

# Local Systems

LS

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NO.	DATE	TITLE
LS-625	10-19-21	Steel Beam Guardrail Tangent End Terminal (NCHRP 350 TL-3)
LS-626	10-19-21	Steel Beam Guardrail Flared End Terminal (NCHRP 350 TL-3)
LS-630	10-19-21	Steel Beam Guardrail Installation At Concrete Barrier Or Bridge Rail End Section (NCHRP 350 TL-3)
LS-631	04-20-21	Steel Beam Guardrail Installation At Side Object (Two-Way Protection)
LS-632	04-20-21	Steel Beam Guardrail Installation At Side Object (One-Way Protection)
LS-633	04-19-16	Steel Beam Guardrail Installation At Railroad Signal
LS-635	10-18-22	Steel Beam Guardrail Installation At Concrete Barrier Or Bridge Rail End Section (MASH TL-2)

DESIGNER INFORMATION

Refer to Materials I.M. 455.02 for a list of approved sources.

With Engineer's approval, the Contractor may install the end terminal of BA-205.

Use materials meeting the respective manufacturer's specifications. Install end terminals according to the manufacturer's recommendations.



Drive posts using a hammer driver. Ensure posts are not damaged during installation. Posts may be placed in prebored holes if site conditions are such that posts cannot be driven. Place backfill material consisting of material removed or other suitable soil around posts. Place the backfill material in lifts not exceeding 4 inches. Thoroughly compact each lift before the next lift is placed.

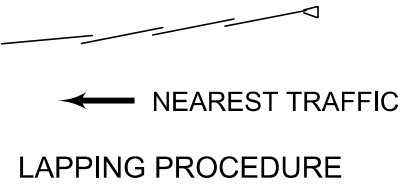
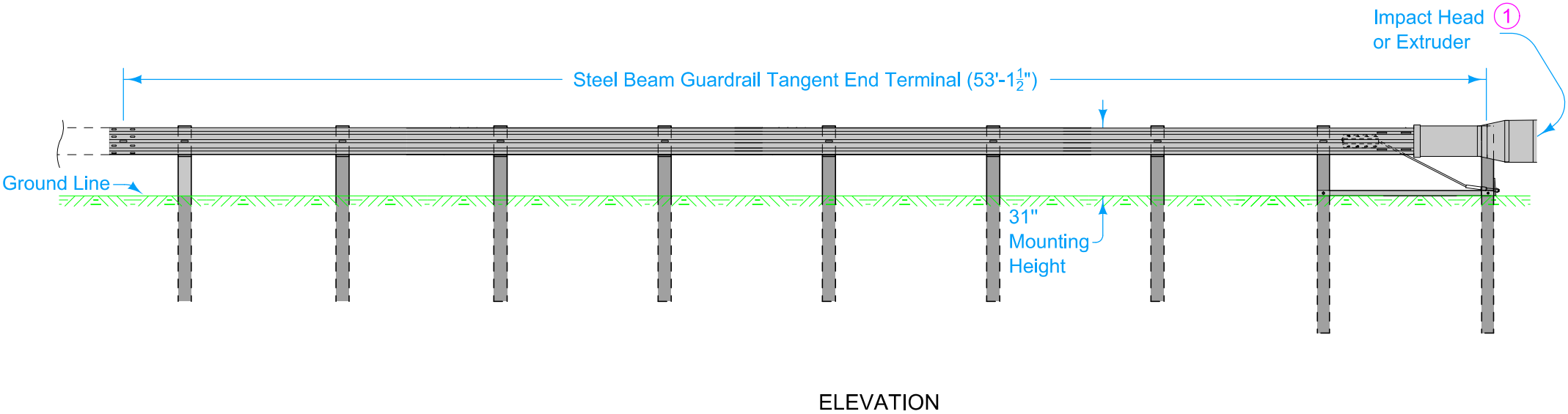
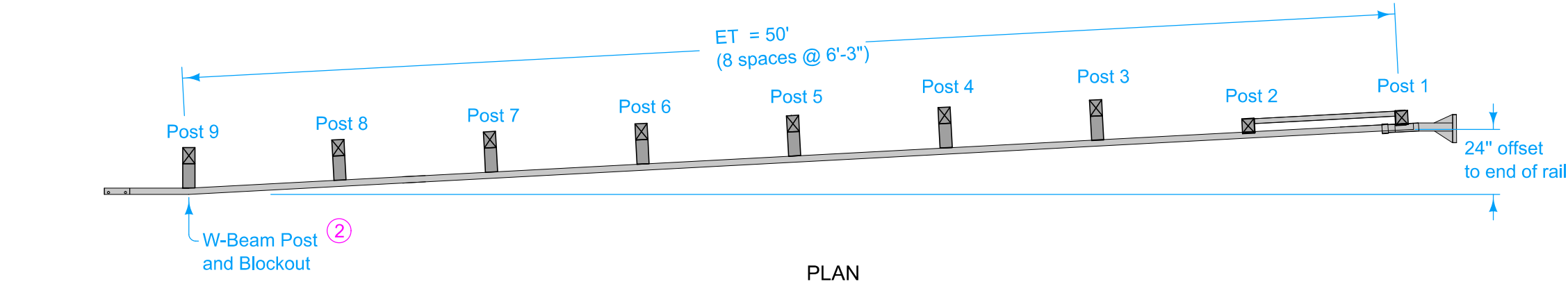
- ① Cover entire face of impact head or extruder with alternating black and yellow striped adhesive sheeting meeting the following requirements:
- Stripes are approximately 3 inches wide and slope down at a 45 degree angle toward the side on which traffic is to pass the end terminal.

