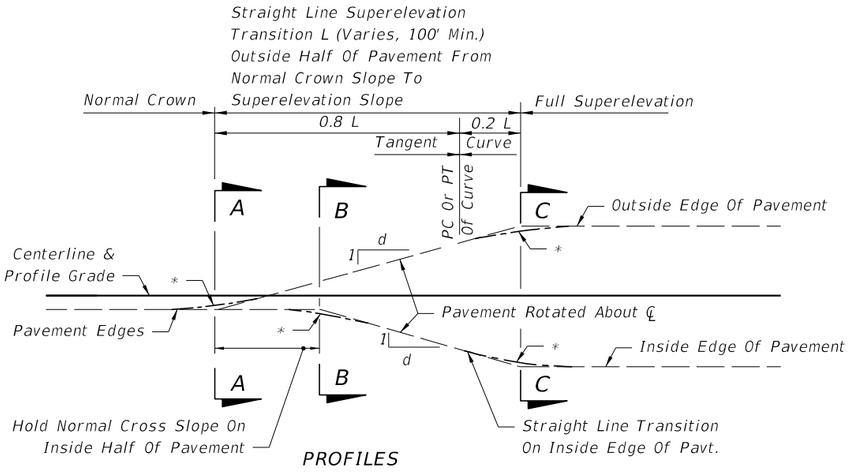
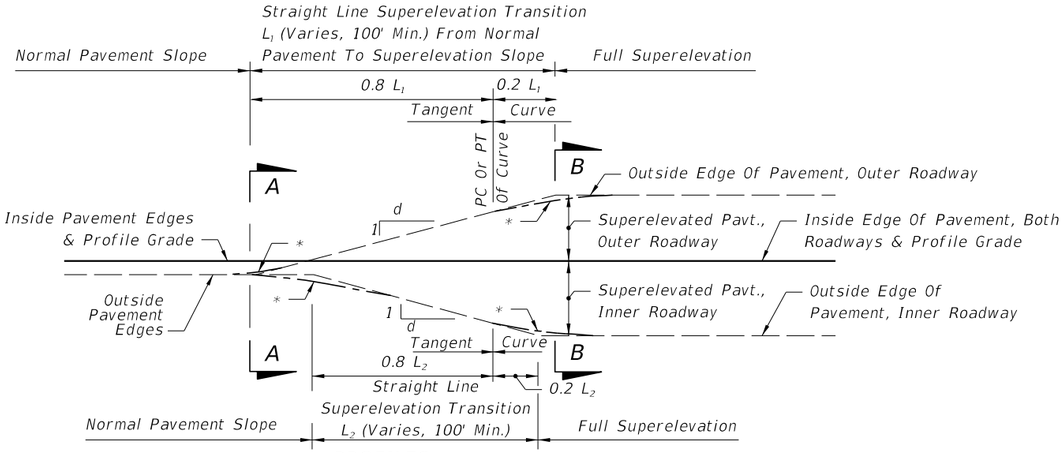


PROFILES

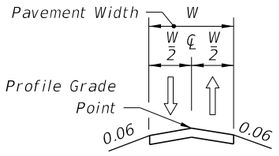
SLOPE RATIOS FOR SUPERELEVATION TRANSITIONS				
NUMBER OF LANES IN ONE DIRECTION	DESIGN SPEED, MPH			
	25-40	45-50	55-60	65-70
	1 : d			
1 Lane & 2 Lane	1:175	1:200	1:225	1:250
3 Lane	--	1:160	1:180	1:200
4 Lane or More	--	1:150	1:170	1:190

The length of superelevation transition is to be determined by the relative slope between the travel way edge of pavement and the profile grade, except that the minimum length of transition shall be 100 ft.

