

August 3, 2021

City of Woodland Community Development Attention: Travis Goddard 230 Davidson Avenue Woodland, Washington 98674

Dear Mr. Goddard,

This memorandum is detailing updates to the critical areas report for the Oak Village Apartments site which was previously submitted to the City of Woodland on July 1, 2021. Staff members from ELS, AKS, and George Fornes from the Washington Department of Fish and Wildlife (WDFW) conducted a site walk on Tuesday July 28, 2021 to evaluate the proposed mitigation strategy and to address concerns with content of the critical areas report. The following subjects are discussed below:

- Updates to the stream width and classification
- Changes to the RHA buffer width
- Updates to the mitigation strategy as related to the RHA buffer and stream classification changes

Stream Width and Classification Updates

Under the supervision of WDFW staff, stream widths were measured at ten different locations along Burris Creek. Measurements ranged from 6-11 feet resulting in an average stream width of 9.25 feet. Based on *WMC Table 15.08.730-1* Burris Creek is a Type 3(F) stream with a designated 200 foot RHA buffer width.

Proposed Changes to RHA Buffer Width

This project proposes a reduction in RHA buffer width per *WMC 15.08.730-(6)* (excerpted in italics below). The RHA buffer width may be modified under the following conditions:

6. Reduction of Habitat Buffer Widths. The director may allow the standard habitat buffer width to be reduced in accordance with an approved critical area report and the best available science on a case-by-case basis when it is determined that a smaller area is adequate to protect the habitat functions and values based on site-specific characteristics and when all of the following criteria are met:

a. The critical area report provides a sound rationale for a reduced buffer based on the best available science;

The north side of Burris Creek contains steep slopes and has vertical separation. The south side of Burris Creek consists of an open field containing various grasses and invasive species

including Himalayan blackberry and bull thistle. ELS would propose additional enhancement to the portion of the riparian/stream buffer to the south of Burris Creek where little habitat function is currently available, including a lack of shade on the southern exposure for the stream. Proposed enhancement would consist of invasive species removal, planting of native species, the removal of a concrete weir within Burris Creek, and the addition of downed logs/snags consistent with WDFW priority habitat recommendations (WDFW). Additional details on the proposed enhancement can be found in the *Updates to Mitigation Strategy* section of this memorandum.

b. The existing buffer area is well-vegetated or will be significantly enhanced with native species and has less than a ten percent slope;

The existing buffer area to the north of Burris Creek is currently well vegetated, proposed enhancement/mitigation strategies as related to the north side of Burris Creek can be found in the Oak Village Apartments Critical Areas Report. The existing buffer on the south side of Burris Creek will under go enhancement measures which will include the removal of invasive species, planting of native species, and the addition of downed logs/snags consistent with WDFW priority habitat recommendations (WDFW). ELS would consider the removal of invasive species, planting of native species, removal of the concrete weir within Burris Creek, and addition of logs/snags to be significant enhancement as the area in question is currently dominated by various grasses and invasive species which provide little habitat function including lack of shade for the southern exposure to the stream. The existing buffer to the south of Burris Creek has slopes which are less than ten percent in grade. Additional details on proposed enhancement/mitigation in the existing buffer to the south of Burris Creek can be found in the *Updates to Mitigation Strategy* section of this memorandum.

c. No direct or indirect, short-term or long-term, adverse impacts to habitats will result from the proposed activity;

Habitat in the existing buffer to the south of Burris Creek is currently limited in function as the area in question is dominated by various grasses and invasive species. The area also lacks shade for the stream on the southern exposure and virtually no woody debris is naturally recruited to the channel. Additionally, a concrete weir is present within Burris Creek that is actively impacting habitat within Burris Creek itself. Removal of the concrete weir and the addition of logs consistent with WDFW size and length to enhance habitat following weir removal will take place. Invasive species within the existing buffer to the south of Burris Creek will be removed and native species will be planted. Proposed activities will result in the removal of structures and invasive species which currently limit habitat function. Proposed enhancement activities will result in long term functional gain. Details on impacts associated with the concrete weir are outlined in the *Updates to Mitigation Strategy* section of this memorandum, however, the long term functional gain associated with proposed enhancement activities outweighs the short term impacts associated with weir removal.

