A maximum of 1/8" greater than shown.

NOTE: Inside dimensions of sleeve may be a maximum of 1/8" greater than shown.

Wood post foundation details:

- Tapered hard wood wedges (hardwood wedge to be oak, maple or other approved dense hardwoods) to hold post in a stable position after concrete has set. Use 2" or 3" wedges to cover approximately 75% of post width on two adjacent sides.

- Plywood or equivalent
  - 1" x 8" x 5/8"
  - 1 1/2" x 12" x 5/8"
  - Depending on post size

- Minimum 1-1/2" fillet of bituminous water proofing material

- 2" steel and concrete projection above ground

- 10 gauge steel sleeve both ends open (ASTM A-653)

- Concrete per MDOT standards specifications for construction

- Wood post material of MDOT standard specifications for construction

- Concrete encasement

- Wedging

- 2" to 3" maximum of tamped earth

- 3-15/16" or 5-15/16" for 6" x 8" post
- 3" (for 4" x 6" post)

- 2" to 3" maximum of tamped earth

- 10 gauge steel sleeve both ends open (ASTM A-653)

- Tack weld

- Proofing material of bituminous water

- Minimum 1-1/2" fillet

- 2" or 3" for 4" x 6" post

- 4.5' (for 6" x 8" post)

- 3' (for 4" x 6" post)

- 2" to 3" maximum of tamped earth

Wood posts:

Michigan Department of Transportation Bureau of Highway Development Standard Plan for Wood Posts

Prepared by: Design Division

Drawn by:

Checked by:

Approved by: Kirk T. Steudle

Director, Bureau of Field Services

Director, Bureau of Highway Development

Plan: 05/01/15

Sheet: 1 of 5

Sign-210-B

08/13/14
(4" x 6" (nominal) post) 1-1/2" dia. 2 holes
(6" x 8" (nominal) post) 3-1/2" dia. 2 holes

The post may be driven or placed in an augered hole. If augered, backfill with existing material in five 12" deep layers, tamping each layer.

8" dia. augered hole (for 3-1/2" x 5-1/2" post)
10" dia. augered hole (for 5-1/2" x 7-1/2" post)

END VIEW

WOOD POST DIRECT EMBEDMENT DETAIL
SINGLE POST INSTALLATIONS ONLY

NOTE: DIRECT EMBEDMENT ONLY AT LOCATIONS IDENTIFIED IN PLANS OR PROPOSAL.

SAW CUT DETAIL
BREAKAWAY HOLES/SAWCUT RELATIONSHIP

*SAW CUT SHALL BE PLACED ON APPROACH TRAFFIC SIDE OF POST.

SINGLE POST
MULTIPLE POST

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.
SINGLE TYPE I SIGN - ERECTION DETAILS

**TOP VIEW**

**SINGLE TYPE I SIGN**

3/8" DIA. STAINLESS STEEL BOLTS
2 STAINLESS STEEL FLAT WASHERS & STAINLESS STEEL NYLON INSERT LOCKNUT (TYP.)

1-1/2" (TYP.)

1-1/2" (TYP.)

1/16" SIGN LENGTH

STIFFENER ANGLE (TYP.)

ALUMINUM EXTRUSION

**END VIEW**

**REAR VIEW**

3/8" DIA. STAINLESS STEEL BOLTS

ON APPROX. 24" CENTERS FULL LENGTH ALL EXTRUSIONS

0.015" (TYP.)

0.040" EXTERIOR CORNER RADIUS (TYP.)

STAINLESS STEEL FLAT WASHER
7/8" O.D. X 0.406" I.D. X 0.050"-

1/2" X 3/4" ELONGATED BOLT HOLES MAY BE USED TO FACILITATE ALIGNMENT OF PANELS.

1/2" X 3/4" ELONGATED BOLT HOLES MAY BE USED TO FACILITATE ALIGNMENT OF PANELS.

NYLON INSERT LOCKNUTS & STAINLESS STEEL STAINLESS STEEL FLAT WASHERS

STAINLESS STEEL 3/8" DIA. RECTANGULAR FLAT BOLTS

STAINLESS STEEL FLAT WASHERS & STAINLESS STEEL NYLON INSERT LOCKNUTS

BOLT STIFFENER ANGLE TO EACH PANEL

1/2" X 3/4" ELONGATED BOLT HOLES MAY BE USED TO FACILITATE ALIGNMENT OF ALUMINUM ANGLES.

SEE SIGN-700-SERIES-ENG.

ALUMINUM L 4" X 3" X 3/8" ANGLES MAY BE INSTALLED ON EITHER SIDE OF EACH POST.

STIFFENER ANGLE- L 2" X 2" X 1/4" (ALUM.1 X SIGN HEIGHT)

ALUMINUM EXTRUSION PER MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION

STIFFENER ANGLE

TYPICAL HOLE SPACING

7/8" O.D. X 0.406" I.D. X 0.050"

STAINLESS STEEL 3/8" DIA. Rectangular flat bolts, stainless steel flat washers & stainless steel nylon insert locknuts. Bolt stiffener angle to each panel.

1/2" X 3/4" Elongated bolt holes may be used to facilitate alignment of aluminum angles.

SEE SIGN-700-SERIES-ENG.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN

05/01/15 08/13/14 SIGN-210-B SHEET 3 OF 5

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

BACK-TO-BACK TYPE I SIGNS

SECTION A-A

TYPE I BACK-TO-BACK SIGNS-ERECTION DETAILS

NOTE: REFER TO TYPE I SIGN-ERECTION DETAILS FOR CONNECTING ANGLES TO BACK OF SIGNS.

3/8" DIA. STAINLESS STEEL BOLT, 2 STAINLESS STEEL FLAT WASHERS & STAINLESS STEEL NYLON INSERT, LOCKNUT (TYP.), 4 BOLTS PER ANGLE, 8 BOLTS PER POST.
NOTES:

1. THE DRILLED BREAKAWAY HOLES ARE TO BE CAREFULLY CENTERED ON THE POSTS.

2. ALL CONCRETE FOUNDATIONS SHALL BE FINISHED AS SHOWN AND ANY SURPLUS MATERIAL SHALL BE COMPLETELY REMOVED FROM RIGHT-OF-WAY. SIGNS SHALL NOT BE ERECTED ON WOOD POSTS FOR A MINIMUM OF 24 HOURS AFTER PLACEMENT OF THE CONCRETE.

3. THE PAY ITEM "SIGN, TYPE ___" INCLUDES ALL ATTACHING DEVICES AND HARDWARE.

4. WOOD POSTS MAY BE DIRECTLY EMBEDDED ONLY AT THOSE LOCATIONS IDENTIFIED IN THE PLANS OR PROPOSAL.

5. A 0.500" WIDE X 0.015" DEEP GROOVE SHALL RUN THE ENTIRE LENGTH AT TOP AND BOTTOM OF ALL EXTRUDED ALUMINUM PANELS TO ACCOMMODATE OVERLAP SHEETING.

6. ALL STAINLESS STEEL BOLTS, NUTS, AND WASHERS SHALL BE MDOT STANDARDS SPECIFICATIONS FOR CONSTRUCTION.

7. FIELD DRILL ALUMINUM ANGLES AND WOOD POSTS.

8. ALL SIGNS SHALL BE ATTACHED SO THAT THE BOLTS ARE CENTERED HORIZONTALLY ON THE POSTS.