PLAN
(Scheme 2 shown, other Schemes similar, Reinforcing Steel not shown for clarity)

ELEVATION OF INSIDE FACE OF RAILING
(Scheme 2 shown with Post “A”, other Schemes similar, Reinforcing Steel not shown for clarity)

NOTES:

1. Shop Drawings are required.
2. Work this Index with Index 862 Aluminum Bicycle/Pedestrian Railing Details and Specification Section 515. Refer to the IDS for Design Criteria and Limits of Use.
3. Materials:
   A. Galvanized Steel Fasteners: Hex Head Bolt ASTM A307, Hex Nuts ASTM A563, Washers ASTM F436
   B. Aluminum:
      a. Support Bracket (Scheme 3) L-shape and Stiffener Plate: ASTM B209, Alloy 6061-T6
      b. Battleguard (Schemes 1 & 3) L-shape: ASTM B209, Alloy 6061-T6 or 6063-T5
   C. Concrete: Same as bridge deck
   D. Pre-cured Silicone Sealant: Specification Section 932
   E. Bearing Pads: Provide 3/8" thick Plain, Fabric Reinforced or Fabric Laminated pads meeting the requirements of Specification Section 962 for Ancillary Structures.
4. See Structures Plans, Superstructure Sheets for bridge information including concrete type, deck expansion joint locations and orientations, and thermal movement.
5. Railings:
   A. For thermal movement greater than 4" (up to a maximum of 5"), clear opening between adjacent pickets, or panels at Rail Expansion Joints above Deck Joints must be reduced to 3½".
   B. For treatment of railings on skewed bridges see Index 420.
6. Curbs:
   A. Match open curb joints at Deck Expansion Joint locations to the deck joint dimension.
   B. Construct Concrete Curb (Scheme 2) vertical with the top surface finished level transversely.
   See Concrete Curb Details Sheet 3.
   C. Provide 3/8" Intermediate open joints in curbs coinciding with the 3/8" joints in the traffic railing.
7. Payment: Support Bracket (Scheme 3) is incidental to the cost of railing. Curb concrete and reinforcing steel (Scheme 2) are included in the bridge deck quantities.

Index 862 Railing shown, see Contract Plans for actual railing continuation or termination

** SHBR – Special Height Bicycle Railing
** PBR – Pedestrian/Bicycle Railing
**Round Rails - Top Rail or Handrail**

- Notes:
  - All bar dimensions in the bending diagrams are out to out.
  - The reinforcement for the curb on a retaining wall shall be the same as detailed for an 8" deck.
  - All reinforcing steel shall have a 2" minimum cover.
  - Bars 4S may be continuous or spliced at the construction joints.
  - Bar splices for Bars 4S shall be a minimum of 1'-8".
  - Deformed WWR meeting the requirements of Specifications Section 931 may be used in lieu of all Bars 4P and 4S.

**Alternate Reinforcing (WWR) Details**

- Place wire panels to minimize the end overhang. End overhangs greater than 4½" are not permitted.

**Curb Reinforcing Steel Notes:**

1. All bar dimensions in the bending diagrams are out to out.
2. The reinforcement for the curb on a retaining wall shall be the same as detailed for an 8" deck.
3. All reinforcing steel at the open joints shall have a 2" minimum cover.
4. Bars 4S may be continuous or spliced at the construction joints.
5. Deformed WWR meeting the requirements of Specifications Section 931 may be used in lieu of all Bars 4P and 4S.

**Intermediate Joint Seal Note:**

At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant. Apply sealant prior to any Class V finish coating and remove all curing compound and loose material from the surface prior to application of bonding agent.

**Estimated Concrete Curb Quantities (Scheme 2)**

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<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Concrete</td>
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<tr>
<td>Reinforcing Steel</td>
<td>LB/P</td>
<td>4.03</td>
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</tbody>
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**Scheme 3 - Concrete Curb Details**