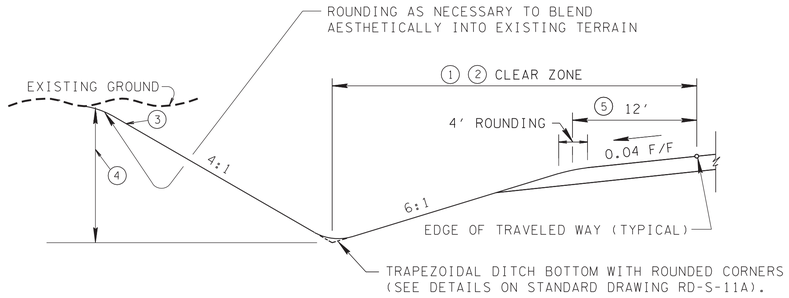
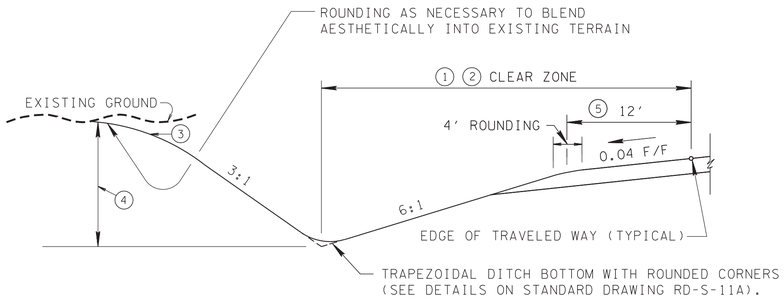
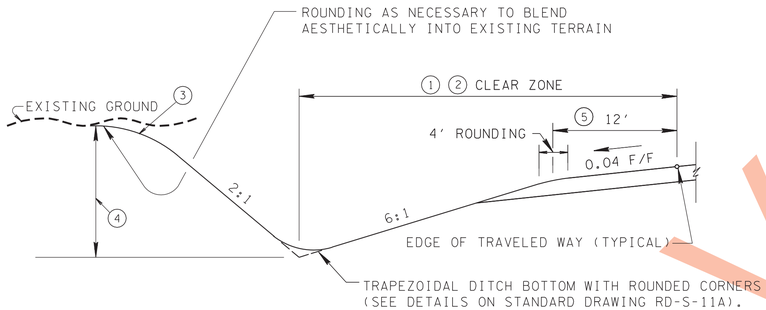
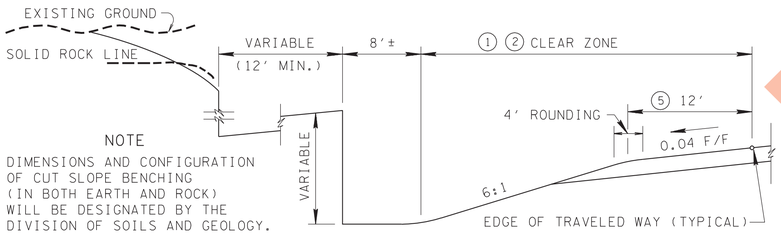






CUT SLOPES IN EARTH



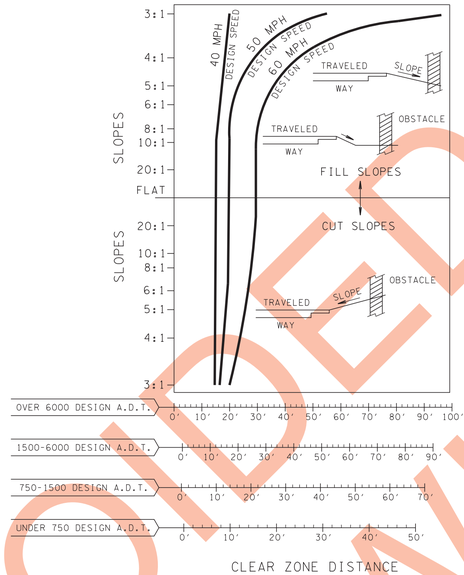
CUT SLOPE IN ROCK

(SHOWING PRE-SPLIT VERTICAL SLOPE)

GENERAL NOTES

(1) CLEAR ZONE IS DEFINED IN AASHTO'S "ROADSIDE DESIGN GUIDE" AS THE TOTAL ROADSIDE BORDER AREA, STARTING AT THE EDGE OF THE TRAVELED WAY, AVAILABLE FOR SAFE USE BY ERRANT VEHICLES. THIS AREA MAY CONSIST OF A SHOULDER, A RECOVERABLE SLOPE, A NON-RECOVERABLE SLOPE, AND/OR A CLEAR RUN-OUT AREA. THE DESIRED WIDTH IS DEPENDENT UPON THE TRAFFIC VOLUMES AND SPEEDS, AND ON THE ROADSIDE GEOMETRY. SEE "ROADSIDE DESIGN GUIDE" FOR MORE DETAILED INFORMATION.

(2) CLEAR ZONE DISTANCES ARE RELATED TO DESIGN SPEED AND TRAFFIC VOLUME AS SHOWN IN THE FOLLOWING CHART:



(3) SLOPES AT THE TOE OF FILLS AND TOP OF CUTS SHALL BE ROUNDED TO BLEND INTO THE EXISTING TERRAIN IN SUCH A MANNER AS TO BE AESTHETICALLY PROPORTIONAL.