d. As required by the director, a five-year monitoring program of the buffer and habitat shall be included. Subsequent corrective actions may be required if adverse impacts to the habitats are discovered during the monitoring period;

A ten year monitoring program will be put into place consistent with what is currently detailed in the existing critical areas report.

e. In no case shall the standard buffer width be reduced by more than fifty percent using this provision.

ELS proposes to use the buffer widths which are currently detailed on Exhibits A and B within the Oak Village Apartments Critical Areas Report. The proposed RHA buffer width will not be reduced by more than fifty percent of the standard buffer width as outlined in Woodland Municipal Code.

Updates to Mitigation Strategy

In accordance with updates to the stream width and classification, changes to the RHA buffer width and the proposed reduction of the 200 foot RHA buffer width ELS would like to take this opportunity to describe in greater detail how the mitigation approach for the Oak Village Apartments site will be updated. This portion of the memorandum will be limited to discussing the concrete weir within Burris Creek and enhancement measures being proposed within the existing buffer to the south of Burris Creek.

Concrete Weir Removal

The capacity of the concrete weir was calculated and was determined to be equivalent to approximately 32 cubic yards of concrete and soil fill or approximately 144 square feet. The concrete weir consists of two structures which are approximately 12 feet in width and 6 feet in height in opposing locations on the channel. Each structure is positioned along the bank of Burris Creek and are approximately 8.5 feet apart, a concrete footing connects both weirs. Structures making up the weir are stabilized by tie backs which are approximately 6 feet in length (Exhibit A). The concrete weir as it currently exists acts as an obstruction for natural stream bank-full width and provides little to no habitat. Additionally, the concrete weir obstructs shading and foraging activities. Proposed removal of the concrete weir will allow for the stream to be restored to its original width and will allow for native vegetation to become re-established along the bank of Burris Creek. This will provide long term functional gain for habitat by increasing shading and foraging opportunity for fish, as well as allowing the stream to migrate naturally within its floodplain area.

Introduction of Downed Logs

Updates to the mitigation strategy include the addition of horizontal logs within and along Burris Creek. The placement of 15 logs is proposed, approximate locations for placement are detailed on Exhibit A. Consistent with WDFW Priority Habitat recommendations logs will be greater than 12 inches in diameter at the largest end and greater than 20 feet in length. Logs will be sourced from onsite conifer species which will be downed or girdled as a part of the existing proposed mitigation strategy that is detailed in the Oak Village Apartments Critical Areas Report. Per the Priority Habitats and Species publication from the WDFW well distributed snags and logs are considered a priority habitat (WDFW), therefore ELS is proposing the addition of logs as an enhancement measure to the existing buffer of Burris Creek. These logs will augment the streambank condition

41st Avenue, LLC August 3, 2021 Page 3 of 6 and assist with riffle and pool development to benefit fish and other aquatic species. Logs will also provide shade to the stream and their slow decline through rot and mulch will add detritus and insects to the aquatic food web. They will also allow the stream to meander over time through them and amongst them, which benefits the hydraulics of the stream through the floodplain area.

Removal of Invasive Species and Planting of Native Species

As discussed in the Oak Village Apartments Critical Areas Report invasive species removal and the planting of native trees and shrubs is an existing proposed enhancement/mitigation strategy. Due to the expansive cover of re-sprouting invasive Himalayan blackberry in the existing buffer to the south of Burris Creek, native plantings in this area will be spaced in a manner that will allow brush hog access for the maintenance/mowing of invasive species. Spacing of native plants will otherwise be consistent with the plan detailed in the existing critical areas report. Plantings within the existing buffer to the south of Burris Creek will result in critical shading of Burris Creek in its southern exposure and will provide habitat diversity to an area where little to no habitat function currently exists.

