



Exhibit G: Service Provider Letters (Updated)

Glen Southerland

From: Foster, Jeremy L. <Jeremy.Foster@tvfr.com>
Sent: Tuesday, January 30, 2024 3:36 PM
To: Steve Russell
Subject: RE: Online Form Submittal: Service provider permit for Beaverton

Categories: Filed by Newforma



IRONSCALES couldn't recognize this email as this is the first time you received an email from this sender
Jeremy.Foster@tvfr.com

Proceed with caution: This email hails from an external source. Unverified emails may lead to phishing attacks or malware infiltration. Always exercise due diligence.

Good afternoon Steve-

I reviewed your application for the replacement of the Williwow Creek Trail boardwalk. This is not considered a building and therefore not regulated by the Oregon Fire Code. TVF&R will not require a Service Provider Permit (SPP) for this project. Please submit this e-mail with your land use application.

Thank you,

Jeremy Foster | Deputy Fire Marshal

Tualatin Valley Fire & Rescue

Direct: 503-259-1414

www.tvfr.com

From: noreply@civicplus.com <noreply@civicplus.com>

Sent: Wednesday, January 24, 2024 11:26 AM

To: Ernst, Brian C. <Brian.Ernst@tvfr.com>; Foster, Jeremy L. <Jeremy.Foster@tvfr.com>; Weisgerber, Gregory A. <Gregory.Weisgerber@tvfr.com>

Subject: Online Form Submittal: Service provider permit for Beaverton

The sender is from outside TVF&R – Do not click on links or attachments unless you are sure they are safe

Service provider permit for Beaverton

Instructions

1. Complete & submit the [TVF&R Permit Application](#)
2. Complete & submit the [Fire Department Access and Water Supply Permit Checklist](#)
3. Attach one plan sheet, labeled FS-1, that clearly shows all access and water supply requirements of the Fire Department Access and Water Supply Permit Checklist. If more plan sheets are necessary, label them FS-2, FS-3, etc. Please keep plan sheets to a minimum.

Once approved, an electronically stamped plan will be returned to you. The approved plan and permit application will then need to be submitted with your land use application to the [city of Beaverton Planning Department](#). If you have further questions, please contact Jeremy Foster at 503-259-1414 or Brian Ernst at 503-259-1422.

Name	Steve Russell
Email	RussellS@aks-eng.com
City	Beaverton
1) Submit Permit Application	8015-01 20240124 TVFR Universal Permit Application.pdf
2) Submit Permit Checklist	8015-01 20240124 Project Permit Checklist.pdf
3) Submit Plan Sheet (s)	8015-01 Willow Creek Boardwalk - 1N132BC03001.pdf
4) Additional Documentation (Optional)	Field not completed.
5) Additional Documentation (Optional)	Field not completed.

Email not displaying correctly? [View it in your browser.](#)

**FIRE CODE / LAND USE / BUILDING REVIEW
APPLICATION**



North Operating Center
11945 SW 70th Avenue
Tigard, OR 97223
Phone: 503-649-8577

South Operating Center
8445 SW Elligsen Rd
Wilsonville, OR 97070
Phone: 503-649-8577

REV 6-30-20

Applicant's Representative:	Project Information Steve Russell
Applicant Name:	AKS Engineering & Forestry, LLC
Address:	12965 SW Herman Road, Suite 100
Phone:	503-563-6151
Email:	russells@aks-eng.com
Site Address:	No situs
City:	Beaverton
Map & Tax Lot #:	1N132BC03001
Business Name:	Tualatin Hills Park and Recreation District
Land Use/Building Jurisdiction:	Beaverton
Land Use/ Building Permit #	LU32023-00902
Choose from:	Beaverton, Tigard, Newberg, Tualatin, North Plains, West Linn, Wilsonville, Sherwood, Rivergrove, Durham, King City, Washington County, Clackamas County, Multnomah County, Yamhill County
Project Description	
Replacement construction of a raised boardwalk pathway between the Waterhouse Trail, a regional trail facility, and NW Waterhouse Avenue.	

Permit/Review Type (check one):	
<input checked="" type="checkbox"/>	Land Use / Building Review - Service Provider Permit
<input type="checkbox"/>	Emergency Radio Responder Coverage Install/Test
<input type="checkbox"/>	LPG Tank (Greater than 2,000 gallons)
<input type="checkbox"/>	Flammable or Combustible Liquid Tank Installation (Greater than 1,000 gallons)
* Exception: Underground Storage Tanks (UST) are deferred to DEQ for regulation.	
<input type="checkbox"/>	Explosives Blasting (Blasting plan is required)
<input type="checkbox"/>	Exterior Toxic, Pyrophoric or Corrosive Gas Installation (in excess of 810 cu.ft.)
<input type="checkbox"/>	Tents or Temporary Membrane Structures (in excess of 10,000 square feet)
<input type="checkbox"/>	Temporary Haunted House or similar
<input type="checkbox"/>	OLCC Cannabis Extraction License Review
<input type="checkbox"/>	Ceremonial Fire or Bonfire (For gathering, ceremony or other assembly)
For Fire Marshal's Office Use Only	
TVFR Permit #	_____
Permit Type:	_____
Submittal Date:	_____
Assigned To:	_____
Due Date:	_____
Fees Due:	_____
Fees Paid:	_____

Approval/Inspection Conditions (For Fire Marshal's Office Use Only)	
<p>This section is for application approval only</p> <p>Fire Marshal or Designee _____ Date _____</p> <p>Conditions:</p> <p>See Attached Conditions: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Site Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>This section used when site inspection is required</p> <p>Inspection Comments:</p> <p>_____</p> <p>Final TVFR Approval Signature & Emp ID _____ Date _____</p>

AMENDED Service Provider Letter

23-002781

This form and the attached conditions will serve as your Service Provider Letter in accordance with Clean Water Services Design and Construction Standards (R&O 19-5, as amended by R&O 19-22).

Jurisdiction:	<u>City of Beaverton</u>	Review Type:	<u>Tier 2 Analysis</u>
		SPL Original Date:	<u>November 13, 2023</u>
Site Address / Location:	<u>NW Waterhouse Ave & NW 185th Ave</u> <u>Beaverton, OR 97006</u>	SPL Amendment Date:	<u>February 23, 2024</u>
		SPL Expiration Date:	<u>February 22, 2026</u>

Applicant Information:		Owner Information:	
Name	<u>SONYA DAVIS</u>	Name	<u>RENE BRUCKER</u>
Company	<u>AKS ENGINEERING & FORESTRY. LLC</u>	Company	<u>THPRD</u>
Address	<u>12965 SW HERMAN RD, SUITE 100</u> <u>TUALATIN, OR 97062</u>	Address	<u>6220 SW 112TH AVE, STE 100</u> <u>BEAVERTON, OR 97008</u>
Phone/Fax	<u>(503) 563-6151</u>	Phone/Fax	<u></u>
E-mail:	<u>daviss@aks-eng.com</u>	E-mail:	<u></u>

