

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE



REGION 6
OKANOGAN - WENATCHEE NATIONAL FORESTS



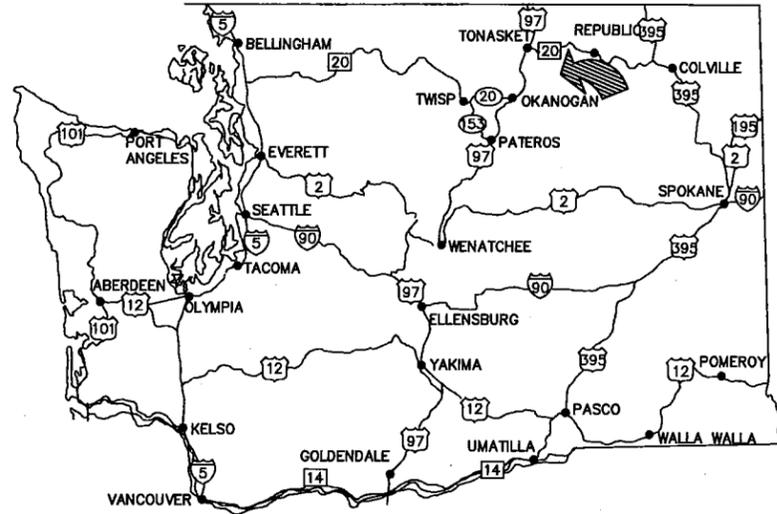
Tonasket Ranger District

CONSTRUCTION DRAWINGS FOR

CR T.S.

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	TITLE
2	VICINITY MAP
3-4	ESTIMATE OF QUANTITIES
5	NOTES, SYMBOLS & TYPICAL DETAILS
6	ROAD STRUCTURE DETAILS
7	CLEARING DETAILS
8	DRAINAGE LISTING
9	DRAINAGE CONSTRUCTION DETAILS
10	DRAIN DIP DETAILS
11	WORK DESCRIPTIONS
12	3000180 - PLAN & PROFILE



KEY MAP OF WASHINGTON SHOWING LOCATION OF PROJECT

ROAD NO.	LENGTH MILES	RECONST./CONST.	SHEET NO.
3000101	0.49	RECONST	11
3000187	0.55	RECONST	11
3000200-I	0.04	RECONST	11
3000200-II	0.06	RECONST	11
3000213	0.27	RECONST	11
3000214	0.29	RECONST	11
3000218	0.18	RECONST	11
3015175	2.83	RECONST	11
3015180	0.08	RECONST	12
3015181	0.33	RECONST	11

TOTAL CONSTRUCTION 0 MILES
TOTAL RECONSTRUCTION 5.12 MILES

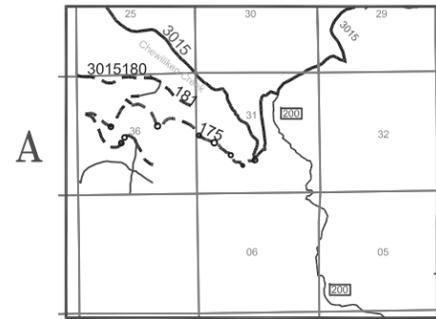
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-6
PACIFIC NORTHWEST REGION

Reviewed and Approved By
District Ranger *Dale Olson* 10/1/13
Forest Engineer *Michael Ballman* 10/23/13

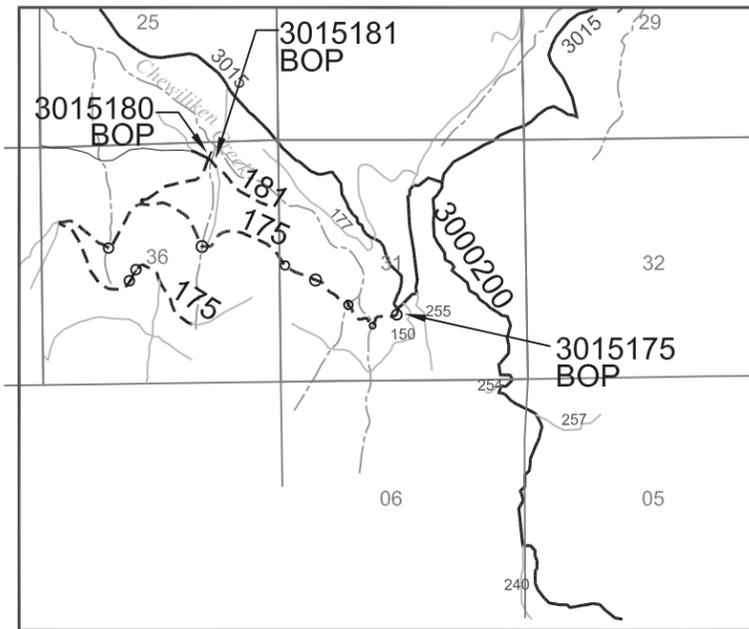
Recommended and Approved By
Zone Engineer *M. Conell* 9/30/13

