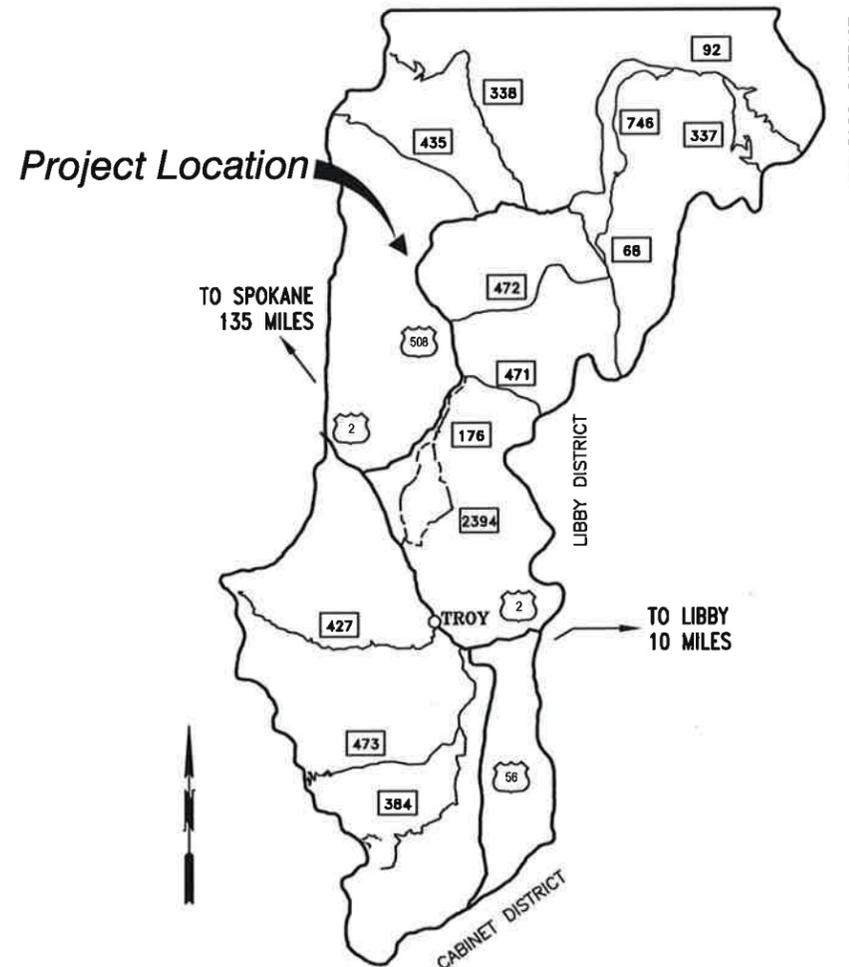
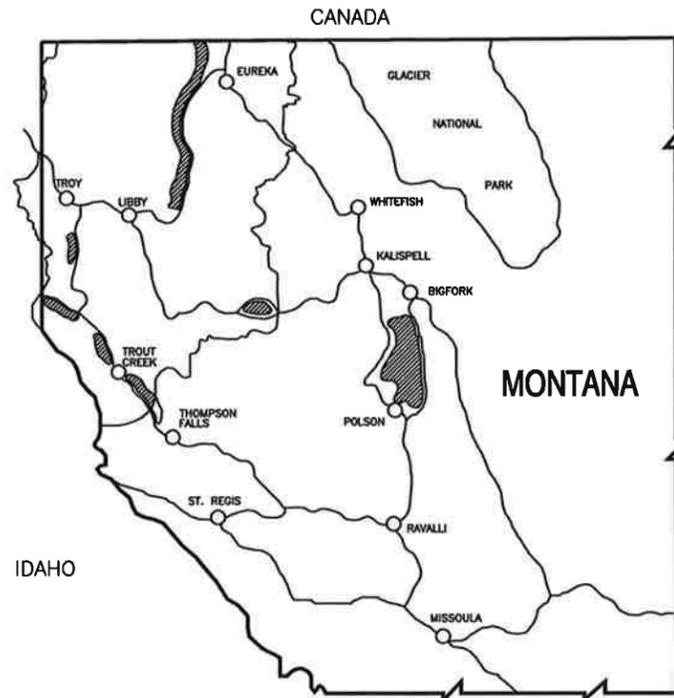


UNITED STATES DEPARTMENT OF AGRICULTURE
 FOREST SERVICE - REGION ONE
 PLANS FOR PROPOSED
 NATIONAL FOREST SYSTEM ROADS
 LINCOLN COUNTY, MONTANA
Redhead Meadowchild
 KOOTENAI NATIONAL FOREST
 THREE RIVERS RANGER DISTRICT



ROAD NO.	ROAD NAME	LENGTH	*C/R/M
393	Redtop Cyclone	5.00	R
524	Meadow Creek	0.92	R
745	Hellroaring Creek	0.92	R
5961	North Fork Meadow Cr.	0.14	R

* C = CONSTRUCTION
 R = RECONSTRUCTION

PREPARED BY:
Justin Pickler
 PROJECT ENGINEER
 DATE: 4-22-15

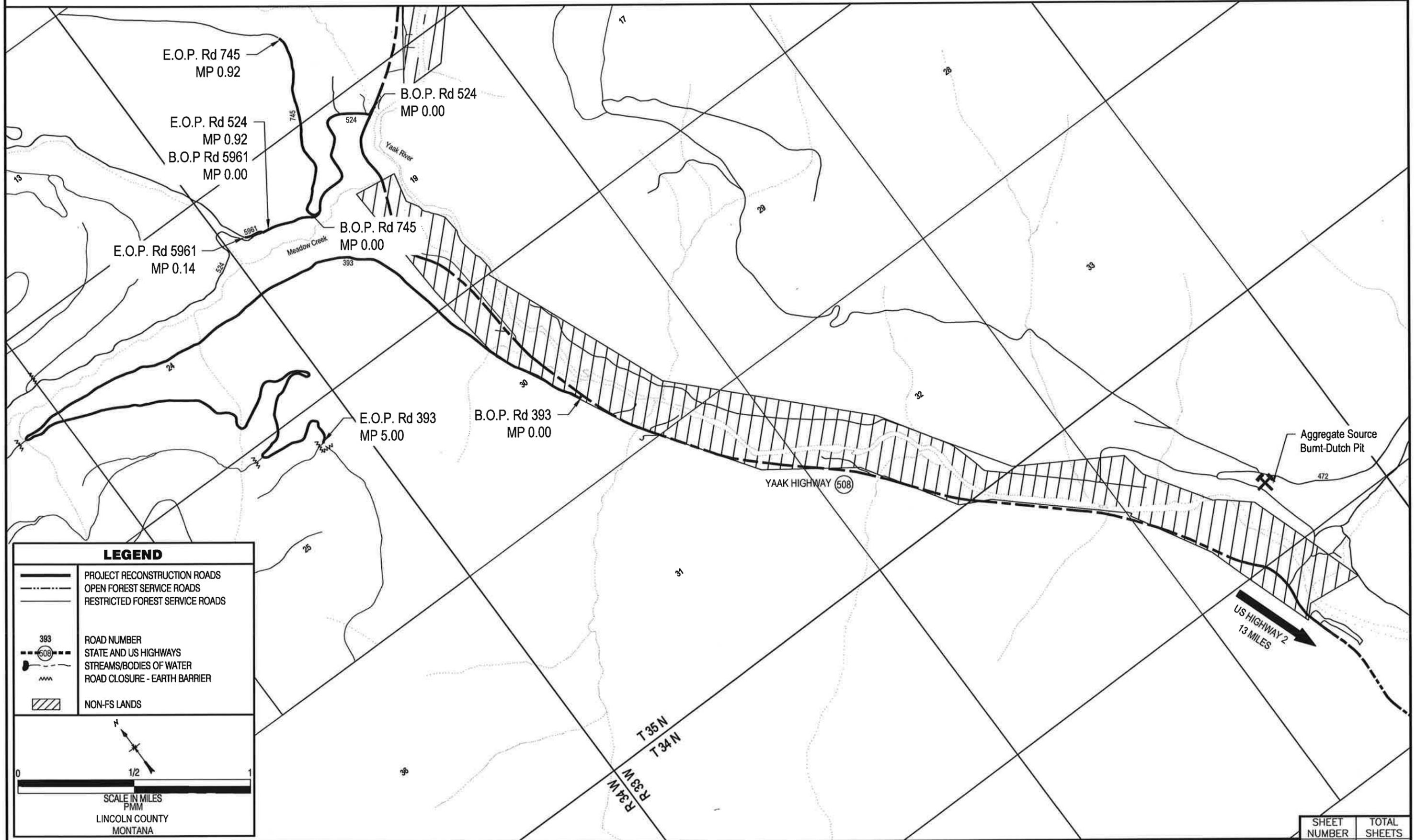
REVIEWED BY:
Justin Pickler
 PROJECT TEAM LEADER
 DATE: 5-12-15

MULTIPLE RESOURCE REVIEW BY:
[Signature]
 DISTRICT RANGER
 DATE: 5-13-15

I certify that this project has been designed in accordance with sound engineering practice.
[Signature]
 FOREST ENGINEER
 DATE: 5/14/15

SHEET NUMBER	TOTAL SHEETS
1	13

Project Map



LEGEND

- PROJECT RECONSTRUCTION ROADS
- OPEN FOREST SERVICE ROADS
- RESTRICTED FOREST SERVICE ROADS
- ROAD NUMBER
- STATE AND US HIGHWAYS
- STREAMS/BODIES OF WATER
- ROAD CLOSURE - EARTH BARRIER
- NON-FS LANDS

