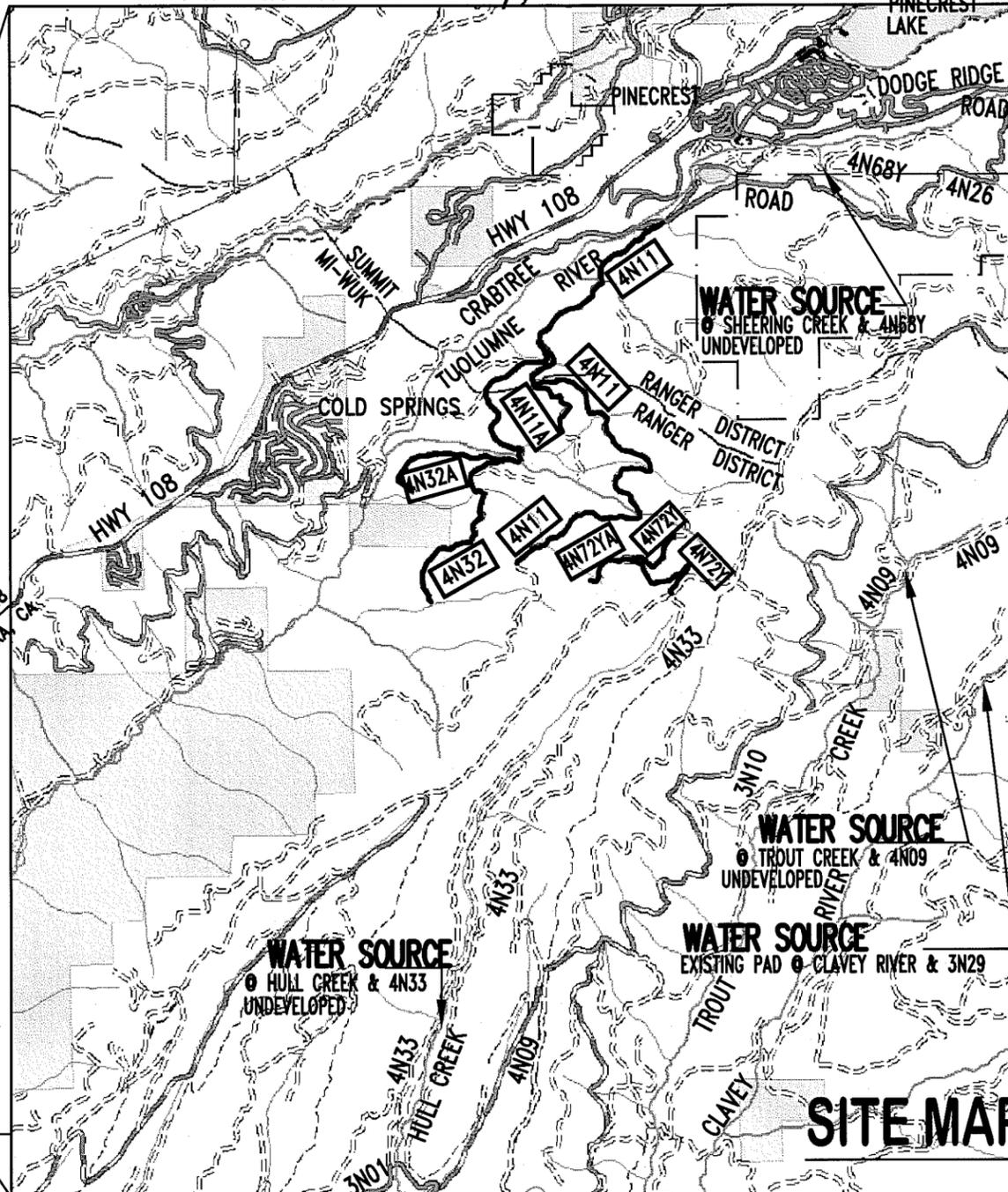
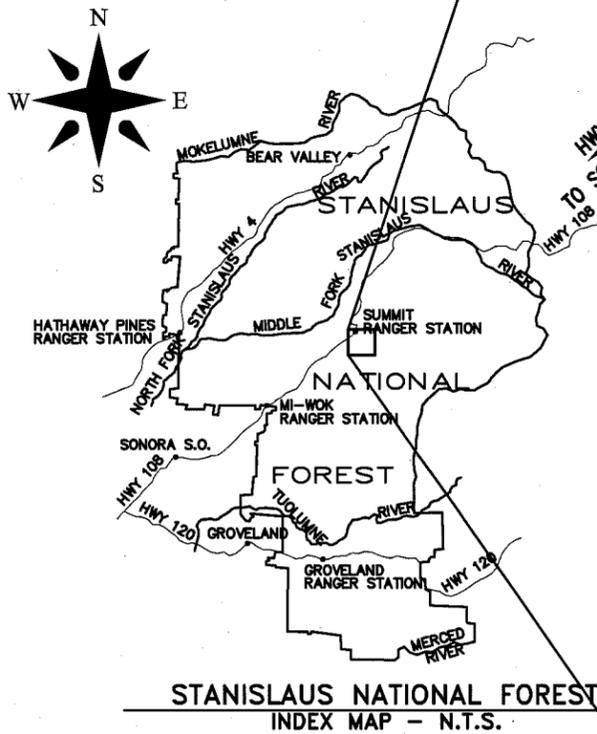


**UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE
STANISLAUS NATIONAL FOREST
DRAWINGS FOR PROPOSED
TIMBER SALE ROADS (HIGH)
Tuolumne County, California**



FOR DIRECTIONS TO ROADS 4N11, 4N11A, 4N32 & 4N32A PROCEED FROM SONORA, CALIFORNIA, TRAVEL APPROXIMATELY 26.83 MILES EAST ON STATE HIGHWAY 108 TO CRABTREE ROAD. TURN RIGHT AND GO 1.59 MILE TO FOREST ROAD 4N11 AND TURN RIGHT. ALL THE OTHER ROADS CAN BE REACHED FROM 4N11.

FOR ROADS 4N72Y & 4N72YA PROCEED FROM SONORA, CALIFORNIA, TRAVEL APPROXIMATELY 19 MILES EAST ON STATE HIGHWAY 108 TO LONG BARN ROAD. TURN RIGHT ON LONG BARN AND TRAVEL 0.16 MILE TO THE INTERSECTION OF 3N01 AND TURN LEFT. ON 3N01 TRAVEL 10.23 MILES TO THE INTERSECTION OF 4N33 AND TURN LEFT. ON 4N33 TRAVEL 7.34 MILES TO THE INTERSECTION OF 4N72Y.

THE WATER SOURCE LOCATION FOR ROADS 4N11, 4N11A, 4N32, & 4N32A IS AT SHEERING CREEK & 4N68Y

ALL OTHER WATER SOURCE LOCATIONS ARE FOR ROADS 4N72Y & 4N72YA

ALL UNDEVELOPED SITES NOTED MAY REQUIRE A PLANNED DEVELOPMENT SITE (SEE SHEET 19 DETAIL OF WATER SOURCE PAD).

PERMISSION FROM THE C.O. & COORDINATION WITH PERMITTEES ARE REQUIRED FOR THE UNDEVELOPED SITES.

THE PROJECT INVOLVES: RECONSTRUCTION AND MAINTENANCE OF FOREST ROADS 4N11, 4N11A, 4N32, 4N32A, 4N72Y & 4N72YA. THE CONSTRUCTION WORK CONSISTS OF DRAINAGE ON UNSURFACED ROADS SUCH AS EARTH DIPS, DRIVEABLE WATERBARS, LEAD OFF DITCHES, REMOVAL OF BERMS, CURVE WIDENING AND OUTSLOPING.

ROAD NO.	MILEAGE	ROAD NO.	MILEAGE
4N11	4.00	4N32A	0.87
4N11A	0.511	4N72Y	1.17
4N32	2.51	4N72YA	0.31

TOTAL ROADS MILEAGE IS APPROXIMATELY 9.371 MILES.

INDEX to SHEET

SHEET NO.	DESCRIPTION
1	TITLE SHEET & VICINITY MAP
2	GENERAL NOTES AND LEGEND FOR ROAD MAINTENANCE & RECONSTRUCTION
3-6	MAINTENANCE OR RECONSTRUCTION SUMMARY OF DRAINAGE FEATURES
7-10	MAINTENANCE & RECONSTRUCTION OF ROAD NO. 4N11
11	MAINTENANCE & RECONSTRUCTION OF ROAD NO. 4N11A
12-13	MAINTENANCE & RECONSTRUCTION OF ROAD NO. 4N32
14	MAINTENANCE & RECONSTRUCTION OF ROAD NO. 4N32A
15	MAINTENANCE & RECONSTRUCTION OF ROAD NO. 4N72Y & 4N72YA
16	ROAD MAINTENANCE OR RECONSTRUCTION SECTION DETAILS
17	EROSION CONTROL ON FOREST ROAD 4N32
18	MAINTENANCE OR RECONSTRUCTION OF ROLLING DIP
19	REMOVAL OF BERM & DEBRIS & OUTSLOPING OF ROAD & CONSTRUCT WATER SOURCE PAD
20	MAINTENANCE OR RECONSTRUCTION OF DITCHES
21	MAINTENANCE OR RECONSTRUCTION OF DRIVEABLE WATERBARS & LEAD OFF DITCHES
22	RECONSTRUCTION OF ROCK DIP RIPRAP DRAINAGE
23	MAINTENANCE OR RECONSTRUCTION OF RIPRAP FILL
24	RECONSTRUCTION OF DROP INLET

GOVERNING SPECIFICATIONS

STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS
FP-03 U.S. CUSTOMARY UNITS, SHALL GOVERN.

Drawn	E. SETNESS & M. SCHAFER
Designed	E. SETNESS & M. SCHAFER
Reviewed	

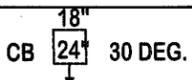
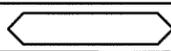
Sheet Title
TITLE SHEET & VICINITY MAP

Scale
AS SHOWN

Forest
STANISLAUS
Project **TIMBER SALE ROADS (HIGH)**

APPROVED BY:	DATE: 7/20/11	DISTRICT RANGER:	DATE: 7/21/11	DISTRICT RANGER:	DATE: 7/21/11	FOREST ENGINEER:	DATE: 7/20/11	FOREST SUPERVISOR:	DATE: 7/21/2011	Sheet of	1 24
DESIGNER		DISTRICT RANGER		DISTRICT RANGER		FOREST ENGINEER		FOREST SUPERVISOR			

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AB-5	AGGREGATE BASE-DEPTH(INCHES)
C5-L or R	REMOVE & DISPOSE OF ALL VEGETATION,(FT)LEFT OR RIGHT
CB-L or R	CONSTRUCT BERM-LEFT OR RIGHT
CD-L or R	CONSTRUCT DITCH - LEFT OR RIGHT
CTW-12'	CLEAR EXISTING TRAVEL WAY WIDTH IN FEET
C-5-L or R	CLEAR CULVERT DISTANCE RIGHT OR LEFT
DIP or IDIP	CONSTRUCT OR MAINTAIN DIP OR INTERCEPTING DIP, DIRECTION INDICATED
BOP	BEGINNING OF PROJECT
EOP	END OF PROJECT
KO	KEEP SIDE ROAD OPEN
CMP	CORRUGATED METAL PIPE
LOD-5-L or R	CONSTRUCT LEAD-OFF DITCH - FEET TO THE LEFT OR RIGHT
DWB	DRIVEABLE WATER BAR
P.P.	POWER POLE
R-5	RECONDITION(SPEC.306)-SCARIFY DEPTH SHOWN(INCH)
RB-L or R	REMOVE BERM - LEFT OR RIGHT
RRD	RIPRAP DRAINAGE -SEE SHEET 35
RRF-L or R	RIPRAP FILL SLOPE-LEFT OR RIGHT, SEE DETAIL SHEET
MES-R or L	ADD METAL END SECTION AT RIGHT OR LEFT SIDE OF CULVERT
S1-L or R	REMOVE STUMP,NUMBER -LEFT OR RIGHT
SC-5-L or R	SELECTIVE CLEAR/PRUNE -WIDTH(FT) LEFT OR RIGHT
SDS-L or R	SLASH DISPOSAL SITE - LEFT OR RIGHT
SR-L or R	SLOPE ROAD -LEFT OR RIGHT (3%-4%)
T2L or R	REMOVE TREE, NUMBER -LEFT OR RIGHT
TD	TIMBER DECK- LEFT OR RIGHT
WR-L or R	WIDEN ROAD-LEFT OR RIGHT TO SPECIFIED WIDTH
CB 	INSTALL CMP DIA.(IN.)AND (FT) LENGTH INDICATED W/CATCH BASIN(CB) DROP INLET(DI) METAL END SECTION (MES)DEBRIS RACK(DR) AND/OR SKEW (DEG)
R 	CLEANOUT AND REPAIR EXISTING CMP (INCH DIA) EXTEND (FT) INDICATED
MD-R or L	MAINTAIN DITCH RIGHT OR LEFT
C/L	CENTERLINE
BEG	BEGIN
EX	EXISTING
F/L	FLOWLINE
	CONSTRUCT DOUBLE LANE
TW 12'	EXISTING TRAVEL WAY AND SPECIFIED WIDTH
RD or RDIP	ROCK DIP
AB-4/1-1/2"ROCK	4" AGGREGATE BASE OVER 1-1/2" ROCK
HWY	HIGHWAY
CW-5 R or L	CURVE WIDENING RIGHT OR LEFT TO SPECIFIED DISTANCE
CRB	CLEAR EXISTING ROADBED AND DITCHES
ED	ENERGY DISSIPATOR
P.M.	PASS MILE USED IN ITEM COSTS FOR CUTTING ROADWAY VEGETATION

SPECIAL NOTES

1. THE WATER SOURCES ARE SHOWN ON THE DRAWINGS (SEE SHEET 1). WATER SOURCES SHALL COMPLY WITH SECTION 891. WATERING IS INCIDENTAL TO SECTIONS 204, 811, 813, AND 839. THE PURCHASER IS TO CONSTRUCT A SUMP FILTER TO USE AT WATER SOURCE. AN EXAMPLE IS AVAILABLE AT THE GROVELAND DISTRICT OFFICE AS A TEMPLATE.
2. BACK OR EXCAVATION SLOPE RATIO IS 1:1 AND FILL OR EMBANKMENT RATIO IS 1 1/2:1. RECONDITIONING OF THE TRAVELED WAY SHALL BE SCARIFIED TO THE DEPTH INDICATED FOR ROADS
3. ANY TIMBER THAT HAS TO BE CUT TO PERFORM THIS CONTRACT SHALL BE DECKED AT LOCATIONS APPROVED BY THE FOREST SERVICE. ANY TREE CUT WITHIN THE CLEARING LIMITS ARE NOT INCLUDED IN THIS CONTRACT AND MAY NOT BE REMOVED BY THE PURCHASER.
4. TREATMENT AND DISPOSAL OF CLEARING DEBRIS SHALL COMPLY WITH SECTION 203.05. DECKING AREAS SHALL BE APPROVED PRIOR TO CLEARING. BOTH MERCHANTABLE AND UNMERCHANTABLE SHALL BE CUT TO APPROVED LENGTHS AS DIRECTED BY THE CONTRACTING OFFICER.
5. DEPOSIT CHIPPED OR GROUND WOODY MATERIAL ONLY ON FINISHED EMBANKMENT SLOPES AND AT APPROVED AREAS DESIGNATED BY THE PROJECT DRAWINGS, OR AS DIRECTED BY THE CONTRACTING OFFICER.
6. CLASS 2 AND 3 ROCK AND RIPRAP SHALL BE OBTAINED FROM AN APPROVED COMMERCIAL SOURCE.
7. AGGREGATE USED SHALL BE CERTIFIED TO BE NO MORE THAN 0.25 % ASBESTOS PRESENT TO BE IN COMPLIANCE WITH CALIFORNIA HEALTH AND SAFETY CODE SECTIONS 93105 AND 93106 AND OBTAINED FROM AN APPROVED COMMERCIAL SOURCE.
8. BEFORE ANY EXCAVATION ACTIVITIES BEGIN, THE PURCHASER SHALL CONTACT A SERVICE TO LOCATE ANY BURIED UTILITIES. USA = 1-800-227-2600 OR THE NATIONAL 811NUMBER OR THE WEBSITE [HTTP://WWW.CALL811.COM/](http://www.call811.com/).
9. EQUIPMENT, FOR THIS PROJECT, IF DRIVEN ON STATE OR COUNTY ROADS SHALL BE CURRENTLY LICENSED.
10. THE PURCHASER SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CONTRACT OFFICER FOR APPROVAL PRIOR TO ANY WORK. THE TRAFFIC CONTROL PLAN SHALL CONTAIN AS A MINIMUM THE PROPOSED LOCATION OF ROAD CONSTRUCTION WARNING SIGNS. THE TEMPORARY TRAFFIC CONTROL PLAN IS INCIDENTAL TO OTHER PAY ITEMS.
11. SLASH REMOVAL WHERE SPECIFIED IN THE DRAWINGS IS INCIDENTAL TO 839(01) PAY ITEM.
12. THE PURCHASER SHALL SUBMIT A WORK SCHEDULE FROM THEIR CONTRACTOR TO THE C.O.BEFORE START OF WORK.
13. THE PURCHASER SHALL SUBMIT A SAFETY PLAN FROM THEIR CONTRACTOR TO C.O. BEFORE THE START OF WORK.
14. THE PURCHASER SHALL POST IN A CONSPICUOUS PLACE THE APPROPRIATE LABOR POSTERS PROVIDED BY THE FOREST SERVICE.

GENERAL NOTES:

- UNLESS OTHERWISE SPECIFIED, NOTES APPLY TO ALL ROADS.
- SELECT CLEAR-ONLY TREES 10"D.B.H. OR LARGER TO BE CLEARED . TREES OF SMALLER DIAMETER AND BRUSH OF ANY SIZE SHALL ALSO BE CLEARED AS SHOWN ON THE DRAWINGS.
- ALL CONSTRUCTION WORK IN THE SCHEDULE OF ITEMS, AS WELL AS DEFINED TERMS, SHALL RELATE TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-03).
- OUTSLOPE 3% UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- RECONSTRUCTION-WIDEN AS NECESSARY TO OBTAIN MIN. SPECIFIED WIDTH. CUT SLOPES SHALL CONFORM TO EXISTING GRADE.
- WATERBARS ARE TO BE CONSTRUCTED AT THE END OF EACH OPERATING SEASON.
- MAINTENANCE-SUITABLE MATERIAL (AS DEFINED IN THE FP03 STANDARD SPECIFICATION) REMOVED FROM DITCHES, ROADBED SLIDES AND CULVERT CATCH BASINS SHALL BE INCORPORATED INTO THE ROADBED.
- UNSUITABLE MATERIAL SHALL BE SIDECAST FROM ROADBED.
- AT INTERSECTIONS, THE ROADBED SHALL BE GRADED TO ASSURE BLENDING OF TWO RIDING SURFACES FOR A DISTANCE OF 50 LINEAR FEET IN ALL DIRECTIONS.
- PURCHASER IS RESPONSIBLE FOR ALL STAKING AND ITS ACCURACY. STAKING WIL BE DONE AS SPECIFIED IN SECTION 152.01 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS AND ITS SUPPLEMENT.STAKING WORK WILL BE APPROVED BY THE FOREST SERVICE. PAYMENT WILL BE INCIDENTAL TO ROAD EXCAVATION.

