

PLAN

Construct earth fill in conformance with requirements for construction of embankments.

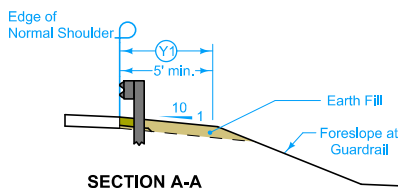
Construct paved shoulder in front of guardrail as shown on Typical 7156.

Guardrail may or may not be attached to face of obstacle.

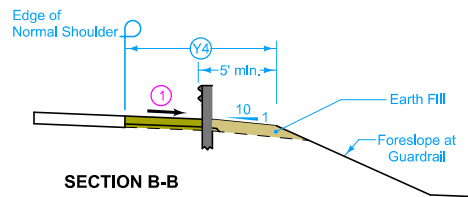
① Match slope of adjacent shoulder.

ⓧ Measured from Location Station.

Ⓨ Distance from edge of normal shoulder to toe of 10:1 slope



SECTION A-A



SECTION B-B

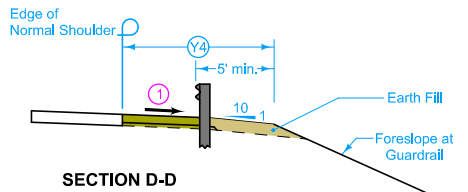
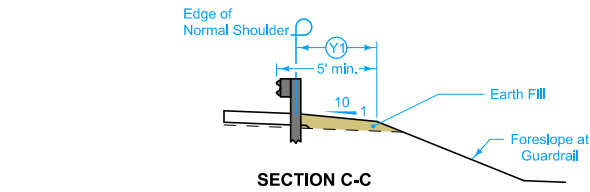
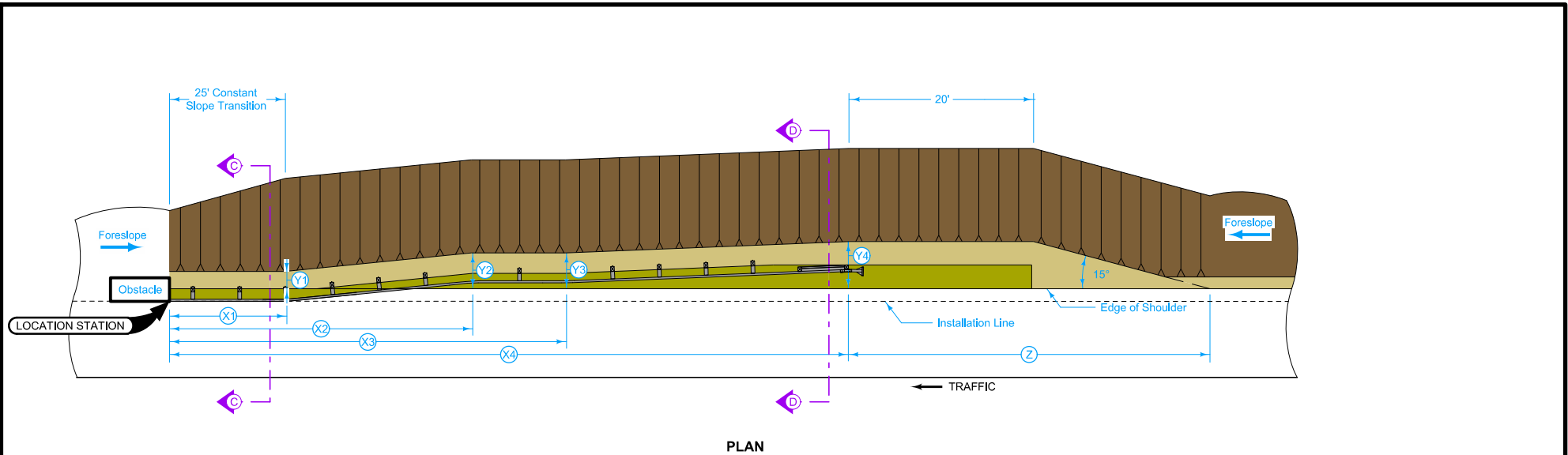
LEGEND	
	Foreslope at Guardrail
	Slope - 10:1
	Match adjacent shoulder.