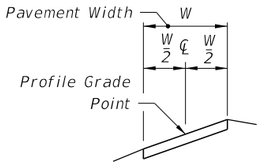
* Short Vertical Curves Are To Be Used On Construction To Avoid Angular Breaks In Edge Profiles



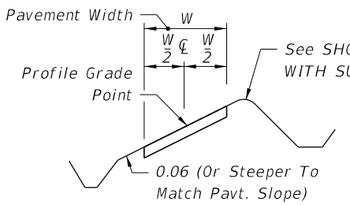
PROFILES



NORMAL CROWN SECTION AA



REVERSE CROWN SECTION BB

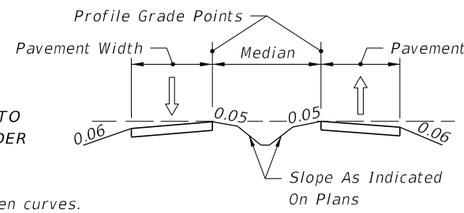


FULLY SUPERELEVATED SECTION CC

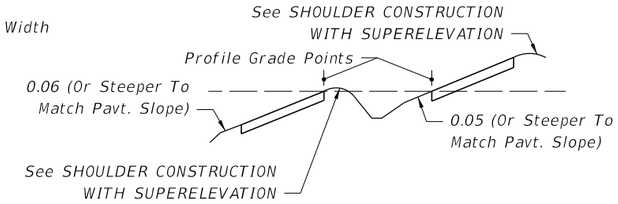
THESE TRANSITION DETAILS ARE TO APPLY IN ALL CASES, EXCEPT UNDER THE FOLLOWING CONDITIONS:

1. Curves of insufficient length.
2. Insufficient tangent length between curves.
3. Deficient transition distance between a curve and other control point(s).
4. At PCC's or PRC's (Runoff rates are applicable).

Transitions for these exceptions are to be as detailed in the plans.



NORMAL SECTION SECTION AA



FULLY SUPERELEVATED SECTION BB

2-LANE, 4-LANE OR 6-LANE PAVEMENT, NO MEDIAN

2-LANE, 4-LANE OR 6-LANE PAVEMENT WITH MEDIAN

SUPERELEVATION TRANSITIONS

SYMBOL:

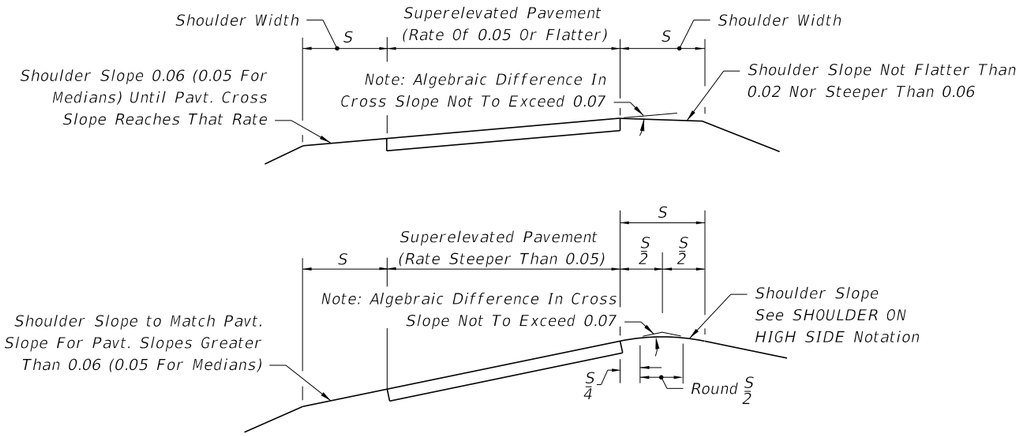
⇨ Direction of Traffic

NOTES:

1. These details apply to both paved and grassed shoulders. For median shoulders use 0.05 in lieu of 0.06.

2. SHOULDER ON HIGH SIDE: A shoulder slope of 0.06 downward from the edge of travel way will be maintained until a 0.07 break in slope at the pavement edge is reached due to superelevation of the pavement. As the pavement superelevation increases, the 0.07 break in slope will be maintained and the shoulder flattened until the shoulder slope reaches the minimum of 0.02 downward from the edge of travel way. Any further increase in pavement superelevation will necessitate sloping the inside half of the shoulder toward the travel way and the outer half outward, both at 0.02 for superelevations 0.06–0.09 and both at 0.03 for superelevation 0.10. For shoulders with paved widths 5 feet or less see Special Shoulder Break Over Details on Sheet 2 of 2.

