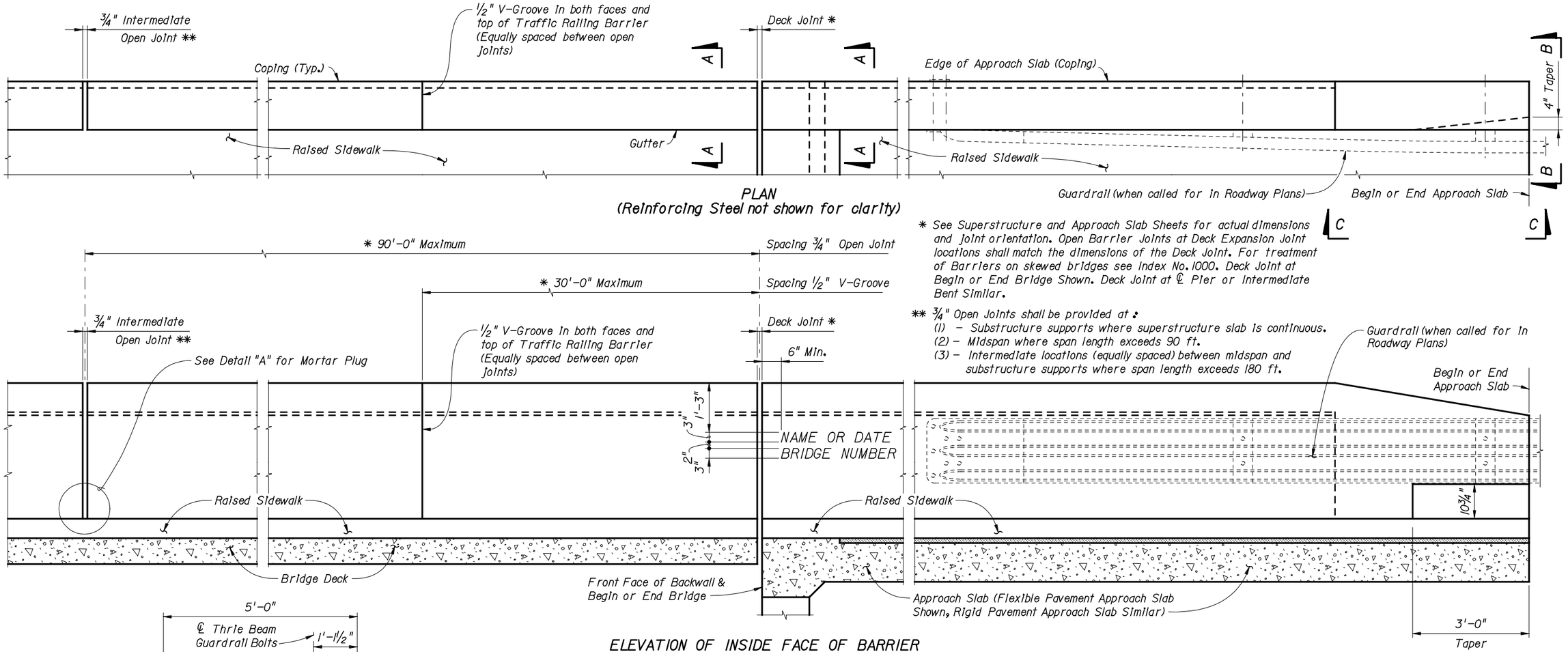
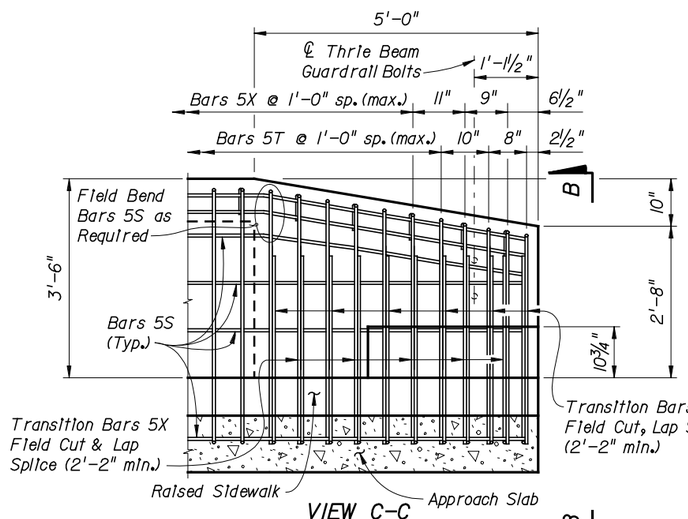


PLAN
(Reinforcing Steel not shown for clarity)

* See Superstructure and Approach Slab Sheets for actual dimensions and joint orientation. Open Barrier Joints at Deck Expansion Joint locations shall match the dimensions of the Deck Joint. For treatment of Barriers on skewed bridges see Index No. 1000. Deck Joint at Begin or End Bridge Shown. Deck Joint at ℄ Pier or Intermediate Bent Similar.