GENERAL SLOPE TABLE

CASE I		CASE II	
FILL SLOPES	HEIGHT OF FILL (4)	FILL SLOPES	HEIGHT OF FILL (4)
6:1	0'-7'	4:1	0'-6'
4:1	7'-15'	3:1	6'-8'
3:1	15'-28'	2:1	8'-12'
2:1	OVER 28'	(7) 1.5:1	OVER 12'
CUT SLOPES	DEPTH OF CUT (4)	CUT SLOPES	DEPTH OF CUT (4)
4:1	0'-15'	4:1	0'-6'
3:1	15'-20'	3:1	6'-8'
2:1	OVER 20'	2:1	8'-12'
		(7) 1.5:1	OVER 12'

CASE I : FOR ALL INTERSTATE, ARTERIALS AND HIGH SPEED COLLECTORS (50 MILES PER HOUR OR GREATER) HIGH VOLUME (CURRENT ADT OVER 400).

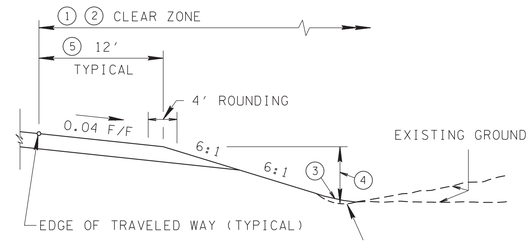
CASE II: FOR LOCAL ROADS AND STREETS AND COLLECTORS NOT COVERED IN CASE I.

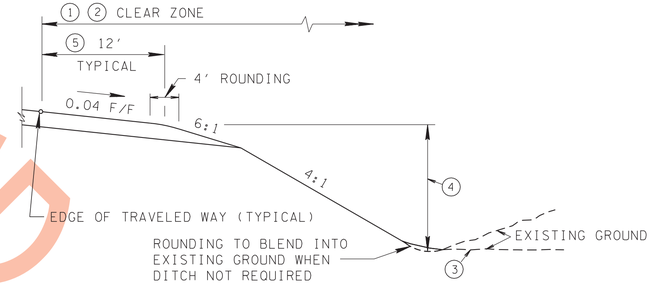
SPECIAL NOTE

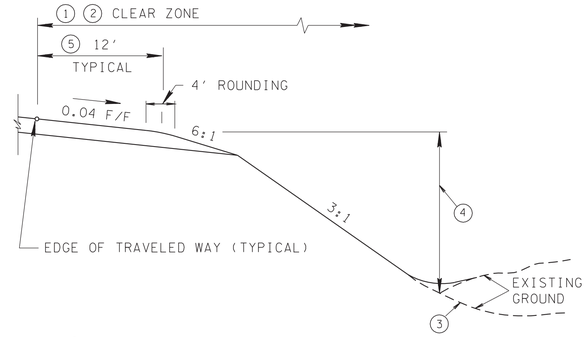
SHOULDER DETAILS SHOWN ON THIS SHEET ARE APPLICABLE TO OUTSIDE SHOULDER ONLY, ON PROJECTS AS DESCRIBED IN CASE I ABOVE. FOR DETAILS OF INSIDE SHOULDERS ON MULTI-LANE ROADWAYS, SEE APPROPRIATE STANDARD DRAWINGS. SOME SHOULDERS MAY BE LESS THAN 12 FEET SHOWN. FOR OUTSIDE SHOULDER DETAILS APPLICABLE TO PROJECTS AS DESCRIBED IN CASE II, SEE STANDARD DRAWINGS RD-TS-1 OR RD-TS-2.

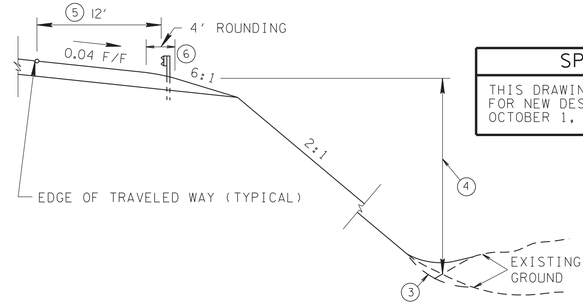
(4) HEIGHT OF CUT AND FILL SHOWN IN GENERAL SLOPE TABLE.

(5) THESE DISTANCES ARE FOR USE WITH CASE I SLOPE CHART. FOR CORRECT SHOULDER WIDTH SEE APPROPRIATE DRAWING IN THE RD-TS-SERIES.









SPECIAL NOTE

THIS DRAWING IS NOT TO BE UTILIZED FOR NEW DESIGN PROJECTS BEGUN AFTER OCTOBER 1, 2002.

FILL SLOPES

(6) GUARDRAIL IS REQUIRED ON ALL 2:1 SLOPES, AND ON ANY OTHER SLOPES WHERE UNREMOVABLE HAZARDS EXIST WITHIN THE CLEAR ZONE.

(7) FILL AND/OR CUT SLOPES STEEPER THAN 2:1 ARE TO BE USED ONLY WHEN RECOMMENDED OR APPROVED BY THE SOILS AND GEOLOGY SECTION. WITHOUT THEIR APPROVAL OR RECOMMENDATION, USE 2:1 SLOPES FOR ALL FILL AND/OR CUT SLOPES GREATER THAN 12 FEET.

REV. 4-4-77: CHANGED DWG. NO. FROM RD-S-1 TO RD-S-11 AND CROSS-REFERENCE TO DWG. NOS. RD-S-12, RD-S-13 AND RD-S-15.

REV. 1-11-82: CHANGED SHOULDER WIDTHS IN FILL AREAS.

REV. 6-11-89: CHANGED CLEAR ZONE CHART AND SLOPE GUIDELINES.

REV. 9-10-90: REDREW SHEET AND UPDATED TO TO CURRENT STANDARDS.

☒ REV. 10-26-93: ADDED NOTE (7) REGARDING USE OF 1.5:1 SLOPES.

☒ REV. 3-20-02: ADDED SPECIAL NOTE.

☒ REV. 3-31-03: CHANGED EFFECTIVE DATE IN SPECIAL NOTE.

☒ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT

RD-S-11