0 1/2 1
SCALE IN MILES
PMM
LINCOLN COUNTY
MONTANA

Aggregate Source
Burnt-Dutch Pit

US HIGHWAY 2
13 MILES

Redhead Meadowchild

SHEET NUMBER	TOTAL SHEETS
3	13

Summary of Quantities

ITEM NO	ITEM DESCRIPTION	METHOD OF MEASURE	UNIT OF MEASURE	393	524	745	5961											
15101	Mobilization	LSQ	L.S.	All	All	All	All											
15756	Straw Wattles	A.Q.	L.F.	36														
20301A	Removal of CMP	A.Q.	Each	8		2												
20301B	Removal of CMP Ends	A.Q.	Each	1	2													
20419A	Drainage Excavation, Type Outlet Ditch	A.Q.	L.F.	50														
20419B	Drainage Excavation, Type Ditch	A.Q.	L.F.	110														
20480	Drainage Excavation, Type Open Top Box Culvert, Compaction Method F	A.Q.	L.F.	24														
20481A	Drainage Excavation, Drain Dip, Compaction Method E	A.Q.	Each	11														
20481B	Drainage Excavation, Type Construct 4% Outslope, Compaction Method E	A.Q.	Each	2														
20701	Earthwork Geotextile, Type II-A	C.Q.	S.Y.		28													
23050	Brushing	C.Q.	Mile	5.00	0.92	0.92	0.14											
25101A	Placed Riprap, Class 1	C.Q.	C.Y.	17	2.5	3	0.5											
25101B	Placed Riprap, Class 3	C.Q.	C.Y.	18		1.0												
25201	Rock Embankment, Class 6)	C.Q.	C.Y.		16.0													
30357	Roadway Reconditioning, Compaction Method B	C.Q.	Mile	5.00	0.92	0.92	0.14											
32232	Haul and Place Stockpiled Aggregate, Compaction B	C.Q.	C.Y.	480	2	4												
60253	42" Span x 29' Rise Corrugated Steel Pipe Arch, 0.079" (Includes Culvert Excavation), Compaction Method B	A.Q.	L.F.	48														
60270A	18" Corrugated Steel Pipe, 0.064" Thickness, (Includes Culvert Excavation), Compaction Method B	A.Q.	L.F.	458		70												
60270B	24" Corrugated Steel Pipe, 0.064" Thickness, (Includes Culvert Excavation), Compaction Method B	A.Q.	L.F.	96														
60710	Reconditioning Drainage Structures, Reseal CMP	A.Q.	Each	3														
60712A	Reconditioning Drainage Structure, Clean Existing OTBC	A.Q.	Each		3	6												
60712B	Reconditioning Drainage Structure, Clean Existing SWD	A.Q.	Acre				1											
62556	Seeding, Dry Method	C.Q.	Acre	2.5	0.5	0.5	0.1											

Drainage Listing

AS DESIGNED						AS BUILT					INSTALLATION DETAILS				RIPRAP			BMP ITEMS					REMARKS			
STATION OR MILE POST	CULVERT DIAMETER (INCHES)	CULVERT LENGTH (FEET)	ROLLING DRAINAGE DIP	BLIND DRAIN (LIN. FT.)	OPEN TOP BOX CULV. (LIN. FT.)	STATION OR MILE POST	CULVERT DIAMETER (INCHES)	CULVERT LENGTH (FEET)	ROLLING DRAINAGE DIP	BLIND DRAIN (LIN. FT.)	SURFACE DEFLECTOR (LIN. FT.)	TYPE *	SKEW (DEGREES)	OUTLET DITCH (LIN. FT.)	GASKETS REQUIRED	CLASS	INLET (C.Y.)	OUTLET (C.Y.)	STRAW BALES	SLASH FILTER DRAIN	FILTER FABRIC INLET	STRAW WATTLE (LIN. FT.)	SILT FENCE (LIN. FT.)			
Road 393																										
MP 0.08	18"	24'										2	**			1	0.5	0.5								Culvert alignment and bedding require inspection and acceptance in writing, prior to backfill placement on all live streams or culvert greater than 48" dia.
MP 0.19	18"	2'														1		0.5								Cut 2 L.F. off existing inlet & outlet and install 2 L.F. extension Place 30 C.Y. of aggregate on surface of drain dip
MP 0.46			XXX																							
MP 0.47	24"	32'										2	**			3	1.0	1.0								
MP 0.53	18"	28'										2	**			1	0.5	0.5								
MP 0.57	18"	26'										2	**			1	0.5	0.5								
MP 0.58			XXX																							Place 30 C.Y. of aggregate on surface of drain dip
MP 0.74			XXX																							Place 30 C.Y. of aggregate on surface of drain dip
MP 1.04			XXX																							Place 30 C.Y. of aggregate on surface of drain dip
MP 1.17			XXX																							Place 30 C.Y. of aggregate on surface of drain dip
MP 1.18	18"	28'										2	**	20'		1	0.5	0.5								
MP 1.47			XXX									2	**			1	0.5	0.5								Place 30 C.Y. of aggregate on surface of drain dip
MP 1.67			XXX									2	**			1	0.5	0.5								Place 30 C.Y. of aggregate on surface of drain dip
MP 1.90			XXX									2	**			1	0.5	0.5								Place 30 C.Y. of aggregate on surface of drain dip
MP 2.00	18"	32'										2	**			1	0.5	0.5								
MP 2.02			XXX																							Place 30 C.Y. of aggregate on surface of drain dip
MP 2.16	18"	50'										2	**			3	1	1								
MP 2.28			XXX																							Place 30 C.Y. of aggregate on surface of drain dip
MP 2.29														15'												Place 30 C.Y. of aggregate on surface of drain dip
MP 2.45					24'								**			1		0.5								
MP 2.55	18"	34'										2	**			1	0.5	0.5								
MP 2.60	18"	34'										2	**			1	0.5	0.5								
MP 2.78	24"	32'										2	**			3	1.0	1.0								
MP 2.80	18"	36'										2	**			1	0.5	0.5								
MP 2.86	18"	34'										2	**			1	0.5	0.5								
MP 3.24	18"	32'										2	**			1	0.5	0.5								
MP 3.72																						12'				
MP 3.87	***	48'										1	**		2	3	5.0	5.0				12'				***42"x29" CMPA
MP 3.91	24"	32'										1	**			3	1	1				12				
MP 3.92	18"	32'										1	**	15'		1	0.5	0.5								
MP 4.43			XXX																							Place 30 C.Y. of aggregate on surface of drain dip
MP 4.65	18"	34'										2	**			1	0.5	0.5								
MP 4.74	18"	32'										2	**			1	0.5	0.5								
Road 524																										
MP 0.21																1		0.5								Cut and remove 2 lf from outlet of existing cmp
MP 0.74																1		0.5								
MP 0.78																1		1								
MP 0.82																1		0.5								Cut and remove 2 LF from outlet of existing cmp
Road 745																										
MP 0.15																3	1									Amour catchbasin
MP 0.33																1		1								
MP 0.73	18"	34'										2	**			1	0.5	0.5								Enlarge catch basin. Lower new cmp invert by 1.0'. See Sheet 8
MP 0.82	18"	36'										2	**			1	0.5	0.5								Increase skew and grade from existing cmp
Road 5961																										
MP 0.12																1		0.5								

Reconstruction Log

Redtop Cyclone #393

Note:
Mileages are measured electronically and do not match Mile Posts marked on the ground.

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
MP 0.00	30357 23050 62556	BEGIN PROJECT; JUNCTION WITH YAAK HIGHWAY 508. BEGIN ROADWAY RECONDITIONING, COMPACTION METHOD B; SEE TYPICAL A, SHEET 8. BEGIN ROADWAY BRUSHING; SEE TYPICAL A, SHEET 8. BEGIN SEEDING OF ALL DISTURBED AREAS WITH EXCEPTION OF TRAVELED ROADWAY.	MP 1.86	32232	PLACE 20 C.Y. AGGREGATE TO RAISE GRADE OVER EXISTING 18" CMP.
MP 0.06	60710	RESEAL INLET OF EXISTING 18" CMP. EXCAVATE A MINIMUM OF 5 FEET FROM INLET OF CMP.	MP 1.90	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.
MP 0.08	20301A 60270A 25101A	REMOVE EXISTING 18" CMP. INSTALL 18" x 24 L.F. CSP, COMPACTION METHOD B; SEE SHEET 10. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.	MP 2.00	60270A 25101A	INSTALL 18" x 32 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.
MP 0.14	30357	RESHAPE DITCH TO DRAIN, APPROXIMATELY 100' LENGTH. SEE TYPICAL B, SHEET 8.	MP 2.02	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.
MP 0.18	20481B 32232	CONSTRUCT 4% OUTSLOPE, DRAIN RIGHT, COMPACTION METHOD E; SEE DETAIL A, SHEET 9. PLACE 10 C.Y. AGGREGATE OVER DISTURBED OUTSLOPED SURFACE; COMPACTION METHOD B.	MP 2.10	60710 32232	RESEAL INLET OF EXISTING 18" CMP. EXCAVATE A MINIMUM OF 5 FEET FROM INLET OF CMP. PLACE 10 C.Y. AGGREGATE TO FILL IN SCOUR CHANNEL IN ROADWAY.
MP 0.19	20301B 60270A 25101A	CUT AND REMOVE 2 L.F. FROM BOTH INLET AND OUTLET ENDS OF EXISTING 18" CMP. INSTALL 2 L.F. EXTENSION ON INLET END OF CMP AND RESEAL INLET. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT OUTLET.	MP 2.16	20301A 60270A 25101B	REMOVE EXISTING 18" CMP. INSTALL 18" x 50 L.F. CSP. COMPACTION METHOD B. PLACE 1.0 C.Y. CLASS 3 RIPRAP AT INLET AND OUTLET; 2 C.Y. TOTAL.
MP 0.24	30357	BEGIN RECONSTRUCTING DITCHLINE TO MP 0.33. SEE TYPICAL B, SHEET 8.	MP 2.28	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.
MP 0.36	20481B 32232	CONSTRUCT 4% OUTSLOPE, DRAIN RIGHT. COMPACTION METHOD E. PLACE 10 C.Y. AGGREGATE OVER DISTURBED OUTSLOPED SURFACE.	MP 2.29	20419A	CONSTRUCT 15 L.F. OUTLET DITCH AT EXISTING 18" CMP. SEE TYPICAL B, SHEET 9.
MP 0.46	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.	MP 2.39	30357	CLEAN OUTLET OF EXISTING 18" CMP.
MP 0.47	20301A 60270B 25101B	REMOVE EXISTING 18" CMP. INSTALL 24" x 32 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 3 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.	MP 2.44	30357	CLEAN OUTLET OF EXISTING 24" CMP.
MP 0.53	60270A 25101A	INSTALL 18" x 28 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.	MP 2.45	20480 25101A	INSTALL 24 L.F. OPEN TOP BOX CULVERT, COMPACTION METHOD F; SEE SHEET 11. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT OUTLET ON FILL SLOPE
MP 0.57	60270A 25101A	INSTALL 18" x 26 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.	MP 2.55	60270A 25101A	INSTALL 18" x 34 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.
MP 0.58	20481A 32232 30357	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP. BEGIN RECONSTRUCTING DITCHLINE TO MP 0.67.	MP 2.60	60270A 25101A	INSTALL 18" x 34 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.
MP 0.74	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.	MP 2.78	20301A 60270B 25101B	REMOVE EXISTING 18" CMP. INSTALL 24" x 32 L.F. CSP; MOVE INLET TO ALIGN WITH STREAM CHANNEL. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 3 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.
MP 1.04	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.	MP 2.80	60270A 25101A	INSTALL 18" x 36 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.
MP 1.17	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.	MP 2.84	20419B	CONSTRUCT DITCHLINE AROUND INSIDE OF SWITCHBACK, 110 L.F. SEE TYPICAL B, SHEET 8.
MP 1.18	20301A 60270A 25101A 20419A	REMOVE EXISTING 18" CMP. INSTALL 18" x 28 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL. CONSTRUCT 20 L.F. OUTLET DITCH. SEE DETAIL B, SHEET 9.	MP 2.86	60270A 25101A	INSTALL 18" x 34 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.
MP 1.47	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.	MP 3.24	20301A 60270A 25101A	REMOVE EXISTING 18" CMP. COMPACTION METHOD B. INSTALL 18" x 32 L.F. CSP. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.
MP 1.67	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP.	MP 3.38	32232	BEGIN PLACING AGGREGATE, 410 L.F., 4" DEPTH, 12' TOP WIDTH, 70 C.Y.
			MP 3.59	60710	RESEAL INLET OF EXISTING 18" CMP. EXCAVATE A MINIMUM OF 5 FEET FROM INLET OF CMP.
			MP 3.72	30357 15756	RECONSTRUCT DITCHLINE FOR 310 L.F. AHEAD. INSTALL 2 STRAW WATTLES ACROSS DITCHLINE 10' FROM EXISTING 18" CMP, 6 L.F. EACH, 12 L.F. TOTAL. INSTALL WATTLES PRIOR TO BEGINNING DITCH RECONSTRUCTION WORK.