Conclusion

Following the site visit conducted on July 28, 2021 ELS believes that comments and concerns expressed by WDFW staff have been adequately addressed. The implementation of additional enhancement/mitigation measures are being proposed as a result of stream type and classification changes which result in a larger RHA buffer width. Consistent with *WMC 15.08.730-(6)* ELS believes that the RHA buffer width should be reduced to that which is currently shown on Exhibits A and B. Lastly, the AKS Tree Inventory Table shown in Appendix C of the Oak Village Apartments Critical Areas Report was determined to be incomplete, a complete AKS tree inventory table in included with this memorandum as Attachment A.

Limitations

ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

If you have any questions or need additional information, please contact me at (360) 578-1371 or Gabby@eco-land.com.

Sincerely,

Francis Naglich Sr. Wetland Biologist/Principal

41st Avenue, LLC August 3, 2021 Page 4 of 6

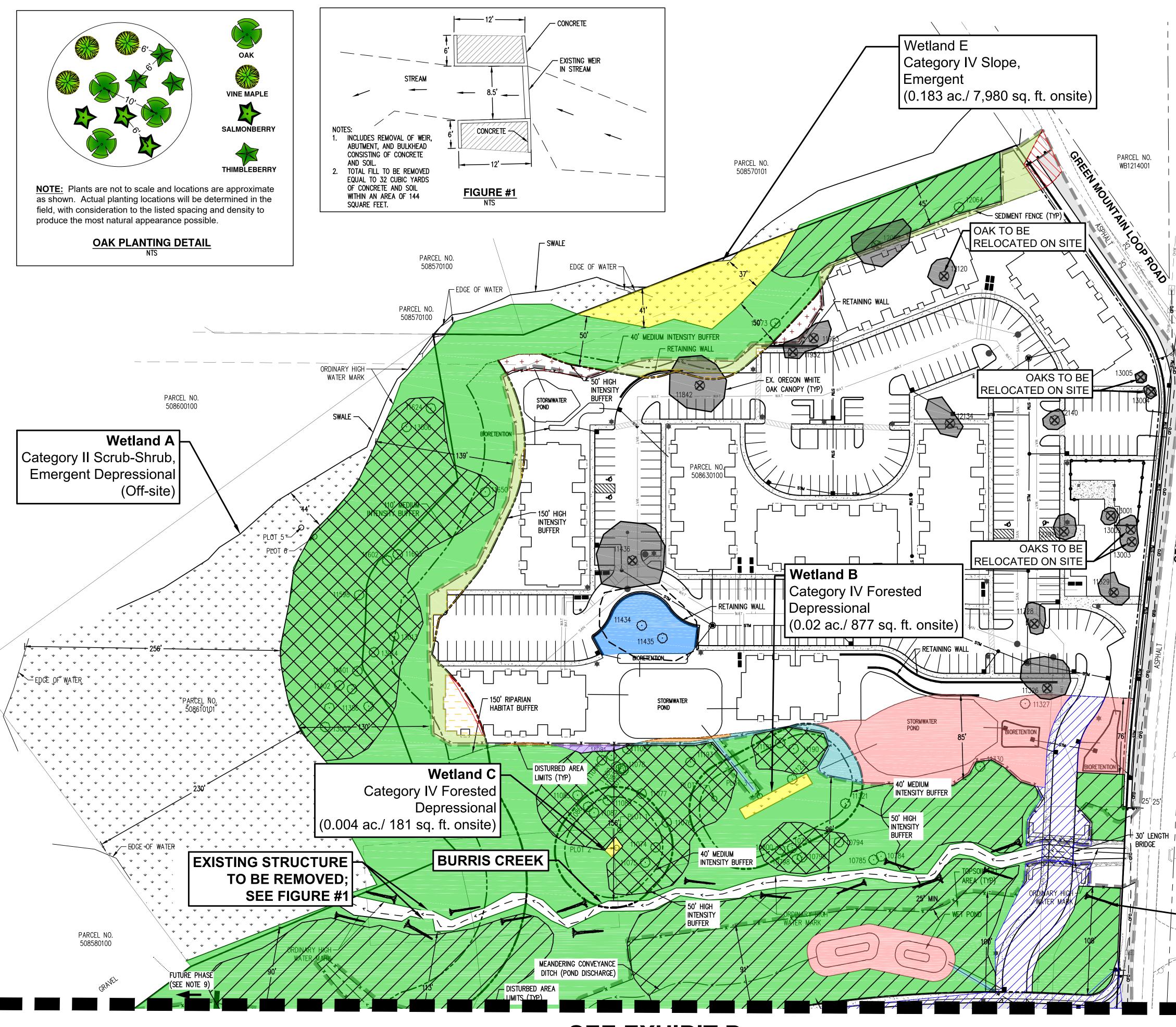
Gabby Bender Biologist

Figures: Exhibit A – Updated July 2021 Exhibit B – Updated July 2021

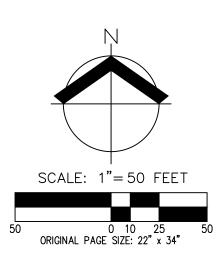
Attachments: Attachment A – Complete AKS Tree Inventory Table

REFERENCES

- Washington Department of Fish and Wildlife (WDFW). 2020a. *Priority Habitats and Species* (*PHS*) on the Web. https://geodataservices.wdfw.wa.gov/hp/phs/. Accessed June 2021.
- Woodland Municipal Code (WMC). January 2021. Woodland Critical Areas Ordinance Chapter 15.08; Critical Areas Regulations.



