

March 30, 2016

Washington State Department of Fish and Wildlife  
Habitat Program  
600 N. Capitol Way  
Olympia, WA 98501-1091

RE: SR 18 Maple Valley to Issaquah-Hobart Road (MP 16.6 to 19.3)  
WDFW HPA Permit **00000F4792-14**

Dear Interested Parties:

The Washington State Department of Transportation completed qualitative monitoring of the SR 18 MVIH HPA sites on August 26 and September 28, 2015, to determine compliance with the above-listed HPA. Monitoring activities included vegetation observations and photo documentation. This Year-9 report is being issued for compliance with the reporting requirements of the WDFW HPA Permit 00000F4792-14.

<b>General Site Information</b>	
<b>WDFW HPA Permit Number</b>	00000F4792-14
<b>Restoration Locations</b>	Along SR 18 between Maple Valley and Issaquah-Hobart Road
<b>Construction Date</b>	2006-2007
<b>Monitoring Period</b>	2007-2016
<b>Year of Monitoring</b>	9 of 10
<b>Type of Restoration</b>	Riparian re-vegetation

**Site development:**

In general the sites have developed robust vegetation and appear to have stabilized slopes near SR 18. Due to the nature of the dense, mature vegetation, the monitoring staff collected qualitative cover estimates for these sites in lieu of survival. At year 9, survival does not appear to be an informative measure of the site performance. We have photos of each HPA site. Please let us know if you would like access to these photos.

Site Name	WDFW Permit Requirement	Results
Cedar River Crossing	Plantings shall be maintained as necessary for ten years to ensure 80 percent or greater survival for each species of a contingency species and shall not be trimmed or removed without the approval of the WDFW Area Habitat Biologist.	About <b>80% native woody cover</b> across the site. Nearly 100% cover between bridges; About 5-15% cover under the bridges; About 30-40% cover along the banks of Cedar River. Pretty even mix of species (see planting plan for list). Several conifers appear stressed and/or dying.
Taylor Creek 244 <sup>th</sup> Ave Crossing		About <b>65% native woody cover</b> overall. Dominated by willows ( <i>Salix</i> species). Majority of the planted area was inundated due to beaver activity.
Taylor Creek SE 215 <sup>th</sup> Place		About <b>90% native woody cover</b> overall. Sparse cover near the top of the slope on the north side of the site, but otherwise dense cover across the site. Red alder ( <i>Alnus rubra</i> ) and willows dominant with mix of shrubs and small conifers including volunteer western red cedar ( <i>Thuja plicata</i> ) and Douglas-fir ( <i>Pseudotsuga menziesii</i> ) in gravel bar area. A few stressed/dying conifers near SW edge of site.
Taylor Creek Tributary Crossing 1 Stream Realignment		About <b>90-95% native woody cover</b> overall. Small areas of low cover underneath bridges. Red alder and willows dominant with mix of understory shrubs and conifers. New plantings, sheet mulch, and coir logs at western end of site on both sides of Taylor Creek.
Taylor Creek Tributary Crossing 2		About <b>95% native woody cover</b> . Pacific ninebark ( <i>Physocarpus capitatus</i> ), and redosier dogwood ( <i>Cornus alba</i> ) dominant with mix of other shrubs. A few volunteer red elderberry ( <i>Sambucus racemosa</i> ) are doing well under the bridges (rip rap, unplanted areas). One large non-native sweetbriar rose ( <i>Rosa rubiginosa</i> ) present on west creek bank.
Taylor Creek Tributary Crossing 3		About <b>95% native woody cover</b> . Overstory of red alder and Pacific willow ( <i>Salix lasiandra</i> ), about 10m in height. Understory of Pacific ninebark, salmonberry ( <i>Rubus spectabilis</i> ), roses ( <i>Rosa</i> species), redosier dogwood, and Indian plum ( <i>Oemleria cerasiformis</i> ).
Taylor Creek Tributary Crossing 4		<p>Section A (eastbound): About <b>100% native woody cover</b>. Overstory of red alder and willows. Understory of salmonberry, redosier dogwood, and twinberry honeysuckle (<i>Lonicera involucrata</i>).</p> <p>Section B (westbound): About <b>100% native woody cover</b>. Primarily one layer canopy of shrubs including snowberry, beaked hazelnut (<i>Corylus cornuta</i>), vine maple (<i>Acer circinatum</i>), and red elderberry. Douglas-fir beginning to overtake shrub layer. Some die-off of western red cedar and Douglas-fir.</p>

