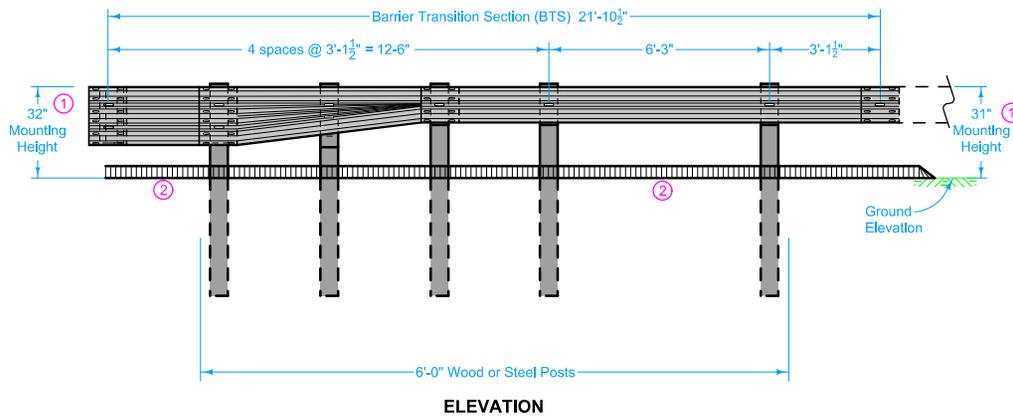
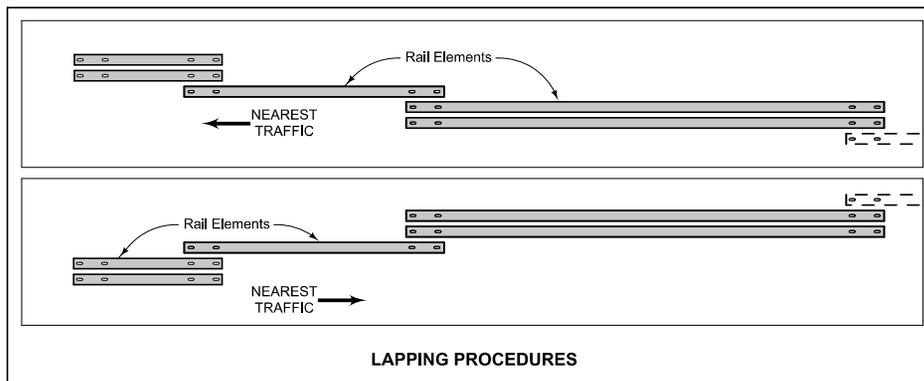


PLAN



ELEVATION



LAPPING PROCEDURES

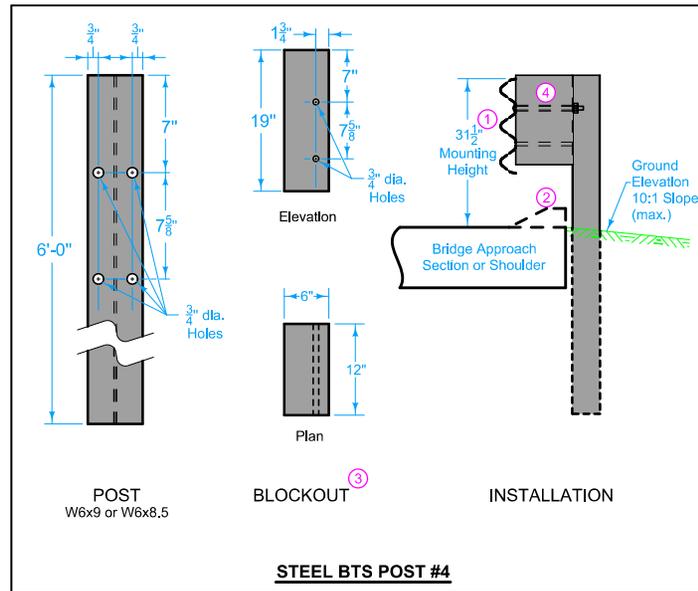
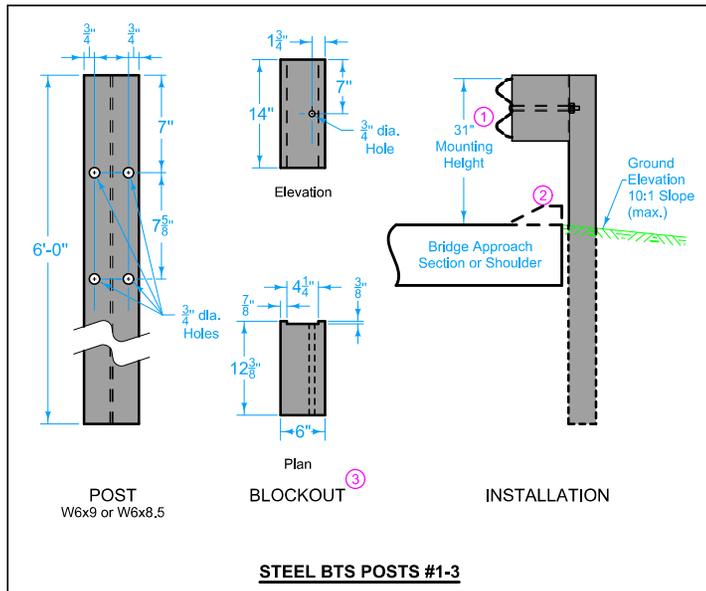
At Bridge End Drains, cut Scour Protection (Transition Mat and Turf Reinforcement Mat) or remove rock as required to place post(s) such that Bridge End Drains abut post(s).