- Yellow stripes meet the retroreflectivity requirements for Type III or Type IV reflective sheeting.
- ② Refer to BA-200.

Possible Contract Item:  
Steel Beam Guardrail Tangent End Terminal, LS-625

Possible Tabulations:  
108-8A  
108-8B  
108-8C  
108-8D

 IOWA DOT		REVISION	
		1	10-19-21
STANDARD ROAD PLAN		LS-625	
		SHEET 1 of 1	
REVISIONS:	Removed note about alternate post design. Added note about driving posts. Added engineer's approval note.		
			
APPROVED BY DESIGN METHODS ENGINEER			
STEEL BEAM GUARDRAIL TANGENT END TERMINAL (NCHRP 350 TL-3)			



DESIGNER INFORMATION

Refer to Materials I.M. 455.02 for a list of approved sources.

Use materials meeting the respective manufacturer's specifications. Install end terminals according to the manufacturer's recommendations.

Drive posts using a hammer driver. Ensure posts are not damaged during installation. Posts may be placed in prebored holes if site conditions are such that posts cannot be driven. Place backfill material consisting of material removed or other suitable soil around posts. Place the backfill material in lifts not exceeding 4 inches. Thoroughly compact each lift before the next lift is placed.

1 Cover entire face of impact head or buffered end section with alternating black and yellow striped adhesive sheeting meeting the following requirements:



-Stripes are approximately 3 inches wide and slope down at a 45 degree angle toward the side on which traffic is to pass the end terminal.