Designed By *Jim WML* 9/30/13
Reviewed By *Steve Stagg* 9/30/13

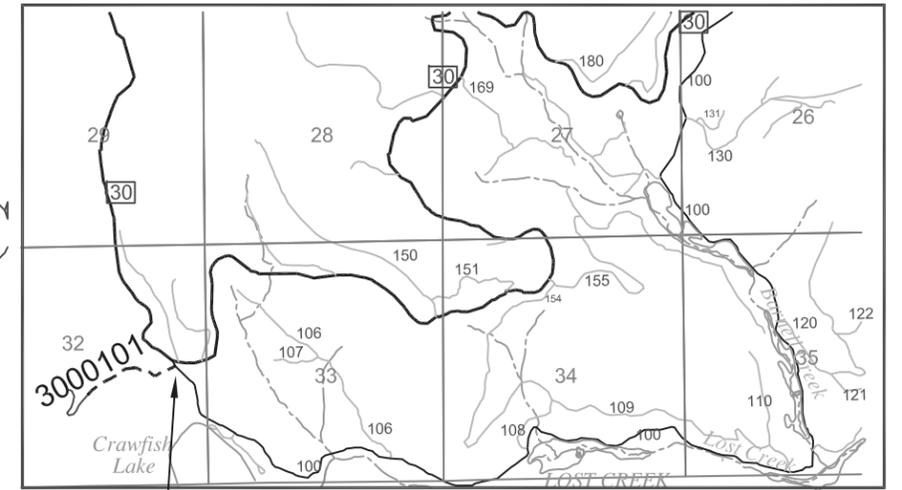
Sheet Title
Sheet 1



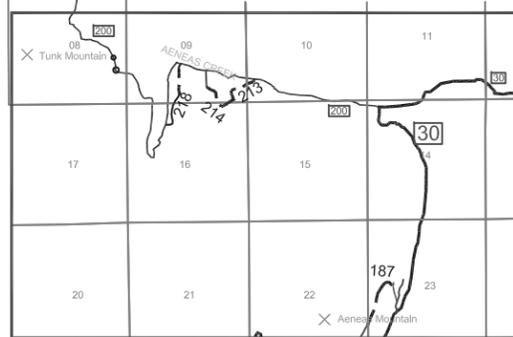
A



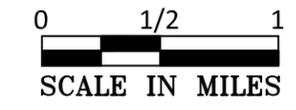
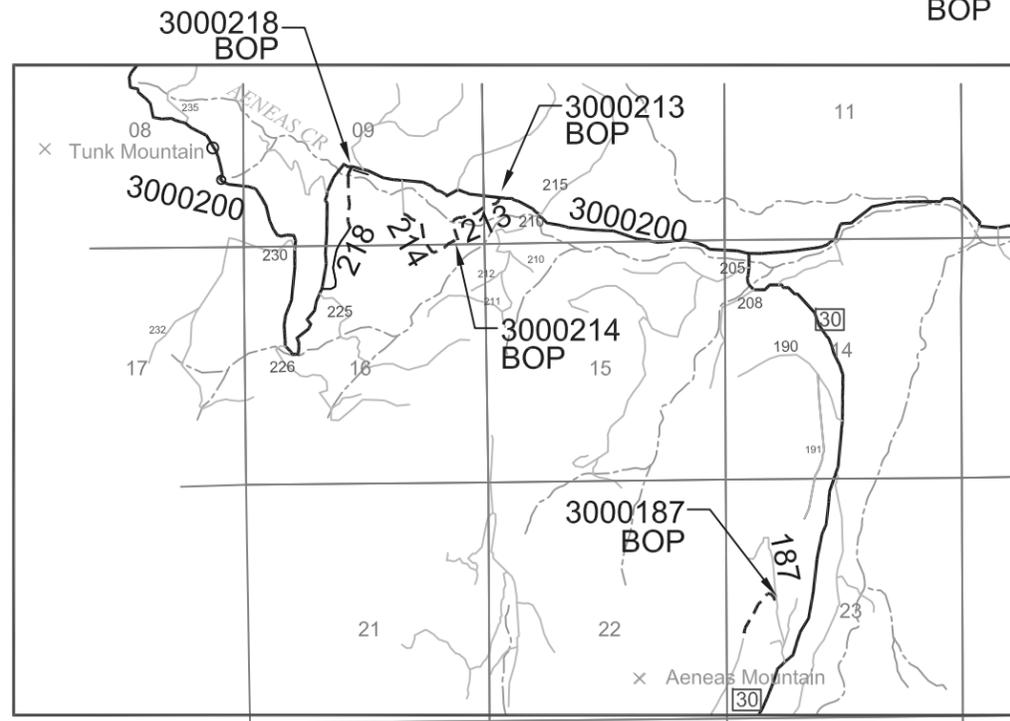
C



B



B



Notes, Symbols & Typical Details

DISPOSAL OF MERCHANTABLE TIMBER (TIMBER MEETING UTILIZATION STANDARDS):

Merchantable timber (timber Meeting Utilization Standards) shall be decked in locations shown on drawings, within reach of standard loading equipment.