We welcome your questions or comments. Please contact me at 360/570-2579 or by e-mail at [littaud@wsdot.wa.gov](mailto:littaud@wsdot.wa.gov) for questions about these mitigation sites.

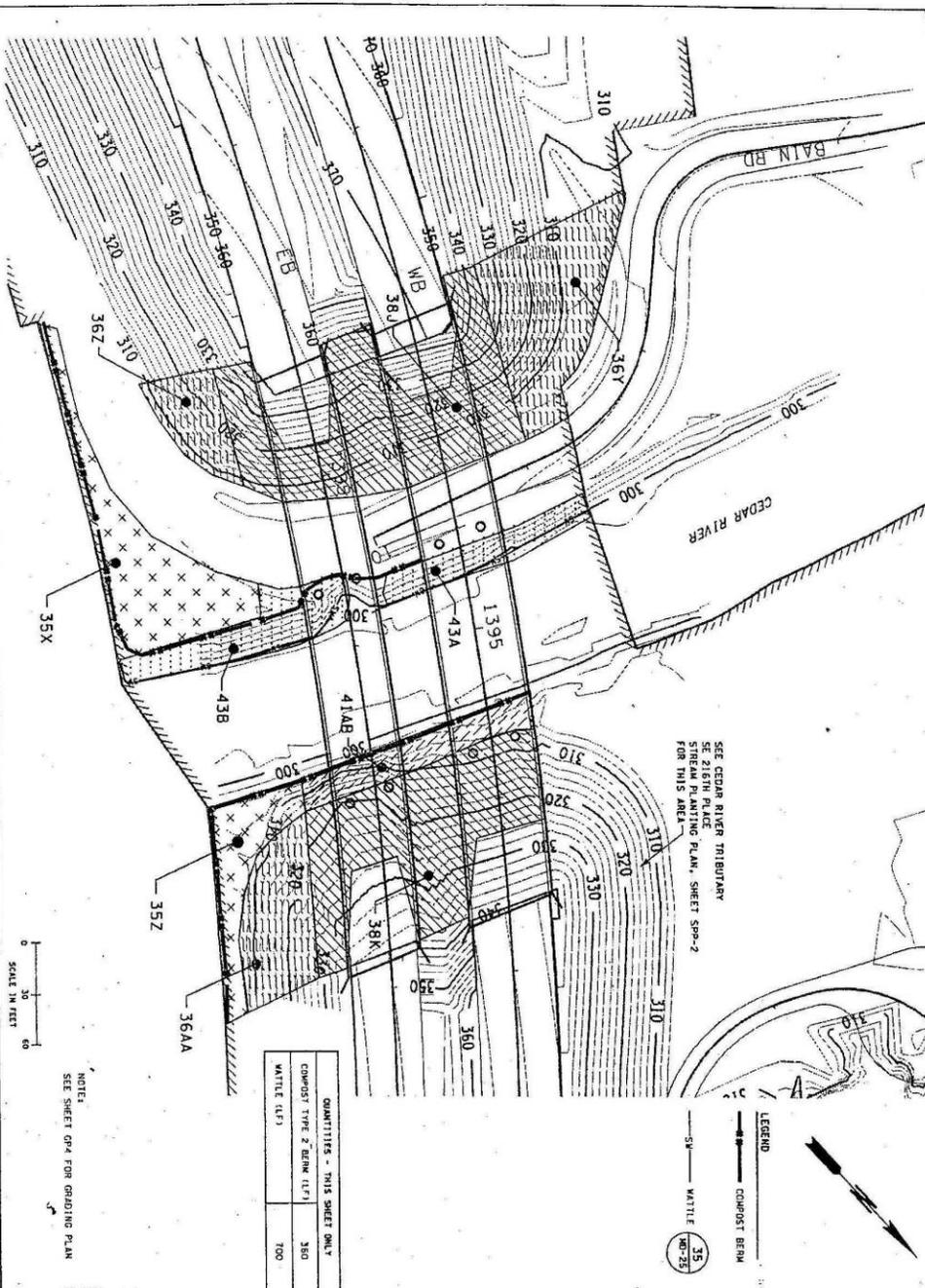
Sincerely,

Doug Littauer  
Wetlands Program

TITLE: SR 18 MAPLE VALLEY TO ISSAQUAH/PHOENIX RD. CEDAR RIVER CROSSING  
 DATE: 04/02/2003  
 DESIGNED BY: A. HENKULT  