Tax lot ID	Development Activity
<u>1N131AD00102</u>	<u>THPRD Willow Creek Boardwalk</u>
<u>1N131DA12000</u>	<u>Widening and Realignment</u>
<u>1N132BC03001</u>	<u></u>
<u></u>	<u></u>
<u></u>	<u></u>

<p>Pre-Development Site Conditions:</p> <p>Sensitive Area Present: <input checked="" type="checkbox"/> On-Site <input checked="" type="checkbox"/> Off-Site</p> <p>Vegetated Corridor Width: <u>50</u></p> <p>Vegetated Corridor Condition: <u>Good/Marginal/Degraded</u></p>	<p>Post Development Site Conditions:</p> <p>Sensitive Area Present: <input checked="" type="checkbox"/> On-Site <input checked="" type="checkbox"/> Off-Site</p> <p>Vegetated Corridor Width: <u>50</u></p>
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Enhancement of Remaining Vegetated Corridor Required: **Square Footage to be enhanced:** 15,500

Encroachments into Pre-Development Vegetated Corridor:

Type and location of Encroachment:	Square Footage:
<u>Trail/boardwalk widening and realignment (Permanent encroachment; Mitigation required)</u>	<u>2,920</u>
<u>Trail/boardwalk construction (Temporary encroachment; Restoration and mitigation in-place required)</u>	<u>9,980</u>
<u></u>	<u></u>

Mitigation Requirements:

Type/Location	Sq. Ft./Ratio/Cost
<u>Onsite/Replacement Mitigation through removal of existing trail and reestablishment of VC</u>	<u>2290</u>
<u>1,617 SF of Wetland & 4,596 SF of additional good VC enhancement as Public Benefit</u>	<u>6,213</u>
<u></u>	<u></u>

Conditions Attached Development Figures Attached (5) Planting Plan Attached Geotech Report Required

This Service Provider Letter does NOT eliminate the need to evaluate and protect water quality sensitive areas if they are subsequently discovered on your property.

In order to comply with Clean Water Services water quality protection requirements the project must comply with the following conditions:

1. No structures, development, construction activities, gardens, lawns, application of chemicals, uncontained areas of hazardous materials as defined by Oregon Department of Environmental Quality, pet wastes, dumping of materials of any kind, or other activities shall be permitted within the sensitive area or Vegetated Corridor which may negatively impact water quality, except those allowed in R&O 19-5, Chapter 3, as amended by R&O 19-22.
2. Prior to any site clearing, grading or construction the Vegetated Corridor and water quality sensitive areas shall be surveyed, staked, and temporarily fenced per approved plan. During construction the Vegetated Corridor shall remain fenced and undisturbed except as allowed by R&O 19-5, Section 3.06.1, as amended by R&O 19-22 and per approved plans.
3. **Prior to any activity within the sensitive area, the applicant shall gain authorization for the project from the Oregon Department of State Lands (DSL) and US Army Corps of Engineers (USACE). The applicant shall provide Clean Water Services or its designee (appropriate city) with copies of all DSL and USACE project authorization permits.**
4. An approved Oregon Department of Forestry Notification is required for one or more trees harvested for sale, trade, or barter, on any non-federal lands within the State of Oregon.
5. Prior to ground disturbing activities, an erosion control permit is required. Appropriate Best Management Practices (BMP's) for Erosion Control, in accordance with Clean Water Services' Erosion Prevention and Sediment Control Planning and Design Manual, shall be used prior to, during, and following earth disturbing activities.
6. Prior to construction, a Stormwater Connection Permit from Clean Water Services or its designee is required pursuant to Ordinance 27, Section 4.B.
7. Activities located within the 100-year floodplain shall comply with R&O 19-5, Section 5.10, as amended by R&O 19-22.
8. Removal of native, woody vegetation shall be limited to the greatest extent practicable.
9. The water quality swale and detention pond shall be planted with Clean Water Services approved native species, and designed to blend into the natural surroundings.
10. **Should final development plans differ significantly from those submitted for review by Clean Water Services, the applicant shall provide updated drawings, and if necessary, obtain a revised Service Provider Letter.**
11. The Vegetated Corridor width for sensitive areas within the project site shall be a minimum of 50 feet wide, as measured horizontally from the delineated boundary of the sensitive area.
12. For Vegetated Corridors greater than 50 feet in width, the applicant shall enhance the first 50 feet closest to the sensitive area to meet or exceed good corridor condition as defined in R&O 19-5, Section 3.14.2, Table 3-3, as amended by R&O 19-22 **or equal to the project footprint, meeting Linear Development Projects, Section 3.12.b, and as approved on attached documents.**
13. **Removal of invasive non-native species by hand is required in all Vegetated Corridors rated ""good."" Replanting is required in any cleared areas larger than 25 square feet using low impact methods. The applicant shall calculate all cleared areas larger than 25 square feet prior to the preparation of the required Vegetated Corridor enhancement/restoration plan.**
14. Prior to any site clearing, grading or construction, the applicant shall provide Clean Water Services with a Vegetated Corridor enhancement/restoration plan. Enhancement/restoration of the Vegetated Corridor shall be provided in accordance with R&O 19-5, Appendix A, as amended by R&O 19-22, and shall include planting specifications for all Vegetated Corridor, including any cleared areas larger than 25 square feet in Vegetated Corridor rated ""good.""
15. Prior to installation of plant materials, all invasive vegetation within the Vegetated Corridor shall be removed per methods described in Clean Water Services' Integrated Pest Management Plan, 2019. During removal of invasive vegetation care shall be taken to minimize impacts to existing native tree and shrub species.

16. **City shall be notified 72 hours prior to the start and completion of enhancement/restoration activities. Enhancement/restoration activities shall comply with the guidelines provided in Planting Requirements (R&O 19-5, Appendix A, as amended by R&O 19-22).**
17. **Maintenance and monitoring requirements shall comply with R&O 19-5, Section 2.12.2, as amended by R&O 19-22. If at any time during the warranty period the landscaping falls below the 80% survival level, the owner shall reinstall all deficient planting at the next appropriate planting opportunity and the two year maintenance period shall begin again from the date of replanting.**
18. **Performance assurances for the Vegetated Corridor shall comply with R&O 19-5, Section 2.07.2, Table 2-1 and Section 2.11, Table 2-2, as amended by R&O 19-22.**
19. Clean Water Services shall require an easement over the Sensitive Area and Vegetated Corridor conveying storm and surface water management to Clean Water Services or the City that would prevent the owner of the Vegetated Corridor from activities and uses inconsistent with the purpose of the corridor and any easements therein.

