ORIGINATION FORM

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: 521-428

Sheet Number (s): 1

Index Title: Traffic Railing - (42" Single-Slope)

Summary of the changes:

Sheet 1: Numbered and reorganized notes; Added drainage slot information; Clarified the height transitions; Deleted crash rating; Sheet 3: Changed height transitions (deleted transition to 44") Changed Notes

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. Sheet 2 deleted Detail "B" because it is included in 521-610 and does not transition to 44" Roadway Barriers which are for pier protection-different shape.

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

Yes	No	
☐	☑	Other Standard Plans –
☐	☑	FDOT Design Manual –
☐	☑	Basis of Estimates Manual –
☐	☑	Standard Specifications –
☐	☑	Approved Product List –
☐	☑	Construction –
☐	☑	Maintenance –

Origination Package Includes:

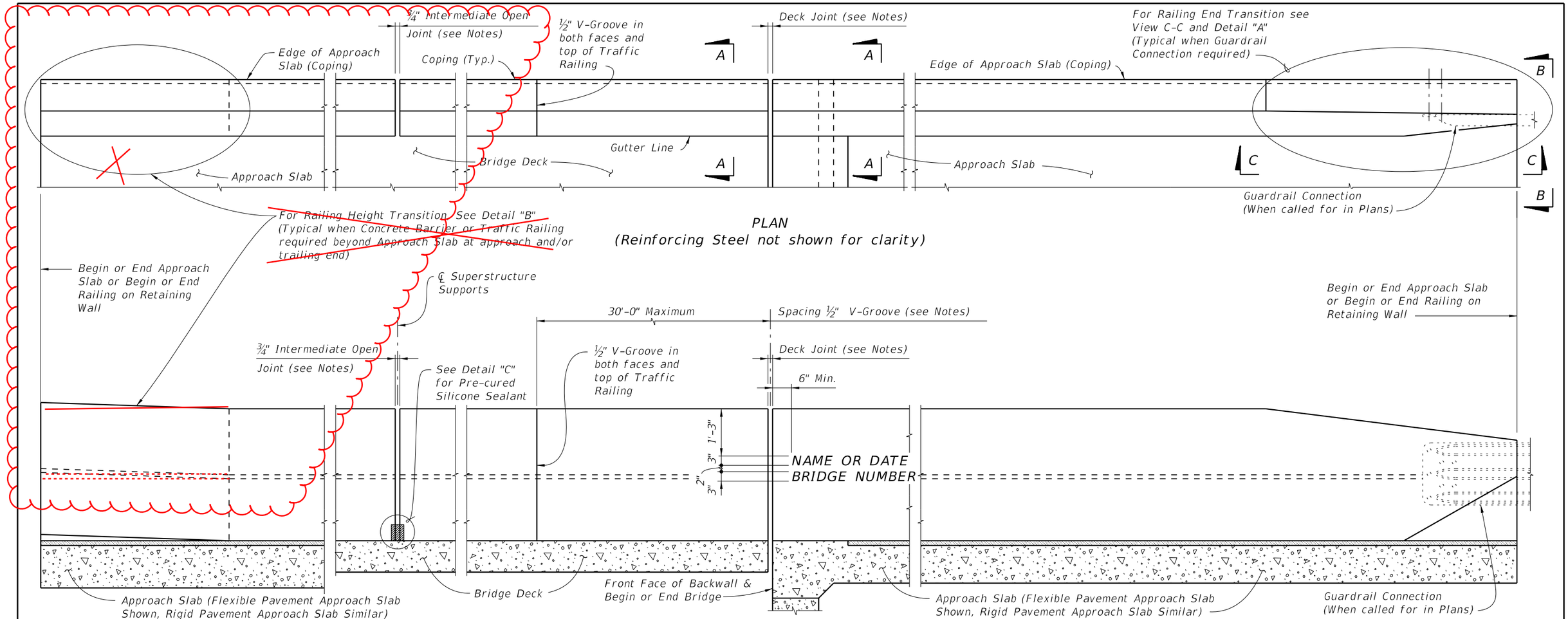
(Email or hand deliver package to Rick Jenkins)

Yes	N/A	
☑	☐	Redline Mark-ups
☐	☐	Proposed Standard Plan Instruction (SPI)
☐	☐	Revised SPI
☐	☐	Other Support Documents

Implementation:

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

Contact the Roadway Design Office for assistance in completing this form



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, End View B-B and Detail "A" see Sheet 2.
For Detail "B" see Sheet 3.
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-5.~~

CONCRETE AND REINFORCING STEEL: See Structures Plans, General Notes.

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.

GUARDRAIL: For Guardrail connection details, see Index 536-001.

