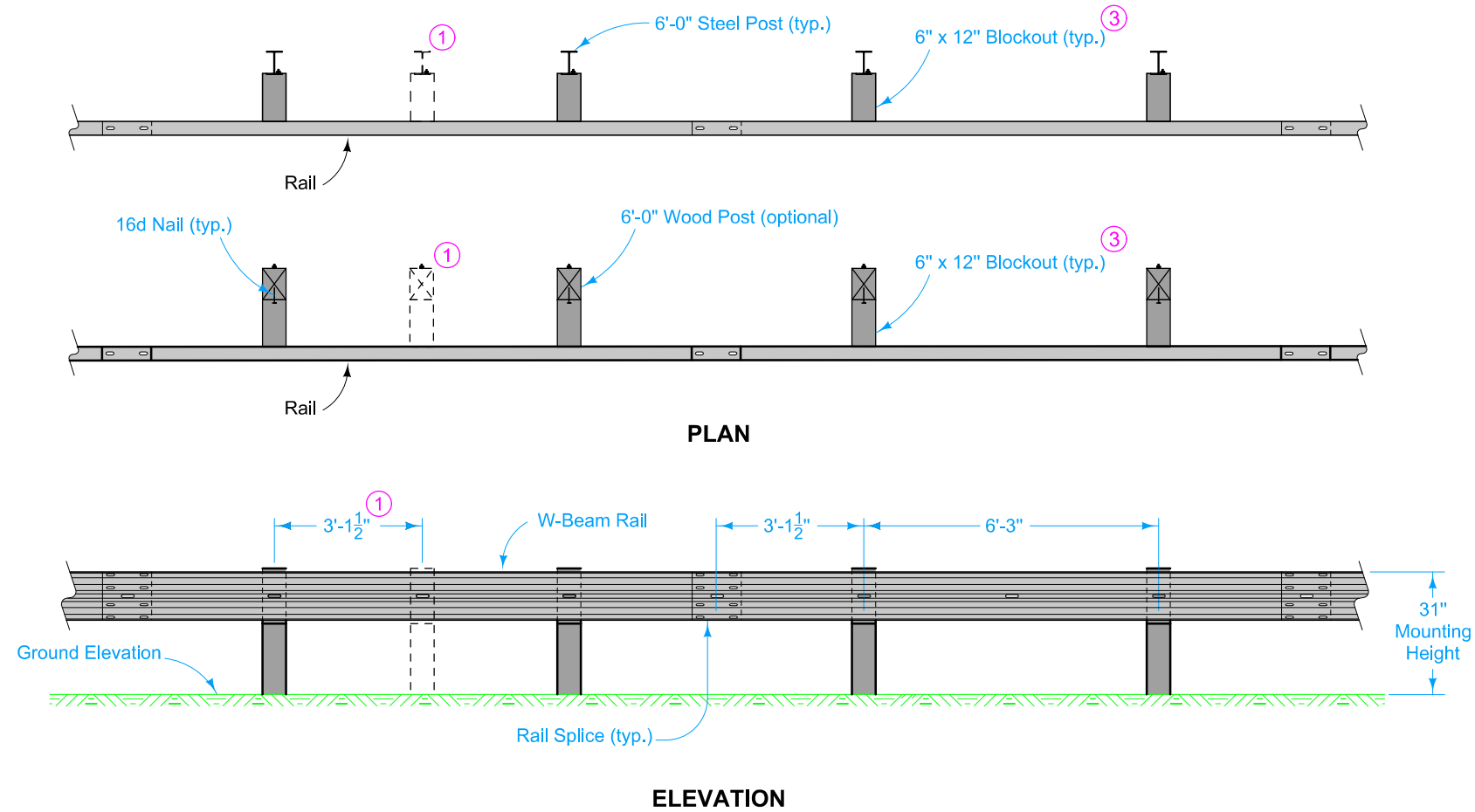
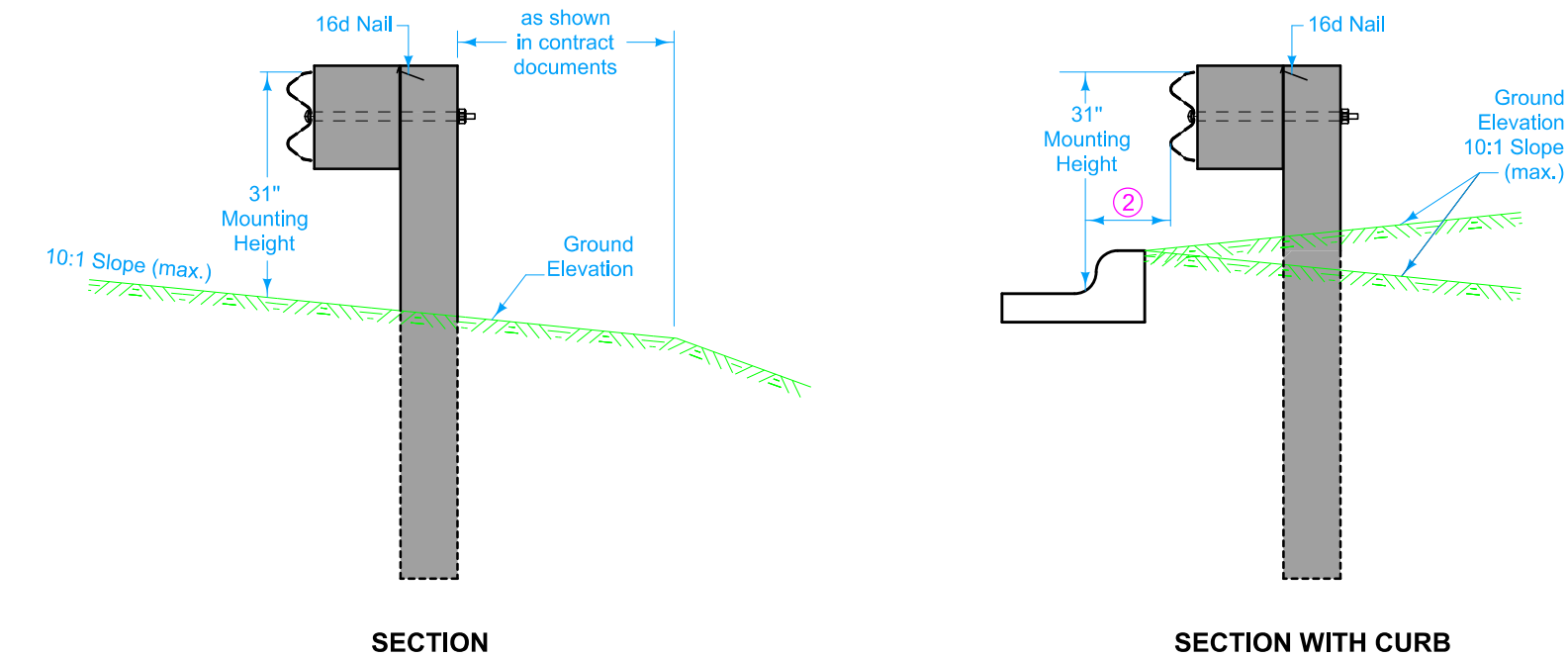
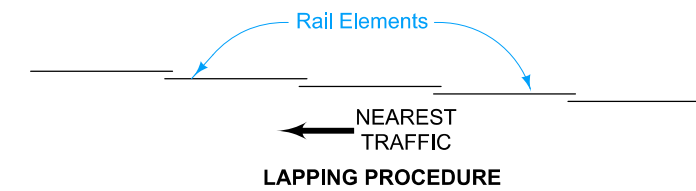


