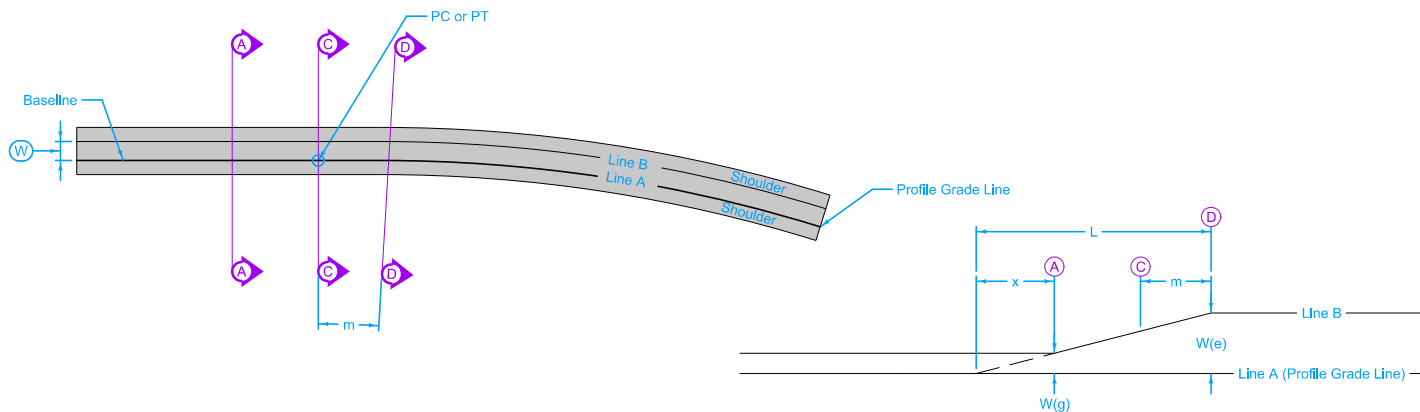


DIAGRAMMATIC PROFILES OF THE PAVEMENT EDGE LINES

**CASE A  
TRANSITION DETAILS - TANGENT TO CURVE  
WHEN NORMAL CROSS SLOPE IS IN THE OPPOSITE DIRECTION AS SUPERELEVATION**



DIAGRAMMATIC PROFILES OF THE PAVEMENT EDGE LINES

**CASE B  
TRANSITION DETAILS - TANGENT TO CURVE  
WHEN NORMAL CROSS SLOPE IS IN THE SAME DIRECTION AS SUPERELEVATION**

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

Place 70% of full superlevation at the P.C. and P.T.

Place 30% of the runoff length within the curve.

Unless otherwise specified, all lengths are measured along the baseline.

Smooth curves should be established at the time of construction at sections A-D along the profile edge of lines A and B.

Axis of rotation coincides with profile grade location.

$m = 30\%$  of Runoff Length (L)

$W$  = Pavement Width

$g$  = Normal Cross Slope (2%)

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

$e$  = Superlevation Rate

$x$  = Distance to Change Cross Slope from 0% to 2%

$s$  = Normal Shoulder Slope

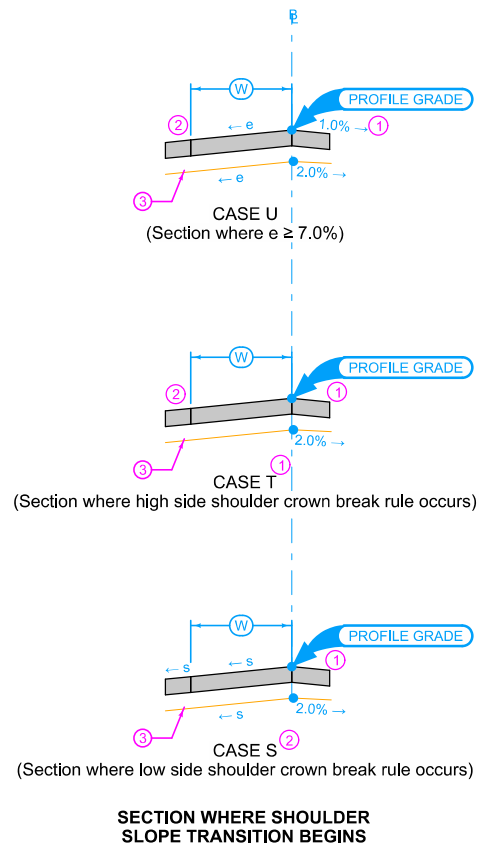
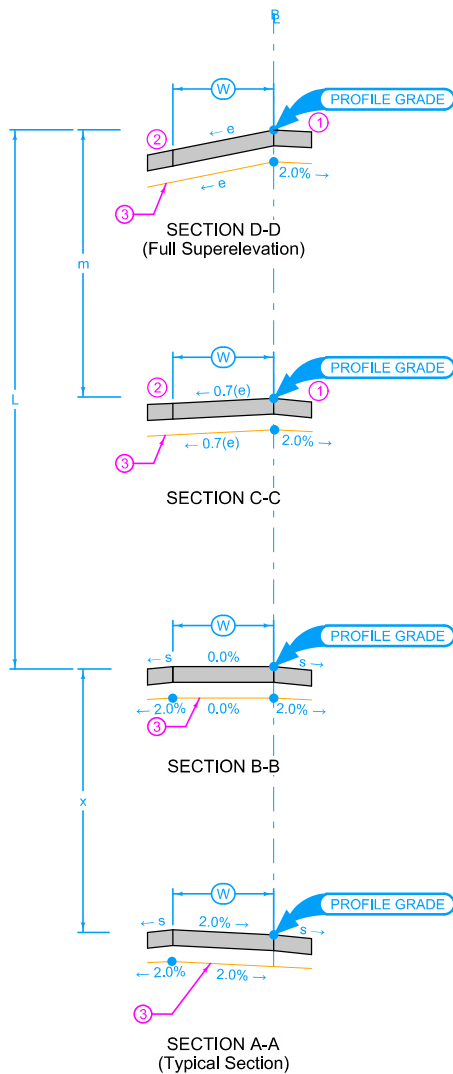
Possible Tabulation:  
101-18