SEE EXHIBIT B



NOTES

25'

EN

- 1. ELS CONDUCTED A SITE VISIT ON 9/11/2020 TO INVENTORY OAKS, DELINEATE WETLAND BOUNDARIES, AND MAP THE ORDINARY HIGH-WATER MARK OF BURRIS CREEK.
- WDFW CONDUCTED A SITE VISIT ON 1/26/2021 TO CONFIRM WETLAND AND STREAM OHWM BOUNDARIES PREVIOUSLY MAPPED BY ELS. ACTUAL PLANTING LOCATIONS WITHIN THE STREAM/WETLAND BUFFER
- ENHANCEMENT AREAS DETERMINED IN THE FIELD BASED ON AREAS WITH RELATIVELY LOW VEGETATION COVERAGE AND WILL BE DETAILED IN AN AS-BUILT REPORT. STREAM BUFFER DETERMINED PER WCAO TABLE 15.08.730-1
- WETLAND BUFFER DETERMINED PER WCAO TABLE 15.08.400-1
- BUFFER AVERAGING DETERMINED PER WCAO 15.08.400(F) NOT ALL TREES WERE SURVEYED. ONLY OREGON WHITE OAKS ARE SHOWN.
- CRITICAL AREAS INFORMATION PROVIDED BY ELS, INC. WATER AND SANITARY SEWER INSTALLED WITH PHASE 1. STORM, GRADING, AND HARD SURFACE IMPROVEMENTS TO BE INSTALLED WITH FUTURE PHASE.

LEGE	ND
RETAINED OAKS (4,430 SF)	
REMOVED OAK CANOPY (15,500 SF)
REMOVED OAKS	8
ON-SITE WETLAND (75,150 SF)	* * *
TEMPORARY WETLAND BUFFER IMPACTS (9,560 SF)	
PERMANENT WETLAND BUFFER IMPACTS (1,370 SF)	
WETLAND BUFFER AVG. IN (2,115 S	F) + +
WETLAND BUFFER AVG. OUT (2,115	SF)
TEMPORARY RIPARIAN BUFFER IMPACTS (2,610 SF)	
PERMANENT RIPARIAN BUFFER IMPACTS (35,480 SF)	
RIPARIAN BUFFER AVG. IN (345 SF)
RIPARIAN BUFFER AVG. OUT (345	SF)
STORMWATER MANAGEMENT (25,380) SF)
WETLAND/STREAM BUFFER ENHANC (109,190 SF)	EMENT
OAK ENHANCEMENT WITH RELEASE CANOPY (65,500 SF)	OF
OAK PLANTING AREAS CURRENTLY OR SHRUB DOMINATED (97,320 SF)	