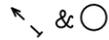
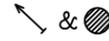
To meet minimum tree specifications, trees must be equal or exceed 7-inches DBH and contain at least one minimum piece. Such timber shall be felled and bucked into log lengths not exceeding 52 ft. Pieces (logs) shall also be considered as meeting Utilization Standards, and be required to be decked, when such pieces would have met Utilization Standards if bucking lengths were varied to include such material. Merchantable timber shall be limbed and bucked. Log decks shall be free of slash and debris. Material not meeting Utilization Standards, including any material remaining after deck removal, shall be disposed of as other construction slash pursuant to Specification 201.04.

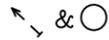
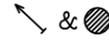
MINIMUM UTILIZATION STANDARDS:

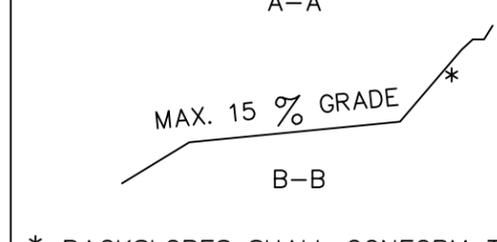
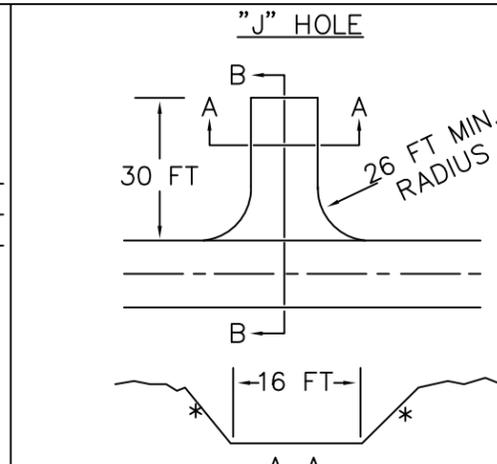
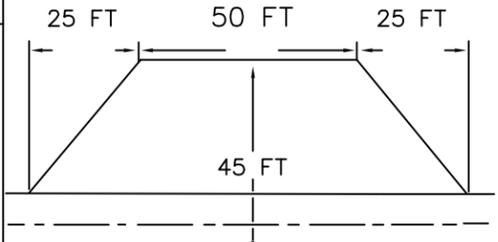
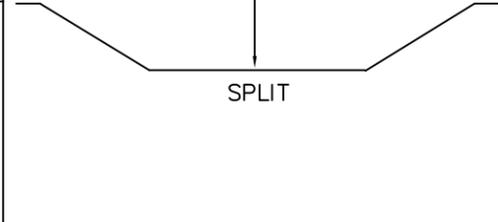
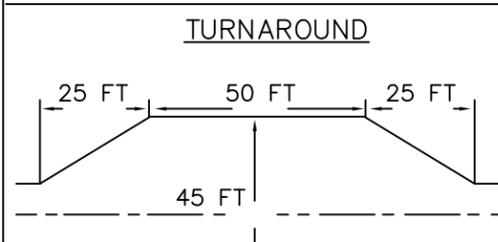
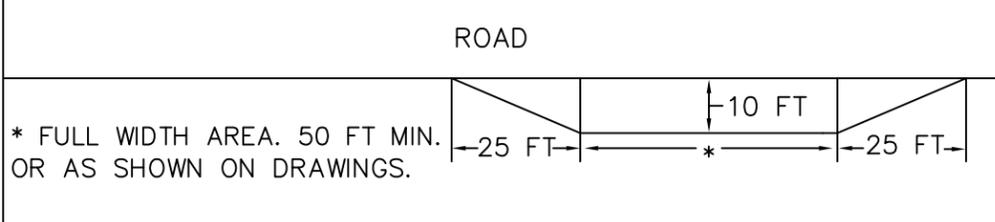
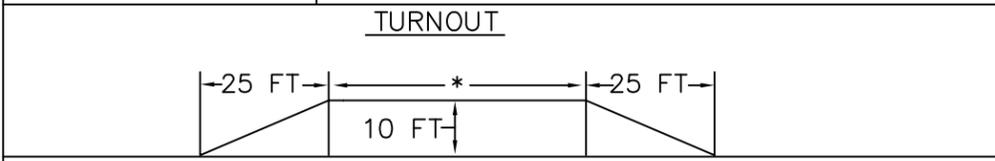
SEE AT.2- Volume Estimate and Utilization Standards.

DISPOSAL OF UNMERCHANTABLE TIMBER: Logs not meeting Utilization Standards which are suitable for use as firewood, may be scattered and decked. Material not suitable for firewood shall be treated by other slash methods.

STAKES: All stakes shall have the following minimum nominal dimensions. Hubs shall be 2 in. X 2 in. X 8 in. Guard, reference, slope, and other stakes shall be 0.3 in. X 1.5 in. X 18 in. Lath shall be 0.4 in. X 1.5 in. X 3 ft. Other dimensions and materials may be used, such as steel reinforcing bars and metal pins, if approved by the Engineer. The color of paint or flagging, as well as the colors for use on stakes for clearing, reference, structures, and slope staking shall be fluorescent orange. Other colors may be used if approved in writing by the Engineer.

