUS	SMALL-FRUITED BULRUSH	OBL		18" O.C.	BARE-ROOT	
ELEOCHARIS PALUSTRIS	COMMON SPIKERUSH	OBL		18" O.C.	RHIZOME	
SAGITTARIA LATIFOLIA	ARROWHEAD	OBL		18" O.C.	TUBER	

HABITAT FEATURE

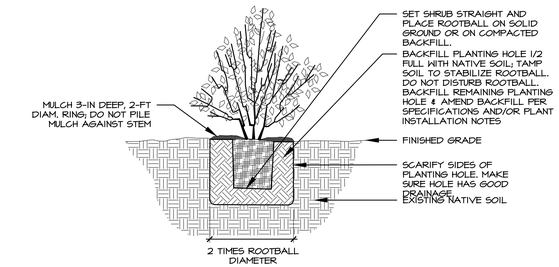
STUMP	QTY: 2
DOWN LOGS	QTY: 4
BURIED ROOTWAD	QTY: 2

GENERAL PLANT INSTALLATION NOTES

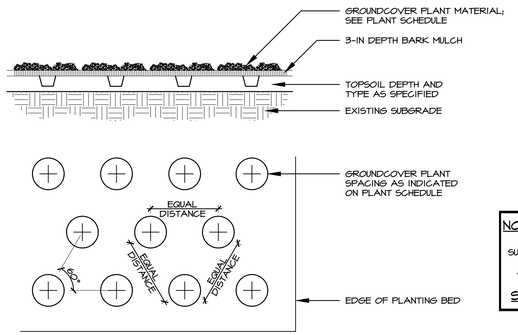
1. PLANT TREES AND/OR SHRUBS 1" HIGHER THAN DEPTH GROWN AT NURSERY.
2. FOR CONTAINER TREES AND/OR SHRUBS, SCORE FOUR SIDES OF ROOTBALL PRIOR TO PLANTING. BUTTERFLY ROOTBALL IF ROOT CIRCLING IS EVIDENT.
3. STAKE DECIDUOUS AND EVERGREEN TREES 4 FEET AND OVER IN HEIGHT WITH TWO (2) STAKES PER TREE. STAKE TREES IMMEDIATELY AFTER PLANTING. PLACE STAKE AT THE OUTER EDGE OF THE ROOTS OR ROOTBALL, IN LINE WITH THE PREVAILING WIND. STAKES SHALL BE LOOSELY ATTACHED USING CHAIN-LOCK TREE TIES TO ALLOW FOR SOME TRUNK MOVEMENT. STAKES TO BE VERTICAL, PARALLEL, EVEN-TOPPED, UNSCARRED AND DRIVEN INTO UNDISTURBED SUBGRADE. REMOVE AFTER ONE YEAR.
4. WATER PLANTS IMMEDIATELY UPON PLANTING, THEN PROVIDE MANUAL WATERING OR A TEMPORARY IRRIGATION SYSTEM TO PREVENT PLANT MORTALITY AND ENSURE PROPER PLANT ESTABLISHMENT. PLANTS SHALL RECEIVE A MINIMUM OF APPROXIMATELY ONE INCH OF WATER EVERY WEEK DURING THE DRY SEASON (GENERALLY JUNE 15TH - OCTOBER 15TH, OR EARLIER OR LATER IF CONDITIONS WARRANT) FOR THE FIRST SEASON AFTER PLANTING. IRRIGATION AMOUNTS MAY NEED TO BE INCREASED DURING PROLONGED PERIODS OF HOT, DRY WEATHER.
5. IN THE BUFFER AREAS ONLY, FERTILIZE ALL TREES AND SHRUBS WITH A SLOW-RELEASE GENERAL PURPOSE GRANULAR FERTILIZER OR SLOW-RELEASE TABLETS AT MANUFACTURER'S SPECIFIED RATE. NO FERTILIZER SHALL BE APPLIED WITHIN WETLAND AREAS.
6. IN THE BUFFER AREAS ONLY. A SOIL MOISTURE RETENTION AGENT, SUCH AS "SOILMOIST" OR EQUAL, SHALL BE INCORPORATED INTO THE BACKFILL OF EACH PLANTING PIT, PER MANUFACTURER'S INSTRUCTIONS. NO MOISTURE RETENTION AGENT SHALL BE APPLIED WITHIN WETLAND AREAS.



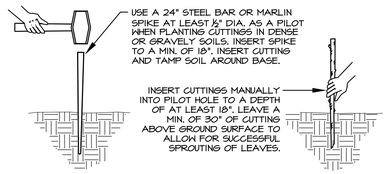
1 B&B DECIDUOUS TREE PLANTING DETAIL
N.T.S.



2 CONTAINER SHRUB PLANTING DETAIL
N.T.S.



3 GROUNDCOVER INSTALLATION DETAIL
NTS



NOTES:
1. CUTTINGS SHALL BE SPECIES AS NOTED IN THE PLANT SCHEDULE.
2. CUTTINGS SHALL BE AT LEAST 1/2" IN DIA. AND 4' IN LENGTH.
3. CUTTINGS MUST BE MADE FROM LIVE AND VIGOROUS WOODY MATERIAL WITH SIDE BRANCHES REMOVED AND BARK INTACT.
4. THE BUTT ENDS SHALL BE CLEANLY CUT AT AN ANGLE FOR EASY INSERTION INTO THE SOIL.
5. THE TOP SHALL BE CUT SQUARE OR BLUNT.
6. CUTTINGS SHALL BE PLANTED WITHIN 24 HOURS OF CUTTING AND MUST BE KEPT MOIST AT ALL TIMES PRIOR TO PLANTING.
7. BOTTOM OF CUTTINGS SHALL BE TREATED WITH ROOTING HORMONE PRIOR TO PLANTING.

4 CUTTING INSTALLATION DETAIL
N.T.S.

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CRITICAL AREAS MITIGATION PLAN
PLANT SCHEDULE, NOTES, & DETAILS
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

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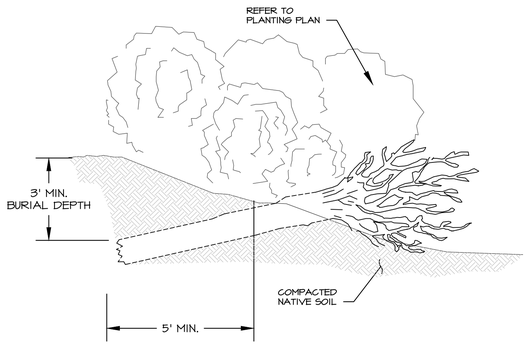
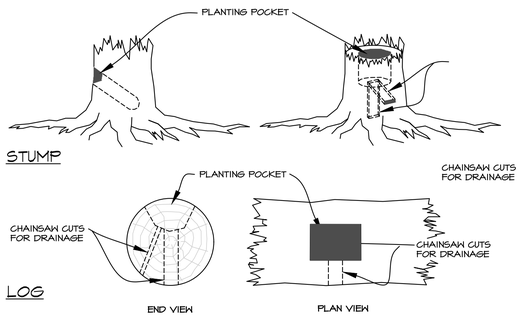


INSTALLATION NOTES:
1. MINIMUM ROOTWAD STEM LENGTH: 12 FEET
   MINIMUM ROOTWAD STEM DIAMETER: 12 INCHES
   LOG SPECIES: CEDAR OR FIR

1 BURIED ROOTWAD (INTO SLOPE)
SCALE: NTS



2 STUMP & LOG WITH PLANTING POCKETS DETAIL
SCALE: NTS

NOTES FOR CLEARING, GRUBBING, AND HABITAT FEATURE INSTALLATION

PART 1: GENERAL

1.1 SEQUENCING

A. GENERAL CONSTRUCTION:
1. CONTRACTOR SHALL GIVE TALASAEA CONSULTANTS A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO BEGINNING CONSTRUCTION.
2. NO CONSTRUCTION WORK SHALL COMMENCE UNTIL THERE IS A MEETING BETWEEN THE CLIENT, TALASAEA CONSULTANTS, GENERAL, CLEARING, AND/OR EARTHWORK CONTRACTORS, AND THE LANDSCAPE CONTRACTOR. THE APPROVED PLANS AND SPECIFICATIONS SHALL BE REVIEWED TO ENSURE THAT ALL PARTIES INVOLVED UNDERSTAND THE INTENT AND THE SPECIFIC DETAILS RELATED TO THE CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND SITE CONSTRAINTS.
3. LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO: (1) INDEPENDENTLY VERIFY THE ACCURACY OF UTILITY LOCATIONS AND (2) DISCOVER AND AVOID ANY UTILITIES WITHIN THE MITIGATION PLAN AREA(S) THAT ARE NOT SHOWN, BUT WHICH MAY BE AFFECTED BY IMPLEMENTATION OF THE PLAN. SUCH AREA(S) ARE TO BE CLEARLY MARKED IN THE FIELD. TALASAEA CONSULTANTS SHALL REVIEW ANY CONFLICTS WITH THE APPROVED MITIGATION PLAN PRIOR TO START OF CONSTRUCTION.
4. A COPY OF THE APPROVED PLANS MUST BE ON SITE WHENEVER CONSTRUCTION IS IN PROGRESS, AND SHALL REMAIN ON SITE UNTIL PROJECT COMPLETION.
5. CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH ALL AGENCY STANDARDS, RULES, CODES, PERMIT CONDITIONS, AND/OR OTHER APPLICABLE ORDINANCES AND POLICIES.
6. THE PROJECT OWNER/APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER RELATED OR REQUIRED PERMITS PRIOR TO THE START OF CONSTRUCTION.
7. A QUALIFIED ECOLOGIST SHALL BE ON SITE, AS NECESSARY, TO MONITOR MITIGATION CONSTRUCTION AND APPROVE MINOR REVISIONS TO THE PLAN.
8. DURING CONSTRUCTION, THE CONTRACTOR MUST USE MATERIALS AND CONSTRUCTION METHODS THAT PREVENT TOXIC SUBSTANCES AND OTHER POLLUTANTS FROM ENTERING MITIGATION AREAS OR OTHER NATURAL WATERS OF THE STATE.
9. PREVENTATIVE MEASURES SHALL BE USED TO PROTECT EXISTING STORM DRAINAGE SYSTEMS, EXISTING UTILITIES, AND ROADS.
10. THE CONTRACTOR SHALL PROVIDE SEDIMENT AND EROSION CONTROLS AROUND THE PROJECT AREA PRIOR TO SOIL DISTURBANCE FROM CONSTRUCTION ACTIVITY.

B. MITIGATION CONSTRUCTION: THE FOLLOWING PROVIDES THE GENERAL SEQUENCE OF ACTIVITIES ANTICIPATED TO BE NECESSARY TO COMPLETE THIS MITIGATION PROJECT. SOME OF THESE ACTIVITIES MAY BE CONDUCTED CONCURRENTLY AS THE PROJECT PROGRESSES.
1. CONDUCT A SITE MEETING BETWEEN THE CONTRACTOR, TALASAEA CONSULTANTS, AND THE OWNER'S REPRESENTATIVE TO REVIEW THE PROJECT PLANS.
2. SURVEY CLEARING LIMITS.
3. INSTALL SILT FENCE AND ANY OTHER EROSION AND SEDIMENTATION CONTROL BMPS NECESSARY FOR WORK IN THE MITIGATION AREAS.
4. CLEAR AND GRUB NON-NATIVE/INVASIVE VEGETATION FROM BUFFER
5. AMEND SOIL AND PLACE LARGE WOODY MATERIAL.
6. CONSTRUCT PEDESTRIAN SOFT-SURFACE TRAIL WITHIN BUFFER.
7. COMPLETE SITE CLEANUP AND INSTALL PLANT MATERIAL AS INDICATED ON THE BUFFER MITIGATION PLANTING PLAN.
8. INSTALL SPLIT-RAIL FENCE AND CRITICAL AREA SIGNS.

1.2 PROJECT CONDITIONS

A. PROTECTION AND MAINTENANCE OF OFF-SITE AREAS: CONTRACTOR SHALL ENSURE THAT CONSTRUCTION RELATED ACTIVITIES DO NOT DAMAGE OFF-SITE FEATURES OR ADJACENT VEGETATION. TALASAEA CONSULTANTS SHALL BE NOTIFIED IMMEDIATELY IF ACCIDENTAL DAMAGE OCCURS. CONTRACTOR SHALL ENSURE THAT ADJACENT ROADS ARE MAINTAINED AND KEPT CLEAR OF SOIL AND/OR OTHER DEBRIS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH THE GOVERNING JURISDICTION'S CODES REGARDING STREET MAINTENANCE/CLEANING DURING CONSTRUCTION.

B. PLAN CHANGES AND MODIFICATIONS: ANY CHANGES OR MODIFICATIONS TO THE MITIGATION PLANS OR SPECIFICATIONS MUST RECEIVE PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE, TALASAEA CONSULTANTS, AND APPLICABLE AGENCIES.

1.3 WARRANTY

A. WARRANTY TERMS AND CONDITIONS: A CONTRACTOR-PROVIDED WARRANTY SHALL EXTEND FOR A PERIOD OF ONE YEAR FROM THE DATE OF PHYSICAL COMPLETION. PHYSICAL COMPLETION FOR THE WORK OF THIS SECTION IS THE DATE WHEN ALL CLEARING/GRUBBING, HABITAT FEATURE PLACEMENT, PLANTING, IRRIGATION, AND RELATED PHASES OF SUCH WORK HAVE BEEN COMPLETED AND ARE ACCEPTED BY THE OWNER'S REPRESENTATIVE, TALASAEA CONSULTANTS, AND APPLICABLE AGENCIES.

PART 2: PRODUCTS AND MATERIALS

2.1 HABITAT FEATURES

A. DOWN LOGS: DOWN LOGS SHALL BE CEDAR OR FIR SPECIES, HAVE A 20 FOOT MINIMUM LENGTH, WITH OR WITHOUT ROOTS, AND A MINIMUM DIAMETER OF 18 INCHES. BARK SHALL BE KEPT INTACT. ENDS THAT HAVE BEEN CUT SHALL BE DISTRESSED AND NOT BLUNT.

B. STUMPS: STUMPS SHALL BE EITHER PART-DECAYED, RELOCATED STUMPS, OR CUT LIVE ROOTWADS WITH A MINIMUM OF THREE FEET OF TRUNK 20 INCHES IN DIAMETER MINIMUM. ENDS THAT HAVE BEEN CUT SHALL BE DISTRESSED AND NOT BLUNT.

2.2 SOFT-SURFACE PATH

A. TRAIL SURFACING SHALL BE CLEAN WOODCHIPS. SEE DETAIL ON MITIGATION PLANS.

2.3 TOPSOIL

A. TOPSOIL: TOPSOIL THAT HAS BEEN STOCKPILED ON-SITE FOR REUSE IN PROJECT AREA(S) OR IMPORTED FROM OFF-SITE SOURCES SHALL BE FERTILE, FRIABLE, SANDY LOAM SURFACE SOIL, FREE OF SUBSOIL, CLAY LUMPS, BRUSH, WEEDS, ROOTS, STUMPS, STONES LARGER THAN 1 INCH IN ANY DIMENSION, LITTER, OR ANY OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.

B. ORGANIC CONTENT: IMPORTED TOPSOIL SHALL CONSIST OF ORGANIC MATERIALS AMENDED AS NECESSARY TO PRODUCE A BULK ORGANIC CONTENT OF AT LEAST 10 PERCENT AND NOT GREATER THAN 20 PERCENT, AS DETERMINED BY AASHTO-T-194.

2.4 MULCH

A. BARK OR WOODCHIP MULCH SHALL BE DERIVED FROM DOUGLAS FIR, PINE, OR HEMLOCK SPECIES. THE MULCH SHALL NOT CONTAIN RESIN, TANNIN, OR OTHER COMPOUNDS IN QUANTITIES THAT WOULD BE DETRIMENTAL TO ANIMAL, PLANT LIFE OR WATER QUALITY. SAWDUST SHALL NOT BE USED AS MULCH.

B. MULCH SHALL BE MEDIUM-COARSE GROUND WITH AN APPROXIMATELY 3-INCH MINUS PARTICLE SIZE. FINE PARTICLES SHALL BE MINIMIZED SO THAT NOT MORE THAN 30%, BY LOOSE VOLUME, WILL PASS THROUGH A US NO. 4 SIEVE.

PART 3: EXECUTION

A. SURVEY/STAKE/FLAG LIMITS OF CLEARING:
1. PRIOR TO ANY CONSTRUCTION, A LICENSED SURVEYOR SHALL SURVEY, STAKE, AND FLAG CLEARING LIMITS. CLEARING LIMITS ARE DEPICTED ON THE MITIGATION PLANS. TALASAEA CONSULTANTS SHALL REVIEW AND APPROVE FLAGGING OF CLEARING LIMITS PRIOR TO ANY VEGETATION REMOVAL. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATIONS OF VEGETATION TO BE SAVED AND REQUEST THAT TALASAEA CONSULTANTS MODIFY THE MITIGATION PLAN AS NECESSARY TO AVOID ALL SIGNIFICANT NATIVE VEGETATION.

B. FLAG AND PROTECT EXISTING VEGETATION TO REMAIN:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING DISTURBANCE TO EXISTING VEGETATION LOCATED OUTSIDE THE CLEARING LIMITS. NO REMOVAL OF ANY VEGETATION SHALL OCCUR WITHOUT PRIOR APPROVAL BY TALASAEA CONSULTANTS.
2. TALASAEA CONSULTANTS SHALL FLAG EXISTING VEGETATION TO REMAIN LOCATED WITHIN THE MITIGATION AREA. FLAGGED VEGETATION SHALL NOT BE DISTURBED, UNLESS APPROVED IN WRITING BY TALASAEA CONSULTANTS.
3. CONTRACTOR SHALL EXERCISE CARE TO PREVENT INJURY TO THE TRUNK, ROOTS, AND BRANCHES OF TREES AND SHRUBS TO REMAIN. ANY WOODY PLANT TO REMAIN THAT IS DAMAGED DURING CONSTRUCTION SHALL BE TREATED IMMEDIATELY AFTER DAMAGE OCCURS, AND TALASAEA CONSULTANTS SHALL BE NOTIFIED OF INCIDENT. DAMAGE TREATMENT SHALL INCLUDE EVENLY CUTTING BROKEN BRANCHES, BROKEN ROOTS, AND DAMAGED TREE BARK. INJURED PLANTS SHALL BE THOROUGHLY WATERED AND ADDITIONAL MEASURES SHALL BE TAKEN, AS APPROPRIATE, TO AID IN PLANT SURVIVAL.

C. PLACE EROSION CONTROL MEASURES:
1. CONTRACTOR SHALL INSTALL SILT FENCING WHERE SHOWN ON THE MITIGATION PLANS PRIOR TO ANY MITIGATION CONSTRUCTION ACTIVITY. OTHER EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY OR AS REQUIRED. TALASAEA CONSULTANTS SHALL VERIFY AND APPROVE LOCATIONS OF EROSION CONTROL MEASURES WITHIN MITIGATION AREAS PRIOR TO COMMENCING MITIGATION CONSTRUCTION. EROSION CONTROL MEASURES FOR MITIGATION WORK SHALL BE COORDINATED WITH EROSION CONTROL FOR CIVIL SITE WORK AS NECESSARY.
2. CONTRACTOR SHALL MAINTAIN EROSION CONTROL MEASURES FOR THE DURATION OF THE PROJECT. THESE MEASURES SHALL REMAIN IN PLACE UNTIL AUTHORIZATION IS GIVEN BY TALASAEA CONSULTANTS FOR REMOVAL OR LOCATION ADJUSTMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL EROSION CONTROL MEASURES WITHIN AND/OR ADJACENT TO SENSITIVE AREAS WHEN AUTHORIZED BY TALASAEA CONSULTANTS.
3. AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, EROSION CONTROL FACILITIES SHALL BE MAINTAINED AND/OR ALTERED AS REQUIRED BY TALASAEA CONSULTANTS TO ENSURE CONTINUED EROSION/SEDIMENTATION CONTROL.
4. WHERE POSSIBLE, NATURAL GROUND COVER VEGETATION SHALL BE MAINTAINED FOR EROSION CONTROL.

D. INVASIVE/NON-NATIVE VEGETATION REMOVAL FROM MITIGATION AREAS:
1. CONTRACTOR SHALL GRUB OUT ALL NON-NATIVE AND INVASIVE VEGETATION WITHIN BUFFER MITIGATION AREAS AS SHOWN ON THE MITIGATION PLANS, WITH THE EXCEPTION OF FLAGGED EXISTING VEGETATION TO REMAIN. IN AREAS OF EXISTING VEGETATION, CONTRACTOR SHALL REMOVE INVASIVE SPECIES INCLUDING, BUT ARE NOT LIMITED TO: SCOTS BROOM, ENGLISH IVY, HIMALAYAN AND EVERGREEN BLACKBERRY, PURPLE LOOSESTRIFE, HEDGE BINDWEED (MORNING GLORY), JAPANESE KNOTWEED, CANADA THISTLE, AND CREEPING NIGHTSHADE. INVASIVE/NON-NATIVE VEGETATION SHALL BE REMOVED BY HAND WITH MINIMAL DISTURBANCE TO THE EXISTING NATIVE VEGETATION TO REMAIN. ALL ROOTS SHALL BE REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.
2. REED CANARYGRASS CONTROL: REED CANARYGRASS SHALL BE MOWED CLOSE AND TREATED WITH AN HERBICIDE APPROVED FOR USE IN AQUATIC AREAS (E.G., RODEO, OR EQUAL). HERBICIDE TREATMENT SHALL BE APPLIED THREE (3) TIMES PRIOR TO PLANTING.
3. ALL GRUBBED VEGETATION SHALL BE EXPORTED FROM THE SITE AND DISPOSED OF IN AN APPROVED MANNER FOLLOWING ALL APPLICABLE LOCAL/STATE/FEDERAL REGULATIONS.
4. TALASAEA CONSULTANTS SHALL DESIGNATE ANY ADDITIONAL PLANT SPECIES TO BE REMOVED DURING MITIGATION CONSTRUCTION.

