

DESIGN DATA

CONTRACTOR DESIGNED OVERHEAD SIGN STRUCTURES SHALL BE DESIGNED ACCORDING TO THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1ST EDITION AND INTERIM SPECIFICATIONS, AND THE WISDOT BRIDGE MANUAL.

STANDARD FOUNDATIONS DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

DEAD LOAD: WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD: 3 PSF TO ONE FACE OF SIGN & SURFACE OF MEMBERS.
WIND PRESSURE: 115 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS. (700 YEAR MEAN RECURRENCE INTERVAL)

WIND COMPONENTS	NORMAL	TRANSVERSE
LOAD CASE 1:	1.00	0.00
LOAD CASE 2:	0.00	1.00
LOAD CASE 3:	0.75	0.75

LOAD COMBINATIONS

STRENGTH I: 1.25 DC + 1.6 LL
EXTREME I (MAX DC): 1.1 DC + 1.0 W + 1.0 ICE
EXTREME I (MIN DC): 0.9 DC + 1.0 W
SERVICE I: 1.0 DC + 1.0 W
FATIGUE I: 1.0 NWG (NATURAL WIND GUST VIBRATION)
1.0 TRG (TRUCK INDUCED GUST VIBRATION)
1.0 GVW (GALLOPING - CANTILEVER ONLY)

MATERIAL PROPERTIES

CONCRETE MASONRY ----- f'c = 3,500 psi
HIGH STRENGTH STEEL REINFORCEMENT, GRADE 60 ----- fy = 60,000 psi
HIGH STRENGTH BOLTS - A325 ----- fy = 92,000 psi
ANCHOR RODS - ASTM F1554 GRADE 55 ----- fy = 55,000 psi
HEAVY HEX NUTS FOR ANCHOR RODS - ASTM A563A
WASHERS FOR ANCHOR RODS - ASTM F436

FOUNDATION DATA

SIGN STRUCTURE FOUNDATIONS ARE SUPPORTED ON DRILLED SHAFTS THAT HAVE BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 24° (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 750 PSF (COHESIVE SOILS) AND A UNIT WEIGHT OF 125 PCF. THE GROUND WATER TABLE FOR DESIGN IS ASSUMED TO BE AT A DEPTH OF 10'-0" BELOW THE GROUND SURFACE, ACTUAL WATER LEVEL AT SITE MAY VARY. THE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS DURING DRILLING OF THE SHAFT HOLE TO CONFIRM THESE PROPERTIES PRIOR TO PLACEMENT OF THE DRILLED SHAFT CONCRETE.

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-XX-XXX	S-XX-XXX	S-XX-XXX	S-XX-XXX
531.20XX	DRILLING SHAFT (DIAMETER)	LF	XX	----	----	----
531.20XX	DRILLING SHAFT (DIAMETER)	LF	----	XX	----	----
531.20XX	DRILLING SHAFT (DIAMETER)	LF	----	----	XX	----
531.20XX	DRILLING SHAFT (DIAMETER)	LF	----	----	----	XX
531.5XXX	FOUNDATION SINGLE-SHAFT (TYPE)	EA	XX	----	----	----
531.5XXX	FOUNDATION SINGLE-SHAFT (TYPE)	EA	----	XX	----	----
531.5XXX	FOUNDATION SINGLE-SHAFT (TYPE)	EA	----	----	XX	----
531.5XXX	FOUNDATION SINGLE-SHAFT (TYPE)	EA	----	----	----	XX
532.51XX	MONOTUBE CANTILEVER (TYPE)	EA	XX	----	----	----
531.52XX	MONOTUBE FULL SPAN (TYPE)	EA	----	XX	----	----
532.53XX	TRUSS CANTILEVER 2-CHORD (TYPE)	EA	----	----	XX	----
531.54XX	TRUSS FULL SPAN 2-CHORD (TYPE)	EA	----	----	----	XX

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), XXXX COUNTY ZONE, NAD 83 (1997). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE TRUSS OR MONOTUBE BID ITEMS FOR EACH APPLICABLE SIGN STRUCTURE IN THE PLAN SET. LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIA A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D11.

SEE SIGN PLATE NO. A4-6, A4-7A & A4-7B OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGNS VERTICALLY ON THE TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF THE CANTILEVER SPAN, 2'-0" DEEPER THAN THE C/L TO C/L OF CHORDS, AND SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON THE PLANS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOW SIGNS ON THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE DRILLED SHAFTS. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. PERMANENT CASING MADE FROM STEEL OR CORRUGATED METAL PIPE MAY BE USED IN LIEU OF TEMPORARY CASING. TEMPORARY/PERMANENT CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "DRILLING SHAFT (DIA.)".

STRUCTURE DATA

SIGN STR	ACTUAL SIGN AREA	ACTUAL SIGN DEPTH
S-XX-XXX	XXX SF	X'-X"
S-XX-XXX	XXX SF	X'-X"

STANDARD TYPE
X
X

SIGN AREA/HEIGHT IS TYPE I SIGN AREA/HEIGHT OR DMS AREA/HEIGHT

FILL IN ADT, DESIGN YEAR FOR ADT, AND RDS

SELECT STD FOUNDATION FROM FDM 11-55-20 FIGURE 20.2.5

TRAFFIC VOLUME

A.D.T. (20XX) = X.XXX
R.D.S. = XX MPH

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. GENERAL LAYOUT S-XX-XXX
3. GENERAL LAYOUT S-XX-XXX

ADD A GENERAL LAYOUT SHT FOR EACH SIGN STRUCTURE IN THE PLAN SET

LIST OF OSS STANDARD DESIGN DRAWINGS

4. I. MONOTUBE & 2-CHORD TRUSS DETAILS 1
5. II. MONOTUBE & 2-CHORD TRUSS DETAILS 2
6. III. 2-CHORD TRUSS STANDARD ELECTRICAL DETAILS
7. IV. MONOTUBE & 2-CHORD TRUSS FOUNDATION DETAILS
- 8.

UPDATE OVERALL SHEET NUMBERS

NOTES TO DESIGNER

A RED BOX INDICATES DATA TO BE FILLED IN BY THE SIGN DESIGNER

STRUCTURE DESIGN CONTACTS:
AARON BONK (608) 261-0261
(608)

THESE ARE STANDARD DESIGN PLANS, DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION. THE DESIGNER CERTIFIES THAT THE DESIGN AND PLAN DETAILS CHOSEN ARE CONSISTENT WITH THE GUIDANCE PROVIDED IN THE CURRENT WISCONSIN BRIDGE MANUAL CHAPTER 39.

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED _____
CHIEF STRUCTURES DESIGN ENGINEER DATE _____

MONOTUBE AND 2-CHORD TRUSS PLANS

ENTER DESCRIPTION

COUNTY _____ COUNTY _____ TOWN/CITY/VILLAGE _____
ENTER TWN,CITY, OR VIL. _____

DESIGN SPEC. AASHTO LRFDLTS-1W/INTERIMS
DESIGNED BY BOS DESIGNED CK'D. BOS DRAWN BY XYZ PLANS CK'D. XYZ

GENERAL NOTES & DESIGN DATA

SHEET 1 OF XX