 CHECKED BY: M. WAGNER  
 PREP. ENGR.: G. LAWRENCE  
 REVISION:

SHEET NO.: 478  
 OF SHEETS: 479  
 PROJECT NO.: 1429

WASHINGTON STATE  
 Department of Transportation  
 SR 18  
 MAPLE VALLEY TO ISSAQUAH/PHOENIX RD.  
 CEDAR RIVER CROSSING  
 STREAM PLANTING PLAN



QUANTITIES - THIS SHEET ONLY

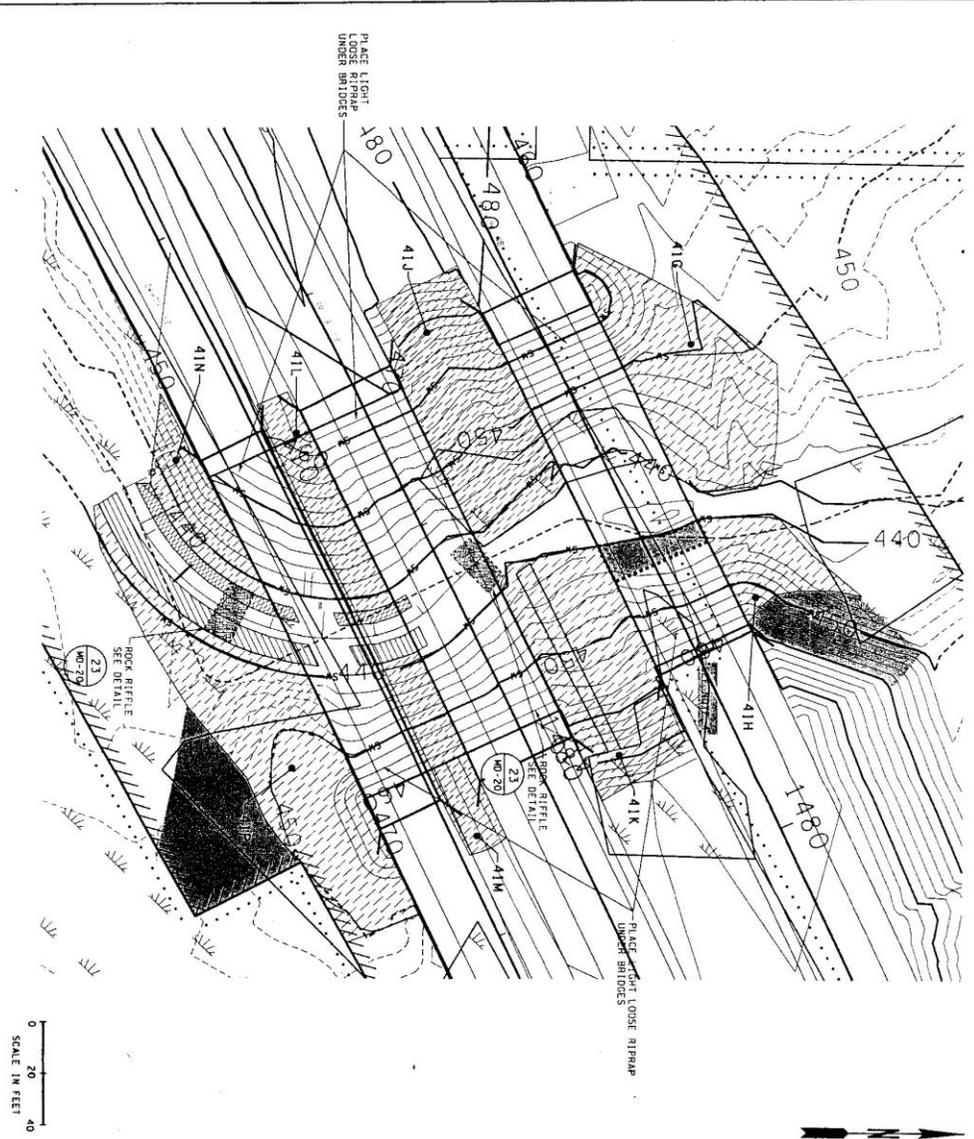
COMPOST TYPE 2 BERM (L.F.)	360
WATTLE (L.F.)	700