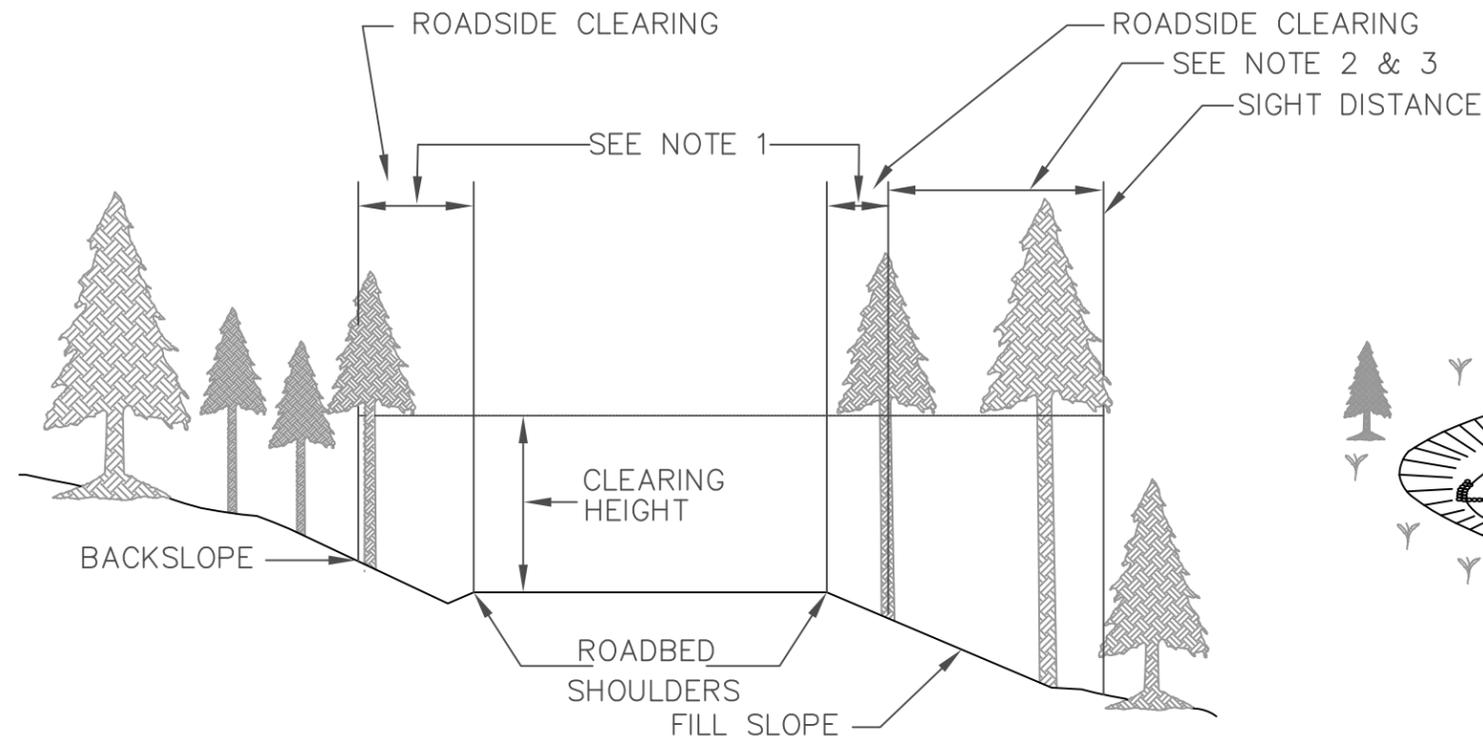
SYMBOLS	DESCRIPTION
BOP, EOP	BEGINNING OF PROJECT, END OF PROJECT
CW	CURVE WIDENING
FW	FULL WIDTH AREA*
TOL, TOR, TOS	TURNOUT LEFT/RIGHT/SPLIT
V	DRAIN DIP
LOD	LEAD-OUT DITCH
	CULVERT (EXISTING)
	CULVERT (INSTALL)

SYMBOLS	DESCRIPTION
BOP, EOP	BEGINNING OF PROJECT, END OF PROJECT
CW	CURVE WIDENING
FW	FULL WIDTH AREA*
TOL, TOR, TOS	TURNOUT LEFT/RIGHT/SPLIT
V	DRAIN DIP
LOD	LEAD-OUT DITCH
	CULVERT (EXISTING)
	CULVERT (INSTALL)