- ① Guardrail mounting height at barrier connection is 32 inches. Transition guardrail mounting height down to 31 inches at BTS Post #3.
- ② Possible 4 inch sloped curb. See project plans.

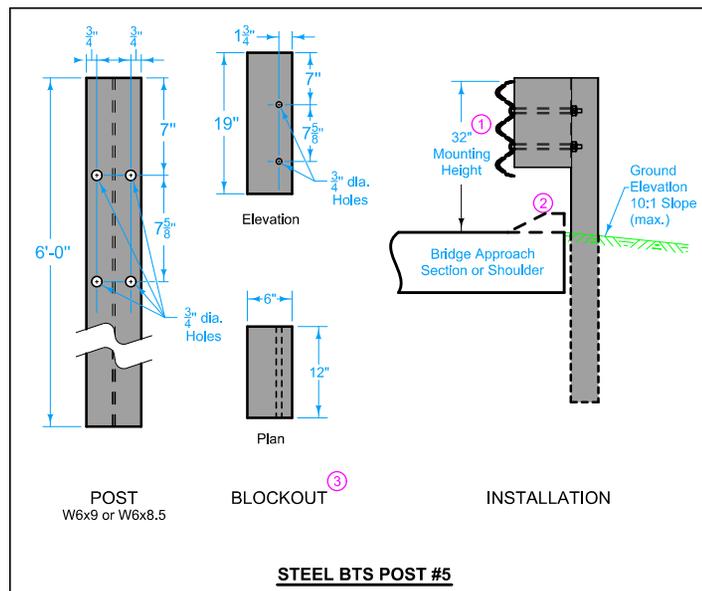
Possible Contract Item:  
Steel Beam Guardrail Barrier Transition Section, BA-221

- Materials included in the Contract Item:
- Steel Post Option:
- (5) 6" x 8" x 6'-0" posts
  - (2) 6" x 12" x 19" blockouts
  - (3) 6" x 12" x 14" blockouts
- Wood Post Option:
- (5) 6" x 8" x 6'-0" posts
  - (2) 6" x 12" x 19" blockouts
  - (3) 6" x 12" x 14" blockouts
- (1) Asymmetrical Transition Section
  - (2) 3'-1 1/2" Thrie-Beam rail sections
  - (2) 12'-6" W-Beam rail sections
- Approved bolts, nuts, and washers  
Refer to BA-200 for guardrail components