E. INSTALL SNAGS:
1. INSTALL SNAGS UPON COMPLETION OF CLEARING/GRUBBING AT LOCATIONS DEPICTED ON MITIGATION PLANS. SNAGS SHALL BE ANCHORED INTO SUBGRADE A MINIMUM OF 25 PERCENT OF THE TOTAL LENGTH, AS DEPICTED IN THE PLAN DETAIL. TALASAEA CONSULTANTS SHALL APPROVE SNAG LOCATIONS PRIOR TO INSTALLATION.

F. TOPSOIL
1. IN ALL CLEARED AND GRUBBED BUFFER MITIGATION AREAS, EXISTING SOIL SHALL BE AMENDED (OR TOPSOIL IMPORTED) TO PROVIDE A 9-INCH MINIMUM DEPTH OF TOPSOIL. NOTE: PRIOR TO PLACING TOPSOIL, SUBGRADE SHALL BE DECOMPACTED OR SCARIFIED TO A MINIMUM DEPTH OF 12" IN AREAS WHERE EXISTING PAVING AND/OR BUILDINGS WERE REMOVED.

G. HABITAT FEATURES: PLACE HABITAT FEATURES UPON COMPLETION OF TOPSOIL AND/OR SOIL AMENDMENT PLACEMENT, AS DEPICTED ON THE MITIGATION PLANS AND DETAILS. TALASAEA CONSULTANTS SHALL APPROVE LOCATIONS PRIOR TO PLACEMENT.
1. DOWN LOGS: TO CUT/BREAK DOWN LOGS, FIRST SCORE THE LOG AT THE DESIRED LENGTH BY MECHANICAL MEANS, THEN SNAP THE LOG AT THE SCORED LOCATION TO CREATE A NATURAL LOOK TO THE BREAK. TWIST BROKEN ENDS TO DISGUISE SAW CUTS. HABITAT FEATURES THAT HAVE BEEN CUT SHALL HAVE NO BLUNT ENDS.
2. STUMPS: STUMPS SHALL BE SET UPRIGHT.

H. INSTALL TRAIL AND FOOTBRIDGES:
1. CONSTRUCT SOFT-SURFACE TRAIL IN STREAM BUFFER WHERE SHOWN ON PLANS PER PLAN DETAIL.
2. INSTALL FOOTBRIDGES ALONG TRAIL WHERE SHOWN ON PLANS PER DETAIL(S) AND SPECIFICATIONS PROVIDED.

I. MULCH CLEARED/GRUBBED BUFFER AREAS: TALASAEA CONSULTANTS SHALL BE PROVIDED A MULCH SAMPLE PRIOR TO IT BEING DELIVERED TO THE SITE. NO BUFFER AREAS SHALL BE SEEDED.
1. CONTRACTOR SHALL SPREAD MULCH OVER ALL GRADED BUFFER AREAS TO ACHIEVE A UNIFORM DEPTH OF 3 INCHES. NOTE: 3-INCH DEPTH IS THE MINIMUM AFTER SETTLING. IF MULCH IS INSTALLED BY BLOWER TRUCK IT SHALL BE INSTALLED AT A 4-INCH DEPTH TO PROVIDE A MINIMUM 3-INCH DEPTH AFTER SETTLING.

J. INSPECTIONS: PRIOR TO PLANT INSTALLATION, TALASAEA CONSULTANTS SHALL APPROVE ALL CLEARING/GRUBBING WORK AND HABITAT FEATURE PLACEMENT. IF ITEMS ARE TO BE CORRECTED, A PUNCH LIST SHALL BE PREPARED BY TALASAEA CONSULTANTS AND SUBMITTED TO THE CONTRACTOR FOR COMPLETION. AFTER PUNCH LIST ITEMS HAVE BEEN COMPLETED, TALASAEA CONSULTANTS SHALL REVIEW THE PROJECT FOR FINAL ACCEPTANCE OF PUNCH LIST ITEMS, AND PLANTING MAY THEN PROCEED.

K. SOIL STABILIZATION: IF THERE IS A DELAY IN CONSTRUCTION FOR ANY REASON, CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EROSION CONTROL MEASURES, DRAINAGE, AND TEMPORARY IRRIGATION DURING CONSTRUCTION DELAY PERIOD, UNLESS OTHERWISE STATED IN WRITING.

MITIGATION CONSTRUCTION SEQUENCE

THE FOLLOWING PROVIDES THE GENERAL SEQUENCE OF ACTIVITIES ANTICIPATED TO BE NECESSARY TO COMPLETE THIS MITIGATION PROJECT. SOME OF THESE ACTIVITIES MAY BE CONDUCTED CONCURRENTLY AS THE PROJECT PROGRESSES.

1. CONDUCT A SITE MEETING BETWEEN THE CONTRACTOR, PROJECT BIOLOGIST AND/OR ECOLOGIST, AND THE OWNER'S REPRESENTATIVE TO REVIEW THE PROJECT PLANS, WORK AREAS, STAGING/STOCKPILE AREAS, MATERIAL DISPOSAL AREAS, AND EXISTING VEGETATION TO BE RETAINED.
2. SURVEY CLEARING/GRADING LIMITS.
3. A PROJECT BIOLOGIST OR ECOLOGIST SHALL REVIEW CLEARING LIMITS AND SHALL FLAG TREES AND OTHER EXISTING VEGETATION TO REMAIN WITHIN THE WORK AREA. A PROJECT BIOLOGIST AND/OR ECOLOGIST SHALL ALSO FLAG ANY WOODY MATERIAL TO BE SAVED AND STOCKPILED FOR LATER USE AS HABITAT FEATURES (STUMPS, SNAGS, DOWN LOGS, & BOULDERS)
4. INSTALL SILT FENCE AND ANY OTHER EROSION AND SEDIMENTATION CONTROL BMPS NECESSARY FOR WORK IN THE PROJECT AREAS.
5. INSTALL TREE PROTECTION FENCING AROUND EXISTING TREES AND VEGETATION TO REMAIN.
6. CLEAR AND GRUB GRADING AREAS.
7. GRUB OUT ALL INVASIVE SPECIES FROM BUFFER ENHANCEMENT AREAS SHOWN ON PLANS.
8. SURVEY EARTHWORK AREAS AND SET GRADE STAKES AS REQUIRED.
9. COMPLETE EXCAVATION OF MITIGATION AREAS TO SUBGRADE PER GRADING PLAN.
10. INSTALL BURIED ROOTWAD.
11. PLACE TOPSOIL.
12. PLACE WOODY DEBRIS (LONG & SHORT DOWN LOGS, ROOTWADS, STUMPS).
13. MULCH ALL CLEARED/GRADED BUFFER AREAS.
14. COMPLETE SITE CLEANUP AND INSTALL PLANT MATERIAL AS INDICATED ON THE MITIGATION PLAN.
15. INSTALL CRITICAL AREA FENCE & SIGNS.

NOT FOR CONSTRUCTION

THESE PLANS HAVE BEEN SUBMITTED TO THE APPROPRIATE AGENCIES FOR REVIEW AND APPROVAL. UNTIL APPROVED, THESE PLANS ARE:

SUBJECT TO REVISION

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NOTES

1. SURVEY PROVIDED BY HARMSEN, LLC, 2822 COLBY AVE, STE 300, EVERETT, WA 98201, (425) 252-1884.
2. SOURCE DRAWING WAS MODIFIED BY TALASAEA CONSULTANTS FOR VISUAL ENHANCEMENT.

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CRITICAL AREAS MITIGATION PLAN
HABITAT FEATURE DETAILS & NOTES
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

Revisions	Date	By

Date 11-21-2023
Scale AS NOTED
Designed
Drawn TH
Checked EP
Approved

Project # 1927

Sheet # W3.2

PLANTING SPECIFICATIONS

PART 1: GENERAL

1.1 SEQUENCING

A. GENERAL CONSTRUCTION

1. CONTRACTOR SHALL GIVE THE PROJECT BIOLOGIST OR ECOLOGIST A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO COMMENCING CONSTRUCTION.
2. NO CONSTRUCTION WORK SHALL COMMENCE UNTIL THERE IS A MEETING BETWEEN THE CLIENT, THE PROJECT BIOLOGIST OR ECOLOGIST, THE GENERAL, CLEARING, AND/OR EARTHWORK CONTRACTORS, AND THE LANDSCAPE CONTRACTOR. THE APPROVED PLANS AND SPECIFICATIONS SHALL BE REVIEWED TO ENSURE THAT ALL PARTIES INVOLVED UNDERSTAND THE INTENT AND THE SPECIFIC DETAILS RELATED TO THE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONSTRAINTS.
3. LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO: (1) INDEPENDENTLY VERIFY THE ACCURACY OF UTILITY LOCATIONS, AND (2) DISCOVER AND AVOID ANY UTILITIES WITHIN THE MITIGATION AREA(S) THAT ARE NOT SHOWN, BUT WHICH MAY BE AFFECTED BY IMPLEMENTATION OF THE PLAN. SUCH AREA(S) ARE TO BE CLEARLY MARKED IN THE FIELD. THE PROJECT BIOLOGIST OR ECOLOGIST SHALL RESOLVE ANY CONFLICTS WITH THE APPROVED GRADING PLAN PRIOR TO START OF CONSTRUCTION.
4. A COPY OF THE APPROVED PLANS MUST BE ON SITE WHENEVER CONSTRUCTION IS IN PROGRESS, AND SHALL REMAIN ON SITE UNTIL PROJECT COMPLETION.
5. CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH ALL AGENCY STANDARDS, RULES, CODES, PERMIT CONDITIONS, AND/OR OTHER APPLICABLE ORDINANCES AND POLICIES.
6. THE PROJECT OWNER/APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER RELATED OR REQUIRED PERMITS PRIOR TO THE START OF CONSTRUCTION.
7. A QUALIFIED WETLAND CONSULTANT SHALL BE ON SITE, AS NECESSARY, TO MONITOR CONSTRUCTION AND APPROVE MINOR REVISIONS TO THE PLAN.
8. DURING CONSTRUCTION, THE CONTRACTOR MUST USE MATERIALS AND CONSTRUCTION METHODS THAT PREVENT TOXIC SUBSTANCES AND OTHER POLLUTANTS FROM ENTERING MITIGATION AREAS OR OTHER NATURAL WATERS OF THE STATE.
9. PREVENTATIVE MEASURES SHALL BE USED TO PROTECT EXISTING STORM DRAINAGE SYSTEMS, EXISTING UTILITIES, AND ROADS.
10. PROVIDE SEDIMENT AND EROSION CONTROLS AROUND THE PROJECT AREA PRIOR TO SOIL DISTURBANCE FROM CONSTRUCTION ACTIVITY.

B. MITIGATION CONSTRUCTION: THE FOLLOWING PROVIDES THE GENERAL SEQUENCE OF ACTIVITIES ANTICIPATED TO BE NECESSARY TO COMPLETE THE PLANTING PORTION OF THE MITIGATION PROJECT. SOME OF THESE ACTIVITIES MAY BE CONDUCTED CONCURRENTLY AS THE PROJECT PROGRESSES.

1. CONDUCT A SITE MEETING BETWEEN THE CONTRACTOR, THE PROJECT BIOLOGIST OR ECOLOGIST, AND THE OWNER'S REPRESENTATIVE TO REVIEW THE PROJECT PLANS, STAGING/STOCKPILE AREAS, AND MATERIAL DISPOSAL AREAS.
2. PLANT TREES AND SHRUBS AS INDICATED ON MITIGATION PLANS.
3. PLANT WETLAND EMERGENTS AND STAKES (CUTTINGS).
4. MULCH PLANTS INSTALLED IN NON-GRADED BUFFER AREAS.
5. INSTALL TEMPORARY IRRIGATION SYSTEM AND PROGRAM FOR 0.5 INCHES OF WATER EVERY 3 DAYS.
6. INSTALL FENCING AND CRITICAL AREA PROTECTION SIGNS.

1.2 SUBMITTALS

A. PRODUCT DATA: FURNISH THE FOLLOWING WITH EACH PLANT MATERIAL DELIVERY:

1. INVOICES INDICATING SIZES AND VARIETY OF PLANT MATERIAL.
2. CERTIFICATES OF INSPECTION REQUIRED BY STATE AND FEDERAL AGENCIES.

B. QUALITY CONTROL SUBMITTALS:

1. PRIOR TO DELIVERY OF MATERIALS, CERTIFICATES OF COMPLIANCE ATTESTING THAT MATERIALS MEET THE SPECIFIED REQUIREMENTS SHALL BE FURNISHED FOR THE FOLLOWING: PLANTS, TOPSOIL, FERTILIZER, AND ORGANIC MULCH. CERTIFIED COPIES OF THE MATERIAL CERTIFICATES SHALL INCLUDE THE FOLLOWING:
   a. PLANT MATERIALS: BOTANICAL NAME, COMMON NAME, SIZE, QUANTITY BY SPECIES, AND LOCATION WHERE GROWN.
   b. IMPORTED TOPSOIL: PARTICLE SIZE, PH, ORGANIC MATTER CONTENT, TEXTURAL CLASS, SOLUBLE SALTS, CHEMICAL AND MECHANICAL ANALYSES.
   c. FERTILIZER: CHEMICAL ANALYSIS AND PERCENT COMPOSITION.
   d. IMPORTED MULCH: COMPOSITION AND SOURCE.

1.3 REFERENCES

A. SIZE AND GRADING STANDARDS: SHALL CONFORM TO THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.

1.4 QUALITY ASSURANCE

A. WORKER'S QUALIFICATIONS: THE PERSONS PERFORMING THE PLANTING AND THEIR SUPERVISOR(S) SHALL BE PERSONALLY EXPERIENCED WITH PLANTING AND CARING FOR PLANT MATERIAL, AND SHALL HAVE BEEN REGULARLY EMPLOYED BY A COMPANY ENGAGED IN PLANTING AND CARING FOR PLANT MATERIAL FOR A MINIMUM OF 2 YEARS.

B. PLANT MATERIAL: ALL PLANT MATERIALS SHALL BE LOCALLY GROWN OR REGIONALLY ACCLIMATIZED TO THE PACIFIC NORTHWEST.

1.5 DELIVERY, INSPECTION, STORAGE AND HANDLING

A. DELIVERY: A DELIVERY SCHEDULE SHALL BE PROVIDED AT LEAST 10 CALENDAR DAYS PRIOR TO THE FIRST DAY OF DELIVERY. PLANT MATERIALS SHALL BE DELIVERED TO THE JOB SITE NOT MORE THAN 7 WORKING DAYS PRIOR TO THEIR RESPECTIVE PLANTING DATES.

B. PROTECTION DURING DELIVERY: PLANT MATERIAL SHALL BE PROTECTED DURING DELIVERY TO PREVENT DESICCATION AND DAMAGE TO THE BRANCHES, TRUNK, ROOT SYSTEM, OR EARTH BALL. BRANCHES SHALL BE PROTECTED BY TYING-IN. EXPOSED BRANCHES SHALL BE COVERED DURING TRANSPORT.

C. FERTILIZER: FERTILIZER SHALL BE DELIVERED IN MANUFACTURER'S STANDARD SIZED BAGS SHOWING WEIGHT, ANALYSIS, AND MANUFACTURER'S NAME. STORE UNDER A WATERPROOF COVER OR IN A DRY PLACE AS DESIGNATED BY THE OWNER'S REPRESENTATIVE.

D. INSPECTION: ALL PLANT MATERIALS SHALL BE INSPECTED UPON ARRIVAL AT THE JOB SITE BY THE OWNER'S REPRESENTATIVE FOR CONFORMITY TO TYPE AND QUANTITY WITH REGARD TO THEIR RESPECTIVE SPECIFICATIONS.

E. MULCH: A MULCH SAMPLE SHALL BE INSPECTED BY THE PROJECT BIOLOGIST OR ECOLOGIST PRIOR TO THE MULCH BEING DELIVERED TO THE SITE.

F. STORAGE:

1. PLANT MATERIAL NOT INSTALLED ON THE DAY OF ARRIVAL AT THE SITE SHALL BE STORED AND PROTECTED IN DESIGNATED AREAS. PLANTS STORED ON THE PROJECT SITE SHALL BE PROTECTED FROM EXTREME WEATHER CONDITIONS BY INSULATING THE ROOTS, ROOT BALLS OR CONTAINERS WITH SAWDUST, SOIL, COMPOST, BARK OR WOODCHIPS. PLANT MATERIAL SHALL BE PROTECTED FROM DIRECT EXPOSURE TO WIND AND SUN. BARE-ROOT PLANT MATERIAL SHALL BE HEELED-IN. CUTTINGS AND EMERGENT PLANTS MUST BE PROTECTED FROM DRYING AT ALL TIMES AND SHALL BE HEELED-IN WITH MOIST SOIL OR OTHER INSULATING MATERIAL. ALL PLANT MATERIAL STORED ON-SITE SHALL BE WATERED DAILY UNTIL INSTALLED.
2. STORAGE OF OTHER MATERIALS SHALL BE IN DESIGNATED AREAS.

1.6 SCHEDULING

A. PLANTING SEASON: INSTALL WOODY PLANTS BETWEEN OCTOBER 1 AND FEBRUARY 15 WHENEVER THE TEMPERATURE IS ABOVE 32 DEGREES F AND THE SOIL IS IN A WORKABLE CONDITION, UNLESS OTHERWISE APPROVED IN WRITING. CUTTINGS SHALL ONLY BE USED IF PLANTING OCCURS BETWEEN DECEMBER 1ST AND APRIL 1ST.

B. PLANT INSTALLATION: EXCEPT FOR CONTAINER-GROWN PLANT MATERIAL, THE MAXIMUM TIME BETWEEN THE DIGGING AND INSTALLATION OF PLANT MATERIAL SHALL BE 21 DAYS. THE MAXIMUM TIME BETWEEN PLANT INSTALLATION AND MULCH PLACEMENT SHALL BE 72 HOURS.

1.7 WARRANTY

A. WARRANTY PERIOD: THE CONTRACTOR-PROVIDED WARRANTY SHALL EXTEND FOR A PERIOD OF ONE YEAR FROM THE DATE OF PHYSICAL COMPLETION. PHYSICAL COMPLETION FOR THE WORK OF THIS SECTION IS THE DATE WHEN ALL GRADING, PLANTING, IRRIGATION, AND RELATED WORK HAS BEEN COMPLETED AND IS ACCEPTED BY THE OWNER'S REPRESENTATIVE, THE PROJECT BIOLOGIST OR ECOLOGIST, AND APPLICABLE AGENCIES.

B. WARRANTY TERMS: CONTRACTOR'S WARRANTY SHALL INCLUDE REPLACEMENT OF PLANTS DUE TO MORTALITY (SAME SIZE AND SPECIES SHOWN ON THE DRAWINGS). PLANTS REPLACED UNDER THIS WARRANTY SHALL BE WARRANTED FOR AN ADDITIONAL YEAR AFTER REPLACEMENT.

C. EXCEPTIONS: LOSS DUE TO EXCESSIVELY SEVERE CLIMATOLOGICAL CONDITIONS (SUBSTANTIATED BY 10-YEAR RECORDED WEATHER CHARTS), OR CASES OF NEGLECT BY OWNER, OR CASES OF ABUSE/DAMAGE BY OTHERS.

PART 2: PRODUCTS AND MATERIALS

2.1 PLANTS

A. GENERAL: ALL PLANT MATERIAL WILL CONFORM TO THE VARIETIES SPECIFIED OR SHOWN IN THE PLANT LIST(S) INDICATED ON THE MITIGATION PLANS AND BE TRUE TO BOTANICAL NAME AS LISTED IN: HITCHCOCK, C.L., AND A. CRONQUIST. 1973. FLORA OF THE PACIFIC NORTHWEST. UNIVERSITY OF WASHINGTON PRESS.