V-GROOVES: Construct ½" V-Grooves plumb. Space V-Grooves equally between ¾" 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".

DRAINAGE SLOTS: When shown in the plans, see Index 521-427 Sheet 5 for details.

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 ⅜" V-Grooves. V-Grooves shall be formed by preformed letters and figures.

JOINTS: See Structures 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 Index 521-427.
Provide ¾" Intermediate Open Joints shall be provided 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.

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.

Numbered and reorganized notes. Added note on transitions.

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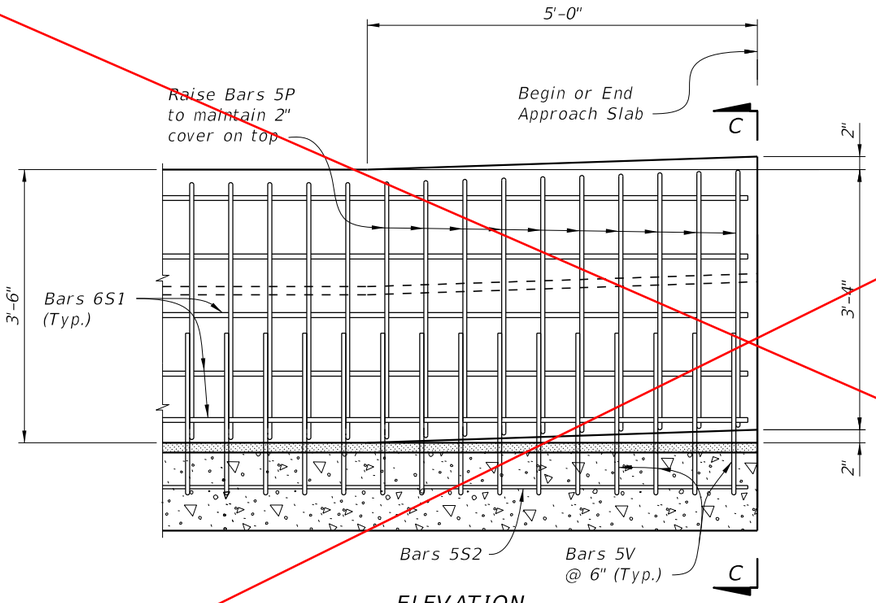
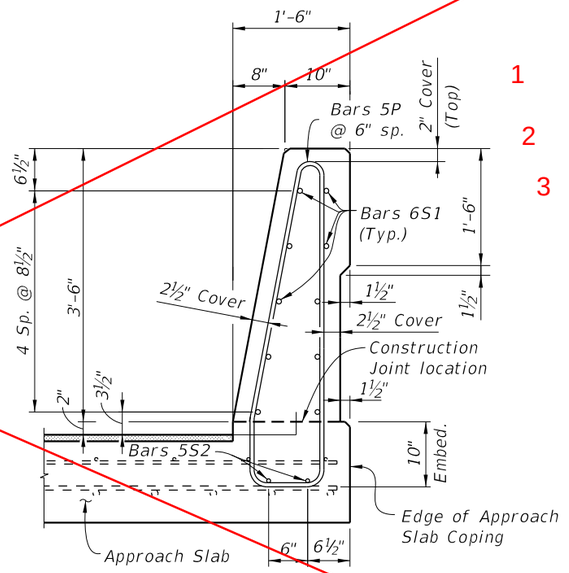


