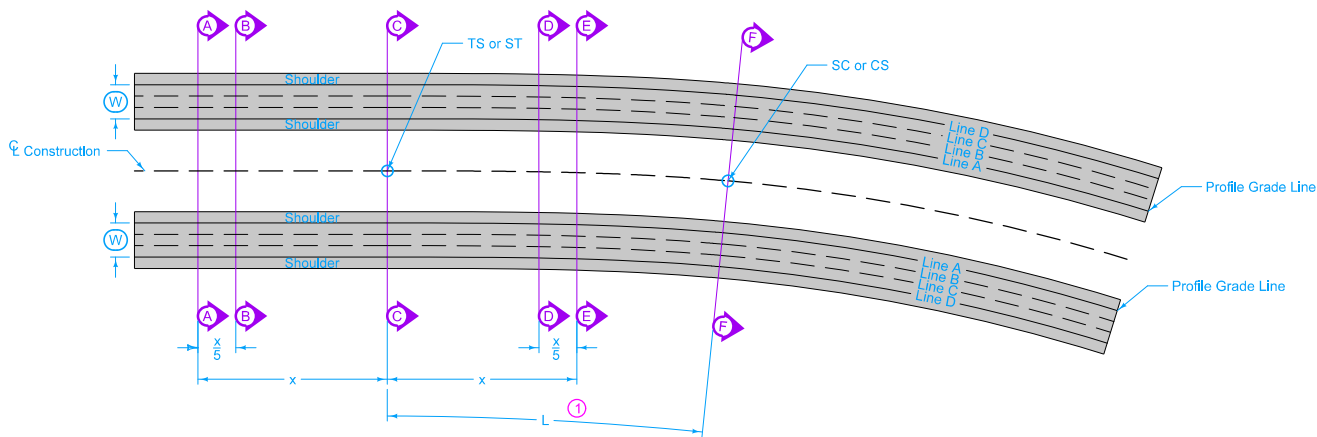


TRANSITION DETAILS - TANGENT TO CURVE



TRANSITION DETAILS - SPIRAL CURVE

Refer to specific curve data contained in project plans for tangent runoff length (x), runoff length (L) and full superlevation (e).

When spiral curve transitions are not required:
Place 70% of full superlevation at the PC and PT.
Place 30% of the runoff length within the curve.

Unless otherwise specified, all lengths are measured along the centerline of construction.

Superelevations on this standard are shown for curves to the right. Curves to the left are a mirror image of what is shown.

Smooth curves should be established at the time of construction at sections A-F along the profile edges of lines A-D.

Axis of rotation coincides with profile grade location.

m = 30% of Runoff Length (L)

W = 36' Regardless of Pavement Width

g = Normal Cross Slope (2.5%)

