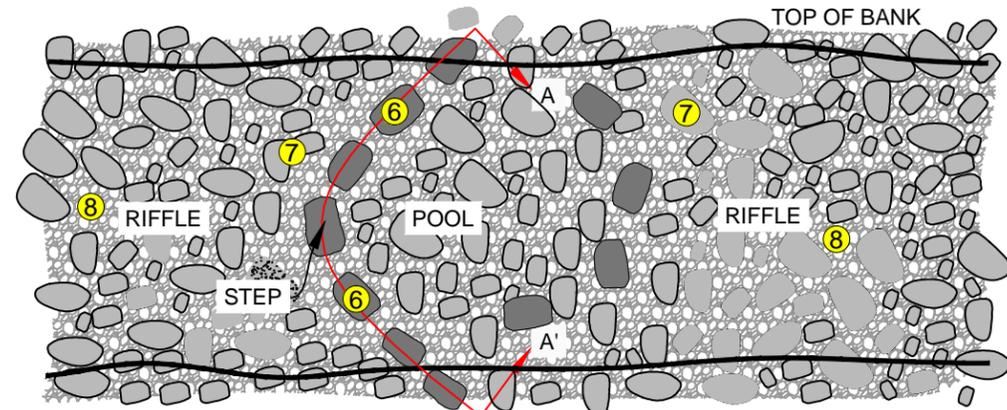
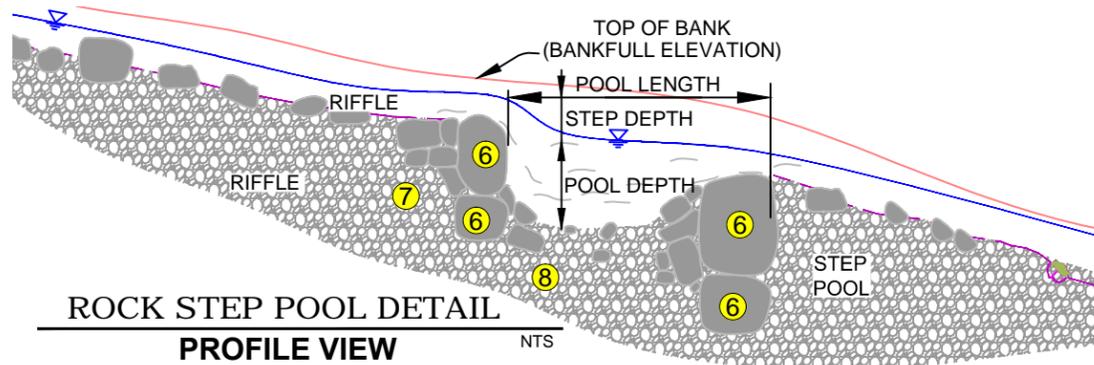


DESIGN INTENT

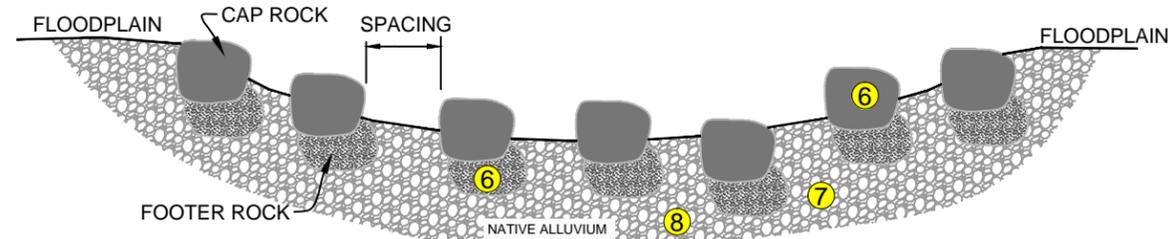
THE INTENT OF THE STEP POOL STRUCTURE IS TO PROVIDE VERTICAL CHANNEL STABILITY FOR ENTRENCHED TO MODERATELY ENTRENCHED STREAM TYPES EXHIBITING AVERAGE GRADIENTS GREATER THAN TWO PERCENT. THE STRUCTURES ARE DESIGNED TO EMULATE THE MORPHOLOGICAL CHARACTERISTICS OF NATURALLY-OCCURRING STEP POOL DOMINATED CHANNELS AND BEDFORMS, INCLUDING ALTERNATING GRADE CONTROL STEPS AND PLUNGE POOLS. VELOCITY AND ENERGY DISSIPATION ARE CONTROLLED BY STEP SPACING WHICH IS INVERSELY PROPORTIONAL TO SLOPE AND DIRECTLY RELATED TO BANKFULL WIDTH. STEP HEIGHT IS DESIGNED TO MAINTAIN UPSTREAM FISH PASSAGE AT ALL FLOW LEVELS WHEREBY STEP HEIGHT IS TYPICALLY LIMITED TO 0.5 FEET OR THE VERTICAL JUMPING CAPABILITY OF THE TARGET FISH SPECIES AND AGE CLASSES.



ROCK STEP POOL DETAIL
PLAN VIEW NTS



ROCK STEP POOL DETAIL
PROFILE VIEW NTS



ROCK STEP POOL DETAIL
SECTION A - A' NTS

MATERIAL SCHEDULE (PER STRUCTURE)

ITEM	DIAMETER (IN)	QUANTITY
⑥ CATEGORY 1 ROCK	24-36	15
⑦ CATEGORY 2 ROCK	12-24	1 CY
⑧ CATEGORY 3 ROCK	12-MINUS	1 CY



EXAMPLE OF A CONSTRUCTED ROCK STEP POOL STRUCTURE

CONSTRUCTION NOTES

ROCK SHALL BE FROM AN APPROVED SOURCE AND SHALL BE SOUND, DENSE (SG=2.65 MIN) AND FREE FROM CRACKS, SEAMS OR OTHER DEFECTS CONDUCTIVE TO ACCELERATED WEATHERING.