ELEVATION
RAILING HEIGHT TRANSITION

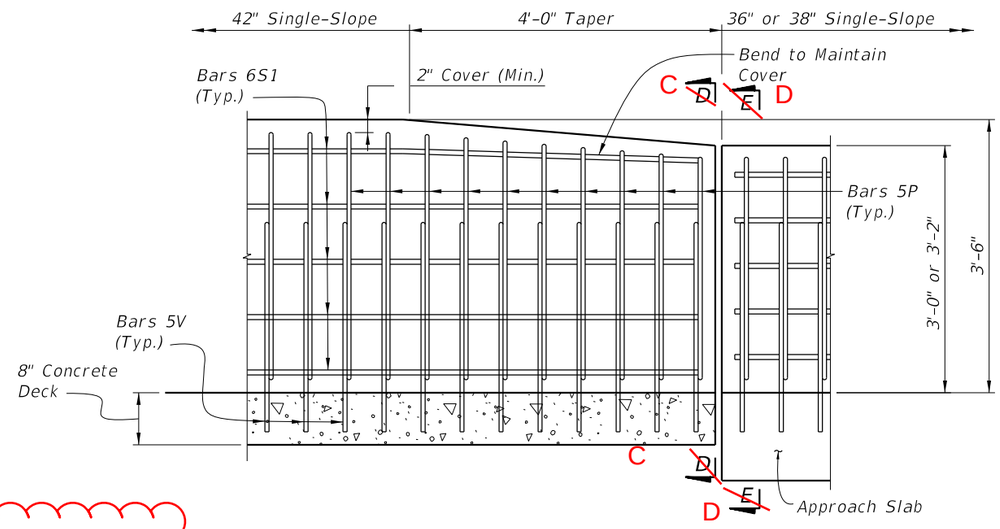


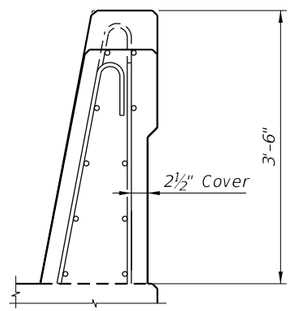
VIEW C-C
RAILING HEIGHT TRANSITION

NOTE:

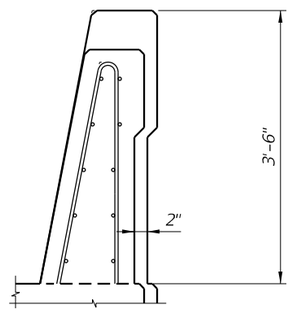
1. ~~Provide Detail "B" height transition where 42" Single Slope Traffic Railings increase to 44" Barriers beyond flexible pavement approaches.~~
2. ~~Work Detail "B" with Index 400-090~~
3. ~~Provide Detail "C"~~ height transition where 42" Traffic Railings are required on bridge, and 36" or 38" Barriers are shown on approaches.
4. ~~Work Detail "C"~~ with Indexes 400-090 or 400-091, 521-427, and 521-610 as necessary.
5. Field cut 5P Bars as shown to maintain 2" min. (4" max.) cover at top of traffic railing.

DETAIL "B"





VIEW ~~D-D~~ C-C
RAILING HEIGHT TRANSITION
(Begin/End of Bridge)
(Bars 5V not shown for clarity)



SECTION ~~E-E~~ D-D
(Index 400-091 Shown, 400-090 Similar)
(Index 521-427 Bars 4V not shown for Clarity)

DETAIL "C"

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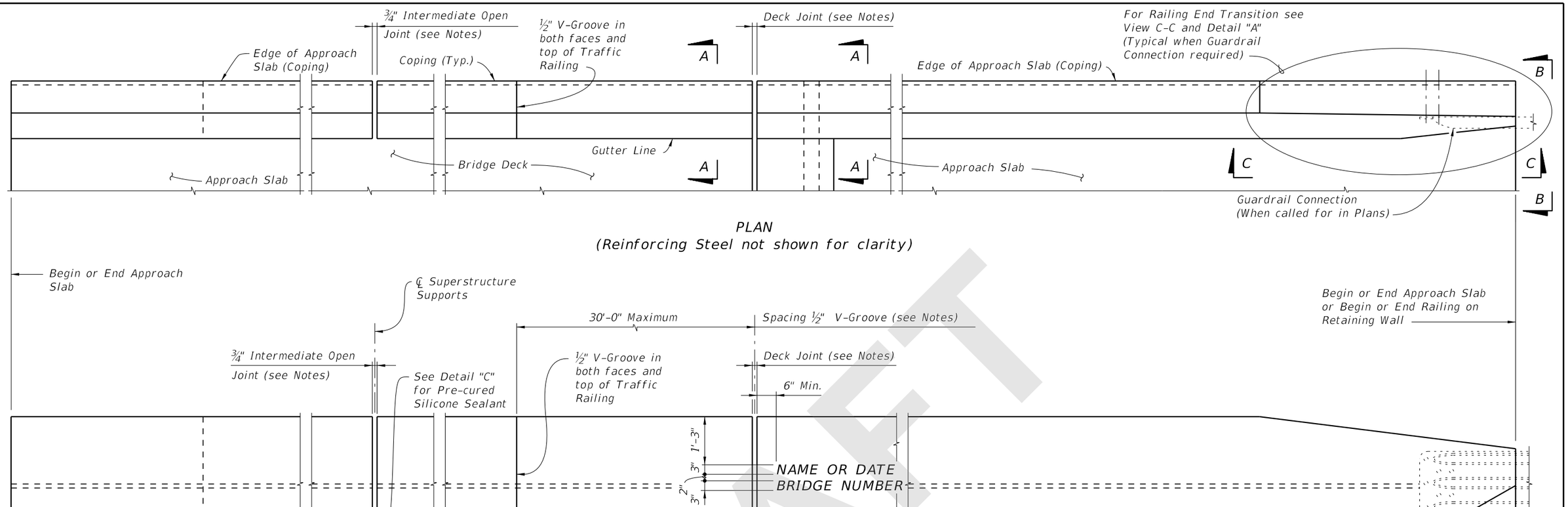
LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2020-21 STANDARD PLANS	TRAFFIC RAILING - (42" SINGLE-SLOPE)	INDEX	SHEET
~~11/01/19~~						521-428	3 of 4



