PLAN 0° CONNECTION

PLAN 10°, 20°, 30°, & 40° CONNECTIONS

** See page 2 of 5 for bolt detail

<table>
<thead>
<tr>
<th>TYPE A BRIDGE CONNECTION TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKEW</td>
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<tr>
<td>------</td>
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<tr>
<td>0° - 10°</td>
</tr>
</tbody>
</table>
| 11° - 20° | 10° | 80° | 6 x 2.83 lbs/ft x 1'-4 3/4" CHANNEL-AMERICAN STANDARD | 5'-6"
| 21° - 30° | 20° | 70° | 6 x 2.83 lbs/ft x 2'-11 1/2" CHANNEL-AMERICAN STANDARD | 5'-11 1/2"
| 31° - 40° | 30° | 60° | 6 x 2.83 lbs/ft x 3'-7 1/2" CHANNEL-AMERICAN STANDARD | 6'-5 1/2"
| 41° - 50° | 40° | 50° | 6 x 2.83 lbs/ft x 5'-1 1/4" CHANNEL-AMERICAN STANDARD | 7'-3 1/4"

BRIDGE CONNECTION TYPE A

TO BE USED FOR MAINTENANCE PURPOSES FOR EXISTING BRIDGE CONNECTIONS ONLY

OLD VIII-810E
**Bolt Detail**

- Lock Nut 5.5
- Steel w/ alun. column
- Flat washer 5.5
- 3 threads beyond nut
- 5/8" Dia. h.s. bolt 5.5
- 1/8" Elastomeric or equivalent pad to cover entire surface area between steel and aluminum sections.

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**SECTION A-A**

Drill 5/8" diameter hole for 1/2" flush stainless steel expansion anchor, washer, 1/2" diameter x 5" stainless steel stud bolt, regular nut & nylon insert lock nut. (Typ.)

**SECTION B-B**

Drill 7/16" diameter hole for 3/8" diameter bolt, (2) flat washers & nylon insert lock nut. (3) Required

Optional instead of 4 bolts

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**SECTION C-C**

BRIDGE CONNECTION TYPE A

6" x 2.83 lbs/ft Channel-American Standard x sign length (aluminum)

**TO BE USED FOR MAINTENANCE PURPOSES FOR EXISTING BRIDGE CONNECTIONS ONLY**

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**NOT TO SCALE**

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN

(SPECIAL DETAIL) 03/20/12 SIGN-897-A SHEET 2 OF 5

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
**SECTION D-D**

- Center line of bent plate
- 3/16" Drill 7/16" diameter hole for 1/2" diameter bolt, (2) flat washers & nylon insert lock nut. (3) Required
- 1/4" Typ. 11/16" Diameter hole for 5/8" diameter bolt, (2) flat washers & nylon insert lock nut. (4) Required **
- Sign face
- Optional instead of 4 bolts 1/4" 2 1/2" 2" 3" 7" 3/4" 1 1/4" 1 1/16" 1 1/16" 2 1/2" 2" 1 1/4" Typ. @ Existing beam 6" x 2.83 lbs/ft Channel-American Standard (aluminum), length varies (see table)

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**SECTION E-E**

- Drill 7/16" diameter hole for 3/8" diameter bolt, (2) flat washers & nylon insert lock nut. (3) Required
- 1/4" Typ. 3/16" 9" Leg Bent E
- Sign face
- 7/8" 1"

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**SECTION F-F**

- 11/16" Diameter hole for 5/8" diameter bolt, (2) flat washers & nylon insert lock nut. (6) required **
- Sign face
- 1/4" Typ.

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**NOTE:**

PLACE 1/8" ELASTOMERIC (OR EQUIVALENT) PAD TO COVER ENTIRE SURFACE AREA BETWEEN STEEL AND ALUMINUM SURFACES.

**BRIDGE CONNECTION TYPE B**

**TO BE USED FOR MAINTENANCE PURPOSES FOR EXISTING BRIDGE CONNECTIONS ONLY**

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**OLD VIII-810E**

**NOT TO SCALE**

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN

(SPECIAL DETAIL) 03/20/12 SIGN-897-A SHEET 4 OF 5

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
NOTES: (APPLY TO TYPE A & B)

1. All bolts, nuts, and washers shall be high strength galvanized on Type B Bridge Connections, and stainless steel on Type A Bridge Connections, unless otherwise noted.

2. All aluminum and steel components shall be per current MDOT Standard Specifications for Construction. All steel components shall be hot-dip galvanized.

3. Sign location may be shifted to avoid joints or stiffeners.

4. Bottom edge of sign shall be horizontal when erected and shall be a minimum of 18" above the bridge beam flange at all points.

5. All 1/2" x 16 diameter stainless steel bolts used with 1/2" stainless steel expansion anchors shall be 1" long (± 0") and shall engage expansion anchors 1 1/2" bolt diameter or 1/2" threads minimum except for 0" connections to bridge fascia (Type A).

6. These bridge connections are to be used with Type II or III Sign.

7. Extreme caution shall be exercised when drilling holes for the 1/2" dia. expansion anchors.

8. Expansion anchors shall be chosen from the current Qualified Products List.

9. Expansion anchors shall be installed as per manufacturer's recommendations.

TO BE USED FOR MAINTENANCE PURPOSES FOR EXISTING BRIDGE CONNECTIONS ONLY