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### **TECHNICAL MEMORANDUM**

То:	Steven A. Ward, PE Ward Development, LLC. 503-931-3460 sward@westech-eng.com
From:	C. Mirth Walker, SPWS, Senior Wetland Scientist
Date:	May 25, 2021
Re:	Strong Heights Subdivision and Reed Road Wetland Determination / SWCA Project No. 304070.10

### INTRODUCTION

SWCA Environmental Consultants (SWCA) conducted a site visit on May 18, 2021, to the proposed Strong Heights Subdivision located south of Old Strong Road SE, north of Strong Road, and west of Reed Road SE, in Salem, Oregon. The site consists of Tax Lots 100, 200, and 300 on Marion County Tax Map 083W11A (Figures 1 and 2 in Appendix A). The proposed development has three phases: 1) the Strong Heights Subdivision, 2) widening of Reed Road SE 12 feet to the west for approximately 1,850 feet south of the subject site (the northern section), and then 3) widening of Reed Road SE 6 feet on both the west and east sides for approximately 850 feet (the southern section).

### FINDINGS

Four sample plots (SP1–SP4) were documented on the site and along Reed Road SE. No wetlands or other waters were found within the site and road widening area.

### 1) Strong Heights Subdivision

Two sample plots (SP1 and SP2) were documented in the northeast corner of the subject site (Figures 2 and 4 in Appendix A) where Reed Road SE and the West Middle Fork Pringle Creek had previously crossed the site. Soils were disturbed by gravel fill and were compacted and very hard to dig; vegetation was dominated by tall fescue (*Schedonorus arundinaceus*). No indicators of wetland hydrology were observed.

### 2) Reed Road SE – Northern Widening

One sample plot (SP4) was placed along Reed Road SE on the west side south of Strong Road and north of Chapel Lane SE (Figure 3 in Appendix A). Vegetation was dominated by Oregon white oak (*Quercus garryana*), field meadow-foxtail (*Alopecurus pratensis*), tall fescue, and tall oat grass (*Arrhenatherum elatius*). Soils were again constrained by gravels but no hydric soil indicators were observed in the surface 6 inches. No indicators of wetland hydrology were observed.

A human-constructed roadside ditch is present starting immediately south of Chapel Lane SE, with culverts crossing Reed Road SE to the east into West Middle Fork Pringle Creek, which flows north along the east side of Reed Road SE. The ditch is approximately 3 to 4 feet wide and ranges from 3 feet deep in the north to 2 feet deep in the south. The ditch was dry, and appears to be intermittent rather than ephemeral. No vegetation was present below the ordinary high water mark and soils did not display any hydric soil indicators. The ditch does not provide food for game fish and, in SWCA's opinion, would not be considered jurisdictional by the Oregon Department of State Lands or the U.S. Army Corps of Engineers. The authority to determine jurisdictional status resides with the jurisdictional agencies. The ditch continues to the south along the entire road widening project, and is culverted under Lindburg Road and driveways or farm/pasture access roads.

### 3) Reed Road SE – Southern Widening

One sample plot (SP3) was placed along Reed Road SE on the east side where the West Middle Fork Pringle Creek swings away from the road (Figure 3 in Appendix A). Vegetation was dominated by tall fescue, field meadow-foxtail, and Kentucky blue grass (*Poa pratensis*). Soils were hard to dig and did not display any hydric soil indicators within the surface 4 inches. No indicators of wetland hydrology were observed. Wetlands may be present to the east, along the banks of the West Middle Fork Pringle Creek.

### **RESULTS AND CONCLUSION**

No wetlands were determined to be present within the proposed subdivision footprint or along Reed Road SE. One human-constructed ditch is present west of Reed Road SE to the south of Chapel Lane SE. Wetland determination data sheets are included in Appendix B, and a list of vegetation noted within the study area is included in Appendix C. Site photographs are available upon request.

### APPENDICES

- A. Figures
- B. Wetland Determination Data Sheets
- C. Vegetation List

## **APPENDIX A**

Figures

# Google Maps



# Strong Heights Subdivision - TLs 100-200-300



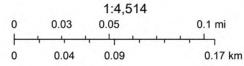
Figure 2. ORmap Aerial with Sample Plot (SP) Locations SP1 and SP2.

