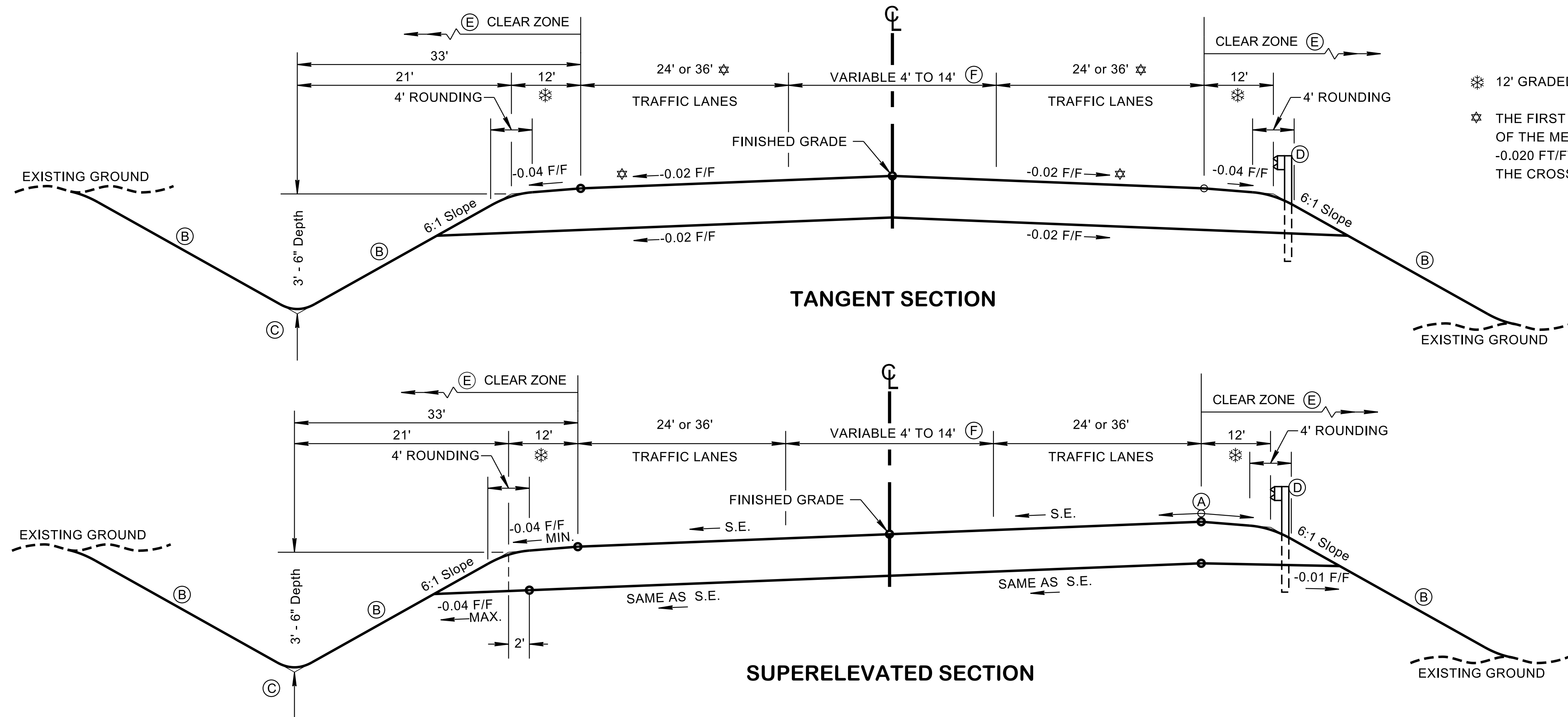


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LEGEND

- ⊛ 12' GRADED / 10' PAVED SHOULDER
- ☆ THE FIRST 24' OF TRAFFIC LANES (FIRST & SECOND LANE AND ONE HALF OF THE MEDIAN ON EACH SIDE OF THE ROADWAY) THE CROSS-SLOPE IS -0.020 FT/FT AND THE TRAFFIC LANES FROM 24' TO 36' (THE THIRD LANE) THE CROSS-SLOPE IS -0.025 FT/FT.

**TABLE I
DESIGN SPEEDS FOR RURAL
ARTERIAL ROADS (SEE PAGE 7-2) (H)**

TYPE OF TERRAIN	DESIGN SPEED (MPH)
LEVEL	60-70
ROLLING	50-60
MOUNTAINOUS	40-50

TABLE II 4 AND 6 LANE ARTERIAL - DESIGN STANDARDS (G)

