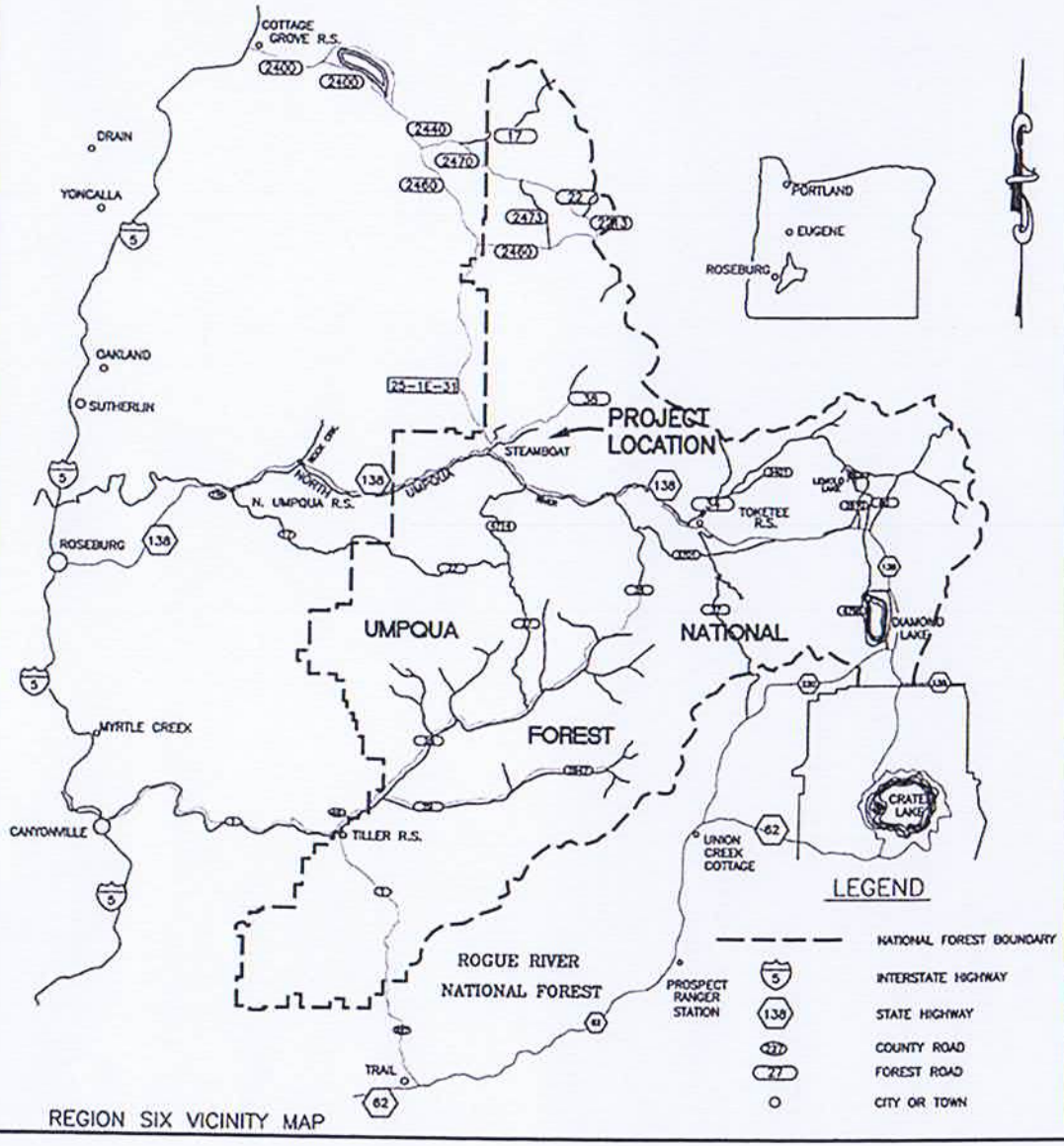
U.S. DEPARTMENT of AGRICULTURE
FOREST SERVICE
UMPQUA NATIONAL FOREST
NORTH UMPQUA RANGER DISTRICT



REGION SIX VICINITY MAP

INDEX

SHEET #	SHEET TITLE
1	TITLE SHEET
2	VICINITY MAP
3	ESTIMATE OF QUANTITIES
4	DRAINAGE LIST
5	CULVERT CONSTRUCTION DETAILS
6	AGGREGATE PLACEMENT TYPICAL FOR CULVERTS
7	DRAIN DIP DETAILS
8	4713 & 4713-500 WORKLIST