Reconstruction Log

Redtop Cyclone Road #393 Cont.

Hellroaring Creek Road #745

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
MP 3.87	20301A 60253 25101B 30357 15756 32232	REMOVE EXISTING 24" CMP, SEE SHEET 13. INSTALL 42" SPAN, 29" RISE CORRUGATED STEEL PIPE ARCH, 48 L.F., COMPACTION METHOD B. PLACE 5 C.Y. CLASS 3 RIPRAP AT INLET AND OUTLET, 10 C.Y. TOTAL. KEY IN RIPRAP AT OUTLET. RECONSTRUCT DITCHLINE BETWEEN MP 3.87 AND MP 3.91. SEE TYPICAL B, SHEET 8. INSTALL 2 STRAW WATTLES ACROSS DITCHLINE 15' FROM EXISTING 24" CMP, 6 L.F. EACH, 12 L.F. TOTAL. INSTALL WATTLES PRIOR TO BEGINNING DITCH RECONSTRUCTION WORK. AFTER CMPA INSTALLATION, PLACE 30 C.Y. AGGREGATE TO COVER DISTURBED SURFACE.	MP 0.00	30357 23050 62556	BEGIN PROJECT; JUNCTION WITH ROAD 524. BEGIN ROADWAY RECONDITIONING, COMPACTION METHOD B; SEE TYPICAL A, SHEET 8. BEGIN ROADWAY BRUSHING; SEE TYPICAL A, SHEET 8. BEGIN SEEDING OF ALL DISTURBED AREAS WITH EXCEPTION OF TRAVELED ROADWAY.
MP 3.91	15756 20301A 60270B 25101B	INSTALL 2 STRAW WATTLES ACROSS DITCHLINE 15' FROM EXISTING 18" CMP, 6 L.F. EACH, 12 L.F. TOTAL. REMOVE EXISTING 18" CMP. INSTALL 24" x 32 L.F. CSP; MOVE INLET TO ALIGN WITH STREAM CHANNEL. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 3 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.	MP 0.12	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.
MP 3.92	60270A 20419A 25101B	INSTALL 18" x 32 L.F. CSP; MOVE INLET TO ALIGN WITH STREAM CHANNEL. COMPACTION METHOD B. CONSTRUCT 15' OUTLET DITCH AT NEW CMP OUTLET. SEE DETAIL B, SHEET 9. PLACE 0.5 C.Y. CLASS 3 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.	MP 0.15	30357 25101B	CLEAN CATCH BASIN OF EXISTING 18" CMP. ARMOR CATCH BASIN WITH 1 C.Y. CLASS 3 RIPRAP.
MP 4.43	20481A 32232	CONSTRUCT DRAIN DIP, COMPACTION METHOD E; SEE SHEET 12. PLACE 30 C.Y. AGGREGATE ON SURFACE OF DRAIN DIP, COMPACTION METHOD B.	MP 0.19	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.
MP 4.65	60270A 25101A	INSTALL 18" x 34 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.	MP 0.20	30357	CLEAR SLUMP FROM DITCHLINE. SEE TYPICAL B, SHEET 8.
MP 4.74	60270A 25101A	INSTALL 18" x 32 L.F. CSP. COMPACTION METHOD B. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL.	MP 0.33	25101A	PLACE 1 C.Y. CLASS 1 RIPRAP AT OUTLET OF EXISTING 18" CMP
MP 5.00	30357	CLEAN INLET AND OUTLET OF EXISTING 18" CMP.	MP 0.42	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.
MP 5.00	30357	END OF PROJECT, JUNCTION WITH ROAD 14738.	MP 0.48	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.

Meadow Creek Road #524

MP 0.00	30357 23050 62556	BEGIN PROJECT; JUNCTION WITH YAAK HIGHWAY 508. BEGIN ROADWAY RECONDITIONING, COMPACTION METHOD B; SEE TYPICAL A, SHEET 8. BEGIN ROADWAY BRUSHING; SEE TYPICAL A, SHEET 8. BEGIN SEEDING OF ALL DISTURBED AREAS WITH EXCEPTION OF TRAVELED ROADWAY.
MP 0.21	20301B 25101A	CUT AND REMOVE 2 L.F. FROM OUTLET END OF EXISTING 18" CMP. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT OUTLET OF CMP.
MP 0.25	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.
MP 0.35	30357	CLEAN INLET OF EXISTING 18" CMP.
MP 0.58	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.
MP 0.70	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.
MP 0.74	25101A	PLACE 0.5 C.Y. CLASS 1 RIPRAP AT OUTLET OF EXISTING 18" CMP.
MP 0.78	25101A	PLACE 1 C.Y. CLASS 1 RIPRAP AT OUTLET OF EXISTING 18" CMP.
MP 0.82	20301B 25101A	CUT AND REMOVE 2 L.F. FROM OUTLET END OF EXISTING 18" CMP. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT OUTLET OF CMP.
MP 0.90	25201 20701 32232	CONSTRUCT ROCK EMBANKMENT, 16 C.Y. SEE DETAIL C, SHEET 9. SEPARATE ROCK EMBANKMENT FROM EXISTING FILL WITH 28 S.Y (15'X17') TYPE II-A GEOTEXTILE. FILL ABOVE ROCK EMBANKMENT WITH 2 C.Y. PITRUN. APPROX. 200 YARDS AWAY ON ROAD 5961 WACKER PACK IN 6" LIFTS. FILL ABOVE PITRUN WITH 1 C.Y. AGGREGATE, RE-ESTABLISH GRADE
MP 0.92		END OF PROJECT; JUNCTION WITH ROAD 5961.

MP 0.72	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.
MP 0.73	20301A 60270A 25101A 32232	REMOVE EXISTING 18" CMP. INSTALL 18" x 34 L.F. CSP, COMPACTION METHOD B; SEE SHEET 10. ENLARGE CATCH BASIN AND PLACE NEW CMP INLET ELEVATION 1' LOWER FROM EXISTING CMP INLET. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL. PLACE 2 C.Y. AGGREGATE ON ROAD SURFACE AFTER CSP INSTALLATION, COMPACTION METHOD B.
MP 0.82	20301A 60270A 25101A 32232	REMOVE EXISTING 18" CMP. INSTALL 18" x 36 L.F. CSP. INCREASE SKEW AND GRADE FROM EXISTING CMP. PLACE 0.5 C.Y. CLASS 1 RIPRAP AT INLET AND OUTLET; 1 C.Y. TOTAL. PLACE 2 C.Y. AGGREGATE ON ROAD SURFACE AFTER CSP INSTALLATION, COMPACTION METHOD B.
MP 0.88	60712A	CLEAN EXISTING OPEN TOP BOX CULVERT IN PLACE.
MP 0.92		END OF PROJECT; UNIT 6 BOUNDARY.

North Fork Meadow Creek Road #5961

MP 0.00	30357 23050 62556	BEGIN PROJECT; JUNCTION WITH ROAD #524. BEGIN ROADWAY RECONDITIONING, COMPACTION METHOD B; SEE TYPICAL A, SHEET 8. BEGIN ROADWAY BRUSHING; SEE TYPICAL A, SHEET 8. BEGIN SEEDING OF ALL DISTURBED AREAS WITH EXCEPTION OF TRAVELED ROADWAY.
MP 0.04	60712B	CLEAN EXISTING SURFACE WATER DEFLECTOR IN PLACE.
MP 0.12	25101A	PLACE 0.5 C.Y. CLASS 1 RIPRAP AT OUTLET OF EXISTING 18" CMP.
MP 0.14		END OF PROJECT; UNIT 5 BOUNDARY.