ROCK SHALL BE EQUIPMENT PLACED SO THAT LARGER ROCKS ARE DISTRIBUTED PER CONSTRUCTION MANAGER AND SMALLER ROCKS FILLING IN VOIDS. NO END DUMPING OF ROCK WILL BE ALLOWED.

EXCAVATE POOL TO SET FOOTER AND POOL FOUNDATION ROCKS. FOOTER ROCKS ARE TO BE PLACED TO MINIMIZE VOIDS AND MAXIMIZE ROCK TO ROCK CONTACT.

PLACE CAP ROCKS ONTOP OF FOOTERS, ALIGN AS SHOWN IN DETAIL. WEIR AND WING ROCK SHALL BE PLACED AT A DISTANCE SPECIFIED.

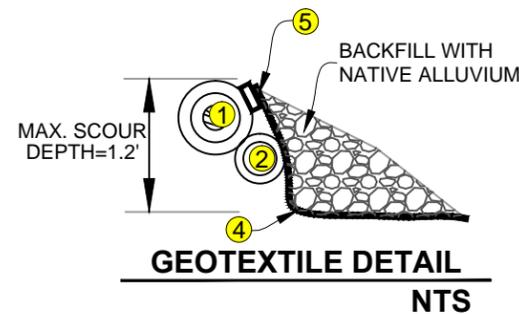
BACKFILL EACH POOL AND FILL ALL GAPS AND VOIDS OF EACH STRUCTURE WITH NATIVE GRAVELS AND COBBLE TO MINIMIZE PIPING OF WATER THROUGH EACH STRUCTURE.

EXCAVATE POOL ACCORDING TO SPECIFIED DIMENSIONS. USE EXCAVATED MATERIAL FOR STRUCTURE BACKFILL OR HAUL TO A LOCATION SPECIFIED BY CONSTRUCTION MANAGER.

THE CONSTRUCTION MANAGER HAS THE RIGHT TO ALTER OR CHANGE THE DESIGN DURING CONSTRUCTION DUE TO UNFORESEEN CIRCUMSTANCES.

MATERIAL SCHEDULE (PER STRUCTURE)

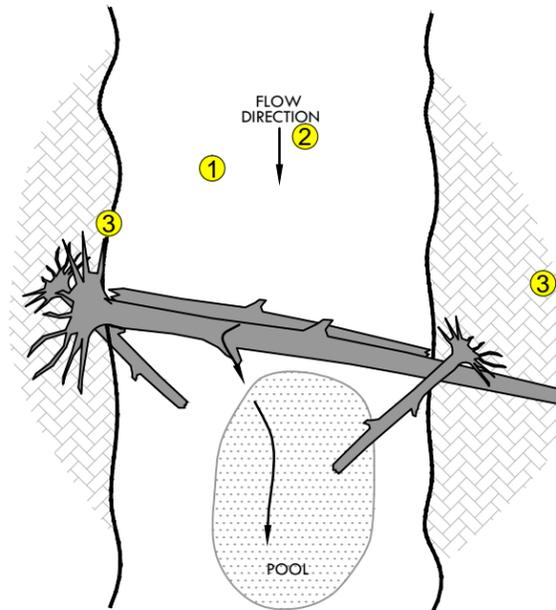
ITEM	DIAMETER (IN)	LENGTH (FT)	ROOTWAD	LIMBS	QUANTITY
② CATEGORY 2 WOOD	12-18	18-20	YES	NO	2
③ CATEGORY 3 WOOD	6-12	10-12	OPTIONAL	YES	2
⑫ LF OF FILTER FABRIC		12.5 X 360 - ROLL			14
⑬ RING SHANK NAILS	3/8	0.5			30



