STEEL TRUSS TYPE D
(105 FT - 125 FT)

PLAN
TOP WIND BRACING LOOKING DOWN

PLAN
BOTTOM WIND BRACING LOOKING DOWN

ELEVATION
FACING TRAFFIC
**TRUSS DATA**

<table>
<thead>
<tr>
<th>TRUSS SPAN (FT)</th>
<th>L1 (FT)</th>
<th>L2 (FT)</th>
<th>L3 (FT)</th>
<th>L4 (FT)</th>
<th>L5 (FT)</th>
<th>CAMBER (IN)</th>
<th>BOX TRUSS</th>
<th>ESTIMATED WEIGHT (LBS/FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>105</td>
<td>22.5</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>22.5</td>
<td>1 1/8&quot;</td>
<td>7'-0&quot; x 7'-0&quot;</td>
<td>206</td>
</tr>
<tr>
<td>110</td>
<td>22.5</td>
<td>20</td>
<td>25</td>
<td>20</td>
<td>22.5</td>
<td>2</td>
<td>7'-0&quot; x 7'-0&quot;</td>
<td>206</td>
</tr>
<tr>
<td>115</td>
<td>22.5</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>22.5</td>
<td>2 1/4&quot;</td>
<td>7'-0&quot; x 7'-0&quot;</td>
<td>206</td>
</tr>
<tr>
<td>120</td>
<td>27.5</td>
<td>20</td>
<td>25</td>
<td>20</td>
<td>27.5</td>
<td>2 1/2&quot;</td>
<td>7'-0&quot; x 7'-0&quot;</td>
<td>206</td>
</tr>
<tr>
<td>125</td>
<td>27.5</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>27.5</td>
<td>2 3/4&quot;</td>
<td>7'-0&quot; x 7'-0&quot;</td>
<td>206</td>
</tr>
</tbody>
</table>

The camber given in the above table is the ordinate at the center of the assembled truss prior to dead load deflection. Allowable camber tolerance for truss is ±25%.

**NOTES:**

3. Maximum sign area is 500 square feet for no more than three signs. Maximum 6 foot sign projection above the top chord.
4. Hot-DIP Galvanzize (HDG) all truss components per ASTM A123 prior to bolted assembly. HDG all fastener components per ASTM A153. Blast clean base plates, stiffeners, and all weldments prior to galvanizing.
5. Provide 13/16" Ø holes for 3/4" Ø high strength (HS) bolts for all connections unless otherwise stated. Provide high strength bolts, nuts, and washers in accordance with subsection 906.07 of the MTO Standard Specifications for construction.
6. Tighten all high strength bolts by the turn of nut method per subsection 707.03.D of the MTO Standard Specifications for construction.
7. Do not lift the truss by the web members.
8. The cambering must be provided in the fabrication so that the flanges are correctly sloped to assure obtaining full contact in the relaxed assembled position prior to snugging up the flange bolts. The flange bolts must not be tightened in an attempt to close any flange misalignment.
9. The truss section lengths tabulated may be increased in 5 foot increments to reduce the number of field splices.
10. The maximum section length must not exceed 40 feet. Any deviation from the details shown on these standards will require approved shop drawings before fabrication.
11. All welds must be 100 percent visual test (VT) inspected by an AWS certified welding inspector (CWI). All fillet welds (except end cap and column cap welds) must be 75 percent magnetic particle test (MT) inspected by a technician qualified in accordance with American Society of Non-Destructive Testing (ASNT) Level II. All complete joint penetration (CJP) welds must be 100 percent ultrasonic test (UT) inspected by a technician qualified in accordance with ASNT Level II.
12. See current MTO sign support typical plan sign-600-series for sign foundation.
13. See current MTO sign support typical plan sign-700-series for sign connection.
14. Base plate weld warpage must not exceed 1/16 inch per foot.
15. HSS denotes hollow structural shape.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN (SPECIAL DETAIL) [F.H.W.A. APPROVAL] PLAN DATE SIGN-500-B SHEET 2 OF 14

NOTE: The original signed copy is kept on file at the Michigan Department of Transportation.
COLUMN ELEVATION

DETAIL R

SECTION C-C

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
FLAT WASHER (TYP)

HS BOLT (TYP)

TOP OR BOTTOM CHORD

FLAT & SQUARE FACES TO BE

SECTION D-D
TOP AND BOTTOM CHORD CONNECTION DETAILS

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

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

TOP CHORD TO DIAGONAL CONNECTION DETAIL

SECTION E-E

*WRAP WELD AROUND ENDS AND STOP 1/4" SHORT OF CLIP.
SECTION G-G

*WRAP WELD AROUND ENDS AND STOP 1/4" SHORT OF CLIP.

SECTION H-H

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
DETAIL K

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
DETAIL OF UPPER CLAMP

U-BOLT DETAIL

(12 REQUIRED)

3/4" Ø STAINLESS STEEL BOLT WITH FLAT 3/16" Ø
THICK WASHER AND 3/4" Ø NYLON INSERT LOCKNUT (TYP)

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**SEAT DETAIL**

- **GUSSET**
- **2½" X 1/2" BAR**
- **1½" X 1" COPE (TYP)**
- **L6" X 6" X 3/8"**
- **L5" X 5" X 5/16"**

**DIMENSIONS FOR DIAGONAL ANGLE**

- **WT 8 X 28.5**
- **1/2" GUSSET**

**DETAIL M**

- **HS BOLTS**

*WRAP WELD AROUND ENDS AND STOP 1/4" SHORT OF CLIP.*
END CAP DETAIL

SEAL END OF CHORD WITH 1/4" E (WELD BEFORE GALVANIZING)

OPTIONAL: CAP WITH SET SCREWS MAY BE USED AS END CAP (SEE COLUMN END CAP DETAILS)

COLUMN CAP DETAIL

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

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