Note:
Mileages are measured electronically and do not match Mile Posts marked on the ground.

Note:
Mileages are measured electronically and do not match Mile Posts marked on the ground.

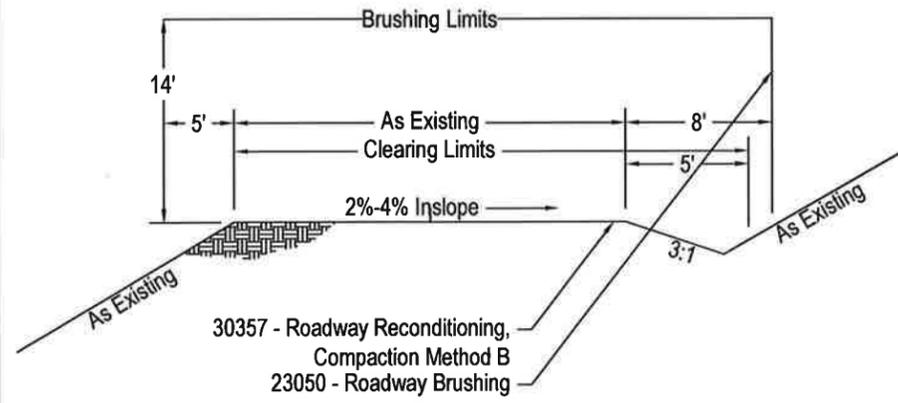
Redhead Meadowchild

SHEET NUMBER	TOTAL SHEETS
7	13

Typical Sections

Typical A

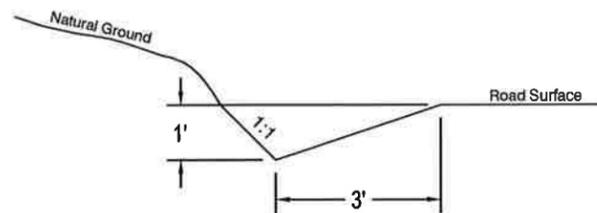
Roads: 393
524
745
5961



Note: If surface is crowned or outsloped, maintain existing profile at 2%-4%. Typical ditch depth is 1'.

Typical C

Typical B



Item 20419B - Construct Ditch
Item 30357 - Reconstruct Ditch

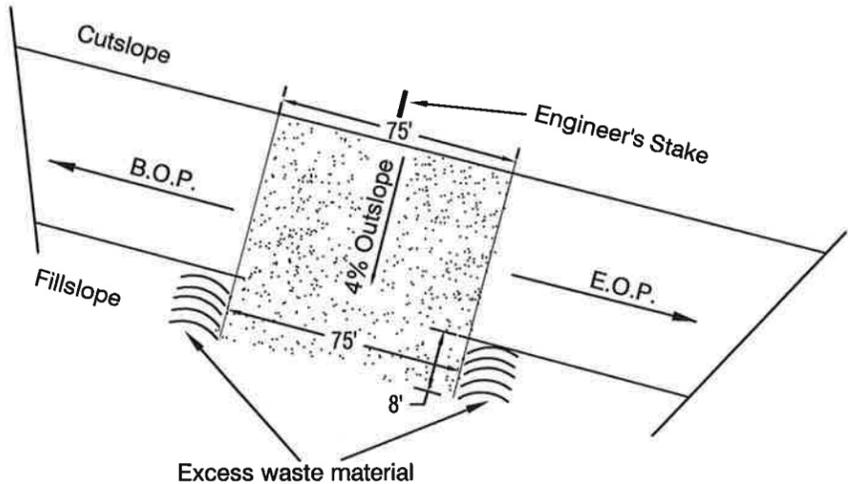
SHEET NUMBER	TOTAL SHEETS
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8	13
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Detail Sheet*

*No scale unless noted.

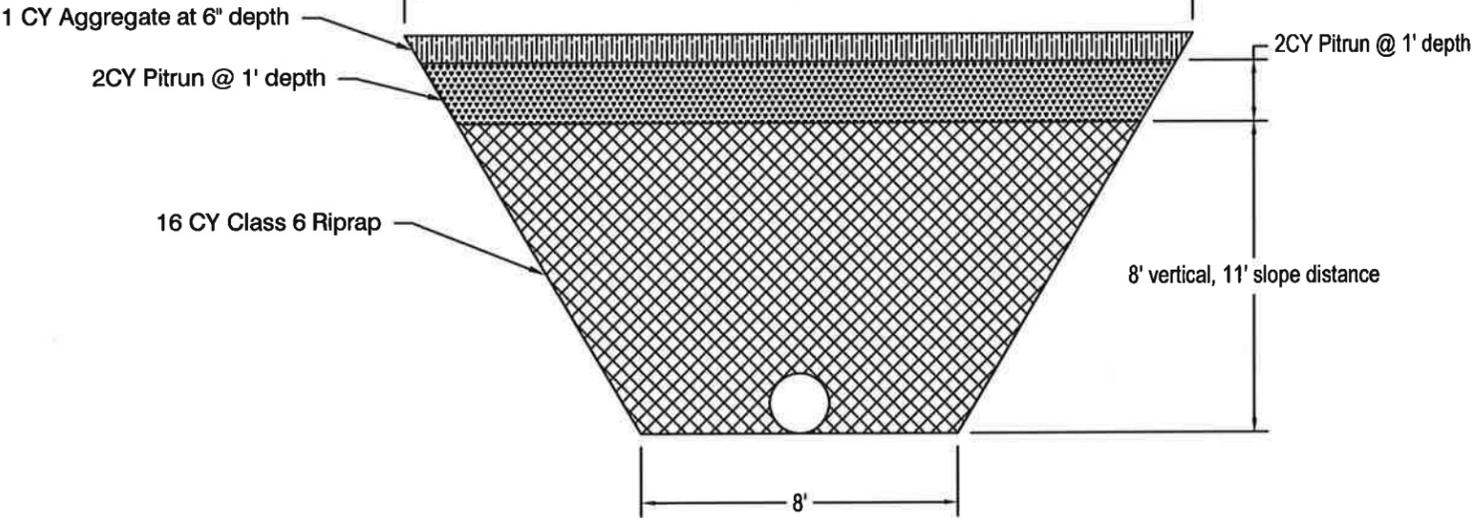
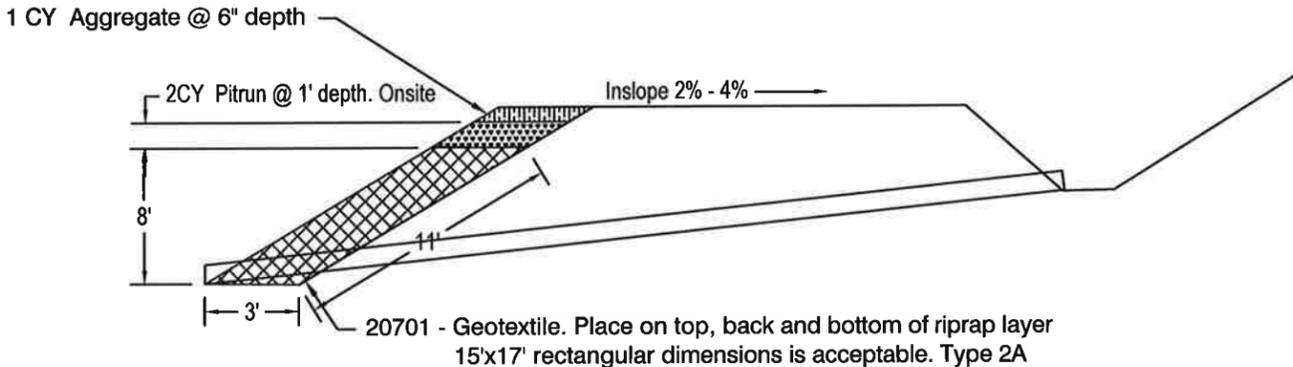
DETAIL A