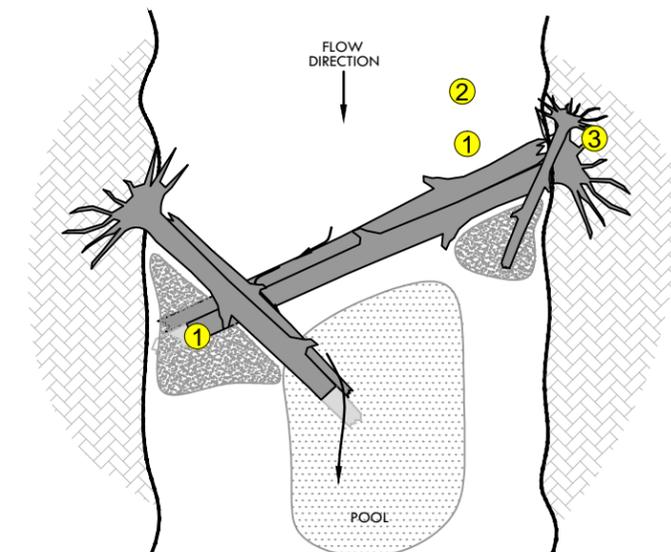
GEOTEXTILE DETAIL
NTS



EXAMPLE OF A CONSTRUCTED LOG STEP POOL

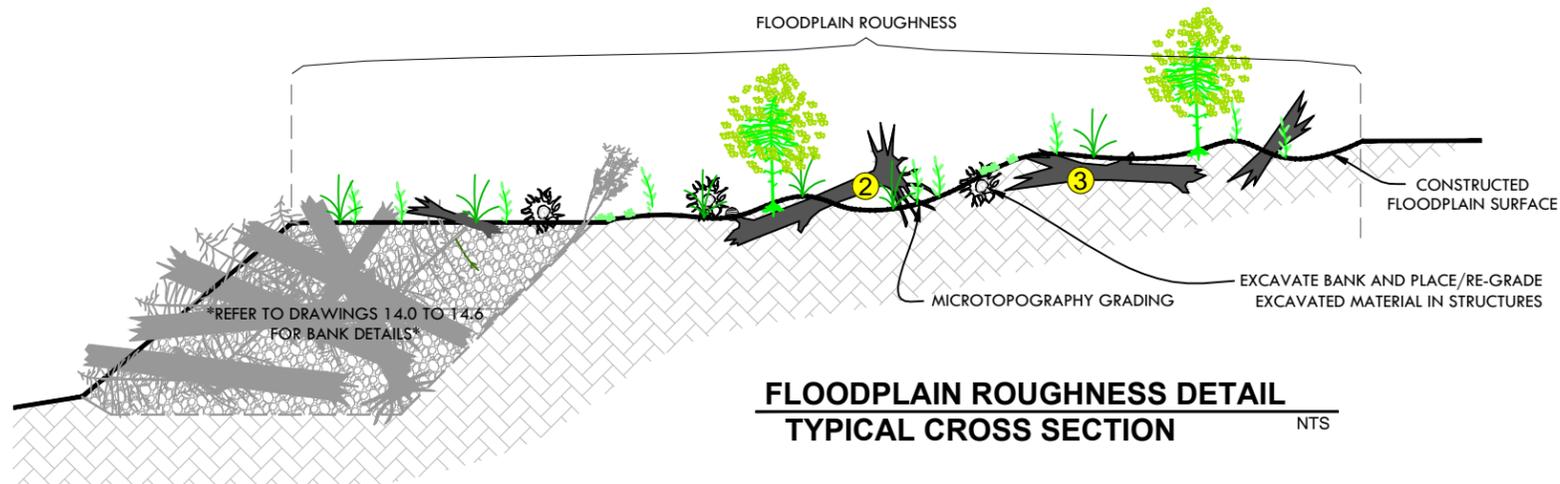


TYPICAL LOG STEP POOL
NTS



TYPICAL LOG STEP POOL
NTS

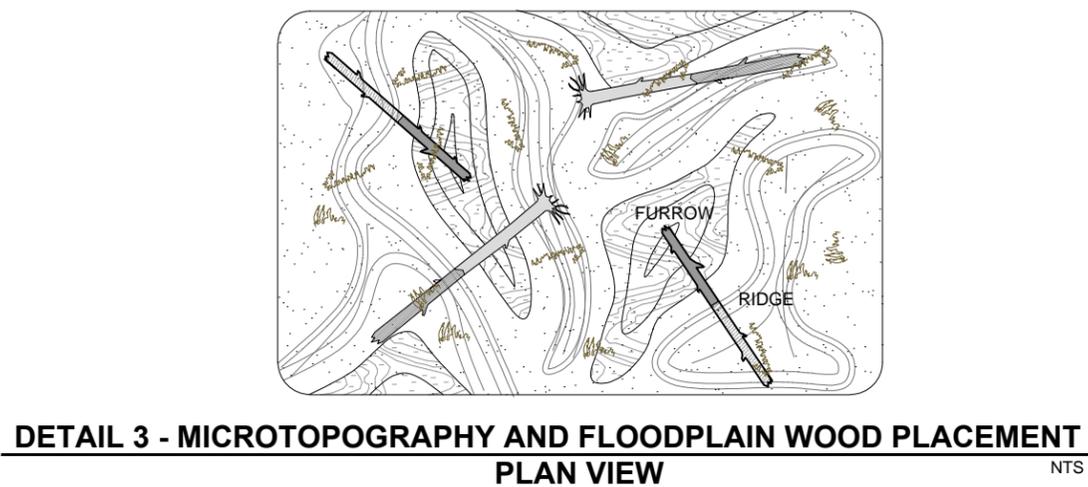
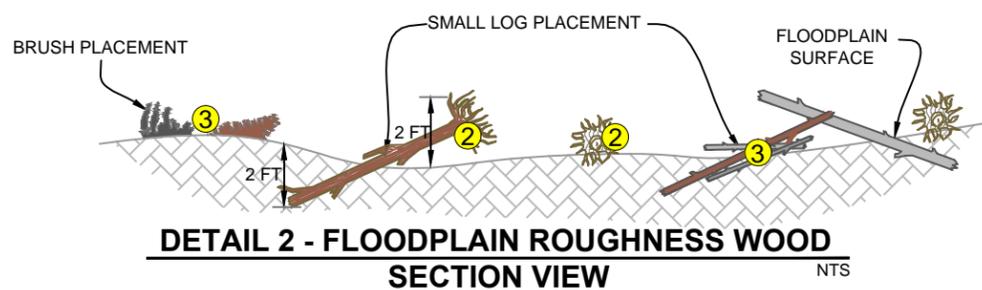
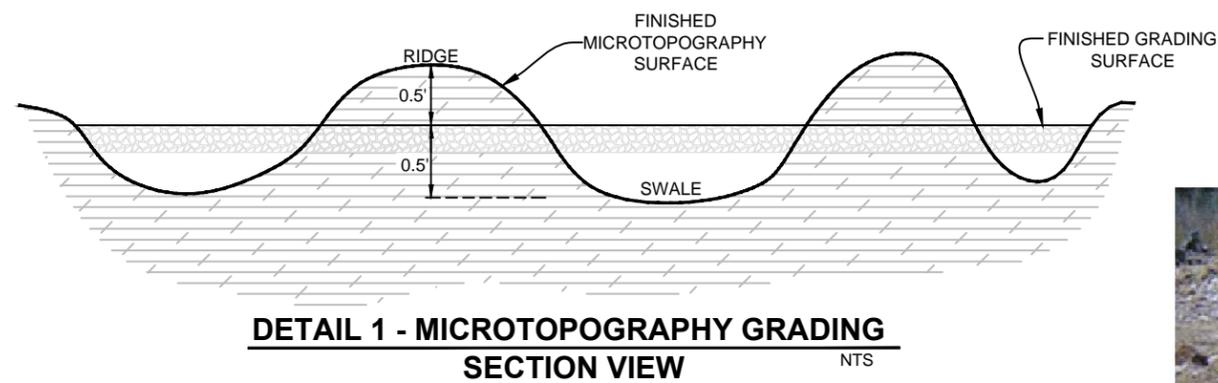
NO.	DATE	BY	DESCRIPTION	CHK
1	02-15-14	NW	FINAL DESIGN	JM



DESIGN INTENT

THE INTENT OF FLOODPLAIN ROUGHNESS TREATMENTS IS TO PROVIDE VARIABLE TOPOGRAPHY AND ROUGHNESS IN THE FLOODPLAIN IN ORDER TO MODERATE FLOOD VELOCITIES, PROVIDE FLOOD ENERGY DISSIPATION, PROVIDE FOR AREAS OF SEDIMENT STORAGE AND NUTRIENT TRAPPING, AND AREAS FOR CONCENTRATED PLANTING WHERE THE WATER TABLE IS CLOSE TO THE SURFACE. A VARIETY OF TREATMENTS ARE APPLICABLE INCLUDING PLACEMENT OF BURIED AND PARTIALLY PROTRUDING WOOD, MICROTOPOGRAPHIC GRADING, AND REVEGETATION.