PLANT QUANTITIES - THIS SHEET ONLY

SYMBOL	ITEM	QUANTITY
X	BLACK COTTONWOOD (LN)	13
X	RED ALDER	6
X	WESTERN RED CEDAR	28
X	RED-OSSIER DOGWOOD	5
X	SALWATERBERRY	63
X	SCOTCH S. YEW	43
X	SCOTCH S. YEW (BN)	43
X	SOIL AMENDMENT (L.F.)	21
X	COMPOST TYPE 1 (L.F.)	1
X	COMPOST TYPE 2 (L.F.)	1
X	WATTLE	700
X	BEAKED HAZELHUT	70
X	INDIAN PLUM	70
X	LOW OREGON GARBE	70
X	RED ELEGANT	47
X	THORNBERY	86
X	VINE MAPLE	47
X	SOIL AMENDMENT (L.F.)	104
X	COMPOST TYPE 1 (L.F.)	33
X	COMPOST TYPE 2 (L.F.)	13
X	CLUSTERED VILD ROSE	17
X	INDIAN PLUM	17
X	RED ELEGANT	17
X	RED OREGON GARBE	14
X	SALWATERBERRY	14
X	THORNBERY	25
X	SOIL AMENDMENT (L.F.)	10
X	COMPOST TYPE 1 (L.F.)	1
X	COMPOST TYPE 2 (L.F.)	1
X	BEAKED HAZELHUT	424
X	INDIAN PLUM	424
X	LOW OREGON GARBE	424
X	RED ELEGANT	282
X	THORNBERY	364
X	VINE MAPLE	14
X	SOIL AMENDMENT (L.F.)	28
X	COMPOST TYPE 1 (L.F.)	8
X	COMPOST TYPE 2 (L.F.)	2
X	INDIAN PLUM	20
X	LOW OREGON GARBE	20
X	RED ELEGANT	29
X	THORNBERY	55
X	VINE MAPLE	29
X	SOIL AMENDMENT (L.F.)	24
X	COMPOST TYPE 1 (L.F.)	8
X	COMPOST TYPE 2 (L.F.)	3
X	BEAKED HAZELHUT	70
X	INDIAN PLUM	70
X	LOW OREGON GARBE	70
X	RED ELEGANT	47
X	THORNBERY	86
X	VINE MAPLE	47
X	SOIL AMENDMENT (L.F.)	104
X	COMPOST TYPE 1 (L.F.)	33
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X	INDIAN PLUM	17
X	RED ELEGANT	17
X	RED OREGON GARBE	14
X	SALWATERBERRY	14
X	THORNBERY	25
X	SOIL AMENDMENT (L.F.)	10
X	COMPOST TYPE 1 (L.F.)	1
X	COMPOST TYPE 2 (L.F.)	1
X	BEAKED HAZELHUT	424
X	INDIAN PLUM	424
X	LOW OREGON GARBE	424
X	RED ELEGANT	282
X	THORNBERY	364
X	VINE MAPLE	14
X	SOIL AMENDMENT (L.F.)	28
X	COMPOST TYPE 1 (L.F.)	8
X	COMPOST TYPE 2 (L.F.)	2
X	INDIAN PLUM	20
X	LOW OREGON GARBE	20
X	RED ELEGANT	29
X	THORNBERY	55
X	VINE MAPLE	29
X	SOIL AMENDMENT (L.F.)	24
X	COMPOST TYPE 1 (L.F.)	8
X	COMPOST TYPE 2 (L.F.)	3