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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



R-5

PACIFIC SOUTHWEST REGION

Drawn E. SETNESS & M.SCHAFFER
Designed E. SETNESS & M.SCHAFFER
Reviewed _____
Approved _____

Revisions

NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
NOTES & LEGEND

Scale NOT TO SCALE

Sheet
2

of 24

STATION	Drainage Feature				REMARKS	RIPRAP		
	DIA	LGTH	THICKNESS IN INCHES			AGGREGATE BASE	II	III
			FE	AL				
ROAD 4N11 CONT 4.0 MI								
0+00 to 1+38					CONSTRUCT DITCH-R			
1+38 to 3+40					CONSTRUCT DITCH-L			
2+34					MAINTAIN EXISTING 18" CMP & REPAIR INLET			
4+54 to 5+54					EXISTING LANDING			
6+23					MAINTAIN SWALE			
8+12 to 79+56					MAINTAIN EXIST CHIPSEAL			
8+12					REMOVE CATTLEGUARD & RETURN TO DISTRICT			
9+28					MAINTAIN EXISTING FLUME			
9+68					MAINTAIN EXISTING 48" CMP			
15+88 to 16+38					SPOT ROCK AB 14'x 0.33'			
17+81 to 19+08					SPOT ROCK AB 16'x 0.33'			
30+70					RRF SHOULDER WITH BORROWED LOCAL 6" ROCK 5CY			
30+70 to 31+70					MAINTAIN EXIST SWALE			
31+10 to 31+56					SPOT ROCK AB 43'x14'x 0.33'			
32+85					FILL 5-3x2' POTHOLES W/SPOT ROCK 5x3'x2'			
40+53					CLEAN EXISTING 18" CMP			
43+60 to 44+60					MAINTAIN DITCH-L			
43+60					MAINTAIN EXISTING 18" CMP			
45+00 to 45+43					RECONDITION 6" & OUTSLOPE SPOT ROCK 14'x 0.33'			
45+43					CONSTRUCT RRF 10 C. YDS.			
55+00					MAINTAIN LOD 10'-R			
55+00					MAINTAIN LOD 10'-R			
56+95 to 57+95					EXISTING LANDING			
60+62					4N32 INTERSECTION KO			
67+22					MAINTAIN EXISTING 18" CMP & REPAIR INLET & CONST DROP INLET			
67+22 to 69+70					MAINTAIN DITCH-L			
69+70					MAINTAIN EXISTING 18" CMP & REPAIR INLET			
72+98 to 73+58					EXISTING TURNOUT			
80+10					4N11 INTERSECTION KO			
81+51 to 82+73					REMOVE BERM & MAINTAIN OUTSLOPE			
82+73					MAINTAIN LOD-5'-R			
83+77 to 84+92					REMOVE BERM-R & MAINTAIN OUTSLOPE			
86+20					MAINTAIN LOD-10'-R			
87+21 to 90+74					REMOVE BERM-R & MAINTAIN OUTSLOPE			
90+74					MAINTAIN LOD-10'-R			
92+00					MAINTAIN LOD-10'-R			
93+28					CONSTRUCT LOD-10-R			
93+78					MAINTAIN LOD-10'-R			
99+18					MAINTAIN LOD-10'-R			
99+18 to 101+57					ROAD WIDENING 2' R CLEAR & GRUB			
99+74					MAINTAIN LOD-10'-R			
99+96					MAINTAIN LOD-10'-R			
101+57					MAINTAIN LOD-10'-R			
102+65					MAINTAIN LOD-10'-R			
103+77					MAINTAIN LOD-10'-R			
104+78					CONSTRUCT LOD-30'-R			
106+21 to 106+57					REMOVE BERM-R & MAINTAIN OUTSLOPE			
106+57					MAINTAIN LOD-10'-R			
107+00 to 107+36					MAINTAIN BERM-R			
107+36 to 108+61					MAINTAIN DITCH-L & CONSTRUCT LOD-15'-R			
108+26					CLEAN EXISTING 18" CMP & EXTEND OUTLET 4 FEET			
110+60					CONSTRUCT LOD-10'-R			
111+08 to 112+73					CONSTRUCT DITCH-L			

STATION	Drainage Feature				REMARKS	RIPRAP		
	DIA	LGTH	THICKNESS IN INCHES			AGGREGATE BASE	II	III
			FE	AL				
ROAD 4N11 CONT 4.0 MI.								
111+78					CLEAN EXISTING 18" CMP			
112+73					MAINTAIN LOD-10'-R			
112+73 to 113+09					RECOND 6" & OUTSLOPE ADD 4" AB W/NONWOVEN GEOFABRIC			
113+09					MAINTAIN DIP & LOD			
114+32 to 116+30					REMOVE BERM-R & MAINTAIN OUTSLOPE			
114+78 to 119+60					RECOND 6" & OUTSLOPE ADD 4" AB W/NONWOVEN GEOFABRIC			
116+30					MAINTAIN LOD-10'-R			
120+59					MAINTAIN SWALE			
126+44					MAINTAIN SWALE			
130+86					MAINTAIN EXISTING 18" CMP			
130+86 to 133+76					MAINTAIN DITCH-L			
133+76					MAINTAIN EXISTING 18" CMP & REPLACE 5 FEET @ INLET			
135+03 to 135+56					CLEAR & GRUB TO CW-2'R			
135+56					CLEAN EXISTING 42" CMP			
135+56 to 136+19					CLEAR & GRUB TO CW-5'R			
135+84					MAINTAIN DIP			
136+19					RESHAPE DIP & LOD			
142+09					MAINTAIN LOD-R			
164+03 to 165+55					MAINTAIN DITCH-L			
164+59					MAINTAIN EXISTING 24" CMP & REPAIR INLET			
164+59 to 165+55					MAINTAIN DITCH-R			
165+55					MAINTAIN EXISTING 18" CMP & REPAIR INLET			
166+94					MAINTAIN LOD-10'-R			
167+74 to 168+71					MAINTAIN DITCH-L			
168+29					MAINTAIN LOD-10'-R			
169+44					MAINTAIN EXISTING 18" CMP			
169+44 to 174+72					MAINTAIN DITCH-L			
169+65					CONSTRUCT LOD-10'-R			
171+76					CONSTRUCT LOD-25'-R			
174+72					MAINTAIN SWALE			
187+71					CONSTRUCT ROCK DIP W/LOD-10'-R			
195+03					CONSTRUCT LOD-5'-R & REMOVE STUMP			
196+32					CLEAN EXISTING 18" CMP			
199+30 to 200+44					WR 4' L ROADWAY EXC-67CY			
201+64					MAINTAIN EXISTING 18" CMP			
201+64 to 201+99					CLEAR & GRUB WR 5'R			
201+99					CONSTRUCT ROCK DIP			
201+99 to 203+94					MAINTAIN DITCH-L			
203+94					MAINTAIN SWALE & LOD-R			
211+62 to 213+54					MAINTAIN DITCH-L			
211+62					CONSTRUCT ROCK DIP			
212+21 to 213+54					EXISTING LANDING			
213+54					E.O.P.			

- | | |
|---------------------------------------|---------------------------|
| P.M.P. = PERFORATED METAL PIPE | C.B. = CATCH BASIN |
| C.M.P.A. = CORRUGATED METAL PIPE ARCH | I.A. = INLET ASSEMBLY |
| C.M.P. = CORRUGATED METAL PIPE | D.I. = DROP INLET |
| S.P.P. = STRUCTURAL PLATE PIPE | * DENOTES SHOP ELONGATION |
| S.P.P.A. = STRUCTURAL PLATE PIPE ARCH | MES = METAL END SECTION |
| S.P.A. = STRUCTURAL PLATE ARCH | LOD = LEAD OFF DITCH |
| D = ROLLING DIP | DWB = DRIVEABLE WATER BAR |
| WB = WATERBAR | ED = ENERGY DISSIPATOR |
| ID = INTERCEPTING DIP | RD = ROCK DIP |
| AL = ALUMINUM | RRD = RIPRAP DRAINAGE |
| FE = GALVANIZED STEEL | II/IV = CLASS OF RIPRAP |
| R.R.F. = RIPRAP FILL | CD = CONSTRUCT DITCH |

NOTES:

- ALL PIPE 48" IN DIAMETER AND OVER SHALL BE ELONGATED 5% UNLESS OTHERWISE SPECIFIED. CULVERTS IN SMALLER DIAMETERS SHALL BE ELONGATED 5% IF NOTED.
- QUANTITIES ON THIS SHEET ARE BASED ON DESIGN DATA ONLY AND ARE SUBJECT TO ADJUSTMENTS BEFORE AND DURING CONSTRUCTION TO SUIT FIELD CONDITIONS.
- CORRUGATIONS TO BE 2-2/3" X 1/2" UNLESS SHOWN OTHERWISE.

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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-5
PACIFIC SOUTHWEST REGION

Drawn E. SETNESS & M. SCHAFFER
Designed E. SETNESS & M. SCHAFFER
Reviewed _____
Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
**MAINTENANCE SUMMARY
OF DRAINAGE FEATURES**
Scale NOT TO SCALE

Sheet 3
of 24

STATION	Drainage Feature				REMARKS	AGGREGATE BASE	RIPRAP		
	DIA	LGTH	THICKNESS IN INCHES				II	III	VII
ROAD 4N11A 0.511 MI.			FE	AL					
0+00					BEGIN EXISTING ROAD				
1+74					MAINTAIN DIP W/LOD-15'-R				
3+65					MAINTAIN DWB W/LOD-10'-R				
4+60 to 4+75					REMOVE BERM-R & MAINTAIN OUTSLOPE				
4+65					CONSTRUCT DWB				
5+65					MAINTAIN LOD-10'-R				
6+60					MAINTAIN DWB & LOD-10'-R				
6+60 to 7+08					REMOVE BERM-R & MAINTAIN OUTSLOPE				
7+76					MAINTAIN DIP & LOD				
12+01					MAINTAIN EXISTING 18" CMP				
13+22					MAINTAIN DIP & LOD-30'-R				
13+22 to 14+05					EXISTING LANDING				
14+05					MAINTAIN LOD-20'-R				
15+04					MAINTAIN DWB & LOD				
16+03					MAINTAIN DWB & LOD				
16+03 to 17+93					MAINTAIN DWB & LOD				
16+92					MAINTAIN EXISTING 18" CMP & REPAIR INLET				
17+93					MAINTAIN DIP & LOD				
20+30					MAINTAIN DIP & LOD				
21+31					MAINTAIN DWB & LOD				
22+37					MAINTAIN DWB & LOD				
22+37 to 23+30					CW-4'R CLEAR AND GRUB				
24+10 to 25+11					REMOVE BERM-R & MAINTAIN OUTSLOPE				
25+11					MAINTAIN DWB & LOD				
26+00 to 27+00					EXISTING LANDING				
26+21					MAINTAIN SWALE & LOD				
27+00					EOP				
ROAD 4N32 2.51 MI.									
0+00					BEGIN EXISTING ROCKED ROAD				
0+98					CLEAN EXISTING 18" CMP, REPAIR INLET & OUTLET.				
2+98					MAINTAIN EXISTING SWALE & LOD-10'-R				
4+65 to 7+57					REMOVE BERM RIGHT & MAINTAIN OUTSLOPE				
5+87					MAINTAIN SWALE				
6+57 to 7+91					MAINTAIN DITCH LEFT				
7+91					MAINTAIN EXISTING 18" CMP				
8+30 to 8+77					REMOVE BERM-R & MAINTAIN OUTSLOPE				
10+55					MAINTAIN DIP W/LOD-10'-R				
11+78					MAINTAIN DIP/REMOVE LOG				
11+80 to 13+38					SENSITIVE SITE-R				
12+46 to 13+01					REMOVE BERM-R & MAINTAIN OUTSLOPE				
14+38					BC				
15+38					EC				
17+59					MAINTAIN DIP W/LOD-10'-R				
20+16					MAINTAIN DIP W/LOD-10'-R				
22+52					MAINTAIN DIP W/LOD-6'-R				
25+75					BC, MAINTAIN SWALE				
27+80					EC, REMOVE LOGS-L				
29+15					MAINTAIN EXISTING 18" CMP				

NOTES:

1. ALL PIPE 48" IN DIAMETER AND OVER SHALL BE ELONGATED 5% UNLESS OTHERWISE SPECIFIED. CULVERTS IN SMALLER DIAMETERS SHALL BE ELONGATED 5% IF NOTED.
2. QUANTITIES ON THIS SHEET ARE BASED ON DESIGN DATA ONLY AND ARE SUBJECT TO ADJUSTMENTS BEFORE AND DURING CONSTRUCTION TO SUIT FIELD CONDITIONS.
3. CORRUGATIONS TO BE 2-2/3" X 1/2" UNLESS SHOWN OTHERWISE.

STATION	Drainage Feature				REMARKS	RIPRAP		
	DIA	LGTH	THICKNESS IN INCHES			II	III	IV
ROAD 4N32 2.51 MI.			FE	AL				
30+93					REMOVE LOGS L&R			
32+01 to 32+89					MAINTAIN OUTSLOPE & RECONDITIONING 4" DEEP			
34+40 to 35+20					CW-L-2' CLEAR & GRUB, REMOVE TREES (10)			
36+33 to 37+83					SPOT ROCK-1-1/2" (150'X14'X6")			
36+33 to 38+42					CONSTRUCT OUTSLOPE & RECONDITION 6" DEEP			
38+42 to 40+09					MAINTAIN OUTSLOPE			
39+26					REMOVE LOGS			
40+09 to 41+60					MAINTAIN DITCH-L			
40+37					REMOVE LOGS			
41+60					MAINTAIN EXISTING 18" CMP.			
41+80					MAINTAIN DIP			
43+42					REMOVE LOGS			
43+76					MAINTAIN DIP			
44+59 to 47+53					MAINTAIN OUTSLOPE, RECONDITION 4" DEEP & WR-4'-R CLEAR & GRUB			
47+53					MAINTAIN DIP & LOD-10'-R			
48+23 to 52+60					MAINTAIN OUTSLOPE @ BC			
49+03					REMOVE TREES (4)			
50+07					CONSTRUCT DIP W/LOD-10'-R			
50+63 to 52+60					REMOVE BERM-R & MAINTAIN OUTSLOPE			
52+60 to 61+74					MAINTAIN EXISTING PAVED ROAD			
54+89 to 61+74					BEGIN MAINTAIN AC BERM-L			
55+27					REMOVE LOGS			
56+09					REMOVE LOGS			
57+41					REMOVE LOGS			
58+38 to 59+06					CW-4'-L CLEAR & GRUB			
58+38 to 63+47					EROSION CONTROL SEE SHEET 17			
58+57					MAINTAIN EXISTING 48"X60" CMP, REPAIR OUTLET			
59+28					MAINTAIN EXISTING FLUME-R			
60+37 to 60+74					CW-2'-L & R CLEAR & GRUB, 3" AB OVER AC BERM AS CUSHION			
61+74 to 64+08					CW-4'-L CLEAR & GRUB, REMOVE LOGS (3)			
62+14					MAINTAIN FLUME			
62+59					MAINTAIN 48" ALUMINUM CMP, REPAIR INLET			
64+08					MAINTAIN SWALE			
67+32					REMOVE LOGS			
69+41					INTERSECTION 4N32A KO			
72+70					MAINTAIN DIP & LOD-10'-R			
73+74 to 75+10					CW-4'-R CLEAR & GRUB			
CONT 4N32								
SEE SHEET 5								

- | | |
|---------------------------------------|---------------------------|
| P.M.P. = PERFORATED METAL PIPE | MES = METAL END SECTION |
| C.M.P.A. = CORRUGATED METAL PIPE ARCH | LOD = LEAD OFF DITCH |
| C.M.P. = CORRUGATED METAL PIPE | DWB = DRIVEABLE WATER BAR |
| S.P.P. = STRUCTURAL PLATE PIPE | ED = ENERGY DISSIPATOR |
| S.P.P.A. = STRUCTURAL PLATE PIPE ARCH | RD = ROCK DIP |
| S.P.A. = STRUCTURAL PLATE ARCH | RRD = RIPRAP DRAINAGE |
| D = ROLLING DIP | II/IV = CLASS OF RIPRAP |
| WB = WATERBAR | CD = CONSTRUCT DITCH |
| ID = INTERCEPTING DIP | |
| AL = ALUMINUM | |
| FE = GALVANIZED STEEL | |
| R.R.F. = RIPRAP FILL | |
| C.B. = CATCH BASIN | |
| I.A. = INLET ASSEMBLY | |
| D.I. = DROP INLET | |
- * DENOTES SHOP ELONGATION

C:_workingGIS-CAD\Projects\High\plans\4Areconst-drainsum-4A.DWG 07/15/11 4:51pm-ESETNESS-XREFS: C:_workingGIS-CAD\Projects\High\plans\USFS-STD-11X17_v04.dwg

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PACIFIC SOUTHWEST REGION

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Designed E. SETNESS & M. SCHAFFER
Reviewed _____
Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
**MAINTENANCE SUMMARY
OF DRAINAGE FEATURES**
Scale NOT TO SCALE
Sheet 4 of 24

STATION	Drainage Feature				RIPRAP			
	DIA	LGTH	THICKNESS IN INCHES		AGGREGATE BASE	II	III	VII
ROAD 4N32 CONT 2.51 MI.			FE	AL	REMARKS			
76+09 to 76+78					CW-4'-L CLEAR & GRUB			
78+31 to 79+05					CW-4'-R CLEAR & GRUB			
83+54					MAINTAIN DIP W/LOD-10'-R			
85+71 to 86+63					CW-4'-R CLEAR & GRUB & OUTSLOPE			
87+14					REMOVE LOGS			
88+00 to 90+05					CW-4'-L CLEAR & GRUB			
88+56					MAINTAIN SWALE & 60"x14"x0.33' SPOT ROCK OVER GEOTEXTILE, REMOVE LOGS			
88+88					MAINTAIN EXISTING 48" CMP			
90+75					REMOVE LOGS			
92+81					MAINTAIN DIP W/LOD-10'-R			
94+20 to 95+26					REMOVE TREES-L&R			
95+92					REMOVE LOGS			
96+90 to 97+94					CW-4'-L CLEAR & GRUB			
99+85					REMOVE LOGS			
101+20 to 102+60					REMOVE LOGS, EXISTING LANDING			
101+97 to 105+64					WR-4'-R CLEAR & GRUB			
103+77					MAINTAIN SWALE & REMOVE LOGS			
104+45					CLEAN EXISTING 18" CMP & BEGIN MAINTAIN OUTSLOPE			
104+45 TO 105+64					MAINTAIN OUTSLOPE			
105+64					MAINTAIN DIP W/LOD			
106+09 to 106+54					REMOVE BERM-R & MAINTAIN OUTSLOPE, REMOVE LOGS			
106+83 to 108+05					CW-4'-R CLEAR & GRUB			
107+41					MAINTAIN EXISTING 18" CMP			
108+35					MAINTAIN SWALE			
109+75 to 110+86					WR-4'-R CLEAR & GRUB			
110+25					REMOVE LOGS			
110+86					CONSTRUCT DIP W/LOD-10'-R			
111+70					MAINTAIN LOD-10'-R			
112+35					MAINTAIN LOD-10'-R			
113+13					CONSTRUCT DIP W/LOD-10'-R			
113+50					REMOVE LOGS			
114+22					REMOVE LOGS			
115+66					CONSTRUCT DIP W/LOD-10'-R			
117+73					MAINTAIN DIP W/LOD-10'-R			
118+23 to 120+71					CW-4'-R CLEARING & GRUBBING, MAINTAIN OUTSLOPE			
118+23					CONSTRUCT LOD-10'-R			
120+71					CONSTRUCT DIP W/LOD-10'-R			
121+82					REMOVE LOG			
122+92					CONSTRUCT DIP W/LOD-10'-R			
124+16					CONSTRUCT DIP W/LOD-10'-R, REMOVE LOG			
124+61 to 125+61					REMOVE BERM, MAINTAIN OUTSLOPE			
125+61					CONSTRUCT DIP W/LOD-10'-R			
126+06					REMOVE LOG			
127+89					CONSTRUCT DIP W/LOD-10'-R & REMOVE LOG			
128+11					MAINTAIN 24" CMP			
128+41					MAINTAIN SWALE @ INTERSECTION KO			
128+98					REMOVE LOG			
129+79					MAINTAIN SWALE W/LOD-10'-R			

STATION	Drainage Feature				RIPRAP			
	DIA	LGTH	THICKNESS IN INCHES		AGGREGATE BASE	II	III	IV
ROAD 4N32 CONT 2.1 MI.			FE	AL	REMARKS			
131+22					REMOVE LOG			
131+72					MAINTAIN DWB W/LOD-10'-R			
132+75					E.O.P.			
ROAD 4N32A 0.87 MILES								
0+00					MAINTAIN ROCK ROAD			
0+13 to 1+57					WIDEN ROAD-6'-L CLEAR & GRUB			
1+53					MAINTAIN DIP			
1+57 to 2+77					WIDEN ROAD-5'-R CLEAR & GRUB			
2+95 to 3+93					WIDEN ROAD-5'-L CLEAR & GRUB			
3+93					MAINTAIN DIP W/LOD-10'-R			
5+36					MAINTAIN SWALE			
6+19					MAINTAIN DIP			
6+19 to 8+63					CW-4'-R CLEAR & GRUB			
7+76					REMOVE LOGS R&L			
8+63					MAINTAIN DIP W/LOD-10'-R			
8+68 to 9+60					WIDEN ROAD-5'-L CLEAR & GRUB			
10+11					REMOVE (2) LOGS			
11+38					MAINTAIN DIP W/LOD-10'-R			
12+73					MAINTAIN DIP			
16+23 to 18+84					WIDEN ROAD-2'-R&L CLEAR & GRUB			
17+85					MAINTAIN DIP			
20+54					MAINTAIN DIP			
22+22					MAINTAIN DIP			
23+14					MAINTAIN DIP			
24+52					MAINTAIN DIP			
26+70					MAINTAIN DIP & REMOVE LOGS			
28+49					MAINTAIN DIP & SPOT ROCK 50"x14"x0.33'			
28+49 to 29+81					WIDEN ROAD-4'-L CLEAR & GRUB			
31+75					MAINTAIN DIP W/LOD-10'-R			
33+84					MAINTAIN DIP W/LOD-10'-R			
36+31					MAINTAIN DIP W/LOD-10'-R			
37+19					REMOVE LOGS			
37+96					MAINTAIN DIP W/LOD-20'-R			
39+57					MAINTAIN DIP W/LOD-10'-R			
40+33					LOD-15'-R			
40+33 to 44+75					WIDEN ROAD-5'-R, CLEAR & GRUB			
41+15					MAINTAIN DIP W/LOD-15'-R			
43+06					MAINTAIN DIP W/LOD-15'-R			
44+56					MAINTAIN SWALE			
45+72					E.O.P.			