PROPOSED PROJECT

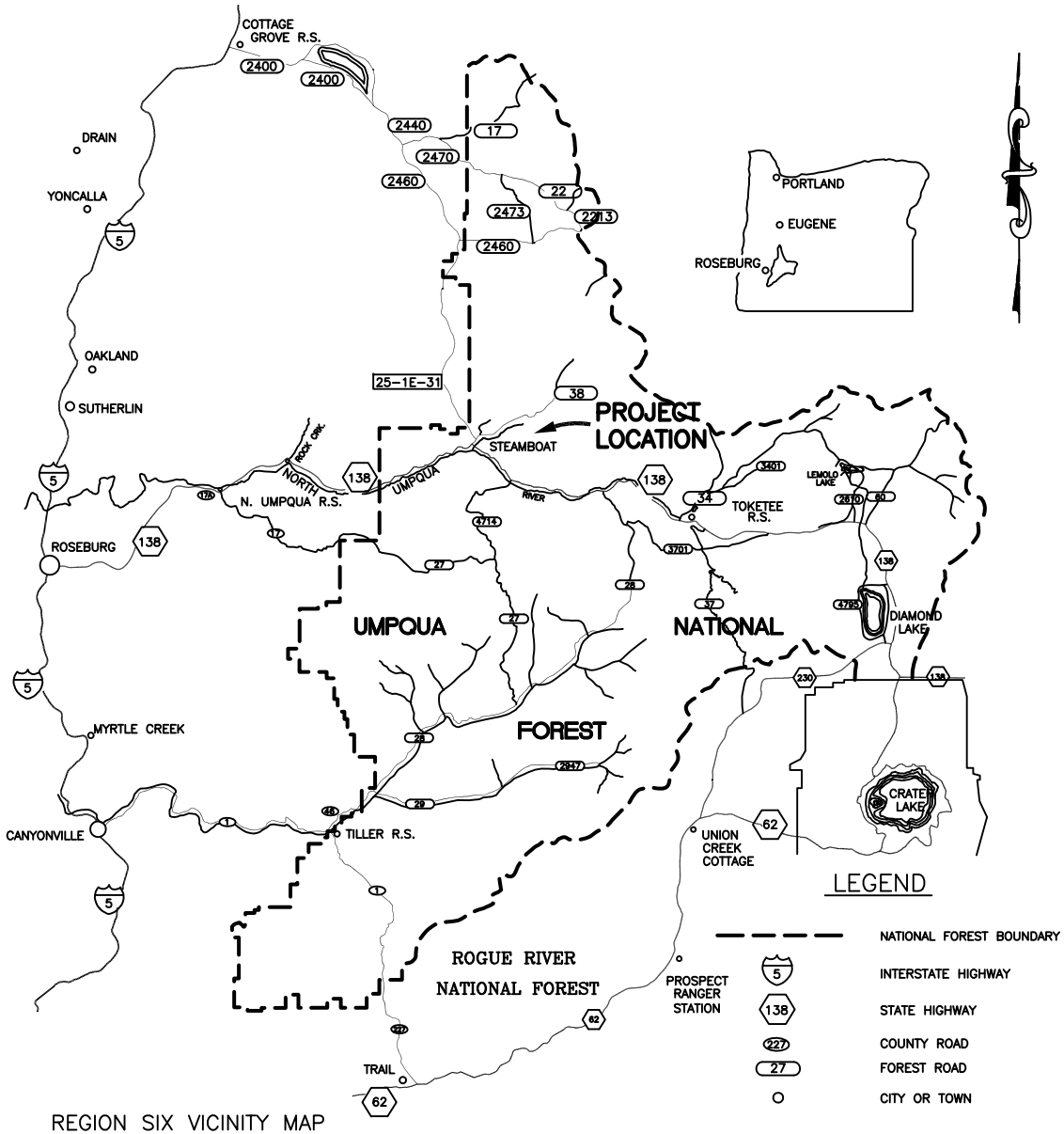
ROAD NUMBER	LENGTH	TYPE OF WORK
4713	4.69 MILES	RECONSTRUCTION
4713-500	1.28 MILES	RECONSTRUCTION

RECOMMENDED BY: DATE: 6/18/15 TRANSPORTATION ENGINEER	DESIGNED BY: DATE: 6/18/15
APPROVED BY: DATE: 6/18/15 DISTRICT RANGER	PLAN IN HAND BY: DATE:
DATE: 6-18-15 FOREST ENGINEER	REVIEWED BY: DATE: 6-17-15 PROJECT TEAM LEADER/DISTRICT ENGINEER