STATE OF WASHINGTON  
 REGISTERED  
 LANDSCAPE ARCHITECT  
 SALLY A. ANDERSON  
 CERTIFICATE NO. 372  
 DATE: 7-3-03

FILE NAME	S:\ARNDSON\VEGET SR BRIDGES CA MAY 01.SW.B AS BUE.TSC\CAVE\12-2007	
TIME	5:20:30 PM	
DATE	6/14/2007	
DESIGNED BY	ASAWICH	
CHECKED BY	B.MORRIS	
PROJ. ENGR.	G.LAMAR	
REGIONAL ADM. LEAD		
REVISION		
DATE		
BY		
SCALE	1:10	FED. AID PROJ. NO.
CONTRACT NO.	07A029	
LOCAL PROJ. NO.		
F.A.S. STATE NO.		
F.A.S. STATE NO.		
STATE		
Department of Transportation		
SR 18		
MAPLE VALLEY TO ISSAQUAHHOBART RD.		
TAYLOR CREEK SR 18 CROSSING 2		
STREAM PLANTING PLAN		
SRP-11		
SHEET	514	
SHEETS	1439	



0 20 40  
SCALE IN FEET

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  
SMILY A. ANDERSON  
CERTIFICATE NO. 372  
DATE: 7-5-07

QUANTITIES - THIS SHEET ONLY  
WATTLE (LF) 1370

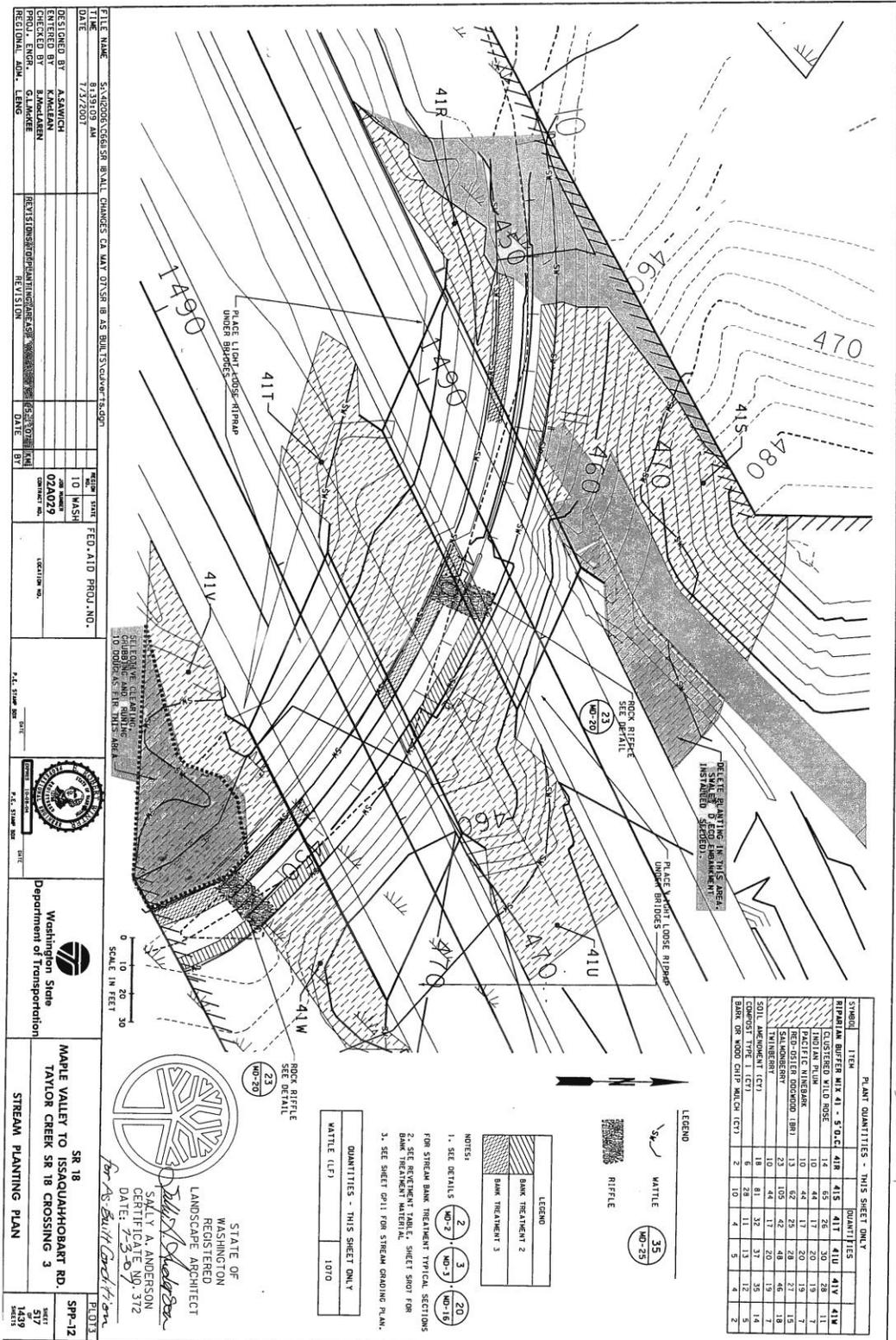
LEGEND  
BANK TREATMENT 2  
BANK TREATMENT 3

LEGEND  
WATTLE 35  
MD-25

LEGEND  
MESH

NOTES:  
1. SEE DETAILS 2, 3, 20, MD-2, MD-3, MD-16  
FOR STREAM BANK TREATMENT TYPICAL SECTIONS  
