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## ORIGINATION FORM

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### Proposed Revisions to a Standard Plans Index (Please provide all information — Incomplete forms will be returned)

**Contact Information:**

Date: February 12, 2020

Originator: Cheryl Hudson

Phone: (850) 414-5332

Email: cheryl.hudson@dot.state.fl.us

**Standard Plans:**

Index Number: 521-427

Sheet Number (s): 1

Index Title: Traffic Railing - (36" Single-Slope)

**Summary of the changes:**

Sheet 1: Numbered and reorganized notes; Added drainage slot information; Clarified the height transitions; Deleted crash rating; Sheet 2: Added Notes; changed Detail B

**Commentary / Background:**

MASH crash criteria met is in the SPI (not a construction note). Numbered notes to make them consistent with other Indexes and within the Single-Slope Traffic Railings.

**Other Affected Offices / Documents:** (Provide name of person contacted)

- | Yes                      | No                                  |                             |
|--------------------------|-------------------------------------|-----------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans –      |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual –        |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications –   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List –     |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction –              |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance –               |

**Origination Package Includes:**

(Email or hand deliver package to Rick Jenkins)

- | Yes                                 | N/A                      |  |
|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups                         |
| <input type="checkbox"/>            | <input type="checkbox"/> | Proposed Standard Plan Instruction (SPI) |
| <input type="checkbox"/>            | <input type="checkbox"/> | Revised SPI                              |
| <input type="checkbox"/>            | <input type="checkbox"/> | Other Support Documents                  |

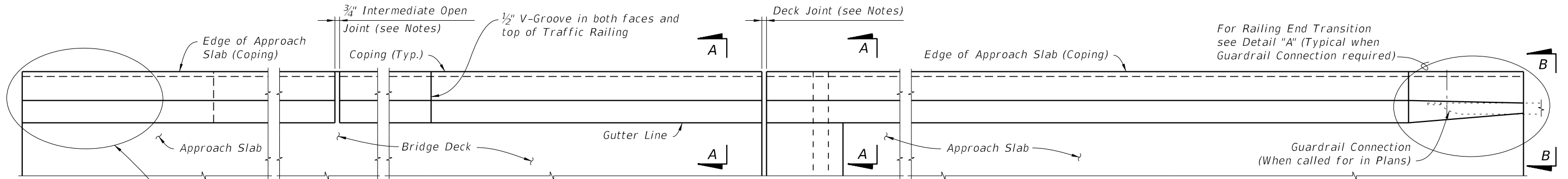
**Implementation:**

- Design Bulletin (Interim)
- DCE Memo
- Program Mgmt. Bulletin
- FY-Standard Plans (Next Release)

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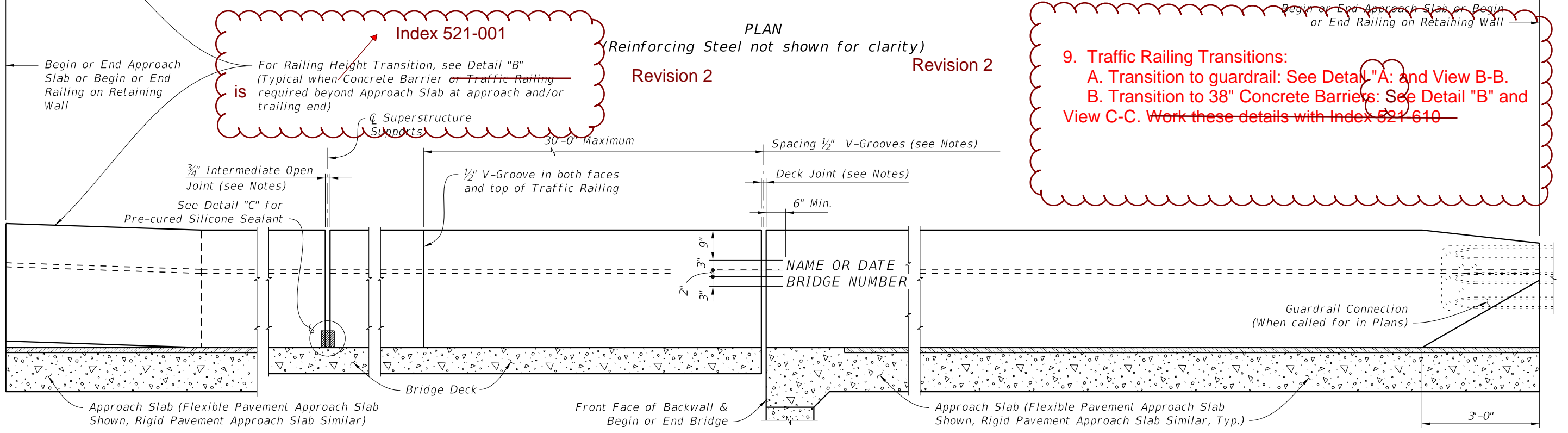
Contact the Roadway Design Office for assistance in completing this form

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**Index 521-001**  
 For Railing Height Transition, see Detail "B" (Typical when Concrete Barrier or Traffic Railing required beyond Approach Slab at approach and/or trailing end)

**9. Traffic Railing Transitions:**  
 A. Transition to guardrail: See Detail "A" and View B-B.  
 B. Transition to 38" Concrete Barriers: See Detail "B" and View C-C. Work these details with Index 521-610



**ELEVATION OF INSIDE FACE OF RAILING**  
 (Reinforcing Steel not shown for clarity)  
 (Railing on Bridge Deck and Approach Slab shown, Railing on Retaining Wall similar)