** ¾" Open Joints shall be provided at :
(1) – Substructure supports where superstructure slab is continuous.
(2) – Midspan where span length exceeds 90 ft.
(3) – Intermediate locations (equally spaced) between midspan and substructure supports where span length exceeds 180 ft.



VIEW C-C
BARRIER END TRANSITION
(Guardrail Not Shown For Clarity)

ELEVATION OF INSIDE FACE OF BARRIER
(Reinforcing Steel not shown for clarity)

NOTE:
Begin placing Barrier Bars 5T and 5X on Approach Slab at the barrier end and proceed toward Begin or End Bridge to ensure placement of guardrail bolt holes. If required, adjustments to the bar spacing for Bars 5T and 5X shall be made immediately adjacent to Begin or End Bridge. Shift and rotate Bars 5T and 5X as required to maintain cover in Barrier End Transition.

NOTE: Omit Taper, Barrier End Transition and Guardrail if Concrete Barrier Wall is used beyond the Approach Slab. See the Plan and Elevation Sheet and Roadway Plans. If Taper and Barrier End Transition are omitted, extend Typical Section to end of the Approach Slab and Space Bars 5X and 5T at 1'-0" (Typ.)

TRAFFIC RAILING BARRIER NOTES

This railing has been structurally evaluated to be equivalent or greater in strength to other safety shape railings which have been crash tested to NCHRP Report 350 TL-4 Criteria.

CONCRETE AND REINFORCING STEEL : See General Notes.

MARKERS : Elevation Markers shall be placed on top of the Traffic Railing Barrier at the end bents. On bridges longer than 100 ft. one marker shall be placed at each end of the bridge. On bridges 100 ft. or less one marker shall be placed at one end of the bridge only. Markers are to be furnished by the Florida Department of Transportation and installed by the Contractor. The cost of installing the markers shall be included in the Contract Unit Price for the Traffic Railing Barrier.

GUARDRAIL : For Guardrail connection details, see Roadway and Traffic Design Standards Index No. 400.

BARRIERS ON RETAINING WALLS : If the Traffic Railing Barrier is to be provided on a retaining wall, the barrier section will be the same as shown on Index No. 720, Drawing 2 of 2. All other details such as the guardrail transition attachment, the maximum spacing of the ¾" open joints and ½" V-groove shall apply.

NAME, DATE, AND BRIDGE NUMBER : The Name and Bridge Number shall be placed on the Traffic Railing Barrier 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 Date shall be the year the bridge is constructed. For a major widening the date shall be 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.

CROSS REFERENCE:
For Section A-A, Detail "A" and View B-B, see Index No. 720, Drawing 2 of 2.

BRIDGE NO. XXXXXX

$$$$$$$DGNSPECIFICATION$$$$$$$

$$$$$$$STYLESHEET$$$$$$$

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
10-01-01	SDO	Standard Drawing Issue Date			

	NAMES	DATES
DRAWN BY	MDM	5-00
CHECKED BY	CEB	5-00
DESIGNED BY	CEB	5-00
CHECKED BY	MDM	5-00
APPROVED BY	REN	

ENGINEER OF RECORD:
STRUCTURES DESIGN OFFICE
CENTRAL OFFICE
605 Suwannee Street, MS 33
Tallahassee, Florida 32399-0450

FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID.
.	.	.

SHEET TITLE:
TRAFFIC RAILING BARRIER – (42" VERTICAL SHAPE)
INDEX NO. 720 (DRAWING 1 OF 2)

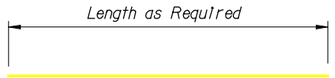
PROJECT NAME:

SHEET NO.
.