BLOODY REOFFER II

SHT 1 OF 8

U.S. DEPARTMENT of AGRICULTURE
FOREST SERVICE
UMPQUA NATIONAL FOREST
NORTH UMPQUA RANGER DISTRICT



REGION SIX VICINITY MAP

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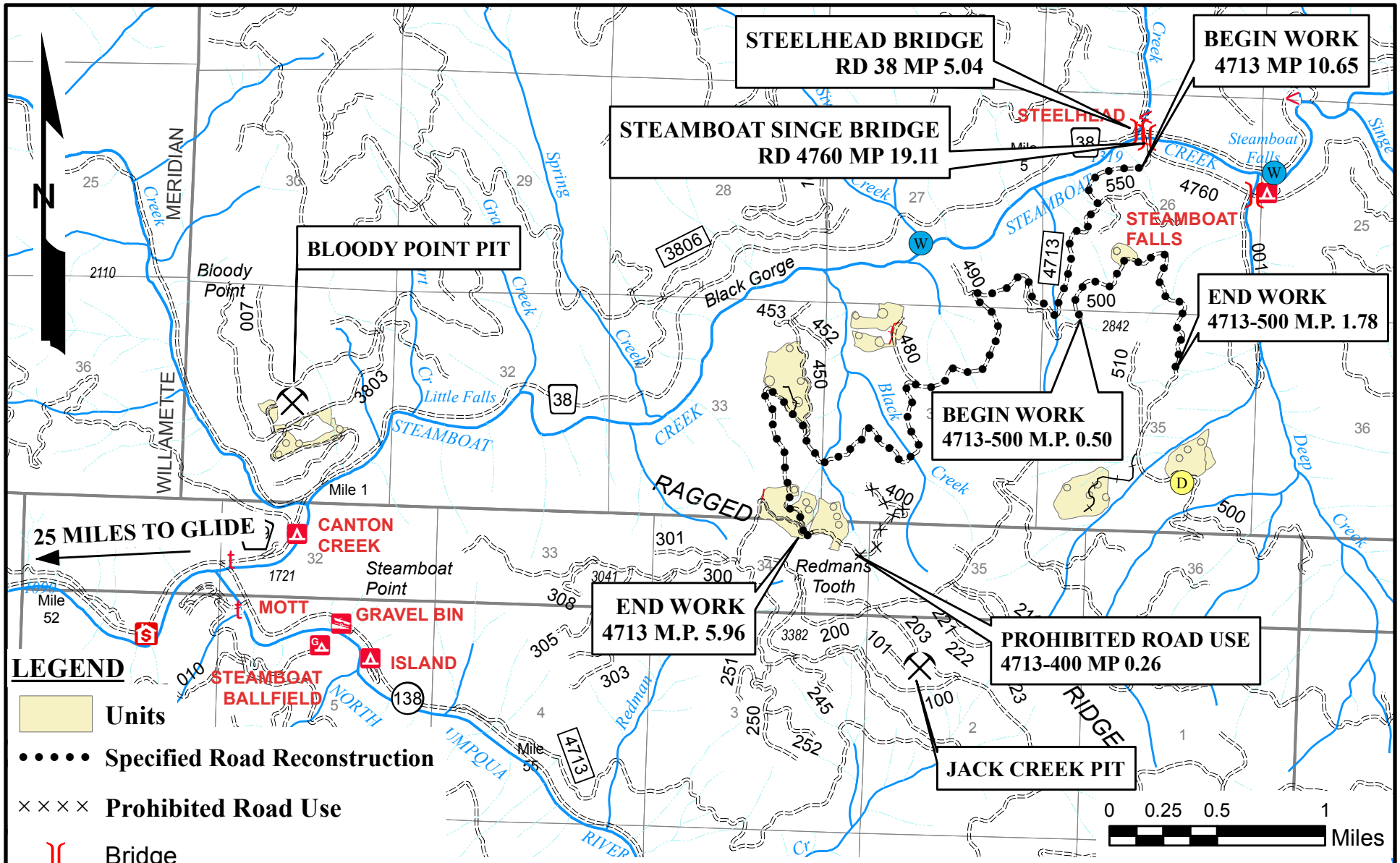
APPROVED BY: DATE: DISTRICT RANGER	REVIEWED BY: DATE: PROJECT TEAM LEADER/DISTRICT ENGINEER
DATE: FOREST ENGINEER	

BLOODY REOFFER II

SHT 1 OF 8



NOTE: UNITS SHOWN ARE FOR DISPLAY PURPOSES ONLY. FOR EXACT UNIT LOCATIONS, SEE THE SALE AREA MAP.

