



FIGURE 1. ROCK CUT SLOPE AND CATCHMENT WIDTH DETAILS

PRESPLIT ROCK SLOPE				
H (m)	VERTICAL		0.25 H : 1 V OR FLATTER	
	W _T (m)	W ₁ (m)	W _T (m)	W ₁ (m)
0-12.2	6.4	0	6.4	0
12.2-15.2	6.4	0	8.2	1.8
15.2-18.3	7.3	0.9	10.1	3.7
18.3-21.3	8.5	2.1	11.3	4.9
21.3-24.4	9.8	3.4	12.5	6.1
24.4-36.6	11.0	4.6	13.7	7.3
36.6-48.8	12.2	5.8	15.5	9.1
48.8-61.0	15.9	9.5	19.2	12.8

TABLE 1. ROCK CUT PRESPLIT SLOPES

FOOTNOTES

- ① SEE GEOTECHNICAL REPORT FOR ALLOWABLE OVERBURDEN CUT SLOPE RECOMMENDATIONS.
- ② OVERBURDEN BENCH TO BE MINIMUM OF 3.0 METERS WIDE AS SPECIFIED IN GEOTECHNICAL REPORT. NO INTERMEDIATE BENCHES ARE TO BE USED UNLESS RECOMMENDED IN THE REPORT.
- ③ TOP OF WEATHERED ROCK ZONE (HENCE, THE THICKNESS -T) WILL BE VARIABLE. GEOTECHNICAL REPORT WILL PROVIDE PROJECT SPECIFIC GUIDANCE ON THICKNESS TO USE IN THE CROSS-SECTION DEVELOPMENT. THIS ZONE MAY CONTAIN ROCK PINNACLES, ROCK LENSES, OR WEATHERED ROCK MIXED WITH SOIL. BLASTING MAY BE REQUIRED TO REMOVE. CONSIDER EXCAVATION ITEM IN THIS ZONE TO BE UNCLASSIFIED, COMMON.
- ④ PRESPLIT SLOPE TO BE PROVIDED FOR SPECIFIC ROCK CUT INTERVALS IN GEOTECHNICAL REPORT. IT IS ASSUMED PRESPLIT FACES WILL BE FORMED OR SCALED OF LOOSE ROCKS AND OVERHANGS IN ACCORDANCE WITH TDOT STANDARD SPECIFICATIONS.
- ⑤ W_T IS HORIZONTAL DISTANCE FROM SHOULDER (MID-POINT OF SLOPE ROUNDING) TO BASE OF PRESPLIT ROCK SLOPE. W_T WILL BE 6.4 METERS OR GREATER IN ALL CASES. FOR ALL FORESLOPES OTHER THAN 6:1, SEE GEOTECHNICAL REPORT.

GENERAL NOTES

- (A) IF W_T CANNOT BE ACHIEVED DUE TO RIGHT-OF-WAY RESTRICTIONS OR EXCESSIVE EXCAVATION, THEN A COMBINATION OF A NARROWER ROCKFALL DITCH (W₁), ROCKFALL CATCHMENT FENCE OR BARRIER, OR ROCKSLOPE MESHING WILL BE REQUIRED. CONTACT GEOTECHNICAL ENGINEERING SECTION OR GEOTECHNICAL CONSULTANT FOR GUIDANCE.
- (B) A UNIFORM CATCHMENT WIDTH (W_T) BASED ON THE HIGHEST ROCK CUT SLOPE (H), SHOULD BE USED.
- (C) FOR LONG CUT SLOPES WHERE A PREDOMINANT CUT HEIGHT EXISTS FOR SEVERAL STATIONS, UTILIZE W_T FOR THAT GIVEN CUT HEIGHT (H). TRANSITION TO VARIOUS CATCHMENT WIDTHS ON A RATIO NO GREATER THAN 1.22 METERS HORIZONTAL W_T PER 30 METER STATION INTERVAL.

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ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DESIGN AND CONSTRUCTION
DETAILS FOR
ROCK CUT SLOPE
AND CATCHMENT