# Strong Heights Subdivision - Reed Road

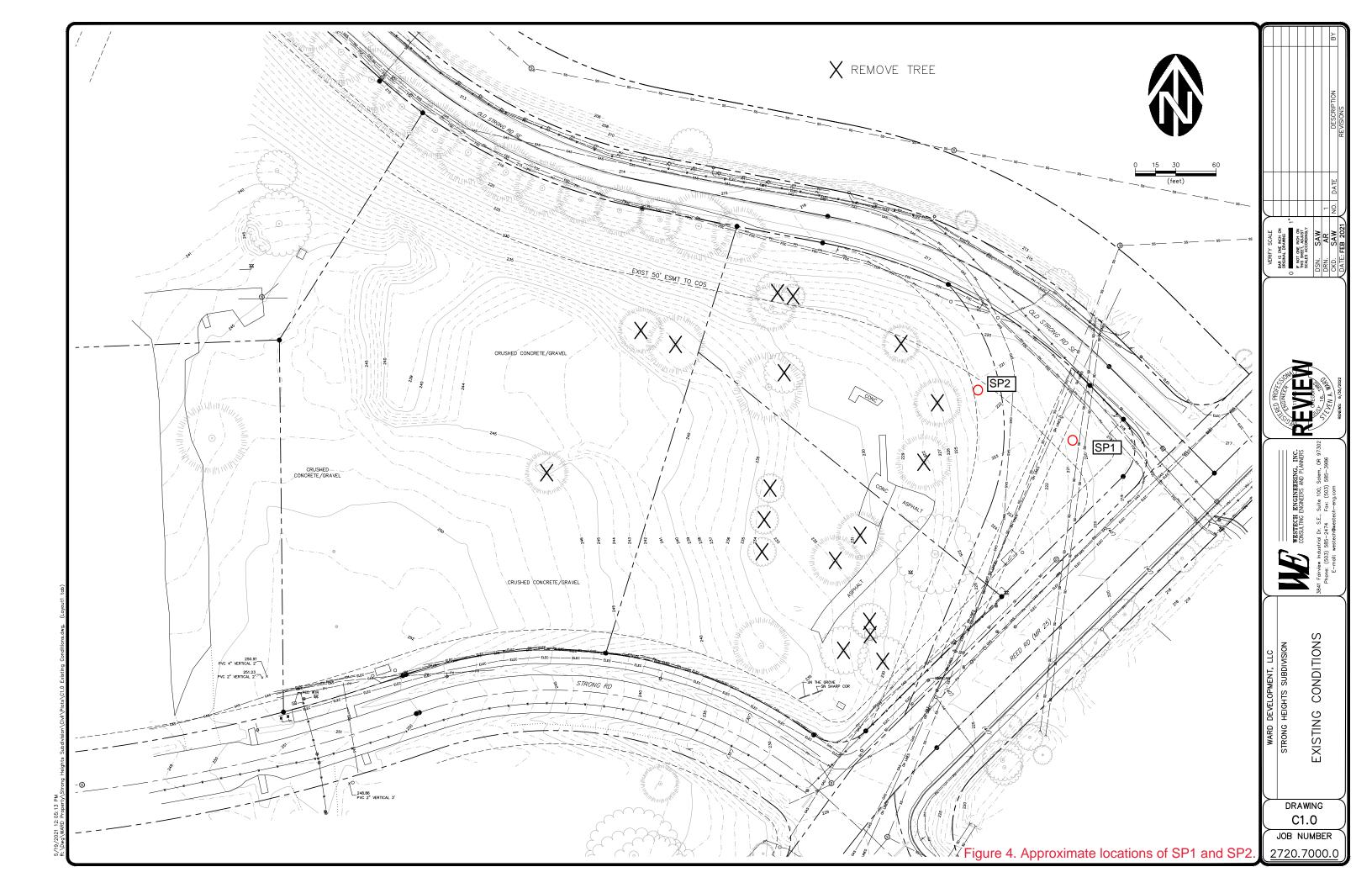




- taxlot
- mapIndex
  - CountyLines



OREGON DOR, GEO, Maxar



## **APPENDIX B**

Wetland Determination Data Sheets

Project/Site: C	old Strong Road / Strong He	eights Subdivision	City/County:	Salem / Mario	วท	Sampling Date: 5/18/	/2021
Applicant/Owner:	Steve Ward, Ward Devel	opment LLC			State: OR	Sampling Point:	SP1
Investigator(s):	C. Mirth Walker		Section,	Township, Rang	ge: 11A, 8S, 3W		
Landform (hillslope,	, terrace, etc.): hillslope			Local relief	(concave, convex, none):	none Slope	(%): 2
Subregion (LRR):	A, Northwest Forests and	l Coast I	_at:	Lon	ıg:	Datum:	
Soil Map Unit Nam	ne: MaA McAlpin				NWI c	classification: None	
Are climatic / hydro	ologic conditions on the site	e typical for this time of	year?	Ye	es X No	(If no, explain in	Remarks)
Are Vegetation	,Soil	, or Hydrology	significantly	disturbed? A	Are "Normal Circumstand	ces" present? Yes	X No
Are Vegetation		, or Hydrology		,	If needed, explain any a	,	
SUMMARY O	F FINDINGS – Attac	h site map showi	ng sampling	point locati	ons, transects, im	portant features	, etc.
Hydrophytic Vege	tation Present?	Yes	No X				
Hydric Soil Preser	nt?	Yes	No <b>X</b>	Is the Samp	led Area		
Wetland Hydrolog	y Present?	Yes	No <b>X</b>	within a Wet	tland? Yes	<u>No X</u>	
	o Sign; 21 feet NW of TP-1	(28 feet NW of center c	f test pit).				
VEGETATION							
Tree Stratum	(Plot size: <u>30' r</u> )	Absolute	Dominant	Indicator	Dominance Test wo		
1.	(1 lot size. <u>50 1</u> )	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant		
2.					That Are OBL, FACW	V, or FAC:1	(A)
3.							
					Total Number of Dom		
4.					Species Across All St	trata: 4	(B)
			Total Cover				
Sapling/Shrub Stra	atum (Plot size: <u>10</u>	<u>)' r</u> )			Percent of Dominant		
1.					That Are OBL, FACW	V, or FAC: <u>25%</u>	<u>•</u> (A/B)
2.					Prevalence Index w		
3.					Total % Cover o	of: Multiply by:	
4.					OBL species (	0 x 1 =	0
5.					FACW species	0 x 2 =	0
		0% =	Total Cover		FAC species 4	45 x 3 =	135
<u>Herb Stratum</u>	(Plot size: <u>5' r</u> )				FACU species 5	51 x 4 =	204
1. Schedonorus	arundinaceus	40%	Yes	FAC	UPL species	5 x 5 =	25
2. Bromus horde	eaceus	10%	Yes	FACU	Column Totals: 10	01 (A)	364 (B)
3. Plantago lanc	eolata	10%	Yes	FACU	Prevalence Index	x = B/A = 3.4	60
4. Hypochaeris i	radicata	10%	Yes	FACU	Hydrophytic Vegeta	tion Indicators:	
5. Trifolium repe	ens	5%	No	FAC	1 - Rapid Test for	r Hydrophytic Vegetati	on
6. Dactylis glom	erata	5%	No	FACU	2 - Dominance Te	est is >50%	
7. Aira caryophy		5%	No	FACU	3 - Prevalence In	ldex is ≤3.0 <sup>1</sup>	
8. Trifolium prate		5%	No	FACU	4 - Morphologica	I Adaptations <sup>1</sup> (Provide	e supporting
9. Daucus carota	a	5%	No	FACU	data in Remai	rks or on a separate sh	neet)
10. Lepidium cam		5%	No	NOL	5 - Wetland Non-	Vascular Plants <sup>1</sup>	
11. Cerastium glo	•	1%	No	FACU	Problematic Hydr	rophytic Vegetation <sup>1</sup> (E	Explain)
g,			Total Cover		·	soil and wetland hydrol	• •
Woody Vine Stratu	um (Plot size: <u>10</u>				be present.		
1.							
2					Hydrophytic		
		0% =	Total Cover		U U	Yes No X	(
% Bare Ground in	Herb Stratum 0	%			Present?		
Remarks:					Entered	d by: <u>cmw</u> QC by:	

			Redox Fea				
(inches) Color (m	oist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark
0-2 10YR 3	3/2 100					gr Si	
ype: C=Concentration, D=	-Depletion RM-Re		vered or Coated Sa	nd Grains	<sup>2</sup> Location: PL-	Pore Lining, M=Matrix	·
/dric Soil Indicators: (Ap						or Problematic Hydri	
Histosol (A1)		Sandy Redox (			2 cm Muc	-	
						ent Material (TF2)	
Histic Epipedon (A2)		Stripped Matrix	Mineral (F1) <b>(excep</b>			( )	-10)
Black Histic (A3)				( WILKA I)	·	llow Dark Surface (TF	-12)
Hydrogen Sulfide (A4)		Loamy Gleyed	( )		Other (Ex	plain in Remarks)	
Depleted Below Dark Su		Depleted Matrix			3	h	
Thick Dark Surface (A12	,	Redox Dark Su				hydrophytic vegetatic	
Sandy Mucky Mineral (S		Depleted Dark	. ,		wetland hyd	drology must be prese	ent,
Sandy Gleyed Matrix (S	4)	Redox Depress	sions (F8)		unless distu	urbed or problematic.	
emarks: S = sand; S	i = silt; C = clay; L :	= loam or loamy; co = t. Corner has been fille		= very fine; + =	• •		No X
Depth (inches): 2 emarks: S = sand; S po compacted to dig; many	ii = silt; C = clay; L : utility lines present	•		= very fine; + =	= heavy (more o		
Depth (inches): 2 emarks: S = sand; S bo compacted to dig; many IYDROLOGY retland Hydrology Indicat	i = silt; C = clay; L : utility lines present	t. Corner has been fille		= very fine; + =	= heavy (more o ).		ay)
Depth (inches): 2 emarks: S = sand; S bo compacted to dig; many YDROLOGY etland Hydrology Indicat	i = silt; C = clay; L : utility lines present	t. Corner has been fille		= very fine; + = through here)	= heavy (more o ). <u>Secondary In</u>	clay); - = light (less cla dicators (2 or more re	ay)
Depth (inches): 2 emarks: S = sand; S bo compacted to dig; many YDROLOGY fetland Hydrology Indicat imary Indicators (minimum Surface Water (A1)	i = silt; C = clay; L : utility lines present	t. Corner has been fille	ed (road used to go	= very fine; + = through here)	= heavy (more o ). <u>Secondary In</u> Water-Sta	clay); - = light (less cla dicators (2 or more re ained Leaves (B9) <b>(M</b>	ay)
Depth (inches): 2 emarks: S = sand; S bo compacted to dig; many YDROLOGY etland Hydrology Indicat imary Indicators (minimum Surface Water (A1) High Water Table (A2)	i = silt; C = clay; L : utility lines present	t. Corner has been fille heck all that apply) Water-Stained 1, 2, 4A, and	ed (road used to go Leaves (B9) <b>(exce</b> d <b>4B)</b>	= very fine; + = through here)	= heavy (more o ). <u>Secondary In</u> Water-Sta <b>4A, an</b>	clay); - = light (less cla dicators (2 or more re ained Leaves (B9) (M d 4B)	ay)
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Depth (inches):       2         emarks:       S = sand; S         bo compacted to dig; many         IYDROLOGY         Vetland Hydrology Indicate         rimary Indicators (minimum         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 Ae         Sparsely Vegetated Cor         Surface Water Present?	i = silt; C = clay; L = utility lines present ors: of one required; cl of and required; cl erial Imagery (B7) ncave Surface (B8) Yes Yes	t. Corner has been fille heck all that apply) Water-Stained <b>1, 2, 4A, and</b> Salt Crust (B11 Aquatic Inverte Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Stunted or Stre Other (Explain No X	ed (road used to go Leaves (B9) <b>(exce</b> <b>d 4B)</b> bates (B13) de Odor (C1) bespheres along Livir educed Iron (C4) eduction in Tilled So essed Plants (D1) (L in Remarks) Depth (inches):	e very fine; + = through here) pt MLRA	= heavy (more of ). <u>Secondary In</u> Water-Sta <b>4A, an</b> Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised A Frost-Hea	clay); - = light (less cla dicators (2 or more re ained Leaves (B9) (M d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Ima hic Position (D2) Aquitard (D3) tral Test (D5) nt Mounds (D6) (LRR	ay) equired) LRA 1, 2, agery (C9)
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Project/Site: C	Old Strong Road	/ Strong Heights S	Subdivisio	on	_City/County	Salem / I	Marion			Sampling Da	ate: 5/18/20	J21	
Applicant/Owner:	Steve Ward, V	Vard Development	LLC					Sta	te: OR	Samplir	ng Point:	SP2	
Investigator(s):	C. Mirth Walke	er			Section,	Township, I	Range: 11	A, 8S, 3	3W				
Landform (hillslope	e, terrace, etc.):	hillslope				Local r	elief (conca	ive, con	vex, none):	concave	Slope (%	%): 2	:
Subregion (LRR):	A, Northwest I	Forests and Coast		Lat:			Long:			Datu	ım:		
Soil Map Unit Nan	ne: Ma	A McAlpin							NWI	classification:	None		
Are climatic / hydr	ologic condition	s on the site typica	l for this	time of yea	r?		Yes	Х	No	(If no, e	xplain in Re	emarks)	
Are Vegetation	,So	il, o	r Hydrolo	ogy	significantly	disturbed?	Are "N	ormal (	Circumstan	ces" present?	Yes	X_No_	
Are Vegetation	,So	il, o	r Hydrolo	ogy	naturally pro	blematic?	(If nee	ded, ex	plain any a	answers in Rer	narks.)		
SUMMARY O	F FINDINGS	<ul> <li>Attach site</li> </ul>	maps	showing	sampling	point lo	cations,	trans	sects, in	nportant fe	atures, e	ətc.	
Hydrophytic Vege	etation Present?	Ye	s <b>X</b>	No No									
Hydric Soil Prese	ent?	Ye	s	No	Х	Is the S	ampled A	rea					
Wetland Hydrolog	gy Present?	Ye	s	No	X	within a	Wetland	?	Yes	No	Х		
	el location - fille	d. West Middle For	k Pringle	e Creek use	ed to flow thro	ough this co	rner as sho	own on	soils map	but it has beer	1 culverted	. 10 feet	
north of TP-2.													