B. SHRUBS AND TREES:

1. THE PROJECT BIOLOGIST OR ECOLOGIST SHALL EXAMINE PLANT MATERIAL PRIOR TO PLANTING. ANY MATERIAL NOT MEETING THE REQUIRED SPECIFICATIONS SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND REPLACED WITH LIKE MATERIAL THAT MEETS THE REQUIRED STANDARDS. PLANT MATERIAL SHALL MEET THE REQUIREMENTS OF STATE AND FEDERAL LAWS WITH RESPECT TO PLANT DISEASE AND INFESTATIONS. INSPECTION CERTIFICATES, REQUIRED BY LAW, SHALL ACCOMPANY EACH AND EVERY SHIPMENT AND SHALL BE SUBMITTED TO THE PROJECT BIOLOGIST OR ECOLOGIST UPON CONTRACTOR'S RECEIPT OF PLANT MATERIAL.
2. PLANT MATERIALS SHALL BE LOCALLY GROWN (WESTERN WASHINGTON, WESTERN OREGON, OR WESTERN BC), HEALTHY, BUSHY, IN VIGOROUS GROWING CONDITION, AND GUARANTEED TO BE TRUE TO SIZE, NAME, AND VARIETY. IF REPLACEMENT OF PLANT MATERIAL IS NECESSARY DUE TO CONSTRUCTION DAMAGE OR PLANT FAILURE WITHIN ONE YEAR OF INSTALLATION, THE SIZES, SPECIES, AND QUANTITIES SHALL BE EQUAL TO SPECIFIED PLANTS, AS INDICATED ON THE PLANS.
3. PLANTS SHALL BE NURSERY GROWN, WELL-ROOTED, OF NORMAL GROWTH AND CHARACTER, AND FREE FROM DISEASE OR INFESTATION. THE PROJECT BIOLOGIST OR ECOLOGIST RESERVES THE RIGHT TO REQUIRE REPLACEMENT OR SUBSTITUTION OF ANY PLANTS DEEMED UNSUITABLE.
4. TREES SHALL HAVE UNIFORM BRANCHING, SINGLE STRAIGHT TRUNKS (UNLESS SPECIFIED AS MULTI-STEM, MULTI-CANE, OR MULTI-TRUNK), AND AN INTACT AND UNDAMAGED CENTRAL LEADER. CONTAINER STOCK SHALL HAVE BEEN GROWN IN A CONTAINER FOR AT LEAST ONE FULL GROWING SEASON AND SHALL HAVE A WELL DEVELOPED ROOT SYSTEM. PLANT MATERIAL THAT IS ROOT-BOUND OR HAS DAMAGED ROOT ZONES OR BROKEN ROOT BALLS WILL NOT BE ACCEPTED.
5. CONIFEROUS TREES SHALL BE NURSERY GROWN, FULL AND BUSHY, WITH UNIFORM BRANCHING AND A NATURAL, NON-SHEARED FORM. ORIGINAL CENTRAL LEADER MUST BE HEALTHY AND UNDAMAGED. MAXIMUM GAP BETWEEN BRANCHING SHALL NOT EXCEED 9 INCHES, AND LENGTH OF TOP LEADER SHALL NOT EXCEED 12 INCHES.
6. SHRUBS SHALL HAVE A MINIMUM OF THREE STEMS AND SHALL BE A MINIMUM HEIGHT OF 18 INCHES.
7. TREES AND SHRUBS SHALL HAVE DEVELOPED ROOT AND BRANCH SYSTEMS. DO NOT PRUNE BRANCHES BEFORE DELIVERY.
8. NATIVE PLANT CUTTINGS SHALL BE GROWN AND COLLECTED IN THE MARITIME PACIFIC NORTHWEST. CUTTINGS SHALL BE OF ONE TO TWO-YEAR-OLD WOOD, ½ INCH DIAMETER MINIMUM. CUTTINGS SHALL BE A MINIMUM OF 4 FEET IN LENGTH WITH 4 LATERAL BUDS EXPOSED ABOVE GROUND AFTER PLANTING. THE TOP OF EACH CUTTING SHALL BE A MINIMUM OF 1 INCH ABOVE A LEAF BUD, THE BOTTOM CUT 2 INCHES BELOW A BUD. THE BASAL ENDS OF THE CUTTINGS SHALL BE CUT AT A 45 DEGREE ANGLE AND MARKED CLEARLY SO THAT THE ROOTING END IS PLANTED IN THE SOIL. CUTTINGS MUST BE KEPT COVERED AND MOIST DURING STORAGE AND TRANSPORT, AND NO CUTTINGS SHALL BE STORED MORE THAN THREE DAYS FROM DATE OF CUTTING. CUTTINGS SHALL ONLY BE USED IF PLANTING OCCURS BETWEEN DECEMBER 1ST AND APRIL 1ST. FOR PLANTING BETWEEN APRIL 1ST AND DECEMBER 1ST, CONTAINER PLANTS SHALL BE USED.
9. PLANTS SHALL BE FREE OF SPLITS AND CHECKS, BARK ABRASIONS, AND DISFIGURING KNOTS.
10. FOR DECIDUOUS PLANTS, BUDS SHALL BE INTACT AND REASONABLY CLOSED AT TIME OF PLANTING, IF DORMANT.
11. BALLED AND BURLAPPED PLANTS SHALL HOLD A NATURAL BALL. MANUFACTURED ROOT BALLS ARE UNACCEPTABLE.
12. PLANTS SHALL CONFORM TO SIZES INDICATED ON THE PLANT SCHEDULE. PLANTS MAY BE LARGER THAN THE MINIMUM SIZES SPECIFIED.

C. WETLAND EMERGENT PLANTS:

1. SPECIES OF EMERGENT PLANTS SHALL BE PROVIDED AS DESCRIBED ON THE MITIGATION PLANS.
2. HERBACEOUS PLANTS SPECIFIED AS CLUMP DIVISIONS SHALL BE WELL-ROOTED PORTIONS OF MATURE PLANTS WITH A MINIMUM HEIGHT OF 6 INCHES OF VIGOROUS, VEGETATIVE GROWTH ABOVE THE GROUND SURFACE. OTHER HERBACEOUS PLANTS, OTHER THAN CLUMP DIVISIONS, SHALL BE DORMANT PROPAGULES SUCH AS RHIZOMES, TUBERS, CORMS, AND BULBS. PROPAGULE SHOOTS SHALL EXHIBIT TURGOR AND BE LIGHT IN COLOR, AND PROPAGULE BODIES SHALL BE RIGID TO THE TOUCH. IF THE BODIES OF THE PROPAGULES ARE SOFT AND MUSHY AND THE SHOOTS LACK TURGOR AND ARE DARK IN COLOR, THE PLANT MATERIALS SHALL BE REJECTED.
3. RHIZOMES, TUBERS, CORMS, AND BULBS SHALL HAVE A MINIMUM DIAMETER OF 1½ INCHES.

D. NOXIOUS SPECIES: ALL PLANT STOCK AND OTHER RE-VEGETATION MATERIALS SHALL BE FREE FROM THE SEED OR OTHER PLANT COMPONENTS OF ANY NOXIOUS OR INVASIVE SPECIES, AS IDENTIFIED BY THE KING COUNTY NOXIOUS WEED CONTROL BOARD.

E. SUBSTITUTIONS: SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT A WRITTEN REQUEST AND APPROVAL FROM THE OWNER'S REPRESENTATIVE, THE PROJECT BIOLOGIST OR ECOLOGIST, AND APPLICABLE AGENCIES.

2.2 PLANTING SOIL

A. TOPSOIL: IF SUITABLE STOCKPILED NATIVE TOPSOIL IS NOT AVAILABLE FOR MITIGATION PLANTINGS, TOPSOIL SHALL BE OBTAINED FROM OUTSIDE SOURCES. STOCKPILED OR IMPORTED TOPSOIL SHALL BE FERTILE, FRIABLE, SANDY LOAM SURFACE SOIL, FREE OF SUBSOIL, CLAY LUMPS, BRUSH, WEEDS, ROOTS, STUMPS, STONES LARGER THAN 1 INCH IN ANY DIMENSION, LITTER, OR ANY OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.

B. ORGANIC CONTENT: IMPORTED TOPSOIL SHALL CONSIST OF ORGANIC MATERIALS AMENDED AS NECESSARY TO PRODUCE A BULK ORGANIC CONTENT OF AT LEAST 10 PERCENT AND NOT GREATER THAN 20 PERCENT, AS DETERMINED BY AASHTO-T-194.

C. COMPOST: COMPOST SHALL MEET THE DEFINITION FOR COMPOSTED MATERIALS AS DEFINED BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY.

D. SOIL AMENDMENTS (BUFFER AREAS ONLY):

D.A. FERTILIZER: WOODY PLANTINGS SHALL BE FERTILIZED WITH A SLOW-RELEASE GENERAL GRANULAR FERTILIZER (16-16-16), WITH APPLICATION RATES AS SPECIFIED BY MANUFACTURER. FERTILIZER SHALL BE APPLIED AFTER PLANTING PIT IS BACKFILLED, AND PRIOR TO APPLICATION OF MULCH. FERTILIZER SHALL NOT BE APPLIED BETWEEN NOVEMBER AND MARCH. NO FERTILIZER SHALL BE APPLIED WITHIN WETLAND AREAS.

D.B. SOIL MOISTURE RETENTION AGENT: A SOIL MOISTURE RETENTION AGENT, SUCH AS "SOILMOIST" OR EQUAL, SHALL BE INCORPORATED INTO THE BACKFILL OF EACH PLANTING PIT, PER MANUFACTURER'S INSTRUCTIONS. NO MOISTURE RETENTION AGENT SHALL BE APPLIED WITHIN WETLAND AREAS.

2.3 MULCH

A. BARK OR WOODCHIP MULCH SHALL BE DERIVED FROM DOUGLAS FIR, PINE, OR HEMLOCK SPECIES. THE MULCH SHALL NOT CONTAIN RESIN, TANNIN, OR OTHER COMPOUNDS IN QUANTITIES THAT WOULD BE DETRIMENTAL TO ANIMAL, PLANT LIFE, OR WATER QUALITY. SAWDUST SHALL NOT BE USED AS MULCH.

B. MULCH SHALL BE MEDIUM-COARSE GROUND WITH AN APPROXIMATELY 3-INCH MINUS PARTICLE SIZE. FINE PARTICLES SHALL BE MINIMIZED SO THAT NOT MORE THAN 30%, BY LOOSE VOLUME, WILL PASS THROUGH A US NO. 4 SIEVE.

2.4 MISCELLANEOUS MATERIALS

A. STAKES, DEADMEN AND GUY STAKES: SOUND, DURABLE, WESTERN RED CEDAR, OR OTHER APPROVED WOOD, FREE OF INSECT OR FUNGUS INFESTATION.

B. CHAIN-LOCK TREE TIES: ½-INCH WIDE, PLASTIC.

PART 3: EXECUTION

3.1 SOIL PREPARATION

A. PLANTING AREA CONDITIONS: CONTRACTOR SHALL VERIFY THAT PLANT INSTALLATION CONDITIONS ARE SUITABLE WITHIN THE PROJECT AREA(S). ANY UNSATISFACTORY CONDITIONS SHALL BE CORRECTED PRIOR TO START OF WORK. WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, POOR DRAINAGE, COMPACTED SOILS, SIGNIFICANT EXISTING OR INVASIVE VEGETATION, OR OTHER OBSTRUCTIONS, CONTRACTOR SHALL NOTIFY THE PROJECT BIOLOGIST OR ECOLOGIST PRIOR TO PLANTING. THE BEGINNING OF WORK BY THE CONTRACTOR CONSTITUTES ACCEPTANCE OF CONDITIONS AS SATISFACTORY.

B. PLANTING IN UNDISTURBED, NON-GRADED AREAS: PLANTS INSTALLED IN UNDISTURBED AREAS SHALL BE INTEGRATED WITH EXISTING NATIVE VEGETATION AND PLANTED IN A RANDOM, NATURALISTIC PATTERN. PRIOR TO INSTALLATION OF PLANTINGS, ALL CONSTRUCTION DEBRIS, TRASH, AND NON-NATIVE INVASIVE PLANT MATERIAL SHALL BE REMOVED FROM THE PROJECT AREA. IN NON-GRADED AREAS, TREES AND SHRUBS SHALL BE PIT PLANTED AS SHOWN IN TYPICAL PLANTING DETAILS. PLANTING PITS SHALL BE BACKFILLED WITH A 50/50 MIXTURE OF IMPORTED, WEED-FREE TOPSOIL AND THE SOIL FROM THE PLANTING PIT.

C. PLANTING IN GRADED AREAS: IN GRADED PLANTING AREAS PLANTS SHALL BE INSTALLED IN NEWLY PLACED TOPSOIL.

D. SOIL DECOMPACTION/SCARIFICATION: SOILS IN GRADED/DISTURBED AREAS THAT ARE COMPACTED AND UNSUITABLE FOR PROPER PLANT GROWTH SHALL BE DECOMPACTED AND/OR SCARIFIED TO A MINIMUM DEPTH OF 6^ PRIOR TO TOPSOIL INSTALLATION.

3.2 PLANTING

A. PLANT LAYOUT: PROPOSED LOCATIONS OF TREES AND SHRUBS SHALL BE STAKED AND IDENTIFIED WITH AN APPROVED CODING SYSTEM OR BY PLACEMENT OF THE ACTUAL PLANT MATERIAL. FOR LARGE GROUPINGS OF A SINGLE SPECIES OF SHRUB, LANDSCAPE CONTRACTOR MAY STAKE THE PLANTING BOUNDARIES.

B. OBTAIN LAYOUT APPROVAL FROM THE PROJECT BIOLOGIST OR ECOLOGIST PRIOR TO EXCAVATION OF PLANTING PITS.

C. PLANTING PIT DIMENSIONS:

1. PIT DEPTH: NOT TO EXCEED THE ROOT BALL OR CONTAINER DEPTH.
2. PIT WIDTH: MEASURED AT THE GROUND SURFACE, 2 TIMES THE WIDTH OF THE ROOT BALL OR CONTAINER, AS INDICATED IN TYPICAL PLANTING DETAILS.
   a. BARE-ROOT PLANTS: DIAMETER EQUAL TO THE WIDTH OF THE ROOT SPREAD.

D. SETTING PLANTS:

1. BALLED PLANTS: SET PLANTS IN POSITION AND BACKFILL 1/2 DEPTH OF BALL. COMPLETELY REMOVE CAGE AND TWINE FROM PLANT AND PULL BURLAP DOWN AS FAR AS POSSIBLE. COMPLETE BACKFILL AND SETTLE WITH WATER. ROOT COLLAR SHALL REMAIN 1 INCH ABOVE ADJACENT GRADE.
2. BARE-ROOT PLANTS: PRUNE BRUISED OR BROKEN ROOTS. SET PLANT IN POSITION AND PLACE WETLAND PLANTING SOIL AROUND ROOTS. USE CARE TO AVOID BRUISING OR BREAKING ROOTS WHEN FIRMING SOIL. SETTLE WITH WATER.
3. SHRUB/TREE PLANTING: SHRUB AND TREE STOCK SHALL BE PLANTED IN HAND-DUG HOLES ACCORDING TO PLANTING DETAILS SHOWN ON THE MITIGATION PLANS. SHRUB AND TREE ROOT BALLS SHALL BE SET SO THAT ROOT COLLARS ARE 1 INCH ABOVE ADJACENT GRADE. ALL BACKFILL SHALL BE GENTLY TAMPED IN PLACE.
4. SURFACE FINISH: FORM A SAUCER AS INDICATED ON TYPICAL PLANTING DETAILS, OR AS DIRECTED. GRADE SOIL TO FORM A BASIN ON THE LOWER SIDE OF SLOPE PLANTINGS TO CATCH AND RETAIN WATER.
5. IN FORESTED AREAS, CONTRACTOR SHALL LOOSELY TIE A 2 FOOT PIECE OF BIODEGRADABLE FLAGGING TO THE TOP PORTION OF ALL PLANTED VEGETATION, BUT NOT ON A CENTRAL LEADER, TO FACILITATE POST-CONSTRUCTION PERFORMANCE AND MAINTENANCE REVIEW BY THE PROJECT BIOLOGIST OR ECOLOGIST AND REGULATORY AGENCIES.
6. ACTUAL PLANT SYMBOL QUANTITIES SHOWN ON THE PLANS SHALL PREVAIL OVER QUANTITIES SHOWN ON THE PLANT SCHEDULE IN THE EVENT OF A DISCREPANCY.

E. MULCHING:

1. GRADED BUFFER AREAS: ARE MULCHED PRIOR TO PLANT INSTALLATION AS DIRECTED IN THE GRADING SPECIFICATIONS.
2. NON-GRADED BUFFER AREAS: PROVIDE A 36-INCH DIAMETER, 3-INCH DEEP MULCH RING AROUND THE BASE OF EACH TREE, AND A 24-INCH DIAMETER, 3-INCH DEEP MULCH RING AROUND THE BASE OF EACH SHRUB.
3. WATER PLANTS THOROUGHLY AFTER MULCHING.

F. PRUNING: PRUNE IMMEDIATELY AFTER PLANTING ONLY AS DIRECTED BY THE PROJECT BIOLOGIST OR ECOLOGIST.

G. TREE STAKES AND TIES: STAKE DECIDUOUS AND EVERGREEN TREES 4 FEET OR OVER IN HEIGHT WITH ONE (1) STAKE PER TREE. STAKE TREES IMMEDIATELY AFTER PLANTING. PLACE STAKE AT THE OUTER EDGE OF THE ROOTS OR BALL, IN LINE WITH THE PREVAILING WIND, AND AT A 10 DEGREE ANGLE FROM THE TREE TRUNK. LOOSELY ATTACH STAKE TO TREE USING CHAIN-LOCK TIES; TREE SHOULD BE ABLE TO SWAY.

H. INSTALLING TEMPORARY IRRIGATION

1. GENERAL REQUIREMENTS: CONTRACTOR SHALL PROVIDE AN ABOVE-GROUND TEMPORARY IRRIGATION SYSTEM CAPABLE OF FULL HEAD-TO-HEAD COVERAGE OF ALL PLANTED PROJECT AREAS. THE TEMPORARY IRRIGATION SYSTEM SHALL EITHER UTILIZE CONTROLLER AND POINT OF CONNECTION (POC) FROM THE SITE IRRIGATION SYSTEM OR SHALL INCLUDE A SEPARATE POC AND CONTROLLER WITH A BACKFLOW PREVENTION DEVICE PER WATER JURISDICTION INSPECTION AND APPROVAL. THE SYSTEM SHALL BE ZONED TO PROVIDE OPTIMAL PRESSURE AND UNIFORMITY OF COVERAGE, AS WELL AS SEPARATION BETWEEN AREAS OF FULL SUN AND SHADE AND FOR SLOPES IN EXCESS OF 5 PERCENT. THE SYSTEM SHALL BE OPERATIONAL FOR A MINIMUM OF THE FIRST TWO GROWING SEASONS AFTER PLANTING (THE FIRST TWO YEARS OF THE PERFORMANCE MONITORING PERIOD), OR LONGER IF REQUIRED TO ENSURE PROPER PLANT ESTABLISHMENT. THE SYSTEM SHALL BE REMOVED UPON FINAL APPROVAL OF THE MITIGATION PROJECT AT THE END OF THE PERFORMANCE MONITORING PERIOD.
2. SYSTEM DESIGN AND MATERIALS: ELECTRONIC VALVES SHALL BE THE SAME MANUFACTURER AS THOSE USED FOR THE SITE IRRIGATION SYSTEM, OR SHALL BE RAIN BIRD PEB SERIES OR EQUAL IF SYSTEM IS NOT CONTIGUOUS WITH THE SITE SYSTEM. VALVES SHALL BE SIZED TO ACCOMMODATE PRESSURE AND ZONE CONSUMPTION REQUIREMENTS OF THE SYSTEM AND SHALL BE INSTALLED BELOW GRADE IN CARSON (OR EQUAL) VALVE BOXES. WIRING SHALL BE INSULATED MULTI-STRAND, TAPED TO THE MAIN AT 6-INCH INTERVALS WITH DUCT TAPE WRAPS. ON-GRADE MAIN AND LATERAL LINES SHALL BE CLASS 200 PVC BELL PIPE WITH SOLVENT WELDED FITTINGS, SECURED IN-PLACE WITH WIRE STAPLES WHERE NECESSARY ON SLOPED AREAS. LINES SHALL BE PLACED 12 INCHES BELOW GRADE IN 4 INCH PCV SLEEVES WHERE VEHICULAR OR MAINTENANCE ACCESS IS NEEDED ACROSS LINES TO THE PROJECT AREA(S). MAXIMUM MAIN LINE SIZE SHALL BE 1½ INCHES AND MAY BE LOOPED BACK TO THE POC TO REDUCE PRESSURE LOSS. LATERAL LINES SHALL BE SIZED IN DECREASING DOWNSTREAM ORDER PER RAIN BIRD DESIGN STANDARDS; THE MINIMUM LATERAL SIZE SHALL BE ¾ INCH. HEADS SHALL BE ROTOR OR IMPACT TYPE INSTALLED 4 FEET ABOVE FINISHED GRADE ON 2-INCH DIAMETER WOOD TREE STAKES. STAKES SHALL BE SECURE IN THE GROUND, EMBEDDED TO A MINIMUM DEPTH OF 24 INCHES. HEADS AND ¾ INCH PVC RISERS SHALL BE SECURED TO STAKES WITH CONSTRICTING HOSE CLAMPS; NO FUNNY PIPE SHALL BE USED. HEADS AND NOZZLES SHALL PROVIDE MATCHED PRECIPITATION RATES FOR EACH ZONE.
3. PROGRAMMING: IRRIGATION SYSTEM SHALL BE PROGRAMMED TO PROVIDE APPROXIMATELY 1/2 INCH OF WATER EVERY THREE DAYS DURING THE DRY SEASON (APPROXIMATELY JUNE 15TH TO OCTOBER 15TH). IRRIGATION AMOUNTS IN ZONES LOCATED IN THE SHADE OR ON STEEP SLOPES MAY BE REDUCED IF APPROVED BY THE PROJECT BIOLOGIST OR ECOLOGIST OR THE PROJECT ECOLOGIST/BIOLOGIST.
4. WATER AND POWER SUPPLY FOR SYSTEM: THE OWNER SHALL PROVIDE WATER AND ELECTRICITY FOR THE SYSTEM.
5. AS-BUILT DRAWING: A CHART DESCRIBING THE LOCATION OF ALL INSTALLED OR OPEN ZONES AND CORRESPONDING CONTROLLER NUMBERS SHALL BE PROVIDED BY THE CONTRACTOR AND PLACED INSIDE THE CONTROLLER AND GIVEN TO THE OWNER'S REPRESENTATIVE.
6. WARRANTY: THE IRRIGATION SYSTEM SHALL INCLUDE A ONE-YEAR WARRANTY AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FROM THE DATE OF FINAL PROJECT ACCEPTANCE. THE WARRANTY SHALL INCLUDE SYSTEM ACTIVATION AND WINTERIZATION FOR THE FIRST YEAR AND IMMEDIATE REPAIR OF THE SYSTEM IF IT IS OBSERVED TO BE MALFUNCTIONING.