Ⓨ4 feet	Ⓩ feet
5	39
6	43
7	47
8	50
9	54
10	57
11	61
12	65
13	69
14	72
15	76
16	80
17	83
18	87
19	91
20	95

Possible Tabulation:  
107-23

**GUARDRAIL INSTALLATION LINE AT OR WITHIN 10 FEET OF SHOULDER**

	REVISION
	1 10-20-15
	<b>STANDARD ROAD PLAN</b>
<b>EW-301</b>	SHEET 1 of 5
REVISIONS: Changed slope in front of guardrail from a 10 to 1 to match the slope of the adjacent shoulder. Added note 3 on Sheet 4.	
APPROVED BY DESIGN METHODS ENGINEER 	
<b>GUARDRAIL GRADING</b>	



**LEGEND**

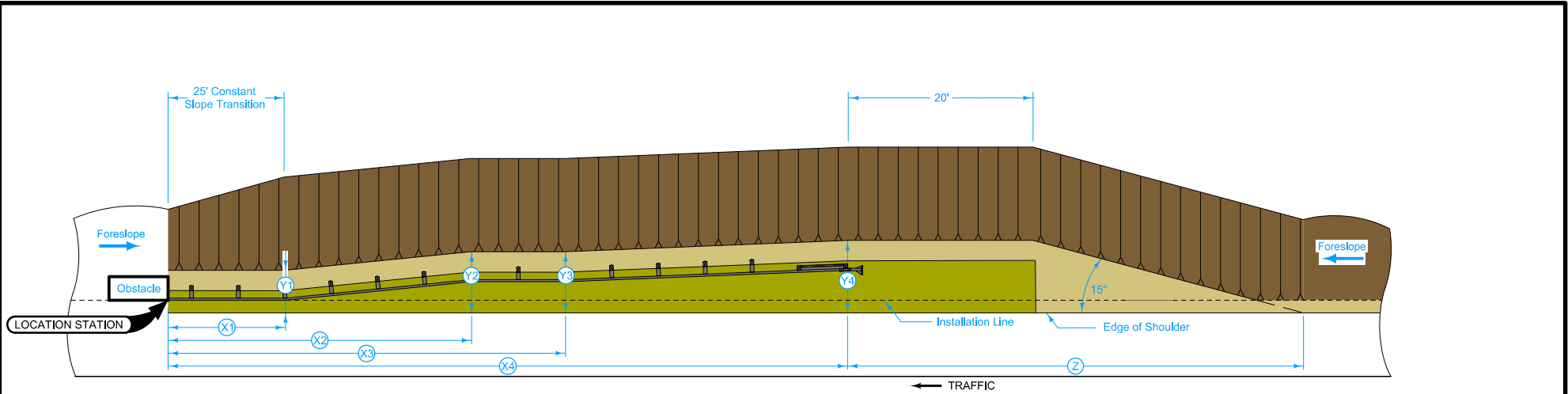
- Foreslope at Guardrail
- Slope - 10:1
- Match adjacent shoulder.

- ① Match slope of adjacent shoulder.
- ⓧ Measured from Location Station.
- Ⓨ Distance from edge of normal shoulder to toe of 10:1 slope

Ⓨ4 feet	Ⓩ feet
5	39
6	43
7	47
8	50
9	54
10	57
11	61
12	65
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18	87
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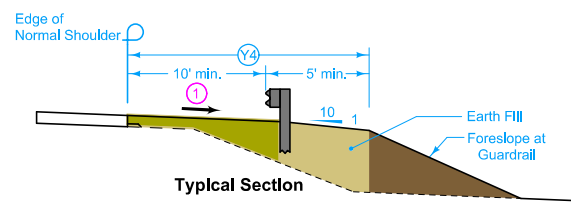
**GUARDRAIL INSTALLATION LINE WITHIN SHOULDER**

 <b>STANDARD ROAD PLAN</b>	REVISION
	1   10-20-15
	EW-301
SHEET 2 of 5	
REVISIONS: Changed slope in front of guardrail from a 10 to 1 to match the slope of the adjacent shoulder. Added note 3 on Sheet 4.	
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
GUARDRAIL GRADING	