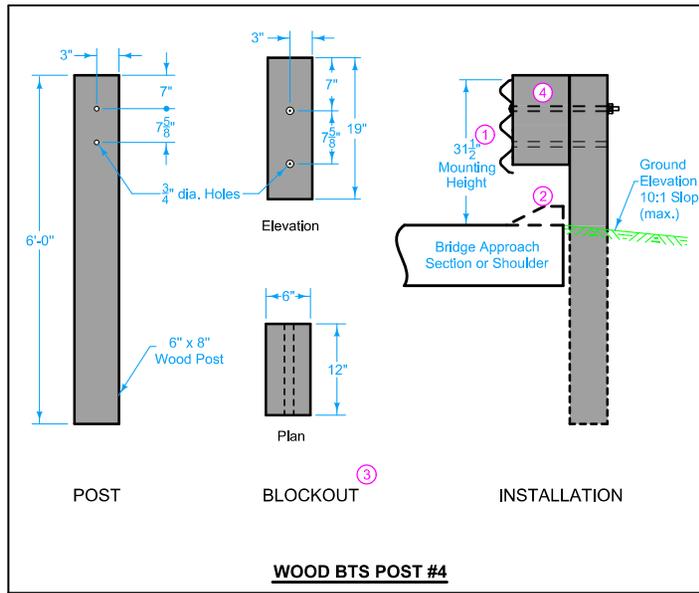
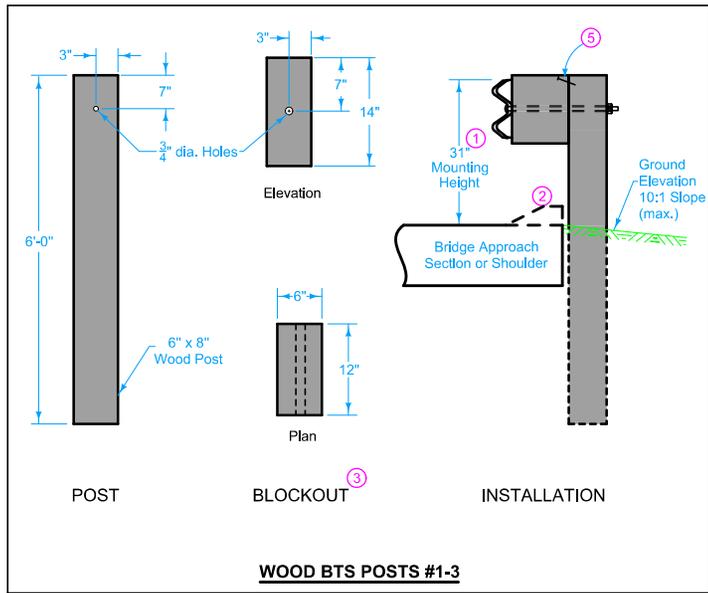
 <b>STANDARD ROAD PLAN</b>	REVISION 1   04-18-17
	<b>BA-221</b>
	SHEET 1 of 3
REVISIONS: Removed bottom bolts on STEEL BTS POST #4 view on page 2 and on WOOD BTS POST #4 view on page 3.	
 APPROVED BY DESIGN METHODS ENGINEER	
<b>STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION (MASH TL-2)</b>	



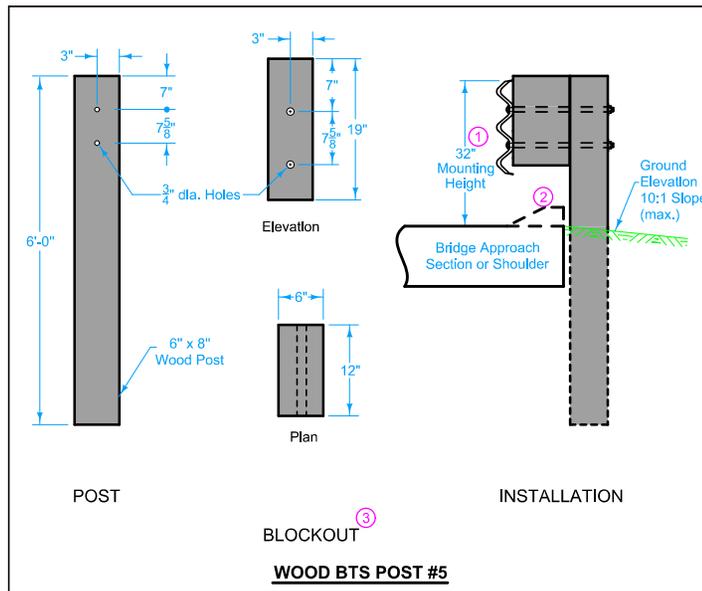
- ① Guardrail mounting height at barrier connection is 32 inches. Transition guardrail mounting height down to 31 inches at BTS Post #3.
- ② Possible 4 inch sloped curb. See project plans.
- ③ Wood or composite only. Steel blockouts will not be allowed.
- ④ Place bolt in top hole only.



<b>IOWA DOT</b>	REVISION	
	1	04-18-17
<b>STANDARD ROAD PLAN</b>		<b>BA-221</b>
		SHEET 2 of 3
REVISIONS: Removed bottom bolts on STEEL BTS POST #4 view on page 2 and on WOOD BTS POST #4 view on page 3.		
<i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER		
<b>STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION (MASH TL-2)</b>		



- ① Guardrail mounting height at barrier connection is 32 inches. Transition guardrail mounting height down to 31 inches at BTS Post #3.
- ② Possible 4 inch sloped curb. See project plans.
- ③ Wood or composite only. Steel blockouts will not be allowed.
- ④ Place bolt in top hole only.
- ⑤ 16d nail to prevent blockout rotation.



<b>IOWA DOT</b>	REVISION	
	1	04-18-17
<b>STANDARD ROAD PLAN</b>		<b>BA-221</b>
		SHEET 3 of 3
<small>REVISIONS: Removed bottom bolts on STEEL BTS POST #4 view on page 2 and on WOOD BTS POST #4 view on page 3.</small>		
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>		
<b>STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION (MASH TL-2)</b>		