**CROSS REFERENCE:**  
 For Section A-A, View B-B, Detail "A" and Detail "B", see Sheet 2. For Detail "C", see Sheet 4.

**TRAFFIC RAILING NOTES**

~~This railing has been structurally evaluated to be equivalent or greater in strength to other single slope railings which have been crash tested to MASH TL 4 Criteria.~~

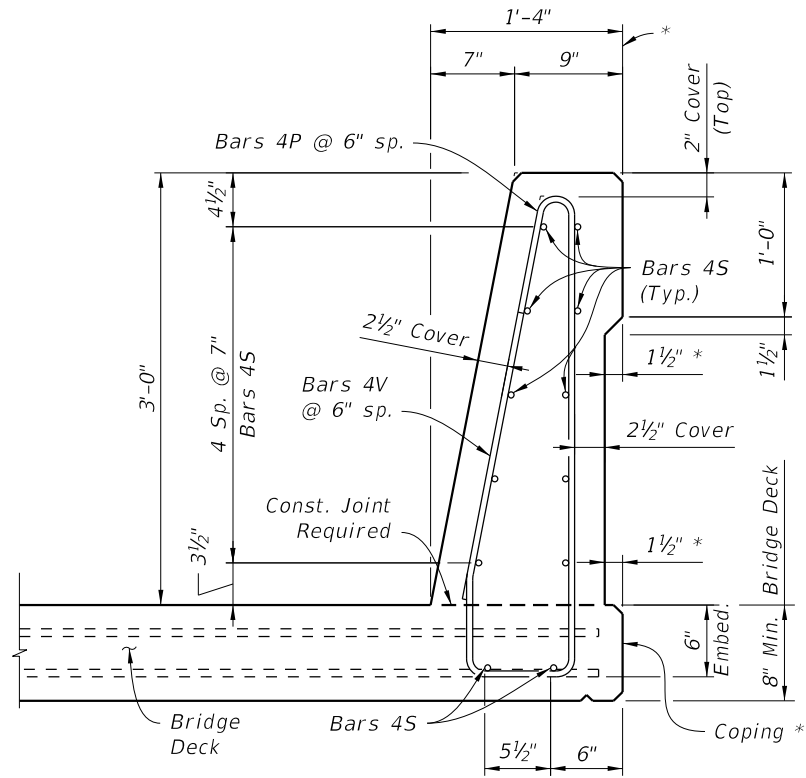
- CONCRETE AND REINFORCING STEEL:** See Structures Plans General Notes.
- GUARDRAIL:** For Guardrail Connection details see Index 536-001.
- SUPERELEVATED BRIDGES:** At the option of the Contractor the Traffic Railing on superelevated bridges may be constructed perpendicular to the roadway surface. If an adjoining railing is constructed plumb, transition the end of the Traffic Railing from perpendicular to plumb over a minimum distance of 20'-0". The cost of all modifications will be at the Contractor's expense.
- PEDESTRIAN AND BICYCLE RAILING:** See Index 515-021 and 515-022 for Notes, Details and post spacings for Traffic Railings with Pedestrian /Bicycle Bullet Railings.
- V-GROOVES:** Construct 1/2" V-Grooves plumb. Space V-Grooves equally between 3/4" Open Joints and/or Deck Joints and at V-Groove locations on Retaining Wall footings.
- END TRANSITIONS:** When guardrail approaches are shown in the Plans, provide the Railing End Transition as shown in Detail "A". When a concrete traffic railing or barrier is shown on the approaches, provide the Railing Height Transition as shown in Detail "B".

- NAME, DATE AND BRIDGE NUMBER:** The Name and Bridge Number shall be placed on the Traffic Railing so as to be seen on the driver's right side when approaching the bridge. The Date shall be placed on the driver's left side when approaching the bridge. The Name shall be as shown in the General Notes in the Structures Plans. The Date shall be the year the bridge is completed. For a widening when the existing railing is removed, use both the existing date and the year of the widening. Black plastic letters and figures 3" in height may be used, as approved by the Engineer, in lieu of the letters and figures formed by 3/8" V-Grooves. V-Grooves shall be formed by preformed letters and figures.
- BARRIER DELINEATORS:** Install Barrier Delineators on top of the Traffic Railing 2" from the face on the traffic side in accordance with Specification Section 705. Match the Barrier Delineator to the color (white or yellow) of the near edgeline.
- JOINTS :** See Plans, Superstructure, Approach Slab and Retaining Walls Sheets for actual dimensions and joint orientation. Provide open Railing Joints at Deck Expansion Joint locations matching the dimensions of the Deck Joint. For treatment of Railings on skewed bridges see Sheet 3.  
 Provide 3/4" Intermediate Open Joints at:  
 (1) - Superstructure supports where slab is continuous.  
 (2) - Ends of approach slabs when adjacent to retaining walls and at expansion joints on retaining wall junction slabs.