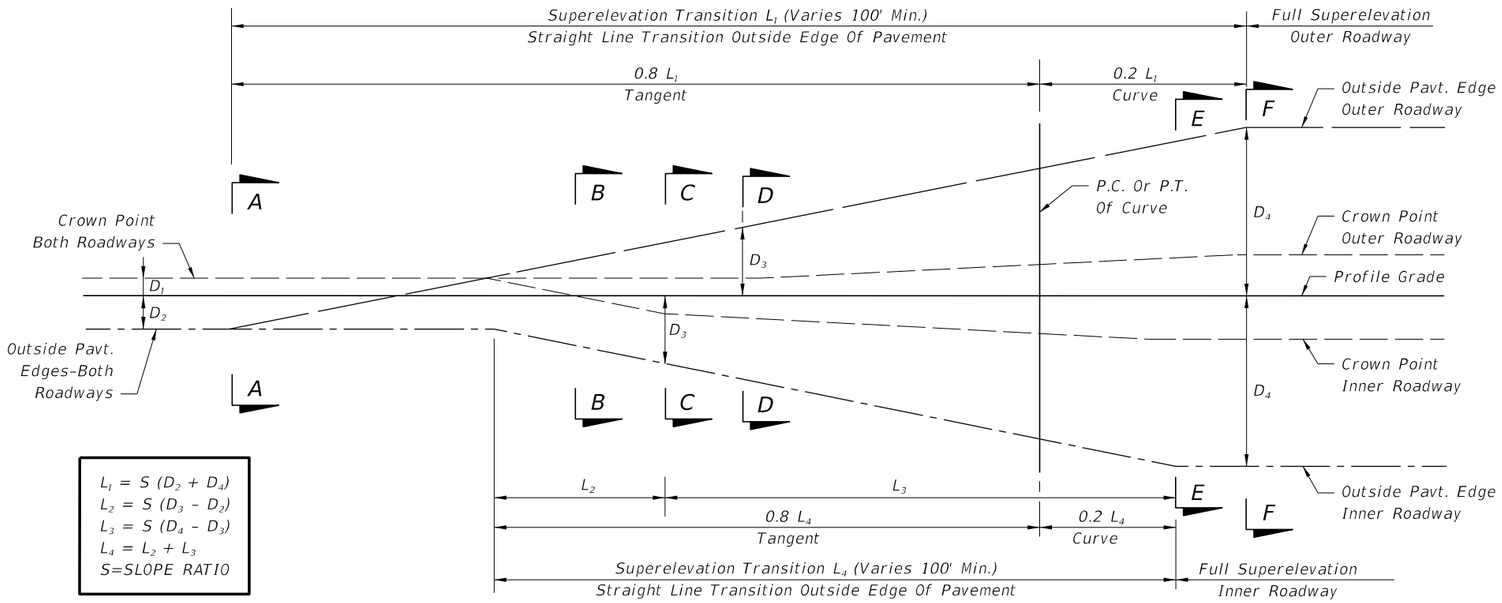
3. SHOULDER ON LOW SIDE: Maintain 0.06 cross slope across shoulder until pavement cross slope reaches 0.06. For pavement cross slopes greater than 0.06, shoulder to have same slope as pavement. See SHOULDER SLOPES ON SUPERELEVATION SECTION (Sheet 2).



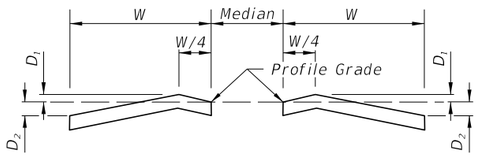
SHOULDER CONSTRUCTION WITH SUPERELEVATION

10/16/2024 8:01:28 AM

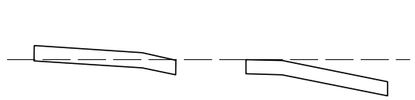
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/23			FY 2025-26 STANDARD PLANS	SUPERELEVATION TRANSITIONS - HIGH SPEED ROADWAYS	000-510	1 of 2



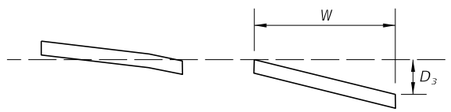
$L_1 = S\ (D_2 + D_4)$
$L_2 = S\ (D_3 - D_2)$
$L_3 = S\ (D_4 - D_3)$
$L_4 = L_2 + L_3$
S=SLOPE RATIO



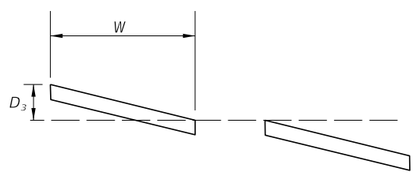
SECTION A-A
NORMAL CROWNED SECTION



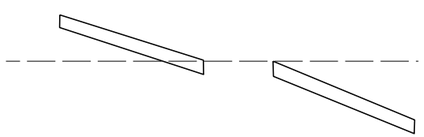
SECTION B-B
SUPERELEVATION SECTION LT. & RT.