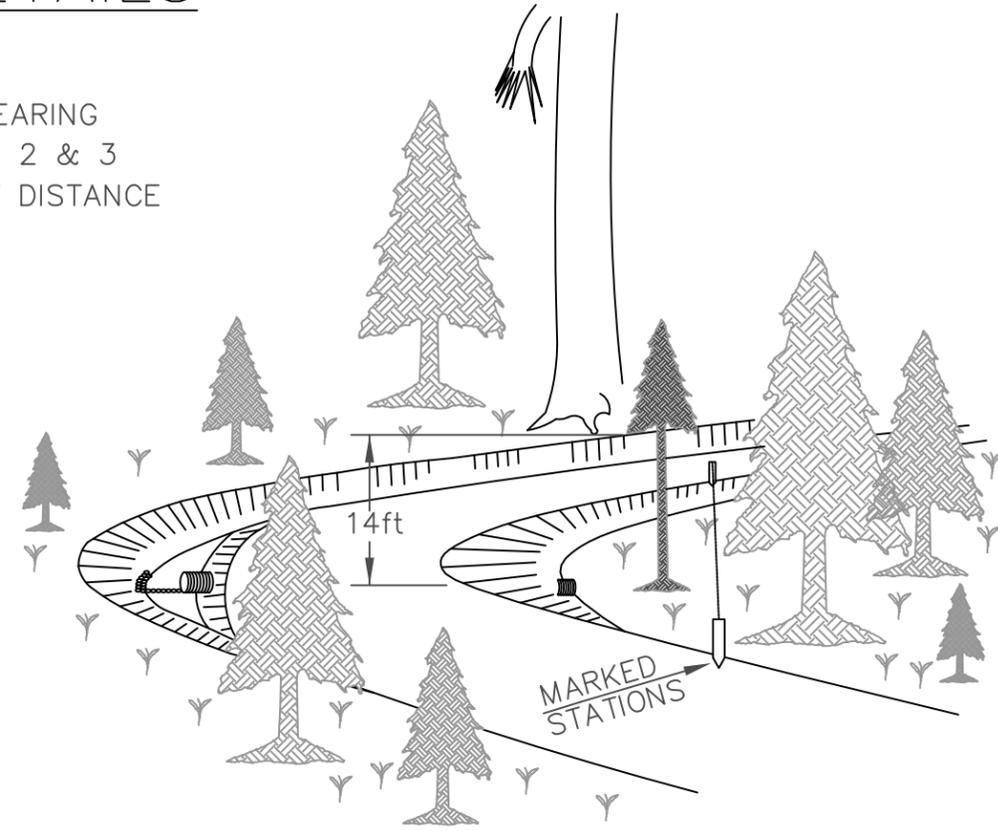
* BACKSLOPES SHALL CONFORM TO CONSTRUCTION TOLERANCES ON ROAD STRUCTURE DETAILS SHEET.