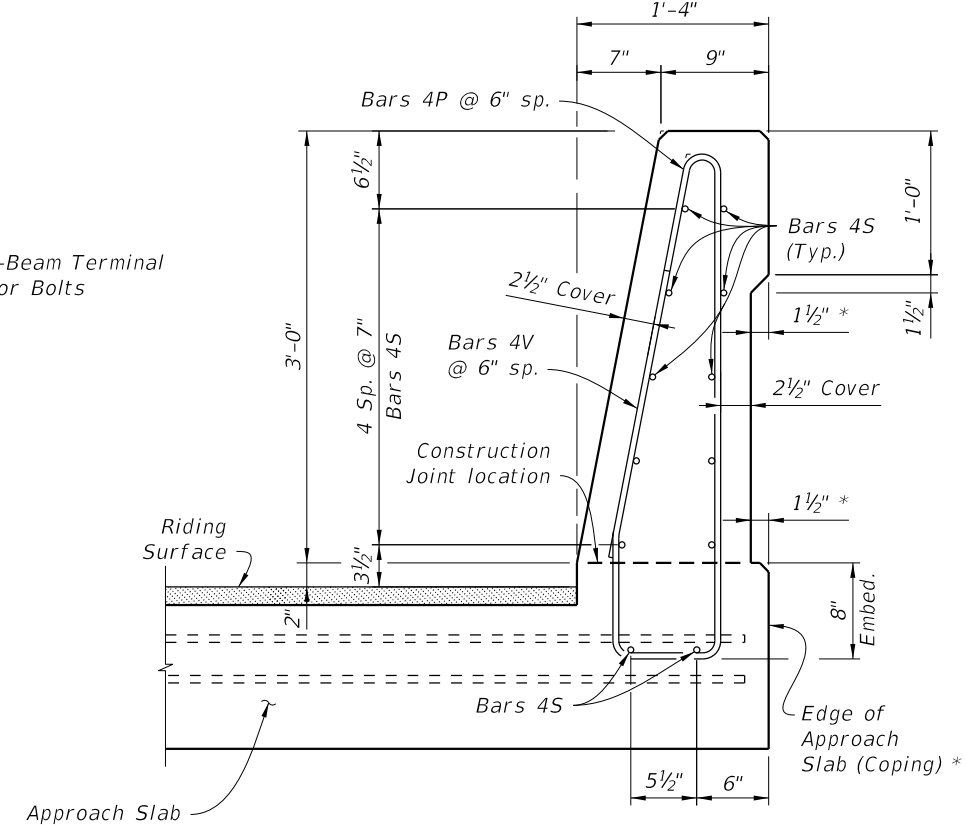
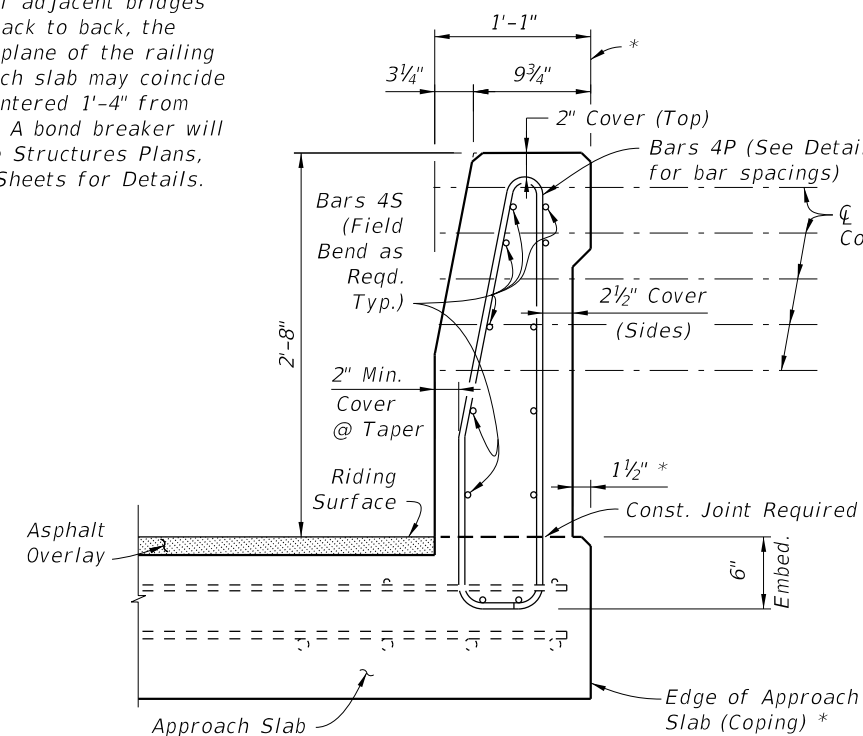
Numbered and reorganized notes; Changed Superelevated Note