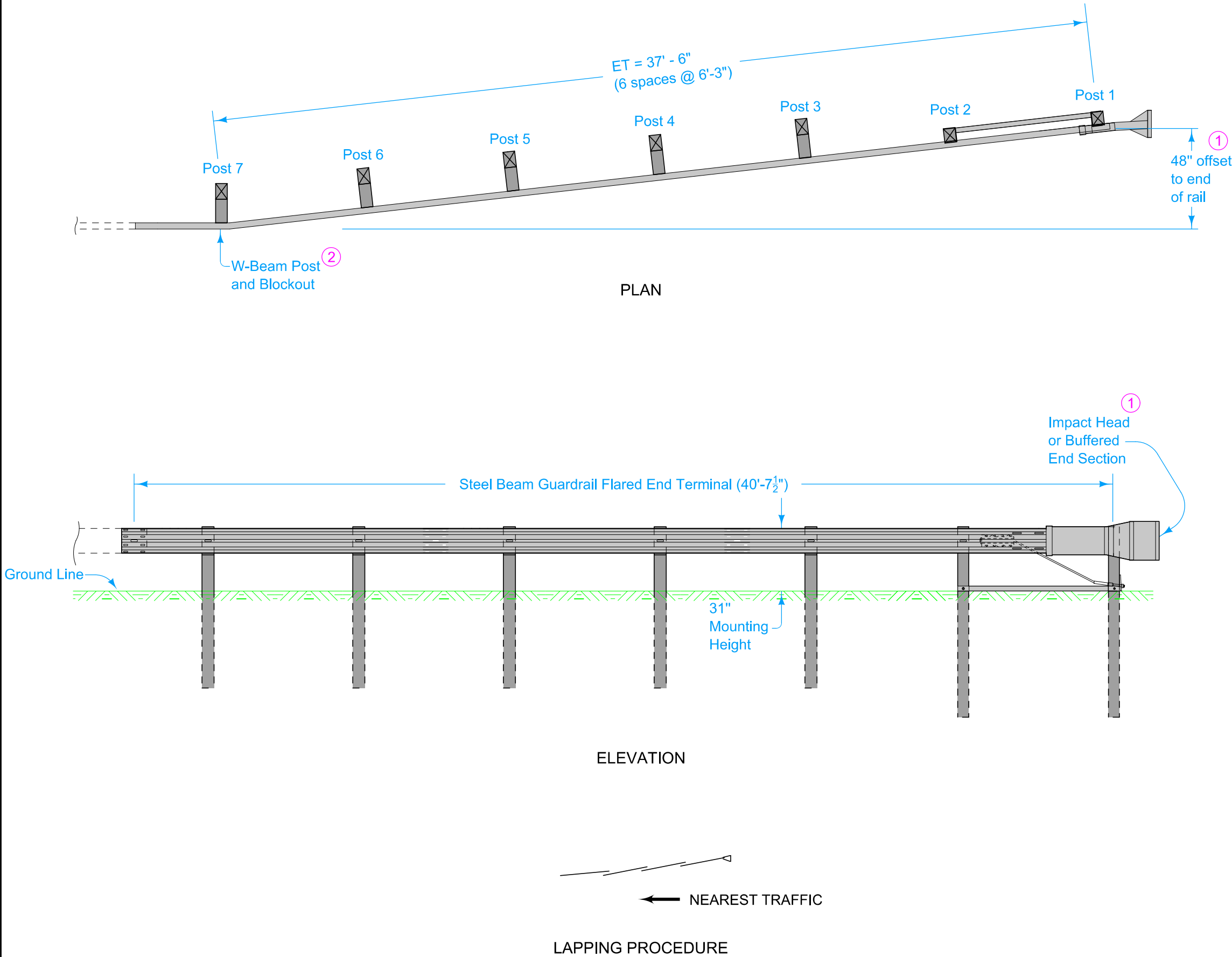
-Yellow stripes meet the retroreflectivity requirements for Type III or Type IV reflective sheeting.

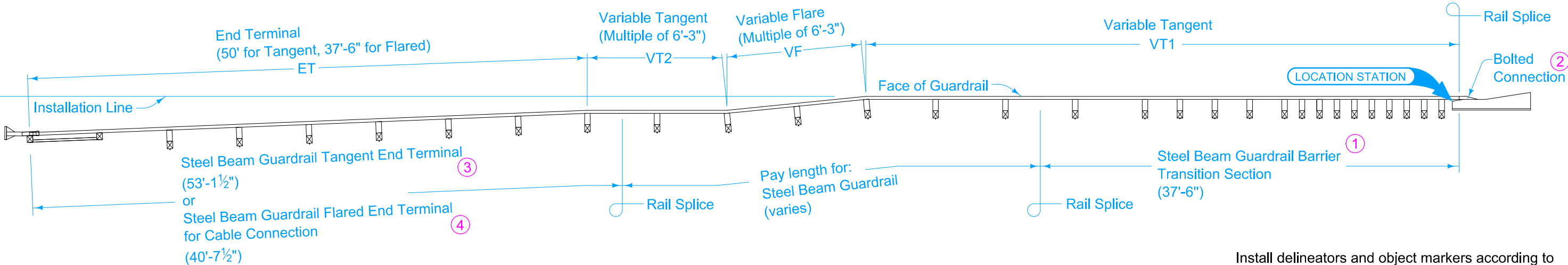
2 Refer to BA-200.

Possible Contract Item:  
Steel Beam Guardrail Flared End Terminal, LS-626

Possible Tabulations:  
108-8A  
108-8B  
108-8C

 IOWA   DOT	REVISION	
	1	10-19-21
	LS-626	
STANDARD ROAD PLAN		SHEET 1 of 1
REVISIONS:	Removed note about alternate post design. Added note about driving posts.	
		