2. SEE REVISION TABLE, SHEET 5006, FOR BANK TREATMENT MATERIAL  
3. SEE SHEET 0710 FOR STREAM GRADING PLAN.

SYMBOL	ITEM	QUANTITIES
	REPAIR BUFFER MIX 41-5.0.C.	41G 41H 41J 41K 41L 41M 41N 41O 41P
	CLUSTERED WILD ROSE	10 20 20 27 10 0 9 58
	INDIAN PUM	20 13 20 18 7 7 6 38
	PACIFIC MYRSINE	20 13 20 18 7 7 6 38
	RE-OSSIER DOGWOOD (98)	28 19 28 26 10 9 6 55
	SALBORN	36 32 20 14 17 16 15 85
	SOIL AMENDMENT (CY)	37 32 56 34 13 12 11 27
	COMPOST TYPE 1 (CY)	13 8 13 12 4 4 4 25
	BANK OR WOOD CHIP MULCH (CY)	5 3 5 4 2 2 1 9



FILE NAME	SR 18 MAPLE VALLEY TO ISSAQUAHOBART RD. TAYLOR CREEK SR 18 CROSSING 3	DATE	7/27/2007
DESIGNED BY	A. SAWICH	CHECKED BY	K. ANDERSON
PROJ. ENGR.	GLAMBEK	REGIONAL ADM. LENS	
REVISION	NO. 1	DATE	
NO. 2			
NO. 3			
NO. 4			
NO. 5			
NO. 6			
NO. 7			
NO. 8			
NO. 9			
NO. 10			
NO. 11			
NO. 12			
NO. 13			
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NO. 17			
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NO. 23			
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NO. 25			
NO. 26			
NO. 27			
NO. 28			
NO. 29			
NO. 30			