PLAN

- ① Match slope of adjacent shoulder.
- ⓧ Measured from Location Station.
- Ⓨ Distance from edge of normal shoulder to toe of 10:1 slope



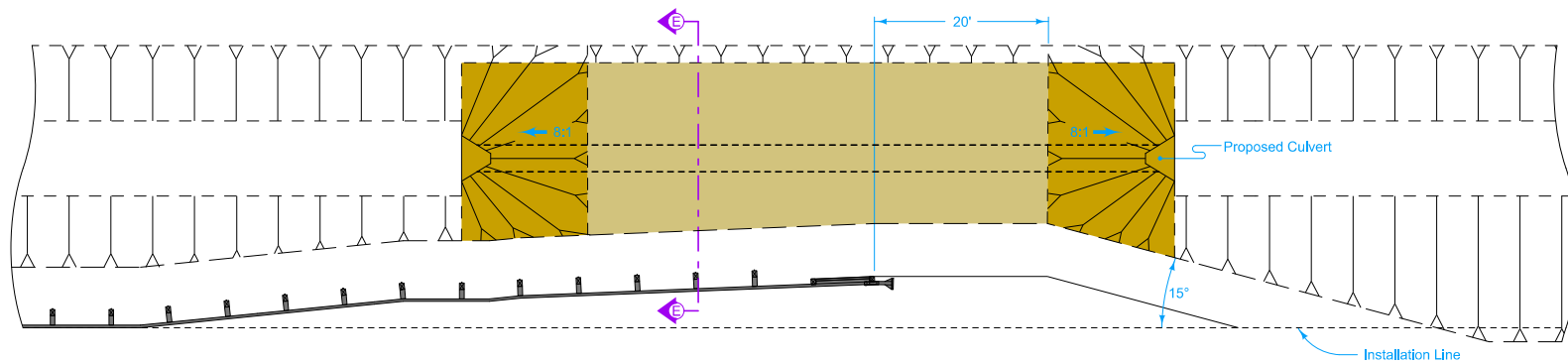
Typical Section

LEGEND	
	Foreslope at Guardrail
	Slope - 10:1
	Match adjacent shoulder.

Ⓨ4 feet	Ⓩ feet
5	39
6	43
7	47
8	50
9	54
10	57
11	61
12	65
13	69
14	72
15	76
16	80
17	83
18	87
19	91
20	95

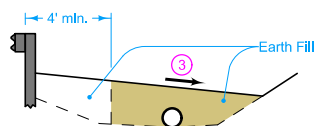
**GUARDRAIL INSTALLATION LINE BEYOND 10 FEET FROM SHOULDER**

 <b>STANDARD ROAD PLAN</b>	REVISION
	1   10-20-15
	<b>EW-301</b> SHEET 3 of 5
REVISIONS: Changed slope in front of guardrail from a 10 to 1 to match the slope of the adjacent shoulder. Added note 3 on Sheet 4.	
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<b>GUARDRAIL GRADING</b>	





PLAN

- ② See sheets 1, 2, or 3 for unshaded areas.
- ③ 10:1 preferred; no steeper than 6:1.



SECTION E-E

LEGEND	
	Slope - 10:1
	Slope - 8:1

FILL OVER PIPE CULVERT ②

 <b>STANDARD ROAD PLAN</b>	REVISION
	1   10-20-15
	<b>EW-301</b>
SHEET 4 of 5	

REVISIONS: Changed slope in front of guardrail from a 10 to 1 to match the slope of the adjacent shoulder. Added note 3 on Sheet 4.


*Brian Smith*  
APPROVED BY DESIGN METHODS ENGINEER

**GUARDRAIL GRADING**

This image can be viewed in 3D on the the ERL or at our website <http://www.iowadot.gov/design/stdrdpIn.htm>



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 <b>STANDARD ROAD PLAN</b>	REVISION	
	1	10-20-15
	<b>EW-301</b>	
SHEET 5 of 5		
<small>REVISIONS: Changed slope in front of guardrail from a 10 to 1 to match the slope of the adjacent shoulder. Added note 3 on Sheet 4.</small>		
<i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER		
<b>GUARDRAIL GRADING</b>		