APPROVED BY DESIGN METHODS ENGINEER		
STEEL BEAM GUARDRAIL FLARED END TERMINAL (NCHRP 350 TL-3)		





Install delineators and object markers according to SI-211.

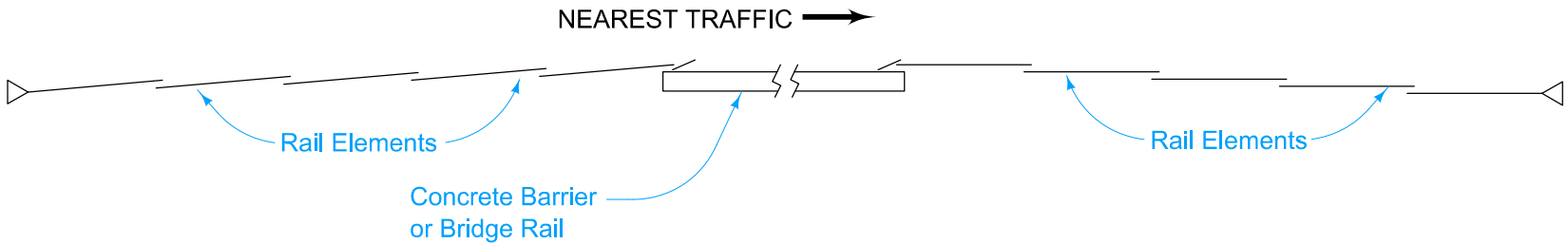
For grading requirements, see EW-301.

For general guardrail details, see BA-200.

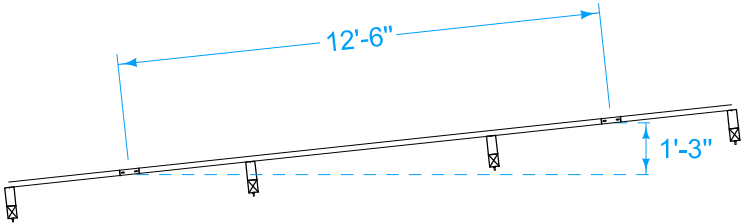
- ① See BA-201.
- ② See BA-202 for connections to concrete barriers and bridge rail end sections.
- ③ See LS-625.
- ④ See LS-626.

Possible Contract Items:  
Steel Beam Guardrail  
Steel Beam Guardrail Barrier Transition Section, BA-201  
Steel Beam Guardrail End Anchor, Bolted  
Steel Beam Guardrail Flared End Terminal, LS-626  
Steel Beam Guardrail Tangent End Terminal, LS-625