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, End View B-B and Detail "A" see Sheet 2.
For Detail "B" see Sheet 3.
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 ⅜" 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 Index 521-427 Sheet 3.
6. Open Joints: Provide ¾" 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 ½" V-Grooves plumb. Space V-Grooves equally between ¾" 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: See Plans for type and location
   A. Transition to guardrail: See Detail "A" and View B-B.
   B. Transition to 44" Roadway Concrete Barriers. See Detail "B" and View C-C.
   C. Transitions to 36" or 38" concrete barriers at end of approach slab: See Detail "C", View D-D and Section E-E.
10. Drainage Slots: See Superstructure Plans for drainage slot locations and size (if required). See Index 521-427 Sheet 5 for details.
11. Embedded conduit and junction boxes: See Index 630-010.

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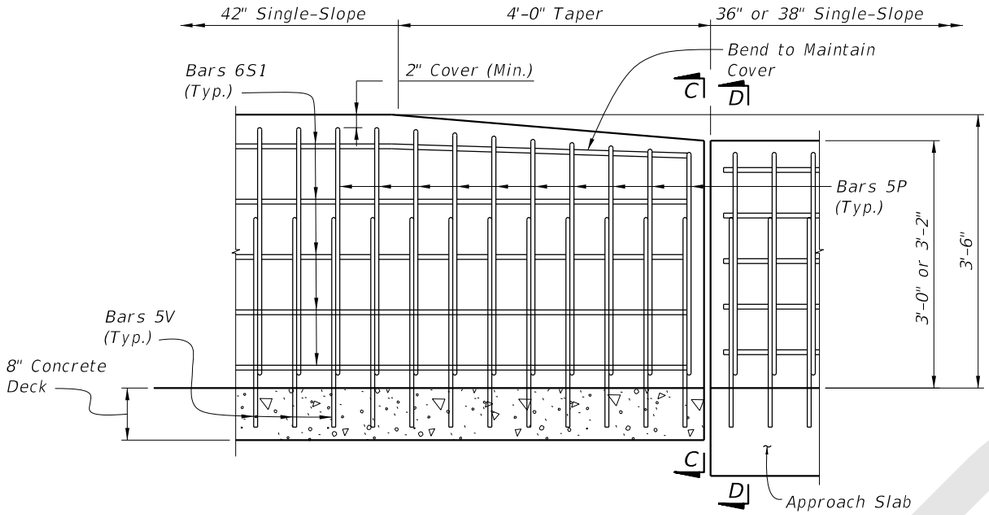
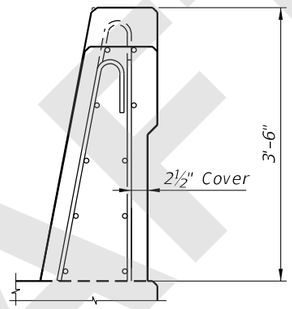
$TIME$
$DATE$

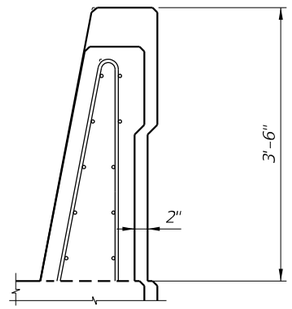
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/20			FDOT FY 2020-21 STANDARD PLANS	TRAFFIC RAILING - (42" SINGLE-SLOPE)	521-428	1 of 4

NOTE:
1. Provide Detail "B" height transition where 42" Traffic Railings are required on bridge, and 36" or 38" Barriers are shown on approaches. See Structures Plans for coping details.
2. Work Detail "B" with Indexes 400-090 or 400-091, 521-427, and 521-610 as necessary.
3. Field cut 5P Bars as shown to maintain 2" min. (4" max.) cover at top of traffic railing.





VIEW C-C
RAILING HEIGHT TRANSITION
(Begin/End of Bridge)
(Bars 5V not shown for clarity)



SECTION D-D
(Index 400-091 Shown, 400-090 Similar)
(Index 521-427 Bars 4V not shown for Clarity)

DETAIL "B"

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LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2020-21 STANDARD PLANS	TRAFFIC RAILING - (42" SINGLE-SLOPE)	INDEX	SHEET
11/01/20						521-428	3 of 4