FINAL PLANS

20. **Final construction plans shall include landscape plans.** In the details section of the plans, a description of the methods for removal and control of exotic species, location, distribution, condition and size of plantings, existing plants and trees to be preserved, and installation methods for plant materials is required. Plantings shall be tagged for dormant season identification and shall remain on plant material after planting for monitoring purposes.
21. **A Maintenance Plan shall be included on final plans including methods, responsible party contact information, and dates** (minimum two times per year, by June 1 and September 30).
22. **Final construction plans shall clearly depict the location and dimensions of the sensitive area and the Vegetated Corridor** (indicating good, marginal, or degraded condition). Sensitive area boundaries shall be marked in the field.
23. Protection of the Vegetated Corridors and associated sensitive areas shall be provided by the installation of permanent fencing and signage between the development and the outer limits of the Vegetated Corridors. **Fencing and signage details to be included on final construction plans. Signage details to be included on final construction plans if they do not already exist along this trail.**

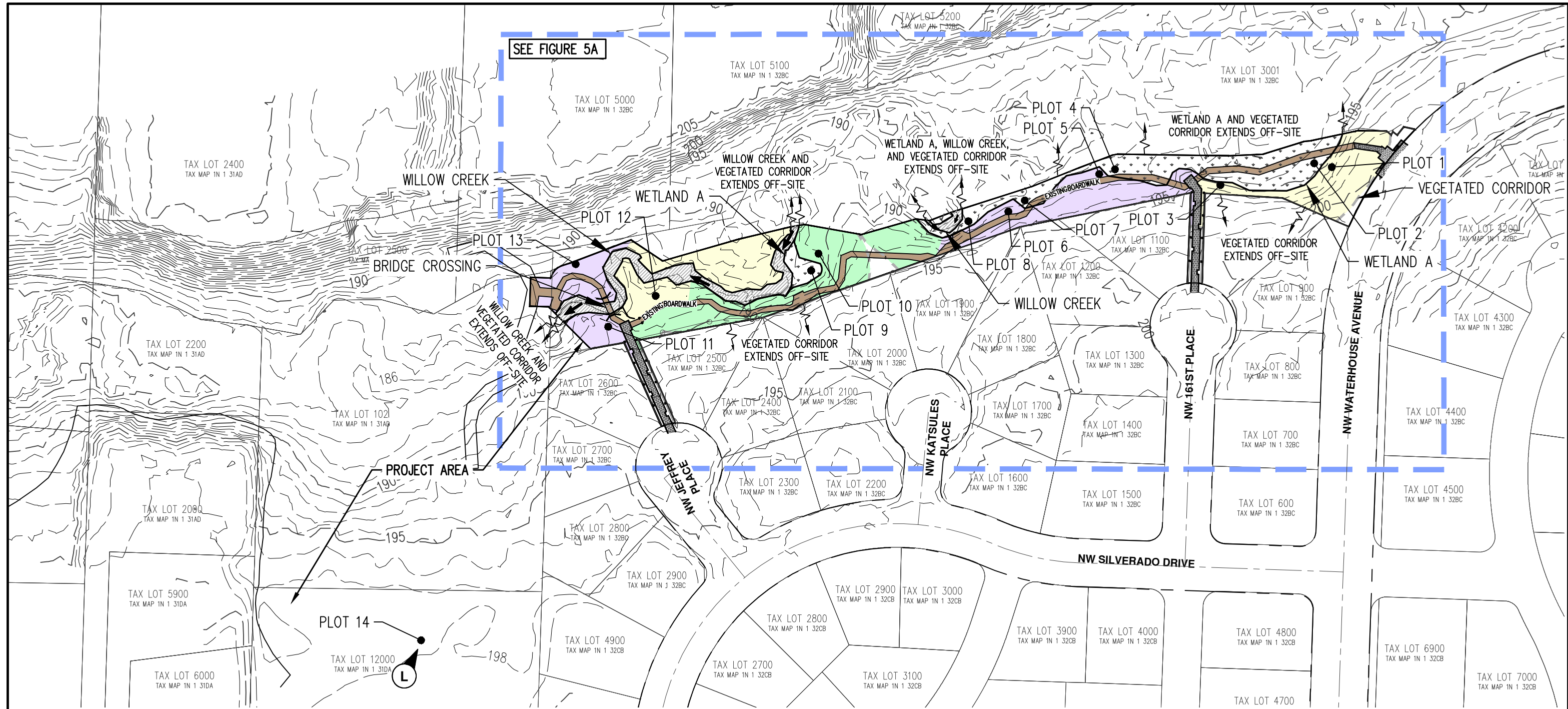
This Service Provider Letter is not valid unless CWS-approved site plan is attached.

Please call (503) 681-3653 with any questions.





**Lindsey Obermiller
Environmental Plan Review**

Attachments (9)

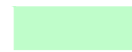



LEGEND (COLOR COPY):

 TOTAL ON-SITE WETLAND AREA: 10,497 SF± (0.24 ACRES±)
 PFO/PSS/SLOPE WETLAND A AREA: 9,542 SF± (0.22 ACRES±)
 PEM/SLOPE WETLAND B AREA: 955 SF± (0.02 ACRES±)

 TOTAL ON-SITE WILLOW CREEK AREA:
 4,908 SF± (0.11 ACRES±)/ 481 LF±

VEGETATED CORRIDOR (VC)

 GOOD CONDITION VEGETATED CORRIDOR:
 9,579 SF± (0.22 ACRES±)

 MARGINAL CONDITION VEGETATED CORRIDOR:
 10,014 SF± (0.23 ACRES±)


 DEGRADED CONDITION VEGETATED CORRIDOR:
 13,303 SF± (0.31 ACRES±)

PHOTO POINT LOCATION AND ORIENTATION

WETLAND AND WATER BOUNDARIES AND PLOT LOCATIONS SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC (AKS) ON APRIL 20, 2023 AND WERE LOCATED WITH SUB-METER ACCURACY USING A TRIMBLE GEO 7X HANDHELD GPS RECEIVER.

1 FOOT GROUND CONTOURS, EXISTING CONDITIONS, TREE SURVEY OF TREES >6" DBH, AND PROPERTY BOUNDARIES DERIVED FROM AKS LAND SURVEY WITH SUBMETER ACCURACY ON APRIL 26-28, 2023.