VEGETATIC	)N
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30' r</u> )	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1.				That Are OBL, FACW, or FAC: 3 (A)
2.				
3.				Total Number of Dominant
4.				Species Across All Strata: 3 (B)
	0%	= Total Cover		、/
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10' r</u> )				Percent of Dominant Species
<sup>1.</sup> Rubus armeniacus	5%	Yes	FAC	That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2				Prevalence Index worksheet: 
4.				OBL species 0 x 1 = 0
5.				FACW species $0 \times 2 = 0$
	5%	= Total Cover		FAC species 85 x 3 = 255
<u>Herb Stratum</u> (Plot size: <u>5' r</u> )				FACU species $10 \times 4 = 40$
1. Schedonorus arundinaceus	50%	Yes	FAC	UPL species $10 \times 5 = 50$
2. Poa pratensis	20%	Yes	FAC	Column Totals: 105 (A) 345 (B)
3. Holcus lanatus	10%	No	FAC	Prevalence Index = $B/A = 3.29$
4. Dactylis glomerata	5%	No	FACU	Hydrophytic Vegetation Indicators:
5. Geranium dissectum	5%	No	NOL	1 - Rapid Test for Hydrophytic Vegetation
6. Vicia disperma	3%	No	NOL	X 2 - Dominance Test is >50%
7. Plantago lanceolata	3%	No	FACU	3 - Prevalence Index is $≤3.0^1$
8. Bellis perennis	2%	No	NOL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9. Trifolium pratense	2%	No	FACU	data in Remarks or on a separate sheet)
10.				5 - Wetland Non-Vascular Plants <sup>1</sup>
11.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	100%	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: <u>10' r</u> )				be present.
1				Hadaa da da
2		Total Course		Hydrophytic Vegetation Yes X No
	0%	= Total Cover		Vegetation Yes <u>X</u> No Present?
% Bare Ground in Herb Stratum 0%	-			
Remarks:				Entered by: cmw QC by:

(inches) Color (mo		-	Redox Fea	aaroo			
	ist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark
0-4+ 10YR 3/	2 98	7.5YR 3/2	2	С	М	SiL	faint
							_
							_
							_
ype: C=Concentration, D=E	Depletion RM=Rec	uced Matrix CS=Cover	ed or Coated Sa	nd Grains	<sup>2</sup> l ocation: Pl =	Pore Lining, M=Mati	
/dric Soil Indicators: (App	•					or Problematic Hyd	
						-	
Histosol (A1)		Sandy Redox (S5	,		2 cm Mu	. ,	
Histic Epipedon (A2)		Stripped Matrix (S Loamy Mucky Mir	,	MI DA 1)		ent Material (TF2)	
Black Histic (A3)						allow Dark Surface (1	1F12)
Hydrogen Sulfide (A4)	f=== (0.1.1)	Loamy Gleyed Ma	. ,		Other (E	xplain in Remarks)	
Depleted Below Dark Sur		Depleted Matrix (	,		<sup>3</sup> Indicators of	f hydrophytic vegetat	ion and
Thick Dark Surface (A12)		Redox Dark Surfa	( )				
Sandy Mucky Mineral (S	,	Depleted Dark Su	. ,			drology must be pres	
Sandy Gleyed Matrix (S4	)	Redox Depression	ns (F8)		unless dist	urbed or problematic	
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si	= silt; C = clay; L =	loam or loamy; co = co ing upland.	parse; f = fine; vf		lydric Soil Pres = heavy (more		No X
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat	= silt; C = clay; L = ors point to site be	•	parse; f = fine; vf		•		
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat IVDROLOGY fetland Hydrology Indicato	= silt; C = clay; L = ors point to site be <b>rs:</b>	ing upland.	parse; f = fine; vf		= heavy (more	clay); - = light (less c	clay)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat IYDROLOGY /etland Hydrology Indicator rimary Indicators (minimum	= silt; C = clay; L = ors point to site be <b>rs:</b>	eck all that apply)		= very fine; +	= heavy (more	clay); - = light (less c	lay) required)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat PDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface Water (A1)	= silt; C = clay; L = ors point to site be <b>rs:</b>	eck all that apply)	eaves (B9) <b>(exce</b>	= very fine; +	= heavy (more Secondary Ir Water-St	clay); - = light (less c ndicators (2 or more t tained Leaves (B9) <b>(</b>	lay) required)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicate IYDROLOGY retland Hydrology Indicator rimary Indicators (minimum Surface Water (A1) High Water Table (A2)	= silt; C = clay; L = ors point to site be <b>rs:</b>	eck all that apply) Water-Stained Le 1, 2, 4A, and 4	eaves (B9) <b>(exce</b>	= very fine; +	= heavy (more <u>Secondary Ir</u> Water-Si 4A, ar	clay); - = light (less c ndicators (2 or more n tained Leaves (B9) (I nd 4B)	lay) required)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat IYDROLOGY /etland Hydrology Indicator rimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	= silt; C = clay; L = ors point to site be <b>rs:</b>	ing upland. eck all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11)	eaves (B9) <b>(exce</b> • <b>B)</b>	= very fine; +	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage	clay); - = light (less c ndicators (2 or more n tained Leaves (B9) (I nd 4B) e Patterns (B10)	lay) required) MLRA 1, 2,
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat PYDROLOGY fetland Hydrology Indicator rimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	= silt; C = clay; L = ors point to site be <b>rs:</b>	eck all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra	eaves (B9) <b>(exce</b> I <b>B)</b> ates (B13)	= very fine; +	= heavy (more <u>Secondary Ir</u> <u>Water-St</u> <u>4A, ar</u> <u>Drainage</u> <u>Dry-Sease</u>	clay); - = light (less c ndicators (2 or more n tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2	<u>required)</u> MLRA 1, 2,
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat PYDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	= silt; C = clay; L = ors point to site be <b>rs:</b>	ing upland. <u>eck all that apply)</u> <u>Water-Stained Le</u> <b>1, 2, 4A, and 4</b> Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	eaves (B9) <b>(exce</b> • <b>B)</b> ates (B13) • Odor (C1)	= very fine; +	= heavy (more <u>Secondary Ir</u> Water-Si <b>4A, ar</b> Drainage Dry-Seas Saturatio	clay); - = light (less c ndicators (2 or more n tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial Ir	<u>required)</u> MLRA 1, 2,
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat IYDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	= silt; C = clay; L = ors point to site be <b>rs:</b>	ing upland. eck all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp	eaves (B9) <b>(exce</b> I <b>B)</b> ates (B13) Odor (C1) oheres along Livi	= very fine; +	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturatic Geomore	clay); - = light (less of ndicators (2 or more in tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2)	<u>required)</u> MLRA 1, 2,
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat PYDROLOGY fetland Hydrology Indicator rimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	= silt; C = clay; L = ors point to site be <b>rs:</b>	ing upland. <u>eck all that apply)</u> <u>Water-Stained Le</u> <b>1, 2, 4A, and 4</b> Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	eaves (B9) <b>(exce</b> <b>IB)</b> ates (B13) Odor (C1) oheres along Livit uced Iron (C4)	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturatic Geomorp Shallow	clay); - = light (less of ndicators (2 or more in tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3)	<u>required)</u> MLRA 1, 2,
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat IYDROLOGY /etland Hydrology Indicator rimary Indicators (minimum 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)	= silt; C = clay; L = ors point to site be <b>rs:</b>	ing upland. eck all that apply) Water-Stained Le <b>1, 2, 4A, and 4</b> Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	eaves (B9) <b>(exce</b> <b>B)</b> ates (B13) Odor (C1) wheres along Livin uced Iron (C4) uction in Tilled So	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturation Geomorp Shallow	clay); - = light (less c ndicators (2 or more t tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial Ir ohic Position (D2) Aquitard (D3) utral Test (D5)	nagery (C9)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat PYDROLOGY fetland Hydrology Indicator rimary Indicators (minimum 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)	= silt; C = clay; L = ors point to site be rs: of one required; ch	eck all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress	eaves (B9) <b>(exce</b> <b>B)</b> ates (B13) Odor (C1) wheres along Livin uced Iron (C4) uction in Tilled So sed Plants (D1) (I	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturation Geomorp Shallow FAC-Neu Raised A	clay); - = light (less of ndicators (2 or more in tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5) Ant Mounds (D6) (LR	nagery (C9)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat PDROLOGY Tetland Hydrology Indicator rimary Indicators (minimum 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 Aer	= silt; C = clay; L = cors point to site be rs: of one required; ch	ing upland. eck all that apply) Water-Stained Le <b>1, 2, 4A, and 4</b> Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	eaves (B9) <b>(exce</b> <b>B)</b> ates (B13) Odor (C1) wheres along Livin uced Iron (C4) uction in Tilled So sed Plants (D1) (I	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturation Geomorp Shallow FAC-Neu Raised A	clay); - = light (less c ndicators (2 or more t tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial Ir ohic Position (D2) Aquitard (D3) utral Test (D5)	nagery (C9)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat IYDROLOGY /etland Hydrology Indicator rimary Indicators (minimum 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 Aer Sparsely Vegetated Cond	= silt; C = clay; L = cors point to site be rs: of one required; ch	eck all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress	eaves (B9) <b>(exce</b> <b>B)</b> ates (B13) Odor (C1) wheres along Livin uced Iron (C4) uction in Tilled So sed Plants (D1) (I	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturation Geomorp Shallow FAC-Neu Raised A	clay); - = light (less of ndicators (2 or more in tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5) Ant Mounds (D6) (LR	nagery (C9)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat (YDROLOGY Tetland Hydrology Indicator rimary Indicators (minimum 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 Aer Sparsely Vegetated Cond	= silt; C = clay; L = cors point to site be rs: of one required; ch ial Imagery (B7) cave Surface (B8)	ing upland. eck all that apply) Water-Stained Le <b>1, 2, 4A, and 4</b> Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	eaves (B9) <b>(exce</b> <b>B)</b> ates (B13) Odor (C1) wheres along Livin uced Iron (C4) uction in Tilled So sed Plants (D1) (I	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturation Geomorp Shallow FAC-Neu Raised A	clay); - = light (less of ndicators (2 or more in tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5) Ant Mounds (D6) (LR	nagery (C9)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat IYDROLOGY /etland Hydrology Indicator rimary Indicators (minimum 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 Aer Sparsely Vegetated Cond ield Observations: Surface Water Present?	= silt; C = clay; L = cors point to site be rs: of one required; ch	ing upland. eck all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	eaves (B9) <b>(exce</b> <b>IB)</b> ates (B13) Odor (C1) oheres along Livin uced Iron (C4) uction in Tilled So ared Plants (D1) (I Remarks) repth (inches):	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturatic Geomorp Shallow FAC-Neu Raised A Frost-He	clay); - = light (less of ndicators (2 or more in tained Leaves (B9) ( <b>I</b> nd <b>4B</b> ) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5) Ant Mounds (D6) ( <b>LR</b> eave Hummocks (D7)	required) MLRA 1, 2, ) magery (C9) R A)
Image: setrictive Layer (if present Type: gravel fill         Depth (inches):       4         Depth (inches):       4         Depth (inches):       4         Demarks:       S = sand; Si         Ieed to dig deeper; all indicated to dig deeper; all indicat	= silt; C = clay; L = cors point to site be rs: of one required; ch ial Imagery (B7) cave Surface (B8)	eck all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in No X D No X D	eaves (B9) <b>(exce</b> <b>IB)</b> ates (B13) Odor (C1) wheres along Livin uced Iron (C4) uction in Tilled So add Plants (D1) (I Remarks) epth (inches):	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturatic Geomorp Shallow FAC-Neu Raised A Frost-He	clay); - = light (less of ndicators (2 or more in tained Leaves (B9) (I nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5) Ant Mounds (D6) (LR	nagery (C9)
estrictive Layer (if present Type: gravel fill Depth (inches): 4 emarks: S = sand; Si eed to dig deeper; all indicat IYDROLOGY /etland Hydrology Indicator rimary Indicators (minimum 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 Aer Sparsely Vegetated Cond ield Observations: Surface Water Present?	= silt; C = clay; L = cors point to site be rs: of one required; ch ial Imagery (B7) cave Surface (B8)	eck all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in No X D No X D	eaves (B9) <b>(exce</b> <b>IB)</b> ates (B13) Odor (C1) oheres along Livin uced Iron (C4) uction in Tilled So ared Plants (D1) (I Remarks) repth (inches):	pt MLRA	= heavy (more <u>Secondary Ir</u> Water-St <b>4A, ar</b> Drainage Dry-Seas Saturatic Geomorp Shallow FAC-Neu Raised A Frost-He	clay); - = light (less of ndicators (2 or more in tained Leaves (B9) ( <b>I</b> nd <b>4B</b> ) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5) Ant Mounds (D6) ( <b>LR</b> eave Hummocks (D7)	required) MLRA 1, 2, ) magery (C9) R A)