L = Distance to Change Cross Slope from 0% to e



e = Superlevation Rate

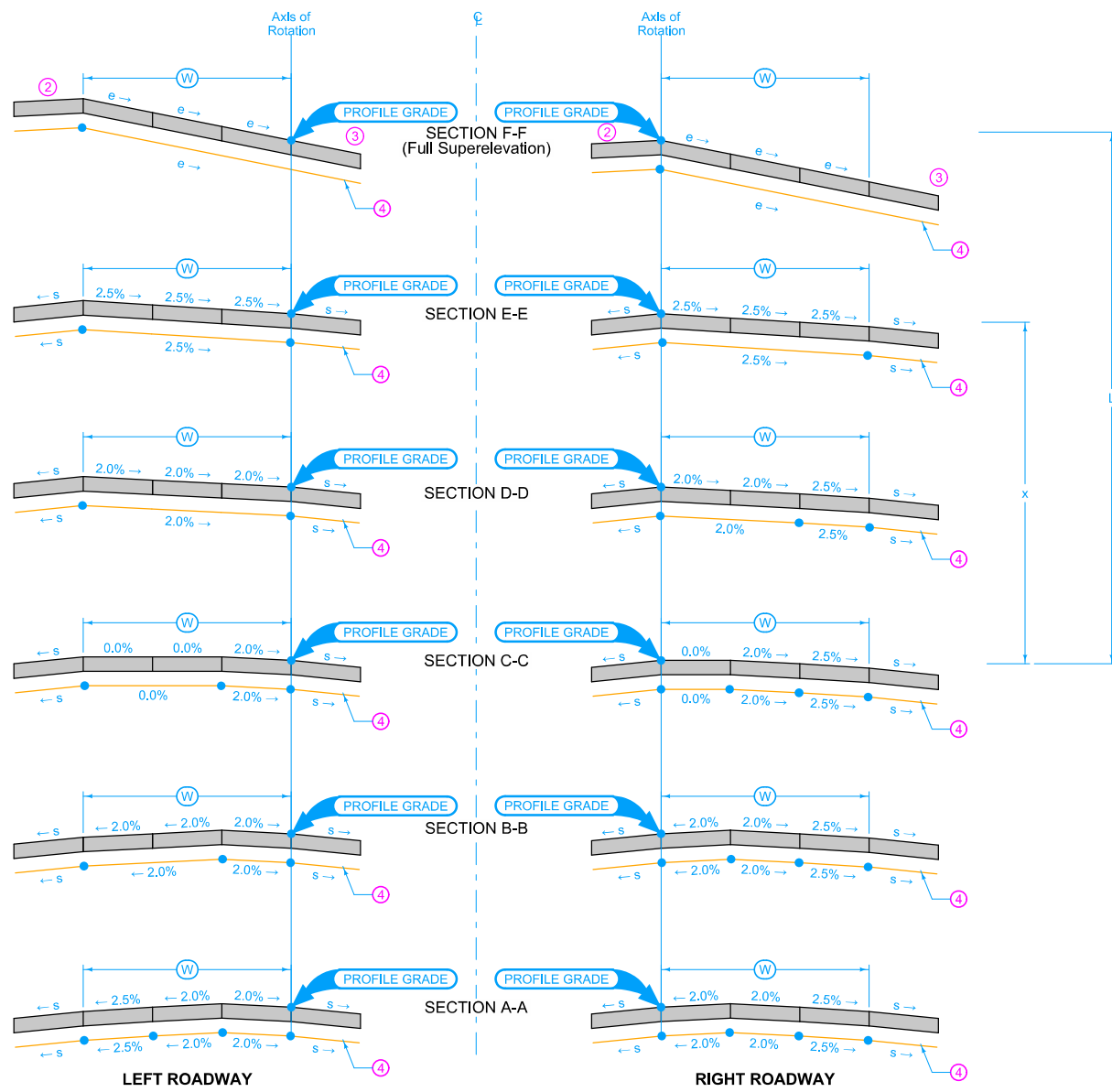
x = Distance to Change Cross Slope from 0% to 2.5%

s = Normal Shoulder Slope

① Spiral curve length coincides with runoff length (L)

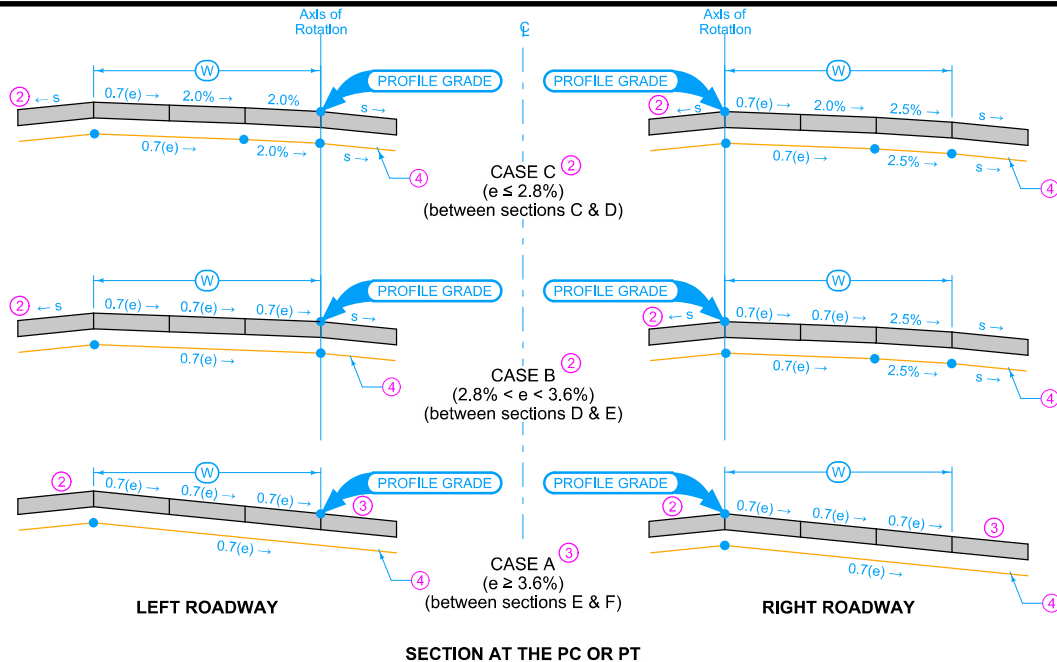
Possible Tabulation:
101-18

 Iowa Department of Transportation	REVISION
	1 04-17-12
STANDARD ROAD PLAN	PV-304
SHEET 1 of 4	
REVISIONS: Updated Diagrammatic Profiles of the Pavement Edge Lines on sheet 4. Added Possible Tabulation, Modified circle note 2.	
 APPROVED BY DESIGN METHODS ENGINEER	
SUPERELEVATION DETAILS SIX LANE ROADWAY DEPRESSED MEDIAN	