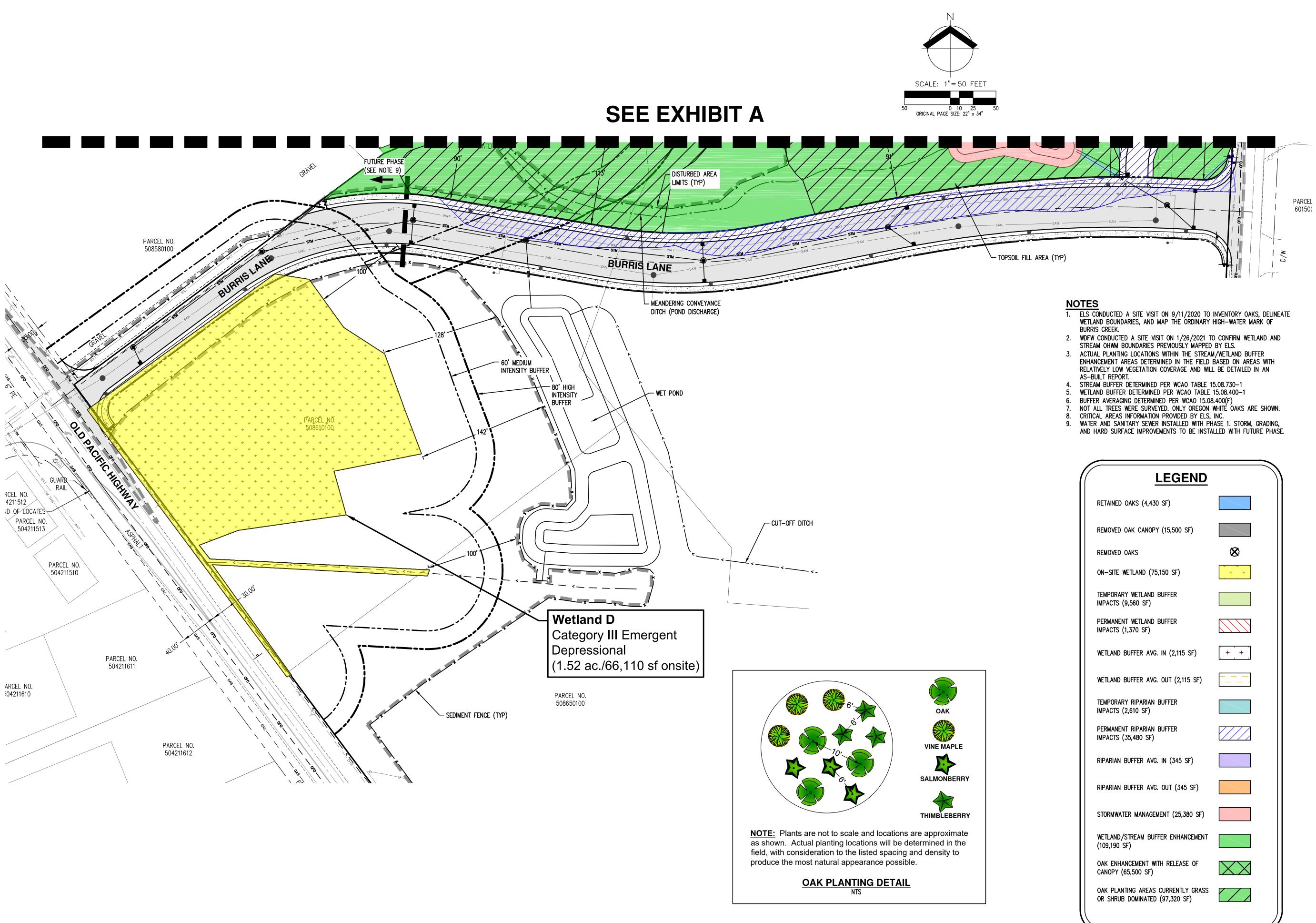
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JOB NUMBER: 08/02/2021 DATE: DESIGNED BY TJW DRAWN BY: BDH CHECKED BY:



TYPICAL LARGE HORIZONTAL WOOD ADDED TO IMPROVE RIPARIAN HABITAT; 15 TOTAL LOGS - MINIMUM SPEC: CONIFER SPECIES, >12" AT LARGE END, >20' LENGTH

EX-A



LEGEND	
RETAINED OAKS (4,430 SF)	
REMOVED OAK CANOPY (15,500 SF)	
REMOVED OAKS	8
ON-SITE WETLAND (75,150 SF)	* *
TEMPORARY WETLAND BUFFER IMPACTS (9,560 SF)	
PERMANENT WETLAND BUFFER IMPACTS (1,370 SF)	
WETLAND BUFFER AVG. IN (2,115 SF)	· + + · · ·
WETLAND BUFFER AVG. OUT (2,115 SF)	
TEMPORARY RIPARIAN BUFFER IMPACTS (2,610 SF)	
PERMANENT RIPARIAN BUFFER IMPACTS (35,480 SF)	
RIPARIAN BUFFER AVG. IN (345 SF)	
RIPARIAN BUFFER AVG. OUT (345 SF)	
STORMWATER MANAGEMENT (25,380 SF)	
WETLAND/STREAM BUFFER ENHANCEMENT (109,190 SF)	
OAK ENHANCEMENT WITH RELEASE OF CANOPY (65,500 SF)	\mathbf{X}
OAK PLANTING AREAS CURRENTLY GRASS OR SHRUB DOMINATED (97,320 SF)	





MAP MENTS SITE NO CONDITIONS SHINGT \cup \geq **N** OSED ш 4 PROP 41ST WOO OAK

JOB NUMBER:	8344
DATE:	08/02/2021
DESIGNED BY:	
DRAWN BY:	TJW
CHECKED BY:	BDH



ATTACHMENT A: COMPLETE AKS TREE INVENTORY TABLE

KS Job No. 8344 - Evaluation Date: 02/02/2021 - Evaluated by: BRK				
Tree #	DBH (in.)	Tree Species Common Name (<i>Scientific name</i>)	Comments	WTR*
10784	11	OR ASH		
10785	6	OR ASH		
10794	31	Oregon White Oak (Quercus garryana)	75% Ivy Coverage	С
10796	21,19	Oregon White Oak (Quercus garryana)	Large cavity in base with decay	В
10798	22,7	Oregon White Oak (Quercus garryana)	Lean (S); 1-sided canopy (S)	В
10799	22,24	Oregon White Oak (Quercus garryana)	Codominant base with included bark; Some splitting	В
10800	24,16	Oregon White Oak (Quercus garryana)	Cavity in base; 1-sided canopy (W)	В
10816	17	OR ASH		
11074	32	Oregon White Oak (Quercus garryana)	1-sided canopy (S); Dead lower limbs	В
11075	8	OR ASH		
11076	42	Oregon White Oak (Quercus garryana)	Codominant base; Dead lower limbs	C
11077	30	Oregon White Oak (Quercus garryana)	Dead Codominant stem at base with good wound wood	C
11078	34,23	Oregon White Oak (Quercus garryana)	Lean (E); 1-sided canopy (E)	В
11079	23	Oregon White Oak (Quercus garryana)	Lean (E); 1-sided canopy (E)	В
11080	11,11	Oregon White Oak (Quercus garryana)	Codominant base	C
11081	30	Oregon White Oak (Quercus garryana)	Lean (SE); 1-sided canopy (SE)	В
11082	15	Oregon White Oak (Quercus garryana)	Lean (E); 1-sided canopy (E); Some dead limbs; Epicormic sprouts	В
11083	14	Oregon White Oak (Quercus garryana)	Poor live crown ratio	В
11084	32	Oregon White Oak (Quercus garryana)		C
11085	33	Oregon White Oak (Quercus garryana)		C
11086	25	Oregon White Oak (Quercus garryana)	1-sided canopy (S)	В
11087	19	Oregon White Oak (Quercus garryana)	1-sided canopy (S)	В
11088	25	Oregon White Oak (Quercus garryana)	1-sided canopy (S)	В
11190	35	Oregon White Oak (Quercus garryana)		C
11191	27	Oregon White Oak (Quercus garryana)	Crooked bole; 1-sided canopy (W)	В
11192	7	OR ASH		
11193	34	Oregon White Oak (Quercus garryana)		С
11235	12	OR ASH		
11262	20	OR ASH		