U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE - THE PACIFIC NORTHWEST - REGION 6

UMPQUA NATIONAL FOREST - NORTH UMPQUA RANGER DISTRICT

APPROVED _____ DATE: _____	DRAWN _____ DATE: _____ REVIEWED _____ DATE: _____	TIMBER SALE NAME: BLOODY REOFFER II	SHEET TITLE: VICINITY MAP	SHT. 2 OF 8

ESTIMATE OF QUANTITIES

NOTES:
1. All volume unit pay items are measured in-place. All reference to quantities of excavated volumes refer to original (prior to excavation) volume.
2. See worklists and vicinity map for further description and location of work.
3. Units are measured as actual quantity unless denoted by an asterisk *. If denoted by an asterisk (*), the quantity is measured as a contract quantity in accordance with FP-03 109.2.

Road No.	4713	4713-500
Project Length (Miles)	4.69	1.28
Work Type	Recon	Recon

NOTES:
4. All waste material, woody debris, slash or boulders shall be hauled and placed in disposal areas at Bloody Point Pit and Jack Creek Pit.
5. Obtain aggregate from Bloody Point Quarry located on Forest Road 3803-003 MP 0.25. Riprap from Jack Creek Quarry located on Forest Road 4713-101 MP 0.11.

Pay Item	Description	Unit			Total Quantities	Remarks
151-01	Mobilization	L.S.	ALL REQUIRED		1	Mobilization for all roads
202-58	Selective clearing, fall and leave individual trees	Each	2	2	4	
203-01	Removal of metal culverts, disposal method A	Each	5	4	9	
204-20	Drainage excavation, Type - drain dip	Each	-	1	1	Construction tolerance class C
204-90	Roadway Excavation	Lump Sum	1	-	1	
251-01.1	Placed riprap, class 1	C.Y.*	-	50	50	Obtain from Bloody Point Pit
251-01.2	Placed riprap, class 2	C.Y.*	3	3	6	Obtain from Bloody Point Pit
251-01.3	Placed riprap, class 3	C.Y.*	4	25	29	Obtain from Bloody Point Pit
322-22	Pit run maximum size 8"	C.Y.*	20	-	20	Obtain from Bloody Point Pit
322-32	Haul and place stockpiled aggregate, compaction method B	C.Y.*	35	55	90	Obtain from Bloody Point Pit
602-63.18	18 inch aluminized steel, corrugated steel pipe, .064 inch thickness, method B	L.F.	112	76	188	
602-63.24	24 inch aluminized steel, corrugated steel pipe, .064 inch thickness, method B	L.F.	98	114	212	

U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE - THE PACIFIC NORTHWEST - REGION 6

UMPQUA NATIONAL FOREST - NORTH UMPQUA RANGER DISTRICT

APPROVED _____ DATE: _____

DRAWN _____ DATE: _____

REVIEWED _____ DATE: _____

BLOODY REOFFER II

ESTIMATE OF QUANTITIES

SHEET **3**

OF **8**

LOCATION AND CULVERT LENGTHS								INSTALLATION DETAILS AND SPECIAL SECTIONS									RIPRAP REQUIREMENTS								Remarks
DESIGNED				AS BUILT				CORRUGATED METAL PIPE			SPILLWAYS			BEVELED DROP INLET			HEADWALL		SPLASH APRON		SLOPE PROTECTION		SUBGRADE REINFORCEMENT		
MP	STA (FT)	LENGTH (FT)	DEGREE SKEW	MP	STA (FT)	SKEW	LENGTH (FT)	DIA (IN)	TH (IN)	TYPE	DOWN- DRAIN LENGTH (FT)	ANCHORS (EA)	ELBOW	DIA (IN)	LENGTH (FT)	"B" ANGLE	CY	CLASS	CY	CLASS	CY	CLASS	CY	CLASS	
Road 4713																									
10.65		32						24	0.064	1															
10.59		36						24	0.064	1															
10.27		30						24	0.064	1									3	2					
7.18																			4	3					Install splash apron
6.00		44						18	0.064	3															Install new ditch relief culvert. Construct new catch basin
5.98		40						18	0.064	1															
5.96		28						18	0.064	1															
Road 4713-500																									
0.50		40						18	0.064	3															
0.88		36						18	0.064	3															
1.38		68						24	0.064	1									3	2					
1.43		46						24	0.064	1															
1.78																					25	3	50	1	Install drain dip.