BRUSH TRENCHES PROVIDE FLOODPLAIN ROUGHNESS AND PROMOTE VEGETATION ESTABLISHMENT WITHIN THE FLOODPLAIN. BRUSH TRENCHES ARE CONSTRUCTED BY EXCAVATING A NARROW TRENCH IN THE FLOODPLAIN PERPENDICULAR TO THE CHANNEL, AND INSTALLING SIX FOOT LONG DORMANT VEGETATIVE CUTTINGS IN THE TRENCH SO AT LEAST 75 PERCENT OF THE LENGTH OF CUTTINGS IS BURIED. THE EXCAVATED TRENCH SHOULD BE DEEP ENOUGH SO THAT THE BASAL ENDS OF THE CUTTINGS EXTEND AT LEAST 1 FOOT BELOW THE BOTTOM OF THE CONSTRUCTED CHANNEL. ONCE CUTTINGS HAVE BEEN PLACED IN THE TRENCH, THE TRENCH IS BACKFILLED WITH THE EXCAVATED MATERIAL. CUTTINGS SHOULD BE BETWEEN 1/2" AND 1" DIAMETER AT THE BASE (LARGER IS ACCEPTABLE IF STEMS ARE OBVIOUSLY YOUNG AND VIGOROUS). CUTTINGS SHOULD BE TAKEN PRIMARILY FROM WILLOW SPECIES, BUT SOME COTTONWOOD, DOGWOOD AND ALDER CAN ALSO BE USED. CUTTINGS SHOULD BE TAKEN FROM 2-3 YEAR OLD STEMS AND NO MORE THAN 1/3 OF ANY ONE WILLOW PLANT SHOULD BE HARVESTED. CUTTINGS SHOULD BE INSTALLED AT A DENSITY OF 5 PER LINEAR FOOT. BRUSH TRENCHES SHOULD BE WATERED IN DURING INSTALLATION USING A WATER/SOIL SLURRY AND AGAIN ONCE THE FINAL PLACEMENT OF SOIL IS COMPLETE USING ONLY WATER. SOIL SHOULD BE ADDED TO THE TRENCH IF NECESSARY AFTER WATERING IN OCCURS.



EXAMPLE OF A BRUSH/WILLOW TRENCH INSTALLATION



EXAMPLE OF CONSTRUCTED FLOODPLAIN SWALES



EXAMPLE OF CONSTRUCTED FLOODPLAIN ROUGHNESS ELEMENTS

MATERIAL SCHEDULE

ITEM	DIAMETER (IN)	LENGTH (FT)	ROOTWAD	LIMBS
② CATEGORY 2 WOOD	12-18	18-24	YES	NO
③ CATEGORY 3 WOOD	6-12	10-12	OPTIONAL	YES