SCALE: 1"=100 FEET



DATE: 10/10/2023

COLOR COPY

CWS FILE NO. 23-002781
 Approved
 Clean Water Services
 FOR ENVIRONMENTAL REVIEW
 By *LO* Date 02/23/2024
 SPL ATTACHMENT 1 OF 9

AMENDED

**NATURAL RESOURCES EXISTING
CONDITIONS OVERVIEW MAP**

THPRD WILLOW CREEK BOARDWALK TIER 2 SITE ASSESSMENT REPORT

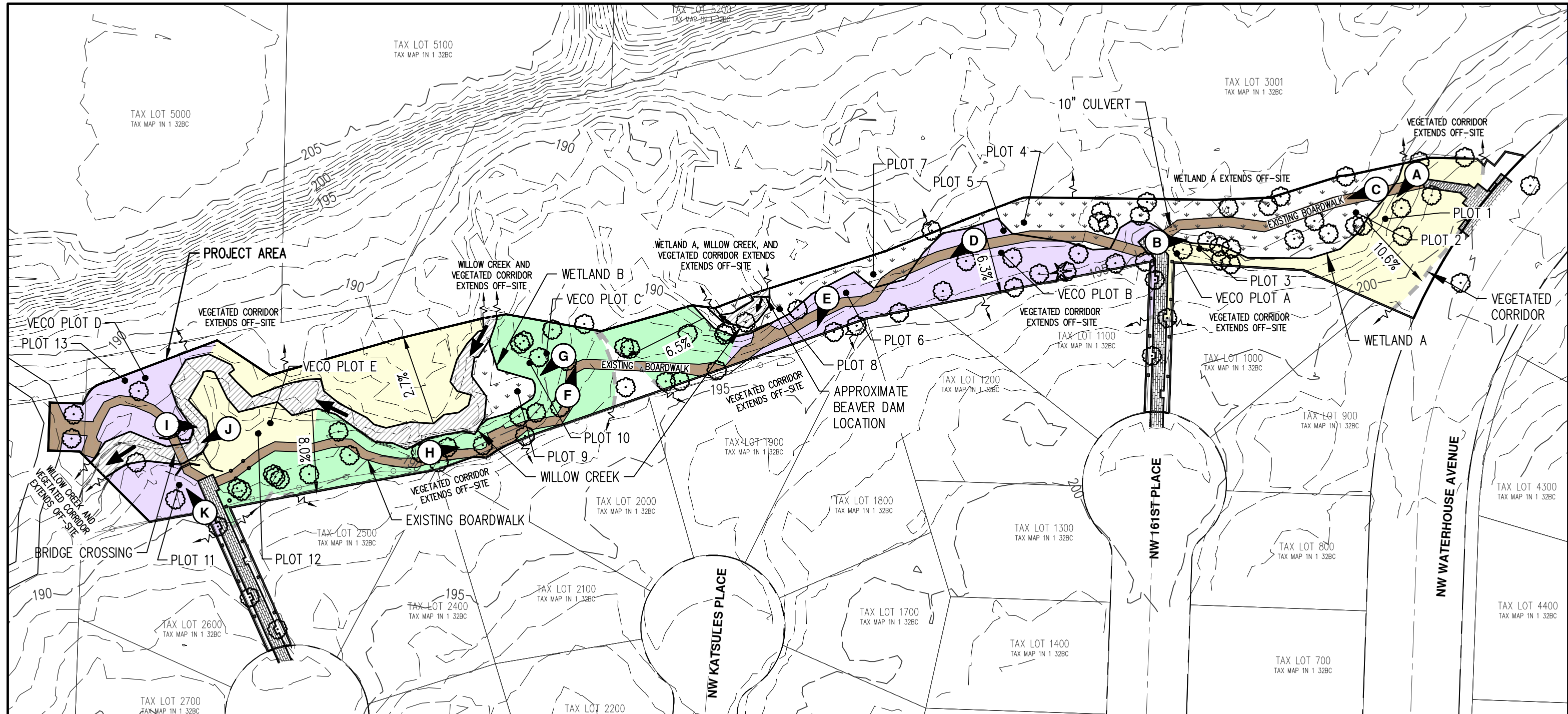
AKS ENGINEERING & FORESTRY, LLC
 12965 SW HERMAN RD, STE 100
 TUALATIN, OR 97062
 503.563.6151 WWW.AKS-ENG.COM




FIGURE


5

DRWN: RAS
 CHKD: SKT
 AKS JOB:
 8015-01

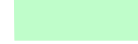



LEGEND (COLOR COPY):


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 PEM/SLOPE WETLAND B AREA: 955 SF± (0.02 ACRES±)


 TOTAL ON-SITE WILLOW CREEK AREA:
 4,908 SF± (0.11 ACRES±)/ 481 LF±

VEGETATED CORRIDOR (VC)

 GOOD CONDITION VEGETATED CORRIDOR:
 9,579 SF± (0.22 ACRES±)

 MARGINAL CONDITION VEGETATED CORRIDOR:
 10,014 SF± (0.23 ACRES±)

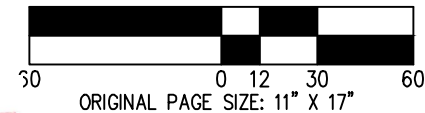
 DEGRADED CONDITION VEGETATED CORRIDOR:
 13,303 SF± (0.31 ACRES±)

 PHOTO POINT LOCATION AND ORIENTATION

WETLAND AND WATER BOUNDARIES AND PLOT LOCATIONS SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC (AKS) ON APRIL 20, 2023 AND WERE LOCATED WITH SUB-METER ACCURACY USING A TRIMBLE GEO 7X HANDHELD GPS RECEIVER.

1 FOOT GROUND CONTOURS, EXISTING CONDITIONS, TREE SURVEY OF TREES >6" DBH. AND PROPERTY BOUNDARIES DERIVED FROM AKS LAND SURVEY WITH SUBMETER ACCURACY ON APRIL 26-28, 2023.

SCALE: 1"=60 FEET



DATE: 10/10/2023

COLOR COPY

CWS FILE NO. 23-002781
 Approved
 Clean Water Services
 FOR ENVIRONMENTAL REVIEW
 By LO Date 02/23/2024
 SPL ATTACHMENT 2 OF 9