DESIGNER INFORMATION



- At Bridge End Drains, cut Scour Protection (Transition Mat and Turf Reinforcement Mat) or remove rock as required to place post(s) such that Bridge End Drains abut post(s).
- ① When specified by the contract documents, install posts at 3'-1½" spacing.
 - ② 6" maximum for 6" Standard or 6" Sloped curbs and for non-standard curbs.
 - ③ Wood or composite only. Steel blockouts will not be allowed.



W-BEAM INSTALLATION

Possible Contract Item:
Steel Beam Guardrail

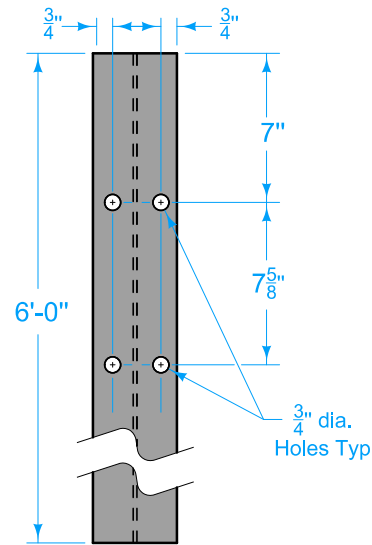
	REVISION	
	6	04-20-21
STANDARD ROAD PLAN		BA-200
		SHEET 1 of 4

REVISIONS: Added new circle note 4 and renumbered remaining notes.

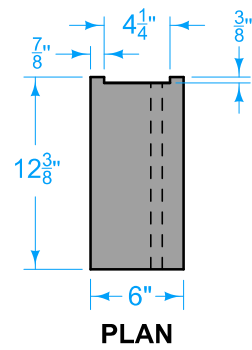
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STEEL BEAM GUARDRAIL COMPONENTS

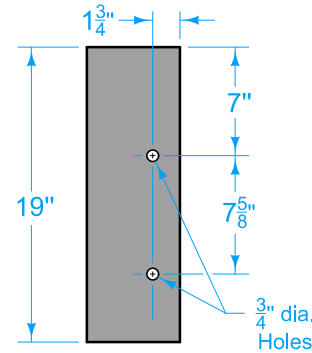
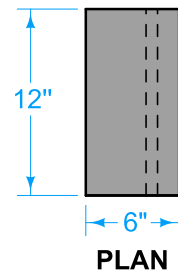
STEEL POST AND BLOCKOUT DETAILS