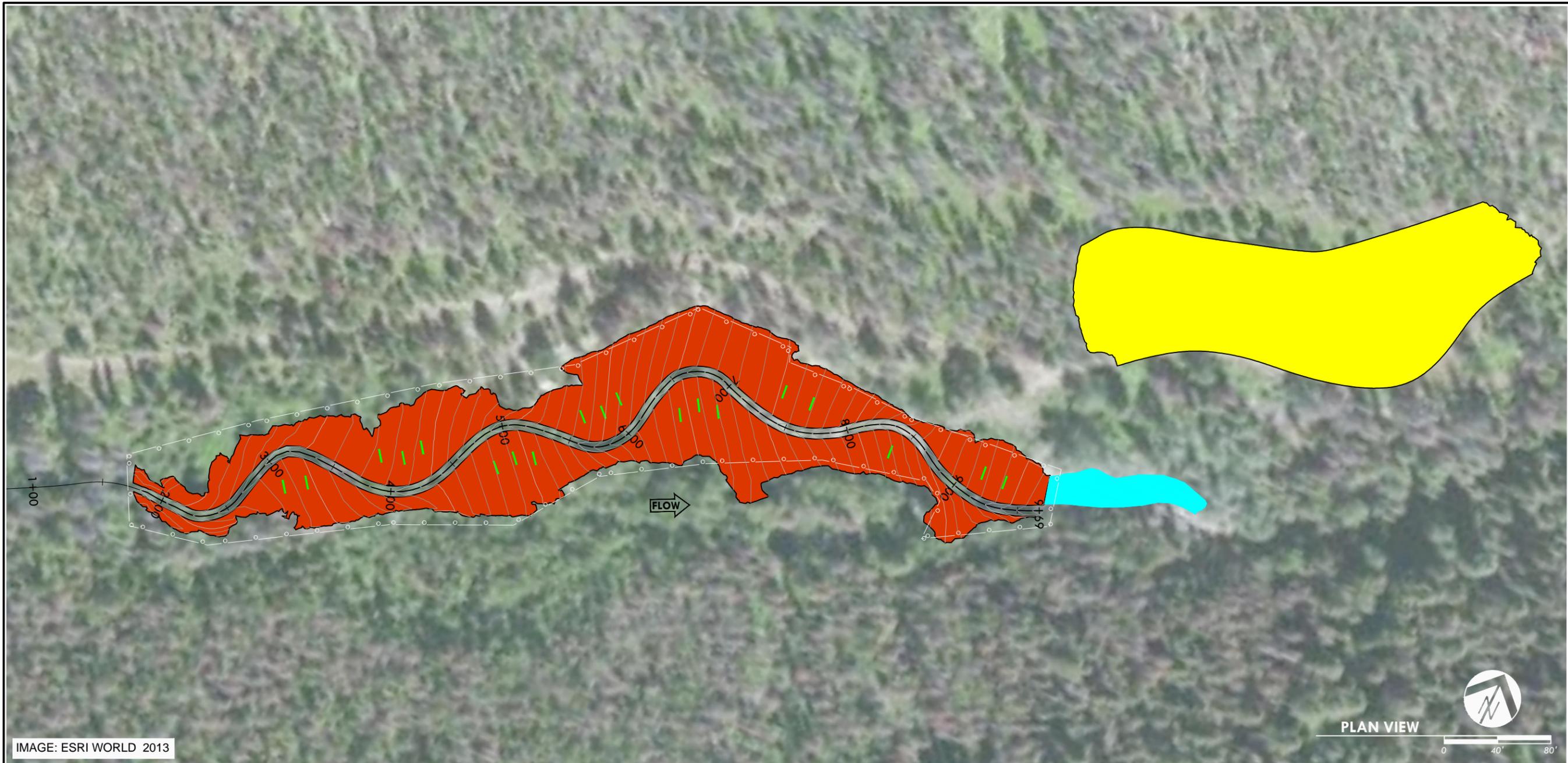
FLOODPLAIN ROUGHNESS AND MICROTOPOGRAPHY DETAIL

NO.	DATE	BY	DESCRIPTION	CHK
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12.5



REVEGETATION PLAN

IMAGE: ESRI WORLD 2013

LEGEND

<p>FLOODPLAIN REVEGETATION AREA TO RECEIVE:</p> <ul style="list-style-type: none"> • FLOODPLAIN PLANTING • FLOODPLAIN SEEDING • FLOODPLAIN ROUGHNESS & MICROTOPOGRAPHY • 6" OF SOIL PLACEMENT 	<p>ADDITIONAL REVEGETATION AREA TO RECEIVE:</p> <ul style="list-style-type: none"> • 12" ROCK REMOVAL • FLOODPLAIN SEEDING • FLOODPLAIN ROUGHNESS & MICROTOPOGRAPHY • 12" OF SOIL PLACEMENT 	<p>BORROW SOURCE REVEGETATION AREA TO RECEIVE:</p> <ul style="list-style-type: none"> • BORROW SOURCE SEEDING • WOODY DEBRIS PLACEMENT • SOIL AND FOREST DUFF SALVAGE & PLACEMENT
<p> FLOODPLAIN WILLOW TRENCH</p>	<p> RIPARIAN PROTECTION FENCING</p>	

REFER TO SHEET 13.1 FOR SPECIES MIX

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13.0

BROADCAST SEEDING

BROADCAST SEEDING SHOULD OCCUR IN THE FLOODPLAIN REVEGETATION AREA, MATERIAL BORROW SOURCE REVEGETATION AREA, ADDITIONAL REVEGETATION AREA AND ROAD DECOMMISSIONING AREA. COMMERCIAL SEED MIXES TO APPLY IN THESE AREAS ARE PROVIDED ON SHEET 13.3 (SEEDING AND PLANTING SCHEDULE). SEED SHOULD BE PLANTED USING THE BROADCAST METHOD, WHEREBY SEED IS SCATTERED ON THE SURFACE OF THE GROUND INSTEAD OF PLANTED IN THE GROUND. SEEDING RATES WILL DEPEND ON THE FINAL SEED MIXES DETERMINED FOR THE SITE. COMMERCIAL SEED MIXES AND SEEDING RATES ARE PROVIDED ON SHEET 13.2 (SEEDING AND PLANTING SCHEDULE).

IN ADDITION TO BROADCAST SEEDING OF COMMERCIAL SEED MIXES, DIRECT SEEDING OF PROPAGULES COLLECTED IN OR NEAR THE PROJECT SITE IS RECOMMENDED. COLLECTION AND DIRECT SEEDING OF ALNUS INCANA (GRAY ALDER) SHOULD BE DONE OPPORTUNISTICALLY WITHIN THE FLOODPLAIN REVEGETATION AREA. DIRECT SEEDING SHOULD BE DONE USING SEED COLLECTED FROM ALDER GROWING ALONG SAUERKRAUT CREEK. ALDER CONES CAN BE COLLECTED DURING DORMANCY (OCTOBER THROUGH MARCH). THE CONES CAN BE STORED OVER WINTER AND AS THE CONES DRY THEY WILL OPEN AND RELEASE TINY SEEDS. THIS SEED CAN BE ADDED TO COMMERCIAL SEED MIXES OR SEEDED SEPARATELY. ALDER CONES CAN ALSO BE COLLECTED IN THE FALL FOLLOWING CONSTRUCTION AND SPREAD ONTO THE NEWLY CONSTRUCTED FLOODPLAIN SURFACE.

FLOODPLAIN PLANTING

CONTAINERIZED PLANTS SHOULD BE INSTALLED WITHIN THE FLOODPLAIN REVEGETATION AREA. PLANT MIXES ARE PROVIDED ON SHEET 13.2 (SEEDING AND PLANTING SCHEDULE). FLOODPLAIN PLANTING INCLUDES PLANTING TWO SIZES OF PLANT MATERIAL: ONE GALLON OR LARGER AND 10 CUBIC INCH. ONE GALLON OR LARGER PLANTS SHOULD BE INSTALLED AT 7 FOOT SPACING WITHIN 10 FEET ON EITHER SIDE OF THE CONSTRUCTED CHANNEL. ONE GALLON OR LARGER PLANTS SHOULD ALSO BE INSTALLED IN FLOODPLAIN DEPRESSIONS CONSTRUCTED AS SPECIFIED ON SHEET 12.5 (FLOODPLAIN ROUGHNESS AND MICROTOPOGRAPHY DETAILS). 10 CUBIC INCH PLANTS SHOULD BE INSTALLED AT 4 FOOT SPACING THROUGHOUT THE REST OF THE FLOODPLAIN REVEGETATION AREA WITHIN APPROPRIATE MICRO-SITES BASED ON SITE MICROTOPOGRAPHY AND HYDROLOGIC REQUIREMENTS OF THE SPECIES. EXACT PLANTING LOCATIONS WILL BE STAKED BY THE ENGINEER PRIOR TO PLANTING.