J. CRITICAL AREAS FENCE AND SIGNS: INSTALL CRITICAL AREAS FENCE AND CRITICAL AREAS SIGNS WHERE SHOWN ON PLANS.

K. RESTORE EXISTING NATURAL OR LANDSCAPED AREAS:

1. EXISTING NATURAL OR LANDSCAPED AREAS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, UNLESS IMPROVEMENTS OR MODIFICATIONS ARE SPECIFIED FOR THOSE AREAS.
2. CONTRACTOR SHALL EXERCISE CARE TO PREVENT INJURY TO THE TRUNK, ROOTS, OR BRANCHES OF ANY TREES OR SHRUBS THAT ARE TO REMAIN. ANY LIVING, WOODY PLANT THAT IS DAMAGED DURING CONSTRUCTION SHALL BE TREATED WITHIN 24 HOURS OF OCCURRENCE, AND THE PROJECT BIOLOGIST OR ECOLOGIST SHALL BE NOTIFIED IMMEDIATELY OF THE INCIDENT. DAMAGE TREATMENT SHALL INCLUDE EVENLY CUTTING BROKEN BRANCHES, BROKEN ROOTS, AND DAMAGED TREE BARK. INJURED PLANTS SHALL BE THOROUGHLY WATERED AND ADDITIONAL MEASURES SHALL BE TAKEN, AS APPROPRIATE, TO AID IN PLANT SURVIVAL.

L. FINAL INSPECTION AND APPROVAL: THE CONTRACTOR SHALL NOTIFY THE PROJECT BIOLOGIST OR ECOLOGIST IN WRITING AT LEAST TEN DAYS PRIOR TO THE REQUESTED DATE OF A PROJECT COMPLETION INSPECTION. IF ITEMS ARE TO BE CORRECTED, A PUNCH LIST SHALL BE PREPARED BY THE PROJECT BIOLOGIST OR ECOLOGIST AND SUBMITTED TO THE CONTRACTOR FOR COMPLETION. AFTER PUNCH LIST ITEMS HAVE BEEN COMPLETED, THE PROJECT BIOLOGIST OR ECOLOGIST SHALL REVIEW THE PROJECT AGAIN FOR FINAL ACCEPTANCE OF PLAN IMPLEMENTATION. IF PUNCH LIST ITEMS REQUIRE PLANT REPLACEMENT, AND THE INSPECTION OCCURS OUTSIDE OF A SUITABLE PLANTING SEASON, PLANTS SHALL BE REPLACED DURING THE NEXT PLANTING SEASON.

M. AS-BUILT PLAN: CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT LOCATIONS AND QUANTITIES ON THE PLANT SCHEDULE WITH THOSE REPRESENTED AS SYMBOLS ON THE MITIGATION PLANS. CONTRACTOR SHALL KEEP A COMPLETE SET OF PRINTS AT THE JOB SITE DURING CONSTRUCTION FOR THE PURPOSE OF RECORDING IN-THE-FIELD CHANGES OR MODIFICATIONS TO THE APPROVED PLANS. THIS INFORMATION SHALL BE UPDATED ON A DAILY BASIS AS NECESSARY.

PART 4: ONE YEAR CONTRACTOR WARRANTY

NOTE: THESE MAINTENANCE SPECIFICATIONS APPLY TO THE ONE-YEAR CONTRACTOR WARRANTY PERIOD ONLY. IF THIS MITIGATION PROJECT REQUIRES LONG-TERM PERFORMANCE MONITORING, AS DETERMINED BY THE GOVERNING JURISDICTION, THE MAINTENANCE SPECIFICATIONS AND GUIDELINES ASSOCIATED WITH THE PERFORMANCE MONITORING STANDARDS ARE INCLUDED IN THE MITIGATION REPORT ASSOCIATED WITH THIS PLAN SET, AND MAY ALSO BE INCLUDED ON A SEPARATE PLAN SHEET IF REQUIRED.

A. REVIEW OF MAINTENANCE REQUIREMENTS: CONTRACTOR SHALL REVIEW LANDSCAPE MAINTENANCE RECOMMENDATIONS WITH A QUALIFIED WETLAND BIOLOGIST FROM THE PROJECT BIOLOGIST OR ECOLOGIST WHO IS FAMILIAR WITH THE STATED GOALS AND OBJECTIVES OF THE PROJECT PLAN.

B. MAINTENANCE ACTIVITIES: CONTRACTOR SHALL MAINTAIN TREES AND SHRUBS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE IN ORDER TO MAINTAIN HEALTHY GROWTH AND HABITAT DIVERSITY. MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT ARE NOT LIMITED TO: (A) REPLACING PLANTS DUE TO MORTALITY, (B) TIGHTENING AND REPAIRING TREE STAKES, (C) RESETTING PLANTS TO PROPER GRADES AND UPRIGHT POSITIONS, AND (D) CORRECTING DRAINAGE PROBLEMS AS REQUIRED.

C. IRRIGATION:

1. SYSTEM MAINTENANCE AND REPAIR: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACTIVATING, WINTERIZING, MAINTAINING, AND CONTINUALLY VERIFYING THE ADEQUATE OPERATION OF THE TEMPORARY IRRIGATION SYSTEM FOR THE FIRST GROWING SEASON FOLLOWING INSTALLATION. SYSTEM FUNCTION (INCLUDING ELECTRONIC VALVE AND CONTROLLER FUNCTION) SHALL BE INSPECTED FOR OPERATION AND FULL COVERAGE OF ALL PLANTED AREAS DURING EACH MAINTENANCE VISIT. THE SYSTEM SHALL BE REPAIRED IMMEDIATELY IF FOUND TO BE DAMAGED OR MALFUNCTIONING. SYSTEM SHALL BE PROGRAMMED AND MAINTAINED TO PROVIDE APPROXIMATELY ½ INCH OF WATER EVERY THREE DAYS.

D. STAKE AND TIE REMOVAL: CONTRACTOR SHALL REMOVE TREE STAKES AND TIES ONE YEAR AFTER INSTALLATION, UNLESS RECEIVING WRITTEN PERMISSION FROM THE PROJECT BIOLOGIST OR ECOLOGIST TO DELAY REMOVAL OF STAKES AND TIES

E. EROSION AND DRAINAGE: CONTRACTOR SHALL CORRECT EROSION AND DRAINAGE PROBLEMS AS REQUIRED.

F. IRRIGATION SYSTEM REMOVAL: CONTRACTOR SHALL REMOVE IRRIGATION SYSTEM APPROXIMATELY 2 YEARS AFTER PLANTING, OR AS APPROVED BY THE PROJECT BIOLOGIST OR ECOLOGIST.

G. FINAL MAINTENANCE INSPECTION AND APPROVAL: UPON COMPLETION OF THE ONE-YEAR MAINTENANCE PERIOD, AN INSPECTION BY THE PROJECT BIOLOGIST OR ECOLOGIST SHALL BE CONDUCTED TO CONFIRM THAT THE PROJECT AREA WAS PROPERLY MAINTAINED. IF ITEMS ARE TO BE CORRECTED, A PUNCH LIST SHALL BE PREPARED AND SUBMITTED TO THE CONTRACTOR FOR CORRECTION. UPON CORRECTION OF THE PUNCH LIST ITEMS, THE PROJECT SHALL BE REVIEWED BY THE PROJECT BIOLOGIST OR ECOLOGIST FOR FINAL CLOSEOUT OF PLAN IMPLEMENTATION.

H. ADD THE FOLLOWING NOTE IF NO IRRIGATION WILL BE INSTALLED:
WATERING: THE CONTRACTOR SHALL PROVIDE MANUAL WATERING OF THE MITIGATION PLANTINGS BETWEEN JUNE 15TH AND OCTOBER 15TH. SUPPLEMENTAL WATERING MAY ALSO BE REQUIRED IF HOT, DRY WEATHER OCCURS EITHER BEFORE OR AFTER THESE DATES. DURING THE FIRST YEAR AFTER INSTALLATION, PLANTINGS SHALL BE WATERED A MINIMUM OF ONE INCH PER WEEK. WATERING FREQUENCY MAY BE INCREASED AS NECESSARY DURING PROLONGED PERIODS OF HOT, DRY WEATHER TO PREVENT PLANT MORTALITY.

NOT FOR CONSTRUCTION

THESE PLANS HAVE BEEN SUBMITTED TO THE APPROPRIATE AGENCIES FOR REVIEW AND APPROVAL. UNTIL APPROVED, THESE PLANS ARE:

SUBJECT TO REVISION

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NOTES

1. SURVEY PROVIDED BY HARMSEN, LLC, 2822 COLBY AVE, STE 300, EVERETT, WA 98201, (425) 252-1884.
2. SOURCE DRAWING WAS MODIFIED BY TALASAEA CONSULTANTS FOR VISUAL ENHANCEMENT.

TALASAEA CONSULTANTS, INC.
Resource & Environmental Planning
15020 Bear Creek Road Northeast - Woodinville, Washington 98077
Bus (425) 861-7550 - Fax (425) 861-7549

CRITICAL AREAS MITIGATION PLAN
PLANTING SPECIFICATIONS
LYNNWOOD BOARDWALK
LYNNWOOD, WASHINGTON

Revisions	Date	By

Date 11-21-2023
Scale AS NOTED
Designed
Drawn TH
Checked EP
Approved

Project # 1927

Sheet # W4.0

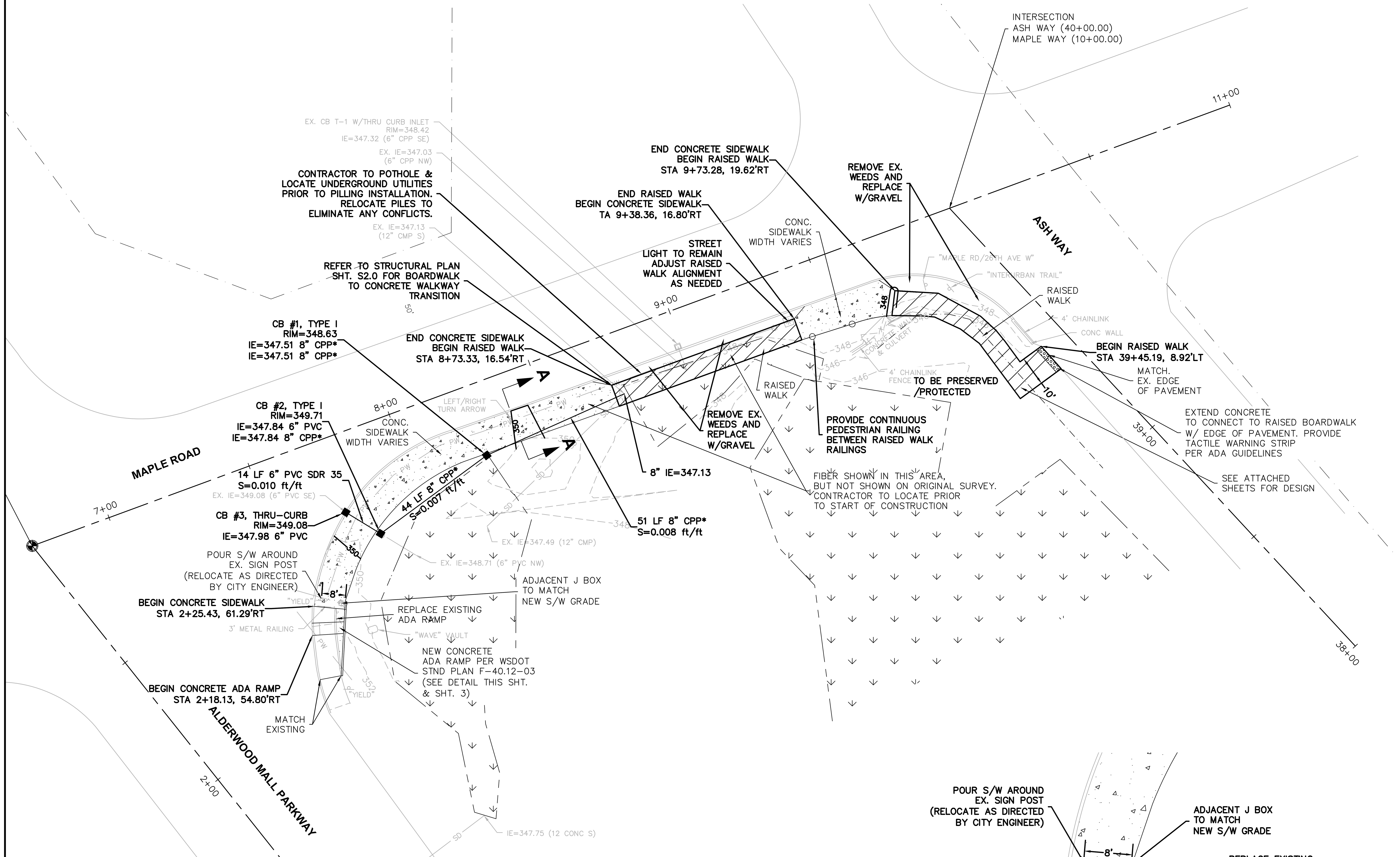
Z:\DRAWING\1900-1999\TAL1927\Plans\TAL-1927 WP 2023-11.dwg
Plotted November 22, 2023

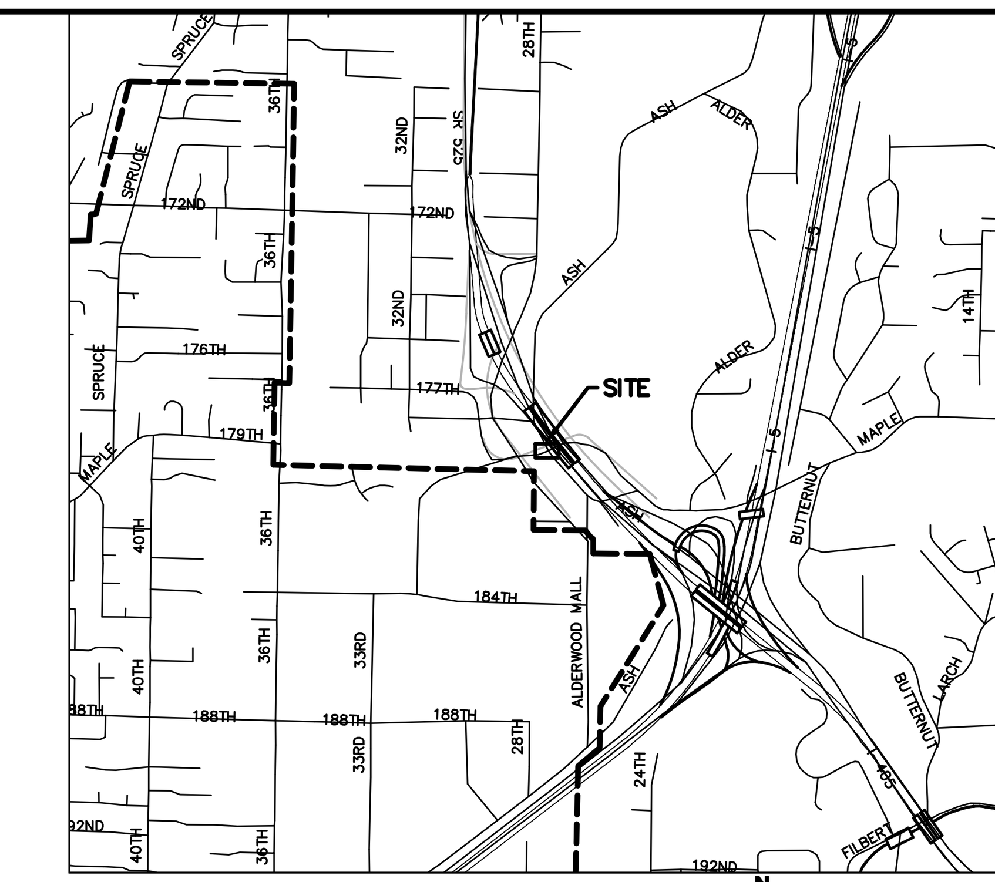
APPENDIX D

Civil Drawing, PSM Consulting Engineers
Structural Drawing, Omega Engineering, Inc.

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.





VICINITY MAP

SCALE: 1" = 2,000'

BASIS OF BEARINGS

S38°28'11"E BETWEEN FOUND MONUMENTS ALONG ALDERWOOD MALL PARKWAY PER RECORD OF SURVEY AFN 8608275005

DATUM NAVD 88

BENCHMARK

SNO. CO. SURVEY CONTROL DATABASE PT. ID 1625 (WSDOT MON "IS3109") – FOUND RAILROAD SPIKE W/ "X" & "3109" IN ASPHALT SHOULDER OF S.R. 525 LOCATED ON OVERPASS NORTH OF SITE ALIGNED W/ EAST EDGE OF 26TH AVE. W.

ELEV. = 377.44'

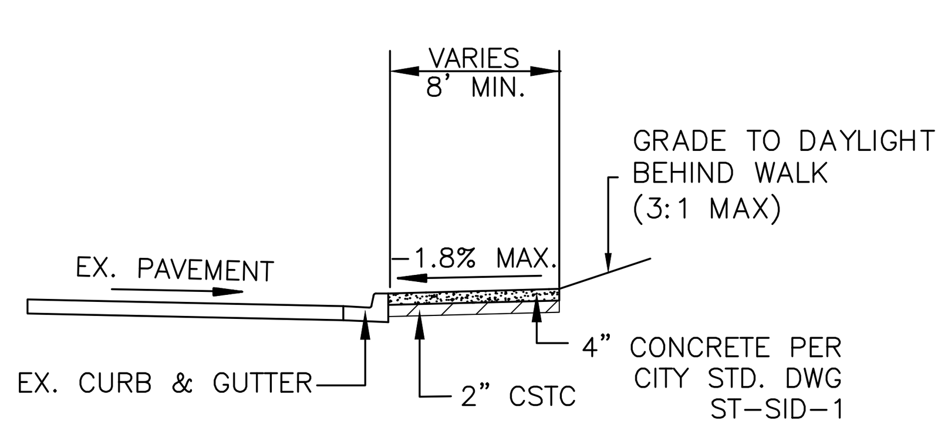
SITE DATA

WORK AREA:	MAPLE ROAD & ASH WAY LYNNWOOD, WA
PROJECT ADDRESS:	3101 184TH ST. SW, LYNNWOOD, WA 98037

CPP* NOTE:

ALL NEW CPP CALLED OUT ON PLAN SHALL BE AASHTO M252, TYPE S

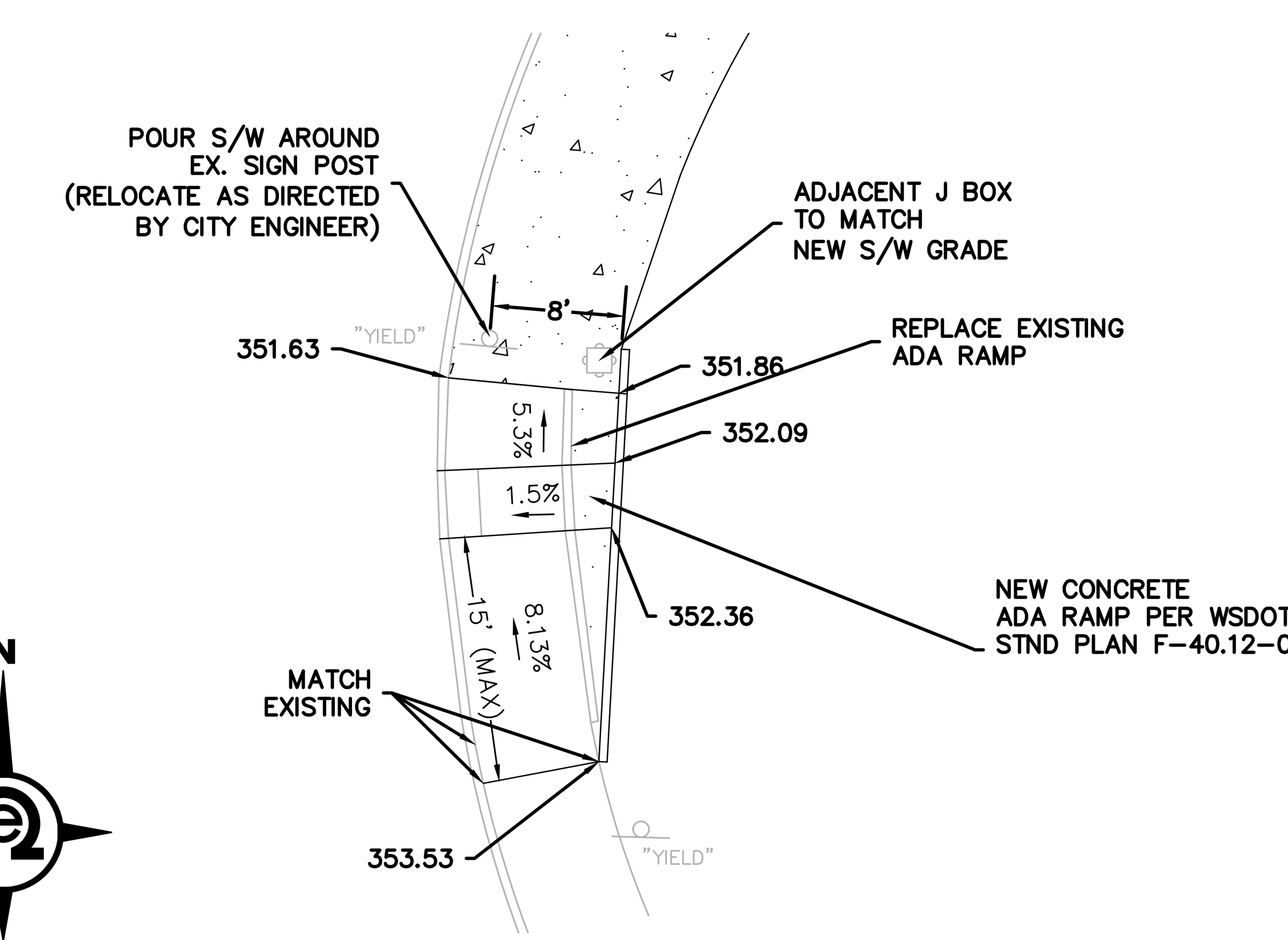
HORIZONTAL SCALE 0 20 40



SECTION 'A-A'

N.T.S.