0 10 20 30  
SCALE IN FEET



SR 18  
MAPLE VALLEY TO ISSAQUAHOBART RD.  
TAYLOR CREEK SR 18 CROSSING 3  
STREAM PLANTING PLAN

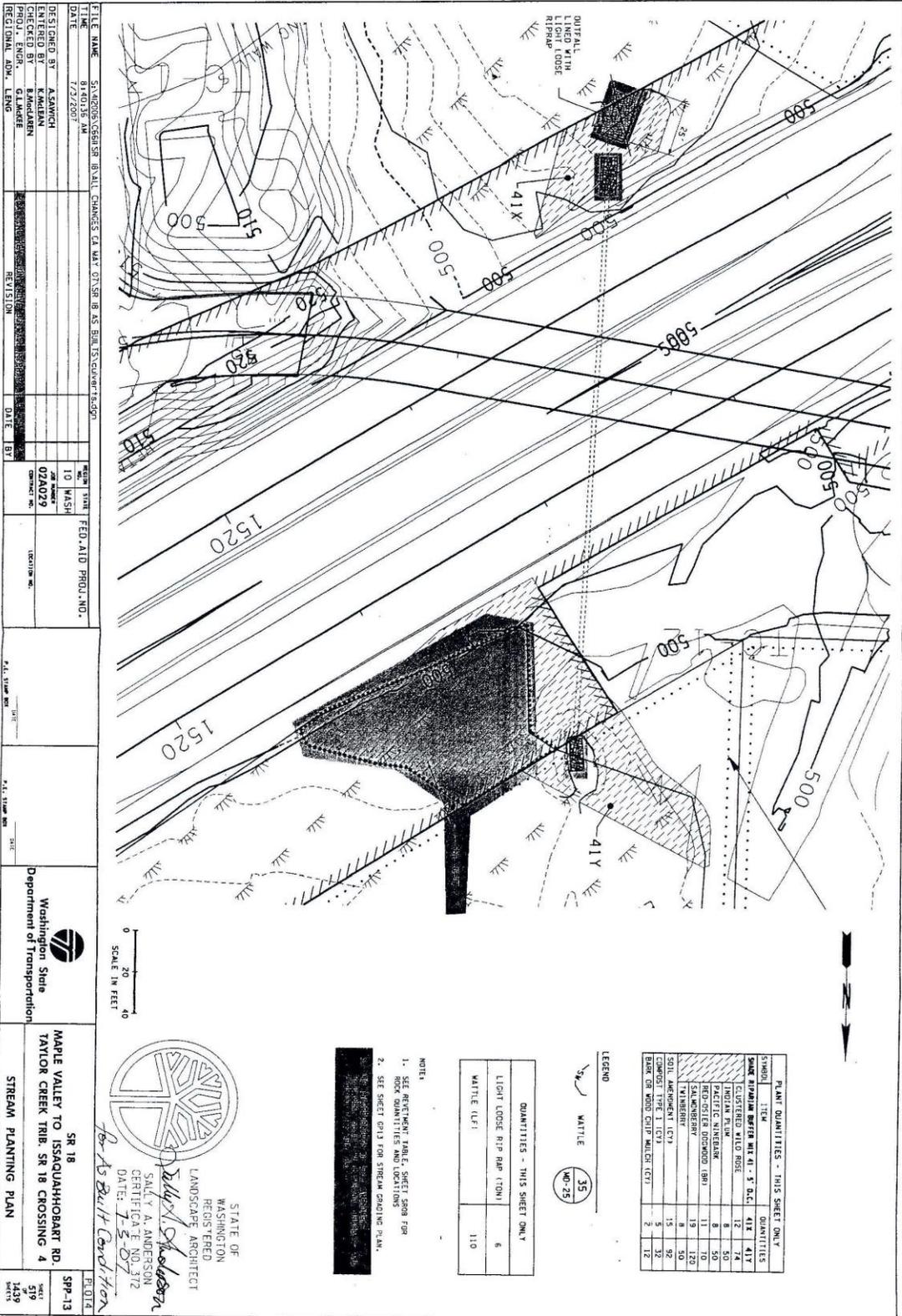
STATE OF WASHINGTON  
REGISTERED  
LANDSCAPE ARCHITECT  
SALLY A. ANDERSON  
DATE: 7-25-07  
CERTIFICATE NO. 372