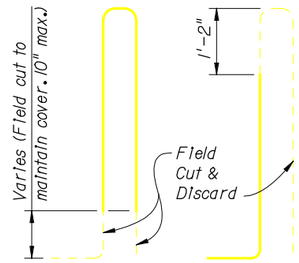
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
S	5	AS REQ'D
T	5	10'-8"
X	5	6'-9"

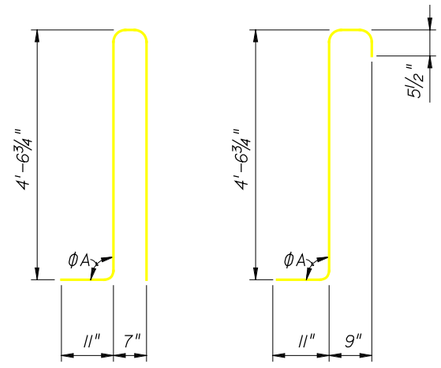
ROADWAY CROSS-SLOPE	ϕA	
	LOW GUTTER	HIGH GUTTER
0% to 2%	90°	90°
2% to 6%	87°	93°
6% to 10%	84°	96°



BAR 5S

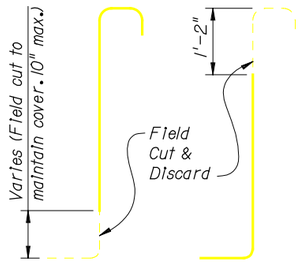


TRANSITION STIRRUP BARS 5T
To Be Field Cut (5 of each required per Barrier End Transition)



STIRRUP BAR 5T

STIRRUP BAR 5X

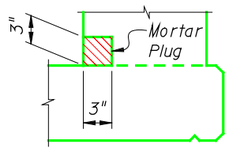


TRANSITION STIRRUP BARS 5X
To Be Field Cut (5 of each required per Barrier End Transition)

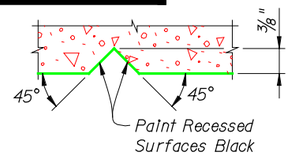
REINFORCING STEEL NOTES:

1. All bar dimensions in the bending diagrams are out to out.
2. The 4'-6¾" vertical dimension shown for Bars 5T and 5X is based on a bridge deck with a 6" thick x 6' wide raised sidewalk at low side of deck, 2% deck cross slope and a counter 2% raised sidewalk cross slope. If the raised sidewalk thickness, width or cross slope vary from the above amounts, adjust this dimension accordingly to achieve a 6" minimum embedment into the bridge deck. See Superstructure and Approach Slab Sheets.
3. The reinforcement for the barrier on a retaining wall shall be the same as detailed above with ϕA = 90°.
4. All reinforcing steel at the open joints shall have a 2" minimum cover.
5. Bars 5S may be continuous or spliced at the construction joints. Bar splices for Bars 5S shall be a minimum of 2'-2".
6. The Contractor may utilize Welded Wire Fabric when approved by the Engineer. Welded Wire Fabric shall conform to ASTM A497.

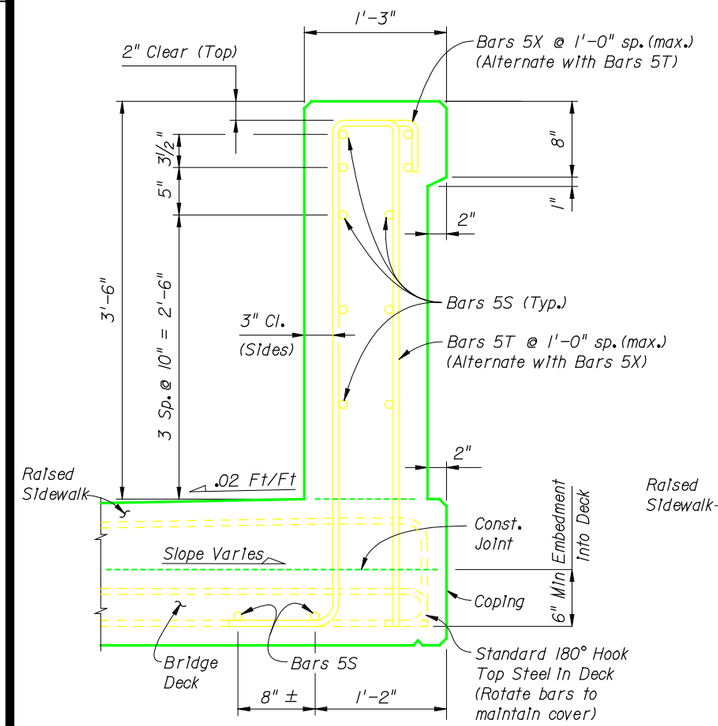
NOTE:
At Intermediate Open Joints, the lower 3" portion of the open joint shall be plugged by filling it with mortar in accordance with Section 400 of the Specifications.