NOTES:

1. ALL PIPE 48" IN DIAMETER AND OVER SHALL BE ELONGATED 5% UNLESS OTHERWISE SPECIFIED. CULVERTS IN SMALLER DIAMETERS SHALL BE ELONGATED 5% IF NOTED.
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3. CORRUGATIONS TO BE 2-2/3" X 1/2" UNLESS SHOWN OTHERWISE.

- | | |
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| C.M.P.A. = CORRUGATED METAL PIPE ARCH | I.A. = INLET ASSEMBLY |
| C.M.P. = CORRUGATED METAL PIPE | D.I. = DROP INLET |
| S.P.P. = STRUCTURAL PLATE PIPE | * DENOTES SHOP ELONGATION |
| S.P.P.A. = STRUCTURAL PLATE PIPE ARCH | MES = METAL END SECTION |
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| FE = GALVANIZED STEEL | II/IV = CLASS OF RIPRAP |
| R.R.F. = RIPRAP FILL | CD = CONSTRUCT DITCH |

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PACIFIC SOUTHWEST REGION

Drawn E. SETNESS & M. SCHAFFER
Designed E. SETNESS & M. SCHAFFER
Reviewed _____
Approved _____

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NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
MAINTENANCE SUMMARY OF DRAINAGE FEATURES
Scale NOT TO SCALE
Sheet 5 of 24

STATION	Drainage Feature				REMARKS	AGGREGATE BASE	RIPRAP CU. YDS.		
	DIA	LGTH	THICKNESS IN INCHES				II	III	VII
4N72Y 1.17 MILES			FE	AL					
0+00					B.O.P.				
0+32					INTERSECTION 3N20				
3+36					MAINTAIN DIP				
5+29					MAINTAIN DIP				
8+25					MAINTAIN SWALE				
9+14					CONSTRUCT LOD-L				
9+14 to 10+93					REMOVE BERM-L & MAINTAIN OUTSLOPE				
10+52 to 11+84					WIDEN ROAD -R-2'				
10+93 to 11+43					BC, WIDEN CURVE-5'-L				
11+43					EC,				
11+84					REMOVE LOG				
12+89					CONSTRUCT DIP				
14+49					MAINTAIN EXISTING 18" CMP				
16+93					CONSTRUCT DIP				
19+84					CONSTRUCT ROCK DIP				
21+72					MAINTAIN DIP				
23+84					CONSTRUCT DIP & LOD-10'-R				
25+25					MAINTAIN EXISTING 24" CMP				
25+81					MAINTAIN DIP				
29+86					MAINTAIN SWALE				
30+81					REMOVE LOGS (3)				
32+12					MAINTAIN SWALE				
33+27					REMOVE LOGS (2)				
34+98					MAINTAIN SWALE				
36+63					CONSTRUCT DIP				
38+30					INTERSECTION 4N72YA KO				
38+43					CONSTRUCT DIP				
39+18 to 40+37					WR-15'-L, CLEARING & GRUBBING				
39+37					CONSTRUCT DIP				
40+37					MAINTAIN EXISTING 18" CMP				
41+21					CONSTRUCT DIP				
43+72					CONSTRUCT DIP				
45+50					CONSTRUCT DIP				
47+63					CONSTRUCT DIP				
48+69 to 49+00					MAINTAIN DITCH-R				
49+00					MAINTAIN EXISTING 24" CMP & CHANNEL				
49+65 to 61+58					EXIST. LANDING				
49+65					MAINTAIN DIP				
50+73					REMOVE LOG (4)				
51+63					CONSTRUCT DIP				
53+23					MAINTAIN 24" CULVERT, REPAIR INLET				
53+63 to 55+60					REMOVE BERM-L, MAINTAIN OUTSLOPE				
54+34					CONSTRUCT DIP				
55+60					MAINTAIN DIP				
56+48					MAINTAIN DIP				
58+07					MAINTAIN DIP				
61+58					END LANDING, EOP				

STATION	Drainage Feature				REMARKS	AGGREGATE BASE	RIPRAP CU. YDS.		
	DIA	LGTH	THICKNESS IN INCHES				II	III	IV
ROAD 4N72YA 0.31 MI.			FE	AL					
0+00					BOP				
1+92					MAINTAIN DIP & RRF 5CY				
1+92 to 3+00					BEGIN WR-3'-L				
3+44					REMOVE LOG (1)				
3+75					MAINTAIN DWB				
5+32					INTERSECTION ROAD KO				
6+11					MAINTAIN DWB & LOD-10'-R				
6+76					MAINTAIN DWB & LOD-5' R				
7+38					CONSTRUCT DIP & LOD-5'-R				
8+17					MAINTAIN DWB & LOD-5'-L				
8+59					CONSTRUCT DWB				
9+48					CONSTRUCT DWB				
10+07					MAINTAIN DWB & LOD-5'-L				
10+68					MAINTAIN DWB & LOD-5'-L				
11+70					CONSTRUCT DWB				
12+59					MAINTAIN DWB & LOD-5'-L				
13+61					MAINTAIN DIP & RRF-R			3 CY.	
14+03					MAINTAIN EXISTING 30" CMP & CHANNEL				
16+49					CONSTRUCT DIP & EOP				

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 C.M.P.A. = CORRUGATED METAL PIPE ARCH
 C.M.P. = CORRUGATED METAL PIPE
 S.P.P. = STRUCTURAL PLATE PIPE
 S.P.P.A. = STRUCTURAL PLATE PIPE ARCH
 S.P.A. = STRUCTURAL PLATE ARCH
 D = ROLLING DIP
 WB = WATERBAR
 ID = INTERCEPTING DIP
 AL = ALUMINUM
 FE = GALVANIZED STEEL
 R.R.F. = RIPRAP FILL
 C.B. = CATCH BASIN
 I.A. = INLET ASSEMBLY
 D.I. = DROP INLET
 * DENOTES SHOP ELONGATION
- MES = METAL END SECTION
 LOD = LEAD OFF DITCH
 DWB = DRIVEABLE WATER BAR
 ED = ENERGY DISSIPATOR
 RD = ROCK DIP
 RRD = RIPRAP DRAINAGE
 III/IV = CLASS OF RIPRAP
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NOTES:

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 PACIFIC SOUTHWEST REGION

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 Designed E. SETNESS & M.SCHAFFER
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 Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
 Project Name
 TIMBER SALE ROADS (HIGH)

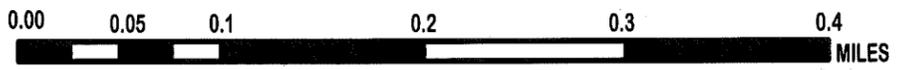
Sheet Title
**MAINTENANCE SUMMARY
 OF DRAINAGE FEATURES**
 Scale NOT TO SCALE
 Sheet 6 of 24

STATE ROUTE 108

CRABTREE ROAD

RIVER

TUOLUMNE PERENNIAL STREAM



STATION 15+88 TO 16+38
SPOT ROCK 14' WIDE X 0.33' DEEP
STATION 17+81 TO 19+08
0.33' SPOT ROCK SHOULDER 1'-5"-R

STATION 0+00 B.O.P.
BEGIN CONSTRUCT DITCH-R
STATION 1+38
BEGIN CONSTRUCT DITCH-L & END CONST DITCH-R
STATION 2+34
MAINTAIN EXIST 18" CMP REPAIR INLET
STATION 3+40
END CONST DITCH-L
STATION 4+54 TO 5+54 EXIST LANDING
STATION 5+84 BEGIN SWALE & SPOT ROCK 14' WIDE X 0.33 DEEP
STATION 6+63
END EXIST SWALE & SPOT ROCK
STATION 8+12
REMOVE EXIST CATTLE CROSSING GUARD
STATION 9+28
MAINTAIN EXIST FLUME
STATION 9+68
MAINTAIN EXIST 48" CMP

STATION 30+70
REPAIR 2' SHOULDER-R BORROW LOCAL 6"+ ROCK & BEGIN EXIST AC SWALE
STATION 30+70 TO 31+70 MAINTAIN EXIST AC SWALE
STATION 31+10 TO 31+56 SPOT ROCK 16' X 0.33'
STATION 32+85 REPAIR 5 - 3X2 POT HOLES - SPOT ROCK EACH
STATION 34+49 REPAIR 3' X 3' POT HOLE SPOT ROCK

STATION 40+53
MAINTAIN EXIST 18" CMP
STATION 43+60
BEGIN MAINTAIN DITCH-L & 18" CMP
STATION 44+60
END MAINTAIN EXIST DITCH-L

STATION 45+00 TO 45+43 CENTER OF ROAD EXC 25' WIDE X 2' DEEP (20CY)
& SPOT ROCK 14' WIDE X 0.25' DEEP
STATION 45+43 RRF 10CY 12' WIDE
MATCH LINE SEE SHEET 8

4N23

4N26

4N11

4N10A

4N10A

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Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
MAINTENANCE AND RECONSTRUCTION
OF ROAD NO. 4N11
Scale NOT TO SCALE

Sheet
7
of 24

TUOLUMNE RIVER

MATCH LINE SEE SHEET 7
STATION 45+43 RRF 10CY 12' WIDE

SEE SHEET 7

STATION 55+00
MAINTAIN LOD 10'R
STATION 56+95
BEGIN MAINTAIN LANDING-R
STATION 57+95
END MAINTAIN LANDING-R

4N17

MATCH LINE SEE SHEET 8
STATION 60+62 INTERSECTION 4N32 KO
= STATION 0+00 4N32 - SEE SHEET 12

STATION 67+22 MAINTAIN EX 18" CMP REPAIR INLET
CONST DROP INLET BEGIN MAINTAIN DITCH-L

STATION 69+70 END MAINTAIN DITCH-L
CLEAN 18" CMP & REPAIR 4' OF INLET

STATION 79+98 BEGIN TURNOUT

STATION 73+58 END TURNOUT

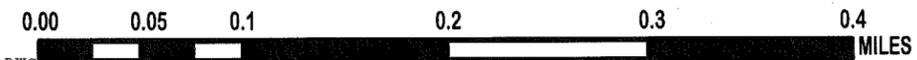
4N32D
SEE SHEET 12
4N32

4N11

SUMMIT RANGER DISTRICT

MI-WOK RANGER DISTRICT

MATCH LINE SEE SHEET 9
STATION 79+56 END MAINTAIN CHIPSEAL



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Approved _____

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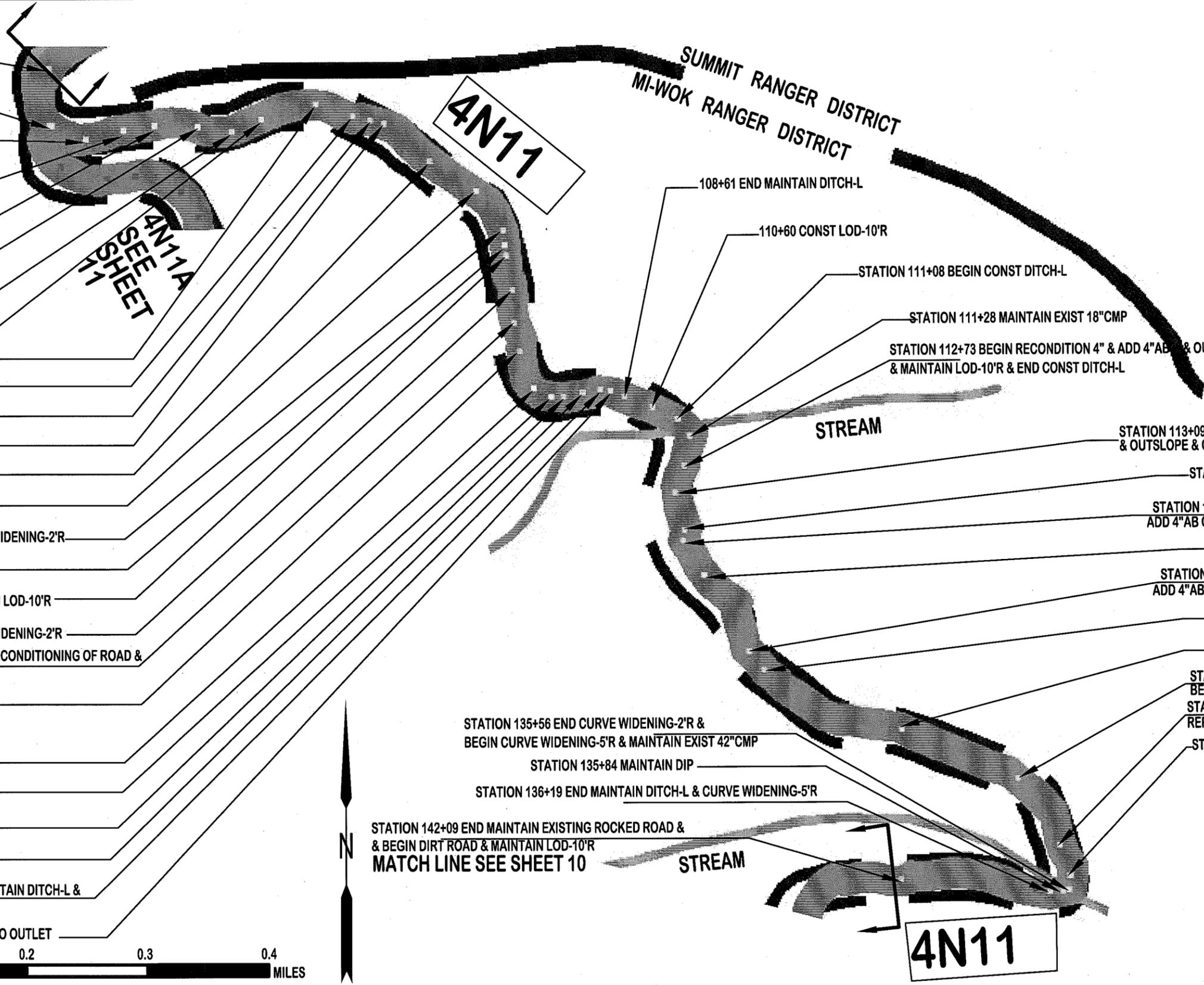
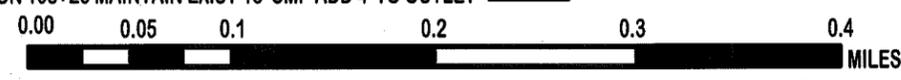
Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
MAINTENANCE AND RECONSTRUCTION
OF ROAD NO. 4N11
Scale NOT TO SCALE

Sheet
8
of 24

MATCH LINE SEE SHEET 8

- STATION 79+56 END MAINTAIN CHIPSEAL
- STATION 80+10 INTERSECTION 4N11A KO
=STATION 0+00 4N11A -SEE SHEET 11
- STATION 81+51 MAINTAIN LOD-15'R &
BEGIN REMOVE BERM-R
- STATION 82+73 MAINTAIN LOD-15'R
& END REMOVE BERM-R
- STATION 83+77 BEGIN REMOVE BERM-R
- STATION 84+92 END REMOVE BERM-R
- STATION 86+20 MAINTAIN LOD-R
- STATION 87+21 BEGIN REMOVE BERM-R
- STATION 90+74 MAINTAIN LOD-10'R
& END REMOVE BERM-R
- STATION 92+00 MAINTAIN LOD-10'R
- STATION 93+28 CONST LOD-10'R
- STATION 93+78 MAINTAIN LOD-10'R
- STATION 95+90 MAINTAIN LOD-10'R
- STATION 97+55 MAINTAIN LOD 10'R
- STATION 99+18 MAINTAIN LOD-10'R BEGIN ROAD WIDENING-2'R
- STATION 99+74 MAINTAIN LOD-10'R
- STATION 99+96 MAINTAIN LOD-10'R
- STATION 101+57 MAINTAIN LOD-10'R END ROAD WIDENING-2'R
- STATION 102+65 MAINTAIN LOD-10'R & BEGIN 2" RECONDITIONING OF ROAD &
OUTSLOPE
- STATION 103+77 MAINTAIN LOD-25'R
- STATION 104+78 MAINTAIN LOD-30'R
- STATION 106+21 BEGIN REMOVE BERM-R
- STATION 106+57 MAINTAIN LOD-10'R
& END REMOVE BERM-R
- STATION 107+00 BEGIN REMOVE BERM-R
- STATION 107+36 END REMOVE BERM-R & BEGIN MAINTAIN DITCH-L &
CONST LOD-15'R
- STATION 108+26 MAINTAIN EXIST 18"CMP ADD 4' TO OUTLET