Detailed Tree Inventory for Jeffries Woodland Development AKS Job No. 8344 - Evaluation Date: 02/02/2021 - Evaluated by: BRK				
Tree #	DBH (in.)	Tree Species Common Name (<i>Scientific name</i>)	Comments	WTR*
11263	12	OR ASH		
11265	12	OR ASH		
11266	13	OR ASH		
11267	15	OR ASH		
11268	12	OR ASH		
11269	8	OR ASH		
11270	13,6	OR ASH		
11271	13	OR ASH		
11321	32,29	Oregon White Oak (Quercus garryana)		С
11324	25	OR ASH		
11325	24,16	OR ASH		
11326	30	Oregon White Oak (Quercus garryana)	Dead lower limbs typical of mature tree	С
11327	39	Oregon White Oak (Quercus garryana)	Dead lower limbs typical of mature tree	С
11328	15	Oregon White Oak (Quercus garryana)	Small cavity in base with sluffing bark	В
11329	17	Oregon White Oak (Quercus garryana)		С
11330	9	Oregon White Oak (Quercus garryana)		С
11386	35	Oregon White Oak (Quercus garryana)		С
11401	21	Oregon White Oak (Quercus garryana)		С
11402	34	Oregon White Oak (Quercus garryana)		С
11405	12	BIGLEAF MAPLE		
11434	47	Oregon White Oak (Quercus garryana)		С
11435	35	Oregon White Oak (Quercus garryana)	1-sided canopy (E)	В
11436	56	Oregon White Oak (Quercus garryana)	Multiple large cavities with decay in bole (~5'); Several failed limbs	A/B
11598	25	Oregon White Oak (Quercus garryana)	1-sided canopy (S); Lean (S)	В
11602	24	Oregon White Oak (Quercus garryana)	1-sided canopy (SW)	В
11603	31	Oregon White Oak (Quercus garryana)	Lean (NE); Weak Leader; Some dead branches	В
11624	36	Oregon White Oak (Quercus garryana)	1-sided canopy (S)	В
11650	7	Oregon White Oak (Quercus garryana)	Suppressed	В
11842	41	Oregon White Oak (Quercus garryana)		С

