

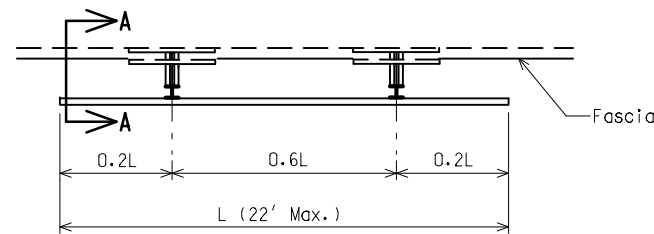
SECTION A-A

PRESTRESSED I-BEAM SIZE	A
28" (TYPE I)	4"
36" (TYPE II)	4"
45" (TYPE III)	4 1/2"
54" (TYPE IV)	6 1/2"

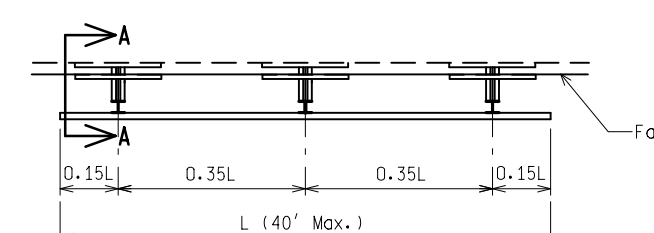
TO BE USED FOR MAINTENANCE PURPOSES FOR EXISTING BRIDGE CONNECTIONS ONLY

OLD VIII-800E

<p>PREPARED BY DESIGN DIVISION DRAWN BY: <u>DHD</u> CHECKED BY: <u>AJU</u></p>	<p>DEPARTMENT DIRECTOR Kirk T. Stuedle</p> <p>APPROVED BY: _____ DIRECTOR, BUREAU OF FIELD SERVICES</p>	<p>MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR</p> <p>BRIDGE CONNECTION TO CONCRETE BEAMS</p>		
	<p>APPROVED BY: _____ (SPECIAL DETAIL) DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT</p>	<p>(SPECIAL DETAIL) F.H.W.A. APPROVAL</p>	<p>03/20/12 PLAN DATE</p>	<p>SIGN-896-A</p>



**PLAN VIEW
2 SUPPORT**



**PLAN VIEW
3 SUPPORT**

TO BE USED FOR MAINTENANCE PURPOSES FOR EXISTING BRIDGE CONNECTIONS ONLY

OLD VIII-800E

NOT TO SCALE

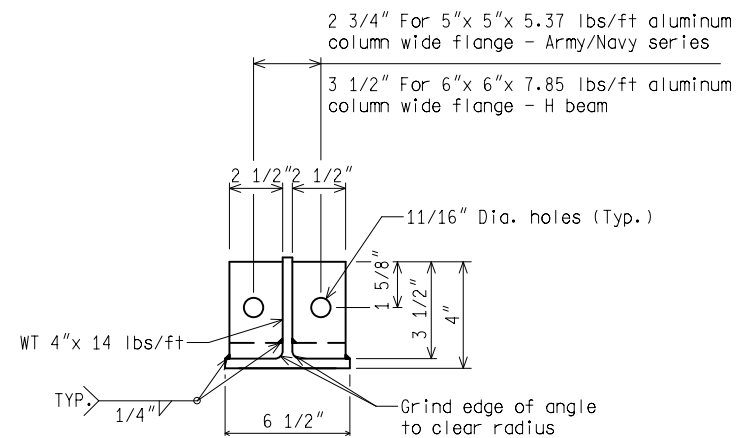
<p>MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN</p>	<p>(SPECIAL DETAIL) F.H.W.A. APPROVAL</p>	<p>03/20/12 PLAN DATE</p>	<p>SIGN-896-A</p>	<p>SHEET 2 OF 4</p>
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NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

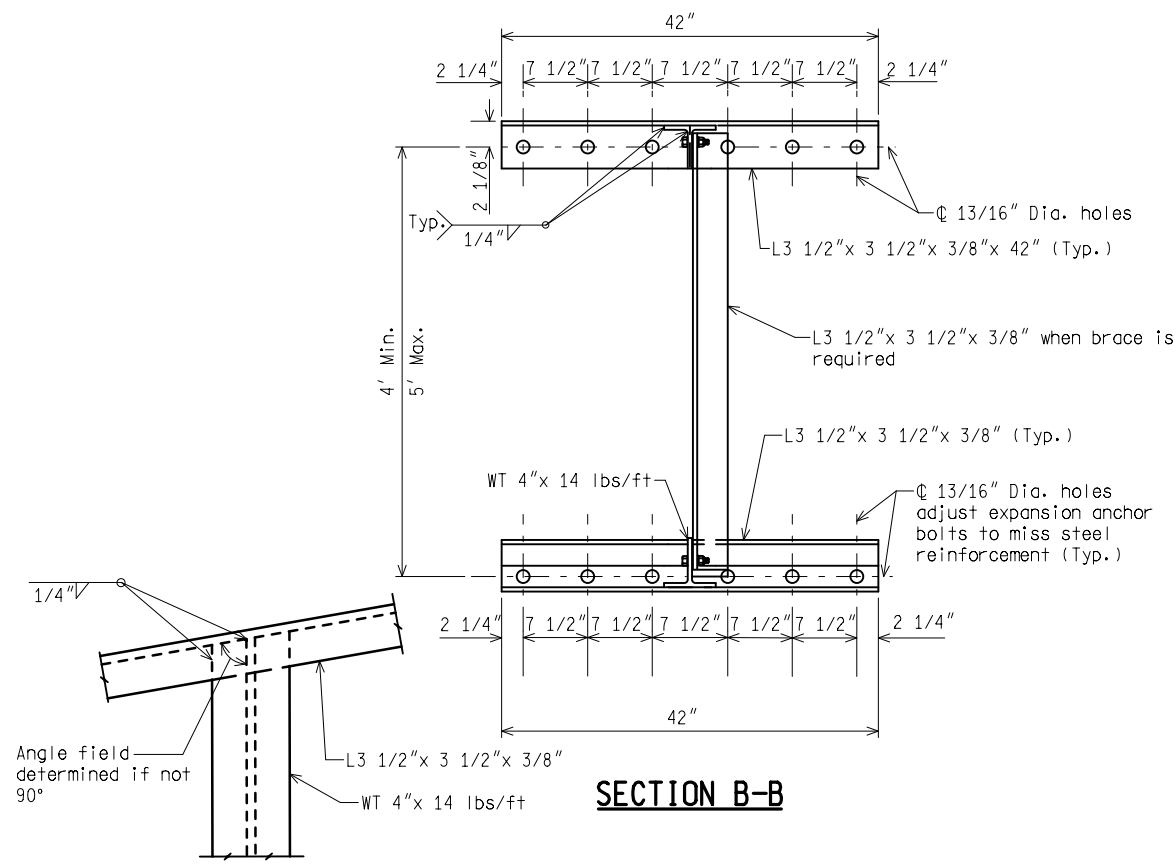
AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE:	CS:	DRAWING	SHEET
DESIGN UNIT:	JN:		
TSC:			
FILE:			