STATION 135+56 END CURVE WIDENING-2'R &
BEGIN CURVE WIDENING-5'R & MAINTAIN EXIST 42"CMP

STATION 135+84 MAINTAIN DIP

STATION 136+19 END MAINTAIN DITCH-L & CURVE WIDENING-5'R

STATION 142+09 END MAINTAIN EXISTING ROCKED ROAD &
& BEGIN DIRT ROAD & MAINTAIN LOD-10'R

MATCH LINE SEE SHEET 10

SUMMIT RANGER DISTRICT
MI-WOK RANGER DISTRICT

STREAM

STREAM

4N11

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FOREST SERVICE**

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PACIFIC SOUTHWEST REGION**

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Approved _____

Revisions			
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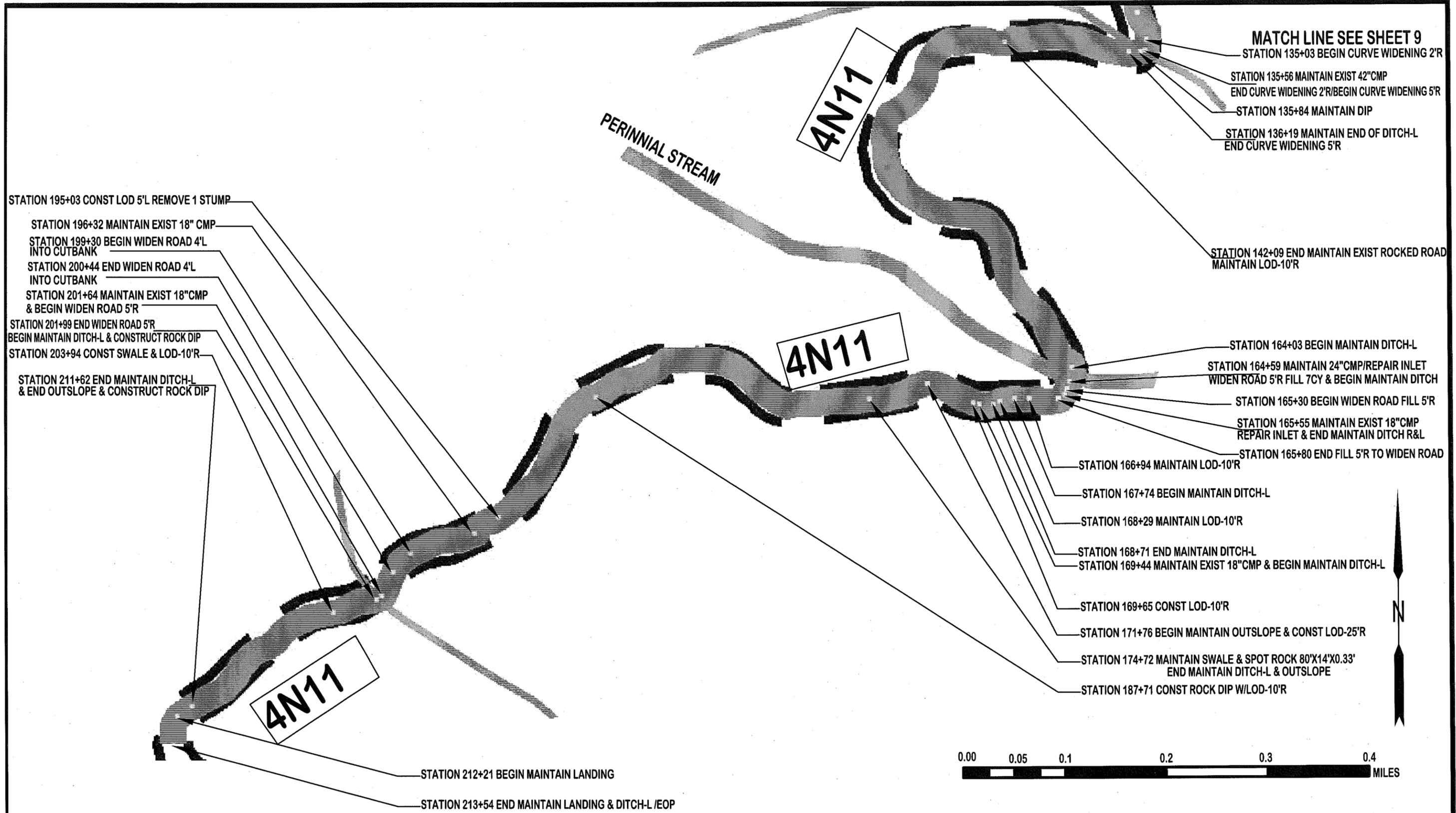
Forest
STANISLAUS

Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
**MAINTENANCE AND RECONSTRUCTION
ROAD NO. 4N11**

Scale NOT TO SCALE

Sheet
9
of
24



C:_workingGIS-CAD\Projects\High\plans\9reconst-4N11.dwg 07/21/11 11:15am-ESETNESS-XREFS: K:\ps\engineer\construct\2010_PROJECTS\10008-51 Miwuk Complex\drawings-for-project\USFS-STD-11X17_v04.dwg

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
 R-5
 PACIFIC SOUTHWEST REGION

Drawn E. SETNESS & M. SCHAFFER
 Designed E. SETNESS & M. SCHAFFER
 Reviewed _____
 Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
 Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
MAINTENANCE AND RECONSTRUCTION
ROAD NO. 4N11
 Scale NOT TO SCALE

Sheet
10
 of 24

MATCH LINE SEE SHEET 9
 STATION 0+00 BOP & INTERSECTION OF 4N11 KO
 =STATION 80+10 4N11 SEE SHEET 9

4N11
 SEE SHEET 9

4N11A



- STATION 1+74 CONST DIP W/LOD15'R
- STATION 3+65 CONST DIP W/LOD10'R
- STATION 4+65 CONST DWB & 4+65 TO 4+75 REMOVE BERM-R
- STATION 5+65 MAINTAIN LOD10'R
- STATION 6+60 MAINTAIN DWB W/LOD 10'R
- STATION 6+60 TO 7+08 REMOVE BERM-R
- STATION 7+76 MAINTAIN DIP W/LOD 10'R
- STATION 12+01 MAINTAIN EX 18" CMP
- STATION 13+22 MAINTAIN DIP W/LOD 30'R
BEGIN MAINTAIN LANDING-R
- STATION 14+05 MAINTAIN LOD-20'R
END MAINTAIN LANDING-R
- STATION 15+04 MAINTAIN DWB
- STATION 16+03 MAINTAIN DWB / BEGIN CURVE WIDENING 4'L
- STATION 16+92 MAINTAIN EXIST 18" CMP REPAIR INLET
- STATION 17+93 MAINTAIN DIP W/LOD 10'R & END CURVE WIDENING 4'L
- STATION 20+30 MAINTAIN DIP W/LOD-10'R
- STATION 21+31 MAINTAIN DWB
- STATION 22+37 MAINTAIN DWB W/LOD-10'R & BEGIN CURVE WIDENING 4'R
- STATION 23+30 END CURVE WIDENING 4'R
- STATION 24+10 REMOVE BERM-R
- STATION 25+11 MAINTAIN DWB W/LOD-10'R & END REMOVE BERM-R
- STATION 26+00 BEGIN LANDING
- STATION 26+21 MAINTAIN SWALE W/LOD
- STATION 27+00 END LANDING & EOP

C:_workingGIS-CAD\Projects\High\plans\10reconst-4N11A.dwg 07/15/11 8:21am-ESETNESS-XREFS: K:\ps\engineer\construct\2010_PROJECTS\10008-51 Miwuk Complex\drawings-for-project\USFS-STD-11X17_v04.dwg

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
 R-5
 PACIFIC SOUTHWEST REGION

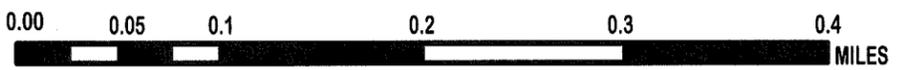
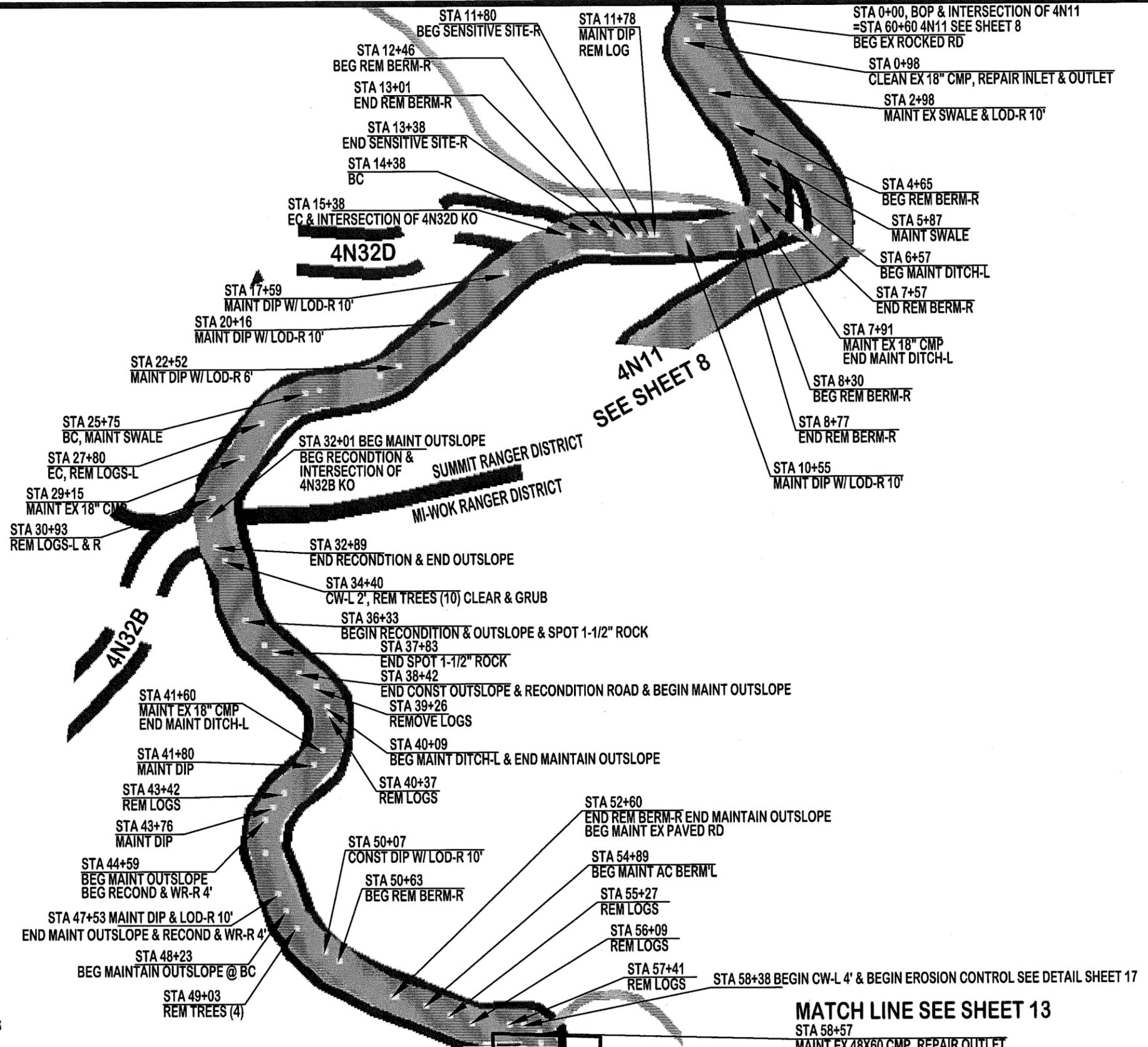


Drawn E. SETNESS & M. SCHAFFER
 Designed E. SETNESS & M. SCHAFFER
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 Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
 Project Name
 TIMBER SALE ROADS (HIGH)

Sheet Title MAINTENANCE AND RECONSTRUCTION ROAD NO. 4N11A	Sheet 11
Scale NOT TO SCALE	of 24



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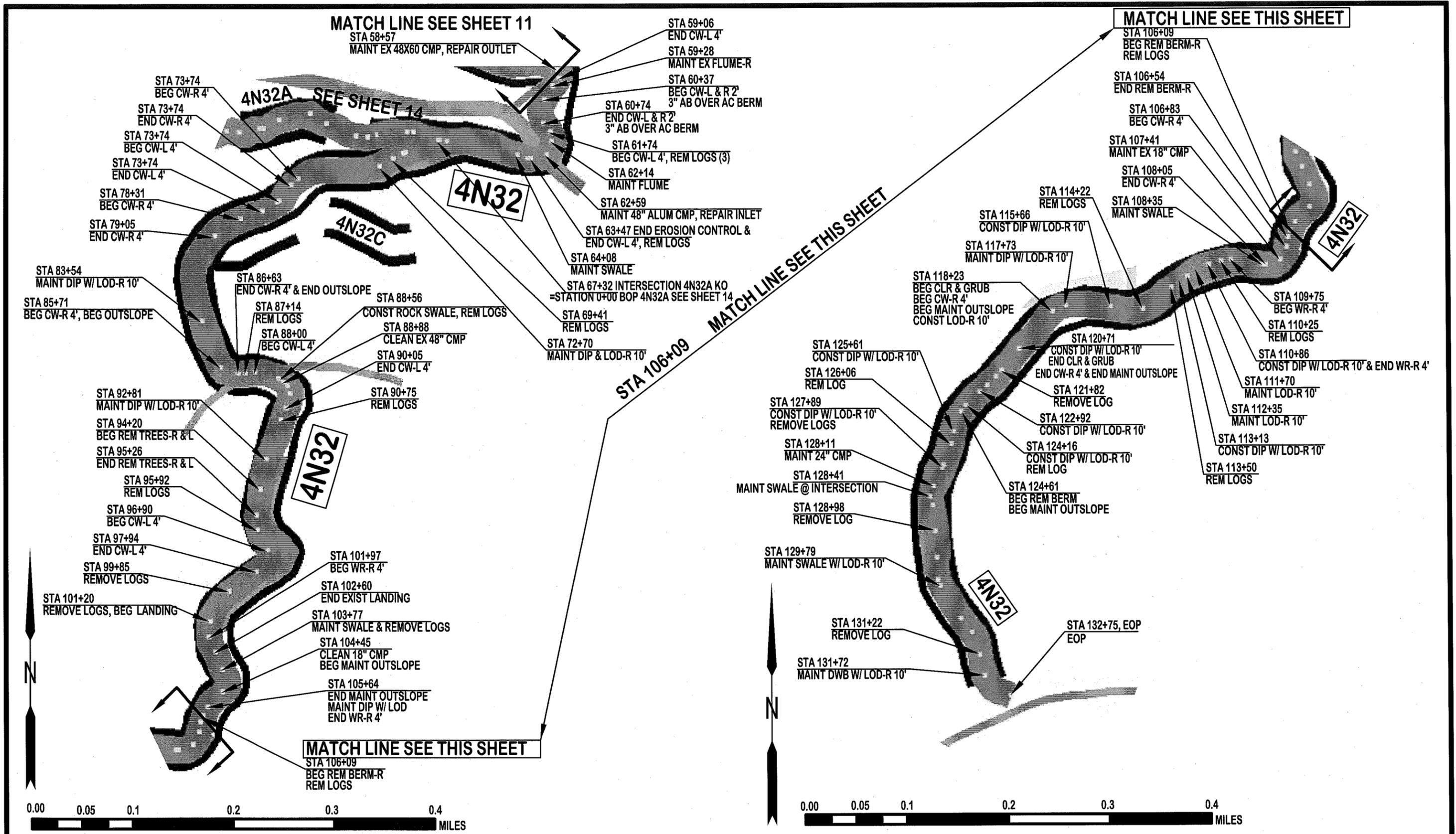
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-5
 PACIFIC SOUTHWEST REGION

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 Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
 Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
MAINTENANCE AND RECONSTRUCTION ROAD NO. 4N32
 Scale NOT TO SCALE
 Sheet **12** of **24**



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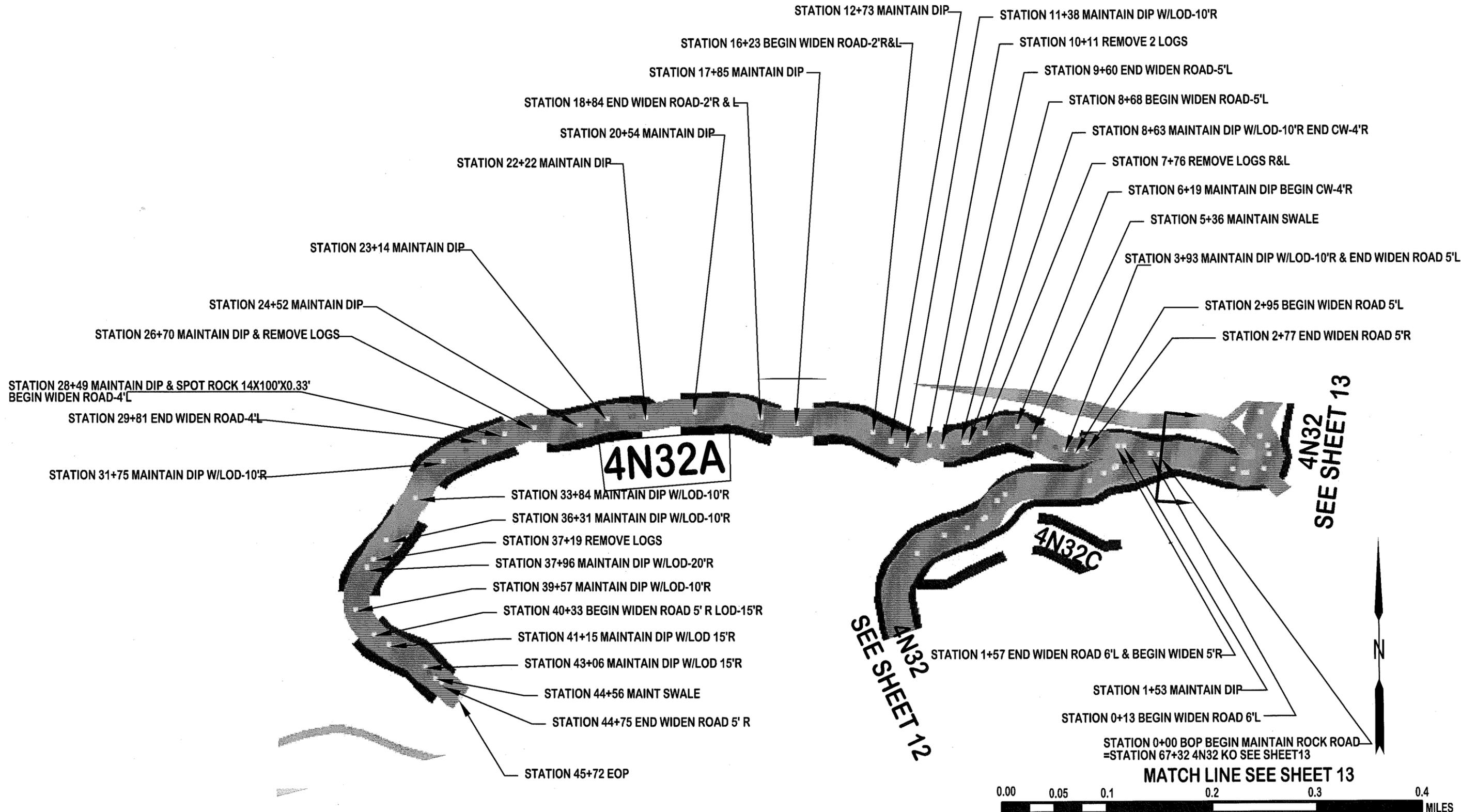
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
 R-5
 PACIFIC SOUTHWEST REGION

Drawn: E. SETNESS & M. SCHAFFER
 Designed: E. SETNESS & M. SCHAFFER
 Reviewed: _____
 Approved: _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
 Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
MAINTENANCE AND RECONSTRUCTION ROAD NO. 4N32
 Scale NOT TO SCALE
 Sheet 13 of 24