Possible Tabulation:  
108-8A



LAPPING PROCEDURE



VARIABLE FLARE

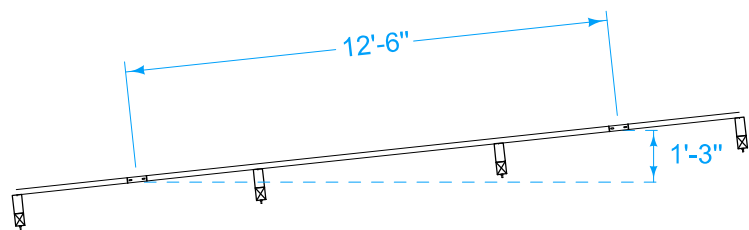
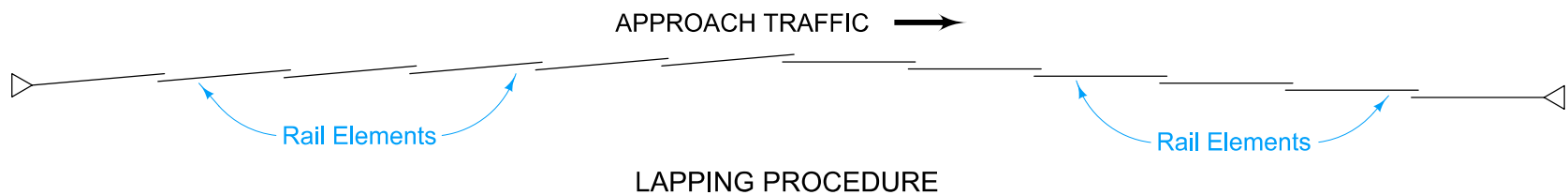
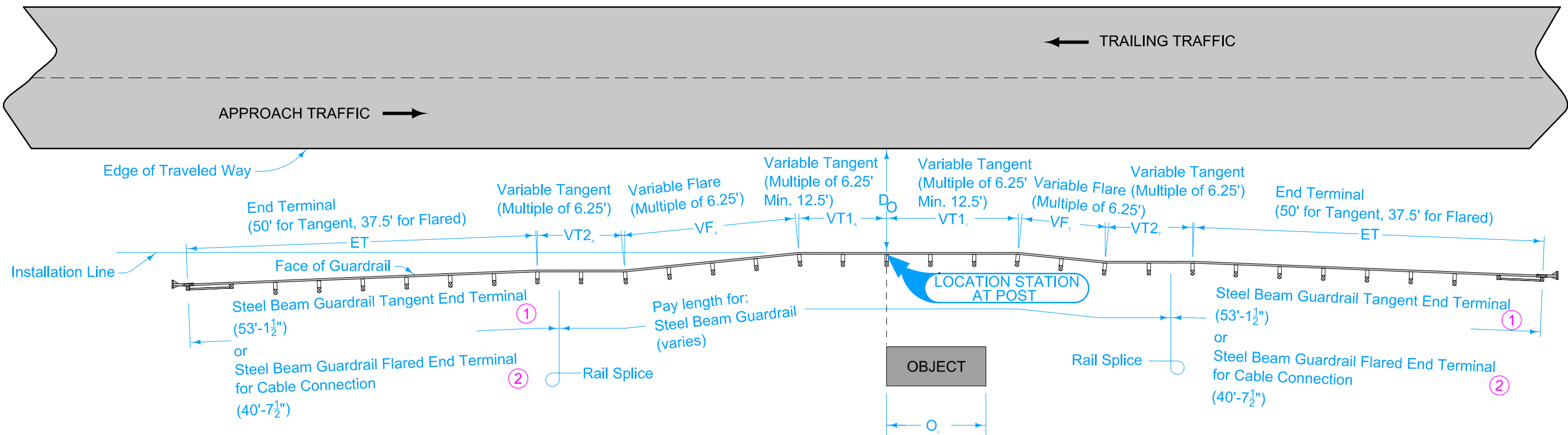
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STANDARD ROAD PLAN

REVISIONS: Removed circle note 5.

APPROVED BY DESIGN METHODS ENGINEER

STEEL BEAM GUARDRAIL  
INSTALLATION AT CONCRETE BARRIER  
OR BRIDGE RAIL END SECTION  
(NCHRP 350 TL-3)



VARIABLE FLARE

Install delineators and object markers according to SI-211.

For grading requirements, see EW-301.



For general guardrail details, see BA-200.

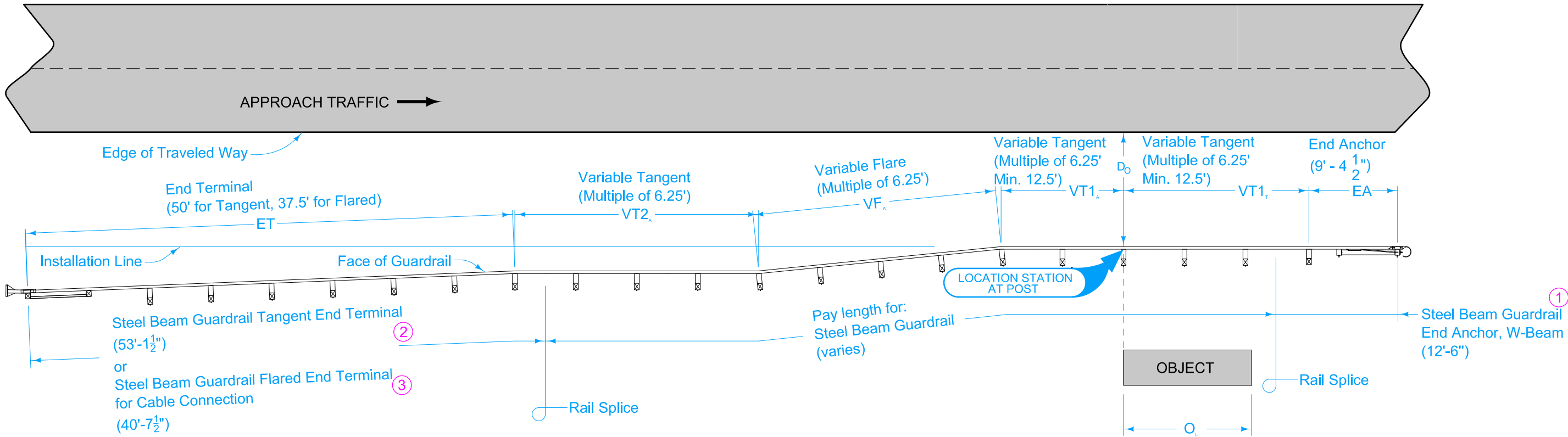
① See LS-625.