Applicant/Owner:         State: OR         Sampling Point:         SP3           Investigator(s):         C.Mith Walker         Section, Township, Range: 11A, 85, 3W         Investigator(s):         C.Mith Walker         Sole (%):         2.           Subregion (LRR):         A. Northwest Forests and Coast         Lat:         Local relief (concer, conver, none, inver, inver         Not         Constructions, transacts, invertances, conver, none, inversationations, inversationation, inversation, inversatindintexponder inversation, inversatindintexponder invers	Project/Site:	Old Strong Road / Strong He	eights Subdivision	City/Co	ounty: Salem / M	larion	Sampling Date: 5/	18/2021
Landom (hillslope, terrace, etc.):         torrace         Local relief (concave, convex, none):	Applicant/Owner:	Steve Ward, Ward Develo	opment LLC			State: OR	Sampling Poir	nt: SP3
Subregion (LRR): A, Northwest Forests and Coast       Lat:       Long:       Datum:         Soil Map Unit Name:       MAA McApin       NVM (dasafication: None         Are dimater (hydrologic conditions on the site typical for this time of year?       Yes       No       With classification: None         Are Vegetation	Investigator(s):	C. Mirth Walker		Sec	ction, Township, R	ange: 11A, 8S, 3W		
Soil Map Unit Name:       MaA McAlpin       NVI classification: None         Are dimatic / hydrologic conditions on the site typical for this time of year?       Yes       X       No       (If no, explain in Remarks)         Are Vegatation       Soil       , or Hydrology       isignificantly disturbed?       Yes       X No       (If no, explain in Remarks)         Are Vegatation       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.       Hydrohytic Vegetation Present?       Yes       No         Hydrobytic Vegetation Present?       Yes       No       X       Is the Sampled Area         Wetland Hydrology Present?       Yes       No       X       Is the Sampled Area         Wetland Hydrology Present?       Yes       No       X       Is the Sampled Area         Wetland Hydrology Present?       Yes       No       X       Is the Sampled Area         Wetland Hydrology Present?       Yes       No       X       Indicator       No       X         Iree Stratum       (Plot size:)       Absolute       Dominant       Indicator       No       X       Indicator         1.	Landform (hillslope	e, terrace, etc.): terrace			Local re	elief (concave, convex, none):	none Slop	pe (%): 2
Are elimatic / hydrologic conditions on the site typical for this time of year?       Yes       X       No       (ff no. explain in Remarks)         Are Vegetation       _Soil       or Hydrology       isginificantly disturbed?       Are "Nomatances" present?       Yes       X       No         Are Vegetation       _Soil       or Hydrology       naturally problematic?       (iff no. explain in Remarks)         SUBIMARY OF FINDINGS -       Attach site map showing sampling point locations, transects, important features, etc.         Hydrophylic Vogetation Present?       Yes       No       X       Is the Sampled Area         Wetland Hydrology Present?       Yes       No       X       Is the Sampled Area         wetland Hydrology Present?       Yes       No       X       X         VEGETATION       Absolute       Dominant       Indicator       Number of Dominant Species         1.	Subregion (LRR)	: A, Northwest Forests and	Coast	Lat:		Long:	Datum:	
Are Vegetation	Soil Map Unit Na	me: MaA McAlpin				NWI	classification: None	
Are Vegetation	Are climatic / hyd	rologic conditions on the site	e typical for this time	e of year?		Yes X No	(If no, explain	in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.         Hydrophytic Vegetation Present?       Yes       No       X       Is the Sampled Area within a Wetland?       No       X         Hydrophytic Vegetation Present?       Yes       No       X       Is the Sampled Area within a Wetland?       No       X         Remarks:       Approximately 8 feet east of road gravel.       Vestant Hydrophytic Vegetation Agencies       No       X         VestantHydrophytic Vegetation (Plot size: _30' r)       Absolute Species?       Dominant Species?       No       X         1.	Are Vegetation	,Soil	, or Hydrology	signific	antly disturbed?	Are "Normal Circumstand	ces" present? Ye	es X No
Hydrophytic Vegetation Present?       Yes       X       No       X       within a Wetland?       Yes       No       X         Hydric Soil Present?       Yes       No       X       within a Wetland?       Yes       No       X         Remarks::       Approximately 8 feet east of road gravel.       VECETATION       Dominant       Indicator       Dominant Species         1.	0				• •			,
Hydric Soil Present?       Yes       No       X       is the Sampled Area within a Wetland?       Yes       No       X         Remarks:       Approximately 8 feet east of road gravel.       VEGETATION       Indicator       Dominant       Status       Number of Dominant Species       Number of Dominant Species       Number of Dominant Species       Indicator       Number of Dominant Species       Indicator       Status       Total Number of Dominant Species       Indicator       Indicato	SUMMARY C	OF FINDINGS – Attac		owing samp	ling point loc	ations, transects, im	portant feature	es, etc.
Wetland Hydrology Present?         Yes         No         X         within a Wetland?         Yes         No         X           Remarks: Approximately 8 feet east of road gravel.         Absolute         Dominant         Indicator         Dominant Species         Indicator         No         X           Image: Stratum         (Plot size: 30' r.)         Absolute         Dominant         Indicator         Status         Number of Dominant Species         Indicator         Number of Dominant Species         Indicator         Indicator         Indicator         Status         Number of Dominant Species         Indicator	Hydrophytic Veg	etation Present?	Yes X					
Remarks: Approximately 8 feet east of road gravel.         VEGETATION         VEGETATION         Indicator       Dominant       Indicator         Number of Dominant Species       Number of Dominant       Species?         1.       Species?       Status       Number of Dominant       Species         2.       That Are OBL, FACW, or FAC:       3       (A)         3.        Total Number of Dominant       Species         4.        Species       Total Number of Dominant         4.        Species Across All Strata:       3       (B)         1.        O%       = Total Cover       Percent of Dominant Species         1.          OBL species       0       x1 =       0         2.          Percent of Dominant Species	Hydric Soil Prese	ent?	Yes					
Approximately 8 feet east of road gravel.         VEGETATION         In the stratum (Plot size:)       Absolute Dominant Species?       Status       Dominant Species         1.	Wetland Hydrolo	ogy Present?	Yes	No X	within a	Wetland? Yes	<u>No X</u>	
Itee Stratum Tree Stratum 1.Absolute % CoverDominant Species?Indicator StatusDominant of Dominant Species1Total Number of Dominant2Total Number of Dominant34231<		feet east of road gravel.						
Tree Stratum(Plot size: $30' r$ )% CoverSpecies?StatusNumber of Dominant Species1	VEGETATIO	N						