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FOREST SERVICE
R-5
PACIFIC SOUTHWEST REGION



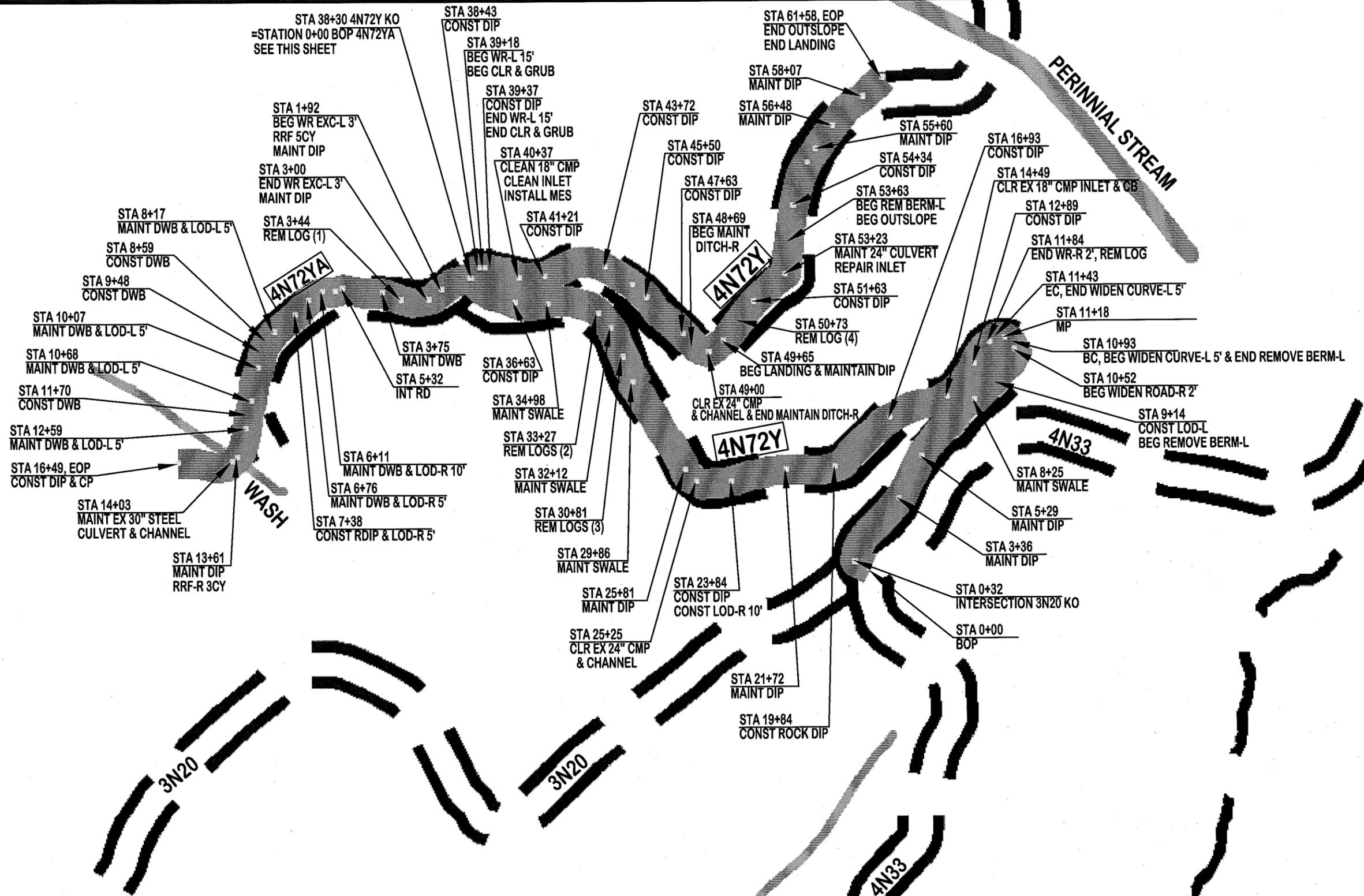
Drawn E. SETNESS & M. SCHAFFER
Designed E. SETNESS & M. SCHAFFER
Reviewed _____
Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
MAINTENANCE AND RECONSTRUCTION
ROAD NO. 4N32A
Scale NOT TO SCALE

Sheet
14
of 24



C:_workingGIS-CAD\Projects\High\plans\14reconst-4N72Y.dwg 07/19/11 1:37pm-ESETNESS-XREFS: C:_workingGIS-CAD\Projects\High\plans\USFS-STD-11X17_v04.dwg

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
 R-5
 PACIFIC SOUTHWEST REGION

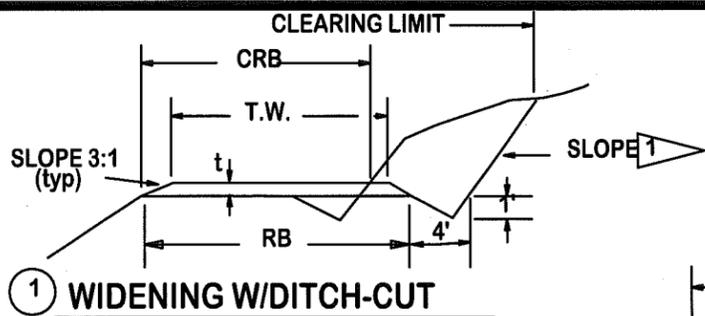
Drawn E.SETNESS & D.ROMERO
 Designed E.SETNESS & M.SCHAFFER
 Reviewed _____
 Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

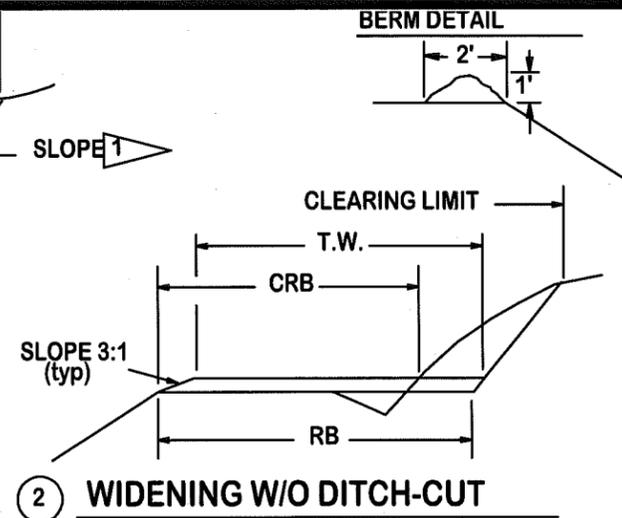
Forest
STANISLAUS
 Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
**MAINTENANCE AND RECONSTRUCTION
 ROAD NO. 4N72Y & 4N72YA**
 Scale NOT TO SCALE

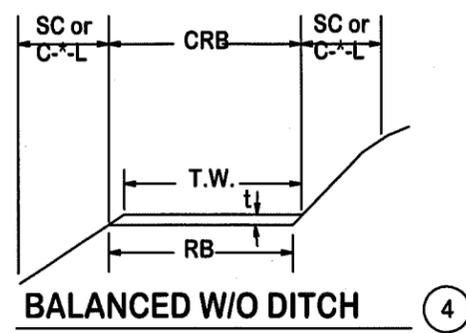
Sheet
15
 of
24



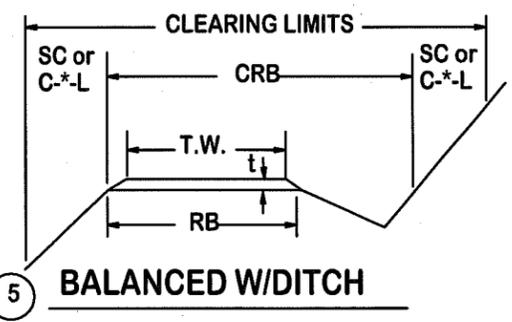
1 WIDENING W/DITCH-CUT



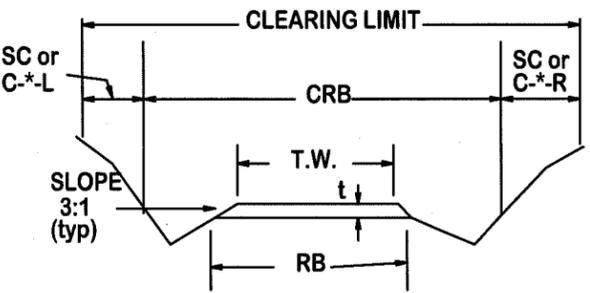
2 WIDENING W/O DITCH-CUT



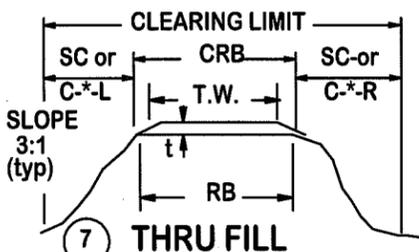
4 BALANCED W/O DITCH



5 BALANCED W/DITCH



6 THRU CUT



7 THRU FILL

BERM DETAIL



- ABBREVIATIONS:**
 T.C.= TOLERANCE CLASS
 t= COURSE DEPTH
 T.W.= TRAVELED WAY
 R.B.= ROADBED
 CRB= CLEAR EXISTING ROADBED AND DITCHES
 No.=NUMBER
 SC= SELECT CLEAR
 L or R= LEFT OR RIGHT
 NR= NARROW ROAD
 L= LAYER
 CW= CURVE WIDEN
 WR= WIDEN ROAD

ROAD TEMPLATE TABLE

Road No.	R.B.	5	t	6	T.W.	4	REMARKS
4N11	12'				12'		
4N11A	12'				12'		
4N32	12'				12'		
4N32A	12'				12'		
4N72Y	12'				12'		
4N72YA	12'				12'		

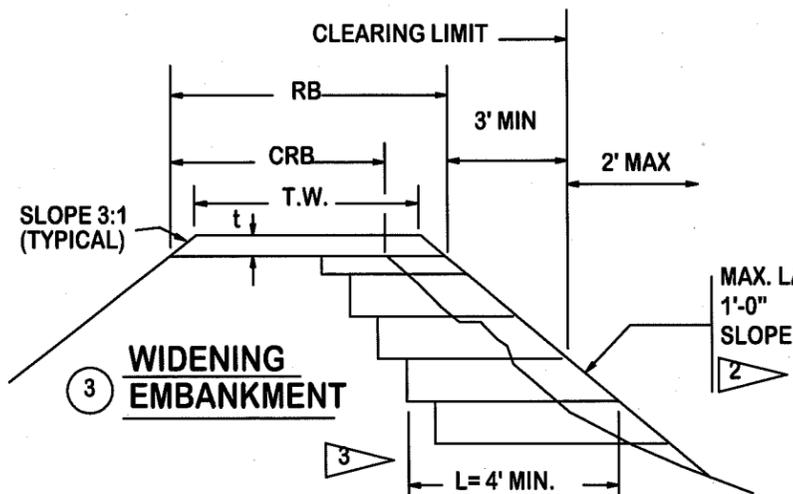
NOTE: All aggregate base is grading 2.

ROAD WIDENING FOR WR, CW, TURNOUT OR DOUBLE LANE SEE THIS SHEET FOR DETAILS

EXISTING STANDARD SEE THIS SHEET FOR DETAILS

NOTES:

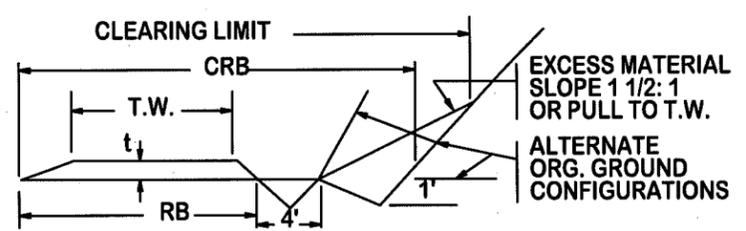
- SEE MAINTENANCE DRAWING SHEETS FOR REQUIRED WIDTH.
- SEE MAINTENANCE TYPICAL SECTIONS FOR BERM, ROADWAY DITCH, AND SLOPE ROUNDING DETAILS.
- ** OR LENGTH SHOWING ON DRAWINGS.
- MAINTAIN EXISTING ROAD SLOPE UNLESS SHOWN OTHERWISE.



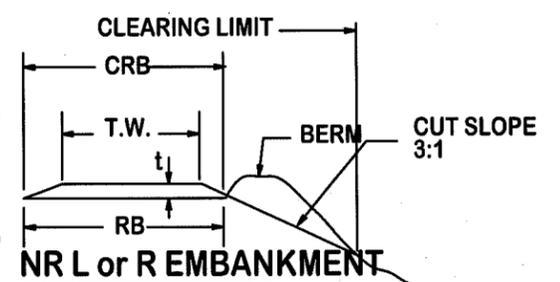
3 WIDENING EMBANKMENT

- 7 TOLERANCE CLASS
- 6 BASE OR SURFACE COURSE DEPTH, SEE DRAWINGS FOR (t) COURSE DEPTH.
- 5 EXISTING WIDTH UNLESS DRAWINGS SHOW OTHERWISE
- 4 SEE DRAWINGS FOR CURVE WIDENING LOCATIONS.
- 3
 - "L" SHALL ACCOMODATE THE COMPACTING EQUIPMENT
 - "L" MAY BE WIDENED BY END DUMPING IN ORDER TO ACCOMODATE COMPACTING EQUIPMENT. THE REMAINDER OF THE EMBANKMENT SHALL BE PLACED AS SPECIFIED.
 - PRIOR TO END DUMPING, SCARIFY THE ORIGINAL GROUND.
- 2 FILL SLOPE - ROCK COMMON 1 1/3:1 OR MATCH EXISTING SLOPE:
1 1/2:1
- 1 CUT SLOPE - SOLID ROCK 1/4:1 CONSTRUCT AS STAKED
LOOSE ROCK COMMON 1/2:1
1 1/2:1

(NR L or R) NARROW ROAD STD.

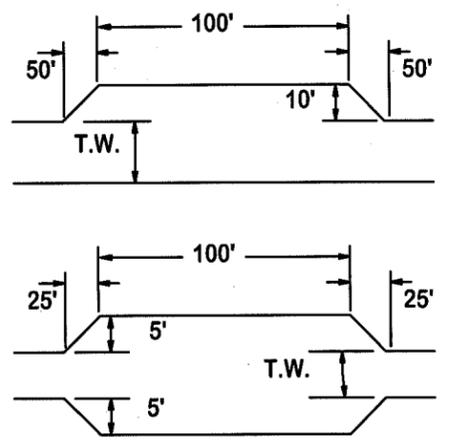


NR-L or R CUT SIDE



NR L or R EMBANKMENT

TURNOUT DETAILS



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 FOREST SERVICE
 R-5
 PACIFIC SOUTHWEST REGION

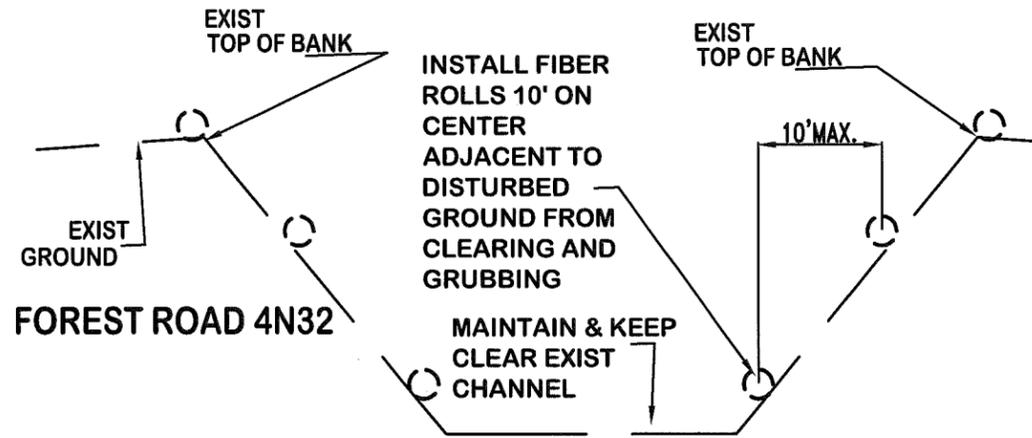
Drawn E. SETNESS & M. SCHAFFER
 Designed E. SETNESS & M. SCHAFFER
 Reviewed _____
 Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

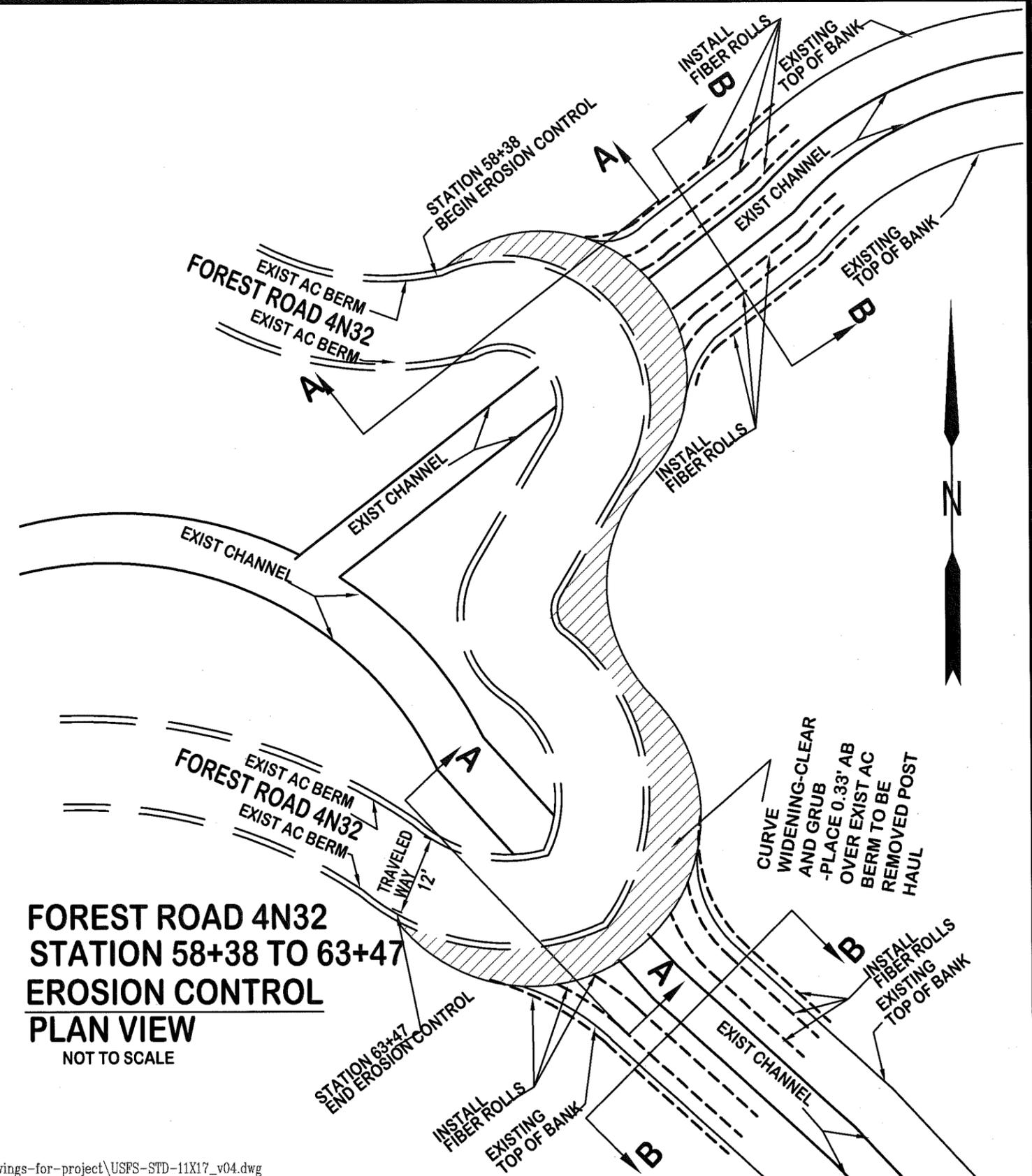
Forest
STANISLAUS
 Project Name
 TIMBER SALE ROADS (HIGH)

