**BASE PLATE SLOPE FOR CAMBER**

<table>
<thead>
<tr>
<th>Cantilever Arm Length</th>
<th>Number of Panels</th>
<th>Support End Panel Length</th>
<th>Slope</th>
</tr>
</thead>
<tbody>
<tr>
<td>40'</td>
<td>4</td>
<td>2 @ 10'- 0&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>35'</td>
<td>4</td>
<td>2 @ 7'- 6&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>30'</td>
<td>3</td>
<td>2 @ 10'- 0&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>25'</td>
<td>3</td>
<td>2 @ 7'- 6&quot;</td>
<td>1/16&quot;</td>
</tr>
<tr>
<td>20'</td>
<td>2</td>
<td>2 @ 10'- 0&quot;</td>
<td>1/16&quot;</td>
</tr>
</tbody>
</table>

**NOTE:**

Cantilever "Type J" can be used only with written authorization from the MDOT - Traffic and Safety Support Area.
2. Only Type I Signs are to be used with the Type J Cantilever.
3. Maximum sign area is 450 square feet. Signs should not project past the ends of the truss.
4. All structural steel, bolts, welding and galvanizing shall be per "MDOT Standard Specifications for Construction".
5. Hot-dip galvanize all truss components prior to bolted assembly.
6. Tighten all high strength galvanized bolts by the turn of the nut method according to subsection 707.03.D. except at splice connections. Splice connections shall have a flat washer and lock washer under each nut and tightened to a snug tight condition.
7. Do not lift the trusses by the web members.
8. Maximum projection of the sign beyond the top chord is 6 feet.
9. Field splices may be placed along the structure to facilitate fabrication. Place field splice $1' - 6" min. to the gusset plate edge. Any deviation from the details shown on this typical will require approved shop drawings before fabrication.
10. Perform ultrasonic inspection of butt welded splices in column members.
11. Blast clean base plates, flange plates, stiffeners, and all weldments prior to galvanizing.
14. Column sections shall be ASTM A53, Grade B or API-5L-x42 24"Ø x 1.219".
15. Chord sections shall be ASTM A500, Grade B HSS 6"Ø x 0.500", ASTM A519-4140 annealed HSS 6"Ø HSSx 0.375" or ASTM A500, Grade B HSS 6 5/8"x 0.432".
16. Web angles shall be ASTM A36 l 5"x 5"x 7/16 " or l 5"x 5"x 1/2".
17. All steel plates shall be ASTM A709, Grade 36.
18. Use 7/8"Ø ASTM A325 bolts for all connections. Provide 1"Ø holes unless otherwise stated. Use an ASTM F436 flat washer and a lock washer according to section 908.09.C of the MDOT Standard Specifications for Construction under each nut for splice connections.
19. The estimated weight of the truss is 190 lbs/ft.
20. Minimum sign height with aluminium beam is 8.5 feet.
21. Warpage in the base plate shall not exceed 1/16" per foot.
COLUMN
TRUSS CONNECTION DETAIL
(WEIGHT MEMBERS AND CONNECTION
PLATES OMITTED FOR CLARITY)

NOT TO SCALE

COLUMN CAP
(See details
sheet 10 of 10)

3/4" Plate (Typ.)

15 x 5 x 7/16 (Typ.)

6" HSS (Typ.)

Q Column

6" Gusset plates

Q Bottom plate

5/8" Plate (Typ.)

1/4" chord

1/4" chord

1/4" chord

Q Truss chord

Q Truss chord

Q Back truss chord

Q Back chord

Q Top chord

Truss web angles (Typ.)

Back truss chord

Top truss chord

Q Column

8'-1 5/8" Clear between plates

8'-1 5/8" Clear between plates

4'-1 1/8" Clear between plates

3'--5 1/2"

3'--5 5/8"

3'-5 1/2"

12" Min.

VIEW A-A

* Wrap weld around outside edge,
stop 1/4" short of corner clip

DETAIL OF OPTIONAL
BUTT-WELDED SPLICE

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

(COLUMN - COLUMN CONNECTITION PLATE DETAILS)

\( \text{Column} \)

\( \text{Truss chord} \)

\( \text{Column} \)

\( \text{Bolts} \)

\( 24'\) Pipe

\( \text{Bolts} \)

\( \text{Chord (Typ.)} \)

\( \text{Plate} \)

\( 3/4" \) Plate

\( \text{Truss chord (Typ.)} \)

\( \text{Plate} \)

\( 3/8" \) Plate

\( \text{5/8" Plate} \)

\( \text{Truss web angle} \)

\( \text{DETAIL A} \)

\( \text{NOT TO SCALE} \)

CHORD-COLUMN CONNECTION PLATE DETAILS

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN

NOT: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
**DETAIL B**

* Wrap weld around outside edge
  stop weld 1/4" around corner clip

See Detail C

1" Stiffener plate (Typ.)

See Detail B

See sheet 2, note 20 for base plate warpage tolerance.

**SECTION C-C**

Plan View 42" Base Plate

(for use with 35 ft and 40 ft cantilever arms)

NOT TO SCALE
PLAN VIEW 38" BASE PLATE

(FOR USE WITH 20 FT THROUGH 30 FT CANTILEVER ARMS. ALSO FOR USE WITH 35 FT AND 40 FT CANTILEVER ARMS WITH REDUCED SIGN AREA, SEE CHART SIGN-350 SERIES, SHEET 5)

SECTION D-D

S E C T I O N  D - D

P L A N  V I E W  3 8 "  B A S E  P L A T E

BASE PLATE 38" X 3"

COLUMN O.D. 24"

COLUMN (Typ.)

LEVELING NUT (Typ.)

S12" BOLT CIRCLE

C2" ANCHOR BOLT (Typ.)

DRILLED SHAFT

See Detail C (sheet 5)

See Detail B (sheet 5)

1" STIFFENER PLATE (Typ.)

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
TYPICAL SECTION OF TRUSS

VIEW E-E

VIEW F-F SIMILAR

FRONT OF TRUSS ELEVATION

(Back truss chord and attached angles not shown for clarity)

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN
09/15/11 F.H.W.D. APPROVAL 08/11/11 PLAN DATE
SIGN-370-A SHEET 7 OF 10

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
NOT TO SCALE

* Dimension typical for all connection details.

** See sheet 9 of 10 for alternate connection details.
**NOT TO SCALE**

* Dimension typical for all connection details.
**CHORD SPlice CONNECTION DETAILS**

1. 3/16" Gap between pipes

2. 7/8" Bolt w/lock washer (Typ.)

**SECTION H-H**

- 9/16" Hole
- tack weld 1/2" hex nut or top hole in angle for 1/2" bolt

**COLUMN CAP DETAIL**

- 1/2" Hex head bolt
- 1/4" Cap plate

**NOT TO SCALE**

**MICHIGAN DEPARTMENT OF TRANSPORTATION**

**BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN**

**F.H.W.A. APPROVAL**

**PLAN DATE**

**SIGN-370-A SHEET**

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