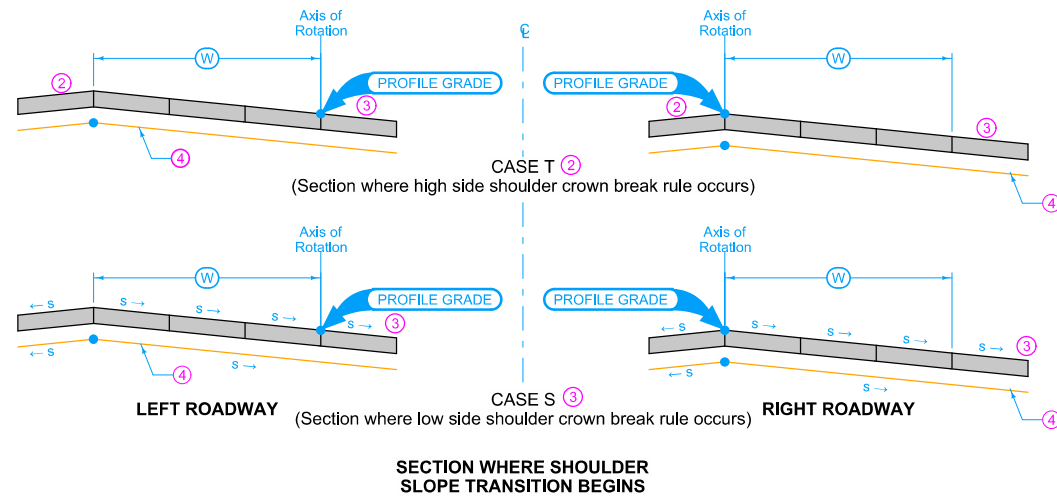


- ② High Side Shoulder: Maintain normal shoulder cross slope (s), until the cross slope break with the adjacent pavement reaches 8.0%. Maintain 8% breakover until superelevation rate reaches 7%. If superelevation rate exceeds 7.0%, maintain a 1% shoulder cross slope away from the adjacent pavement.
- ③ Low Side Shoulder: Maintain normal shoulder cross slope (s) until the adjacent pavement slope equals s, then slope the shoulder at the same cross slope as the adjacent pavement.
- ④ Subgrade Surface: Subgrade surface cross slope parallel to pavement surface cross slope.

 Iowa Department of Transportation	REVISION
	1 04-17-12
	PV-304
STANDARD ROAD PLAN	
SHEET 2 of 4	
REVISIONS: Updated Diagrammatic Profiles of the Pavement Edge Lines on sheet 4. Added Possible Tabulation, Modified circle note 2.	
<i>Deanna Maifield</i> APPROVED BY DESIGN METHODS ENGINEER	
SUPERELEVATION DETAILS SIX LANE ROADWAY DEPRESSED MEDIAN	