ONE GALLON OR LARGER CONTAINERIZED PLANTS CAN BE PLANTED BY HAND OR WITH AN AUGER. 10 CUBIC INCH PLANTS SHOULD BE INSTALLED USING A HAND PLANTING TOOL. PLANTING HOLES SHOULD BE AT LEAST TWO TIMES THE DIAMETER OF THE CONTAINER. PLANTING HOLE DEPTHS WILL VARY DEPENDING UPON THE SPECIES OF PLANT TO BE INSTALLED. THE MAJORITY OF PLANTS SHOULD BE PLANTED SO THAT THEIR ROOT COLLARS ARE FLUSH WITH THE SURFACE. SOME SPECIES SUCH AS WILLOWS, ALDERS, AND ASPENS CAN BE BURIED DEEPER THAN THEIR EXISTING ROOT COLLAR. PLANTS SHOULD BE REMOVED FROM THEIR CONTAINERS AND THE ROOTS LOOSENED IF THEY ARE EXCESSIVELY ROOT BOUND. THE SOIL IN AND AROUND THE PLANTING HOLE SHOULD BE LOOSENED TO ALLOW THE ROOTS TO EXPAND FREELY ONCE THE TREE OR SHRUB IS PLANTED. ONCE THE SHRUB OR TREE IS IN THE PLANTING HOLE, THE HOLE SHOULD BE BACK FILLED AND GENTLY TAMPED TO REMOVE ANY AIR POCKETS.

CONTAINERIZED PLANTS SHOULD BE WATERED IN USING 5 GALLONS OF WATER FOR ONE GALLON OR LARGER PANTS AND 1 GALLON OF WATER FOR 10 CUBIC INCH PLANTS. AFTER WATERING IN, ADDITIONAL SOIL SHOULD BE ADDED TO FILL THE PLANTING HOLE IF NEEDED.

SOIL AND FOREST DUFF SALVAGE

SOIL FOUND WITHIN GRADING LIMITS SHOULD BE SALVAGED AND STOCKPILED SEPARATELY. SOIL MATERIAL INCLUDES SOIL, SAND, FOREST DUFF AND ACCUMULATIONS OF ORGANIC MATTER ON THE GROUND SURFACE. COLLECTING AND SPREADING LITTER AND DUFF FROM ADJACENT FORESTED AREAS PROVIDES SEED SOURCES AND MYCORRHIZAE ADAPTED TO THE SITE.

SOIL PLACEMENT

SOIL SHOULD BE PLACED IN THE AREAS AND AT THE DEPTHS SHOWN ON SHEETS 13.0. SOIL WILL CONSIST OF MATERIAL SALVAGED FROM WITHIN GRADING LIMITS AND IMPORTED SOIL. SPREADING OF SOIL SHOULD NOT BE DONE WHEN THE GROUND OR TOPSOIL IS FROZEN, EXCESSIVELY WET OR OTHERWISE IN A CONDITION THAT PREVENTS EVEN DISTRIBUTION.

WOODY DEBRIS PLACEMENT

WOODY DEBRIS PLACEMENT SHOULD OCCUR IN THE MATERIAL BORROW SOURCE REVEGETATION AREA. ALL WOODY MATERIAL AND TREES WITHIN THE BORROW SOURCE AREA SHOULD BE SALVAGED AND STOCKPILED FOR USE IN THIS TREATMENT. THIS TREATMENT INCLUDES PLACING TREES AND BRUSH ON THE SURFACE OF THE MATERIAL BORROW SOURCE AREA AFTER PLACEMENT OF SALVAGED SOIL AND FOREST DUFF. LARGE TREES FROM ONSITE SHOULD BE PLACED ALONG CONTOURS AND PARTIALLY BURIED TO PREVENT EROSION.

RIPARIAN PROTECTION FENCE

RIPARIAN PROTECTION FENCE SHOULD BE INSTALLED AROUND THE FLOODPLAIN REVEGETATION AREA TO PROTECT CONTAINERIZED PLANTS FROM BROWSE BY WILDLIFE AND LIVESTOCK. RIPARIAN PROTECTION FENCE SHOULD CONSIST OF 8-FOOT FENCE FABRIC SECURED TO WOODEN POSTS. FENCE FABRIC SHOULD CONSIST OF STURDY PLASTIC MESH AT LEAST 8.5 FEET IN HEIGHT. WOODEN POSTS SHOULD BE 4 INCHES IN DIAMETER AND 12 FEET LONG. POSTS SHOULD BE INSTALLED AT 15 FOOT, CENTER TO CENTER SPACING ON HORIZONTAL GROUND, AND AT LESS THAN 15 FOOT SPACING ON SLOPING GROUND. POST 12 FEET IN LENGTH SHALL BE DRIVEN 4 FEET INTO THE GROUND. FENCE FABRIC SHOULD BE SECURED TO FENCE POSTS IN AT LEAST 3 PLACES USING HEAVY DUTY FENCING STAPLES OR 12" RELEASABLE CABLE TIES. AT LEAST SIX INCHES OF FENCING SHALL BE LEFT TO OVERLAP ON THE GROUND. THIS OVERLAP SHOULD BE STAKED INTO THE GROUND USING 18" KINKED, GALVANIZED GROUND STAKES TO PREVENT DEER AND OTHER SMALL MAMMALS FROM ENTERING THE PLANTED AREA UNDER THE FENCE. TRANSITIONS BETWEEN FENCE SECTIONS, WHERE ONE ROLL ENDS AND ANOTHER BEGINS, SHALL OVERLAP 3 FEET AND BE SECURED USING RELEASABLE CABLE TIES.