1.1.1.2342342312342345678123451A511.Alopecurus pratensis41.Alopecurus pratensis45676777777777 <td></td> <td></td> <td>Absolute</td> <td>Domin</td> <td>ant Indicator</td> <td>r Dominance Test wo</td> <td>orksheet:</td> <td></td>			Absolute	Domin	ant Indicator	r Dominance Test wo	orksheet:	
2.	Tree Stratum	(Plot size: <u>30' r</u> )	<u>% Cover</u>	Specie	es? Status	Number of Dominant	Species	
3.	1.					That Are OBL, FACV	V, or FAC:	3 (A)
4. $0\%$ = Total CoverPercent of DominantSapling/Shrub Stratum(Plot size: 10' r ))Percent of Dominant Species1That Are OBL, FACW, or FAC: 100% (A/B)2Prevalence Index worksheet:34O% = Total Cover451.Alopecurus pratensis40% YesFAC23451.Alopecurus pratensis40% YesFAC2.Schedonorus arundinaceus35% YesFAC345673473456777777777	2.					_		
Species Actions Antionation of the size: $10'r$ )0%= Total Cover0%= Total Cover1.That Are OBL, FACW, or FAC: $100\%$ (A/B)2.That Are OBL, FACW, or FAC: $100\%$ (A/B)3.Omega = Total Cover4.OBL species $0 \times 1 = 0$ 5.Omega = Total CoverHerb Stratum (Plot size: $5'r$ )FAC Species $100 \times 3 = 300$ 1.Atopecurus pratensis4.Omega = Total CoverHerb Stratum (Plot size: $5'r$ )FAC1.Atopecurus pratensis2.Schedonorus arundinaceus3. $25\%$ 4.FAC5.Column Totals: $100$ (A)3.Poa pratensis4.FAC5.Image = Total Cover4.Image = Total Cover1.Atopecurus pratensis2. $25\%$ YesFACVPL species $0 \times 5 = 0$ Column Totals: $100$ (A)3.Poa pratensis4.Image = Total Cover5.Image = Total Cover4.Image = Total Cover5.Image = Total Cover4.Image = Total Cover5.Image = Total Cover6.Image = Total Cover7.Image = Total Cover8.Image = Total Cover9.Image = Total Cover <td>3.</td> <td></td> <td></td> <td></td> <td></td> <td>Total Number of Dom</td> <td>ninant</td> <td></td>	3.					Total Number of Dom	ninant	
Saping/Shrub Stratum(Plot size: $10' r$ )Percent of Dominant Species1That Are OBL, FACW, or FAC: $100\%$ (A/B)2Prevalence Index worksheet: Total % Cover of: Multiply by:34OBL species $0$ x 1 = $0$ 5FACW species $0$ x 2 = $0$ FAC species $0$ x 4 = $0$ FAC species $0$ x 4 = $0$ 1.Alopecurus pratensis40% YesFAC2.Schedonorus arundinaceus35% YesFAC3.Poa pratensis25% YesFAC4567	4.					Species Across All S	trata:	3 (B)
1.That Are OBL, FACW, or FAC:100%(A/B)23456 <td></td> <td></td> <td>0%</td> <td>= Total Cove</td> <td>r</td> <td>—</td> <td></td> <td></td>			0%	= Total Cove	r	—		
2.Intal Ale Obl., PAC.100 X3.Image: Ale Obl., PAC.100 X3.Image: Ale Obl., PAC.100 X4.Image: Ale Obl., PAC.100 X5.Image: Ale Obl., PAC.100 X5.Image: Ale Obl., PAC.100 X6.Image: Ale Obl., PAC.100 X7.Image: Ale Obl., PAC.100 X7.Image: Ale Obl., PAC.100 X7.Image: Ale Obl., PAC.100 X7.Image: Ale Obl., PAC.100 X1.Alopecurus pratensis0 X 1 =0%= Total CoverFAC species0%= Total CoverFAC species1.Alopecurus pratensis0 X 2 =1.Alopecurus arundinaceus35%25%YesFAC1.Rapid Test for Hydrophytic Vegetation1.Rapid Test for Hydrophytic Vegetation1.Rapid Test for Hydrophytic Vegetation3.Prevalence Index is <3.01	Sapling/Shrub St	ratum (Plot size: <u>10</u>	<u>)' r)</u>			Percent of Dominant	Species	
Provalence index worksheet:3. $Total % Cover of: Multiply by:4.Cover of: Multiply by:5.Cover of: Multiply by:5.O\% = Total CoverHerb Stratum(Plot size: 5'r)1.Alopecurus pratensis2.Schedonorus arundinaceus3.25\%YesFACVesFACColumn Totals:1001.Alopecurus pratensis2.Schedonorus arundinaceus3.25\%YesFACPoa pratensis25\%YesFACHydrophytic Vegetation Indicators:1.Rapid Test for Hydrophytic Vegetation6.X 2 - Dominance Test is >50\%7.S - Prevalence Index is <3.0^1$	1.					That Are OBL, FACV	V, or FAC: <u>10</u>	<u>/0%</u> (A/B)
4.OBL species $0 \times 1 =$ $0$ 5. $0 \times 1 =$ $0 \times 2 =$ $0$ Herb Stratum(Plot size: 5' r_) $0 \times 3 =$ $300$ 1.Alopecurus pratensis $40\%$ YesFAC2.Schedonorus arundinaceus $35\%$ YesFAC3.Poa pratensis $25\%$ YesFAC4. $$	2.					Prevalence Index w	orksheet:	
5. $\bigcirc 0\%$ = Total CoverFACW species $\bigcirc x 2 =$ $\bigcirc 0$ Herb Stratum(Plot size: <u>5' r</u> ) $\bigcirc \%$ = Total CoverFAC species $100$ x 3 = $300$ 1.Alopecurus pratensis $40\%$ YesFACUPL species $\bigcirc x 4 =$ $\bigcirc$ 2.Schedonorus arundinaceus $35\%$ YesFACColumn Totals: $100$ (A) $300$ (B3.Poa pratensis $25\%$ YesFACPrevalence Index = B/A = $3.00$ 4.Image: Sime Sime Sime Sime Sime Sime Sime Sime	3.					Total % Cover c	of: Multiply by:	
$Merb Stratum$ (Plot size: $5'r$ ) $0\%$ = Total CoverFAC species $100 \times 3 =$ $300$ 1.Alopecurus pratensis $40\%$ YesFACUPL species $0 \times 5 =$ $0$ 2.Schedonorus arundinaceus $35\%$ YesFACColumn Totals: $100 \times 3 =$ $0$ 3.Poa pratensis $25\%$ YesFACPrevalence Index = B/A = $3.00$ 4.Image: SpeciesImage: SpeciesImage: Species $1 \cdot Rapid Test for Hydrophytic Vegetation$ 5.Image: SpeciesImage: SpeciesImage: Species $1 \cdot Rapid Test for Hydrophytic Vegetation$ 6.Image: SpeciesImage: Species $X = -3.0^{1}$ 7.Image: SpeciesImage: Species $3 \cdot Prevalence Index is \leq 3.0^{1}$	4.					OBL species	0 x 1 =	0
Herb Stratum(Plot size: $5'r$ )FACU species $0 \times 4 =$ $0$ 1.Alopecurus pratensis40%YesFACUPL species $0 \times 5 =$ $0$ 2.Schedonorus arundinaceus35%YesFACColumn Totals: $100$ (A) $300$ (B3.Poa pratensis25%YesFACPrevalence Index = B/A = $3.00$ 4.Image: the second	5.					FACW species	0 x 2 =	0
1.Alopecurus pratensis40%YesFACUPL species0 $x 5 =$ 02.Schedonorus arundinaceus35%YesFACColumn Totals:100(A)300(B)3.Poa pratensis25%YesFACPrevalence Index = B/A = $3.00$ 4			0%	= Total Cove	r	FAC species 1	00 x 3 =	300
2.Schedonorus arundinaceus $35\%$ YesFACColumn Totals: $100$ (A) $300$ (B3.Poa pratensis $25\%$ YesFACPrevalence Index = B/A = $3.00$ 4.Image: Signal Arrow Signa	Herb Stratum	(Plot size: <u>5' r</u> )		_		FACU species	0 x 4 =	0
2.Schedonorus arundinaceus $35\%$ YesFACColumn Totals: $100$ (A) $300$ (B3.Poa pratensis $25\%$ YesFACPrevalence Index = B/A = $3.00$ 4.Image: Signal Arrow Signa	1. Alopecurus p	oratensis	40%	Yes	s FAC	UPL species	0 x 5 =	0
3.Poa pratensis25%YesFACPrevalence Index = $B/A = 3.00$ 4	-			_			(A)	300 (B)
4.     Hydrophytic Vegetation Indicators:       5.     1 - Rapid Test for Hydrophytic Vegetation       6.     X 2 - Dominance Test is >50%       7.     3 - Prevalence Index is ≤3.0 <sup>1</sup>				_		Prevalence Inde	x = B/A =	
5.       1 - Rapid Test for Hydrophytic Vegetation         6.       X 2 - Dominance Test is >50%         7.       3 - Prevalence Index is ≤3.0 <sup>1</sup>		-				Hydrophytic Vegeta	ation Indicators:	
7 3 - Prevalence Index is ≤3.0 <sup>1</sup>	5.							ation
7 3 - Prevalence Index is ≤3.0 <sup>1</sup>	6.					X 2 - Dominance T	est is >50%	
						— <b>—</b>		vide supporting
9. data in Remarks or on a separate sheet)						` ~		0
10. 5 - Wetland Non-Vascular Plants <sup>1</sup>						—		
11. Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)								(Explain)
			4000/			— — ·		,
Woody Vine Stratum     (Plot size: 10' r_)         be present.		tum (Plot size: <u>10</u>			I		son and weildhu Hyd	iology must
1								
2 Hydrophytic 0% = Total Cover Vegetation Yes X No	<i></i>			- Total Cover			Yes X No	
	% Baro Ground	n Herb Stratum				-		
% Bare Ground in Herb Stratum     0%     Present?       Remarks:     Entered by: cmw     QC by:			/0					