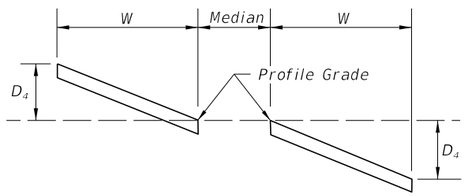
SECTION C-C
SUPERELEVATION SECTION LT.
PLANE INCLINED SECTION RT.



SECTION D-D
PLANE INCLINED SECTION LT.
SUPERELEVATION TRANSITION RT.

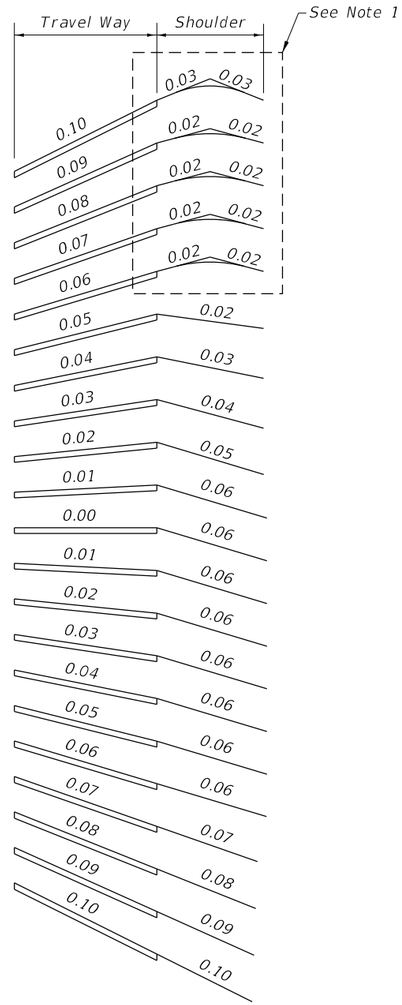


SECTION E-E
SUPERELEVATION TRANSITION LT.
FULL SUPERLEVATION RT.



SECTION F-F
FULL SUPERELEVATION LT. & RT.

8-LANE PAVEMENT WITH TWO LANES SLOPED TO MEDIAN

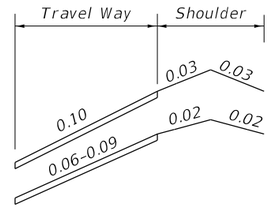


SLOPES OF TRAVELED WAY
AND ABUTTING SHOULDERS

SHOULDER SLOPES ON SUPERELEVATION SECTIONS

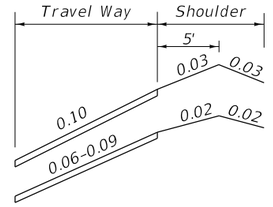
1. For shoulders with paved widths 5 feet or less see special shoulder break over details.

2. For Concrete pavement, the first 1'-0" of the outside shoulder is cast with the outside travel lane and will have the same cross slope as the outside lane. The shoulder break over will occur at the outside edge of the outside slab.

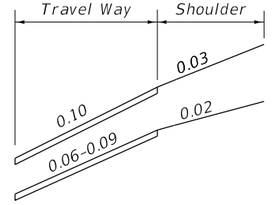


a) 12' AND 10' FULL WIDTH SHOULDERS WITH 5' OR LESS PAVED WIDTHS,

b) 8' FULL WIDTH SHOULDERS WITH 4' OR LESS PAVED WIDTHS,



8' FULL WIDTH SHOULDER
WITH 5' PAVED WIDTH



6' FULL WIDTH SHOULDER
WITH 5' OR LESS PAVED WIDTH

SPECIAL SHOULDER BREAK OVER DETAILS

9/10/2024 10:32:36 AM

LAST REVISION	REVISION	DESCRIPTION:			
11/01/18			FY 2025-26 STANDARD PLANS	SUPERELEVATION TRANSITIONS - HIGH SPEED ROADWAYS	INDEX 000-510 / SHEET 2 of 2