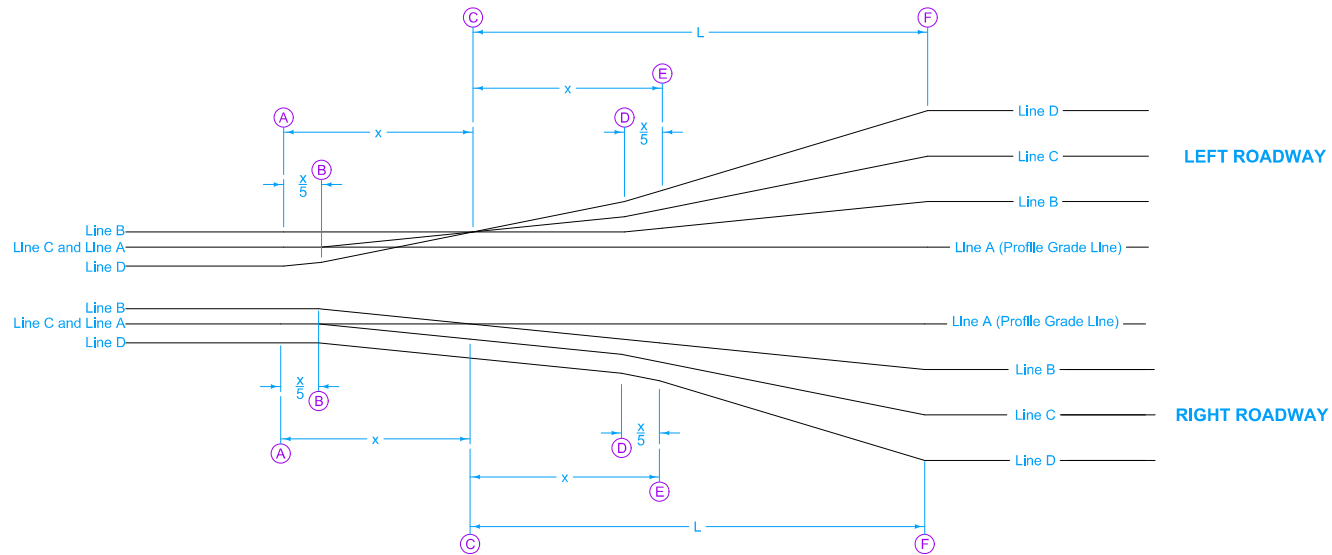


- (2) High Side Shoulder: Maintain normal shoulder cross slope (s), until the cross slope break with the adjacent pavement reaches 8.0%. Maintain 8% breakover until superelevation rate reaches 7%. If superelevation rate exceeds 7.0%, maintain a 1% shoulder cross slope away from the adjacent pavement.
- (3) Low Side Shoulder: Maintain normal shoulder cross slope (s) until the adjacent pavement slope equals s, then slope the shoulder at the same cross slope as the adjacent pavement.
- (4) Subgrade Surface: Subgrade surface cross slope parallel to pavement surface cross slope.




	REVISION
	1 04-17-12
STANDARD ROAD PLAN	PV-304
SHEET 3 of 4	
<small>REVISIONS: Updated Diagrammatic Profiles of the Pavement Edge Lines on sheet 4. Added Possible Tabulation, Modified circle note 2.</small>	
<i>Deanna Maifield</i> <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
SUPERELEVATION DETAILS SIX LANE ROADWAY DEPRESSED MEDIAN	

TABLE OF OFFSETS AND DROPS FOR LEFT ROADWAY							
Location of Cross Sections		(A)	(B)	(C)	(D)	(E)	(F)
From Line A To Line B	Offset (Ft.)	12	12	12	12	12	12
	Slope (%)	2.0	2.0	2.0	2.0	2.5	e
	Drop (Ft.)	0.24	0.24	0.24	0.24	0.30	12(e)
From Line B To Line C	Offset (Ft.)	12	12	12	12	12	12
	Slope (%)	-2.0	-2.0	0.0	2.0	2.5	e
	Drop (Ft.)	-0.24	-0.24	0.0	0.24	0.30	12(e)
From Line C To Line D	Offset (Ft.)	12	12	12	12	12	12
	Slope (%)	-2.5	-2.0	0.0	2.0	2.5	e
	Drop (Ft.)	-0.30	-0.24	0.0	0.24	0.30	12(e)
From Line A To Line D	Offset (Ft.)	36	36	36	36	36	36
	Drop (Ft.)	-0.30	-0.24	0.24	0.72	0.90	36(e)



DIAGRAMMATIC PROFILES OF THE PAVEMENT EDGE LINES

TABLE OF OFFSETS AND DROPS FOR RIGHT ROADWAY							
Location of Cross Sections		(A)	(B)	(C)	(D)	(E)	(F)
From Line A To Line B	Offset (Ft.)	12	12	12	12	12	12
	Slope (%)	2.0	2.0	0.0	-2.0	-2.5	-e
	Drop (Ft.)	0.24	0.24	0.0	-0.24	-0.30	-12(e)
From Line B To Line C	Offset (Ft.)	12	12	12	12	12	12
	Slope (%)	-2.0	-2.0	-2.0	-2.0	-2.5	-e
	Drop (Ft.)	-0.24	-0.24	-0.24	-0.24	-0.30	-12(e)
From Line C To Line D	Offset (Ft.)	12	12	12	12	12	12
	Slope (%)	-2.5	-2.5	-2.5	-2.5	-2.5	-e
	Drop (Ft.)	-0.30	-0.30	-0.30	-0.30	-0.30	-12(e)
From Line A To Line D	Offset (Ft.)	36	36	36	36	36	36
	Slope (%)	-0.30	-0.30	-0.54	-0.78	-0.90	-36(e)
	Drop (Ft.)	-0.30	-0.30	-0.54	-0.78	-0.90	-36(e)

 Iowa Department of Transportation	REVISION
	1 04-17-12
STANDARD ROAD PLAN	PV-304
SHEET 4 of 4	
REVISIONS: Updated Diagrammatic Profiles of the Pavement Edge Lines on sheet 4. Added Possible Tabulation, Modified circle note 2.	
<i>Deanna Maifield</i> APPROVED BY DESIGN METHODS ENGINEER	
SUPERELEVATION DETAILS SIX LANE ROADWAY DEPRESSED MEDIAN	