NOTES:

1) Staking for culverts has been completed by the Forest Service. Culvert lengths and locations are based on as-staked conditions. Install culverts as staked.
2) Excavations for new culverts and culvert replacements are generally deeper than existing culvert installations. Excavation of solid rock may be required in some locations.
3) Dimpled bands shall not be used on downpipes, elbows, or pipes laid on grades greater than 15%.
4) Unless shown otherwise, where cover heights exceed 10-feet, culverts shall be cambered an amount equal to 0.5% of the culvert length.
5) Riprap shall be placed to the minimum dimensions shown on typical section drawings.
6) Refer to Sheet 05 for Culvert Construction Details and Sheet 06 for Aggregate Placement Typical for Culverts.
7) Skew is in degrees. From center line of roadway, looking ahead on line, turn angle right.
8) Ex = Existing culvert, not to be replaced.
9) *same = skew is same as replaced culvert.

U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE - THE PACIFIC NORTHWEST - REGION 6

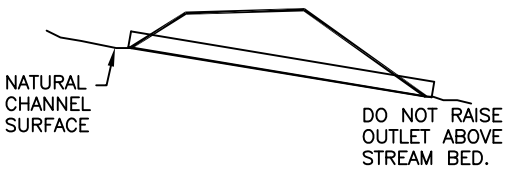
UMPQUA NATIONAL FOREST - NORTH UMPQUA RANGER DISTRICT

_____ DATE: _____ APPROVED	DRAWN _____ DATE: _____ REVIEWED _____ DATE: _____	BLOODY REOFFER II	DRAINAGE LIST	SHEET 4 OF 8

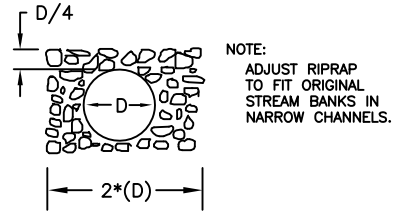
CULVERT CONSTRUCTION DETAIL

(NOT TO SCALE. REFER TO WORKLISTS.)

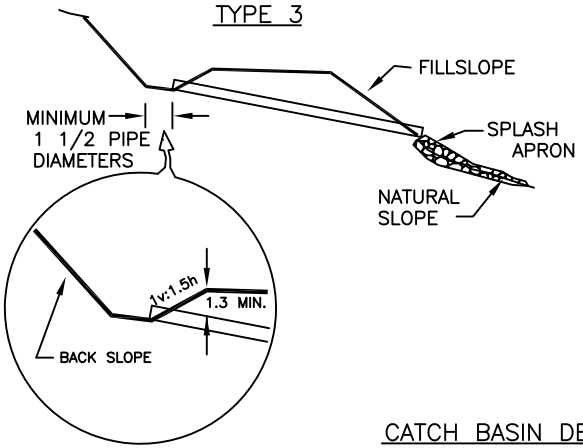
TYPE 1



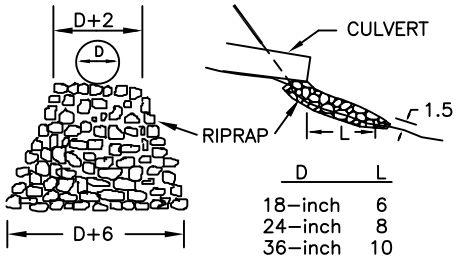
HEADWALLS FOR TYPE 1



TYPE 3



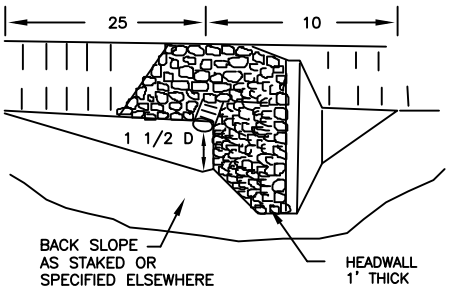
SPLASH APRON



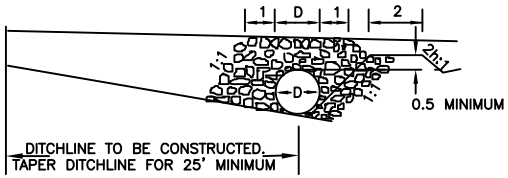
D	L
18–inch	6
24–inch	8
36–inch	10

CATCH BASIN DETAIL FOR TYPE 1 & 3

HEADWALL – PLAN VIEW



HEADWALL – INLET PROFILE VIEW



U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE - THE PACIFIC NORTHWEST REGION 6