CLEARING DETAILS



CLEARING LIMITS TYPICAL

NO SCALE



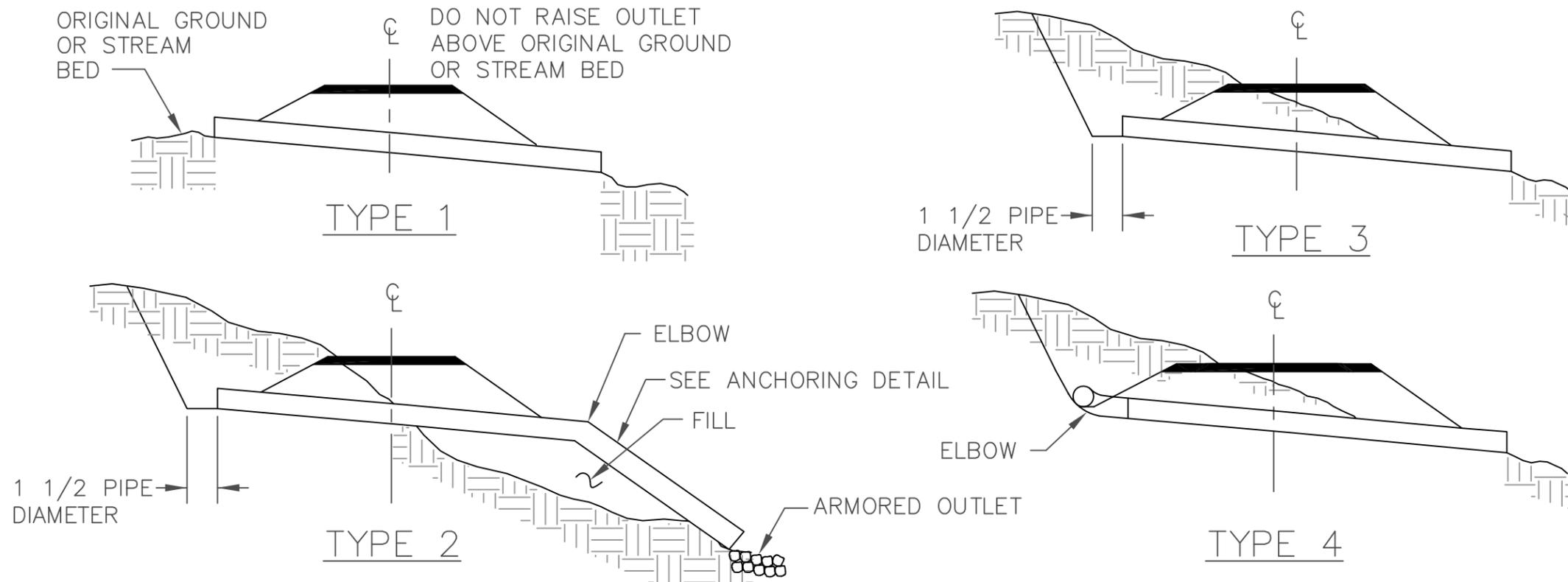
SIGHT DISTANCE TYPICAL

NO SCALE

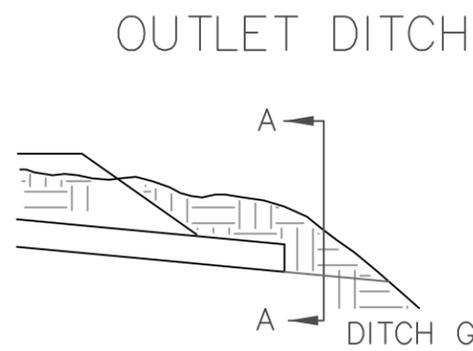
NOTES

1. ALL CONIFERS, HARDWOODS AND BRUSH WITHIN 1 FOOT OF THE OUTSIDE SHOULDER OF THE ROAD AND 1 FOOT FROM THE BOTTOM OF THE DITCH OR INSIDE SHOULDER SHALL BE REMOVED.
2. THE AREA OF SIGHT DISTANCE CLEARING WILL BE FROM THE ROADSIDE CLEARING LIMIT, TO A LINE OF SIGHT BETWEEN THE BEGINNING AND ENDING STATIONS MARKED ON THE GROUND. CONIFERS WITHIN THIS AREA SHALL BE THINNED TO APPROXIMATELY A 12 FEET TRUNK SPACING, EXCEPT WHERE MARKED WITH PAINT OR FLAGGING FOR REMOVAL TO AN ALTERNATE SPACING. ALL HARDWOODS & BRUSH WITHIN THESE LIMITS SHALL BE REMOVED.
3. BRANCHES ON REMAINING CONIFERS SHALL BE TRIMMED FROM GROUND LEVEL TO A CLEARING HEIGHT LIMIT 14 FEET ABOVE THE ROADBED OR TO A LIMIT OF 60% OF THE TREE'S HEIGHT, WHICHEVER IS LESS. LIMBS OF VEGETATION SHALL BE CUT SO AS TO NOT PROTRUDE WITHIN THE CLEARING LIMITS.