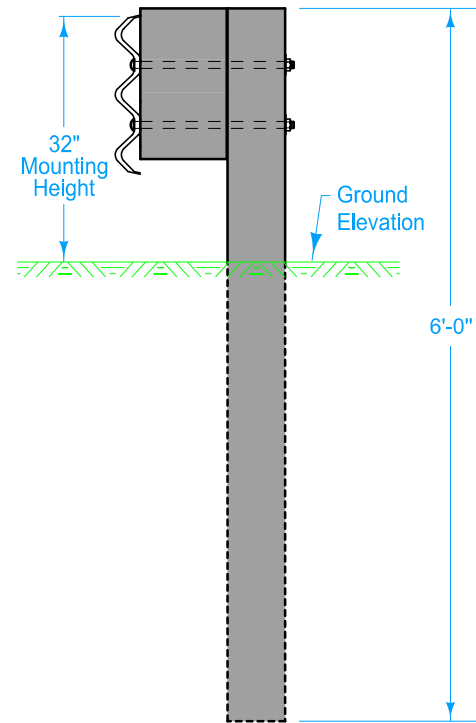
6'-0" STEEL POST
W6x9 or W6x8.5



PLAN
ELEVATION
W-BEAM BLOCKOUT ③



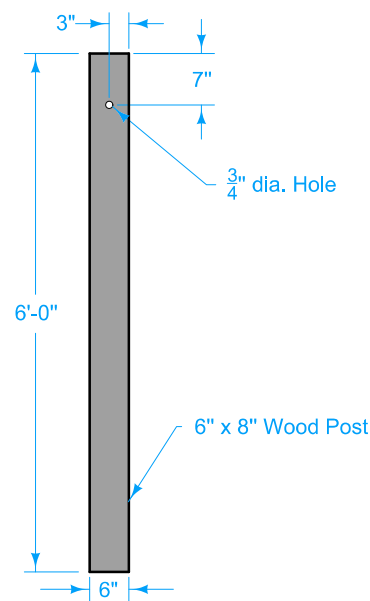
PLAN
ELEVATION
THRIE-BEAM BLOCKOUT ③



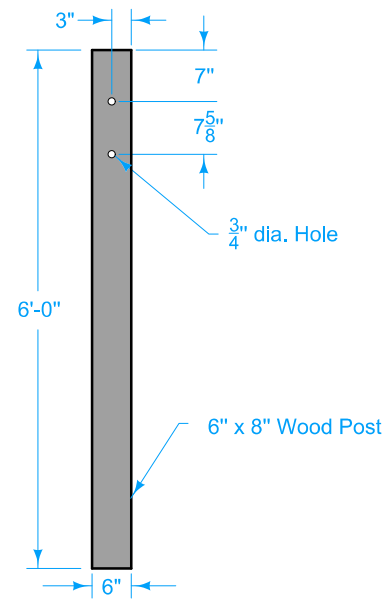
THRIE-BEAM INSTALLATION

- ③ Wood or composite only. Steel blockouts will not be allowed.
- ④ Thrie-beam post may be substituted for W-beam post.

WOOD POST AND BLOCKOUT DETAILS

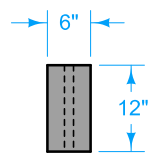


W-BEAM

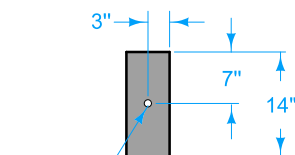


THRIE-BEAM

POSTS ④

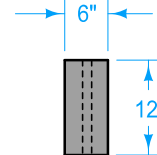


PLAN

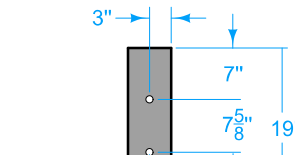


ELEVATION

W-BEAM BLOCKOUT ③



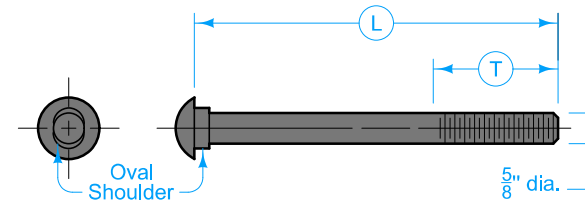
PLAN



ELEVATION

THRIE-BEAM BLOCKOUT ③

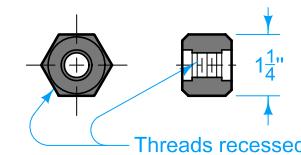
BOLT DETAILS



BOLT

APPLICATION	Ⓣ	Ⓛ
Splice Bolt	1-1/16"	1-1/4"
Bolt for Steel Post with 8" Blockout	2-1/2"	10"
Bolt for Steel Post with 12" Blockout	2-1/2"	14"
Bolt for Wood Post with 8" Blockout	2-1/2"	18"
Bolt for Wood Post with 12" Blockout	2-1/2"	22"