HORIZONTAL SCALE 0 10 20



ADA DETIAL

1" = 10'

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DRAWING INDEX
1) COVER SHEET
2) SWPPP
3) SWPPP DETAILS
4) DETAILS
5) NOTES

TCP
–RAISED BOARDWALK DESIGN

PFN:

R#	DATE	DESCRIPTION	BY

JOSEPH M. SMELBY PROFESSIONAL ENGINEER 12/13/22

COVER SHEET

2707 WETMORE AVE.
EVERETT, WA 98201
t 425.903.4852
f 425.259.1958

OMEGA ENGINEERING, INC.

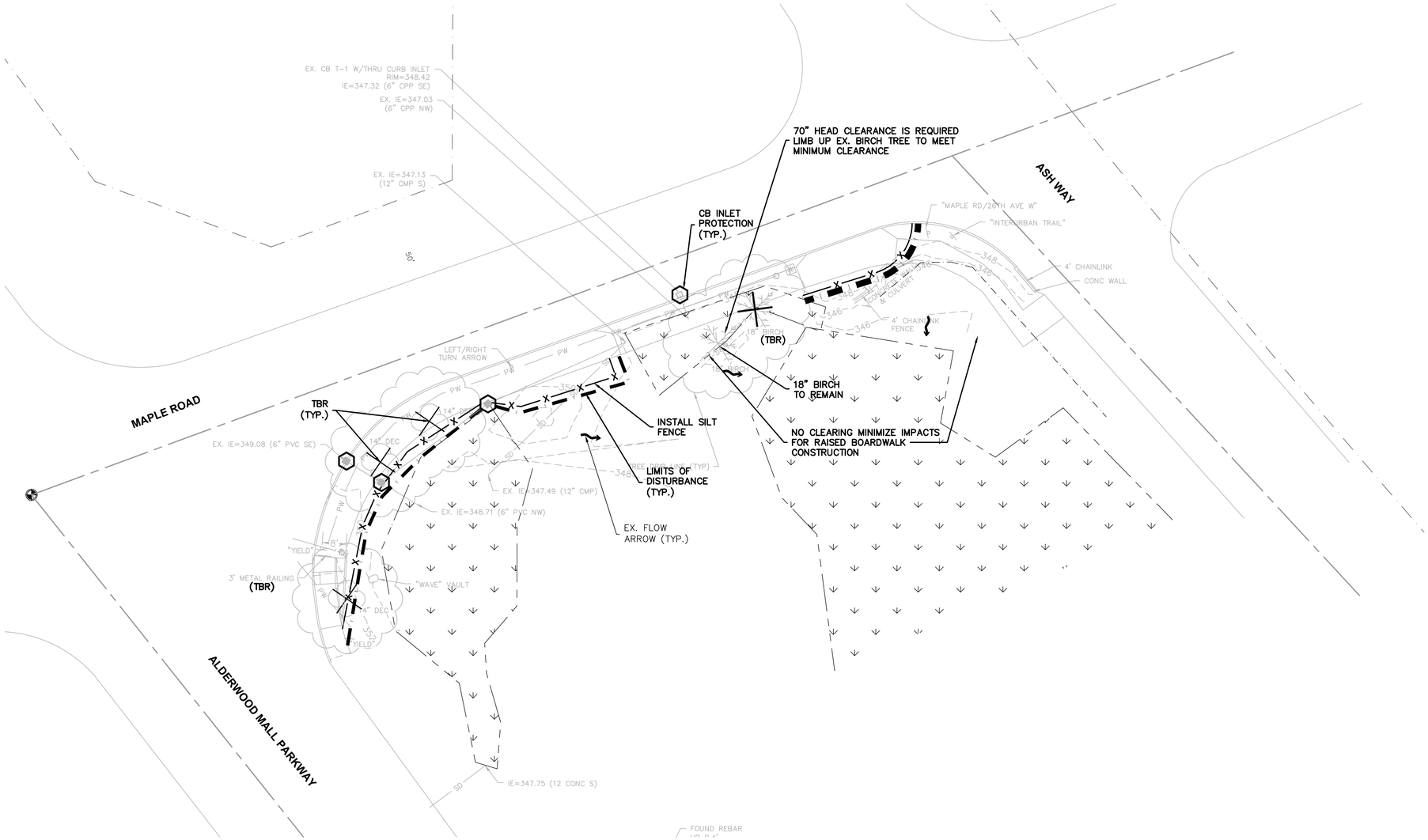
LYNNWOOD PLACE BOARDWALK

CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

PROJ. NO.	DSN. BY:
22-0815	JMS
DATE: 12/13/2022	
SCALE: 1" = 20'	
DRAWING NO. 1 OF 5	

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.



CONSTRUCTION SEQUENCE:

* CONTACT CITY OF LYNNWOOD, 425.670.5220 AND SCHEDULE PRECONSTRUCTION MEETING.

1. CLEARING/CONSTRUCTION LIMITS SHALL BE STAKED & SILT FENCING INSTALLED.
2. CLEAR, GRUB AND REMOVE ALL VEGETATION WITHIN THE CLEARING LIMITS.
3. ROUGH GRADE SITE. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE.
4. INSTALL STORM WATER COLLECTION SYSTEM W/ SEDIMENT PROTECTION MEASURES. SEE NOTE ABOVE.
5. CONSTRUCT CURB, SIDEWALK PER PLAN. OBTAIN RIGHT-OF-WAY DISTURBANCE PERMIT PRIOR TO WORK WITHIN R.O.W.
6. INSTALL/REPAIR PAVEMENT.
7. CLEAN STORM DRAINAGE CONVEYANCE SYSTEM (DO NOT FLUSH), AFTER VEGETATION HAS BEEN ESTABLISHED.
8. WHEN SITE IS STABLE, REMOVE REMAINING TEMPORARY ESC FACILITIES.

LEGEND

- CLEARING LIMITS
- SILT FENCE
- CB INLET PROTECTION

N

0 20 40
HORIZONTAL SCALE

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days before you dig.

PFN:

CONTRACTORS NOTES:

- CONTRACTOR TO MINIMIZE VEGETATION DISTURBANCE BETWEEN AREA OF WORK & CRITICAL AREAS. ALL EXCAVATED MATERIAL SHALL BE PLACED ON ROAD SIDE OF WORK AREA OR IMMEDIATELY IN TRUCK FOR OFF SITE STORAGE DISPOSAL.
- CB INLET PROTECTION SHALL BE INSTALLED IN ALL STORM DRAIN INLETS DOWNSLOPE AND WITH IN 500 FEET OF A DISTURBED OR CONSTRUCTED AREA.

TEMPORARY EROSION AND SEDIMENTATION CONTROL NOTES

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED, AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN (INCLUDING INDIVIDUAL TREES TO BE SAVED) SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED AS OUTLINED ON THE TYPICAL CONSTRUCTION SEQUENCE AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.
6. CONSTRUCTION ACCESS TO THE SITE SHALL BE ONLY AS SHOWN ON THE APPROVED PLANS. ALL VEHICLES LEAVING THE SITE, ONTO PUBLIC RIGHTS-OF-WAY, SHALL BE CLEANED TO PREVENT "TRACKING" OF MUD, DIRT OR OTHER DEBRIS.
7. THE CONTRACTOR SHALL CLEAN ACCESS STREETS AND RIGHT-OF-WAY AT LEAST DAILY OR MORE FREQUENTLY AS MAY BE NECESSARY AND SO DIRECTED BY THE CITY OF LYNNWOOD (CITY). DO NOT CONVEY STREET DEBRIS INTO THE STORM SYSTEM.
8. CLEAN OR REMOVE AND REPLACE INLET PROTECTION DEVICES WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. STOCKPILES SHALL BE LOCATED IN SAFE AREAS AND ADEQUATELY PROTECTED BY TEMPORARY SECURED PLASTIC COVER, SEEDING OR MULCHING. HYDROSEEDING IS PREFERRED.
10. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2 INCHES.
11. ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 2 DAYS BETWEEN OCTOBER 1ST TO MAY 31ST OR 7 DAYS BETWEEN JUNE 1ST TO SEPTEMBER 30TH. SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, TEMPORARY EROSION AND MULCHING, NETTING, EROSION BLANKETS, ETC.).
12. VEGETATION SHALL BE ESTABLISHED ON AREAS DISTURBED OR ON AREAS OF CONSTRUCTION AS NECESSARY TO MINIMIZE EROSION. AREAS TO BE ROUGH GRADED WITH FINISHED GRADING TO FOLLOW NEAR PROJECT COMPLETION ARE TO BE SEEDED WITH ANNUAL, PERENNIAL OR HYBRID RYE GRASS. THIS ALSO INCLUDES PERIMETER DIKES AND THE SEDIMENT BASIN EMBANKMENT. HYDROSEEDING IS PREFERRED.
13. IMMEDIATELY FOLLOWING FINISH GRADING, PERMANENT VEGETATION WILL BE APPLIED AS APPROVED PER THE APPROVED PLANS, CURRENT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARDS AND SPECIFICATIONS AND THE CITY REQUIREMENTS.
14. ADDITIONAL BEST MANAGEMENT PRACTICES (BMP) MAY BE REQUIRED AT ANY TIME DURING CONSTRUCTION.

R#	DATE	DESCRIPTION	BY

12/13/22

SWPPP

2707 WETMORE AVE.
EVERETT, WA 98201
t 425.903.4852
f 425.259.1958

OMEGA ENGINEERING, INC.

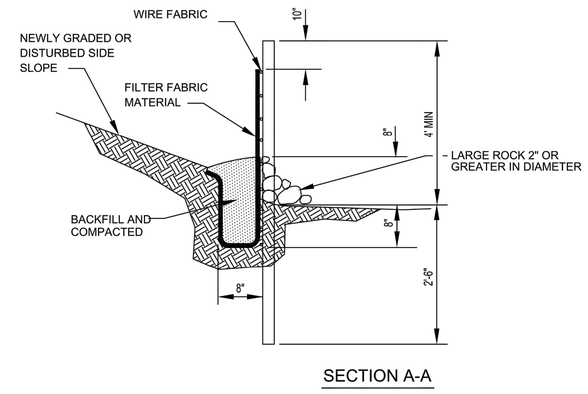
LYNNWOOD PLACE BOARDWALK

CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

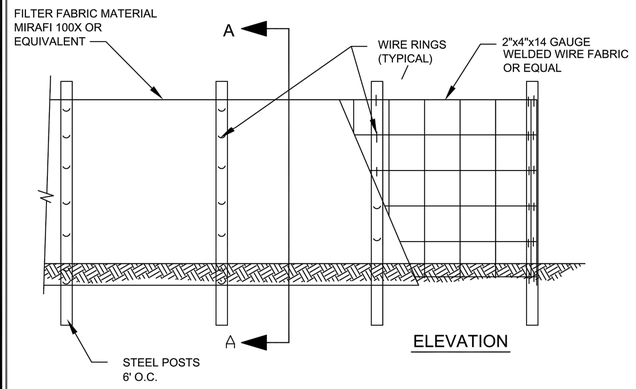
PROJ. NO.	DSN. BY:
22-0815	JMS
DATE: 12/13/2022	
SCALE: 1" = 20'	
DRAWING NO. 2 OF 5	

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.

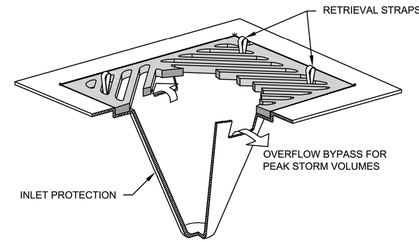


SECTION A-A



ELEVATION

LYNNWOOD WASHINGTON PUBLIC WORKS	SILT FENCE	DRAWING NUMBER	STD2-5
		SCALE	NONE
		REVISION DATE	11/05
	I:\Standard_Plans	DEPARTMENT	PW



NOTES:

1. INSERT SHALL BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES ONE-THIRD FULL. DISPOSE OF ACCUMUALTED SEDIMENT ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS.
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.
4. BELOW INLET GRATE DEVICES SHALL BE PREFABRICATED UNITS SPECIFICALLY DESIGNED FOR INLET PROTECTION AND SHALL REMAIN SECURELY ATTACHED TO THE DRAINAGE STRUCTURE WHEN LOADED WITH SEDIMENT AND DEBRIS TO ONE-THIRD TOTAL CAPACITY.

LYNNWOOD WASHINGTON PUBLIC WORKS	INLET PROTECTION	DRAWING NUMBER	ES-TESC-4
		SCALE	NONE
		REVISION DATE	06/22
	ES-TESC-4-Inlet-Protection.dwg	DEPARTMENT	PW

Know what's below. Call two business days before you dig.

PFN:

R#	DATE	DESCRIPTION	BY

12/13/22

SWPPP DETAILS

2707 WETMORE AVE.
EVERETT, WA 98201
t 425.903.4852
f 425.259.1958

OMEGA ENGINEERING, INC.

LYNNWOOD PLACE BOARDWALK

CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

PROJ. NO.	DSN. BY:
22-0815	JMS

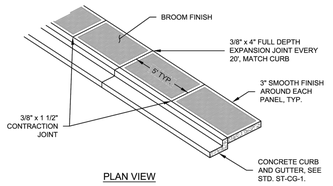
DATE: 12/13/2022

SCALE: N.T.S.

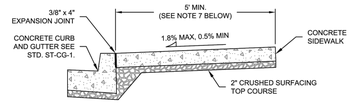
DRAWING NO. 3 OF 5

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.



PLAN VIEW



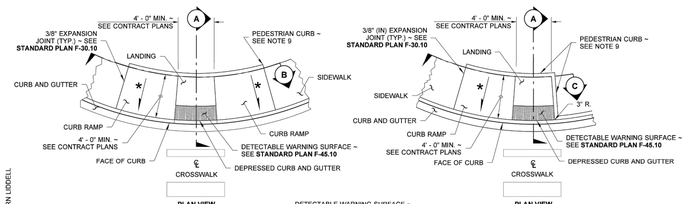
TYPICAL SECTION

NOTES:

1. SIDEWALKS SHALL BE 4" THICK IN NON-TRAFFIC AREAS, 6" THICK IN TRAFFIC AREAS & BEHIND ROLLED CURB.
2. FINISHING, CURING, FORM WORK, PLACEMENT AND MATERIALS SHALL CONFORM TO THE CURRENT WSDOT SPECS.
3. FULL DEPTH EXPANSION JOINTS SHALL GENERALLY BE PLACED TO MATCH THOSE PLACED IN ADJACENT CURB & GUTTER, WITH MAXIMUM SPACING OF 20 FEET. CONTRACTION JOINTS SHALL BE PLACED EVERY 5 FEET. FINAL SPACING DETERMINATION SHALL BE DECIDED BY THE CITY IN THE FIELD.
4. SUBGRADE SHALL BE COMPACTED AS SPECIFIED IN WSDOT STANDARDS AND SPECIFICATIONS.
5. THE FINISHED SIDEWALK SHALL BE COVERED BY CURING COMPOUND, WATERPROOF PAPER OR PLASTIC SHEETING IN THE EVENT OF RAIN OR OTHER INCLEMENT WEATHER.
6. ALL JOINTS SHALL BE CLEANED AND EDGED WITH AN EDGER HAVING A 1/8" RADIUS.
7. SIDEWALKS ARE TYPICALLY 5' WIDE, EXCEPT 7' IN SOME COMMERCIAL AREAS, OR AS APPROVED BY THE PUBLIC WORKS DIRECTOR. SIDEWALKS ARE WIDER THAN 7' IN CERTAIN ZONES (E.G. CITY CENTER).

LYNNWOOD WASHINGTON PUBLIC WORKS	CONCRETE SIDEWALK	DRAWING NUMBER	ST-SID-1
		SCALE	NONE
		REVISION DATE	02/22
	ST-SID-1-Concrete-Sidewalk.dwg	DEPARTMENT	PW

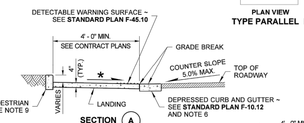
DRAWN BY: FERN LIDDELL



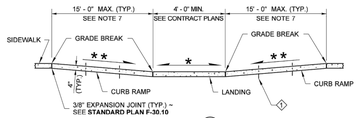
PLAN VIEW
TYPE PARALLEL A

PLAN VIEW
TYPE PARALLEL B

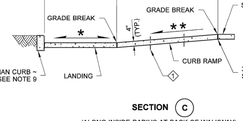
1 CONTRACTION JOINT (TYP.) ~ SEE **STANDARD PLAN F-30.1** FOR CURB RAMP LENGTHS GREATER THAN 8' - 0"PROVIDE CONTRACTION JOINT EQUALLY SPACED 4' - 0" MIN. OC.



SECTION (A)

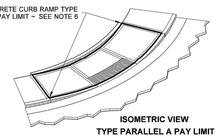


SECTION (B)
(ALONG INSIDE RADIUS AT BACK OF WALKWAY)



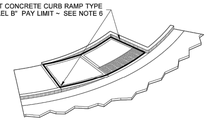
SECTION (C)
(ALONG INSIDE RADIUS AT BACK OF WALKWAY)

"CEMENT CONCRETE CURB RAMP TYPE PARALLEL A" PAY LIMIT ~ SEE NOTE 6



ISOMETRIC VIEW
TYPE PARALLEL A PAY LIMIT

"CEMENT CONCRETE CURB RAMP TYPE PARALLEL B" PAY LIMIT ~ SEE NOTE 6



ISOMETRIC VIEW
TYPE PARALLEL B PAY LIMIT

NOTES

1. At marked crosswalks, the connection between the landing and the roadway must be contained within the width of the crosswalk markings.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances on any part of the Curb Ramp or Landing, or in the Depressed Curb and Gutter where the Landing connects to the roadway.
4. See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
5. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
6. The Bid Item "Cement Concrete Curb Ramp Type __" does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
7. The Curb Ramp length is not required to exceed 15 feet (unless otherwise shown in the Contract Plans). When applying the 15-foot max. length, the running slope of the curb ramp is allowed to exceed 8.3%. Use a single constant slope from bottom of ramp to top of ramp to match into the sidewalk over a horizontal distance of 15 feet. Do not include abutting landing(s) in the15-foot max. measurement. When a ramp is constructed on a radius, the 15-foot max. length is measured on the inside radius along the back of the walkway.
8. Curb Ramps and Landings shall receive a broom finish. See **Standard Specifications 8-14.**
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will be no material to retain.

LEGEND

SLOPE IN EITHER DIRECTION

* 1.6% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (3% MAX.)

** 7.5% OR FLATTER RECOMMENDED FOR DESIGN/ FORMWORK (8.3% MAX.) ~ SEE NOTE 7

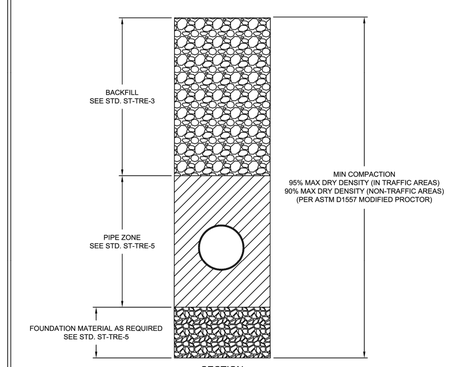
Zeller, Scott
Jun 24 2016 7:19 AM

PARALLEL CURB RAMP

STANDARD PLAN F-40.12-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff
Jun 29 2016 2:27 PM
STATE DESIGN ENGINEER
Washington State Department of Transportation

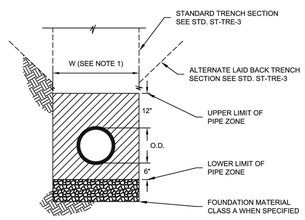


SECTION

NOTES:

1. ALL BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES BEFORE COMPACTION UNLESS AUTHORIZED BY THE ENGINEER DUE TO THE CHARACTER OF THE MATERIAL AND THE COMPACTING EQUIPMENT.
2. EACH LIFT SHALL BE MECHANICALLY COMPACTED TO THE REQUIRED DENSITY PRIOR TO PLACING SUCCEEDING LIFTS OF BACKFILL MATERIAL.
3. COMPACTION TESTS SHALL BE AS REQUIRED BY THE CITY INSPECTOR, BUT IN NO CASE LESS THAN 2 TESTS EVERY 200 FEET OF TRENCH (ONE AT SUBGRADE AND ONE AT 50% OF TRENCH DEPTH).