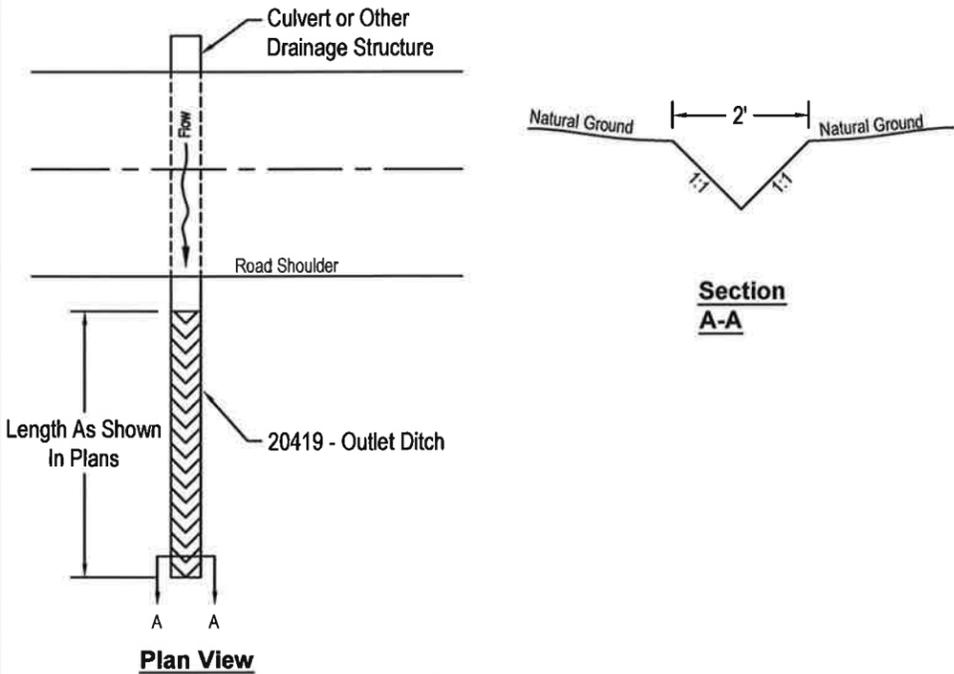
Item 20481B - Construct Outslope

DETAIL C

ROAD 524; MP 0.90



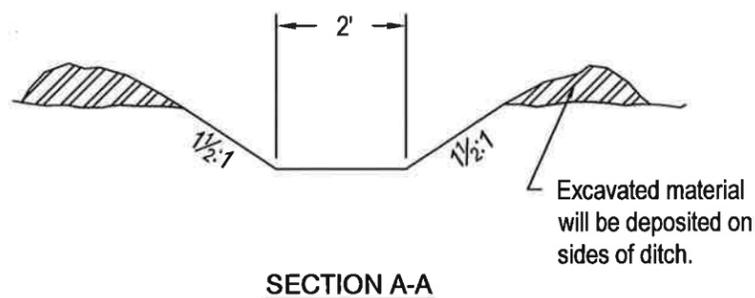
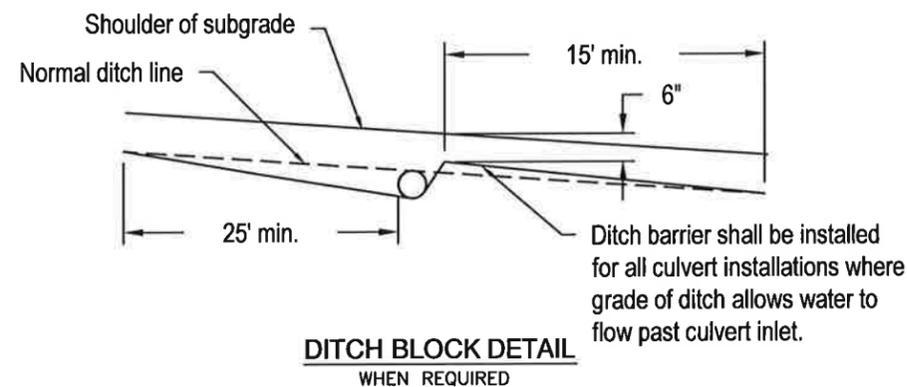
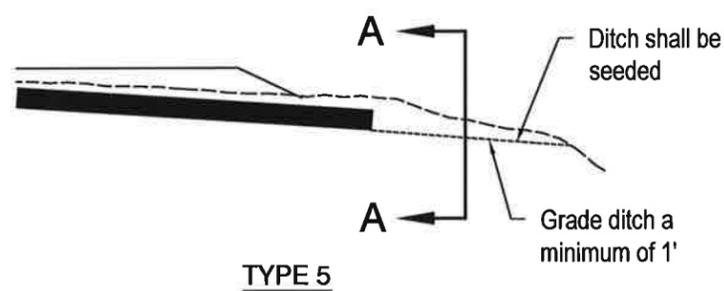
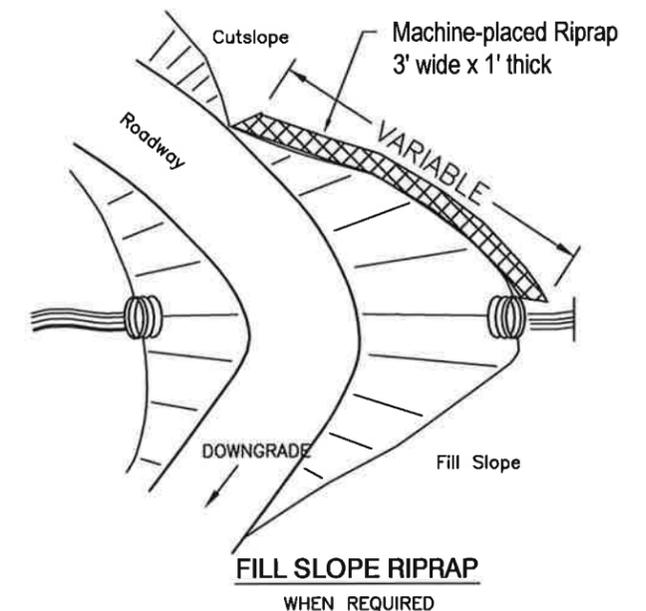
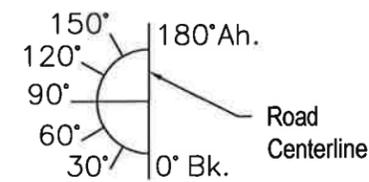
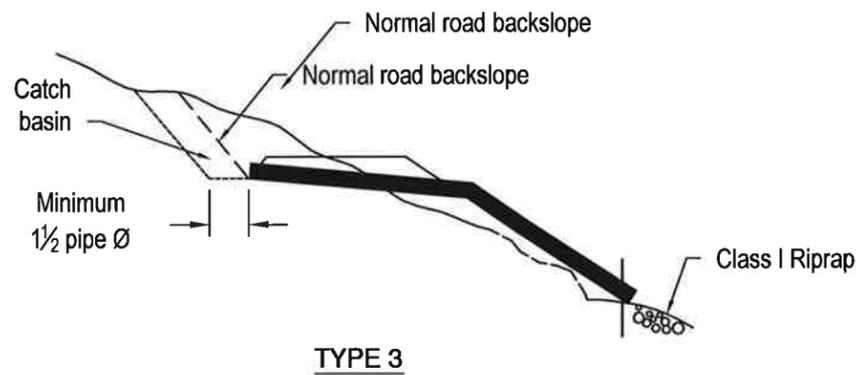
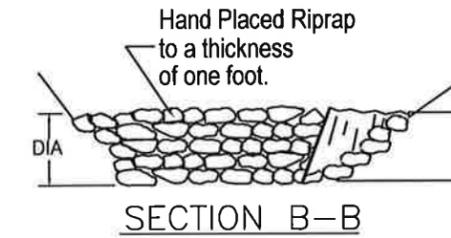
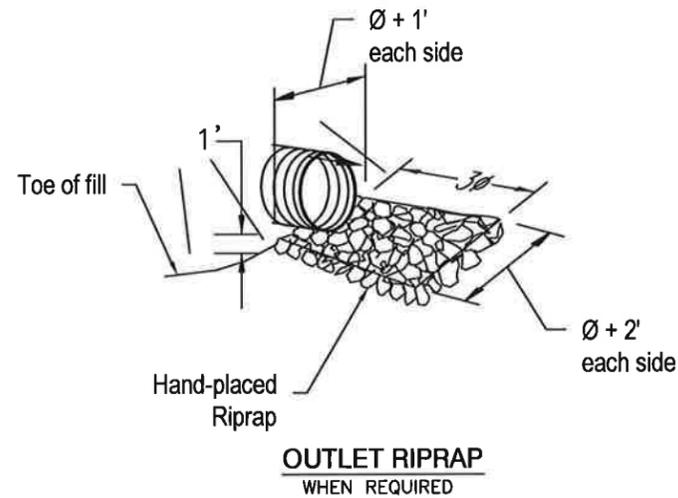
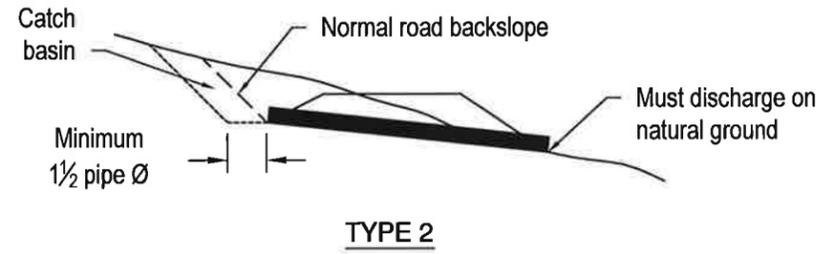
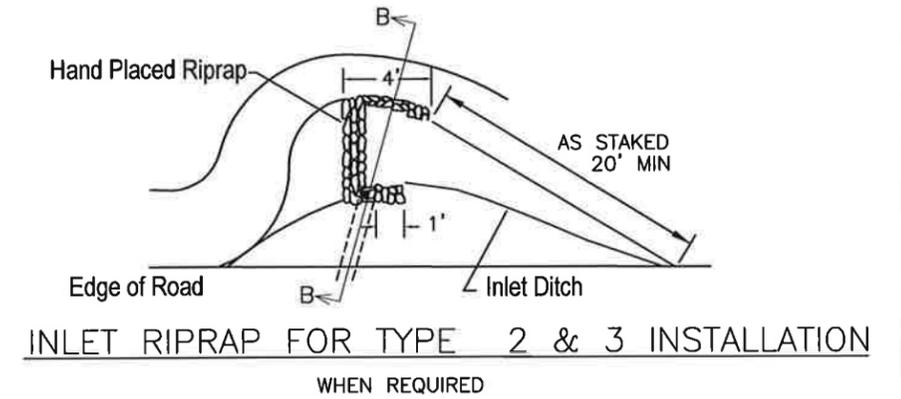
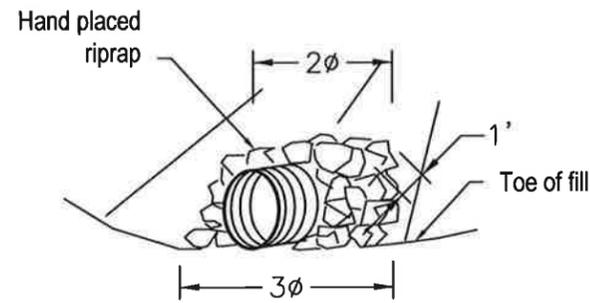
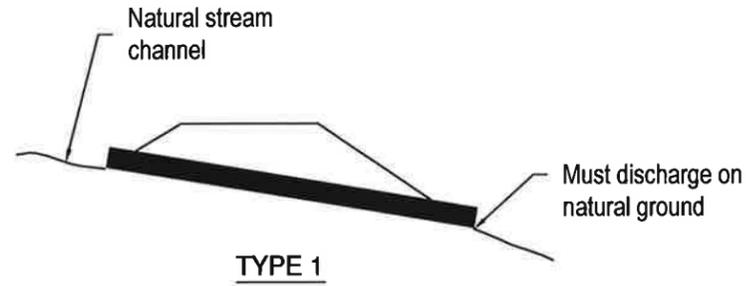
DETAIL B



Item 20419 - Outlet Ditch

SHEET NUMBER	TOTAL SHEETS
9	13

Culvert Construction Detail



SHEET NUMBER	TOTAL SHEETS
10	13

Open Top Box Culvert

NOTES:

OTBC must be inspected and approved in writing prior to installation. Location for inspection to be agreed upon.