② See LS-626.

Possible Contract Items:  
Steel Beam Guardrail  
Steel Beam Guardrail Flared End Terminal, LS-626  
Steel Beam Guardrail Tangent End Terminal, LS-625

Possible Tabulation:  
108-8B

 IOWA DOT	REVISION	
	1	04-20-21
STANDARD ROAD PLAN	LS-631	
	SHEET 1 of 1	
REVISIONS:      Changed Obstacle to Object.		
		
APPROVED BY DESIGN METHODS ENGINEER		
STEEL BEAM GUARDRAIL INSTALLATION AT SIDE OBJECT (TWO-WAY PROTECTION)		



Install delineators and object markers according to SI-211.

For grading requirements, see EW-301.

For general guardrail details, see BA-200.

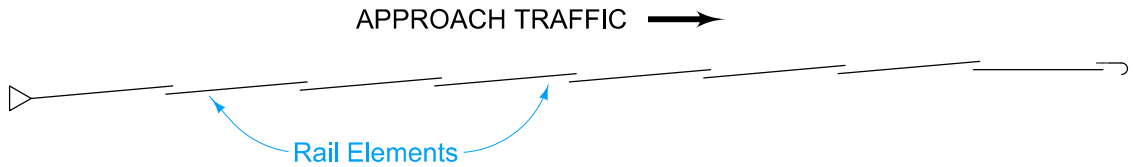
① See BA-203.

② See LS-625.

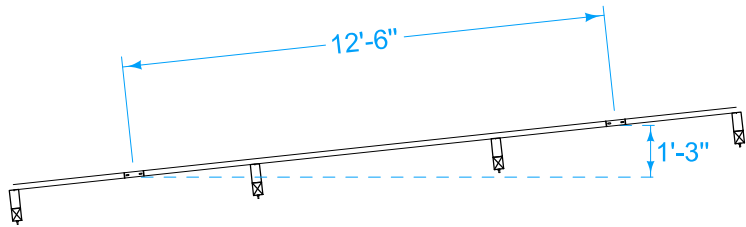
③ See LS-626.

Possible Contract Items:  
Steel Beam Guardrail  
Steel Beam Guardrail End Anchor, W-Beam  
Steel Beam Guardrail Flared End Terminal, LS-626  
Steel Beam Guardrail Tangent End Terminal, LS-625



