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 Fl-4 Criteria.

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

MARKERS: Elevation Markers shall be placed on top of the Traffic Railing 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.

GUARDRAIL: For Guardrail connection details, see Index No. 490.

RAILINGS ON RETAINING WALLS: If the Traffic Railing is to be provided on a retaining wall, the railing section will be as shown on Index No. 492, Sheet 2. All other details such as the guardrail transition attachment, the maximum spacing of the 1/2" open joints and 1/2" V-Groove shall apply.

REFLECTIVE RAILING MARKERS: Reflective Railing markers shall conform to Section 993 of the Specifications.

V-GROOVES: Cast-in-place V-Grooves shall be 3/8" deep and provide 3/8" minimum intervals as shown. Space V-Grooves equally between 3/8" Open Joints and/or Deck Joints and at V-Groove locations on Retaining Wall Railings.

TRAFFIC RAILING NOTES:

NAME, DATE, AND BRIDGE NUMBER: The name, date, and bridge number shall be placed on the Traffic Railing so as to be seen on the driver's side when approaching the bridge. The date shall be placed on the driver's side when approaching the bridge. The date shall be shown on 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 3/8" 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.

CROSS REFERENCE: For Section 2-4, Detail "A", View B-11 and View C-C, see Sheet 2.

REFLECTIVE RAILING MARKER SPACING:

Distance from
Edge of Traffic Lane to Face of Railing Spacing (ft.)
4 ft. 60 ft.
4 to 5 ft. 60 ft.
5 ft. and over None Required

Approach Thrust-Beam Guardrail Transition on Approach Slab shown. Retaining Wall similar (When called for in Plans).
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

<table>
<thead>
<tr>
<th>MARK</th>
<th>SIZE</th>
<th>LENGTH</th>
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<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>44-58</td>
</tr>
<tr>
<td>T</td>
<td>5</td>
<td>20-8</td>
</tr>
<tr>
<td>X</td>
<td>5</td>
<td>5-9</td>
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ROADWAY CROSS-SLOPE

<table>
<thead>
<tr>
<th>CROSS-SLOPE</th>
<th>LOW GUTTER</th>
<th>HIGH GUTTER</th>
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<tr>
<td>0% to 2%</td>
<td>90°</td>
<td>90°</td>
</tr>
<tr>
<td>2% to 6%</td>
<td>87°</td>
<td>63°</td>
</tr>
<tr>
<td>6% to 10%</td>
<td>84°</td>
<td>96°</td>
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Length as Required

BAR 5S

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

STIRRUP BAR 5X

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

REINFORCING STEEL NOTES:
1. All dimensions in the bending diagrams are to scale.
2. The 4-6% vertical dimension shown for Bars 5T and 5X is based on a bridge deck with a 2% girder, a 2% raised sidewalk at the 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 Structures Plans, Superstructure and Approach Slab Sheets.
3. The reinforcement for the railing on the retaining wall shall be the same as detailed above with 2A = 90°.
4. A reinforcing steel at the open joints shall have a 2" minimum cover.
5. Bars 5T may be continuous or spliced at the construction joints. Bar splices for Bars 5T shall be a minimum of 2-2.5%.
6. The Contractor may utilize Welded Wire Reinforcement when approved by the Engineer. Welded Wire Reinforcement shall conform to ASTM A149.

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.

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

ESTIMATED TRAFFIC RAILING QUANTITIES

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<tr>
<td>Concrete</td>
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<tr>
<td>Reinforcing Steel</td>
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(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)