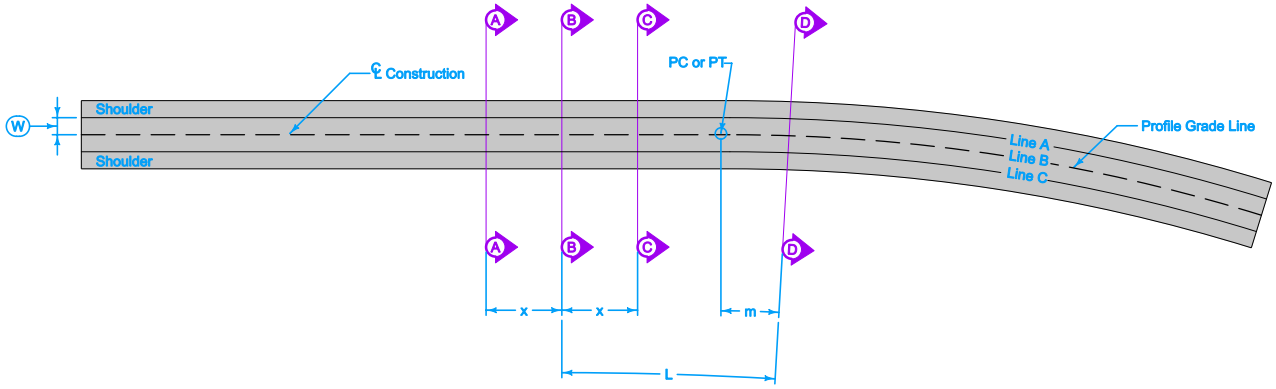
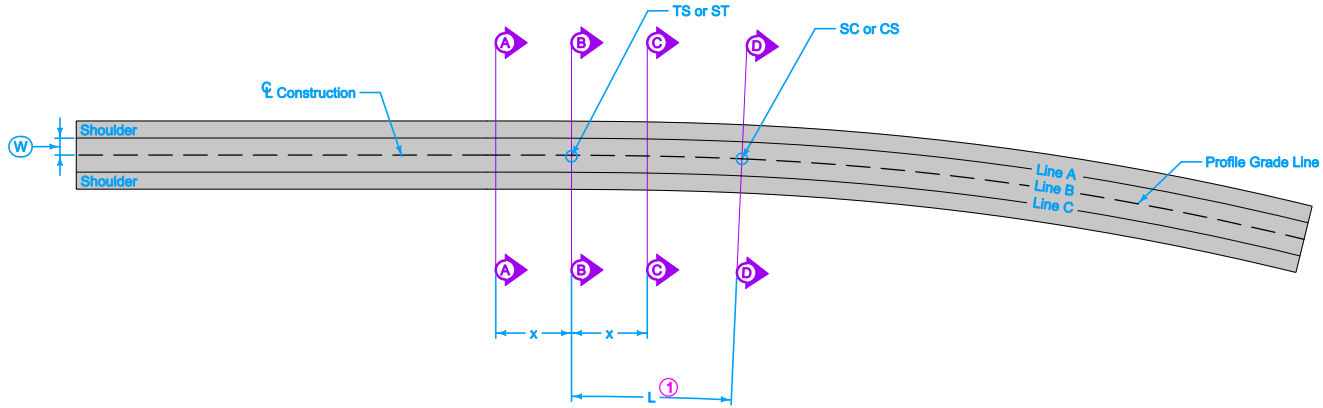
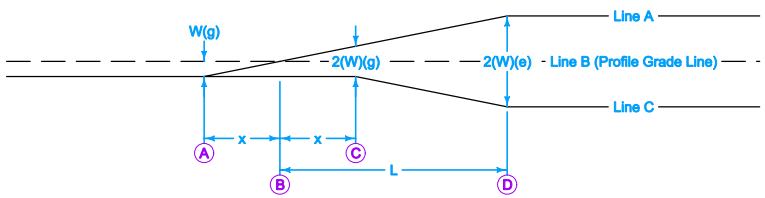


TRANSITION DETAILS - TANGENT TO CURVE



TRANSITION DETAILS - SPIRAL CURVE



DIAGRAMMATIC PROFILES OF THE PAVEMENT EDGE LINES

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

When spiral curve transitions are not required:
Place 70% of full superelevation 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-D along the profile edges of lines A-C.