UMPQUA NATIONAL FOREST – NORTH UMPQUA RANGER DISTRICT

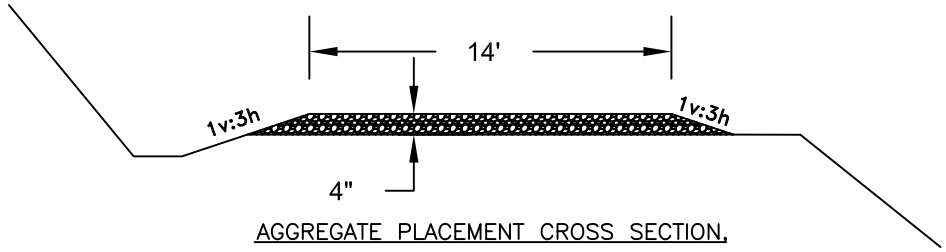
APPROVED _____ DATE: _____	DRAWN _____ DATE: _____ REVIEWED _____ DATE: _____	TIMBER SALE NAME: BLOODY REOFFER II	SHEET TITLE: CULVERT CONSTRUCTION DETAILS

SHT. 5 OF 8

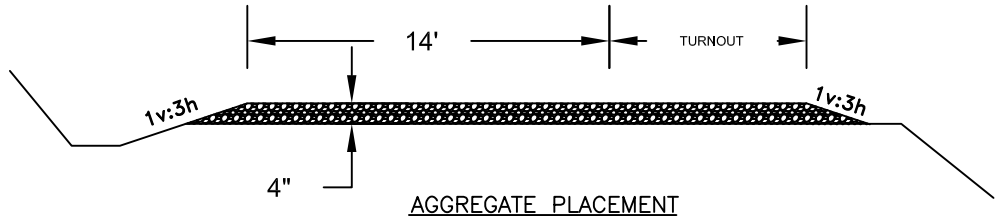
AGGREGATE PLACEMENT TYPICALS

(NOT TO SCALE. REFER TO WORKLISTS.)

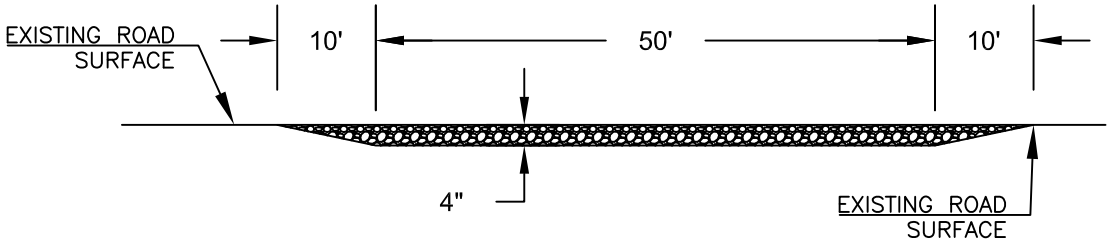
AGGREGATE PLACEMENT CROSS SECTION,
USE OVER NEW AND REPLACED CULVERTS



AGGREGATE PLACEMENT CROSS SECTION,
WITH TURNOUT
USE OVER NEW AND REPLACED CULVERTS



AGGREGATE PLACEMENT
CENTERLINE PROFILE
USE OVER NEW AND REPLACED CULVERTS



NOTES:

1. THESE TYPICALS APPLY TO ALL AREAS REQUIRING SUPPLEMENTAL AGGREGATE PLACEMENT OVER NEWLY INSTALLED AND REPLACED CULVERTS.
2. REFER TO WORKLIST FOR LOCATIONS. ITEM 322-32 QUANTITIES ARE INTENDED TO SUPPLEMENT EXISTING MATERIALS CONSERVED DURING CONSTRUCTION.
3. RECONDITION ENTIRE SUBGRADE LENGTH AS SPECIFIED IN PROFILE DRAWING PRIOR TO AGGREGATE PLACEMENT.

U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE - THE PACIFIC NORTHWEST REGION 6

UMPQUA NATIONAL FOREST – NORTH UMPQUA RANGER DISTRICT

APPROVED _____ DATE: _____	DRAWN _____ DATE: _____ REVIEWED _____ DATE: _____	TIMBER SALE NAME: BLOODY REOFFER II	SHEET TITLE: AGGREGATE PLACEMENT TYPICAL FOR CULVERTS	SHT. 6 OF 8

ITEM 204-20 DRAIN DIP

(NOT TO SCALE. REFER TO WORKLISTS.)

NOTES:

LOW POINT OF DRAIN DIP SHALL BE 0.5 FEET LOWER IN ELEVATION THAN THE DRAIN DIP CREST.