Ⓣ = Min. Thread Length Ⓛ = Bolt Length



NUT

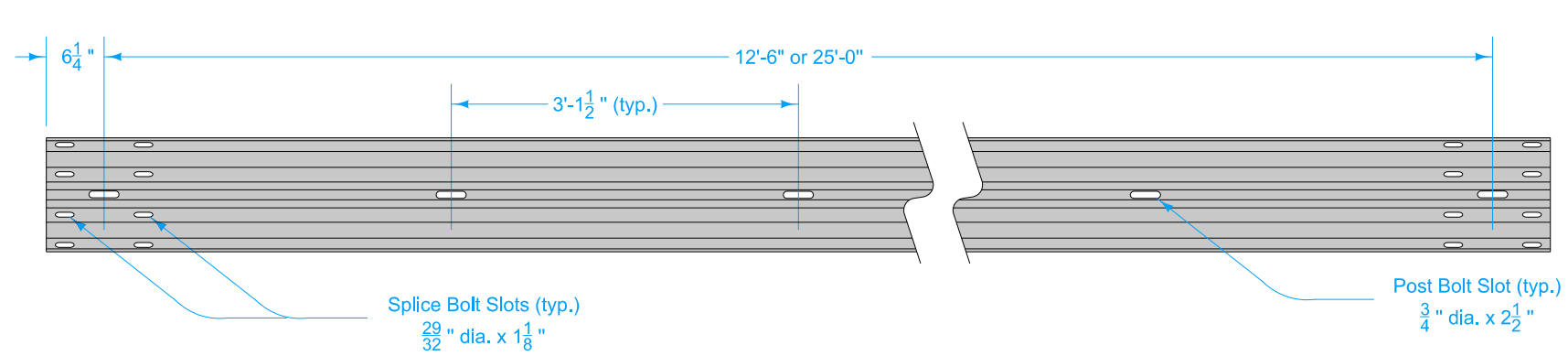
HARDWARE

<p>STANDARD ROAD PLAN</p>	REVISION	
	6	04-20-21
	BA-200	
SHEET 2 of 4		

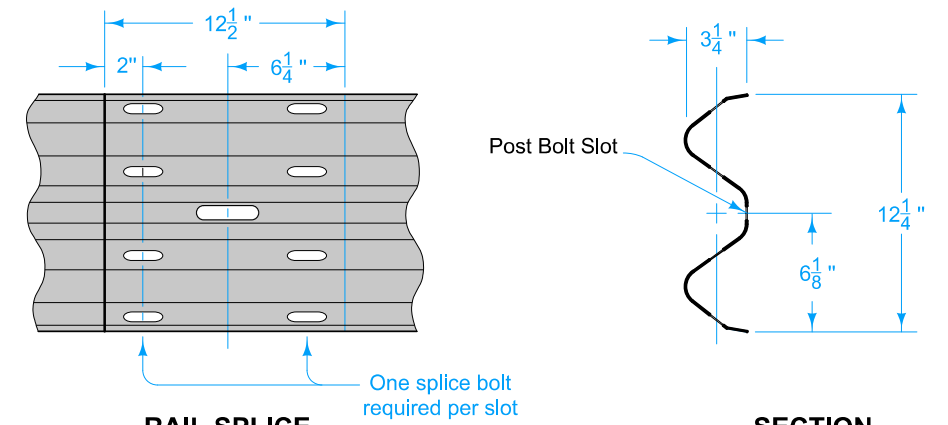
REVISIONS: Added new circle note 4 and renumbered remaining notes.

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STEEL BEAM GUARDRAIL COMPONENTS