Sheet Title
 ROAD MAINTENANCE OR
 RECONSTRUCTION SECTION DETAILS
 Scale SCALE AS NOTED

Sheet
 16
 of
 24

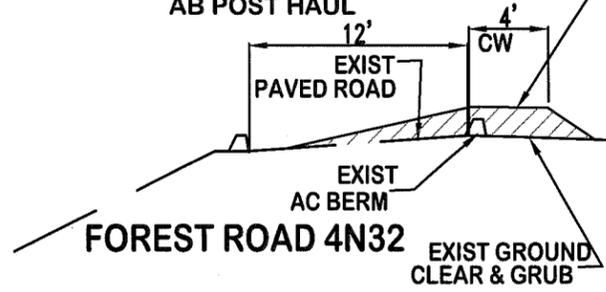


CROSS SECTION B-B



**FOREST ROAD 4N32
STATION 58+38 TO 63+47
EROSION CONTROL
PLAN VIEW**
NOT TO SCALE

4' CURVE WIDENING -
CLEAR AND GRUB- PLACE
0.33' AB CUSHION OVER THE
EXISTING AC BERM REMOVE
AB POST HAUL



CROSS SECTION A-A

NOTE
SEE SHEET 2 FOR LEGEND

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FOREST SERVICE
R-5
PACIFIC SOUTHWEST REGION



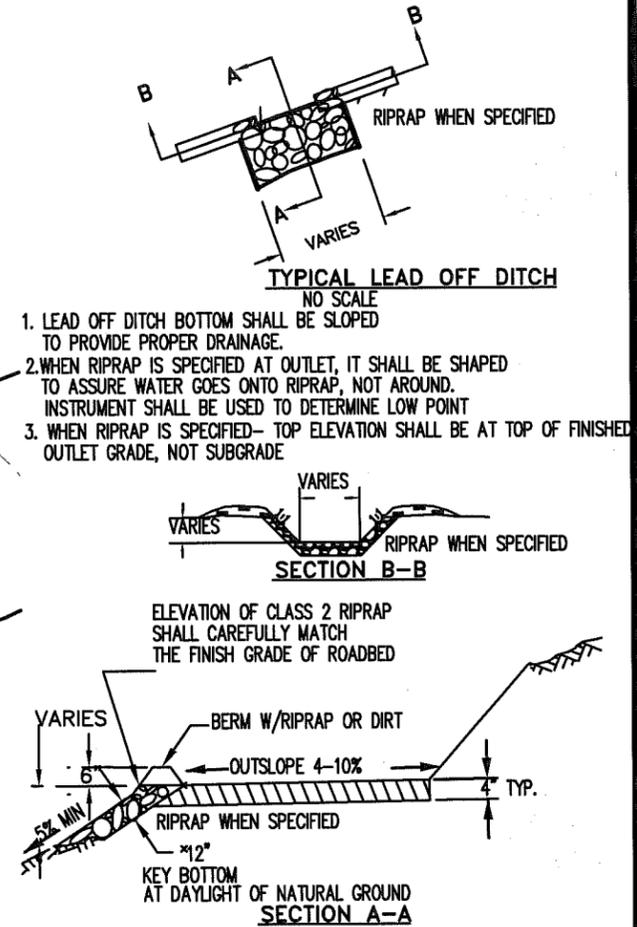
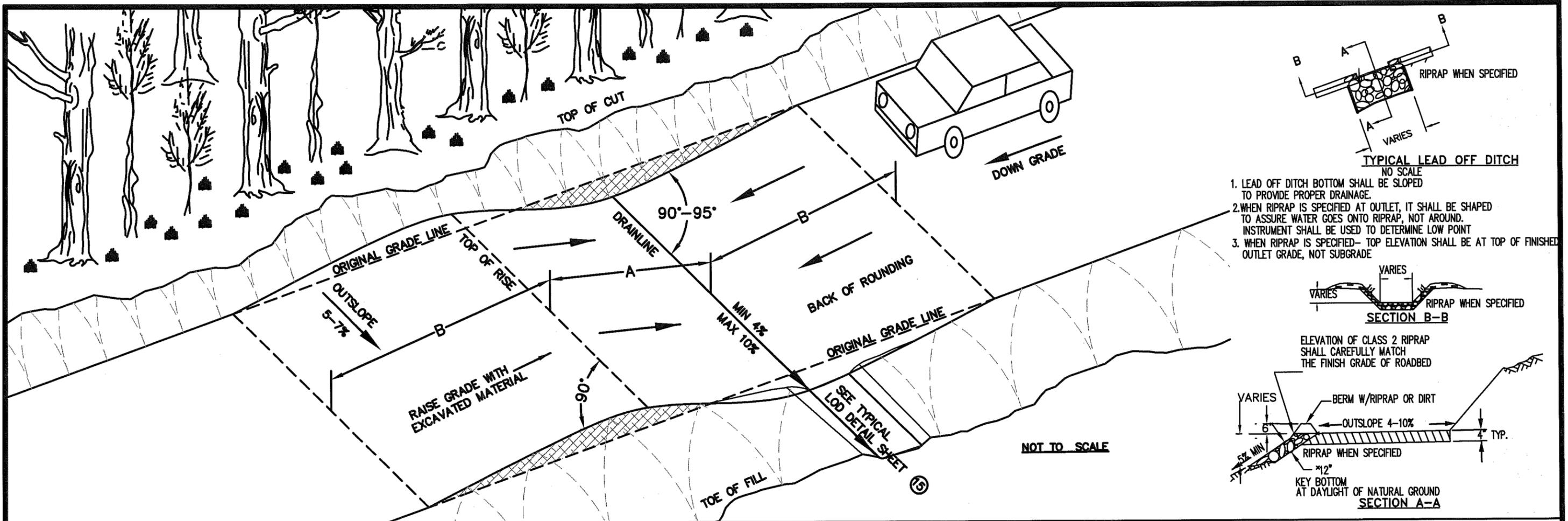
Drawn E. SETNESS
Designed E. SETNESS & M. SCHAFFER
Reviewed _____
Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

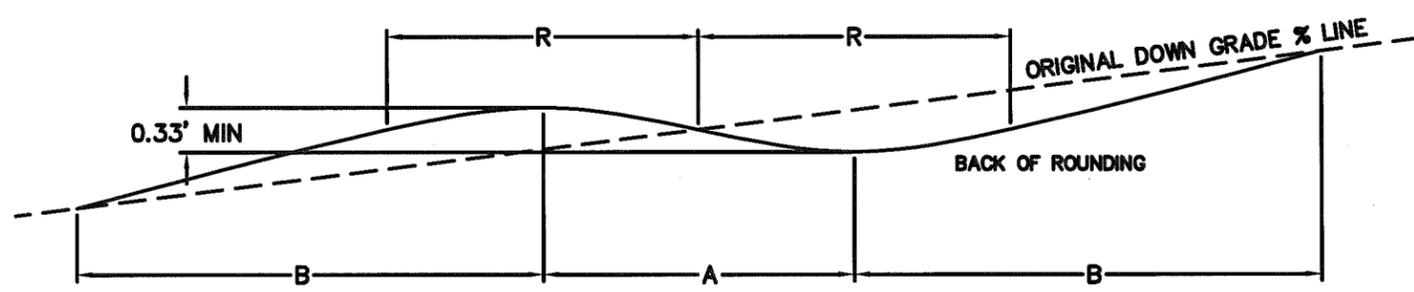
Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
**EROSION CONTROL ON
FOREST ROAD 4N32**
Scale NOT TO SCALE

Sheet
17
of
24



1. LEAD OFF DITCH BOTTOM SHALL BE SLOPED TO PROVIDE PROPER DRAINAGE.
2. WHEN RIPRAP IS SPECIFIED AT OUTLET, IT SHALL BE SHAPED TO ASSURE WATER GOES ONTO RIPRAP, NOT AROUND. INSTRUMENT SHALL BE USED TO DETERMINE LOW POINT
3. WHEN RIPRAP IS SPECIFIED- TOP ELEVATION SHALL BE AT TOP OF FINISHED OUTLET GRADE, NOT SUBGRADE



CENTERLINE PROFILE NOT TO SCALE

DOWN GRADE %	LOWBOY				LOG TRUCK				4X4 (FIRE ENGINE)				
	LENGTH	TAPER	ROUNDING		LENGTH	TAPER	ROUNDING		LENGTH	TAPER	ROUNDING		
	A	B	%	R	A	B	%	R	A	B	%	R	
0-5	30	30	7	30	20	25	10	20	10	10	19	10	
6-8	30	50	7	30	20	40	10	20	10	15	19	10	
CHORD LENGTH FOR ROUNDING				15					15				

- NOTES**
- MIN CROSS-SLOPE OF DRAINLINE: MIN 4%; MAX: 10%
 - ENTIRE LENGTH OF DIP SHALL BE OUTSLOPED 5% TO 7%
 - SKEW OF DRAINLINE SHALL BE 0-5 DEGREES DOWN GRADE
 - WHEN RIPRAP IS SPECIFIED AT OUTLET, IT SHALL BE SHAPED TO ASSURE WATER GOES ONTO RIPRAP, NOT AROUND. INSTRUMENT SHALL BE USED TO DETERMINE LOW POINT
 - RIPRAP TOP ELEVATION SHALL BE AT TOP OF FINISHED OUTLET GRADE, NOT SUBGRADE
 - TAPER LENGTHS SHALL BE WITHIN 10% OF LISTED LENGTHS
 - DIP SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN PRIOR TO PLACEMENT OF AGGREGATE COURSE

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FOREST SERVICE
R-5
 PACIFIC SOUTHWEST REGION

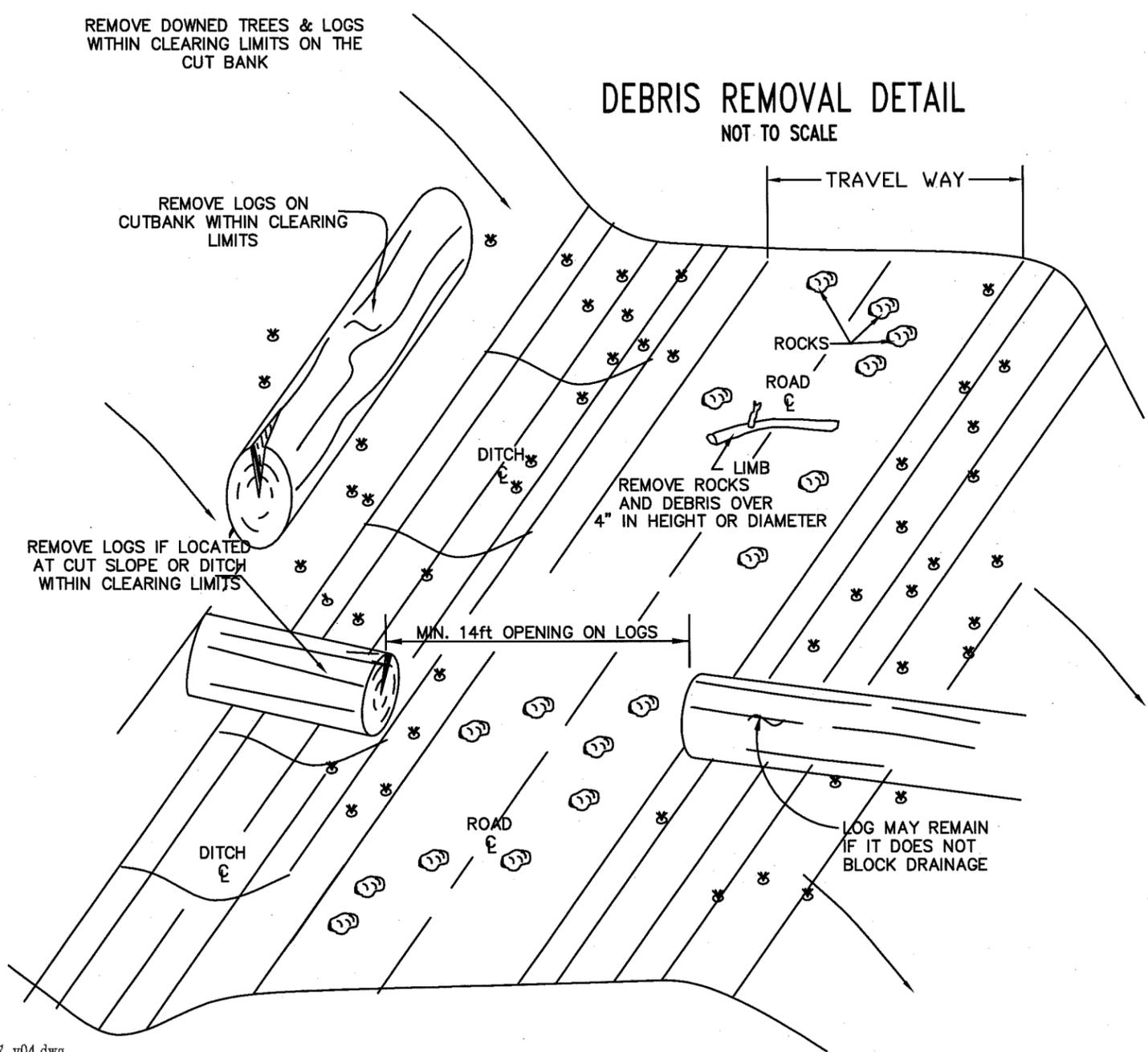
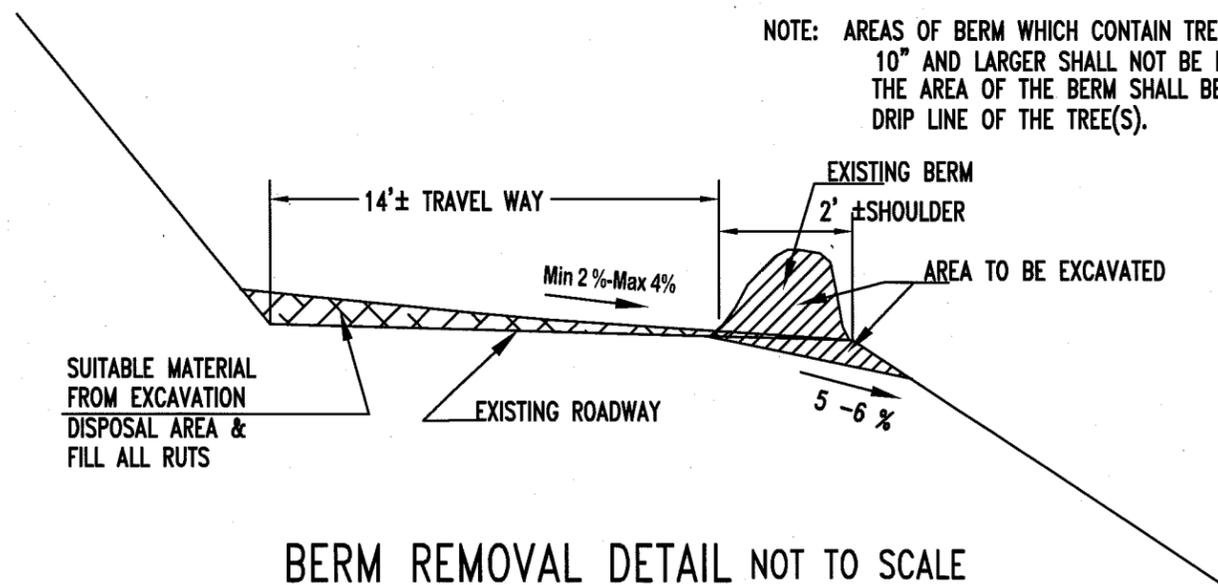
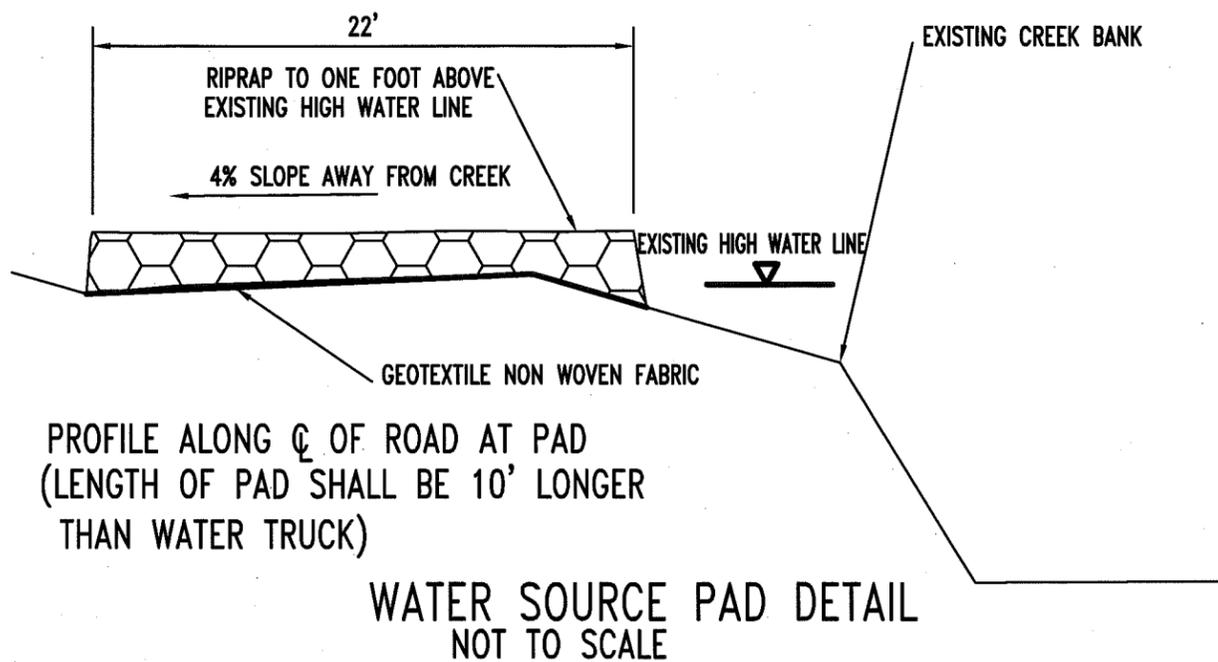
Drawn E. SETNESS & M. SCHAFFER
 Designed E. SETNESS & M. SCHAFFER
 Reviewed _____
 Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
 Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
MAINTENANCE OR RECONSTRUCTION OF ROLLING DIP
 Scale NOT TO SCALE

Sheet
18
 of
24



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FOREST SERVICE
R-5
PACIFIC SOUTHWEST REGION

Drawn E. SETNESS & M. SCHAFFER
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Reviewed _____
Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

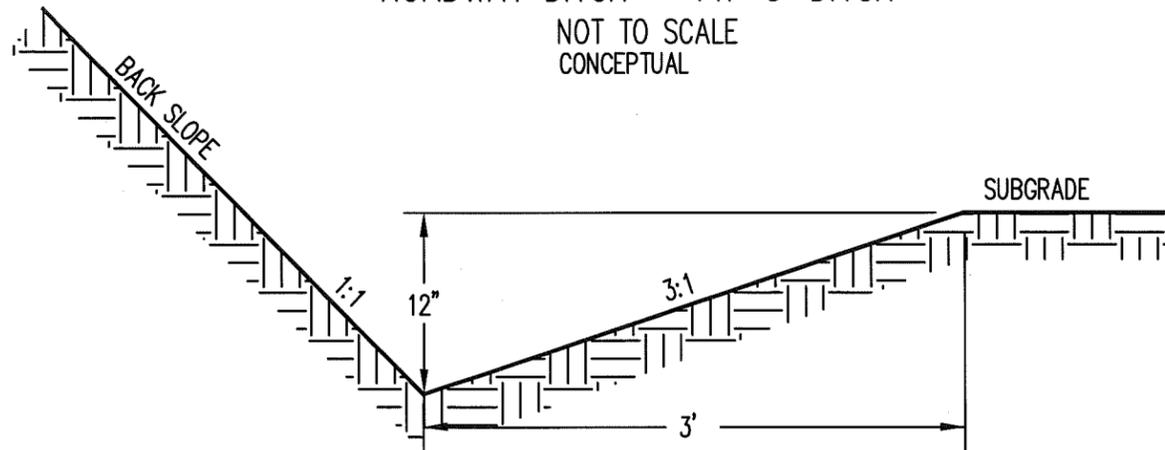
Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
BERM & DEBRIS REMOVAL & OUTSLOPING ROAD & CONSTRUCTION OF WATER SOURCE PAD
Scale NOT TO SCALE