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Whitefish, MT 59937
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Corvallis, OR 97333
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REVEGETATION SPECIFICATIONS

NO.	DATE	BY	DESCRIPTION	CHK
1	02-15-14	NW	FINAL DESIGN	JM

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RDG-14-002

SHEET NUMBER
13.1

FLOODPLAIN PLANTING – CHANNEL AND SWALES		Area: 0.5 acres	Spacing: 7 feet on center	
Species		Size	Percent of Mix	Total Number
<i>Alnus incana</i>	alder	1 gallon or larger	30%	130
<i>Populus balsamifera</i>	black cottonwood	1 gallon or larger	20%	90
<i>Cornus sericea</i>	red-osier dogwood	1 gallon or larger	20%	90
<i>Salix drummondiana</i>	Drummond's willow	1 gallon or larger	20%	90
<i>Salix geyeriana</i>	Geyer's willow	1 gallon or larger	10%	40
			100%	440

FLOODPLAIN PLANTING – ALL AREAS OUTSIDE OF CHANNEL AND SWALES		Area: 0.5 acres	Spacing: 4 feet on center	
Species		Size	Percent of Mix	Total Number
<i>Populus balsamifera</i>	black cottonwood	10 cubic inch	30%	400
<i>Populus tremuloides</i>	quaking aspen	10 cubic inch	10%	130
<i>Picea engelmannii</i> *	Engelmann's spruce	10 cubic inch	10%	130
<i>Pinus contorta</i> *	lodgepole pine	10 cubic inch	20%	250
<i>Ribes oxycanthoides ssp. setosum</i> **	inland gooseberry	10 cubic inch	10%	130
<i>Prunus virginiana</i>	chokecherry	10 cubic inch	20%	250
<i>Amelanchier alnifolia</i>	serviceberry	10 cubic inch	20%	130
<i>Rosa woodsii</i>	Wood's rose	10 cubic inch	5%	130
<i>Mahonia repens</i>	Oregon grape	10 cubic inch	5%	130
			100%	1,680

**Pseudotsuga menziesii* (Douglas fir) or *Abies lasiocarpa* (subalpine fir) could also be planted if desired and available.

**Other *Ribes* species may be substituted based on availability

FLOODPLAIN SEED MIX		Area: 1.1 acre	
Species		PLS #/ac	Total PLS #
<i>Elymus glaucus</i>	blue wildrye	2.5	2.7
<i>Calamagrostis canadensis</i>	bluejoint reedgrass	3.0	3.2
<i>Chamerion angustifolium</i>	fireweed	0.5	0.5
<i>Geum macrophyllum</i>	largeleaf avens	1.5	1.6
<i>Bromus marginatus</i>	mountain brome	3.0	3.2
<i>Elymus trachycaulus</i>	slender wheatgrass	3.5	3.7
<i>Achillea millefolium</i>	yarrow	0.5	0.5
		14.5	15.4

MATERIAL BORROW SOURCE AND ROAD DECOMMISSIONING SEED MIX		Area: 1.1 acre	
Species		PLS #/ac	Total PLS #
<i>Elymus glaucus</i>	blue wildrye	2.5	2.8
<i>Pseudoroegneria spicata</i>	bluebunch wheatgrass	3.5	3.9
<i>Chamerion angustifolium</i>	fireweed	0.1	0.1
<i>Festuca idahoensis</i>	Idaho fescue	1.0	1.1
<i>Arctostaphylos uva-ursi</i>	kinnickinnick	0.5	0.6
<i>Anaphalis margaritacea</i>	pearly everlasting	0.1	0.1
<i>Calamagrostis rubescens</i>	pinegrass	0.2	0.2
<i>Elymus trachycaulus</i>	slender wheatgrass	2.5	2.8
<i>Achillea millefolium</i>	yarrow	0.5	0.6
		10.9	12.0