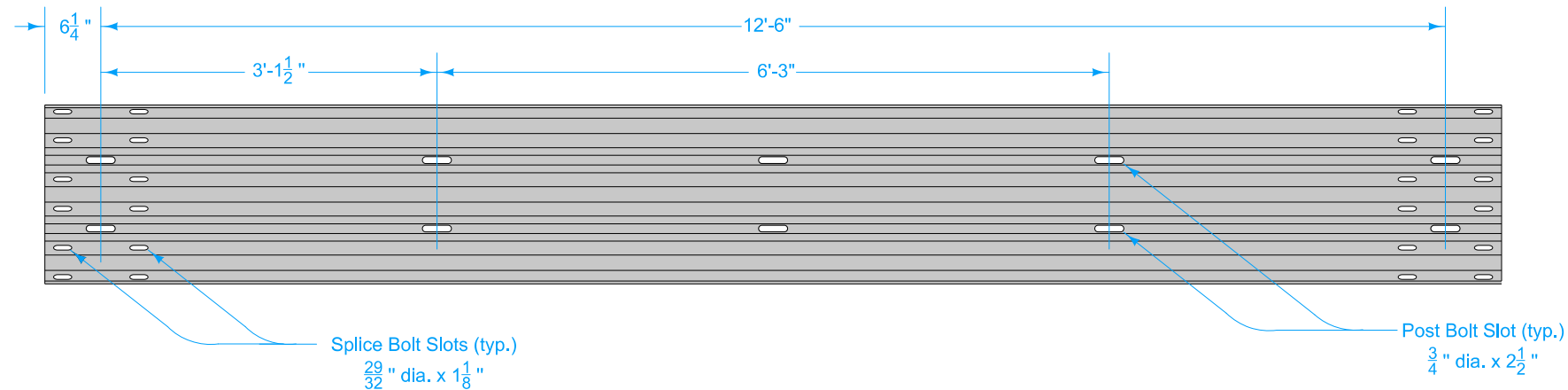
ELEVATION



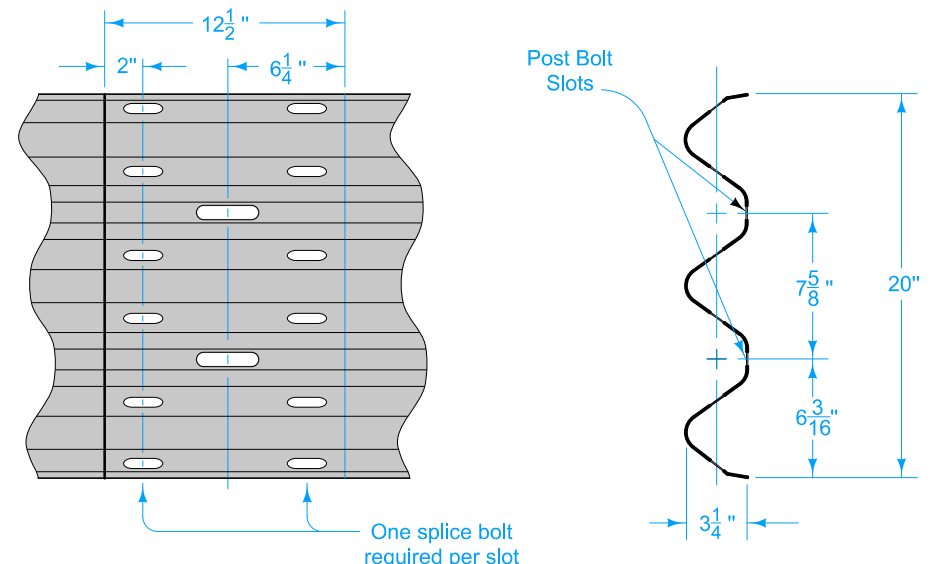
RAIL SPLICE

SECTION

W-BEAM RAIL



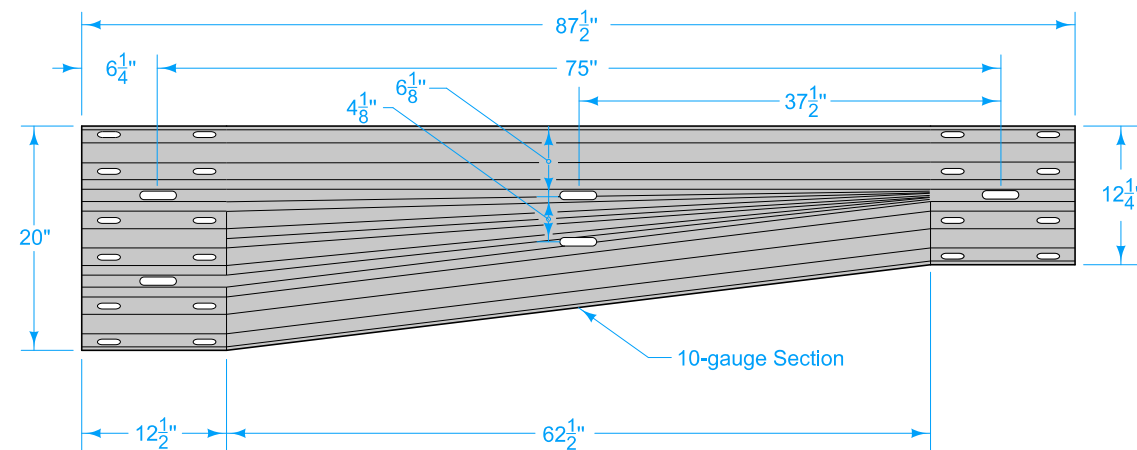
ELEVATION



RAIL SPLICE

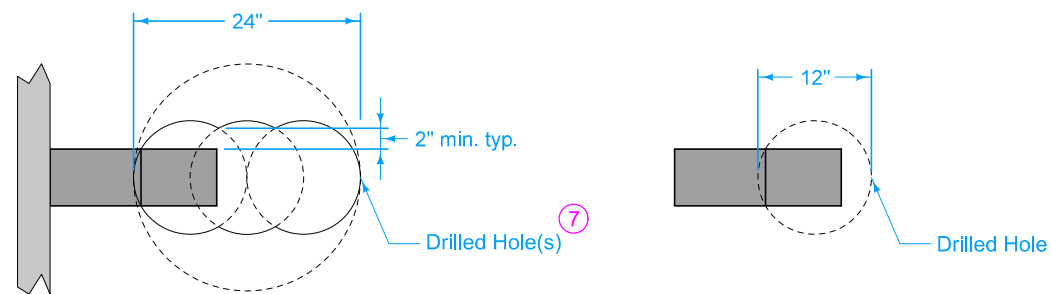
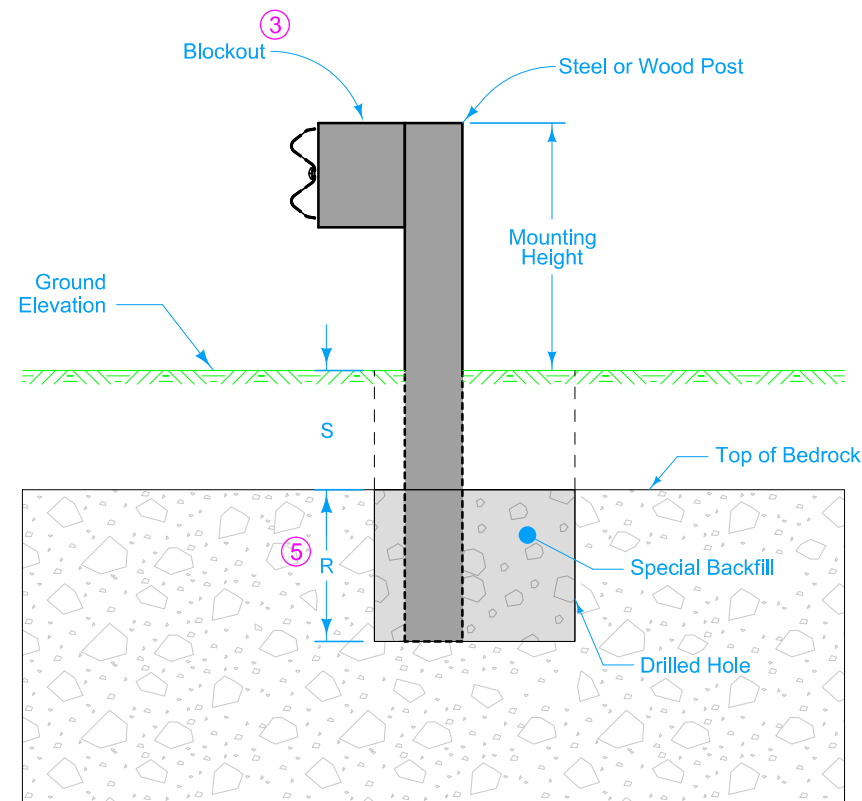
SECTION

THRIE-BEAM RAIL



ASYMMETRICAL TRANSITION SECTION

	REVISION	
	6	04-20-21
STANDARD ROAD PLAN		BA-200
		SHEET 3 of 4
REVISIONS: Added new circle note 4 and renumbered remaining notes.		
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STEEL BEAM GUARDRAIL COMPONENTS		