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20	LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 FY 2020-21 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX 521-427	SHEET 1 of 5
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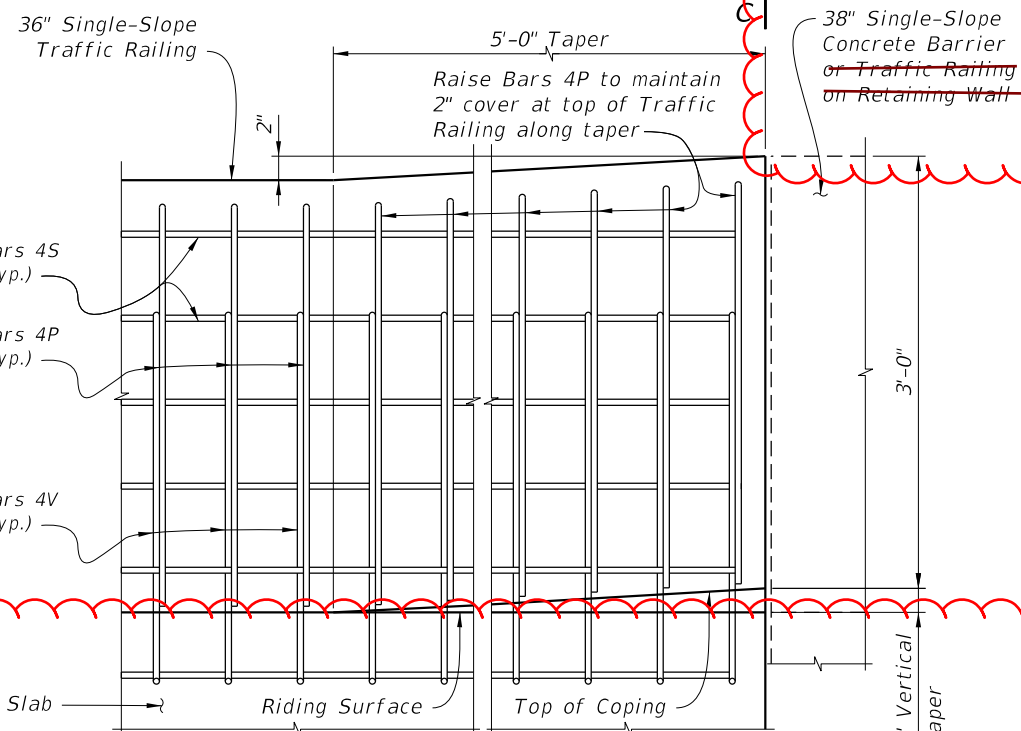
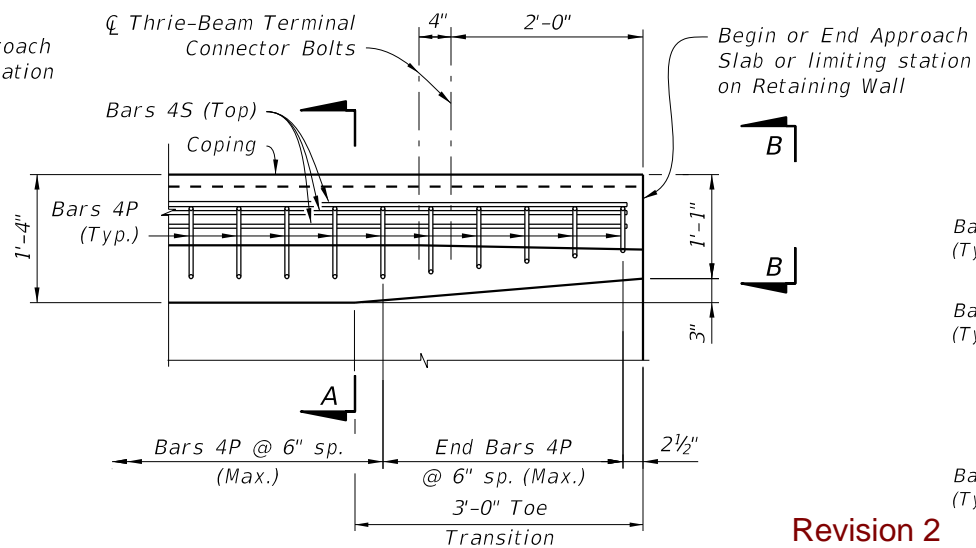
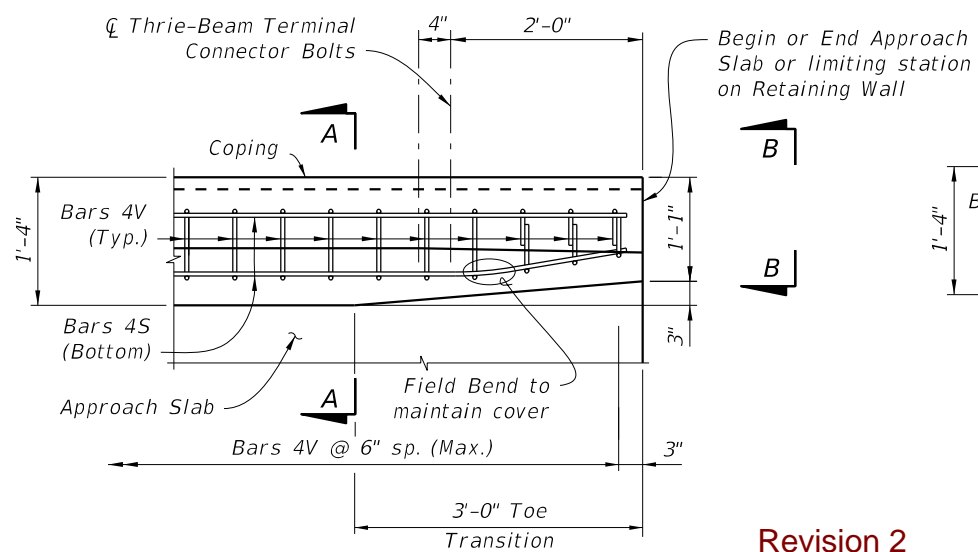
\* Where railings of adjacent bridges are to be built back to back, the outside vertical plane of the railing and deck/approach slab may coincide along a plane centered 1'-4" from each gutter line. A bond breaker will be required. See Structures Plans, Superstructure Sheets for Details.