Possible Tabulation:  
108-8C



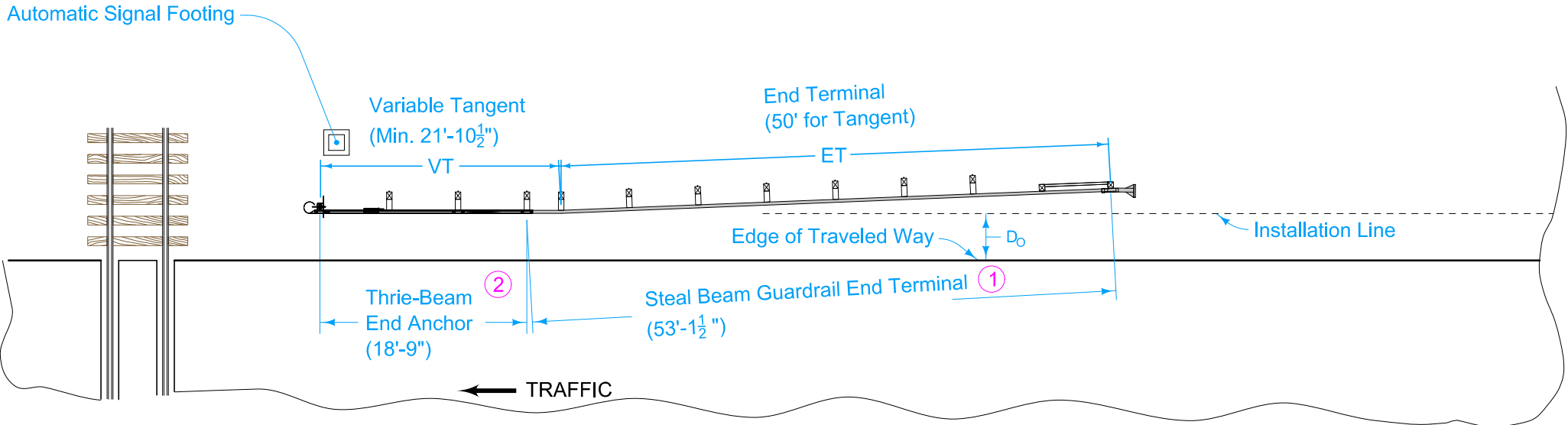
LAPPING PROCEDURE



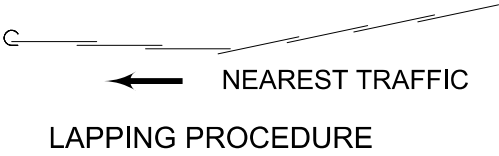
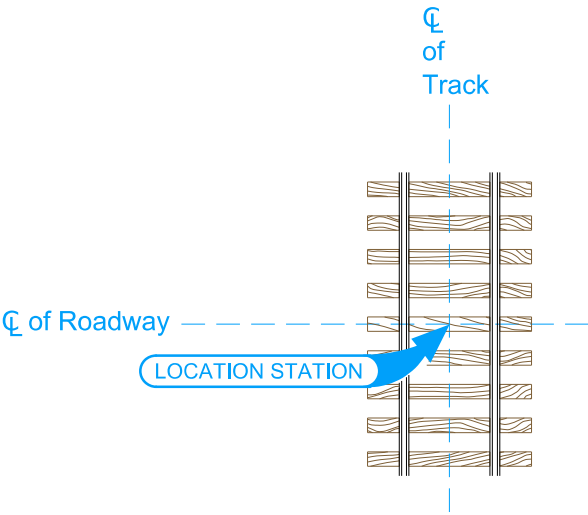
VARIABLE FLARE

 <b>IOWA   DOT</b>	REVISION	
	1	04-20-21
	<b>LS-632</b>	
<b>STANDARD ROAD PLAN</b>	SHEET 1 of 1	
REVISIONS:      Changed Obstacle to Object.		
		
APPROVED BY DESIGN METHODS ENGINEER		
<b>STEEL BEAM GUARDRAIL INSTALLATION AT SIDE OBJECT (ONE-WAY PROTECTION)</b>		



- For grading requirements, refer to EW-301.
- For additional guardrail requirements, refer to BA-200.
- ① Refer to LS-625.
- ② Refer to BA-204.



PLAN



- Possible Contract Items:
- Steel Beam Guardrail End Anchor, Thrie-Beam
  - Steel Beam Guardrail Tangent End Terminal, LS-625
- Incidental to Steel Beam Guardrail End Anchor, Thrie-Beam:
- Delineator, Rigid - Type I
  - Object Marker, Type 2
  - Object Marker, Type 3
- Possible Tabulation:
- 108-8D

 IOWA   DOT	REVISION	
	New	04-19-16
	LS-633	
STANDARD ROAD PLAN		
SHEET 1 of 1		
REVISIONS:	New. Previously published as BA-253.	
		