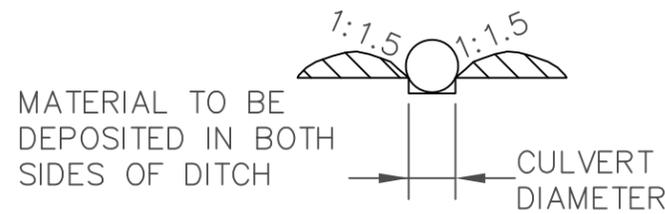
DRAINAGE CONSTRUCTION DETAILS



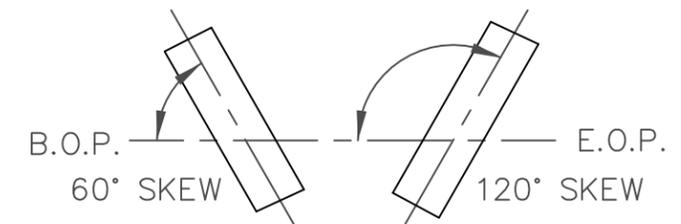
NOTE: MINIMUM COVER OVER CULVERT AT SHOULDER SHALL BE 1ft. BELOW SUBGRADE



SECTION A-A

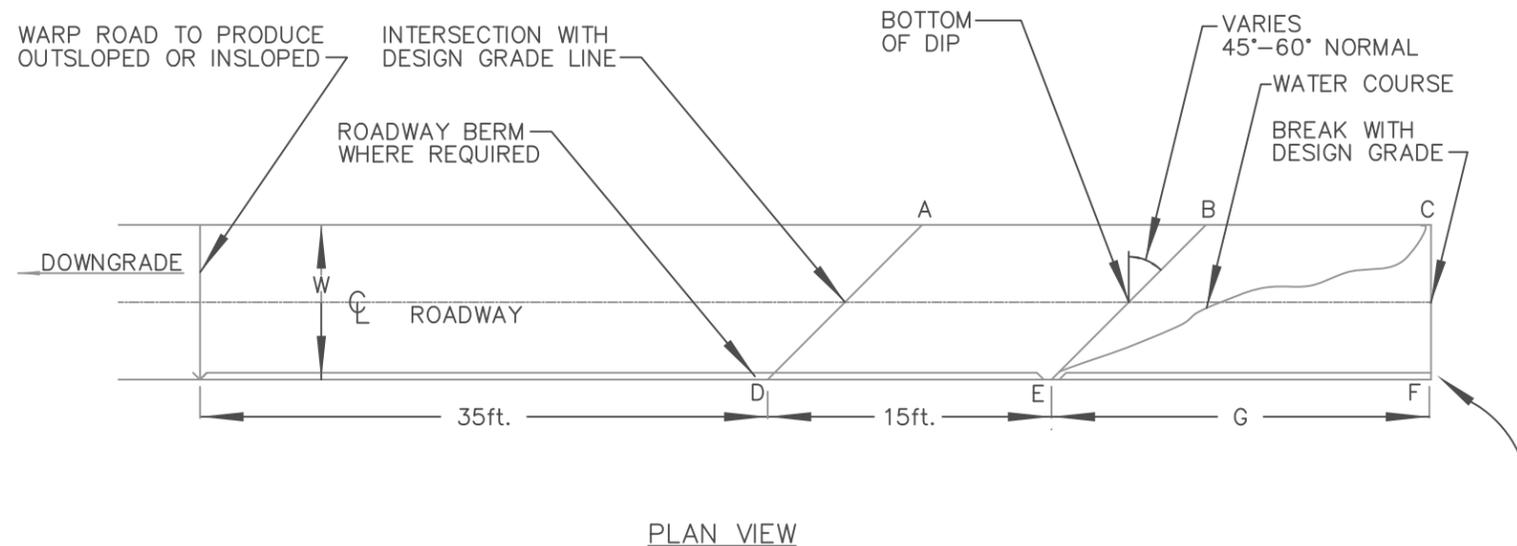


SKEW DIAGRAM



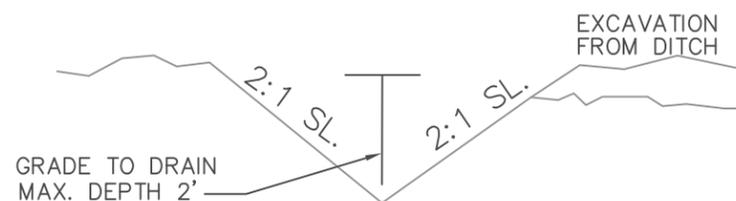
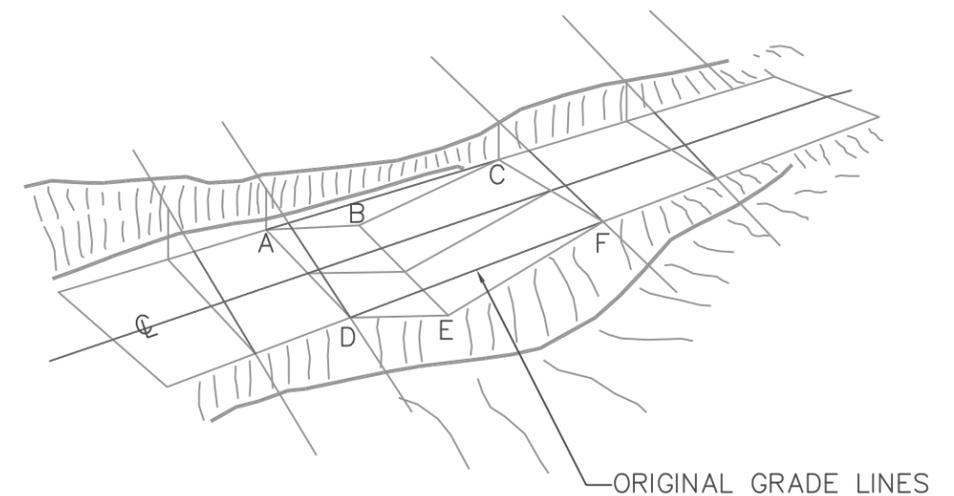
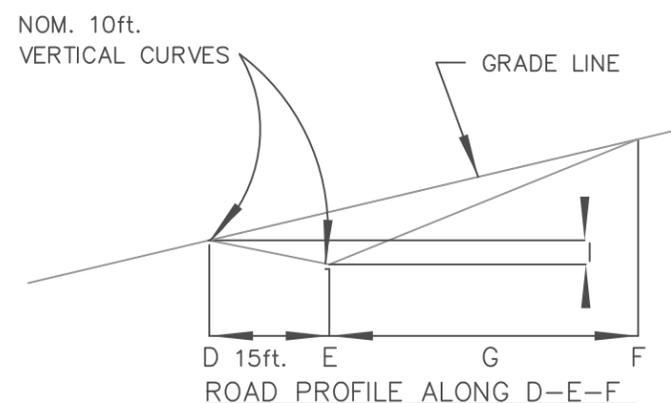
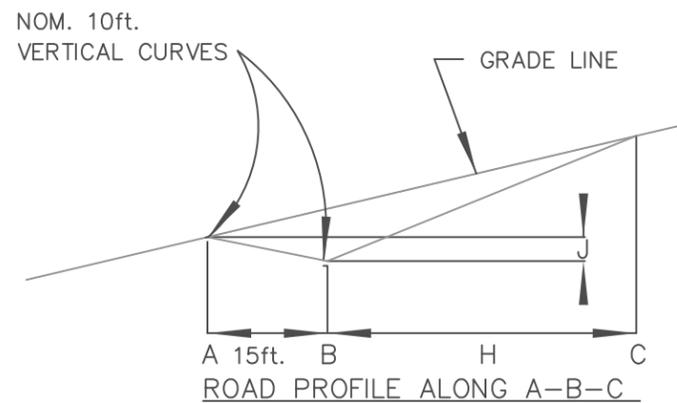
B.O.P. = BEGINNING OF PROJECT
E.O.P. = END OF PROJECT