SECTION A-A  
TYPICAL SECTION THRU TRAFFIC RAILING  
(Section thru Bridge Deck shown, Section thru Approach Slab and Retaining Walls similar)

VIEW B-B  
END TRANSITION  
(Section thru Approach Slab shown, Section thru Retaining Walls similar)

VIEW C-C  
HEIGHT TRANSITION



PLAN - RAILING END TRANSITION  
(Showing Bars 4V and 4S)

PLAN - RAILING END TRANSITION  
(Showing Bars 4P and 4S)

DETAIL "B"  
ELEVATION - RAILING HEIGHT TRANSITION  
(Showing Transition to 38" Single-Slope Traffic Railing or Barrier)

NOTE: Omit Detail "A" and provide Detail "B" if Index 521-001 Concrete Barrier or Retaining Wall with 38" Single-Slope Traffic Railing is used beyond the Approach Slab; See Structures Plans, Plan and Elevation Sheet and Roadway Plans. If Transitions are not required, extend Typical Section to end of the Approach Slab.

Detail "B" is not required when transitioning to

Index 521-610

If transitions A or B is not required, extend typical Section to end of the approach Slab

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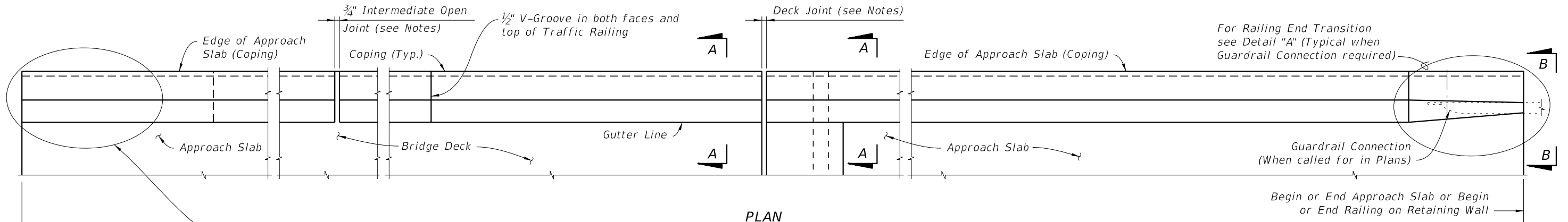


FY 2020-21  
STANDARD PLANS

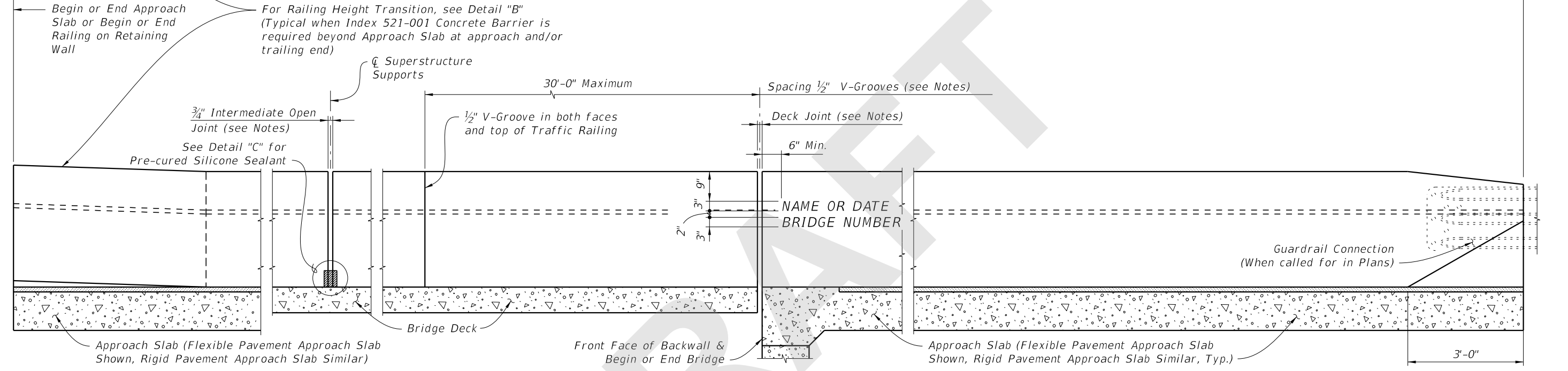
TRAFFIC RAILING - (36" SINGLE-SLOPE)

INDEX  
521-427

SHEET  
2 of 5



**PLAN**  
(Reinforcing Steel not shown for clarity)



**ELEVATION OF INSIDE FACE OF RAILING**  
(Reinforcing Steel not shown for clarity)  
(Railing on Bridge Deck and Approach Slab shown, Railing on Retaining Wall similar)