ALUMINUM COLUMN CONNECTION DETAIL
(USE FOR ALL CONNECTIONS TO ALUMINUM COLUMNS)



TOP VIEW FOR ANGLE

TO BE USED FOR MAINTENANCE PURPOSES FOR EXISTING BRIDGE CONNECTIONS ONLY

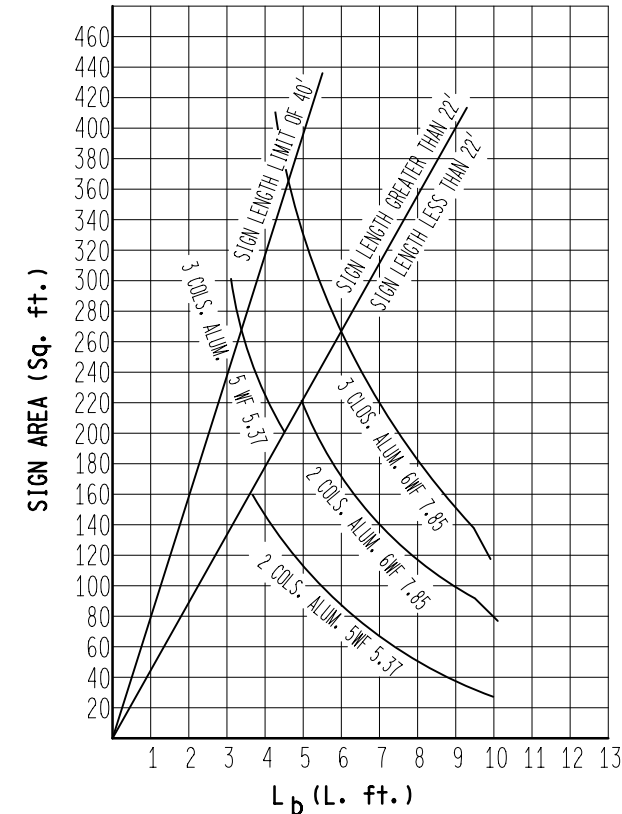
OLD VIII-800E

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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	03/20/12 PLAN DATE	SIGN-896-A	SHEET 3 OF 4
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TYPE	ALUMINUM COLUMN
I	5" x 5" x 5.37 lbs/ft WIDE FLANGE-ARMY NAVY
II	6" x 6" x 7.85 lbs/ft WIDE FLANGE-H BEAM



COLUMN SELECTION PROCEDURE

- Determine b using the longest required column. ($b=1.25'$ min.)
- $L_b = 1/2$ of the distance between the top the sign and the top clip angle bolt.
 $L_b = 1/2 (h + b - 2')$
- Determine the sign area (ft²) according to the example given below include exit no. sign if any.
 $A = \text{exit no. sign } 10 \text{ ft} \times 2 \text{ ft} = 20.0(\text{ft}^2)$
 $A = \text{parent sign } 15 \text{ ft} \times 7.5 \text{ ft} = 112.5(\text{ft}^2)$
TOTAL AREA = 132.5(ft²)
- Average height = $H = \frac{\text{TOTAL AREA (ft}^2\text{)}}{\text{PARENT SIGN LENGTH (ft)}}$
 $H = \frac{132.5(\text{ft}^2)}{15.0 \text{ (ft)}} = 8.83\text{ft}$
- Use the chart on this sheet, to determine the size and number of columns required.

NOTES:

- All bolts shall be galvanized high strength bolts except as noted.
- All bolts, nuts, and washers shall be hot dip galvanized. Nuts shall be tapped 0.015" oversize.
- All aluminum and steel components shall be per current MDOT Standard Specifications for Construction.
- All steel components shall be hot-dip galvanized.
- All stainless steel expansion anchors should accommodate 3/4" dia. stainless steel bolt and shall provide a minimum pull-out resistance of 15,000 lbs at 1/16" maximum slippage.
- The bottom edge of the sign shall be horizontal when erected.
- Extreme caution shall be exercised when drilling holes for the 3/4" expansion anchors.
- For open parapet railing top connection should be in the slab fascia.
- Expansion anchors shall be chosen from the current qualified products list.
- Expansion anchors shall be installed as per manufacturer's recommendations.

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