DESIGN STANDARDS (FOR GIVEN DESIGN SPEED)	DESIGN SPEEDS (MPH)										REMARKS
	30	35	40	45	50	55	60	65	70		
MINIMUM RADIUS (FEET) 0.04 MAX. S.E.	250	371	533	711	926	1190	1500				
MINIMUM RADIUS (FEET) 0.06 MAX. S.E.	231	340	485	643	833	1060	1330				SEE PAGE 3-32
MINIMUM RADIUS (FEET) 0.08 MAX. S.E.	214	314	444	587	758	960	1200	1480	1810		
MAXIMUM RURAL GRADES %	LEVEL TERRAIN			5	5	4	4	3	3	3	
	ROLLING TERRAIN			6	6	5	5	4	4	4	SEE PAGE 7-4
	MOUNTAINOUS TERRAIN			8	7	7	6	6	5	5	
MAXIMUM URBAN GRADES %	LEVEL TERRAIN	8	7	7	6	6	5	5			
	ROLLING TERRAIN	9	8	8	7	7	6	6			SEE PAGE 7-29
	MOUNTAINOUS TERRAIN	11	10	10	9	9	8	8			
MINIMUM STOPPING SIGHT DISTANCE (FEET)	200	250	305	360	425	495	570	645	730		SEE PAGE 7-3
MINIMUM "K" VALUE	CREST VERTICAL CURVE	19	29	44	61	84	114	151	193	247	SEE PAGE 3-155
	SAG VERTICAL CURVE	37	49	64	79	96	115	136	157	181	SEE PAGE 3-161

FOR SUPERELEVATION SEE STANDARD DRAWINGS RD11-SE SERIES

DESIGN NOTES

(A) THE SLOPE OF THE SHOULDER AND THE ROADWAY PAVEMENT SHOULD NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7%.

(B) SEE STANDARD DRAWING RD11-S-11 FOR FILL AND CUT SLOPE TABLES. ROUNDING ON TOP OF CUT SLOPES AND TOE ROUNDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPES SPECIAL ROCK TREATMENT AND SUBGRADE ROUNDING IF APPLICABLE.

(C) SEE STANDARD DRAWING RD11-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPES.

(D) SEE STANDARD DRAWING S-PL-6 FOR TYPICAL GUARDRAIL PLACEMENT.

(E) SEE STANDARD DRAWING S-CZ-1 FOR CLEAR ZONE CRITERIA. SEE THE "ROADSIDE DESIGN GUIDE", AASHTO, 2011, FOR FURTHER INFORMATION REGARDING CLEAR ZONE.

(F) 4 - 6 FEET MEDIAN WIDTH ALLOWED UNDER RESTRICTIVE CONDITIONS. 12 FEET MINIMUM MEDIAN WIDTH IS PREFERRED (SEE PAGE 7-14).

(G) ALTHOUGH THE SELECTED DESIGN SPEED ESTABLISHES THE LIMITING VALUES OF CURVE RADIUS AND MINIMUM SIGHT DISTANCE THAT SHOULD BE USED IN DESIGN, THERE SHOULD BE NO RESTRICTION ON THE USE OF FLATTER HORIZONTAL CURVES OR GREATER SIGHT DISTANCES WHERE SUCH IMPROVEMENTS CAN BE PROVIDED AS A PART OF AN ECONOMICAL DESIGN (SEE PAGE 2-55).

(H) URBAN DESIGN SPEEDS ARE GENERALLY IN THE RANGE OF 30 TO 60 MILES PER HOUR (SEE PAGE 7-27).

GENERAL NOTES

(1) FOR SPECIFIC CONDITIONS NOT COVERED ON THIS SHEET, REFERENCE SHOULD BE MADE TO "A POLICY OF GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" AASHTO, 2011 (GREEN BOOK).

(2) PAGE NUMBERS REFERRED TO ON THIS DRAWING ARE FROM "A POLICY OF GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" AASHTO, 2011 (GREEN BOOK), UNLESS OTHERWISE NOTED.

(3) REFERENCE SHOULD ALSO BE MADE TO THE AASHTO "ROADSIDE DESIGN GUIDE," AASHTO, 2011.

(4) DESIRABLE RIGHT-OF-WAY IS SLOPE LINES PLUS FIFTEEN FEET TO TWENTY FEET.

(5) THE DESIGN OF BRIDGES, CULVERTS, WALLS, TUNNELS AND OTHER STRUCTURES SHALL BE IN ACCORDANCE WITH THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, THE DESIGN LOADING SHOULD BE THE HL-93 CALIBRATED LIVE LOAD DESIGNATION.

(6) FOR EXISTING BRIDGES TO REMAIN IN PLACE, THEY SHOULD HAVE ADEQUATE STRUCTURAL STRENGTH AND A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE TRAVELED WAY PLUS 2 FEET CLEARANCE ON EACH SIDE. BRIDGES SHOULD BE CONSIDERED FOR ULTIMATE WIDENING OR REPLACEMENT IF THEY DO NOT PROVIDE AT LEAST HL-93 LIVE LOADING CAPACITY. AS AN INTERIM MEASURE, FOR NARROW BRIDGES, SPECIAL SIGNING AND DELINEATION TREATMENTS MAY BE CONSIDERED.

(7) FOR ADDITIONAL URBAN DESIGN GUIDANCE AND CRITERIA, SEE PAGES 7-26 THROUGH 7-56.

(8) MINIMUM PASSING SIGHT DISTANCE IS NOT APPLICABLE FOR FOUR AND SIX LANE DIVIDED HIGHWAYS.

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

**DESIGN STANDARDS
FOR ARTERIAL
HIGHWAYS WITH
FLUSH MEDIAN
(4 AND 6 LANE)**

01-01-2019 RD11-TS-3B