Myosotis discolor (FAC) rooted to the east); Cytisus scoparius (NOL) rooted to the south.

			Redox Featu	100			
(inches) Color (mo	oist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark
0-4 10YR 2	2/2 100					SiL	
							-
			<u> </u>				
e: C=Concentration, D=	•			Grains.		Pore Lining, M=Matri	
ric Soil Indicators: (App	blicable to all LRF	s, unless otherwise i	noted.)		Indicators for	or Problematic Hydr	ic Soils <sup>°</sup> :
Histosol (A1)		Sandy Redox (S	S5)		2 cm Mu	ck (A10)	
Histic Epipedon (A2)		Stripped Matrix	(S6)		Red Pare	ent Material (TF2)	
Black Histic (A3)		Loamy Mucky M	lineral (F1) (except	MLRA 1)	Very Sha	llow Dark Surface (T	F12)
Hydrogen Sulfide (A4)		Loamy Gleyed I	Matrix (F2)		Other (Ex	plain in Remarks)	
Depleted Below Dark Su	rface (A11)	Depleted Matrix	(F3)				
Thick Dark Surface (A12	)	Redox Dark Su	face (F6)		<sup>3</sup> Indicators of	hydrophytic vegetati	on and
Sandy Mucky Mineral (S	1)	Depleted Dark S	Surface (F7)		wetland hyd	drology must be pres	ent,
Sandy Gleyed Matrix (S4		Redox Depress	. ,		•	urbed or problematic.	
strictive Layer (if presen	t):						
Type: <u>Hardpan</u> Depth (inches): <u>4</u> marks: S = sand; Si	•	= loam or loamy; co = o		very fine; +	• •	clay); - = light (less cl	No X
Type: <u>Hardpan</u> Pepth (inches): <u>4</u> marks: S = sand; Si build check earlier in seaso	on when soils are e	•		very fine; +	= heavy (more	clay); - = light (less cl	
Type: <u>Hardpan</u> epth (inches): <u>4</u> marks: S = sand; Si buld check earlier in seaso /DROLOGY tland Hydrology Indicate	on when soils are e	easier to dig. Wetland n		very fine; +	= heavy (more of he first 6 feet of	clay); - = light (less cl vegetation is fine.	lay)
Type: <u>Hardpan</u> epth (inches): <u>4</u> marks: S = sand; Si buld check earlier in seaso /DROLOGY tland Hydrology Indicate	on when soils are e	easier to dig. Wetland n		very fine; +	= heavy (more of he first 6 feet of	clay); - = light (less cl	lay)
Type: <u>Hardpan</u> epth (inches): <u>4</u> marks: S = sand; Si buld check earlier in seaso TDROLOGY tland Hydrology Indicate	on when soils are e	easier to dig. Wetland n		very fine; + e east, but ti	= heavy (more of he first 6 feet of <u>Secondary In</u>	clay); - = light (less cl vegetation is fine.	ay)
Type: <u>Hardpan</u> epth (inches): <u>4</u> narks: S = sand; Si buld check earlier in seaso <b>DROLOGY</b> tland Hydrology Indicator nary Indicators (minimum	on when soils are e	easier to dig. Wetland n	nay be present to the Leaves (B9) <b>(except</b>	very fine; + e east, but ti	= heavy (more of he first 6 feet of <u>Secondary In</u>	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b>	ay)
Type: <u>Hardpan</u> epth (inches): <u>4</u> narks: S = sand; Si uld check earlier in seaso DROLOGY land Hydrology Indicate nary Indicators (minimum Surface Water (A1)	on when soils are e	easier to dig. Wetland n neck all that apply) Water-Stained L	Leaves (B9) (except 4B)	very fine; + e east, but ti	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St 4A, an	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b>	ay)
Type: <u>Hardpan</u> epth (inches): <u>4</u> marks: S = sand; Si uld check earlier in seaso DROLOGY tland Hydrology Indicator mary Indicators (minimum Surface Water (A1) High Water Table (A2)	on when soils are e	easier to dig. Wetland n neck all that apply) Water-Stained L 1, 2, 4A, and	nay be present to the eaves (B9) (except 4B)	very fine; + e east, but ti	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> d <b>4B</b> )	ay) equired) /ILRA 1, 2,
Type: <u>Hardpan</u> epth (inches): <u>4</u> narks: S = sand; Si uld check earlier in sease <b>DROLOGY</b> tland Hydrology Indicate hary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	on when soils are e	easier to dig. Wetland n neck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11)	Leaves (B9) (except 4B) prates (B13)	very fine; + e east, but ti	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> d <b>4B)</b> Patterns (B10)	equired) // ILRA 1, 2,
Type: <u>Hardpan</u> epth (inches): <u>4</u> marks: S = sand; Si build check earlier in seaso <b>DROLOGY</b> tland Hydrology Indicate mary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	on when soils are e	easier to dig. Wetland n heck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfic	Leaves (B9) (except 4B) prates (B13)	MLRA	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio	Clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> d <b>4B</b> ) Patterns (B10) con Water Table (C2)	equired) // ILRA 1, 2,
Type: <u>Hardpan</u> epth (inches): <u>4</u> narks: S = sand; Si build check earlier in sease <b>/DROLOGY</b> tland Hydrology Indicate nary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	on when soils are e	easier to dig. Wetland n heck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfic	Leaves (B9) (except 4B) prates (B13) le Odor (C1) spheres along Living	MLRA	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B)</b> Patterns (B10) son Water Table (C2) n Visible on Aerial Irr	equired) // ILRA 1, 2,
Type: <u>Hardpan</u> epth (inches): <u>4</u> narks: S = sand; Si puld check earlier in sease <b>DROLOGY</b> tland Hydrology Indicate nary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	on when soils are e	easier to dig. Wetland n heck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Invertet Hydrogen Sulfic Oxidized Rhizos Presence of Re	Leaves (B9) (except 4B) prates (B13) le Odor (C1) spheres along Living	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow /	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B)</b> Patterns (B10) son Water Table (C2) n Visible on Aerial In whic Position (D2)	equired) // ILRA 1, 2,
Type: <u>Hardpan</u> epth (inches): <u>4</u> marks: S = sand; Si buld check earlier in seaso <b>/DROLOGY</b> tland Hydrology Indicator mary Indicators (minimum 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)	on when soils are e	easier to dig. Wetland n meck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfic Oxidized Rhizos Presence of Re- Recent Iron Rec	Leaves (B9) (except 4B) orates (B13) le Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soils	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu	Clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B)</b> Patterns (B10) son Water Table (C2) n Visible on Aerial Irr shic Position (D2) Aquitard (D3) ttral Test (D5)	equired) //LRA 1, 2, hagery (C9)
Type: Hardpan Pepth (inches): 4 marks: S = sand; Si puld check earlier in sease (DROLOGY tland Hydrology Indicate mary Indicators (minimum 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)	on when soils are e	easier to dig. Wetland n heck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Invertet Hydrogen Sulfic Oxidized Rhizos Presence of Rea Recent Iron Rea Stunted or Stres	Leaves (B9) (except 4B) orates (B13) le Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soils ssed Plants (D1) (LR	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B)</b> Patterns (B10) son Water Table (C2) n Visible on Aerial In whic Position (D2) Aquitard (D3) ttral Test (D5) nt Mounds (D6) ( <b>LRf</b>	equired) //LRA 1, 2, hagery (C9)
Type: <u>Hardpan</u> Pepth (inches): <u>4</u> marks: S = sand; Si buld check earlier in sease <b>(DROLOGY</b> <b>tland Hydrology Indicate</b> mary Indicators (minimum 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 Ae	on when soils are e ors: of one required; ch rial Imagery (B7)	easier to dig. Wetland n meck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfic Oxidized Rhizos Presence of Re- Recent Iron Rec	Leaves (B9) (except 4B) orates (B13) le Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soils ssed Plants (D1) (LR	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A	Clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B)</b> Patterns (B10) son Water Table (C2) n Visible on Aerial Irr shic Position (D2) Aquitard (D3) ttral Test (D5)	equired) //LRA 1, 2, hagery (C9)
Type: <u>Hardpan</u> Pepth (inches): <u>4</u> marks: S = sand; Si bould check earlier in sease <b>/DROLOGY</b> <b>tland Hydrology Indicate</b> mary Indicators (minimum 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 Ae Sparsely Vegetated Con	on when soils are e ors: of one required; ch rial Imagery (B7)	easier to dig. Wetland n heck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Invertet Hydrogen Sulfic Oxidized Rhizos Presence of Rea Recent Iron Rea Stunted or Stres	Leaves (B9) (except 4B) orates (B13) le Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soils ssed Plants (D1) (LR	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B)</b> Patterns (B10) son Water Table (C2) n Visible on Aerial In whic Position (D2) Aquitard (D3) ttral Test (D5) nt Mounds (D6) ( <b>LRf</b>	equired) //LRA 1, 2, hagery (C9)
Type: Hardpan Pepth (inches): 4 marks: S = sand; Si buld check earlier in sease (DROLOGY tland Hydrology Indicate mary Indicators (minimum 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 Ae Sparsely Vegetated Con Id Observations:	on when soils are e ors: of one required; ch rial Imagery (B7) cave Surface (B8)	easier to dig. Wetland n meck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Invertet Hydrogen Sulfic Oxidized Rhizos Presence of Re- Recent Iron Rec Stunted or Stres Other (Explain i	hay be present to the Leaves (B9) (except 4B) brates (B13) le Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soils ssed Plants (D1) (LR n Remarks)	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B)</b> Patterns (B10) son Water Table (C2) n Visible on Aerial In whic Position (D2) Aquitard (D3) ttral Test (D5) nt Mounds (D6) ( <b>LRf</b>	equired) //LRA 1, 2, hagery (C9)
Type: Hardpan Pepth (inches): 4 marks: S = sand; Si build check earlier in sease (DROLOGY tland Hydrology Indicate mary Indicators (minimum 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 Ae Sparsely Vegetated Con Id Observations: rface Water Present?	on when soils are e ors: of one required; cl rial Imagery (B7) cave Surface (B8) Yes	A wasier to dig. Wetland n meck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Invertet Hydrogen Sulfic Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in No X	Leaves (B9) <b>(except</b> <b>4B)</b> brates (B13) le Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soils ssed Plants (D1) ( <b>LR</b> n Remarks) Depth (inches):	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A Frost-Hea	Clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B</b> ) Patterns (B10) son Water Table (C2) n Visible on Aerial In whic Position (D2) Aquitard (D3) ttral Test (D5) nt Mounds (D6) ( <b>LRF</b> ave Hummocks (D7)	equired) //LRA 1, 2, /nagery (C9)
Type: Hardpan Depth (inches): 4 marks: S = sand; Si ould check earlier in seaso (DROLOGY stland Hydrology Indicate mary Indicators (minimum 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) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con Ind Observations: Inface Water Present?	on when soils are e ors: of one required; ch rial Imagery (B7) cave Surface (B8)	Aasier to dig. Wetland n heck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Invertet Hydrogen Sulfic Oxidized Rhizos Presence of Re- Recent Iron Red Stunted or Stres Other (Explain in No X	Leaves (B9) (except 4B) orates (B13) le Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soils ssed Plants (D1) (LR n Remarks) Depth (inches):	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A Frost-Hea	clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B)</b> Patterns (B10) son Water Table (C2) n Visible on Aerial In whic Position (D2) Aquitard (D3) ttral Test (D5) nt Mounds (D6) ( <b>LRf</b>	ay) equired) //LRA 1, 2, hagery (C9) R A)
Type: <u>Hardpan</u> Depth (inches): <u>4</u> marks: S = sand; Si ould check earlier in seaso <b>YDROLOGY</b> <b>etland Hydrology Indicate</b> mary Indicators (minimum 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 Ae	on when soils are e ors: of one required; cl rial Imagery (B7) cave Surface (B8) Yes	Aasier to dig. Wetland n heck all that apply) Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Invertet Hydrogen Sulfic Oxidized Rhizos Presence of Re- Recent Iron Red Stunted or Stres Other (Explain in No X	Leaves (B9) (except 4B) brates (B13) le Odor (C1) spheres along Living duced Iron (C4) duction in Tilled Soils ssed Plants (D1) (LR n Remarks) Depth (inches):	MLRA Roots (C3)	= heavy (more of he first 6 feet of <u>Secondary In</u> Water-St <b>4A, an</b> Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A Frost-Hea	Clay); - = light (less cl vegetation is fine. dicators (2 or more r ained Leaves (B9) ( <b>N</b> <b>d 4B</b> ) Patterns (B10) son Water Table (C2) n Visible on Aerial In whic Position (D2) Aquitard (D3) ttral Test (D5) nt Mounds (D6) ( <b>LRF</b> ave Hummocks (D7)	equired) //LRA 1, 2, /nagery (C9)