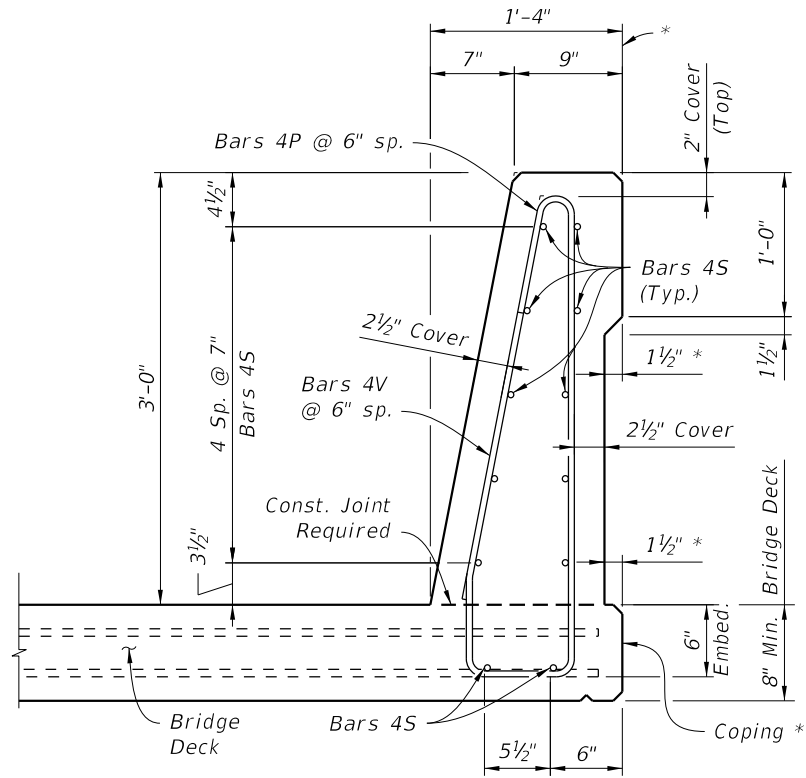
**CROSS REFERENCE:**  
For Section A-A, View B-B, Detail "A" and Detail "B", see Sheet 2. For Detail "C", see Sheet 4.

**TRAFFIC RAILING NOTES**

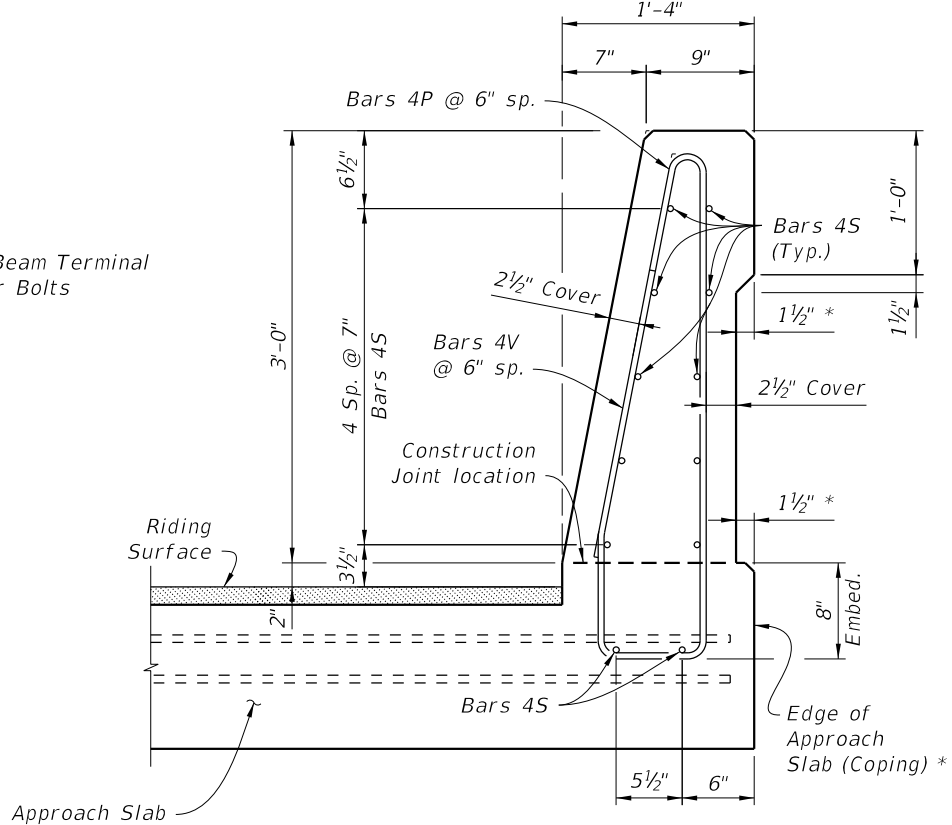
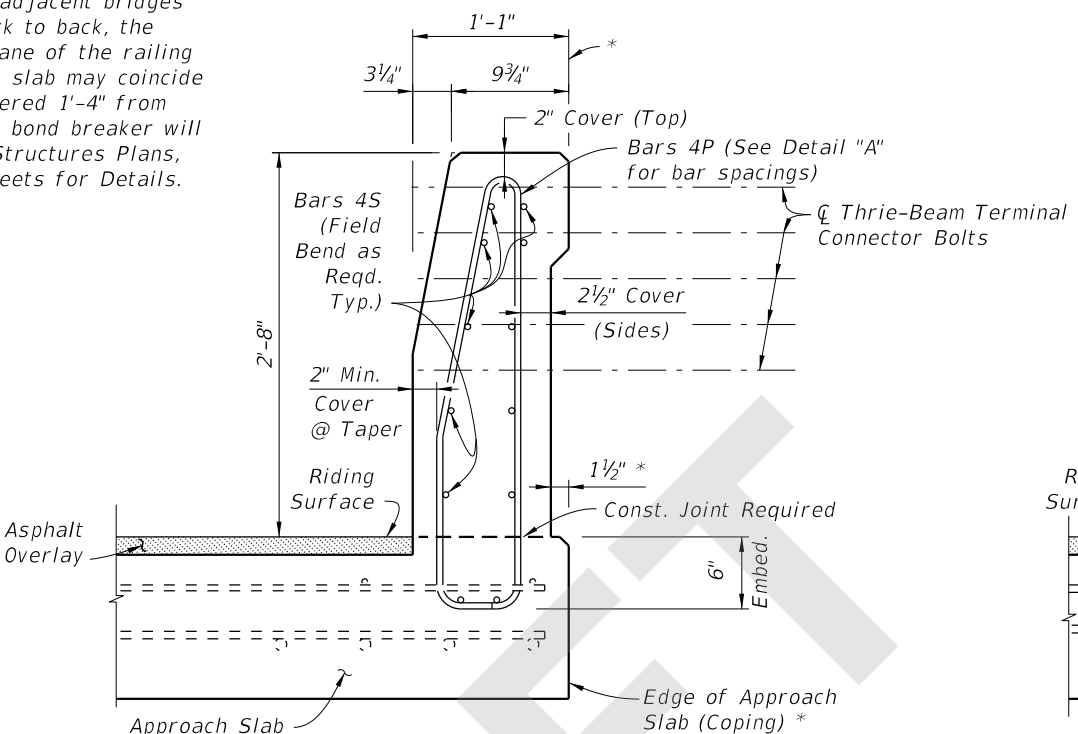
1. Materials: See Structures Plans, General Notes
2. Guardrail Connection Details: See Index 534-001
3. Superelevation: Traffic Railings on Superelevated bridges may be constructed perpendicular to the roadway surface. If an adjoining railing is constructed plumb, transition the end of the Traffic Railing from perpendicular to plumb over a minimum distance of 20'-0". The cost of all modifications will be at the Contractor's expense.
4. Name, Date & Bridge Number: Place the Name and Bridge Number on the Traffic Railing on the driver's right side when approaching the bridge. Place the Date on the driver's left side when approaching the bridge. Use the Name as shown in the General Notes of the Structures Plans. The Date is the year the bridge is completed. For a widening when the existing railing is removed, use both the date on the removed rail and the year of the widening. Form letters and figures with 3/8" V-Grooves using preformed letters and figures. Black plastic letters and figures 3" tall may be used, if approved by the Engineer.