LYNNWOOD WASHINGTON PUBLIC WORKS	TYPICAL TRENCH COMPACTION	DRAWING NUMBER	ST-TRE-6
		SCALE	NONE
		REVISION DATE	12/20
	ST-TRE-6-Typical-Trench-Compaction.dwg	DEPARTMENT	PW



SECTION: PIPE BEDDING

NOTES:

1. LIMITS OF TRENCH
   W = MAXIMUM WIDTH OF TRENCH
   FOR PIPES 15" OR LESS IN DIAMETER W= 40" MINIMUM.
   FOR PIPES 18" OR GREATER IN DIAMETER W= 1 1/2 X I.D. + 18".
2. GRAVEL BACKFILL FOR PIPE ZONE BEDDING SHALL BE EQUAL TO WSDOT 9-03.12 (3).
3. TRENCH DAMS SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR FOR IMPERMEABLE SOILS ON SLOPES.
4. ALL FOUNDATION MATERIAL, IF REQUIRED, SHALL BE FOUNDATION MATERIAL CLASS "A" PER WSDOT SPEC 9-03.17.
5. COMPACTION SHALL COMPLY WITH WSDOT SPEC 2-06. SEE LYNNWOOD STD. ST-TRE-6 FOR ADDITIONAL INFORMATION.

LYNNWOOD WASHINGTON PUBLIC WORKS	BEDDING FOR PIPE	DRAWING NUMBER	ST-TRE-5
		SCALE	NONE
		REVISION DATE	12/20
	ST-TRE-5-Pipe-Bedding-in-Trench.dwg	DEPARTMENT	PW

R#	DATE	DESCRIPTION	BY

DETAILS

2707 WETMORE AVE.
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t 425.903.4652
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OMEGA ENGINEERING, INC.

LYNNWOOD PLACE BOARDWALK

CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP
27 NORTH, RANGE 4 EAST, W.M.

PROJ. NO.	DSN. BY:
22-0815	JMS
DATE: 12/13/2022	
SCALE: N.T.S.	
DRAWING NO. 4 OF 5	

811 Know what's below. Call two business days before you dig.

LYNNWOOD PLACE BOARDWALK

SECTION 15, TOWNSHIP 27N, RANGE 4E, W.M.

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE ACCORDING TO THE LATEST ADDITION OF "STANDARD SPECIFICATIONS FOR MUNICIPAL PUBLIC WORKS CONSTRUCTION" PREPARED BY WASHINGTON STATE CHAPTER, AMERICAN PUBLIC WORKS ASSOCIATION (APWA), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), CITY OF LYNNWOOD STANDARD PLANS AND PLAN NOTES, SPECIFICATIONS AND ANY CONDITIONS OF APPROVAL. IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL ENGINEER OF RECORD TO CORRECT ANY ERROR, OMISSIONS, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE CITY OF LYNNWOOD.

2. ALL CONSTRUCTION IS SUBJECT TO INSPECTION BY THE CITY OF LYNNWOOD. THE CONTRACTOR SHALL NOTIFY THE CITY OF THEIR SCHEDULE IN SUFFICIENT TIME TO PERMIT INSPECTION PRIOR TO AND DURING WORK. FOR ONLINE INSPECTION REQUESTS AND MANAGING YOUR PERMITS GO TO **HTTP://DBS.LYNNWOODWA.GOV** AND REGISTER YOUR ACCOUNT.

3. BEFORE ISSUANCE OF PERMITS, CONSTRUCTION OR ANY DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING IS REQUIRED BETWEEN THE CITY OF LYNNWOOD INSPECTOR, THE APPLICANT AND THE APPLICANT'S CONSTRUCTION REPRESENTATIVE. TO SCHEDULE A PRECONSTRUCTION MEETING CONTACT NICK STOKES AT 425 670–5220 OR **NSTOKES@LYNNWOODWA.GOV**

4. ALL WORK WITHIN THE SITE AND CITY OF LYNNWOOD RIGHT OF WAY SHALL BE SUBJECT TO INSPECTION BY THE CITY'S INSPECTOR. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR IN SUFFICIENT TIME TO PERMIT INSPECTION PRIOR TO AND DURING WORK.

5. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE DEVELOPER'S ENGINEER AND PERMITTING AGENCY AND SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION.

6. WORK NOT READY FOR A REQUESTED INSPECTION UPON THE ARRIVAL OF THE CITY OF LYNNWOOD INSPECTOR MUST BE RESCHEDULED FOR INSPECTION AND A RE–INSPECTION FEE MAY BE IMPOSED.

7. THE CONTRACTOR SHALL KEEP A SET OF PLANS ON SITE AT ALL TIMES FOR RECORDING "AS–BUILT" INFORMATION.

8. AN ELECTRONIC PDF FILE OF THE AS–BUILT PLANS STAMPED AND SIGNED BY A LICENSED SURVEYOR AND/OR THE DESIGN ENGINEER SHALL BE SUBMITTED TO THE CITY OF LYNNWOOD AT THE COMPLETION OF CONSTRUCTION. IN ADDITION, A SURVEY SHALL BE PROVIDED AS NECESSARY TO VERIFY FINAL GRADES, STORM AND SEWER INVERT ELEVATIONS AND ADA ROUTE COMPLIANCE, AS PROVIDED BY THE CONTRACTOR AND/OR THE SURVEYOR UPON COMPLETION OF THE PROJECT.

9. THE LOCATION OF UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITIES SHOWN HERE ARE FOR THE RPOSE OF ASSISTING THE CONTRACTOR IN LOCATING SAID UTILITIES. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION CENTER (1–800–424–5555 OR 811) 48 HOURS MINIMUM PRIOR TO THE BEGINNING OF CONSTRUCTION TO REQUEST UTILITY LOCATIONS. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS AND EASEMENTS AS REQUIRED BY THE CITY OF LYNNWOOD PUBLIC WORKS DEPARTMENT.

11. CONSTRUCTION NOISE SHALL BE LIMITED AS PER LYNNWOOD MUNICIPAL CODE (SECTION 10.12.300) FROM 7AM TO 6PM (M–F). WEEKEND WORK PROHIBITED UNLESS APPROVED PER LMC10.12.300.

12. DATUM SHALL BE CITY OF LYNNWOOD (NAVD88) UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS. THE BENCHMARK SHALL TIE TO THE CITY OF LYNNWOOD BENCHMARK LIST.

13. APPROVAL MUST BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS BEFORE ANY STRUCTURES, FILL OR OBSTRUCTIONS, INCLUDING FENCES, ARE LOCATED WITHIN ANY DRAINAGE EASEMENT, FLOOD PLAIN OR NATIVE GROWTH PROTECTION EASEMENT. STRUCTURES SHALL NOT BE PERMITTED WITHIN 15 FEET OF THE TOP OF BANK OF ANY CHANNEL OR POND (LMC13.40.070).

14. WHERE CONSTRUCTION IS CARRIED OUT IN AREAS NOT SPECIFIED ON THE PLANS AND WHICH HAVE EXISTING IMPROVEMENTS, APPROPRIATE MEASURES SHALL BE TAKEN TO RESTORE SUCH AREAS TO CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR AS REQUIRED BY THE CITY OF LYNNWOOD DEPARTMENT OF PUBLIC WORKS.

15. OFF SITE PREMISE STAGING OR STORAGE AREAS SHALL REQUIRE A WRITTEN RELEASE FROM THE AFFECTED PROPERTY OWNER. IN ADDITION, A RELEASE FROM THE CITY SHALL BE REQUIRED DESIGNATING THAT DAMAGE TO CITY PROPERTY IS NEGLIGIBLE OR NON–EXISTENT.

16. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF EMPLOYEES ON THE PROJECT AND SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE, AND MUNICIPAL SAFETY LAWS AND BUILDING CODES. THE CONTRACTOR SHALL ERECT AND PROPERLY MAINTAIN, AT ALL TIMES, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR PROTECTION OF WORKMEN AND THE PUBLIC; SHALL POST DANGER SIGNS WARNING AGAINST KNOWN OR UNUSUAL HAZARDS; AND SHALL DESIGNATE A RESPONSIBLE MEMBER OF THEIR ORGANIZATION ON THE CONSTRUCTION SITE WHOSE DUTY SHALL BE THE PREVENTION OF ACCIDENTS.

17. THE DEVELOPER SHALL PROVIDE STREET NAME AND TRAFFIC CONTROL SIGNS (E.G. STOP OR DEAD END). ALL TRAFFIC MARKINGS AND SIGNAGE TO BE PER THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND CITY OF LYNNWOOD CURRENT STANDARDS. SIGNS ARE TO BE INSTALLED BY THE DEVELOPER PRIOR TO ANY BUILDING CONSTRUCTION WITHIN THE PROJECT SITE.

STORM DRAINAGE NOTES

1. SEE GENERAL PLAN NOTES FOR ADDITIONAL REQUIREMENTS.

2. ALL REQUIRED STORM WATER RETENTION/DETENTIONFACILITIES SHALL BE CONSTRUCTED AND OPERABLE PRIOR TO PAVING AND BUILDING CONSTRUCTION UNLESS OTHERWISE APPROVED BY LYNNWOOD DEPARTMENT OF PUBLIC WORKS.

3. ALL PIPES WITHIN THE PUBLIC RIGHT–OF–WAY SHALL MEET CURRENT WSDOT/APWA STANDARDS AND SPECIFICATIONS AND/OR AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS AND SHALL BE INSTALLED PER WSDOT SECTION 7–08.

4. BACKFILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE OR PIPE–ARCH IN LAYERS WITH A LOOSE AVERAGE DEPTH OF 6 INCHES, COMPACTED TO A DENSITY OF 95%. REFER TO WSDOT STD. SPEC. 7–08.3(3) AND STD. SPEC. 2–03.3(14)C, METHOD B & C.

5. WHERE SHOWN ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER OR DIRECTOR OF PUBLIC WORKS, THE EXISTING MANHOLES, CATCH BASINS, OR INLETS SHALL BE ADJUSTED TO THE GRADE AS STAKED. ALL PIPE AND STRUCTURES SHALL BE STAKED FOR SURVEY LINE AND GRADE PRIOR TO THE START OF CONSTRUCTION. ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND DIRECTOR OF PUBLIC WORKS PRIOR TO COMMENCING CONSTRUCTION.

6. ALL STORM CATCH BASINS WITH A DEPTH OVER 5 FEET TO FLOW LINE SHALL BE TYPE 2 STRUCTURES PER CURRENT WSDOT/APWA STANDARDS. ALL TYPE 1 AND 2 STRUCTURES SHALL BE PROVIDED WITH LOCKING BOLTS. LADDER ACCESS IS REQUIRED ON ALL TYPE 2 STRUCTURES WHEN 4 FEET OR GREATER IN DEPTH AS MEASURED TO THE INSIDE FINISH FLOOR OR AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

7. DEVELOPER TO PROVIDE A CERTIFIED ELECTRONIC VIDEO RECORD OF STORM DRAINAGE CONSTRUCTION AFTER FINAL CLEANING. FINAL CLEANING AS REQUIRED PER WSDOT SPEC7–04.3(1) AND AS DIRECTED BY THE CITY OF LYNNWOOD PUBLIC WORKS INSPECTOR.

8. DRAINAGE OUTLETS (STUB–OUTS) SHALL BE PROVIDED FOR EACH INDIVIDUAL LOT, UNLESS OTHERWISE APPROVED BY THE CITY OF LYNNWOOD. STUB–OUTS SHALL CONFORM TO THE FOLLOWING:

a) EACH OUTLET SHALL BE SUITABLY LOCATED AT THE LOWEST ELEVATION ON THE LOT, SO AS TO SERVICE ALL FUTURE ROOF DOWNSPOUTS AND FOOTING DRAINS, DRIVEWAYS, YARD DRAINS, AND ANY OTHER SURFACE OR SUBSURFACE DRAINS NECESSARY TO RENDER THE LOTS SUITABLE FOR THEIR INTENDED USE.

b) EACH OUTLET SHALL HAVE FREE FLOWING, POSITIVE DRAINAGE TO AN APPROVED STORM WATER CONVEYANCE SYSTEM OR AN APPROVED OUTFALL LOCATION.

c) OUTLETS ON EACH LOT SHALL BE LOCATED WITH A PRESSURE TREATED 2"X4". EACH MARKER BOARD SHALL BE CLEARLY IDENTIFIABLE, PROTECTED AND STUBBED 5 FEET ABOVE THE FINISH GRADE.

d) ALL PIPE MATERIAL SHALL CONFORM TO THE APPROVED PLANS AND/OR CURRENT WSDOT/APWA STANDARDS AND SPECIFICATIONS. ALL SUBSTITUTIONS ARE SUBJECT TO APPROVAL BY THE ENGINEER AND CITY OF LYNNWOOD DIRECTOR OF PUBLIC WORKS PRIOR TO CONSTRUCTION.

e) 12 TO 14 GAUGE TRACER WIRE OR LOCATING TAPE SHALL BE INSTALLED AS REQUIRED BY THE CITY OF LYNNWOOD PUBLIC WORKS INSPECTOR.

f) DRAINAGE EASEMENTS ARE REQUIRED FOR DRAINAGE SYSTEMS DESIGNED TO CONVEY FLOWS THROUGH INDIVIDUAL LOTS. VERIFICATION AND APPROVAL IS REQUIRED PRIOR TO CONSTRUCTION.

g) THE APPLICANT/CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUB–OUT CONVEYANCE LINES WITH RESPECT TO THE UTILITIES (E.G. POWER, GAS, TELEPHONE, TELEVISION).

h) ALL INDIVIDUAL STUB–OUTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT HOME OWNER, SHALL BE A MINIMUM OF 4 INCH DIAMETER, AND SHALL BE PROVIDED WITH BACKFLOW PROTECTION AS REQUIRED.

GRADING NOTES

1. REFER TO GENERAL PLAN NOTES FOR FURTHER REQUIREMENTS.

2. GRADING SHALL NOT RESULT IN ANY ADDITIONAL WATER TO ADJOINING PROPERTY. IF ADDITIONAL WATER DOES RESULT, THE APPLICANT WILL SUBMIT A PLAN OF CORRECTIVE ACTION FOR CITY APPROVAL AND WILL COMMENCE WITH THAT ACTION IMMEDIATELY UPON NOTICE FROM CITY.

3. THE CONTRACTOR SHALL OBTAIN APPROVAL FOR ALL FILL AND ROAD CONSTRUCTION MATERIAL WITHIN THE CITY OF LYNNWOOD RIGHT OF WAY FROM THE DIRECTOR OF PUBLIC WORKS PRIOR TO ITS USE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND REPAIRING EXISTING IMPROVEMENTS, AS REQUIRED, UNTIL CONSTRUCTION IS APPROVED BY THE CITY OF LYNNWOOD PUBLIC WORKS DEPARTMENT.

5. THE CITY SHALL VERIFY AND APPROVE ALL BACKFILL TRENCHES AND ROADWAY SUBGRADE PRIOR TO PAVING. THE CITY OF LYNNWOOD IS TO BE PROVIDED WITH THE DENSITY REPORT FROM A CERTIFIED "TESTING LAB" SHOWING SATISFACTORY COMPACTION PER WSDOT 2–06.3(14)D. ALL SUBGRADE PREPARATORY REQUIREMENTS SHALL CONFORM TO SECTION 2–06 OF THE WASHINGTON STATE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

6. A PRECONSTRUCTION SOILS INVESTIGATION SHALL BE REQUIRED AS NEEDED TO EVALUATE SOILS STABILITY.

7. THE MAXIMUM CUT/FILL SLOPE SHALL NOT EXCEED TWO FEET HORIZONTAL TO ONE FOOT VERTICAL UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS. AT NO TIME SHALL THE TOE OF ANY FILL SLOPE BE NEARER TO THE PROPERTY LINE THAN 1/2 THE FILL HEIGHT WITH A MINIMUM OF 2 FEET. CUT SLOPES SHALL NOT BE NEARER TO A PROPERTY LINE THAN 1/5 THE HEIGHT OF THE CUT WITH A MINIMUM OF 2 FEET.

8. ALL RETAINING STRUCTURES FOUR (4) FEET IN HEIGHT OR CARRYING A SURCHARGE SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER EXPERIENCED IN SOILS MECHANICS.

9. A PERFORMANCE BOND IS REQUIRED FOR CONCURRENTLY REVIEWED EARLY GRADE PERMITS. THE BOND SHALL BE RECEIVED PRIOR TO THE ISSUANCE OF THE EARLY GRADE PERMIT AND SHALL NOT BE RELEASED UNTIL APPROVED BY THE CITY OF LYNNWOOD DIRECTOR OF PUBLIC WORKS.

10. ALL NATIVE GROWTH PROTECTION AREAS SHALL BE LEFT IN A SUBSTANTIALLY NATURAL STATE. NO CLEARING, GRADING, FILLING, BUILDING CONSTRUCTION OR PLACEMENT, FENCE CONSTRUCTION, OR ROAD CONSTRUCTION OF ANY KIND SHALL OCCUR WITHIN THESE AREAS; PROVIDED THAT UNDERGROUND UTILITY LINES AND DRAINAGE DISCHARGE SWALES MAY CROSS SUCH AREAS UTILIZING THE SHORTEST ALIGNMENT POSSIBLE IF, AND ONLY IF, NO FEASIBLE ALIGNMENT IS AVAILABLE WHICH WOULD AVOID SUCH A CROSSING. REMOVAL OF VEGETATION BY THE PROPERTY OWNER SHALL BE LIMITED TO THAT WHICH IS DEAD, DISEASED OR HAZARDOUS, AND THEN ONLY WITH THE PERMISSION OF THE CITY OF LYNNWOOD DEPARTMENT OF PUBLIC WORKS.

11. SPECIAL INSPECTION BY AN APPROVED GEOTECHNICAL FIRM IS REQUIRED AS DIRECTED BY THE CITY OF LYNNWOOD DIRECTOR OF PUBLIC WORKS. INSPECTION REPORTS SHALL BE SUBMITTED TO THE CITY OF LYNNWOOD FOR REVIEW, COMMENT AND APPROVAL PRIOR TO PUBLIC WORKS FINAL APPROVAL OF THE WORK.

811
Know what's below.
Call two business days before you dig.

PFN:

R#	DATE	DESCRIPTION	BY

JOSEPH M. SMEBY PROFESSIONAL ENGINEER 12/13/22

NOTES

2707 WETMORE AVE.
EVERETT, WA 98201
t 425.903.4852
f 425.259.1958

OMEGA ENGINEERING, INC.

LYNNWOOD PLACE BOARDWALK
CITY OF LYNNWOOD, WASHINGTON
PORTION OF SECTION 15, TOWNSHIP 27 NORTH, RANGE 4 EAST, W.M.

PROJ. NO.	DSN. BY:
22-0815	JMS

DATE: 12/13/2022
SCALE: N.T.S.
DRAWING NO.: 5 OF 5

GENERAL NOTES

THE FOLLOWING NOTES APPLY EXCEPT WHERE SHOWN OTHERWISE

CODE: INTERNATIONAL BUILDING CODE IBC (2018)

STRUCTURAL LOADS

PEDESTRIAN LIVE LOADS: 100 PSF

ROOF SNOW LOADS: GROUND SNOW LOAD, Pg = 25PSF

WIND LOADS: ULTIMATE DESIGN WIND SPEED = 98 MPH
WIND EXPOSURE: 'B'
Kzt= 1.0

EARTHQUAKE LOADS: SEISMIC OCCUPANCY CATEGORY: II
SEISMIC IMPORTANCE FACTOR, IE = 1
MAPPED ACCELERATIONS, Ss = 1.278 S1 = 0.45
SITE CLASS = C
DESIGN ACCELERATIONS, Sds = 1.022 Sd1 = 0.45
SEISMIC DESIGN CATEGORY: D

SHOP DRAWINGS
SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED, AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED. SUBMITTAL REVIEW IS FOR GENERAL CONFORMANCE ONLY; THIS REVIEW DOES NOT CHECK DIMENSIONS OR QUANTITIES.

FOUNDATIONS
FOUNDATIONS TO BE SUPPORTED ON 4" DIA STEEL PIN PILES. SEE FOUNDATION NOTES ON S2.0 FOR ADDITIONAL INFO.

TIMBER:
STRUCTURAL TIMBER AND LUMBER TO BE STRESS GRADE HEM-FIR OR DOUGLAS FIR AS FOLLOWS:

USE	SPECIES	GRADE	FB
2 X/ 3X/ 4X BEAMS/POST	DOUGLAS FIR	NO. 2	900 PSI
6 X BEAMS/POST	DOUGLAS FIR	NO. 1	1350PSI

WOOD AND WOOD BASED MATERIALS USED IN CONTACT WITH SOIL, CONCRETE OR MASONRY, INSTALLED WITHIN 1" OF CONCRETE OR MASONRY, OR EXPOSED TO MOISTURE EITHER INTERIOR OR EXTERIOR, SHALL BE TREATED WITH AN APPROVED PRESERVATIVE PER THE "PRESERVATIVE TREATMENT" SECTION BELOW. SOLID BLOCKING OF NOT LESS THAN 2" NOMINAL THICKNESS SHALL BE PROVIDED AT ENDS AND AT ALL SUPPORTS OF JOISTS AND RAFTERS. BETWEEN SUPPORTS PROVIDE BLOCKING OR BRIDGING AT 8' - 0" O.C.