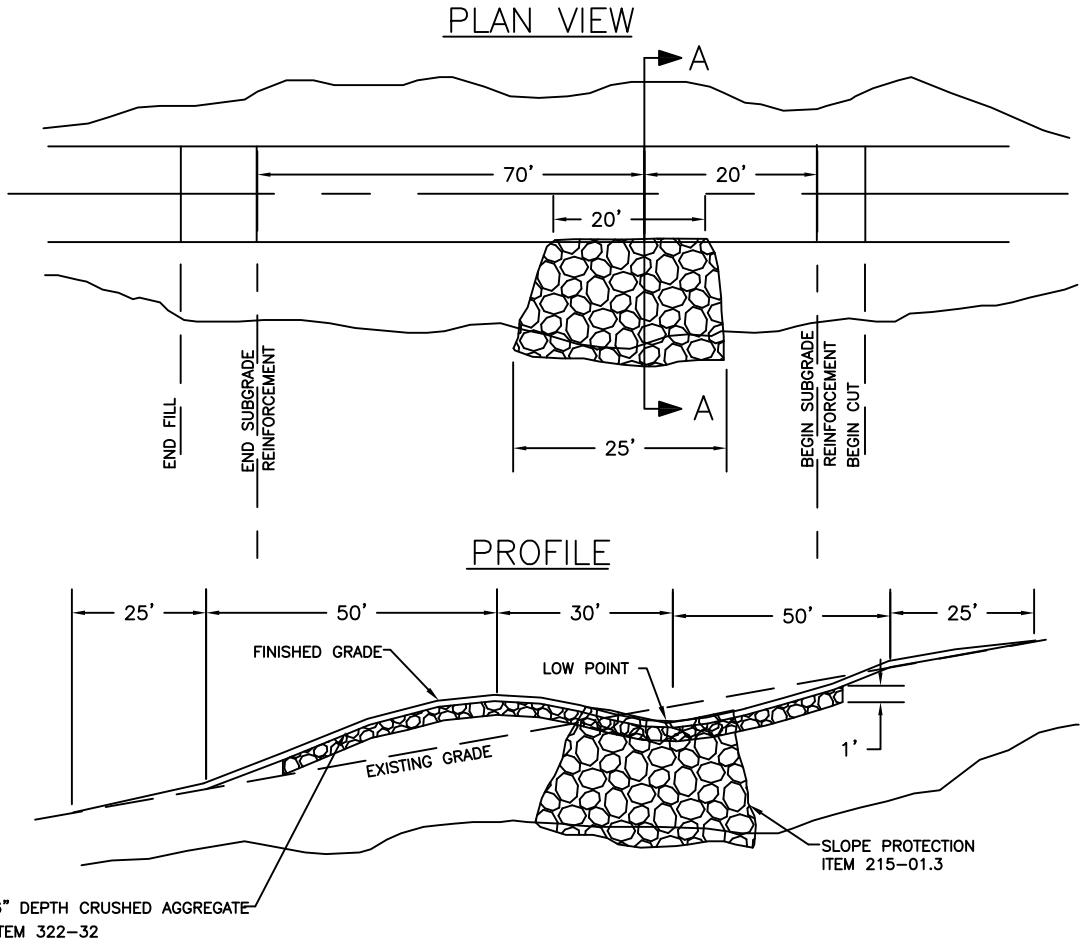
WHERE DITCHES ARE GREATER THAN 1 FOOT DEEP, BLEND LEAD-IN DITCH TO MATCH FINISHED ELEVATION OF DRAIN DIP LOW POINT.

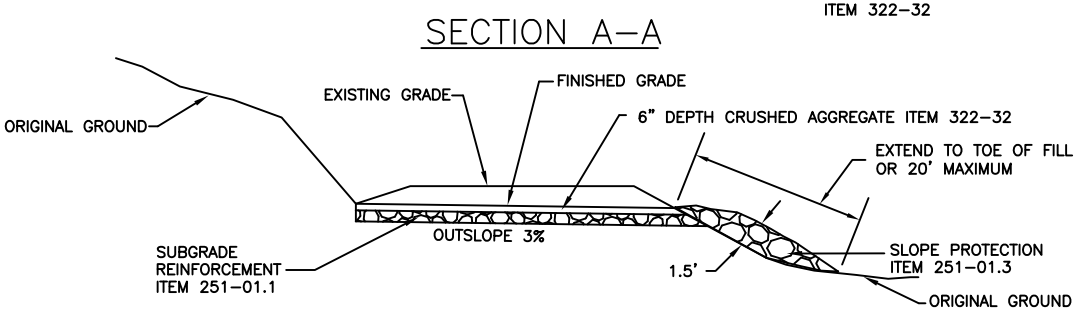
EXCAVATE EXISTING FILL SLOPE AS NECESSARY TO PREPARE FOR PLACEMENT OF SLOPE PROTECTION, SO THAT THE FINISHED SLOPE SURFACE IS EITHER CONCAVE OR PLANAR AND BLENDS WITH ADJACENT FILL SLOPES. THIS EXCAVATION SHALL BE CONCURRENT WITH AND INCIDENTAL TO ITEM 204-20.