APPROVED BY DESIGN METHODS ENGINEER		
STEEL BEAM GUARDRAIL INSTALLATION AT RAILROAD SIGNAL		

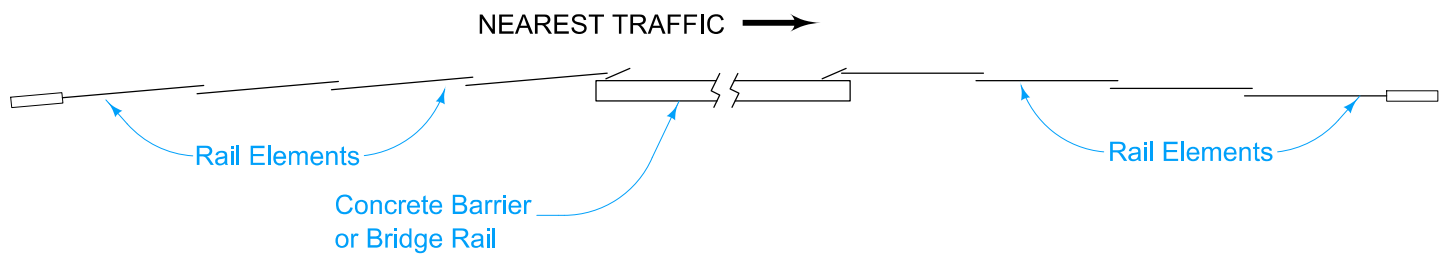
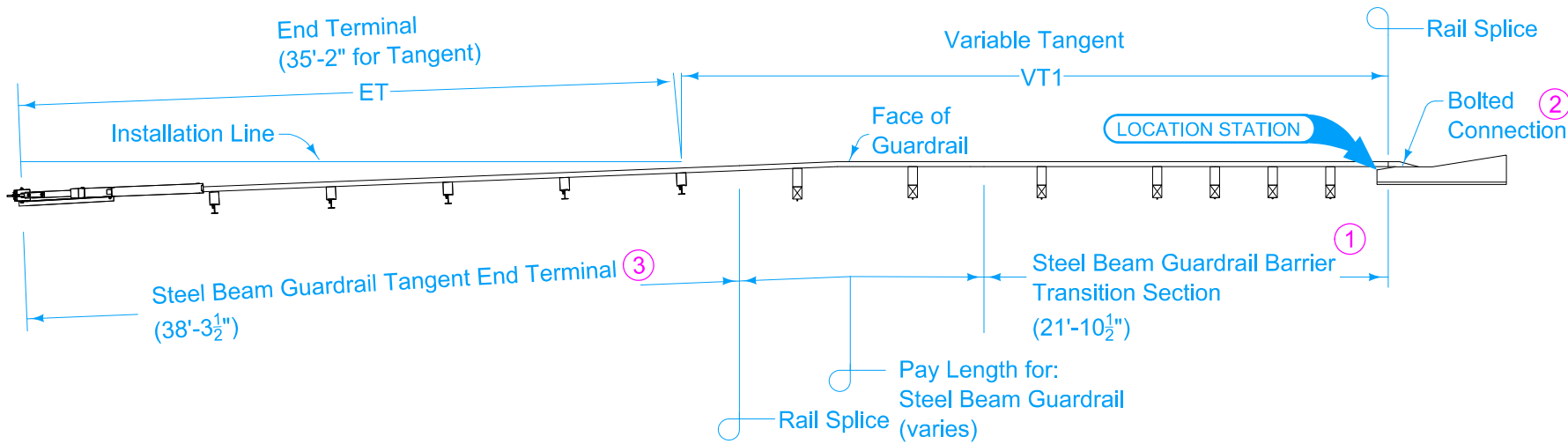


Install delineators and object markers according to SI-211.

For grading requirements, see EW-301.

For general guardrail details, see BA-200.



- ① See BA-221.
- ② See BA-202 for connections to concrete barriers and bridge rail end sections.
- ③ See BA-225.



LAPPING PROCEDURE

Possible Contract Items:  
Steel Beam Guardrail  
Steel Beam Guardrail Barrier Transition Section, BA-221  
Steel Beam Guardrail End Anchor, Bolted  
Steel Beam Guardrail Tangent End Terminal, BA-225

Possible Tabulation:  
108-8A

 IOWA   DOT	REVISION	
	3	10-18-22
STANDARD ROAD PLAN	LS-635	
	SHEET 1 of 1	
REVISIONS: Modified dimension lines.		
		
APPROVED BY DESIGN METHODS ENGINEER		
STEEL BEAM GUARDRAIL INSTALLATION AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION (MASH TL-2)		