Pilot holes are recommended but not required.

Any split which results from fastening boards without a pilot hole and intersects a perpendicular face may allow rejection of the entire board.

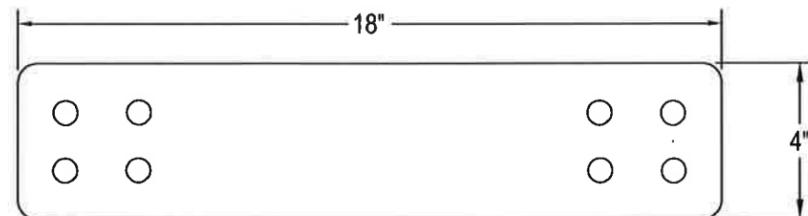
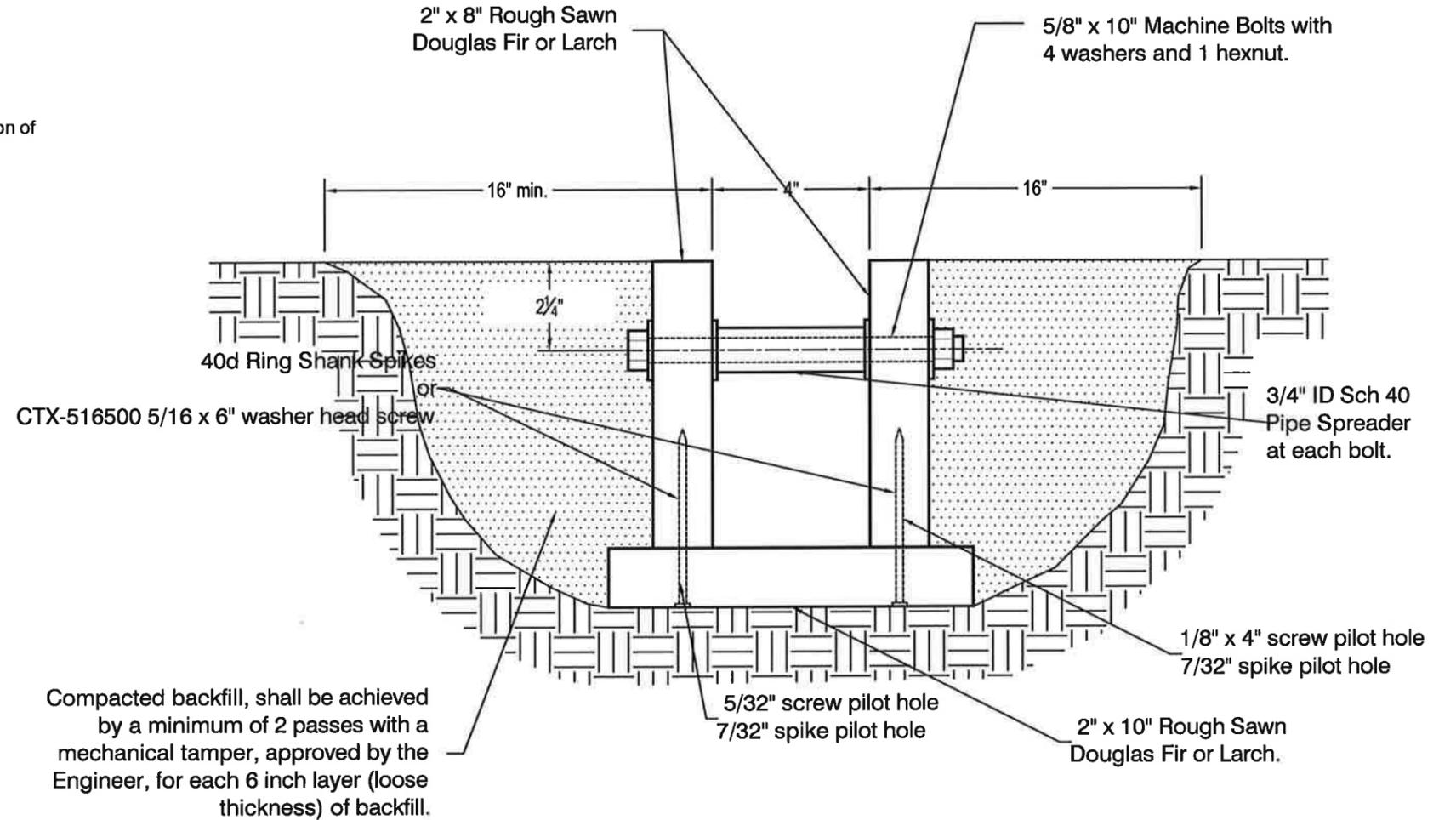
Lumber must be full dimension Select Structural douglas fir or larch. See WWPA Western Lumber Grading Rules 98
See attached requirement in Forest Service Supplemental Specifications

WWPA Western Lumber Grading Rules, Structural Joist and Planks, Standard Sizes does not apply. Full rough sawn dimensions are required for 2"x8" and 2"x10" lumber.

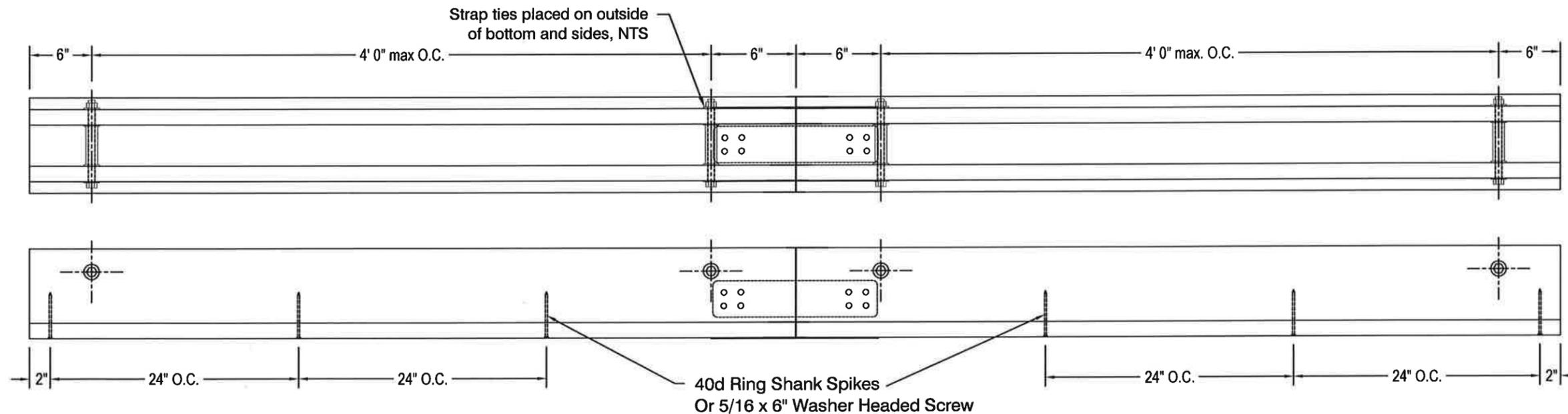
3/4" pipe spreader assumed at 3.75" long with two flat washers (assumed 0.125" thickness) for total clearance between upright of 4" .

All nuts, bolts, washers shall be zinc coated grade 2 or better.