Project/Site: Old Strong Road / Strong He	eights Subdivision	City/County:	Salem / Mario	on	Sampling Da	ate: 5/18/2021	1
Applicant/Owner: Steve Ward, Ward Develo	opment LLC			State: OR	Samplin	ng Point:	SP4
Investigator(s): C. Mirth Walker		Section,	Township, Rang	ge: 11A, 8S, 3W			
Landform (hillslope, terrace, etc.): terrace			Local relief	(concave, convex, none):	none	Slope (%):	1
Subregion (LRR): A, Northwest Forests and	l Coast	Lat:	Lor	ng:	Datu	ım:	
Soil Map Unit Name: MaA McAlpin				NWI	classification:	None	
Are climatic / hydrologic conditions on the site	e typical for this time	of year?	Ye	es No	(If no, e>	kplain in Rem	arks)
Are Vegetation,Soil	, or Hydrology	significantly	disturbed? A	Are "Normal Circumstand	ces" present?	Yes X	No
	, or Hydrology		,	If needed, explain any a		,	
SUMMARY OF FINDINGS – Attac		wing sampling	point locati	ons, transects, im	portant fea	atures, etc	<u>;.</u>
Hydrophytic Vegetation Present?	Yes X	No					
Hydric Soil Present?	Yes	No <b>X</b>	Is the Samp				
Wetland Hydrology Present?	Yes	No X	within a We	tland? Yes	No	<u>X</u>	
Remarks: S of Strong Road, west side by 3 oaks that w	ill be removed.						
VEGETATION							
<u>Tree Stratum</u> (Plot size: <u>30' r</u> )	Absolute <u>% Cover</u>	Dominant <u>Species?</u>	Indicator <u>Status</u>	Dominance Test wo Number of Dominant			
<ol> <li><u>Quercus garryana</u></li> <li>2.</li> </ol>	80%	Yes	FACU	That Are OBL, FACV	V, or FAC:	3	(A)
3.		·					
4.		·		Total Number of Don		-	
				Species Across All S		5	(B)
Sapling/Shrub Stratum (Plot size: 10	<u>80%</u> )	= Total Cover		Percent of Dominant	Species		
1. Crataegus douglasii	10%	Yes	FAC	That Are OBL, FACV	V, or FAC:	<u>60%</u>	(A/B)
<ol> <li><u>Crataegus monogyna</u></li> <li>3.</li> </ol>	1%	No	FAC	Prevalence Index w Total % Cover of		by:	
4.		· · · · · · · · · · · · · · · · · · ·		OBL species	0 x 1 =	0	
5.		·			$\frac{0}{0} \times 2 =$	0	—
	11%	= Total Cover			91 x 3 =	273	—
Herb Stratum (Plot size: <u>5' r</u> )		-			31 x 4 =	324	—
1. Alopecurus pratensis	50%	Yes	FAC	·	20 x 5 =	100	—
2. Schedonorus arundinaceus	20%	Yes	FAC		92 (A)	697	(B)
3. Arrhenatherum elatius	20%	Yes	UPL	Prevalence Inde		3.63	`´
4. Poa pratensis	10%	No	FAC	Hydrophytic Vegeta	ation Indicato	rs:	
5. Quercus garryana	1%	No	FACU	1 - Rapid Test fo			
6.	170		17100	X 2 - Dominance T		0	
7.				3 - Prevalence Ir	ndex is ≤3.0 <sup>1</sup>		
8.		·		4 - Morphologica		(Provide sun	porting
9.		·		°	rks or on a ser	· ·	
10.		·		5 - Wetland Non-	•	·	
11.		·		Problematic Hyd			in)
Woody Vine Stratum (Plot size: <u>10</u>		= Total Cover		<sup>1</sup> Indicators of hydric s be present.			
1.				20 2.000111			
2.				Hydrophytic			
	0%	= Total Cover		Vegetation	Yes X	No	
% Bare Ground in Herb Stratum 0	%			Present?			
Remarks:				Entere	d by: cmw	QC by:	