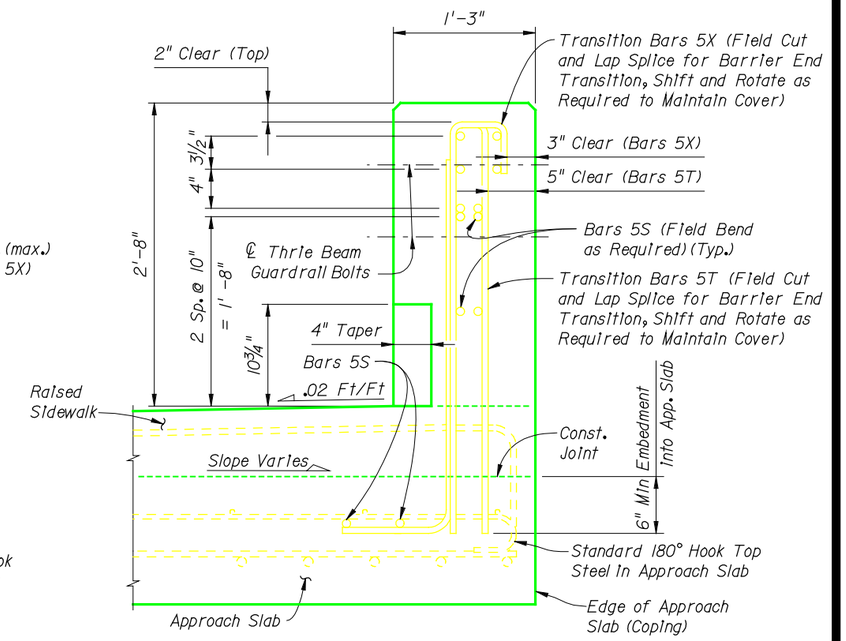
DETAIL "A" – SECTION
AT INTERMEDIATE OPEN JOINT



SECTION THRU RECESSED "V" GROOVE
TO FORM INSCRIBED LETTERS AND FIGURES



SECTION A-A
TYPICAL SECTION THRU TRAFFIC RAILING BARRIER
SECTION THRU BRIDGE DECK SHOWN



VIEW B-B
APPROACH SLAB END VIEW
OF TRAFFIC RAILING BARRIER

ESTIMATED TRAFFIC RAILING BARRIER QUANTITIES		
ITEM	UNIT	QUANTITY
Concrete	C.Y./FT.	0.145
Reinforcing Steel	LB./FT.	30.68

(The above quantities are based on a 6" thick x 6' wide raised sidewalk at low side of deck, 2% deck cross slope and counter 2% sidewalk cross slope)

CROSS REFERENCE:
For location of Section A-A, Detail "A" and View B-B, see Index No. 720, Drawing 1 of 2.

INSTRUCTIONS TO DESIGNER:

For Bridge Decks up to a maximum thickness of 9", the two Bars 5S placed in the Bridge Deck may substitute for the longitudinal deck steel located within the limits of Bars 5T, provided that the total area of longitudinal steel beneath the barrier as required by calculation is not reduced. Show these bars on the Superstructure Sheets with the deck steel.

BRIDGE NO. XXXXXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
6-30-00	SDO	Standard Drawing Issue Date			

	NAMES	DATES
DRAWN BY	MDM	5-00
CHECKED BY	CEB	5-00
DESIGNED BY	CEB	5-00
CHECKED BY	MDM	5-00
APPROVED BY	REN	

ENGINEER OF RECORD:
STRUCTURES DESIGN OFFICE
CENTRAL OFFICE
605 Suwannee Street, MS 33
Tallahassee, Florida 32399-0450

FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID.

SHEET TITLE:
TRAFFIC RAILING BARRIER – (42" VERTICAL SHAPE)
INDEX NO. 720 (DRAWING 2 OF 2)

PROJECT NAME:

SHEET NO.

$$$$$$$$DGNSPECIFICATION$$$$$$$$
$$$$$$$$SYSTIME$$$$$$$$