Sheet 19 of 24

ROADWAY DITCH- TYP 3' DITCH

NOT TO SCALE
CONCEPTUAL

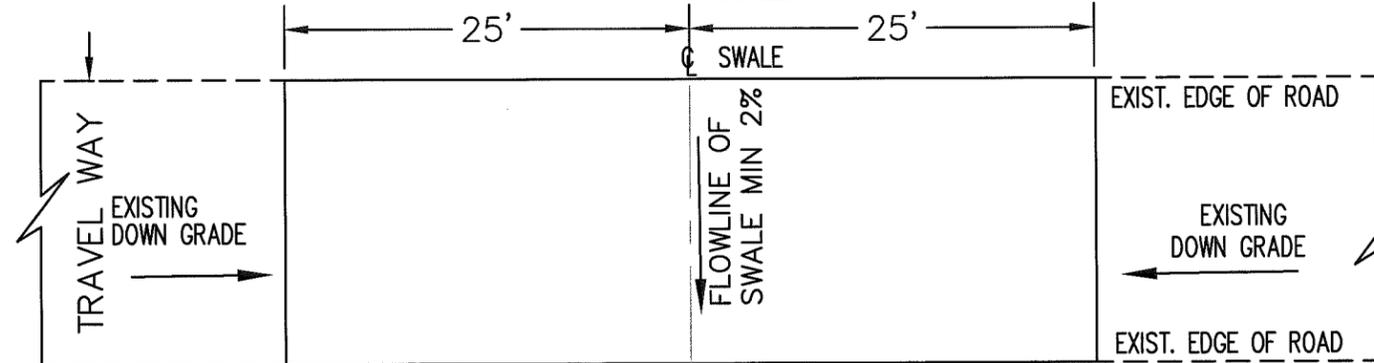


GENERAL NOTES:

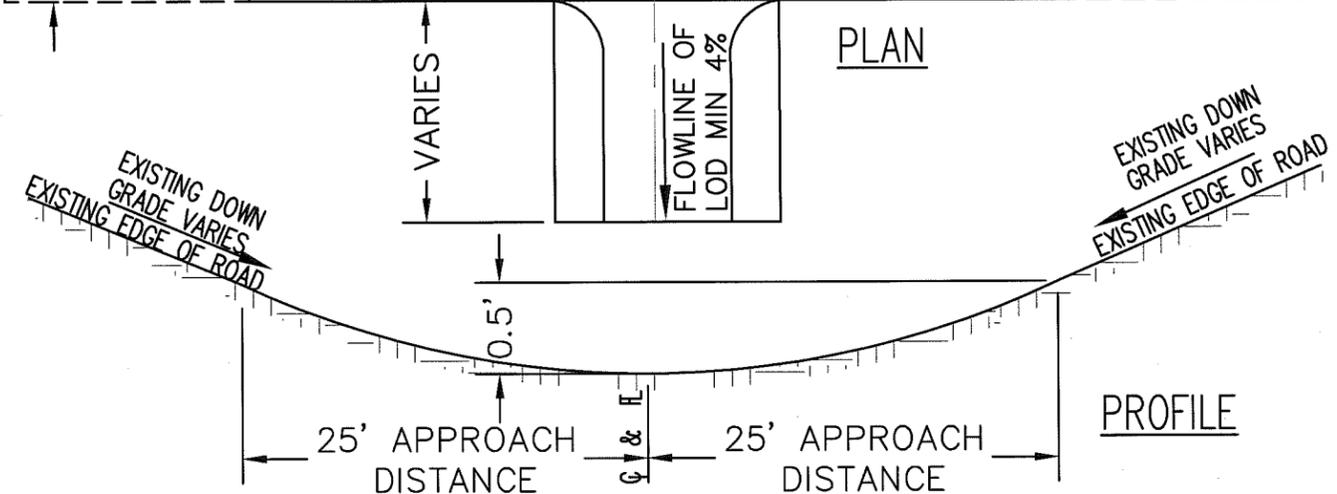
1. WHEN POSSIBLE, UTILIZE SUITABLE EXCAVATED MATERIAL IN ROADBED.

GRADED SWALE

NOT TO SCALE



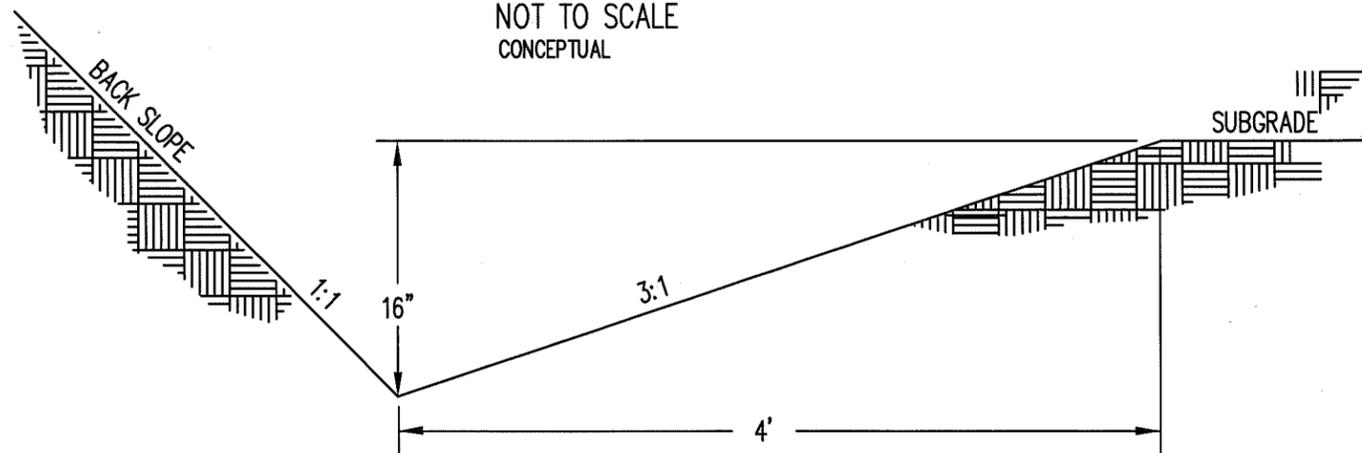
PLAN



PROFILE

ROADWAY DITCH- TYP 4' DITCH

NOT TO SCALE
CONCEPTUAL



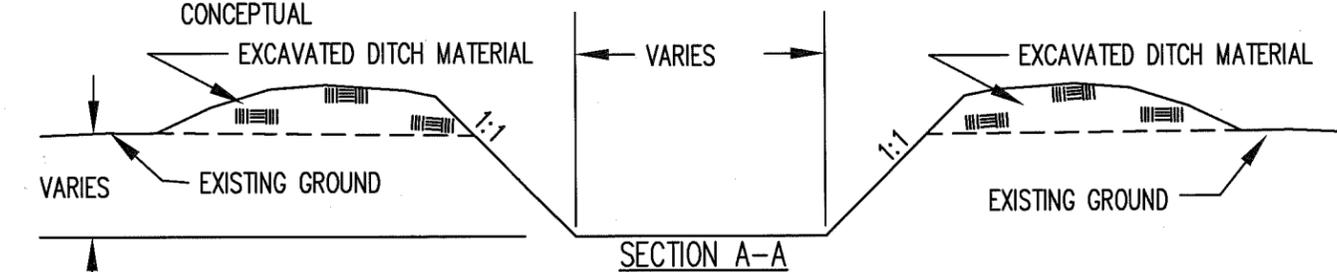
GENERAL NOTES:

1. WHEN POSSIBLE, UTILIZE SUITABLE EXCAVATED MATERIAL IN ROADBED.

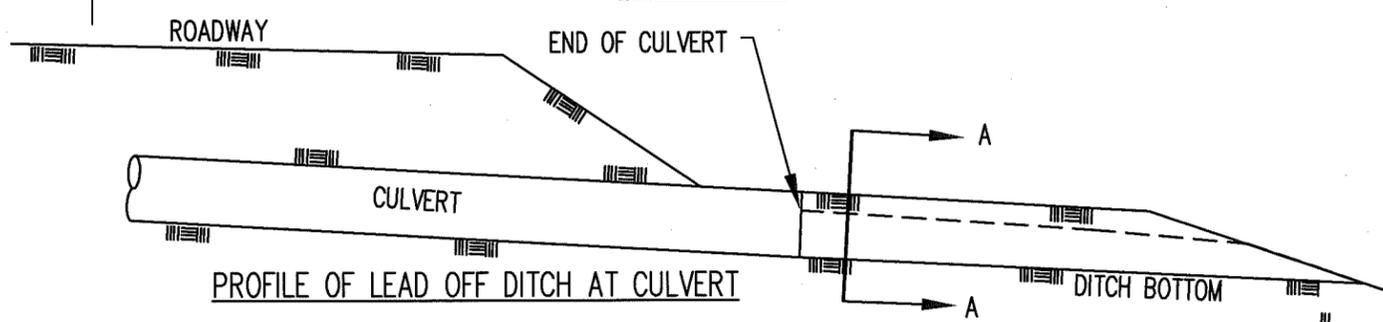
LEAD OFF DITCH AT CULVERT

NOT TO SCALE
CONCEPTUAL

1. LEAD OFF DITCH BOTTOM SHALL BE SLOPED TO PROVIDE PROPER DRAINAGE.



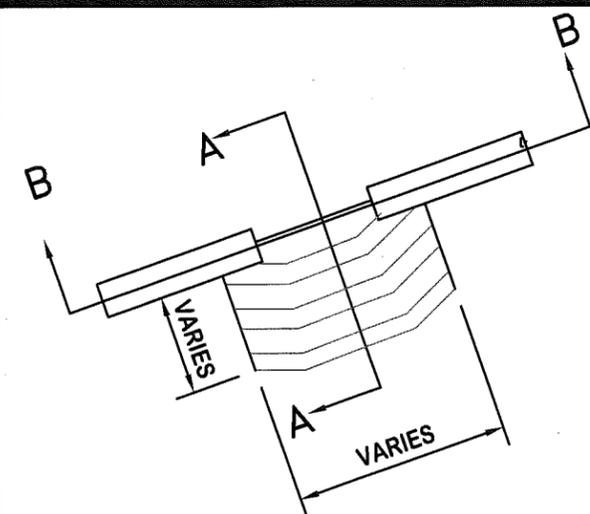
SECTION A-A



PROFILE OF LEAD OFF DITCH AT CULVERT

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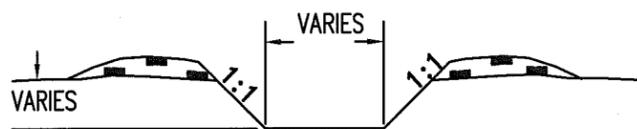
Revisions			
NO.	DESCRIPTION	DATE	BY



TYPICAL LEAD OFF DITCH

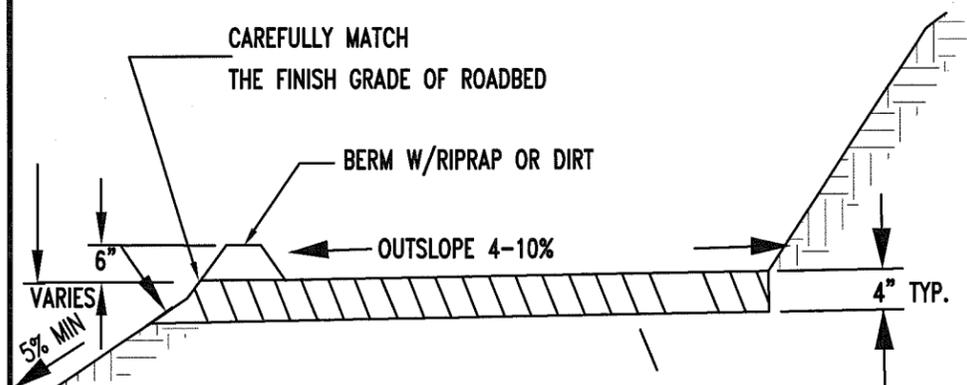
NO SCALE

1. LEAD OFF DITCH BOTTOM SHALL BE SLOPED TO PROVIDE PROPER DRAINAGE.



SECTION B-B

NO SCALE

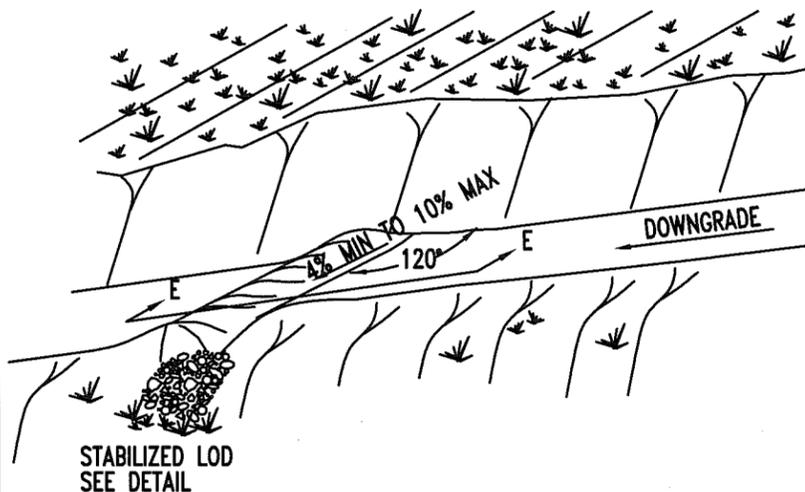


SECTION A-A

W/O RIPRAP

NO SCALE

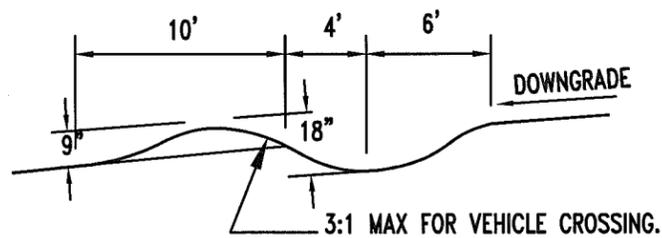
DRIVEABLE WATERBAR FOR HIGH CLEARANCE VEHICLES



STABILIZED LOD SEE DETAIL

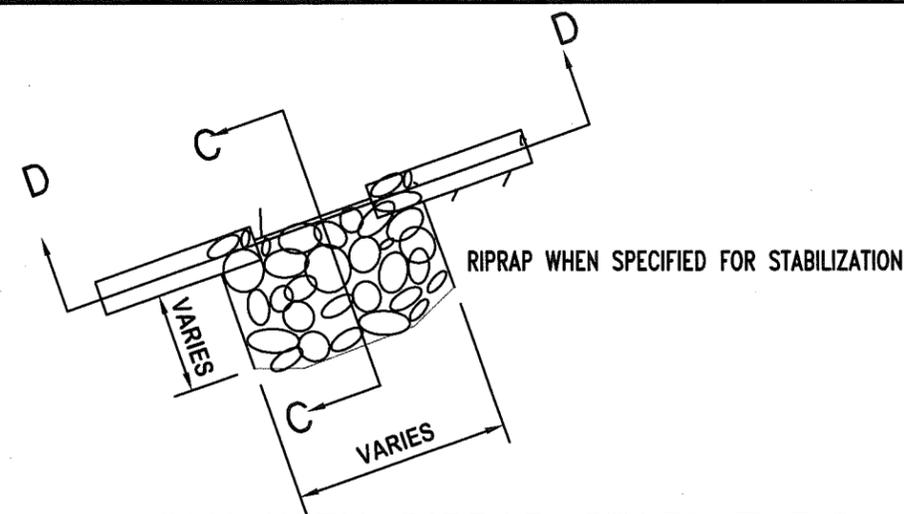
NOTES - DRIVEABLE WATERBAR:

1. FOR USE ON GRADES STEEPER THAN 10%.
2. WATER NOT TO BE DISCHARGED ON FILLS GREATER THAN 3 FEET IN HEIGHT.
3. EXCAVATED MATERIAL TO BE SPREAD OUT ON ROADBED
4. WHEN STAKING FOR LOCATION, THE STAKE WILL INDICATE OUTFALL



SECTION E-E

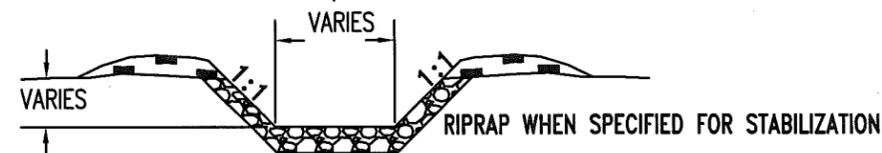
NO SCALE



LEAD OFF DITCH WITH RIPRAP STABILIZATION

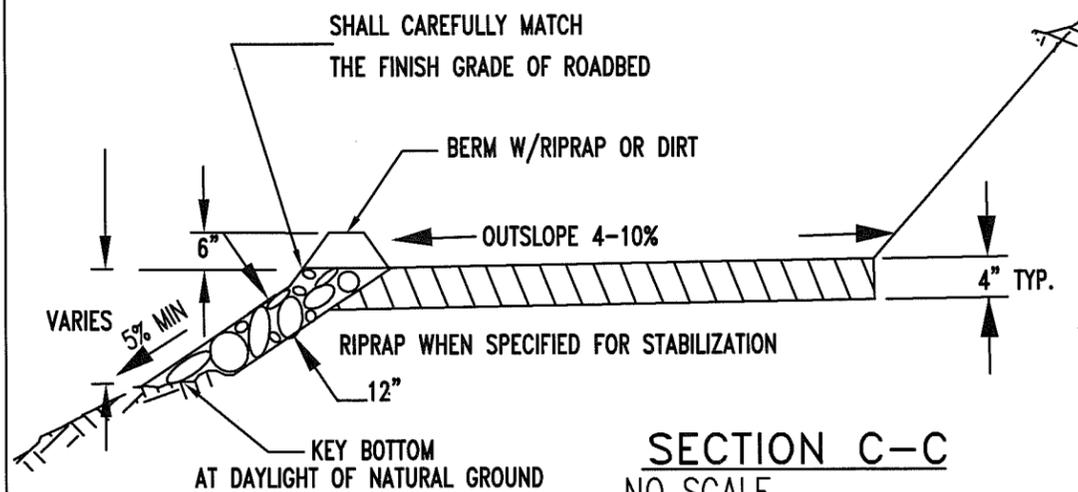
NO SCALE

1. LEAD OFF DITCH BOTTOM SHALL BE SLOPED TO PROVIDE PROPER DRAINAGE.
2. WHEN RIPRAP IS SPECIFIED AT OUTLET, IT SHALL BE SHAPED TO ASSURE WATER GOES ONTO RIPRAP, NOT AROUND. INSTRUMENT SHALL BE USED TO DETERMINE LOW POINT
3. WHEN RIPRAP IS SPECIFIED- TOP ELEVATION SHALL BE AT TOP OF FINISHED OUTLET GRADE, NOT SUBGRADE