AMENDED

NATURAL RESOURCES EXISTING CONDITIONS

THPRD WILLOW CREEK BOARDWALK TIER 2 SITE ASSESSMENT REPORT

AKS ENGINEERING & FORESTRY, LLC
 12965 SW HERMAN RD, STE 100
 TUALATIN, OR 97062
 503.563.6151 WWW.AKS-ENG.COM



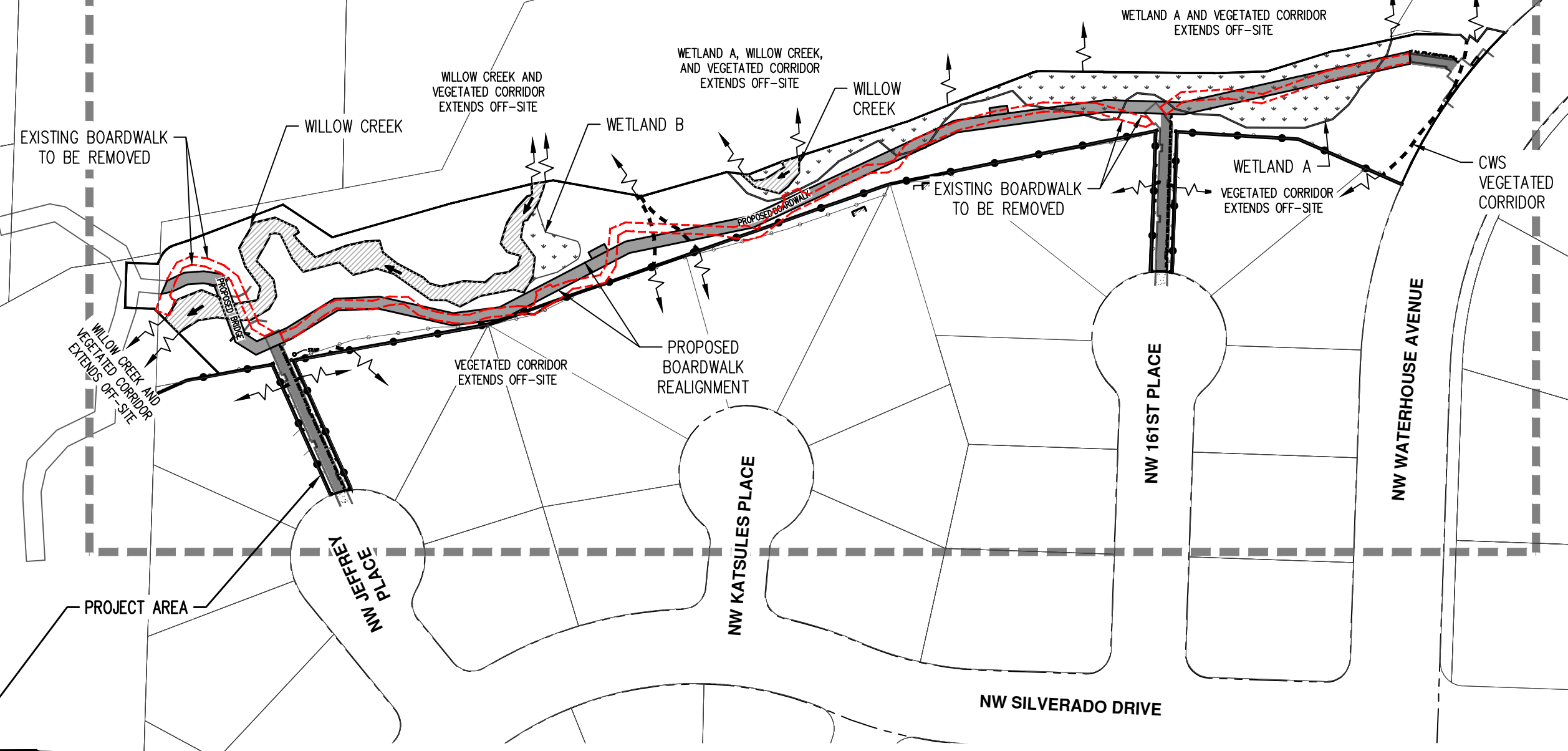
FIGURE

5A

DRWN: RAS
 CHKD: SKT
 AKS JOB:
 8015-01

DWG: 8015-01NRA SITE PLAN | FIGURE 6

SEE FIGURE 7



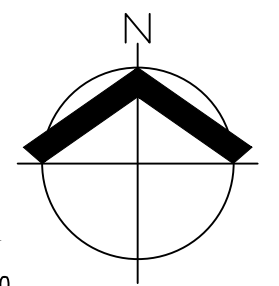
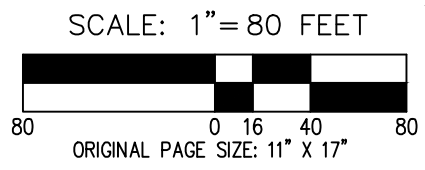
PROJECT AREA

STAGING AREA

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC (AKS) ON APRIL 20, 2023 AND WERE LOCATED WITH SUB-METER ACCURACY USING A TRIMBLE GEO 7X HANDHELD GPS RECEIVER.

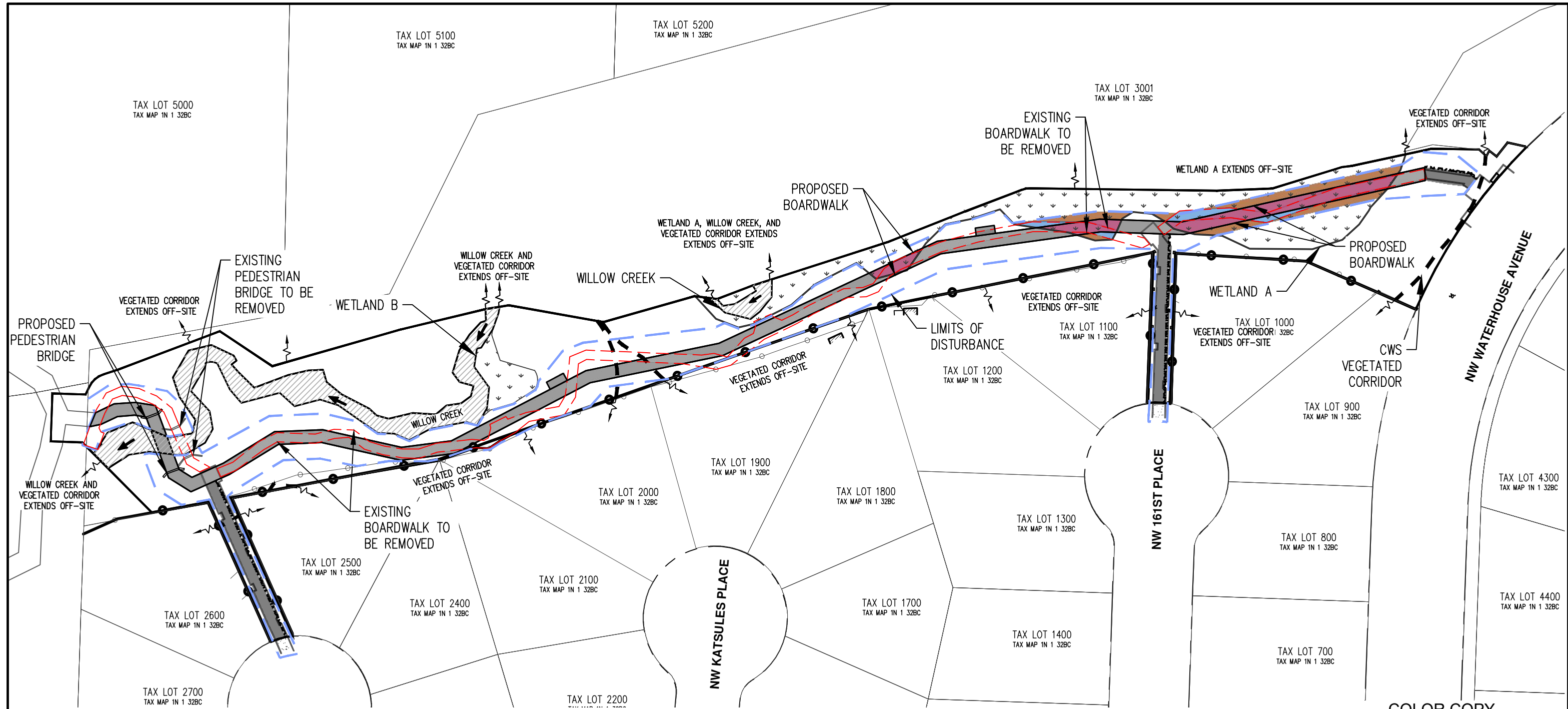
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CWS FILE NO. 23-002781
 Approved
 Clean Water Services
 FOR ENVIRONMENTAL REVIEW
 By LO Date 02/23/2024
 SPL ATTACHMENT 3 OF 9
 AMENDED