Detailed Tree Inventory for Jeffries Woodland Development AKS Job No. 8344 - Evaluation Date: 02/02/2021 - Evaluated by: BRK				
Tree #	DBH (in.)	Tree Species Common Name (Scientific name)	Comments	WTR*
11952	9	Oregon White Oak (Quercus garryana)	Crooked bole; Epicormic sprouts; 1-sided canopy (S)	В
11953	13	Oregon White Oak (Quercus garryana)	Lean (S); 1-sided canopy (S)	В
11973	19	Oregon White Oak (Quercus garryana)	Dead limbs; 1-sided canopy (N); Sparse canopy	В
11982	32	OR ASH		
12002	33	Oregon White Oak (Quercus garryana)	Lean (S); 1-sided canopy (S); Codominant with included bark	В
12064	22	Oregon White Oak (Quercus garryana)	1-sided canopy (W)	В
12065	12	BIGLEAF MAPLE		
12120	13	Oregon White Oak (Quercus garryana)		С
12134	19	Oregon White Oak (Quercus garryana)	1-sided canopy (W)	В
12140	16	Oregon White Oak (Quercus garryana)		С
12146	8	Oregon White Oak (Quercus garryana)	1-sided canopy (E)	В
12288	8	Oregon White Oak (Quercus garryana)		С
12291	12	Oregon White Oak (Quercus garryana)		С
13001	8	Oregon White Oak (Quercus garryana)		С
13002	10	Oregon White Oak (Quercus garryana)	Several cavities with decay in bole	В
13003	12	Oregon White Oak (Quercus garryana)		С
13004	11	Oregon White Oak (Quercus garryana)	Grafted with Cherry at base; Lean (E); 1-sided canopy (E)	В
13005	6	Oregon White Oak (Quercus garryana)		С
13006	31	Oregon White Oak (Quercus garryana)	50% ivy coverage; bore holes; some failed stems	В
13007	35	Oregon White Oak (Quercus garryana)	1-sided canopy (E)	В
13008	11,12,6,10	Maple (Acer sp.)	1 stem has failed already, 1 stem is leaning E pretty significantly, recommend removal of leaning stems. 50% ivy coverage	В
13009	13,12,12	Maple (Acer sp.)	1 stem has failed already, 1 stem is leaning E pretty significantly, recommend removal of leaning stems. 50% ivy coverage	В
13010	9,9	Cherry (Prunus avium)	Topped; 1-sided canopy (W) (~40')	А
13011	11	Cherry (Prunus avium)	Dead; 100% Ivy coverage (~40')	А
13012	10	Cherry (Prunus avium)	Dead (~30')	А
13013	5	Oregon White Oak (Quercus garryana)	Poor live crown ratio	В
13014	8	Oregon White Oak (Quercus garryana)	Poor live crown ratio	В

Detailed Tree Inventory for Jeffries Woodland Development AKS Job No. 8344 - Evaluation Date: 02/02/2021 - Evaluated by: BRK				
Tree #	DBH (in.)	Tree Species Common Name (<i>Scientific name</i>)	Comments	WTR*
13015	10,10	Black cottonwood (Populus trichocarpa)	Significant lean NE, History if similar trees failing in area, recommend removal (~60-70')	А
13016	7	Black cottonwood (Populus trichocarpa)	Significant lean N, History if similar trees failing in area, recommend removal (~40')	А
13017	17	Black cottonwood (Populus trichocarpa)	Significant lean N, History if similar trees failing in area, recommend removal (~40')	А
13018	18	Willow (<i>Salix sp.</i>)	Scar up bole, sparse canopy, top heavy, leaning significantly NE, previous codominant stem failure	А
13019	19	Willow (<i>Salix sp.</i>)	sparse canopy, top heavy, leaning significantly NE, previous codominant stem failure	А

Total Trees Evaluated = 90

*Windthrow Rating:

A= Least windthrow resistant

B= Moderately windthrow resistant

C= Most windthrow resistant

Arborist Disclosure Statement:

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the health of trees, and attempt to reduce the risk of living near trees. The Client and Jurisdiction may choose to accept or disregard the recommendations of the arborist, or seek additional advice. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed. Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees. Neither this author nor AKS Engineering & Forestry, LLC have assumed any responsibility for liability associated with the trees on or adjacent to this site.

At the completion of construction, all trees should once again be reviewed. Land clearing and removal of adjacent trees can expose previously unseen defects and otherwise healthy trees can be damaged during construction.