ALL SILL PLATES AT SHEAR WALLS TO BE 3X_ PRESERVATIVE TREATED DOUGLAS-FIR #2, U.N.O. ON THE PLANS. SILL PLATES SHALL HAVE A MOISTURE CONTENT OF NOT GREATER THAN 19% BEFORE BEING COVERED WITH INSULATION, INTERIOR WALL FINISH, FLOOR COVERING OR OTHER MATERIAL.

ALL STUD WALL SILL AND TOP PLATE MEMBERS SHALL BE SURFACE-DRIED (S-DRY) LUMBER (MOISTURE CONTENT = 19% OR LESS DURING FRAMING). ALL STUDS AND POSTS MAY BE SURFACE-GREEN (S-GREEN) LUMBER (MOISTURE CONTENT = 19% TO 23% DURING FRAMING) OR S-DRY LUMBER. THE MOISTURE CONTENT OF THE FRAMING SHALL BE LESS THAN 12 % PRIOR TO INSTALLATION OF GYPSUM WALLBOARD SHEATHING.

STRUCTURAL STEEL:
WIDE FLANGE SHAPES TO BE ASTM A992,FY=50 KSI.
CHANNELS, ANGLES, AND PLATES TO BE ASTM A36, FY=36 KSI.
PIPE COLUMNS TO BE ASTM A53, GRADE B, FY=35 KSI.
HSS RECTANGULAR AND SQUARE STRUCTURAL TUBE TO BE ASTM A500, GRADE B, FY=46 KSI.
HSS ROUND STRUCTURAL TUBE TO BE ASTM A500, GRADE B, FY=42 KSI.

ALL STEEL EXCEPT STEEL EMBEDDED IN CONCRETE SHALL BE GIVEN ONE SHOP COAT OF APPROVED PAINT.
ALL STEEL AND CONNECTION HARDWARE EXPOSED TO WEATHER TO BE HOT DIPPED GALVANIZED.
WELDS TO BE 3/16" MINIMUM CONTINUOUS FILLET, BY CERTIFIED WELDERS USING E70XX ELECTRODES.
ALL WELDING SHALL BE PERFORMED IN STRICT ADHERENCE TO A WRITTEN WELDING PROCEDURE SPECIFICATION (WPS) PER AWS D1.8. ALL WELDING PARAMETERS SHALL BE WITHIN THE ELECTRODE MANUFACTURER'S RECOMMENDATIONS. WELDING PROCEDURES SHALL BE SUBMITTED TO THE OWNER'S TESTING AGENCY FOR REVIEW BEFORE STARTING FABRICATION OR ERECTIONS. COPIES OF THE WPS SHALL BE ON SITE AND AVAILABLE TO ALL WELDERS AND THE SPECIAL INSPECTOR.

STEEL TO STEEL BOLTED CONNECTIONS ARE SHOWN TO BE BEARING-TYPE CONNECTIONS USING A325 BOLTS WITH THREADS INCLUDED IN THE SHEAR PLANE. HOLE SIZE SHALL BE IN ACCORDANCE WITH AISC SPECIFICATION FOR BEARING CONNECTION AND BOLTS SHALL BE TIGHTENED TO SNUG-TIGHT CONDITION. WHERE BOLTS ARE NOTED A325SC, CONNECTIONS SHALL BE FRICTION-TYPE CONNECTIONS WITH BOLTS TENSIONED AND USING APPROPRIATE HARDENED STEEL WASHERS AS REQUIRED BY AISC STANDARDS.

SUBMIT SHOP DRAWINGS PREPARED BY AN EXPERIENCED DETAILER FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS TO BE COMPLETE, SHOWING ALL WELDS AND MATERIAL GRADES. PROVIDE A PLAN LOCATION OR DETAIL REFERENCE FOR EACH SHOP DRAWING. FOR MINOR STEEL-TO-STEEL CONNECTIONS OF 12" AND SMALLER STEEL MEMBERS: IF AN EXPLICIT CONNECTION IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, DETAILER IS TO PROPOSE A CONNECTION SIMILAR TO THE CONNECTIONS ON THE DRAWINGS OR PER AISC STANDARD CONNECTIONS. ON THE SHOP DRAWING, CLOUD THE CONNECTION AND STATE "VERIFY." SHOP DRAWINGS NOT MEETING THESE CONDITIONS WILL BE REJECTED. REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR DESIGN INTENT ONLY, AND DOES NOT INCLUDE VERIFICATION OF DIMENSIONS AND QUANTITIES. VERIFICATION OF DIMENSIONS AND QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

STEEL FABRICATORS AND DETAILERS: BASE BID TO INCLUDE STEEL DETAILER AND FABRICATOR TIME AND COSTS FOR ROUTINE CONSTRUCTION QUESTIONS. ROUTINE CONSTRUCTION QUESTIONS INCLUDE DIMENSIONAL QUESTIONS AND MINOR FRAMING QUESTIONS. ROUTINE CONSTRUCTION QUESTIONS ARE PART OF THE NORMAL CONSTRUCTION PROCESS, AND ARE TO BE INCLUDED IN THE BASE BID.

WOOD CONNECTORS:
WHERE THE STRUCTURE IS LOCATED IN SDC A, B OR C CHANGE 3"X3"X1/4" PLATE WASHERS TO "STANDARD" WASHERS.

SILL BOLTS TO BE 3/4" DIAMETER EMBEDDED 7" INTO THE CONCRETE. MAXIMUM SPACING OF SILL BOLTS SHALL BE 48" O.C. AT DESIGNATED SHEARWALLS SILL BOLT SPACING SHALL BE PER THE PLANS. USE GALVANIZED 3" X 3" X 1/4" PLATE WASHERS, WITH HOLES NO GREATER THAN 3/16" LARGER THAN THE BOLT DIAMETER AT ALL SHEARWALL SILL BOLTS. PROVIDE A MINIMUM OF TWO BOLTS EACH PIECE. PROVIDE ONE BOLT AT EACH END OF EACH PIECE, NOT LESS THAN 6" AND NOT MORE THAN 12" FROM THE END.

BOLT HEADS AND NUTS BEARING AGAINST WOOD TO BE PROVIDED WITH MALLEABLE IRON WASHERS EXCEPT ON STEEL BEAM NAILERS USE CUT WASHERS. NAILERS TO STEEL BEAMS SHALL BE ATTACHED WITH 5/8" BOLTS AT 3' - 0" O.C. STAGGERED.

NAILS SHALL CONFORM TO REQUIREMENTS OF ASTM F 1667 AND HAVE A MINIMUM BENDING STRENGTH OF 90 KSI FOR SHANK DIAMETERS BETWEEN .142" AND .177". ALL WOOD-TO-WOOD NAILING SHALL BE PER IBC TABLE 2304.10.1. IF PLANS AND DETAILS SPECIFY 8D, 10D OR 16D NAILS, THEY SHALL HAVE THE FOLLOWING PROPERTIES:

8D = 0.131" DIA X 2-1/2"
10D = 0.148" DIA X 3"
16D = 0.162" DIA X 3-1/2"

ALL SUBSTITUTIONS SHALL HAVE THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD PRIOR TO USE.

LIGHT GAUGE METAL FRAMING CONNECTORS AND THEIR REQUIRED FASTENERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, OR APPROVED EQUAL.

ALL FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED STEEL WITH A G185 SPECIFICATION OR TYPE 304 & 316 STAINLESS STEEL. TYPE 304 AND 316 STAINLESS STEEL SHOULD BE USED FOR ALL CONNECTORS AND FASTENERS IN CONTACT WITH AZCA TREATED WOOD AND SOME VARIATIONS OF ACQ TREATED WOODS. HOT-DIPPED GALVANIZED STEEL SHOULD NEVER COME IN CONTACT WITH STAINLESS STEEL.

STRUCTURAL GLUED-LAMINATED LUMBER:
SHALL BE FABRICATED TO THE REQUIREMENTS OF ANSI/AITC A190.1. LUMBER SHALL BE VISUALLY GRADED WESTERN SPECIES, COMBINATION 24F-V4 FOR SIMPLE BEAMS, 24F-V8 FOR CANTILEVER BEAMS AND COLUMNS. LAMINATED MEMBERS TO BE AITC CERTIFIED. ADHESIVES USED IN THE GLULAM MANUFACTURING PROCESS SHALL CONFORM TO AITC 405 FOR WET USE ADHESIVES.

PRESERVATIVE TREATMENT:
ALL LUMBER, TIMBER, PLYWOOD, GLUE-LAMINATED AND OTHER COMPOSITE LUMBER THAT IS IN CONTACT WITH CONCRETE OR MASONRY OR EXPOSED TO WEATHER SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH CURRENT AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA) PRESERVATIVE (P) STANDARDS. THESE MEMBERS SHALL BE TREATED WITH AN APPROVED PRESERVATIVE IN ACCORDANCE WITH CURRENT AWPA COMMODITY (C) STANDARDS AND THE AWPA USE CATEGORY SYSTEM (UCS). WHEREVER POSSIBLE, PRECUT ALL MATERIAL BEFORE TREATMENT. HANDLE TREATED LUMBER IN ACCORDANCE WITH AWPA M4 STANDARDS.

FIELD CUTS, HOLES (SUCH AS ANCHOR BOLT HOLES IN TREATED SILL PLATES) AND PENETRATION DAMAGE SHALL BE TREATED IN ACCORDANCE WITH THE CURRENT AWPA M4 STANDARDS. THE MOST COMMONLY AVAILABLE PRESERVATIVE MEETING THE REQUIREMENTS OF STANDARD M4 IS A COPPER NAPHTHENATE SOLUTION CONTAINING AT LEAST 2% COPPER. CERTAIN DAP, WM BARR, CUPRINOL, BEHR, GREEN'S, JASCO, HENRY AND FIELDS PRESERVATIVE PRODUCTS CONTAIN THIS METAL CONTENT.

ALL FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED OR TYPE STAINLESS STEEL. SEE THE "WOOD CONNECTORS" SECTION.

DEFERRED SUBMITTALS:
THE FOLLOWING ITEMS ARE CONSIDERED TO BE DEFERRED SUBMITTALS UNDER SECTION 107.3.4.1 OF THE INTERNATIONAL BUILDING CODE AND MUST BE SUBMITTED TO THE ARCHITECT OR THE ENGINEER FOR REVIEW. SUBMITTALS TO INCLUDE FULL, DETAILED DESIGN, DRAWINGS, AND CALCULATIONS SIGNED BY A PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. DESIGNS SIGNED BY AN ENGINEER WHO IS NOT LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED WILL BE REJECTED WITHOUT REVIEW. THESE ITEMS WILL THEN BE FORWARDED TO THE BUILDING OFFICIAL FOR APPROVAL. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

- PIN PILES

SPECIAL INSPECTIONS

SPECIAL INSPECTION SCHEDULE

REQUIRED INSPECTIONS AND VERIFICATIONS FOR WOOD

TYPE	CONTINUOUS	PERIODIC	REFERENCE STANDARD	IBC REFERENCE
DECK PLANKS : VERIFY DECK THICKNESS AND GRADE, NAIL SIZE AND SPACING, BOLTING AND BACKWALL ANCHORAGE.		X		1705.5.1
RAILING SYSTEM (RAILS AND POSTS) : VERIFY SIZE AND GRADE, NAIL SIZE AND SPACING, BOLTING ANCHORAGE.		X		1705.11.1

SPECIAL INSPECTION SCHEDULE

REQUIRED INSPECTIONS AND VERIFICATIONS FOR PIN PILES

TYPE	CONTINUOUS	PERIODIC	REFERENCE STANDARD	IBC REFERENCE
STEEL PIN PILE INSTALLATION.	X			IBC 1705.9

REQUIRED INSPECTIONS AND VERIFICATIONS FOR STEEL CONSTRUCTION			
	TYPE	FREQUENCY OF INSPECTIONS	REFERENCE STANDARD
1.	THE FABRICATOR'S QCI SHALL INSPECT THE FOLLOWING AS A MINIMUM, AS APPLICABLE:		AISC 360 CH. M AND N
a.	SHOP WELDING, HIGH STRENGTH BOLTING AND DETAILS IN ACCORDANCE WITH AISC 360, SECTION N5.	PER AISC	TABLE N5.4-1 TABLE N5.4-2
b.	SHOP CUT AND FINISHED SURFACES IN ACCORDANCE WITH AISC 360, SECTION M2.	PER AISC	TABLE N5.4-3 TABLE N5.6-1
c.	SHOP HEATING FOR STRAIGHTENING, CAMBERING AND CURVING IN ACCORDANCE WITH AISC 360, SECTION M2.1.	PER AISC	TABLE N5.6-2 TABLE N5.6-3
d.	TOLERANCES FOR SHOP FABRICATION IN ACCORDANCE WITH THE CODE OF STANDARD PRACTICE, SECTION 6.4.	PER AISC	CODE OF STANDARD PRACTICE SEC. 6
2.	THE ERECTOR'S QCI SHALL INSPECT THE FOLLOWING AS A MINIMUM, AS APPLICABLE:		
a.	FIELD WELDING, HIGH STRENGTH BOLTING AND DETAILS IN ACCORDANCE WITH AISC 360, SECTION N5.	PER AISC	AISC 360 CH. M AND N TABLE N5.4-1
b.	STEEL DECK IN ACCORDANCE WITH SDI STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR INSTALLATION OF STEEL DECK	PER AISC	TABLE N5.4-2 TABLE N5.4-3
c.	HEADED STEEL STUD ANCHOR PLACEMENT AND ATTACHMENT I ACCORDANCE WITH SECTION N5.4	PER AISC	TABLE N5.6-1 TABLE N5.6-2
d.	FIELD CUT SURFACES IN ACCORDANCE WITH AISC 360, SECTION M2.2.	PER AISC	TABLE N5.6-3
e.	FIELD HEATING FOR STRAIGHTENING IN ACCORDANCE WITH AISC 360, SECTION M2.1.	PER AISC	
f.	TOLERANCES FOR FIELD ERECTION IN ACCORDANCE WITH THE CODE OF STANDARD PRACTICE, SECTION 7.13.	PER AISC	CODE OF STANDARD PRACTICE SEC. 7
3.	QAI SHALL BE PERFORMED BY OTHERS. ALL REQUIRED INSPECTION AND NON-DESTRUCTIVE TESTING, AS APPLICABLE, SHALL BE IN ACCORDANCE WITH AISC 360	PER AISC & IBC	AISC 360 CH. M AND N

STRUCTURAL SUBMITTAL: REPORTS, CERTIFICATES, AND OTHER DOCUMENTS RELATED TO STRUCTURAL SPECIAL INSPECTIONS AND TESTS AS STATED BELOW AND AS PERFORMED PER SCHEDULE PROVIDED ON THIS SHEET SHOULD BE SUBMITTED BY CONTRACTOR TO THE BUILDING DEPARTMENT. THE CERTIFICATES OF COMPLIANCE ARE REQUIRED TO STATE THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

NOTE: ALL TESTING AND INSPECTIONS AS STIPULATED IN THIS SHEET TO BE CONDUCTED ONLY BY QUALIFIED SPECIAL INSPECTORS.

REVISION	DATE

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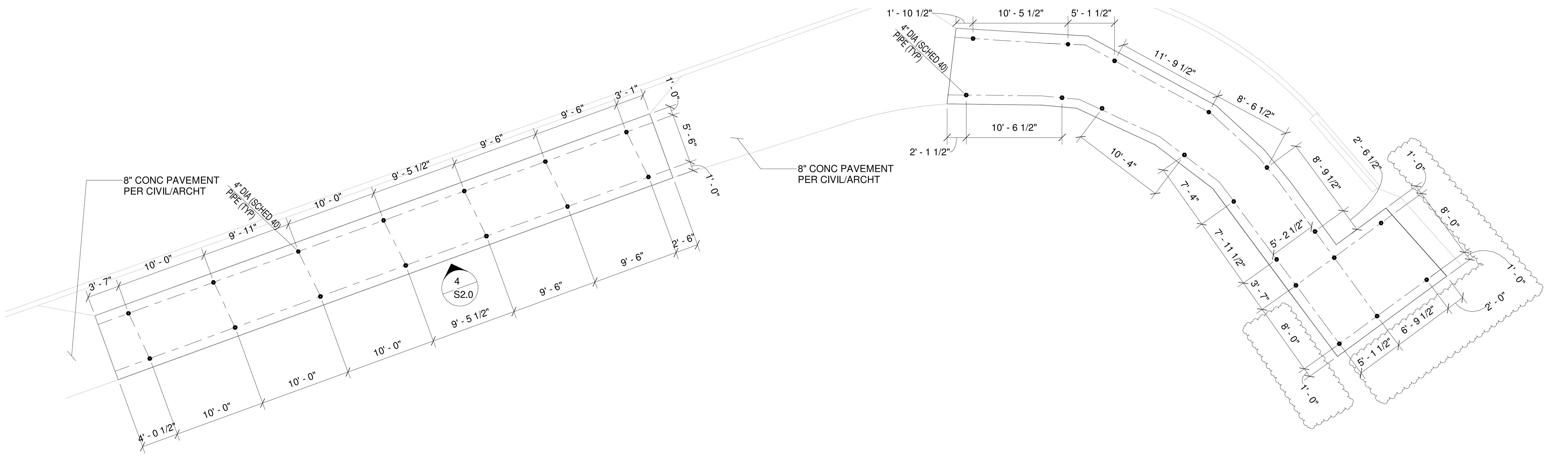
SHEET CONTENTS:
GENERAL NOTES AND SPECIAL INSPECTIONS

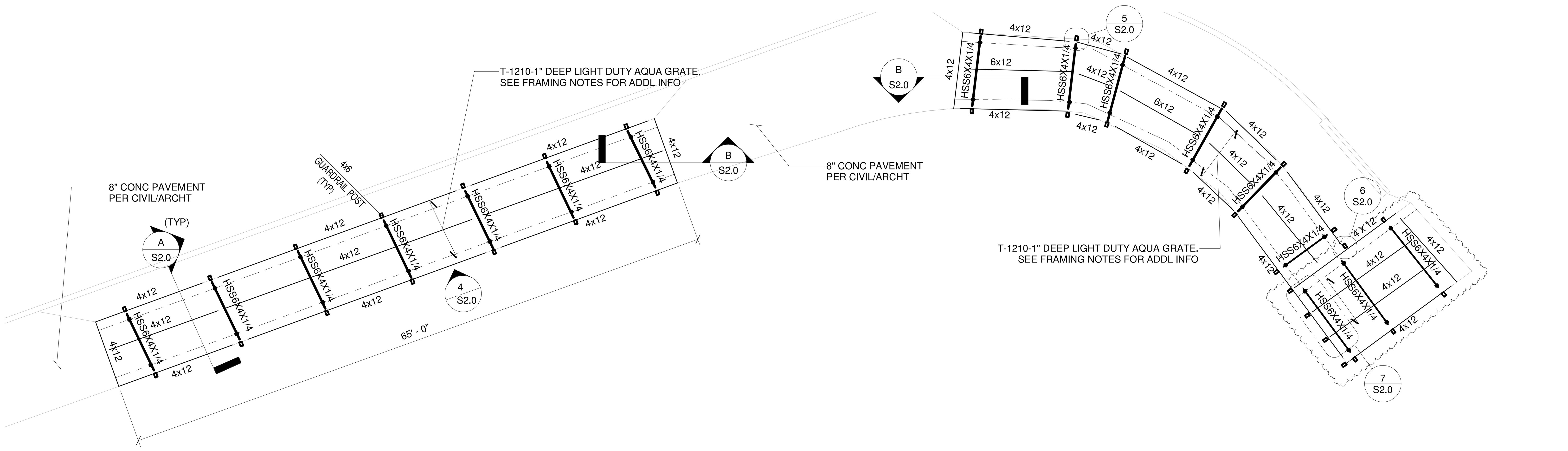
JOB No.	22096
DWN BY:	SMV
CHKD BY:	PSM
DATE:	12/14/22

SHEET No.