(inches)         Color (moist)         %         Color (moist)         %         Type1         Loc2         Texture           0-6         10YR 3/2         99         10YR 4/6         1         C         M         SiL         w/ gr           0-6         10YR 3/2         99         10YR 4/6         1         C         M         SiL         w/ gr           0-6         10YR 3/2         99         10YR 4/6         1         C         M         SiL         w/ gr           0-6         10YR 3/2         99         10YR 4/6         1         C         M         SiL         w/ gr           0-6         10YR 3/2         99         10YR 4/6         1         C         M         SiL         w/ gr           0-6         10YR 3/2         99         10YR 4/6         1         C         M         Sil         -           0-6         10YR 4/6         1         C         M         Sil         -
0-6       10YR 3/2       99       10YR 4/6       1       C       M       SiL       w/g         w/g
Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)
indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)
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indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)
Histosol (A1)Sandy Redox (S5)2 cm Muck (A10) Histic Epipedon (A2)Stripped Matrix (S6)Red Parent Material (TF2) Uery Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11)Depleted Matrix (F2)Other (Explain in Remarks) Depleted Below Dark Surface (A12)Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1)Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Trictive Layer (if present): Type:gravels pth (inches):6 th (inches):6 pth (inches):6 DROLOGY Bard Hydrology Indicators: ary Indicators (minimum of one required; check all that apply)Secondary Indicators (2 or more required) Surface Water (A1)Water-Stained Leaves (B9) (except MLRA 1, 2 High Water Table (A2)Salt Crust (B11)Drainage Patterns (B10)
Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (TF2)         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3) <sup>3</sup> Indicators of hydrophytic vegetation and         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present,         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         rtictive Layer (if present):       Type:       gravels         pth (inches):       6       Hydric Soil Present?       Yes       No         OROLOGY       and Hydrology Indicators:       ary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required)         Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       1, 2, 4A, and 4B)       4A, and 4B)       Saturation (A3)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)
Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       3 <sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, sandy Gleyed Matrix (S4)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         rictive Layer (if present):       Type:       gravels       Hydric Soil Present? Yes       No         arks:       S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)       Secondary Indicators (2 or more required)         Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Satt Crust (B11)       Drainage Patterns (B10)
Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3) <sup>3</sup> Indicators of hydrophytic vegetation and         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present,         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         trictive Layer (if present):       Type:       gravels         pth (inches):       6       Hydric Soil Present? Yes       No         arks:       S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)         DROLOGY       Mater-Stained Leaves (B9) (except MLRA       Water-Stained Leaves (B9) (MLRA 1, 2         Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)
Depleted Below Dark Surface (A11)
Thick Dark Surface (A12)       Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         trictive Layer (if present):       Hydric Soil Present?       Yes No         arks:       6       Hydric Soil Present?       Yes No         arks:       S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)         DROLOGY       Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA         High Water Table (A2)       1, 2, 4A, and 4B)       Water-Stained Leaves (B9) (MLRA 1, 2)         Saturation (A3)       Satt Crust (B11)       Drainage Patterns (B10)
Index Data Control (12)
Sandy Gleyed Matrix (S4)
rictive Layer (if present):         Type:       gravels         pth (inches):       6         arks:       S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)         DROLOGY         and Hydrology Indicators:         ary Indicators (minimum of one required; check all that apply)         Surface Water (A1)
Type:       gravels         pth (inches):       6         arks:       S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)         DROLOGY         and Hydrology Indicators:         ary Indicators (minimum of one required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA         High Water Table (A2)       1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)
Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA       Water-Stained Leaves (B9) (MLRA 1, 2         High Water Table (A2)       1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)
High Water Table (A2)1, 2, 4A, and 4B)4A, and 4B)Saturation (A3)Salt Crust (B11)Drainage Patterns (B10)
Saturation (A3)Salt Crust (B11)Drainage Patterns (B10)
······································
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C
Drift Deposits (B3)     Oxidized Rhizospheres along Living Roots (C3)     Geomorphic Position (D2)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)
d Observations:
face Water Present? Yes No X Depth (inches):
rface Water Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?         iter Table Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?
rface Water Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?         uter Table Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?         utration Present?       Yes       No       X       Depth (inches):       Yes       Yes
ter Table Present? Yes No X Depth (inches): Wetland Hydrology Present?

# APPENDIX C

Vegetation List

	Strong Heights Subdivis	sion	
	Vegetation List		
	May 18, 2021		
Common Name	Scientific Name	Wetland Indicator Status	Native and Invasive, Noxious
common silver-hair grass	Aira caryophyllea	FACU	non-native
field meadow-foxtail	Alopecurus pratensis	FAC	non-native
tall oat grass	Arrhenatherum elatius	UPL	non-native
English daisy	Bellis perennis	NOL	non-native
soft brome	Bromus hordeaceus	FACU	non-native
sticky mouse-ear chickweed	Cerastium glomeratum	FACU	non-native
black hawthorn	Crataegus douglasii	FAC	native
English hawthorn	Crataegus monogyna	FAC	non-native
Scot's broom	Cytisus scoparius	NOL	noxious
orchard grass	Dactylis glomerata	FACU	non-native
Queen Anne's-lace	Daucus carota	FACU	non-native
cutleaf geranium	Geranium dissectum	NOL	non-native
common velvet grass	Holcus lanatus	FAC	non-native
hairy cat's-ear	Hypochaeris radicata	FACU	non-native
field pepperweed	Lepidium campestre	NOL	non-native
English plantain	Plantago lanceolata	FACU	non-native
Kentucky blue grass	Poa pratensis	FAC	non-native
Douglas-fir	Pseudotsuga menziesii	FACU	native
Oregon white oak	Quercus garryana	FACU	native
Himalayan blackberry	Rubus armeniacus	FAC	invasive, noxious
tall fescue	Schedonorus arundinaceus	FAC	non-native
red clover	Trifolium pratense	FACU	non-native
white clover	Trifolium repens	FAC	non-native
European vetch	Vicia disperma	NOL	non-native

 Wetland Indicator Status and taxonomy for the Western Mountains, Valleys, and Coast Region per the National Wetland Plant List

 2018 v3.4. Accessed May 18, 2020.

 http://wetland-plants.usace.army.mil/nwpl\_static/v34/home/home.html

Native per Hitchcock & Cronquist 2018 and <u>http://plants.usda.gov/</u> Invasive per Clean Water Services 2019: <u>http://cleanwaterservices.org/permits-development/design-construction-standarc</u> Noxious per ODA 2020:

https://www.oregon.gov/ODA/programs/Weeds/OregonNoxiousWeeds/Pages/AboutOregonWeeds.aspx

WETLAND INDICATOR STATUS (WIS)	
OBL	Obligate Wetland Plant – Almost always occurs in wetlands (hydrophyte), rarely in uplands
FACW	Facultative Wetland Plant - Usually occur in wetlands (hydrophyte), but may occur found in non-wetlands
FAC	Facultative Plant – Occurs in wetlands (hydrophyte) and uplands (nonhydrophyte)
FACU	Facultative Upland Plant - Usually occur in non-wetlands (non-hydrophyte), but may occur in wetlands
UPL	Upland Plant - Almost always occurs in uplands (non-hydrophyte), almost never occurs in wetlands. UPL plants have a WIS in other regions
NOL	Not Listed - Plants that are not on the National Wetland Plant List are assumed to be UPL and have no WIS in any region