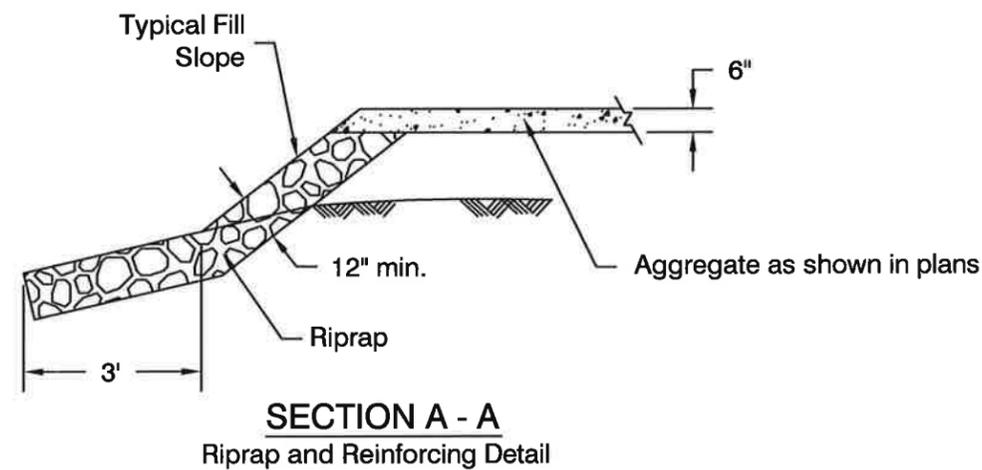
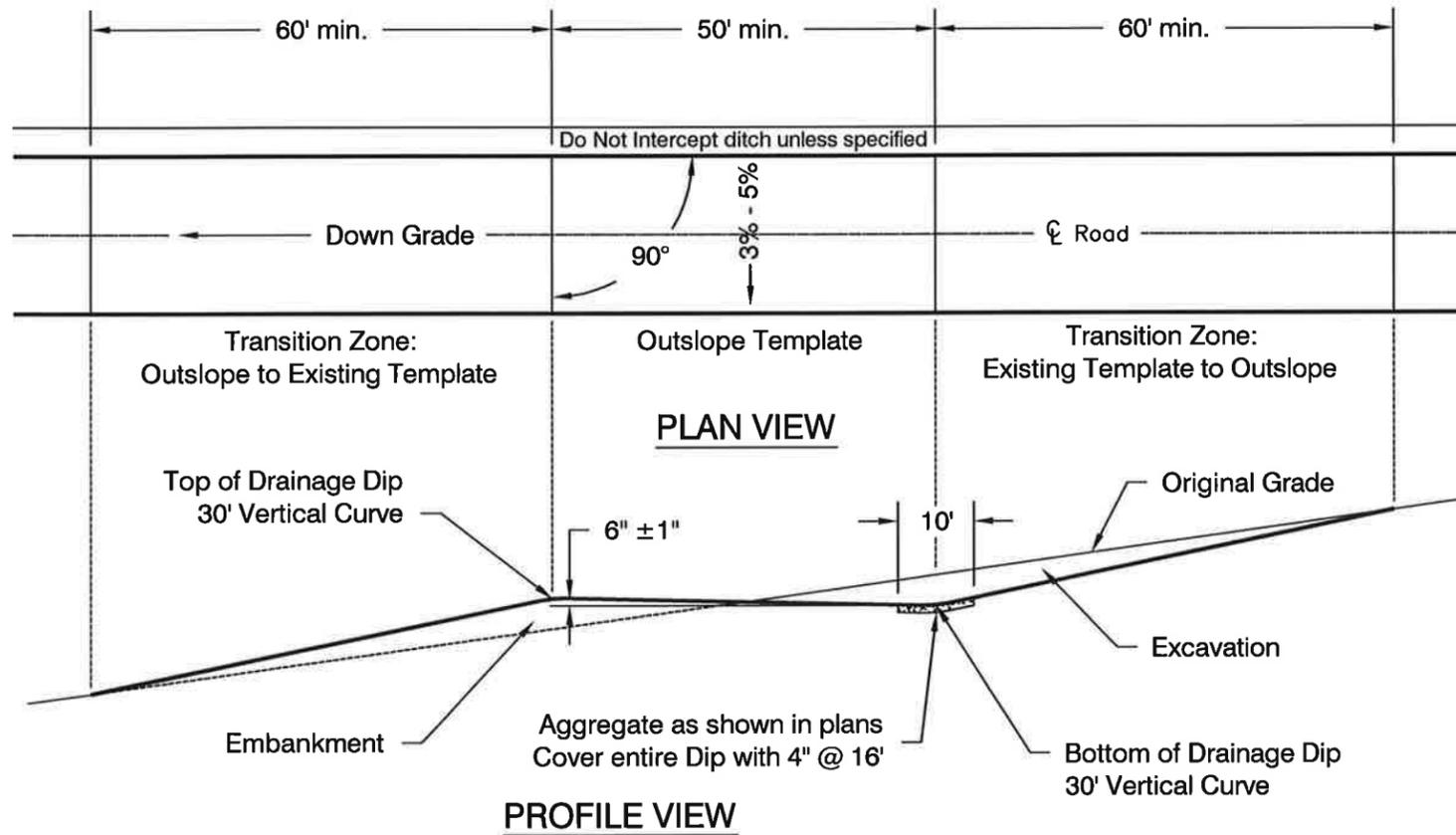
Provide three strap ties per splice. Attach with 1/2"x2" lag screws with washers, using two per end per splice. Construct from 7 gauge (3/16" flatstock). Apply one coat of galvanized spray or hand applied paint.



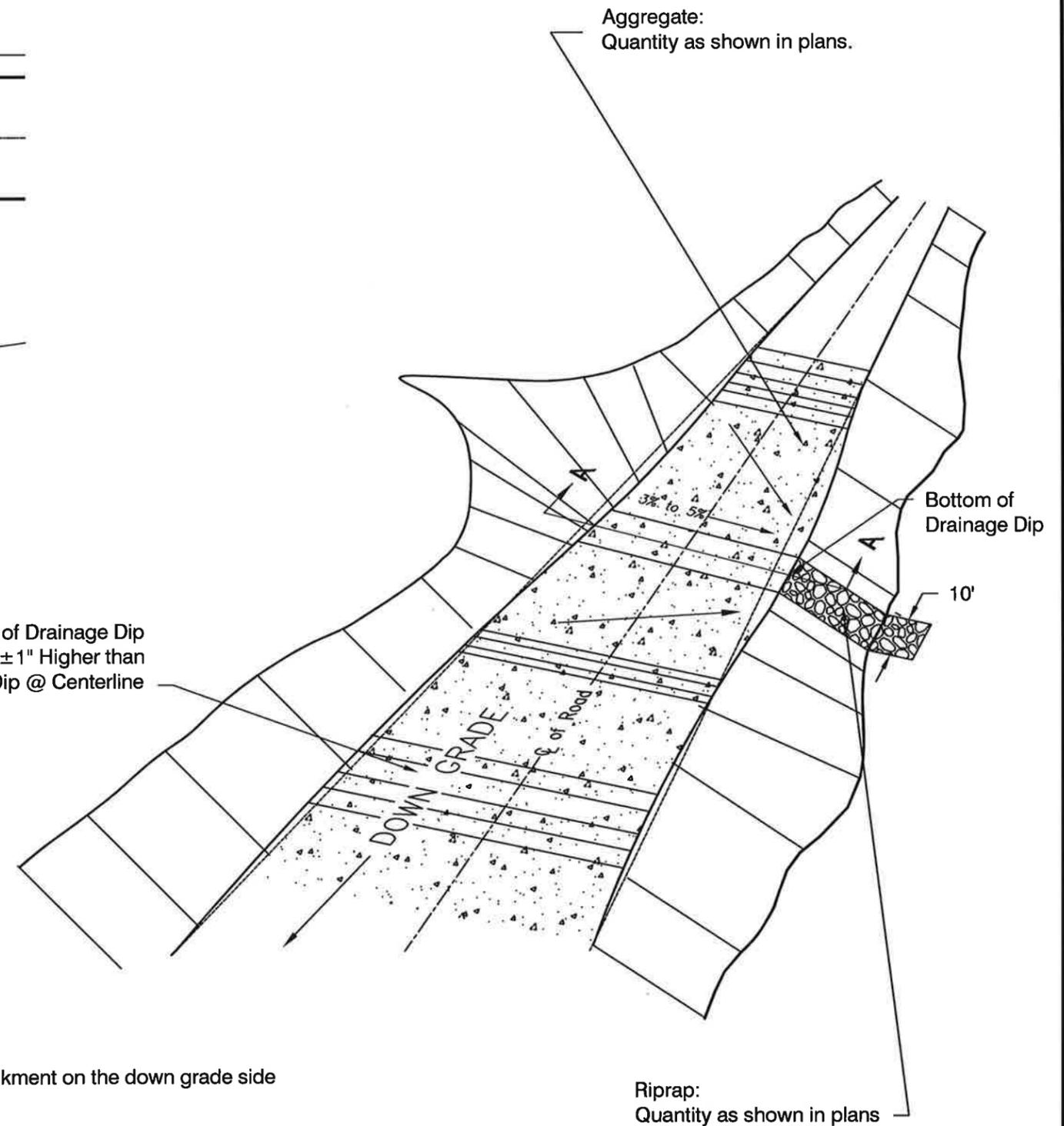
DETAIL "A" - Strap Tie



Drain Dip Detail



Drawings Not To Scale



Notes:

Excavation below the existing grade line will be used as embankment on the down grade side of the dip.

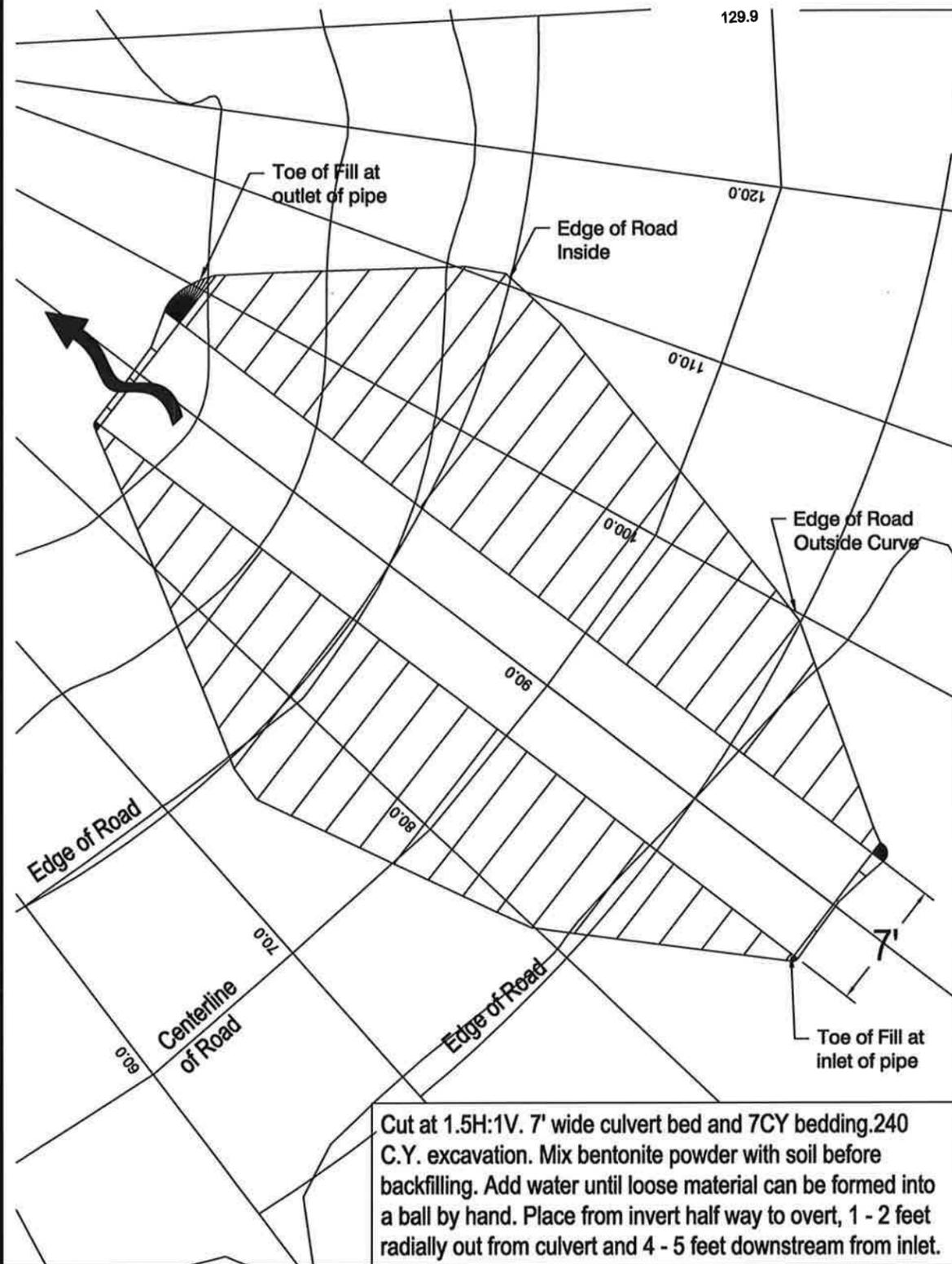
All disturbances shall be kept within the limits of the Drainage Dip.