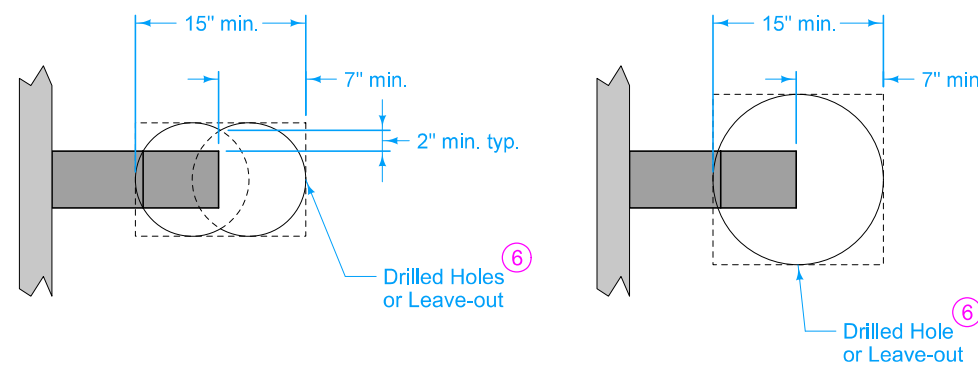
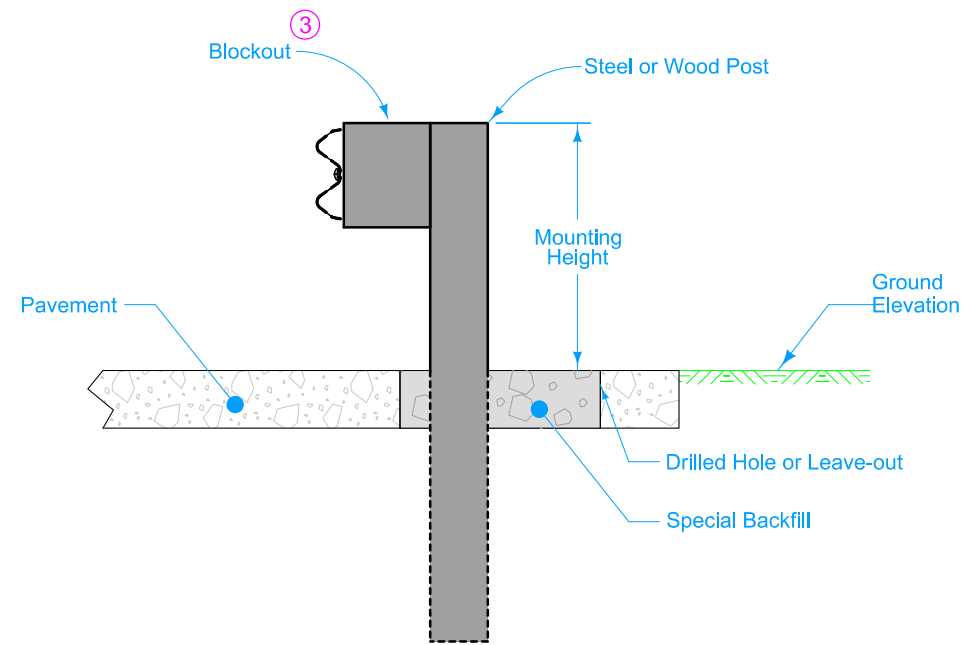


PLAN - CASE A

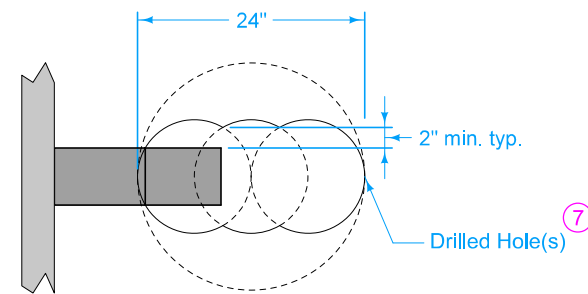
PLAN - CASE B

Post Embedment (5)		
Case	Depth to Bedrock	Minimum Depth to Drill into Bedrock
A	S = 0" to 16"	R = 24"
B	S = 16" to 52"	R = Post Length - Mounting Height - S

POST INSTALLED IN BEDROCK



PLAN - PAVEMENT THICKNESS <= 8"
Either approach is acceptable.



PLAN - PAVEMENT THICKNESS > 8"

POST INSTALLED IN PAVEMENT

Installation information applies to both wood and steel posts.

- (3) Wood or composite only. Steel blockouts will not be allowed.
- (5) Post extends to bottom of hole in all cases. Trim top of post as required and treat with preservative according to Section 4161 of the Standard Specifications.
- (6) Use a 12 inch bit with two drills or a 15 inch bit with one drill. If placing post before paving, provide required leave-out area. If placing post after paving, drill or cut required area. Leave-out may be round or square.
- (7) Use a 12 inch bit with three drills or a 24 inch bit with one drill.

 STANDARD ROAD PLAN	REVISION
	6 04-20-21
	BA-200
SHEET 4 of 4	

REVISIONS: Added new circle note 4 and renumbered remaining notes.

Steve Miller
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STEEL BEAM GUARDRAIL COMPONENTS