Axis of rotation coincides with profile grade location.

m = 30% of Runoff Length (L)

W = 12' Regardless of Pavement Width

g = Normal Cross Slope (2%)

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

e = Supereleavtion Rate

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

s = Normal Shoulder Slope

1 Spiral curve length coincides with runoff length (L)

Possible Tabulation:
101-18

Iowa Department of Transportation

REVISION	
1	04-19-11

STANDARD ROAD PLAN

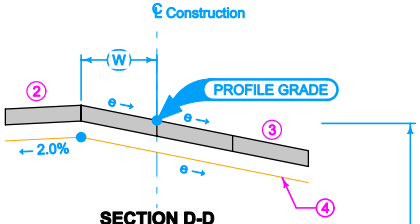
PV-301

SHEET 1 of 2

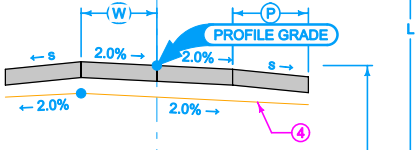
REVISIONS: Revised graphics. Added additional cross sections and notes.

Deanna Maifield
APPROVED BY DESIGN METHODS ENGINEER

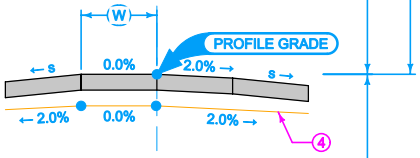
SUPERELEVATION DETAILS
TWO LANE ROADWAY



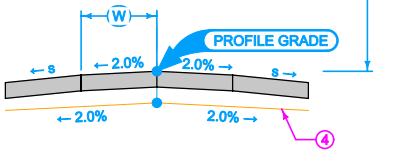
SECTION D-D
(Full Superelevation)



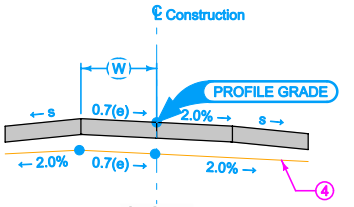
SECTION C-C
(Remove Crown)



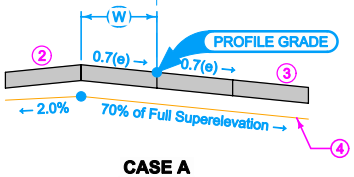
SECTION B-B
(Remove Adverse Crown)



SECTION A-A
(Typical Section)

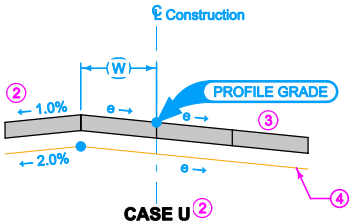


CASE B
e = 2.8%

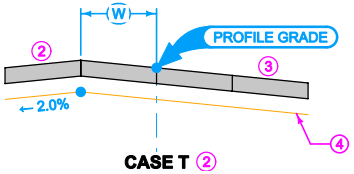


CASE A
e > 2.8%

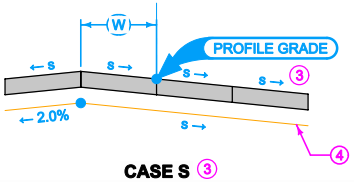
SECTION AT THE PC OR PT



CASE U ②
(Section where e = 7.0%)



CASE T ②
(Section where high side shoulder crown break rule occurs)



CASE S ③
(Section where low side shoulder crown break rule occurs)

SECTION WHERE SHOULDER SLOPE TRANSITION BEGINS

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	04-19-11

STANDARD ROAD PLAN

PV-301

SHEET 2 of 2

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

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APPROVED BY DESIGN METHODS ENGINEER

SUPERELEVATION DETAILS
TWO LANE ROADWAY