Aggregate, Dip Reinforcement, or Riprap will only be required when specified in the Drainage Listing or Reconstruction Log.

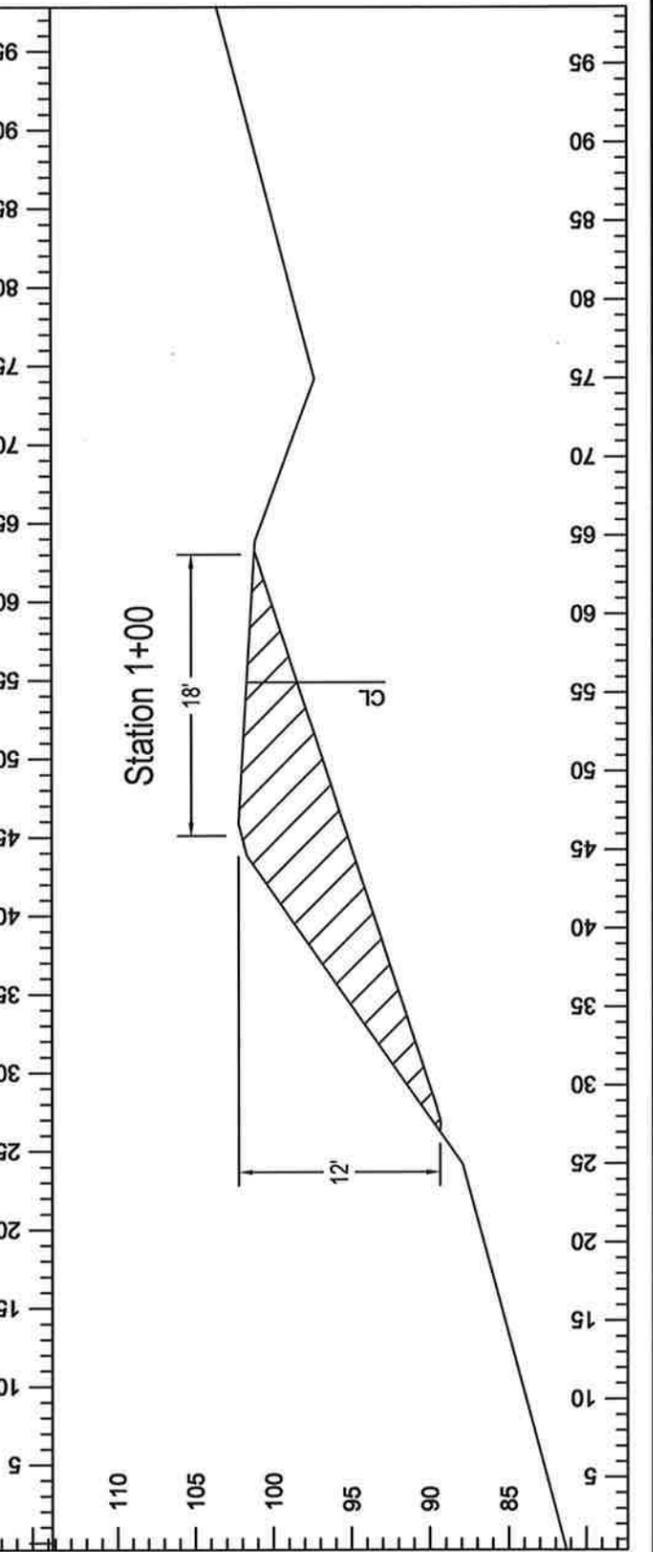
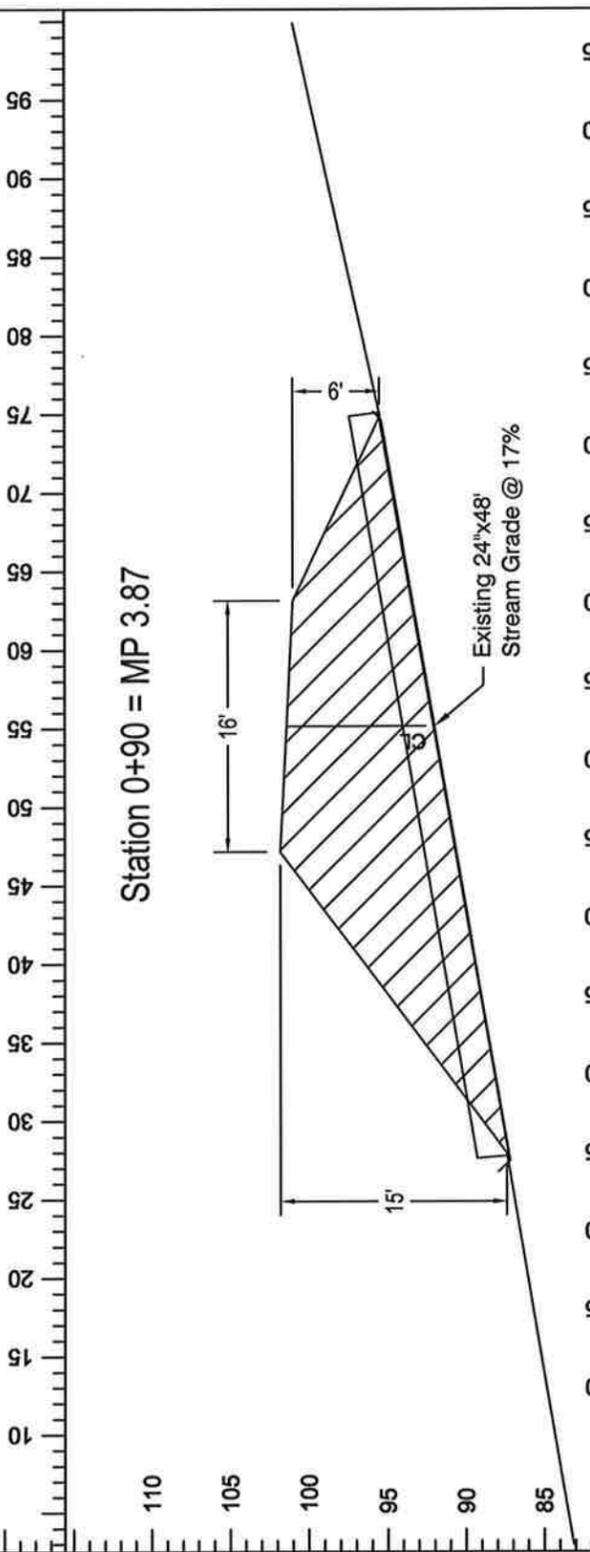
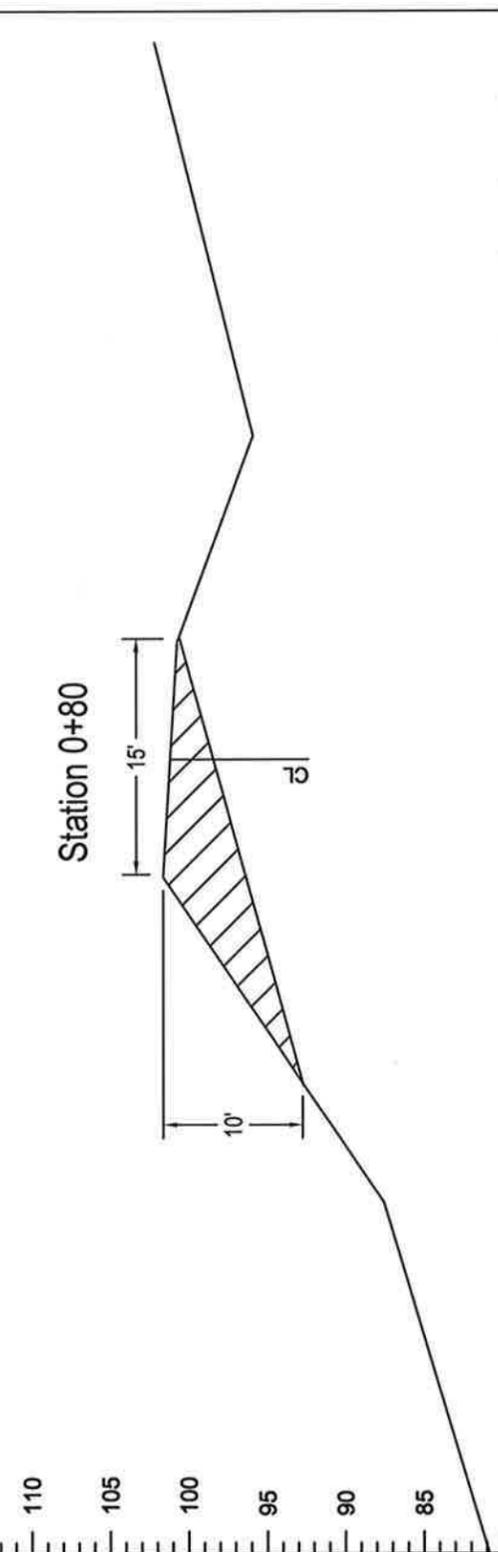
SHEET NUMBER	TOTAL SHEETS
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12 13

Road 393 MP 3.87



Cut at 1.5H:1V. 7' wide culvert bed and 7CY bedding. 240 C.Y. excavation. Mix bentonite powder with soil before backfilling. Add water until loose material can be formed into a ball by hand. Place from invert half way to overt, 1 - 2 feet radially out from culvert and 4 - 5 feet downstream from inlet.



Redhead Meadowchild

SHEET NUMBER	TOTAL SHEETS
13	13