5. Open Joints: See the Superstructure Plans, Approach Slab and Retaining Wall Sheets for Deck Joint dimensions and orientation. Provide Open Railing Joints matching the dimensions of the Deck Joint at Deck Expansion Joint locations.
  - A. For treatment of railings on skewed bridges see Sheet 3.
6. Open Joints: Provide 3/4" Open Joints at:
  - A. Superstructure supports where the slab is continuous.
  - B. At ends of approach slabs when adjacent to retaining walls and at expansion joints on retaining wall junction slabs.
7. V-Grooves: Construct 1/2" V-Grooves plumb. Space V-Grooves equally between 3/4" Open Joints and/or Deck Joints and the at V-Groove locations on the Retaining Wall footing/junction slabs.
8. Barrier Delineators: Install Barrier Delineators on top of the Traffic Railing 2" from the face of the traffic side in accordance with Specification Section 705. Match the Barrier Delineator to the color (white or yellow) of the near edgeline.
9. Traffic Railing Transitions:
  - A. Transition to guardrail: see Detail "A" and View B-B.
  - B. Transition to 38" Concrete Barriers: See Detail "B" and View C-C.
10. See Superstructure Plans for drainage slot locations and size (when required)
11. For embedded conduit and junction boxes see Index 630-010. For Traffic Railings with Pedestrian/Bicycle Bullet Railings see Index 515-021 and 515-022 for notes, details and post spacing.