SECTION D-D

NO SCALE
ELEVATION OF CLASS 2 RIPRAP SHALL CAREFULLY MATCH THE FINISH GRADE OF ROADBED



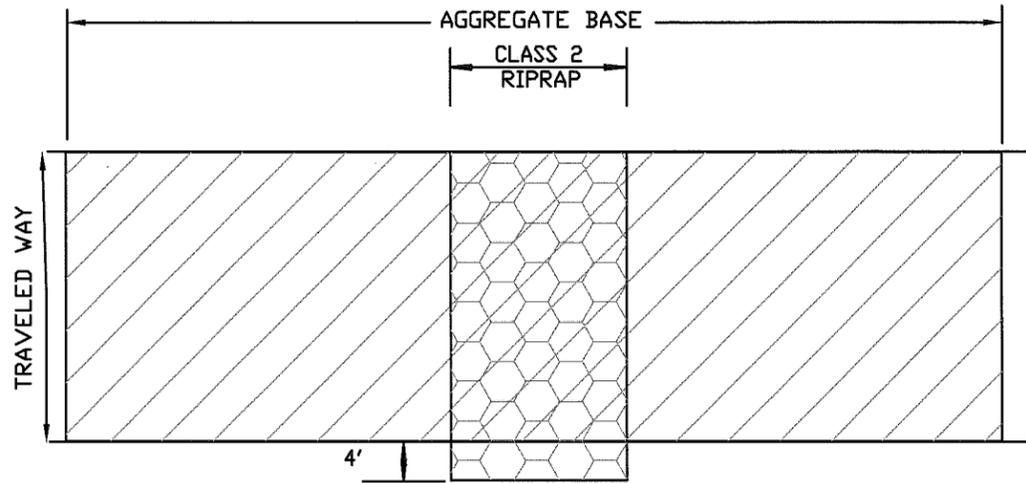
SECTION C-C

NO SCALE

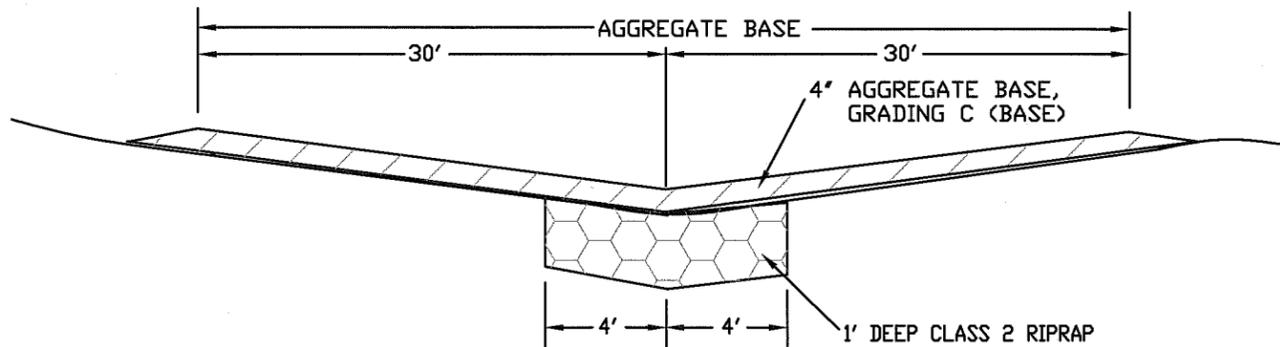
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Revisions			
NO.	DESCRIPTION	DATE	BY

ROCK DIP



PLAN



PROFILE

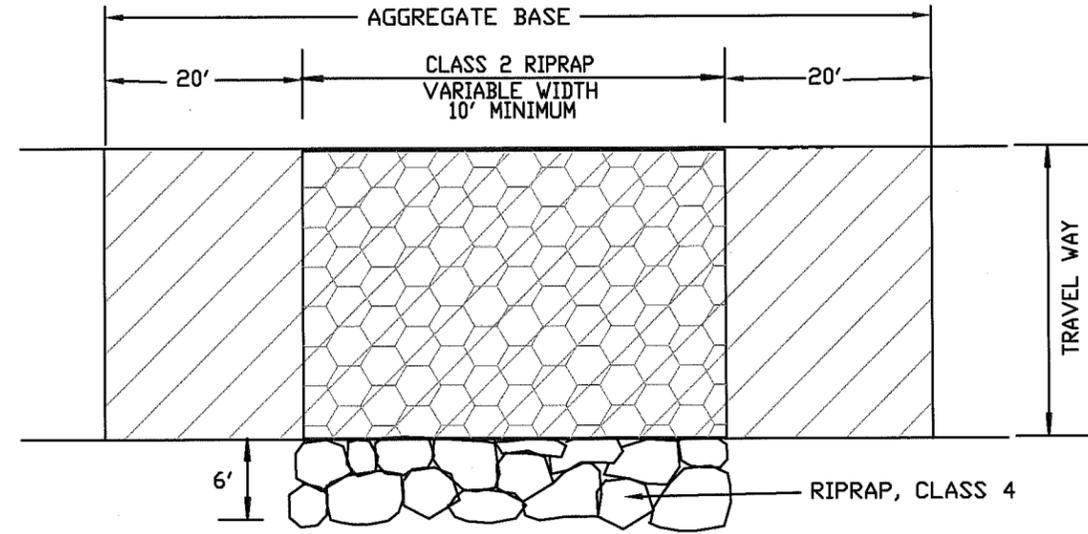
NOTE: CONSTRUCTION OF A ROCK DIP INCLUDES THE PLACEMENT OF AGGREGATE BASE (301(01)) AND RIPRAP, CLASS 2 (705(01)).

MATERIALS LIST:

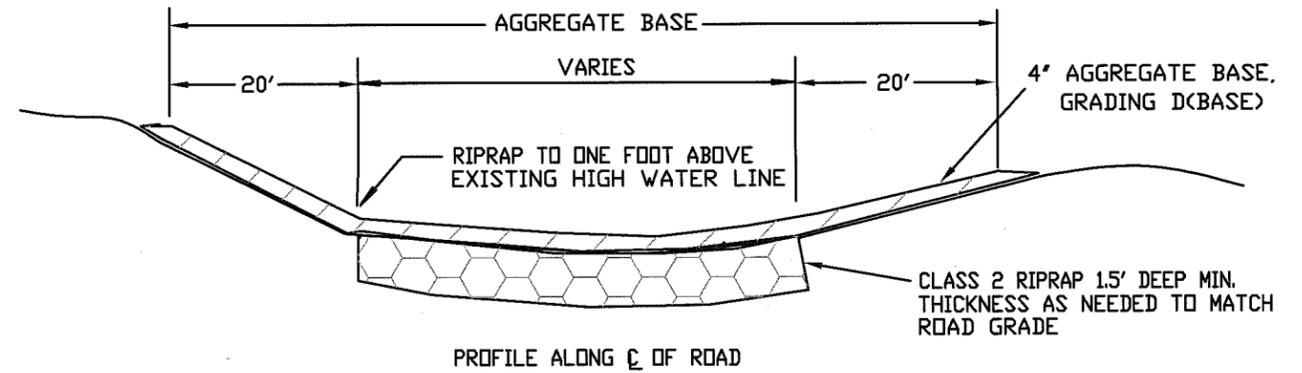
AGGREGATE BASE = 25 TONS
 RIPRAP, CLASS 2 = 12 TONS

NOT TO SCALE

RIPRAP DRAINAGE



PLAN



PROFILE

NOTE: CONSTRUCTION OF RIPRAP DRAINAGE INCLUDES PLACEMENT OF AGGREGATE BASE, GRADING 2 (301(01)), RIPRAP, CLASS 2 (705(01)) AND RIPRAP, CLASS 4 (705(01)).

NOT TO SCALE

C:_workingGIS-CAD\Projects\High\plans\21Rkdrd.dwg 07/15/11 2:34pm-ESETNESS-XREFS: K:\ps\engineer\construct\2008 PROJECTS\08001-54-SOLDIER_CRK_TS\drawings-for-project\USFS-STD-11X17_v04.dwg

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE

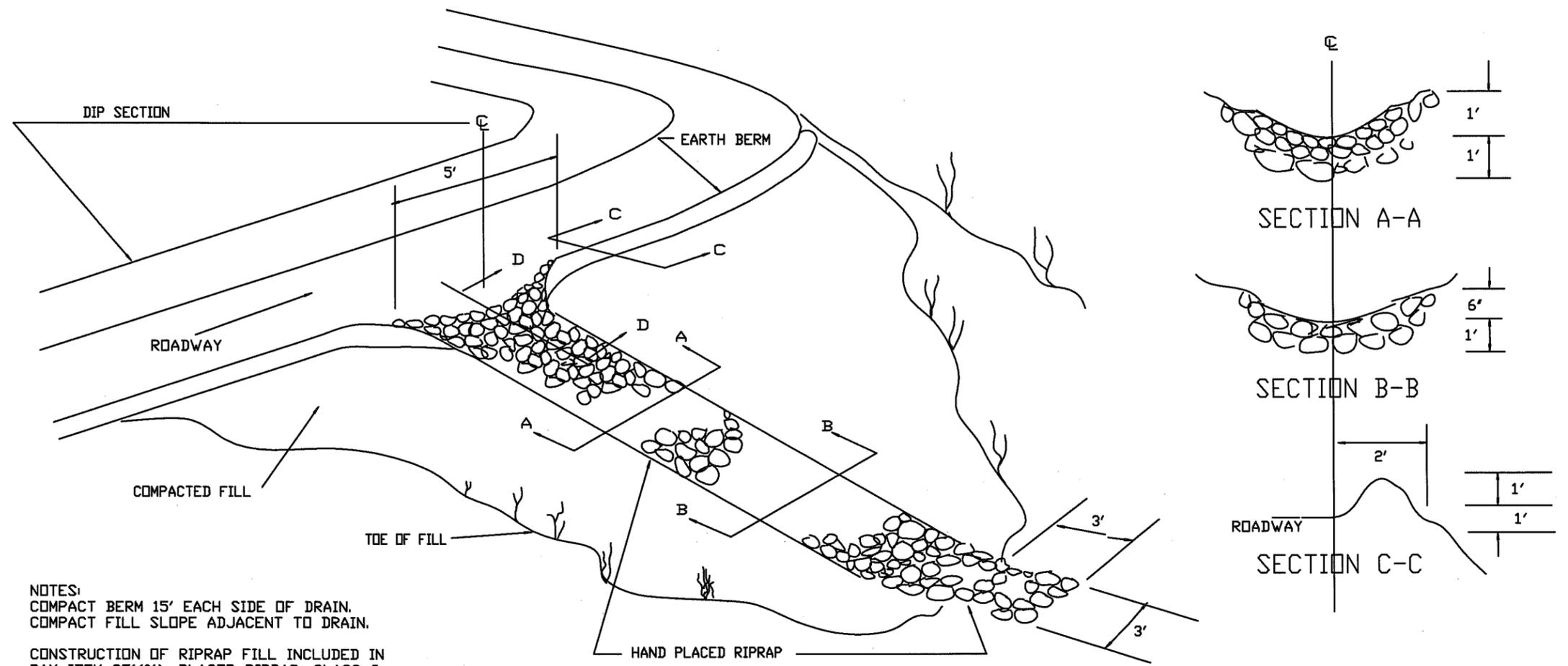
 R-5
 PACIFIC SOUTHWEST REGION

Drawn: E. SETNESS & M. SCHAFFER
 Designed: E. SETNESS & M. SCHAFFER
 Reviewed: _____
 Approved: _____

Revisions			
NO.	DESCRIPTION	DATE	BY

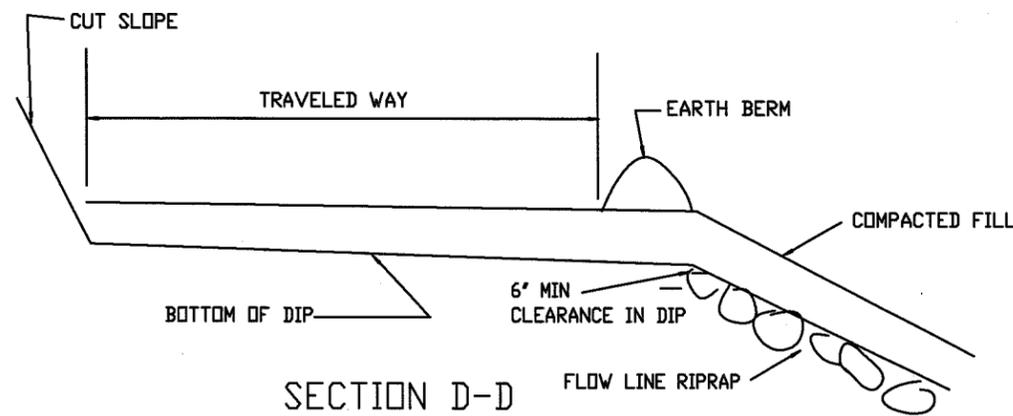
Forest
STANISLAUS
 Project Name
 TIMBER SALE ROADS (HIGH)

Sheet Title RECONSTRUCTION OF ROCK DIP RIPRAP DRAINAGE	Sheet 22
Scale NOT TO SCALE	of 24

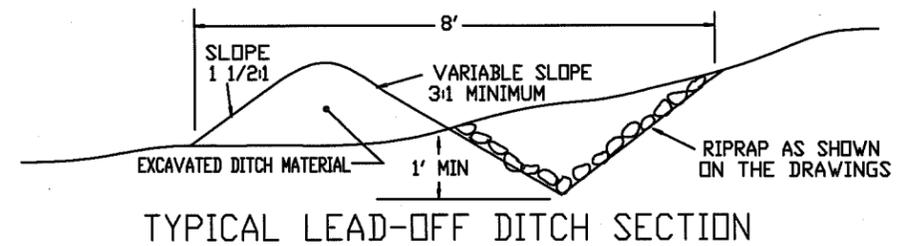


NOTES:
 COMPACT BERM 15' EACH SIDE OF DRAIN.
 COMPACT FILL SLOPE ADJACENT TO DRAIN.
 CONSTRUCTION OF RIPRAP FILL INCLUDED IN
 PAY ITEM 251(01), PLACED RIPRAP, CLASS 2.

TYPICAL RIPRAP FILL



SECTION D-D



TYPICAL LEAD-OFF DITCH SECTION

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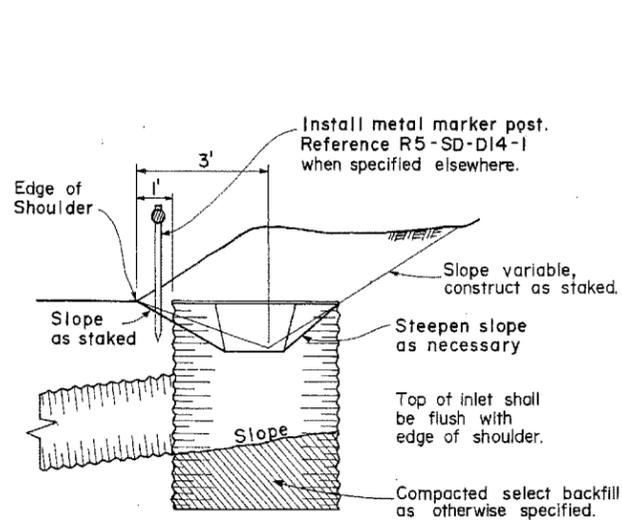
U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
 R-5
 PACIFIC SOUTHWEST REGION

Drawn E. SETNESS & M. SCHAFER
 Designed E. SETNESS & M. SCHAFER
 Reviewed _____
 Approved _____

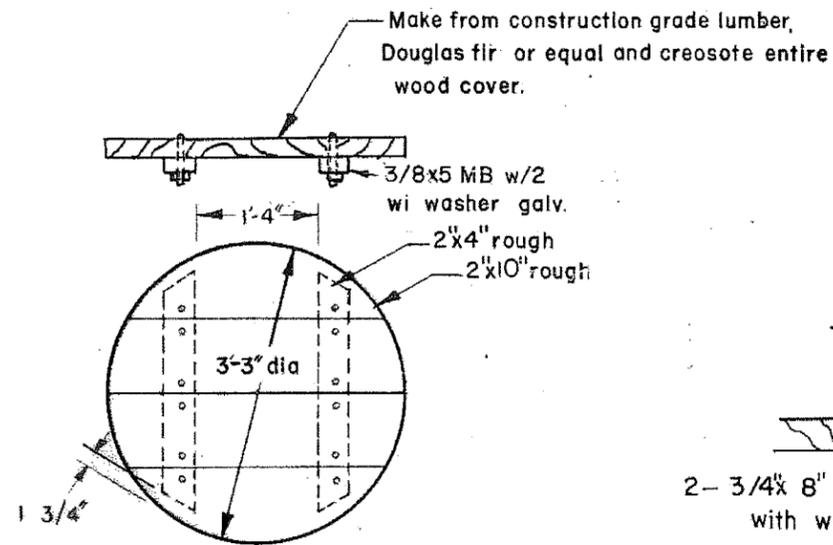
Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
 Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
**RECONSTRUCTION OF
 RIPRAP FILL**
 Scale NOT TO SCALE
 Sheet 23
 of 24

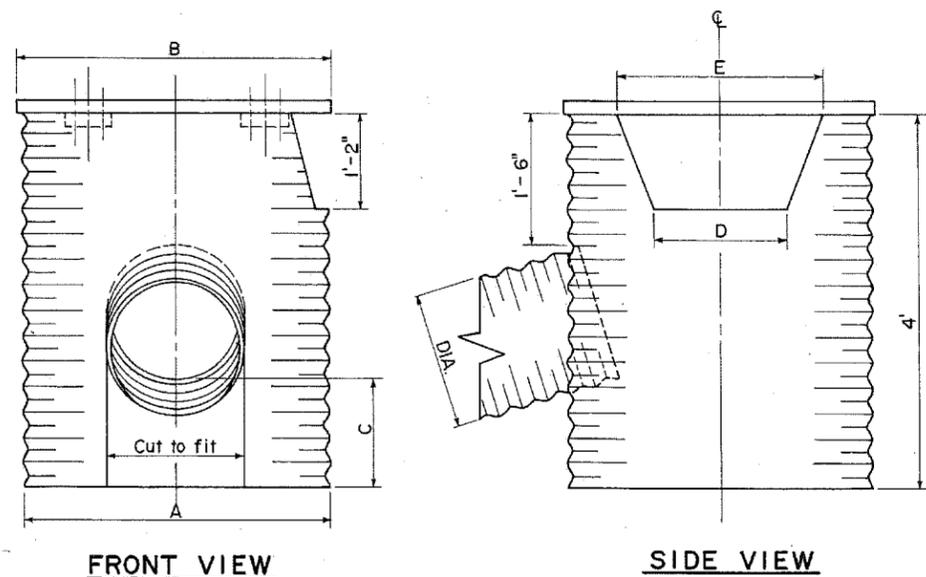
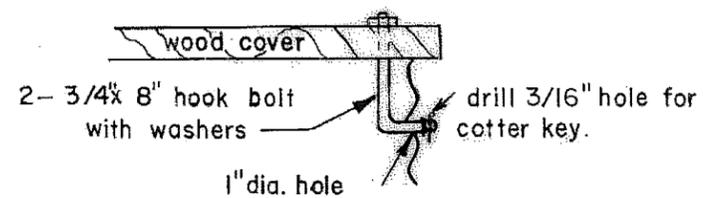


INSTALLATION DETAIL



WOOD COVER

HOOK BOLT DETAIL



FRONT VIEW

SIDE VIEW

GENERAL NOTES:

1. Grate for Type 'B' inlet assembly shall be installed on Type 'A' inlet when specified.
2. Dimensions A and C apply to both types of Inlets. Dimensions B, D, and E apply to Type A.
3. Openings may be field cut. Cut openings in each side of inlet when inlet is located so that water approaches from two directions. Total area of opening shall not be less than shown.
4. Use round or square wood cover as specified on Drainage Summary.

FABRICATION DETAILS

INLET DIMENSION TABLE						
OUTLET PIPE DIA.	INLET DIA. & THKNESS.	A	B	C	D	E
18"	36" - 0.109"	36"	40"	12"	18"	24"
24"	48" - 0.109"	48"	52"	6"	24"	30"

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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-5
PACIFIC SOUTHWEST REGION

Drawn E. SETNESS & M. SCHAFFER
Designed E. SETNESS & M. SCHAFFER
Reviewed _____
Approved _____

Revisions			
NO.	DESCRIPTION	DATE	BY

Forest
STANISLAUS
Project Name
TIMBER SALE ROADS (HIGH)

Sheet Title
**RECONSTRUCTION OF
DROP INLET**
Scale NOT TO SCALE

Sheet
24
of
24