SYMBOL	ITEM	QUANTITIES
41R	RIPIARIAN BUFFER MIX 41 - 5' O.C.	41R
41T	CLUSTERED WILD ROSE	41T
41V	INDIAN PLUM	41V
41W	PALETTE MIXEDBARK	41W
23	ROCK RIFFLE	23
20	LOOSE RIPRAP	20
35	WATTLE	35
25	RIFFLE	25

NOTES:  
1. SEE DETAILS (NO. 2, NO. 3, NO. 20)  
2. SEE TREATMENT PLAN 5, SHEET 3007 FOR BANK TREATMENT MATERIAL  
3. SEE SHEET 011 FOR STREAM GRADING P.L.M.

SYMBOL	ITEM	QUANTITIES
41R	RIPIARIAN BUFFER MIX 41 - 5' O.C.	41R
41T	CLUSTERED WILD ROSE	41T
41V	INDIAN PLUM	41V
41W	PALETTE MIXEDBARK	41W
23	ROCK RIFFLE	23
20	LOOSE RIPRAP	20
35	WATTLE	35
25	RIFFLE	25

Handwritten note: "K. BULL"



FILE NAME	SR 18 CROSSING 4
DATE	7/2/2007
DESIGNED BY	A. SAWICH
ENTERED BY	K. MCKENNA
PROJ. ENGR.	G. LAWREN
REGIONAL ADM. ENGR.	

DESIGNED BY	10	FED. AID PROJ. NO.
ENTERED BY	02/07/29	
PROJ. ENGR.		
REGIONAL ADM. ENGR.		



SR 18  
 MAPLE VALLEY TO ISSAQUAHHOBART RD.  
 TAYLOR CREEK TRIB. SR 18 CROSSING 4  
 STREAM PLANTING PLAN

STATE OF WASHINGTON  
 REGISTERED LANDSCAPE ARCHITECT  
 SALLY A. ANDERSON  
 CERTIFICATE NO. 3172  
 DATE: 7-5-07  
*Sally A. Anderson*  
 for As Built Condition

PLANT QUANTITIES - THIS SHEET ONLY

SYMBOL	ITEM	QUANTITIES
[Symbol]	SLATE RIP RAP (RIP RAP 4" - 8" D.C.)	418 417
[Symbol]	CLUSTERED WILD ROSE	12 74
[Symbol]	INDIAN PLUM	8 50
[Symbol]	PACIFIC NINEBARK	8 50
[Symbol]	RED-OILER (DOGWOOD (80))	11 10
[Symbol]	WILLOW	19 120
[Symbol]	WATERBURY	15 32
[Symbol]	SOIL AMENDMENT (C3)	5 32
[Symbol]	COMPOST TYPE 1 (C4)	5 32
[Symbol]	BARK OR WOOD CHIP MULCH (C5)	2 12

LEGEND

WATTLE

QUANTITIES - THIS SHEET ONLY

SYMBOL	ITEM	QUANTITIES
[Symbol]	LIGHT LODGE RIP RAP (10M)	6
[Symbol]	WATTLE (LFT)	110

NOTE:  
 1. SEE RECTANGULAR TABLE SHEET SR08 FOR ROCK QUANTITIES AND LOCATIONS  
 2. SEE SHEET 013 FOR STREAM GRADING PLAN.