SDATES

LAST REVISION 11/01/20	REVISION	DESCRIPTION:	 FY 2021-22 STANDARD PLANS	<b>TRAFFIC RAILING - (36" SINGLE-SLOPE)</b>	INDEX 521-427	SHEET 1 of 5
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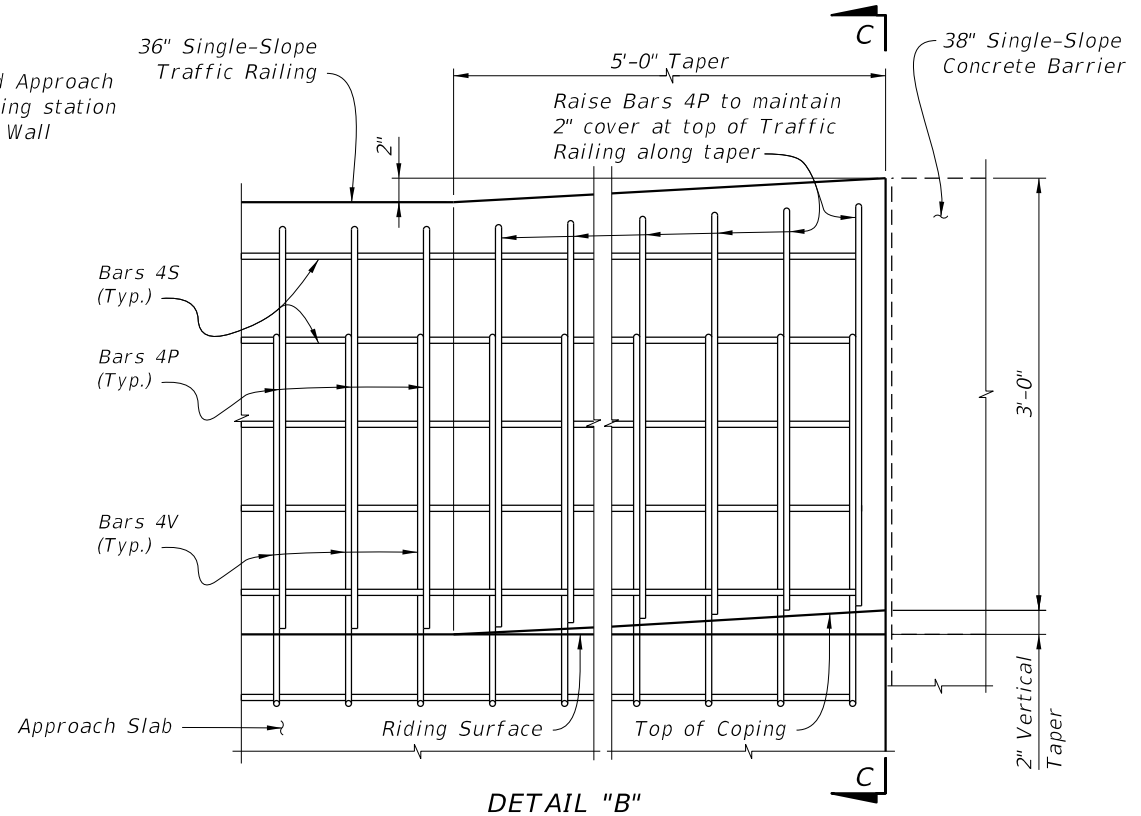
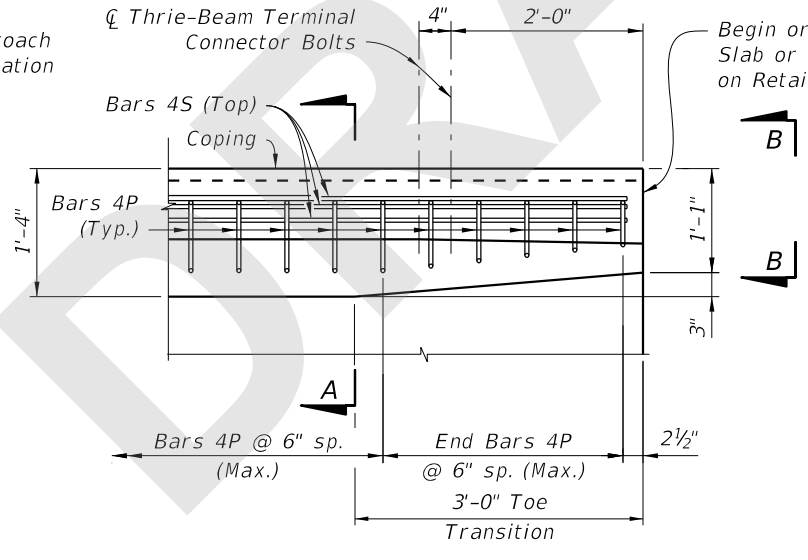
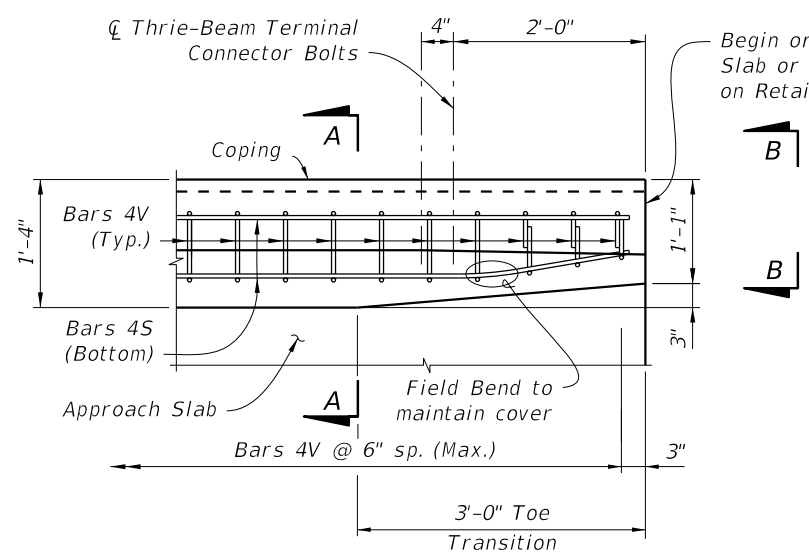
\* Where railings of adjacent bridges are to be built back to back, the outside vertical plane of the railing and deck/approach slab may coincide along a plane centered 1'-4" from each gutter line. A bond breaker will be required. See Structures Plans, Superstructure Sheets for Details.



**SECTION A-A**  
**TYPICAL SECTION THRU TRAFFIC RAILING**  
 (Section thru Bridge Deck shown, Section thru Approach Slab and Retaining Walls similar)

**VIEW B-B**  
**END TRANSITION**  
 (Section thru Approach Slab shown, Section thru Retaining Walls similar)

**VIEW C-C**  
**HEIGHT TRANSITION**



**PLAN - RAILING END TRANSITION**  
 (Showing Bars 4V and 4S)

**PLAN - RAILING END TRANSITION**  
 (Showing Bars 4P and 4S)

**DETAIL "B"**  
**ELEVATION - RAILING HEIGHT TRANSITION**  
 (Showing Transition to Index 521-001 38" Single-Slope Concrete Barrier)

NOTES: Omit Detail "A" and provide Detail "B" if Index 521-001 Concrete Barrier is used beyond the Approach Slab; See Structures Plans, Plan and Elevation Sheet and Roadway Plans. Detail "B" is not required when transitioning to Index 521-610. If Transitions A or B are not required, extend Typical Section to end of the Approach Slab.

SDATES

LAST REVISION 11/01/20	REVISION	DESCRIPTION:		FY 2021-22 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX 521-427	SHEET 2 of 5
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