CLEARING AND GRUBBING OF EXISTING SURFACES MAY BE REQUIRED AND IS INCIDENTAL TO ITEM 204-20. CLEARED MATERIAL MAY BE PLACED ON ADJACENT FILL SLOPES.

SUBGRADE REINFORCEMENT AND SLOPE PROTECTION QUANTITIES AND TYPES SHOWN ON WORKLISTS AND DRAINAGE LISTING.

CONSERVE EXISTING SURFACE ROCK AND REPLACE ON NEW SUBGRADE, INCIDENTAL TO ITEM 204-20. SUPPLEMENT WITH ITEM 322-32 TO OBTAIN FINISHED DEPTH AND LENGTH OF CRUSHED AGGREGATE. ESTIMATED QUANTITIES OF 322-32 SHOWN ON WORKLISTS.





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UMPQUA NATIONAL FOREST - NORTH UMPQUA RANGER DISTRICT

APPROVED _____ DATE: _____	DRAWN _____ DATE: _____ REVIEWED _____ DATE: _____	TIMBER SALE NAME: BLOODY REOFFER II	SHEET TITLE: DRAIN DIP ROAD 4713-500 MP 1.78	SHT. 7 OF 8

MP	SPECIFIED ROAD WORKLIST - ROAD 4713	PAY ITEM	QUANTITY
10.76	Intersection Road 4760 and 4713.		
10.65	BEGIN ROAD WORK. Remove existing culvert and replace with a new 24" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.24) to approved disposal sites. See Sheets 5 and 6 for details.	203-01 322-32 602-63.24	1 EA 5 CY 32 LF
10.59	Fall and leave trees marked by F.S. within the site location. Remove existing culvert and replace with a new 24" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.24) to approved disposal sites. See Sheets 5 and 6 for details.	202-58 203-01 322-32 602-63.24	2 EA 1 EA 5 CY 36 LF
10.27	Remove existing culvert and replace with a new 24" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.24) to approved disposal sites. Install splash apron. See Sheets 5 and 6 for details.	203-01 251-01.2 322-32 602-63.24	1 EA 3 CY 5 CY 30 LF
9.38	Junction left Road 4713-500.		
8.66	Begin Roadway excavation. Excavate unsuitable material from failure and haul to Bloody Point Quarry. Suitable material from existing excavation may be used as backfill material, supplementing with 20 cubic yards pit run material. Conserve and utilize existing aggreagate from roadbed, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry.	204-90 322-22 322-32	1 LS 20 CY 5 CY
7.18	Install splash apron, see Sheet 5 for details.	251-01.3	4 CY
6.00	Install a new 18" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Sheets 5 and 6 for details.	322-32 602-63.18	5 CY 44 LF
5.98	Remove existing culvert and replace with a new 18" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Sheets 5 and 6 for details.	203-01 322-32 602-63.18	1 EA 5 CY 40 LF
5.97	Junction Road 4713-400.		
5.96	Remove existing culvert and replace with a new 18" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Sheets 5 and 6 for details. END ROAD WORK.	203-01 322-32 602-63.18	1 EA 5 CY 28 LF
MP	**SPECIFIED ROAD WORKLIST - ROAD 4713-500**	**PAY ITEM**	**QUANTITY**
0.50	BEGIN ROAD WORK. Remove existing culvert and replace with a new 18" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Sheets 5 and 6 for details.	203-01 322-32 602-63.18	1 EA 5 CY 40 LF
0.88	Remove existing culvert and replace with a new 18" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Sheets 5 and 6 for details.	203-01 322-32 602-63.18	1 EA 5 CY 36 LF
1.38	Fall and leave trees marked by F.S. within the site location. Remove existing culvert and replace with a new 24" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.24) to approved disposal sites. Install splash apron. See Sheets 5 and 6 for details.	202-58 203-01 251-01.2 322-32 602-63.24	2 EA 1 EA 3 CY 5 CY 68 LF
1.43	Remove existing culvert and replace with a new 24" CMP. Conserve and utlilze existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Bloody Point Quarry. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.24) to approved disposal sites. See Sheets 5 and 6 for details.	203-01 322-32 602-63.24	1 EA 5 CY 46 LF
1.78	Construct Drain dip, see Sheet 8 for details. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 204-20) to Disposal site at 4713-500 MP 2.78. **END ROAD WORK.**	204-20 251-01.1 251-01.3 322-32	1 EA 50 CY 25 CY 35 CY