END CROSSFRAME DETAILS

- The \( \frac{3}{8} \) thick plate is part of the expansion joint system. See the appropriate expansion joint standard bridge drawing for details including material and coating requirements.

- The work point shall be the inside face of the protruding angle leg extended as shown. The work point shall be at the intersection of these lines.

END CROSSFRAME FOR SLEEVED BRIDGES WHERE BEARING STIFFENERS INTERCEPT WITH END CROSSFRAMES

MATERIAL: All end crossframe material shall be A36 Grade A, except when the superstructure main Steel is A36 Grade Bow. Then the end crossframe material shall also be A36 Grade Bow.

BEARING/STIFFENER ENDS: For structures on grade, the bearing/girder ends shall be fabricated to be vertical at the elevation. A 3-inch minimum clearance at each end shall be maintained between the vertical faces of the beams and the vertical faces of the backwall unless the contract criteria/plans show otherwise.

WORK POINTS: Work points shall be coded/included in the end crossframe joint details and structural steel suppliers to assure fit up at all design locations.

STIFFENER NOTES:

- The \( \frac{3}{8} \) thick plate is part of the expansion joint system. See the appropriate expansion joint standard bridge drawing for details including material and coating requirements.

- The work point shall be the inside face of the protruding angle leg extended as shown. The work point shall be at the intersection of these lines.
**SCUPPER NOTES:**

**GENERAL:** The designer shall show the location of the scuppers in a plan view of the bridge deck on the contract documents.

**SUPPLEMENTAL REINFORCEMENT:** Reinforce the concrete deck at the two scupper contours opposite the curb line with the #4 bars, 2'-0" long oriented at 45° to the long axis of the scupper and located just below the transverse bars in the top way of steel.

**MATERIALS:** Furnish structural steel tubing according to TIP-10. Tension testing in accordance with ASTM A36 is not required. All other material shall be ASTM A572 Grade 50, 50 or SOW. Galvanize support angles, flanges, bolts, nuts and washers in accordance with TIP-120.

**DECK CROWN/SUPERELEVATION:** Cut the top of the steel tubing square for cross slopes of 1/4 per foot and less. Cut the top of the tubing parallel to the deck surface for cross slopes greater than 1/4 per foot.

**FASTENER NOTES:**
1. The size of the slotted holes shall be 3/8" x 1/8".
2. The slotted hole shall be horizontal in the 3"x 3" bar and vertical in the angle. Bolt shall be 1/2" diameter A325 Type 1, galvanized with hex nut and two washers. Tighten according to TIP-12.
3. The bolts shall be 1/2" diameter A325 Type 1 galvanized for galvanized, metalized or painted structures or A325 Type 3 for bare, weathering steel structures. Each assembly shall include a bolt, nut and two washers. Tighten according to TIP-12 for weathering steel structures. Provide a 8" x 1/8" x 1/8" preformed bearing pad, TIP-12.2, with a 1/2" diameter hole between the deck web and the angle. After the deck concrete has been poured, field drill the 1/2" diameter hole in the web.

**BASIS OF PAYMENT:** The department will pay for the supplemental reinforcement described above separately under Item 509.