DRAIN DIP DETAILS



ALL NUMBERS ARE IN FEET
UNLESS STATED OTHERWISE

%	W=12ft. TO 14ft.				W=24ft.			
	LENGTH	DEPTH	LENGTH	DEPTH	LENGTH	DEPTH	LENGTH	DEPTH
UNDER 3	G	H	I	J	G	H	I	J
7	62	50	0.66	0.30	74	50	1.15	0.30
9	72	60	0.66	0.20	84	60	1.25	0.20
	82	70	0.66	0.10	94	70	1.31	0.10



TYPICAL SECTION LEAD-OFF DITCH

NOTE: PLAN SHOWN IS FOR OUTSLOPED ROLLING DIP. DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DISCHARGE INTO A CULVERT, DROP INLET, OVERSIDE DRAIN OR ONTO NATURAL GROUND. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ORIGINAL ROAD GRADE.

Road no.:3000101
 Sta. Work Description
 (FT)
 0+00 Begin Road Reconditioning.
 Begin Clearing
 25+71 End Road Reconditioning
 End Clearing

Road no.:3000187
 Sta. Work Description
 (FT)
 0+00 Begin Road Reconditioning.
 Begin Clearing
 4+90 Construct Drain Dip.
 7+90 Construct Drain Dip.
 11+90 Construct Drain Dip
 14+90 Construct Turnout Left
 16+90 Construct Drain Dip
 17+90 Construct Turnout Left
 19+90 Construct Turnout Left
 28+90 End Road Reconditioning
 End Clearing

Road no.:3000200-I
 Sta. Work Description
 (FT)
 0+00 Begin Ditch Reconstruction
 Clean CMP Inlet and Outlet.
 Place Class 5 Riprap in Ditch
 and Catch Basin
 Begin Road Reconditioning
 0+81 Install 24"X26' CMP, place
 Class 5 Riprap in Catch Basin
 1+91 End Ditch Reconstruction and
 Riprap
 End Road Reconditioning

Road no.:3000200-II
 Sta. Work Description
 (FT)
 0.00 Begin Ditch Reconstruction
 Clean CMP Inlet and Outlet.
 Place Class 5 Riprap in Ditch
 and Catch Basin
 Begin Road Reconditioning
 1+53 Install 24"X28' CMP
 Place Class 5 Riprap in
 Catch Basin
 End Ditch Reconstruction and
 Riprap
 2+53 Begin Ditch Reconstruction
 Clean Catch basin
 3+34 End Ditch Reconstruction
 and Riprap
 End Road Reconditioning

Road no.:3000213
 Sta. Work Description
 (FT)
 10+36 Begin Road Reconditioning
 Begin Clearing
 11+09 Widen road 4' over CMP area,
 material may be taken from cut
 slope
 13+30 Widen road 4' over CMP area,
 material may be taken from cut
 slope
 14+49 End Road Reconditioning
 End Clearing

Road no.:3000214
 Sta. Work Description
 (FT)
 0+00 Begin Road Reconditioning
 Begin Clearing
 6+85 Clear left edge additional 10' for
 turn radius
 Widen road additional 4'
 7+35 End Additional Clearing
 End additional Widening
 7+85 Construct Turnout Right
 15+25 End Road Reconditioning
 End Clearing

Road no.:3000218
 Sta. Work Description
 (FT)
 0+00 Begin Road Reconditioning.
 Begin Clearing
 0+30 Excavate 6" below existing
 drainage and 12' wide
 Place Riprap 6"D x 12"W
 1+15 End Excavation
 End Placement of Riprap
 9+60 End Road Reconditioning
 End Clearing

Road no.:3015175
 Sta. Work Description
 (FT)
 0+00 Begin Road Reconditioning
 Begin Clearing
 1+66 Begin excavation of stream channel
 at inlet. Approximate size of channel
 excavation 4'W x 12'L x 2'D
 Place Riprap in stream channel
 30'W x 12'L x 0.5'D
 10+70 Remove slough from cut slope
 blend material on road
 33+23 Spread Class 5 Riprap in drainage
 12'W x 20'L
 39+93 Spread Class 5 Riprap in drainage
 6'W x 20'L
 48+27 Spread Class 5 Riprap in drainage
 6'W x 20'L
 57+99 Spread Class 5 Riprap in drainage
 6'W x 12'L
 65+58 Spread Class 5 Riprap in drainage
 12'W x 25'L
 88+49 Spread Class 5 Riprap in drainage
 12'W x 30'L
 130+54 Construct armored drain dip,
 12'W x 30'L Class 5 Riprap
 133+43 Construct armored drain dip,
 12'W x 50'L Class 5 Riprap
 149+42 End Road Reconditioning
 End Clearing

Road no.:3015181
 Sta. Work Description
 (FT)
 0+00 Begin Road Reconditioning
 Begin Clearing
 7+96 Construct Drain dip
 Begin Ditch Excavation
 10+84 End Ditch Excavation
 13+45 Construct Drain Dip
 17+60 End Road Reconditioning
 End Clearing