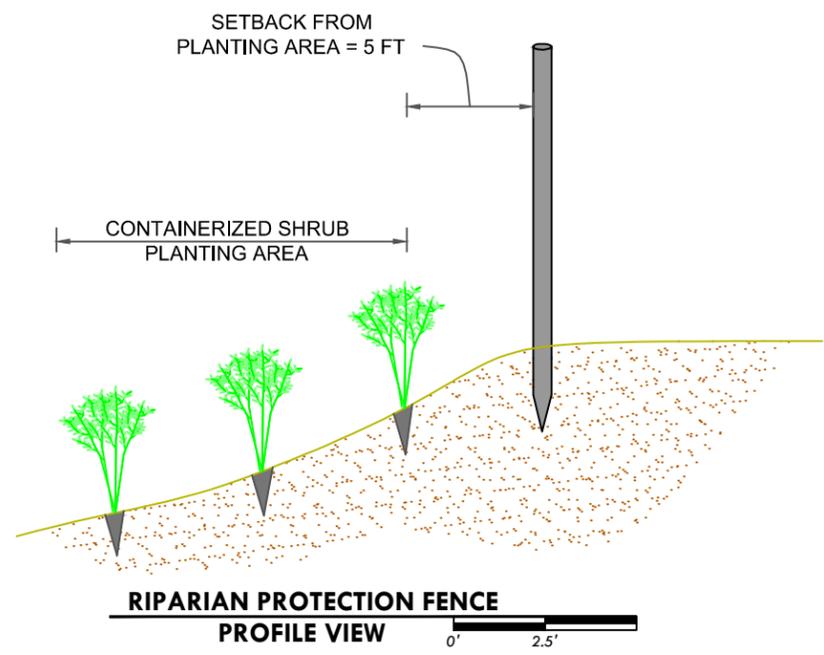
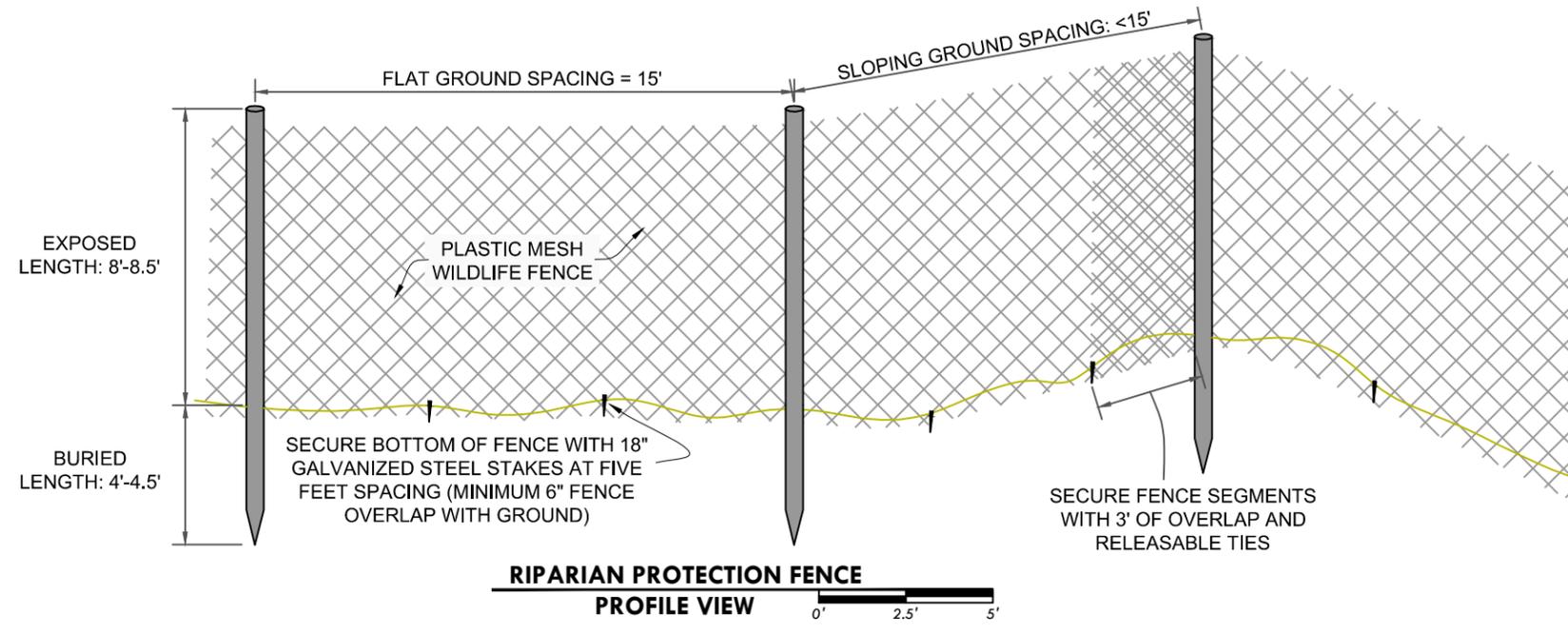
PLANTING AND SEEDING SCHEDULE

NO.	DATE	BY	DESCRIPTION	CHK
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SHEET NUMBER

13.2



**RIPARIAN PROTECTION
FENCE DETAIL**

NO.	DATE	BY	DESCRIPTION	CHK
1	02-15-14	NW	FINAL DESIGN	JM

PROJECT NUMBER
RDG-14-002

SHEET NUMBER
13.3

Category	Item	Quantity	Units	Diameter	Length		
Wood	Category 2 Wood 12"-18" 18'-24'	84	ea	12 in - 18 in	18 ft - 20 ft		
	Category 3 Wood 6"-12" 10'-12'L	913	ea	6 in - 12 in	10 ft - 12 ft		
	Category 4 Wood <6" 8'-12'L	1,986	ea	< 6 in	8 ft - 12 ft		
	Riparian Cuttings	7,155	ea	0.25 in	6 ft		
Category	Item	Quantity	Units	Quantity	Units		
Rock	Category 1 Rock 12"-24"	421	ea	63.12	yd ³		
	Category 2 Rock 8" Plus	328	yd ³				
	Category 3 Rock <6"	111	yd ³				
Category	Item	Quantity	Units	Width	Length	Thickness	Quantity (rolls)
BioEngineering	Outer Fabric: Rolanka BioD-Mat90 (lf)	242	lf	9.84 ft	165 ft	0.35 in	1.5
	Inner Fabric: Rolanka BioD-Mesh60 (lf)	242	lf	6.67 ft	108 ft	0.35 in	2.2
	12" dia Rolanka BioD Roll-S (Coir Log) (#)	220	lf		10 ft	1 ft	22.0
Category	Item	Quantity	Units	Diameter	Length	Thickness	
Miscellaneous	Wooden Wedge Stakes (#) (2"x4"x24")	110	ea				
	LF of Amoco 4553 8-oz Filter Fabric	84	lf				
	Ring Shank Nails	180	ea				
Category	Item	Quantity	Units	Diameter	Length	Thickness	
Floodplain Revegetation Area 1 acre	Container Plants	440	gal				
	Container Plants	1680	10 in ³				
	Seed	14.5	# pure live seed				
	Mature shrub transplants	50	ea				
	Soil	857	cy				
	Fence posts	107	ea	4 in	12 ft		
	Fence fabric	1,610	lf		8 ft		
	Releasable cable ties	322	ea	1/4 in	12 in		
	Fence ground stakes	215	ea				
	Willow cuttings	950	ea	0.5-1 in	6 ft		
Category	Item	Quantity	Units	Diameter	Length	Thickness	
Material Borrow Source Revegetation 0.7 acres	Seed	7.6	# pure live seed				
	Soil/forest duff	Quantity depends on volume salvaged from area					
Category	Item	Quantity	Units	Diameter	Length	Thickness	
Additional Revegetation Area 0.06 acres	Seed	1	# pure live seed				
	Soil	95	cy				
Category	Item	Quantity	Units	Diameter	Length	Thickness	
Road Decommissioning 0.4 acres	Seed	4.4	# pure live seed				

MATERIALS LIST

NO.	DATE	BY	DESCRIPTION	CHK
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