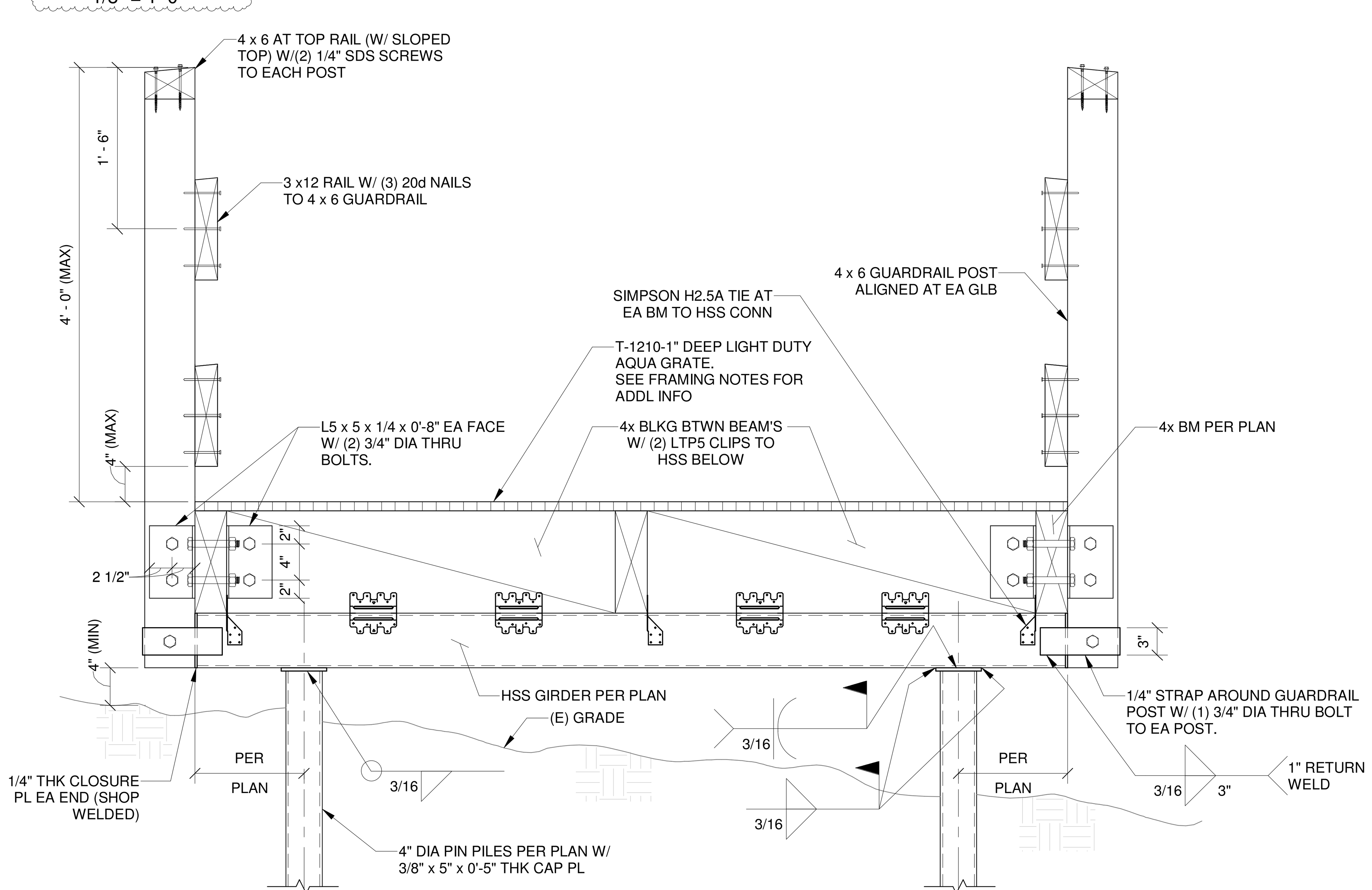
S1.0



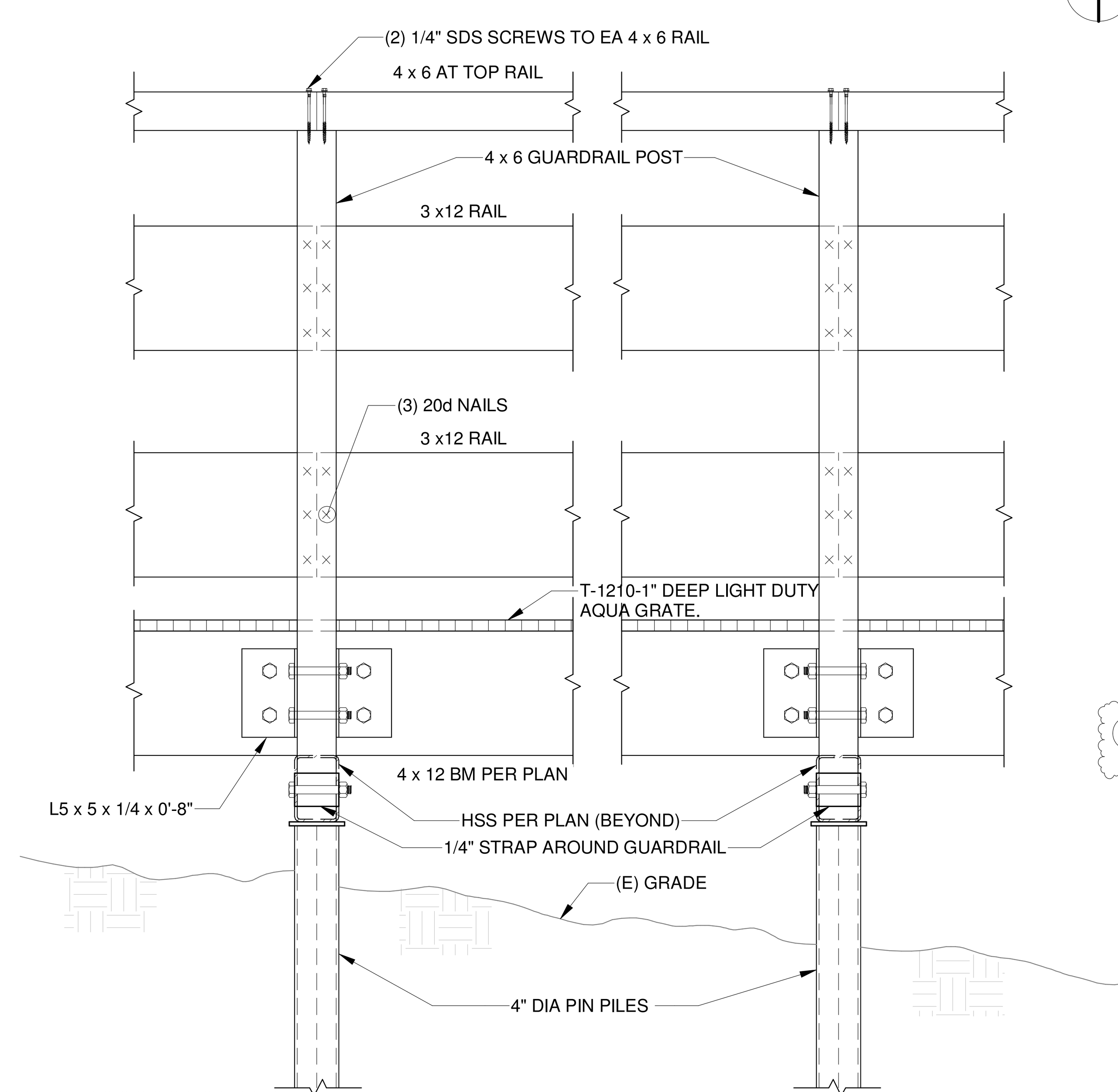
1 PIN PILE LAYOUT PLAN
1/8" = 1'-0"



2 FRAMING PLAN
1/8" = 1'-0"



A SECTION
1" = 1'-0"



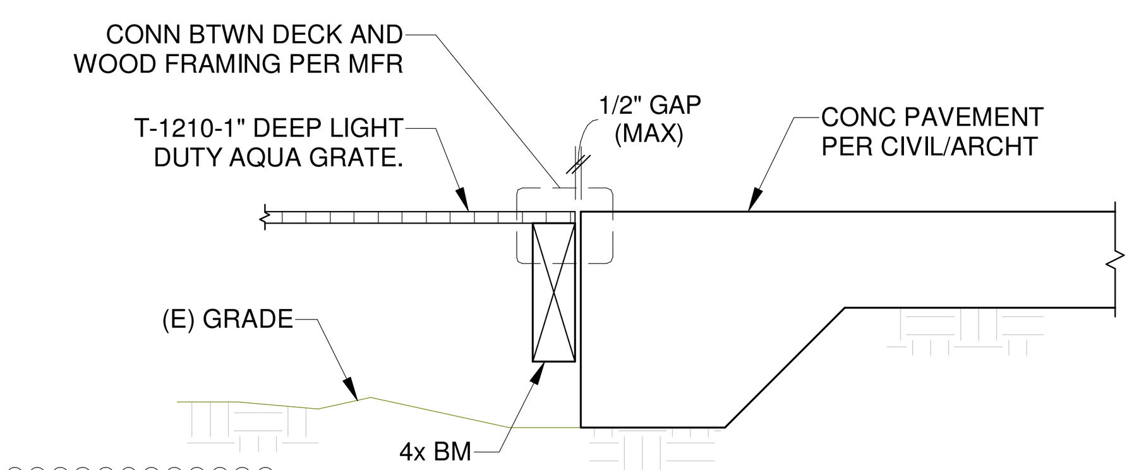
4 PARTIAL ELEVATION
1" = 1'-0"

FOUNDATION NOTES

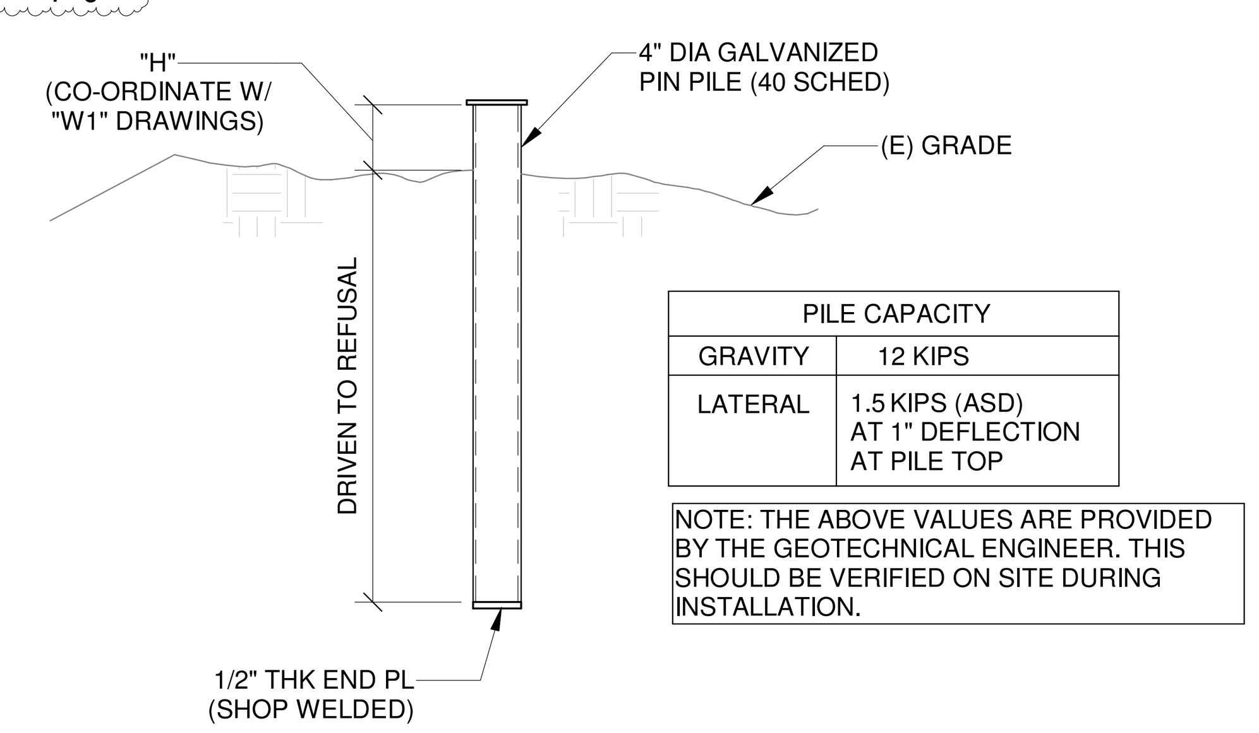
1. DRAWINGS TO BE READ IN CONJUNCTION WITH GEOTECHNICAL CONSULTANT DRAWING SHEET "W1". DIMENSIONS AND LAYOUT OF PIN PILES ARE CONTROLLED BY THESE DRAWINGS. ANY DISCREPANCY IN DIMENSION AND LAYOUT BETWEEN THESE AND STRUCTURAL DRAWINGS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION.
2. STEEL PIN PILES TO BE GALVANIZED AND DRIVEN TO REFUSAL TO ACHIEVE A CAPACITY AS DETAILED IN 3/S2.0.
3. PILES TO BE DRIVEN VERTICALLY PLUMB. SEE GEOTECHNICAL REPORT OF THIS PROJECT FOR ADDITIONAL INSTALLATION REQUIREMENTS.
4. GC TO ENSURE INSTALLATION OF NEW PIN PILES DOES NOT FOUL WITH ANY EXISTING UNDERGROUND UTILITY LINES. IN CASE OF ANY CONFLICT REPORT TO EOR BEFORE PROCEEDING FURTHER.
5. SEE S1.0 FOR GENERAL NOTES AND SPECIAL INSPECTIONS.

FRAMING NOTES

1. ALL WOOD FRAMING MEMBERS TO BE PT PER GENERAL NOTES SECTION OF THIS PROJECT.
2. ALL STEEL FRAMING AND ITS CONNECTION HARDWARE TO BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.
3. THE DESIGN SECTIONS REFERENCED ON DRAWINGS SPECIFY "T-1210 1" DEEP LIGHT DUTY" TO BE PULTRUDED GRATING SYSTEM WITH MATERIAL PROPERTIES CONFORMING TO MFR'S STANDARD AS SPECIFIED IN "AQUA GRATE PEDESTRIAN GRATING MANUAL" FROM FIBERGRATE MFR. AN ALTERNATE GRATING PRODUCT FROM DIFFERENT MFR CONFORMING TO DESIGN REQUIREMENTS OF THIS PROJECT MAY BE SUBMITTED BY GC FOR APPROVAL TO EOR. GRATING TO BE ANCHROED AND SECURED OVER WOOD FRAMING AS PER MFR'S REQUIREMENTS.
4. SPECIAL CARE TO BE TAKEN TO FIELD WELD GALVANIZED STEEL MEMBERS.



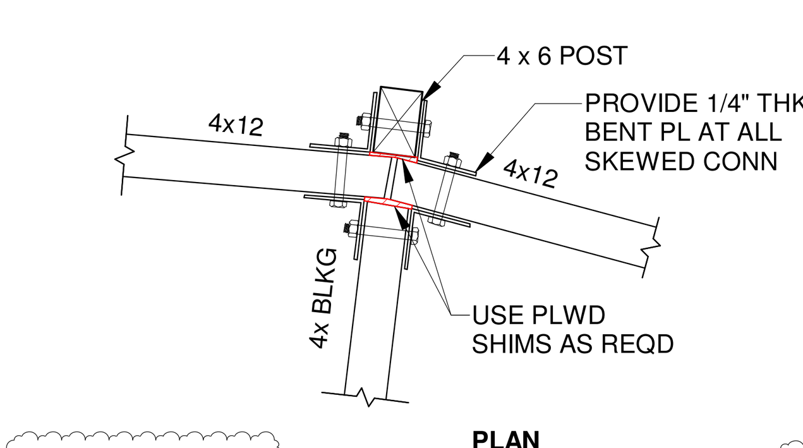
B SECTION
3/4" = 1'-0"



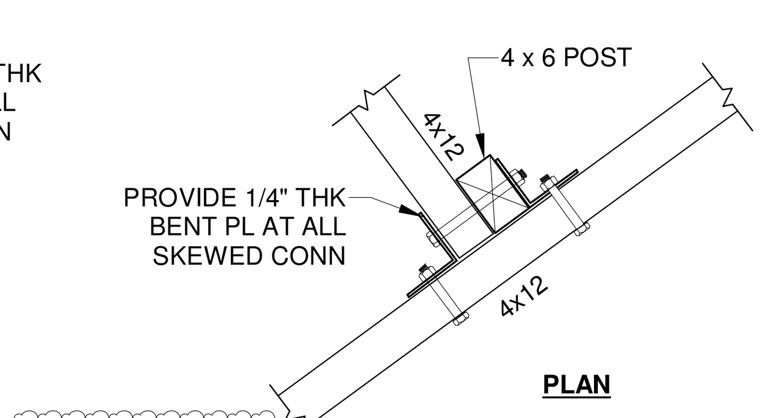
PILE CAPACITY	
GRAVITY	12 KIPS
LATERAL	1.5 KIPS (ASD) AT 1" DEFLECTION AT PILE TOP

NOTE: THE ABOVE VALUES ARE PROVIDED BY THE GEOTECHNICAL ENGINEER. THIS SHOULD BE VERIFIED ON SITE DURING INSTALLATION.

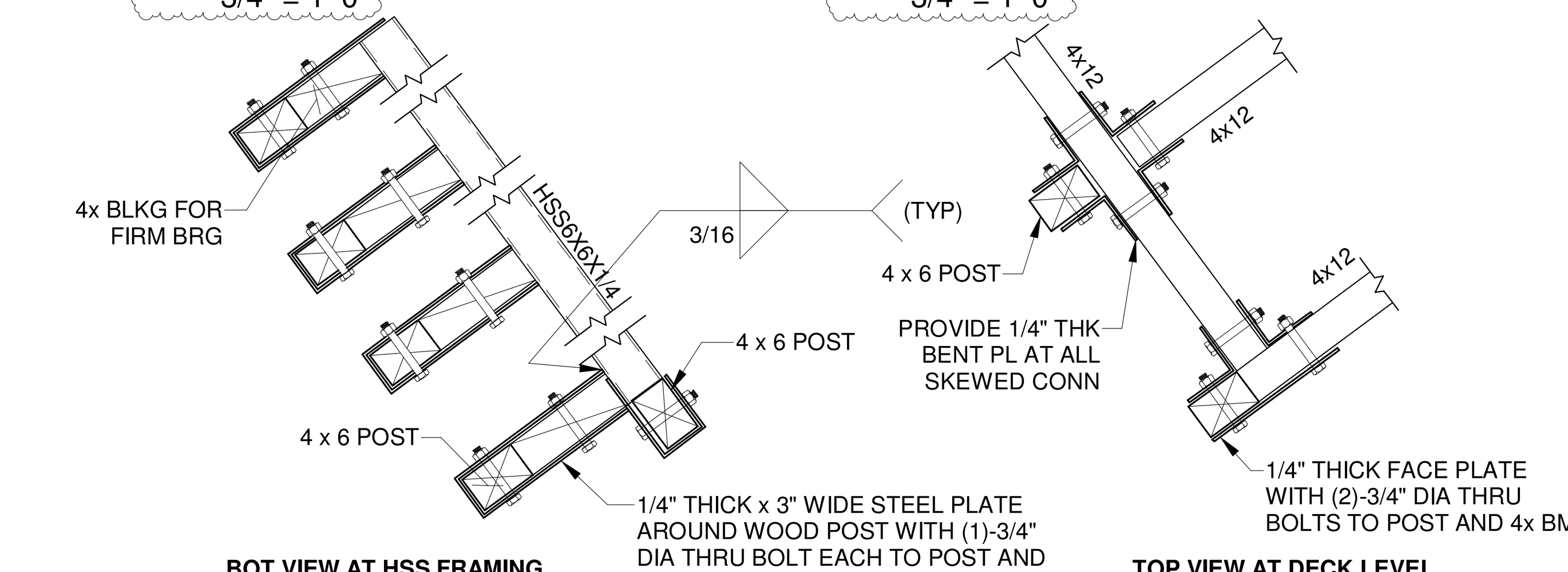
3 TYPICAL PIN PILE INSTALLATION DETAIL
3/4" = 1'-0"



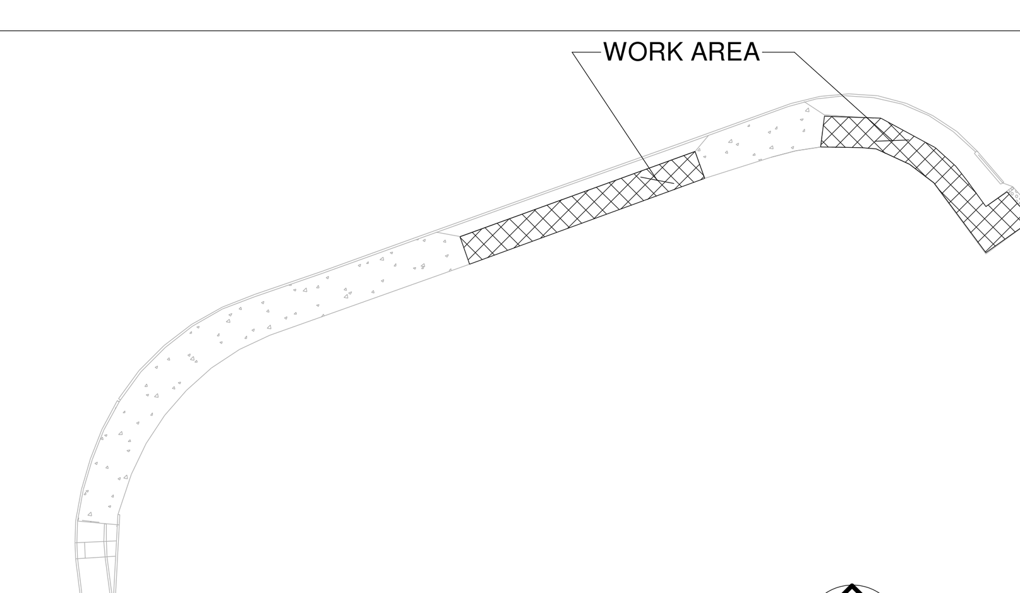
5 DETAIL
3/4" = 1'-0"



6 DETAIL
3/4" = 1'-0"

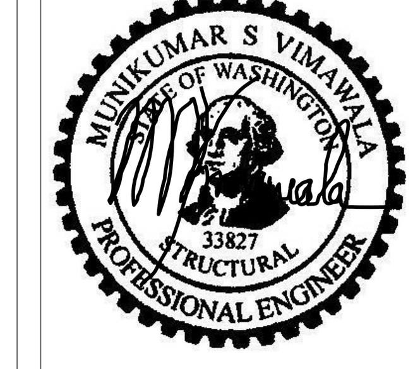


7 DETAIL
3/4" = 1'-0"



KEY PLAN

REVISION	DATE



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SHEET CONTENTS:
PLANS, SECTIONS, ELEVATION AND DETAILS

JOB No.	22096
DWN BY:	SMV
CHKD BY:	PSM
DATE:	12/14/22
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