	REVISION
	1   04-19-11
<b>STANDARD ROAD PLAN</b>	<b>PV-303</b>
SHEET 1 of 3	

REVISIONS: Revised graphics. Added additional cross sections and notes.

*Deanna Maifield*  
APPROVED BY DESIGN METHODS ENGINEER

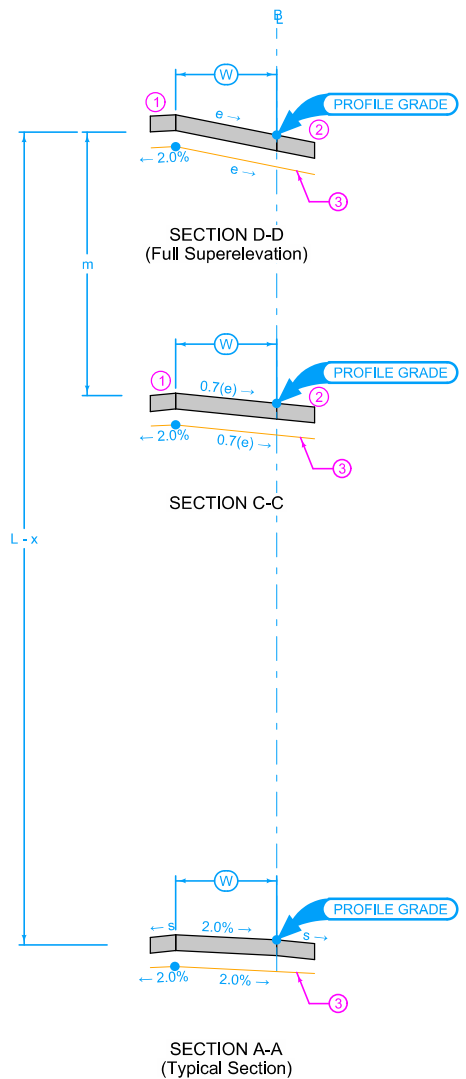
**SUPERELEVATION DETAILS  
RAMPS**



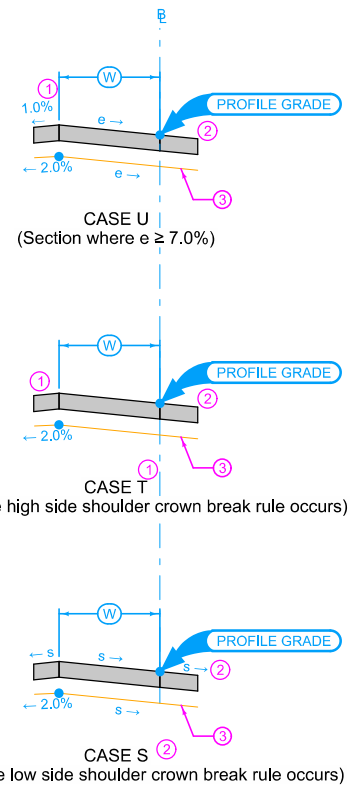
- ① High Side Shoulder: Maintain normal shoulder cross slope ( $s$ ), until the cross slope break with the adjacent pavement reaches 8.0%. Maintain 8% breakover until superelevation rate reaches 7%. If superelevation rate exceeds 7.0%, maintain a 1% shoulder cross slope away from the adjacent pavement.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

CASE A

 Iowa Department of Transportation	REVISION 1   04-19-11
	<b>PV-303</b> SHEET 2 of 3
REVISIONS: Revised graphics. Added additional cross sections and notes.	
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<b>SUPERELEVATION DETAILS RAMPS</b>	



CASE B



SECTION WHERE SHOULDER SLOPE TRANSITION BEGINS

- ① 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.
- ② 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.
- ③ Subgrade Surface: Subgrade surface cross slope parallel to pavement surface cross slope.

 <b>Iowa Department of Transportation</b>	<small>REVISION</small> 1   04-19-11
	<b>PV-303</b> <small>SHEET 3 of 3</small>
<small>REVISIONS: Revised graphics. Added additional cross sections and notes.</small>	
<i>Deanna Maifield</i> <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
<b>SUPERELEVATION DETAILS</b> <b>RAMPS</b>	