DATE: 01/24/2024

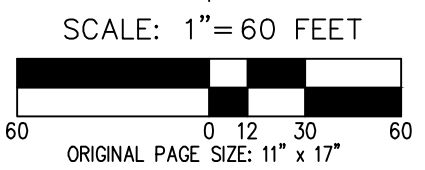
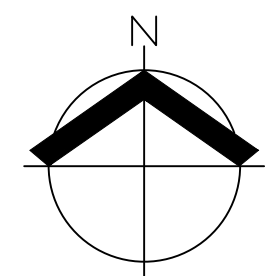
NATURAL RESOURCES SITE PLAN OVERVIEW		FIGURE 6
THPRD WILLOW CREEK BOARDWALK TIER 2 SITE ASSESSMENT REPORT		DRWN: SKD
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM		CHKD: SRR
AKS		AKS JOB: 8015-01



LEGEND (COLOR COPY):

-  TOTAL ON-SITE WETLAND AREA TO REMAIN: 8,880 SF± (0.20 ACRES±)
-  WETLAND A AREA TO REMAIN: 7,925 SF± (0.18 ACRES±)
-  WETLAND B AREA TO REMAIN: 955 SF± (0.02 ACRES±)
-  TOTAL ON-SITE WILLOW CREEK AREA TO REMAIN: 4,908 SF± (0.11 ACRES±)/ 481 LF±
-  PERMANENT WETLAND A IMPACT AREA: 1,617 SF± (0.04 ACRES±)
-  TEMPORARY WETLAND A IMPACT AREA: 1,232 SF± (0.03 ACRES±)
-  WETLAND A RESTORATION AREA (FOR PUBLIC BENEFIT MITIGATION): 385 SF±

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC (AKS) ON APRIL 20, 2023 AND WERE LOCATED WITH SUB-METER ACCURACY USING A TRIMBLE GEO 7X HANDHELD GPS RECEIVER.



COLOR COPY

CWS FILE NO. 23-002781

Approved
Clean Water Services
FOR ENVIRONMENTAL REVIEW

By LO Date 02/23/2024

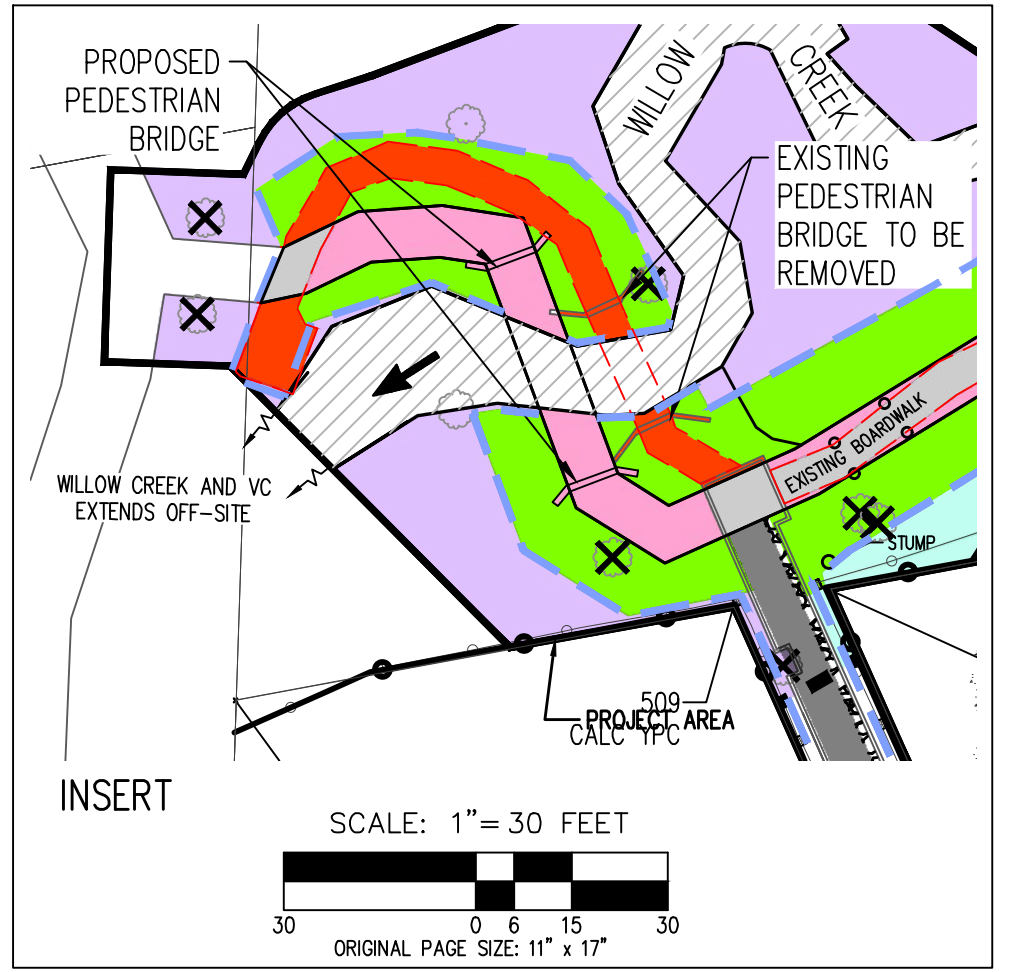
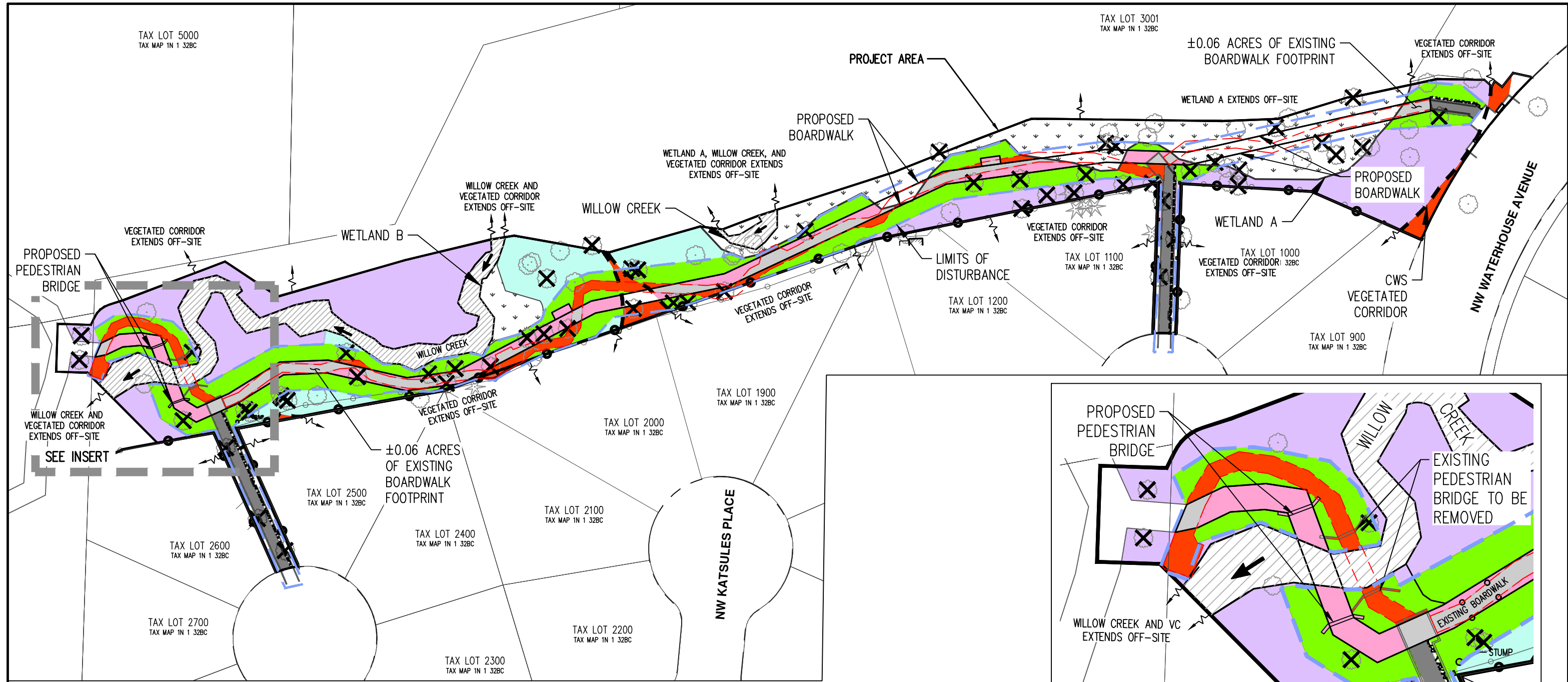
SPL ATTACHMENT 4 OF 9

AMENDED

DATE: 01/24/2024

WETLAND MITIGATION PLAN		FIGURE
THPRD WILLOW CREEK BOARDWALK TIER 2 SITE ASSESSMENT REPORT		7
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM		DRWN: SKD CHKD: RAS AKS JOB: 8015-01





LEGEND (COLOR COPY):

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WETLAND A AREA TO REMAIN: 7,925 SF± (0.18 ACRES±)
WETLAND B AREA TO REMAIN: 955 SF± (0.02 ACRES±)
- TOTAL ON-SITE WILLOW CREEK AREA TO REMAIN:
4,908 SF± (0.11 ACRES±)/ 481 LF±
- PERMANENT VEGETATED CORRIDOR IMPACT AREA:
2,920 SF± (0.07 ACRES±)
- ON-SITE REPLACEMENT VEGETATED CORRIDOR AREA:
2,920 (0.07 ACRES±)
- TEMPORARY VEGETATED CORRIDOR IMPACT AREA TO BE RESTORED TO
GOOD CONDITION: 9,980 SF± (0.23 ACRES±)
- MARGINAL/DEGRADED VEGETATED CORRIDOR TO BE ENHANCED TO GOOD
CONDITION: 15,500 SF± (0.36 ACRES±)

- GOOD CONDITION VEGETATED CORRIDOR AREA TO REMAIN:
4,596 SF± (0.10 ACRES±)
 - NATIVE TREES >6" DBH TO BE REMOVED (REMOVAL OF 16 OREGON ASH
TREES TO BE REPLANTED IN PLACE AT A 1:1 TOTAL DBH)
- WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS
ENGINEERING & FORESTRY, LLC (AKS) ON APRIL 20, 2023 AND WERE
LOCATED WITH SUB-METER ACCURACY USING A TRIMBLE GEO 7X
HANDHELD GPS RECEIVER.

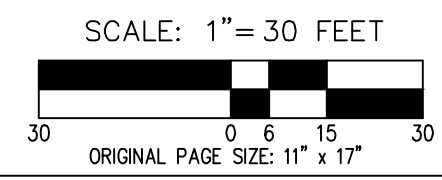
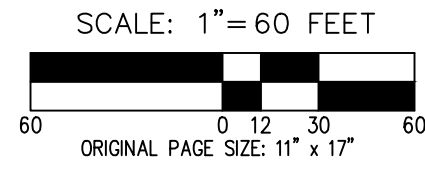
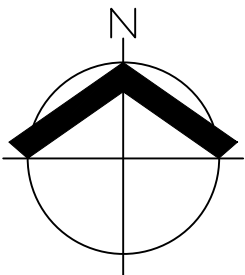
COLOR COPY

CWS FILE NO. 23-002781

Approved
Clean Water Services
FOR ENVIRONMENTAL REVIEW

By *LO* Date **02/23/2024**

SPL ATTACHMENT 5 OF 9



DATE: 01/24/2024

VEGETATED CORRIDOR MITIGATION PLAN		FIGURE 8
THPRD WILLOW CREEK BOARDWALK TIER 2 SITE ASSESSMENT REPORT		DRWN: SKD CHKD: SRR AKS JOB: 8015-01
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM		

THPRD Willow Creek Boardwalk- Vegetated Corridor Planting Specifications

Table 1 includes planting specifications for ±2,920 square feet of replacement mitigation, Table 2 includes restoration of ±9,980 square feet of temporary vegetated corridor encroachment to be planted to “good” condition, and Table 3 includes ±15,500 square feet of “marginal/degraded” vegetated corridor enhancement to “good” condition, based on the requirements outlined by CWS in Design and construction Standards R&O 19-5, Appendix A. Table 4 includes planting specifications for ±1,617 square feet of wetland restoration for Public Benefit Mitigation and temporary wetland impacts. Table 5 includes Oregon ash tree replacement at a 1:1 ratio based on the 16 removed trees total cumulative caliper size and DBH.

Total Vegetated Corridor Planting Area ±28,400 square feet.

Table 1: REPLACEMENT MITIGATION: 2,920 square foot planting area

Scientific Name	Common Name	Size ¹	Spacing/Seeding Rate	Quantity
Trees (total 30)				
<i>Alnus Rubra</i>	red alder	2 gallon	10 feet on center	10
<i>Acer macrophyllum</i>	big-leaf maple	2 gallon	10 feet on center	10
<i>Alnus rhombifolia</i>	white alder	2 gallon	10 feet on center	10
Shrubs (total 146)				
<i>Symphoricarpus albus</i>	snowberry	1 gallon	4-5 feet on center	30
<i>Sambucus racemosa</i>	red elderberry	1 gallon	4-5 feet on center	29
<i>Cornus alba</i>	red osier dogwood	1 gallon	4-5 feet on center	29
<i>Spiraea Douglassi</i>	spiraea	1 gallon	4-5 feet on center	29
<i>Rosa nutkana</i>	Nootka rose	1 gallon	4-5 feet on center	29
Seed Mix/Plug²				
<i>Bromus carinatus</i>	native California brome	seed	1 lbs pls/acre	As needed for bare soil areas >25 square feet
<i>Festuca roemerii</i>	Roemer’s fescue	seed	1 lbs pls/acre	

¹Bare root plants may be substituted for container plants based on availability. If bare root plants are used, they must be planted during the late winter/early spring dormancy period.

² Bosky Dell Natives, Heritage Seedlings, Jonny Native Seed, and Scholls Valley Native Nursery offer custom seed mixes for Pacific Northwest native plants.

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Table 2: RESTORATION MITIGATION: 9,980 square foot planting area

Scientific Name	Common Name	Size ¹	Spacing/Seeding Rate	Quantity
Trees (total 100)				
<i>Alnus Rubra</i>	red alder	2 gallon	10 feet on center	34
<i>Acer macrophyllum</i>	big-leaf maple	2 gallon	10 feet on center	33
<i>Alnus rhombifolia</i>	white alder	2 gallon	10 feet on center	33
Shrubs (total 500)				
<i>Symphoricarpus albus</i>	snowberry	1 gallon	4-5 feet on center	100
<i>Sambucus racemosa</i>	red elderberry	1 gallon	4-5 feet on center	100
<i>Cornus alba</i>	red osier dogwood	1 gallon	4-5 feet on center	100
<i>Spiraea Douglassi</i>	spirea	1 gallon	4-5 feet on center	100
<i>Rosa nutkana</i>	Nootka rose	1 gallon	4-5 feet on center	100
Seed Mix/Plug²				
<i>Bromus carinatus</i>	native California brome	seed	1 lbs pls/acre	As needed for bare soil areas >25 square feet
<i>Festuca roemerii</i>	Roemer's fescue	seed	1 lbs pls/acre	

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Table 3: MARGINAL/ DEGRADED CONDITION VC ENHNACMENT: 15,500 square foot planting area

Scientific Name	Common Name	Size ¹	Spacing/Seeding Rate	Quantity
Trees (total 155)				
<i>Alnus Rubra</i>	red alder	2 gallon	10 feet on center	39
<i>Acer macrophyllum</i>	big-leaf maple	2 gallon	10 feet on center	39
<i>Alnus rhombifolia</i>	white alder	2 gallon	10 feet on center	39
<i>Rhamnus purshina</i>	casara	2 gallon	10 feet on center	38
Shrubs (total 775)				
<i>Symphoricarpus albus</i>	snowberry	1 gallon	4-5 feet on center	155
<i>Sambucus racemosa</i>	red elderberry	1 gallon	4-5 feet on center	155
<i>Cornus alba</i>	red osier dogwood	1 gallon	4-5 feet on center	155
<i>Spiraea Douglassi</i>	spirea	1 gallon	4-5 feet on center	155
<i>Rosa nutkana</i>	Nootka rose	1 gallon	4-5 feet on center	155
Seed Mix/Plug²				
<i>Bromus carinatus</i>	native California brome	seed	1 lbs pls/acre	As needed for bare soil areas >25 square feet
<i>Festuca roemerii</i>	Roemer's fescue	seed	1 lbs pls/acre	

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Table 4: WETLAND RESTORATION: 1,617 square foot planting area

Scientific Name	Common Name	Size ¹	Spacing/Seeding Rate	Quantity
Shrubs (total 30)				
<i>Cornus alba</i>	red osier dogwood	1 gallon	4-5 feet on center	15
<i>Spiraea Douglassi</i>	spiraea	1 gallon	4-5 feet on center	15
Seed Mix/Plug²				
<i>Festuca rubra</i>	Native red fescue	seed	1 lbs pls/acre	As needed for bare soil areas >25 square feet
<i>Agrostis exarata</i>	Spike bentgrass	Seed	1 lbs pls/acre	

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Table 5: OREGON ASH TREE REPLACEMENT AT A 1:1 TOTAL CALIPER/DBH SIZE: 252 Total DBH

Scientific Name	Common Name	Size	Spacing/Seeding Rate	Quantity
Trees (total 252)				
<i>Salix lasiandra</i>	Pacific willow	Stakes	10 feet on center	84
<i>Salix hookeriana</i>	Coastal willow	Stakes	10 feet on center	84
<i>Salix sitchensis</i>	Sitka willow	Stakes	10 feet on center	84

Planting Notes (per CWS Design & Construction Standards R&O 19-5, amended by R&O 19-22, December 2019 Appendix A Planting Requirements):

- 1) Container stock shall be installed only from February 1 through May 1 and October 1 through November 15. Bare root stock shall be installed only from December 15 through April 15. Plantings outside these times may require additional measures to ensure survival which shall be specified on the plans.
- 2) All non-native invasive vegetation shall be removed from planting areas prior to installing native enhancement plantings. Invasive species control shall be consistent with Clean Water Services' June 2019 *Integrated Pest Management (IPM) Plan*.
- 3) Appropriate plant selection, along with adequate site preparation and maintenance, reduces the need for irrigation. However, unless site hydrology is currently adequate, a District/City approved irrigation system or equivalent (i.e., polymer, plus watering) shall be used during the two-year plant establishment period. Watering shall be at a minimum rate of at least one inch per week from June 15 through October 15. Other irrigation techniques, such as deep watering, may be allowed with prior approval by District staff.
- 4) Trees, shrubs, and groundcovers planted shall be mulched at a minimum of three inches in depth and 18 inches in diameter, to retain moisture and discourage weed growth around newly installed plant material. Appropriate mulches are made from composted bark or leaves that have not been chemically treated.
- 5) Tree and shrub plantings shall be tagged.

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- 6) Depending on site conditions, appropriate measure shall be taken to limit wildlife-related plant damage (see *IPM Plan*).

Maintenance Plan

- 1) Clean Water Services requires a two-year maintenance period for vegetated corridor enhancement. The enhanced vegetated corridor is to be inspected annually and a minimum of three times during the growing season and one prior to the onset of the growing season over the two-year monitoring period.
- 2) Plant Survival: Clean Water Services' success criterion for vegetated corridor enhancement is 80% survival of tree and shrub plantings during the two years following planting. If any mortality is noted on the site, the factor likely to have caused mortality of the plantings is to be determined and corrected if possible. If survival falls below 80% at any time during the two-year maintenance period, the plantings shall be replaced and other corrective measures, such as mulching or irrigation, may need to be implemented. If replanting is necessary, the maintenance period will be extended for two years from the date of replanting.
- 3) Invasive species control is to be conducted as needed based on the site inspections. Invasive species include Himalayan blackberry (*Rubus armeniacus*), reed canarygrass (*Phalaris arundinacea*), teasel (*Dipsacus fullonum*), Canada thistle (*Cirsium arvense*), and English ivy (*Hedera helix*).

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