DESIGN DATA

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

FOUNDATION 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: 120 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS. (1700 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
EXTERME 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)

MATERIAL PROPERTIES

CONCRETE MASONRY _____ f'c = 3,500 psi

HIGH STRENGTH STEEL REINFORCEMENT, GRADE 60 _____ fy = 60,000 psi

STRUCTURAL ANGLES, PLATE AND BARS - ASTM A709 GRADE 36 _____ fy = 36,000 psi

CHORDS & COLUMN PIPE - ASTM A500 GRADE C _____ fy = 46,000 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.

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 BID ITEM "TRUSS FULL SPAN 4-CHORD (TYPE)" 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.

CATWALKS ARE USED ON 4-CHORD STRUCTURES CARRYING DMS SIGNS. CATWALKS SHALL BE INCIDENTAL TO THE BID ITEM "TRUSS FULL SPAN 4-CHORD (TYPE)" FOR EACH DMS SIGN STRUCTURE IN THE PLAN SET.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" 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 D1.1.

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.)".

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-XX-XXX	S-XX-XXX
531.1100	CONCRETE MASONRY ANCILLARY STRUCTURES TYPE NS	CY	XX	----
531.1140	STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS	LB	XX	----
531.1160	STEEL REINFORCEMENT HS COATED ANCILLARY STRUCTURES TYPE NS	LB	XX	----
531.2036	DRILLING SHAFT 36-INCH	LF	XX	XX
531.2042	DRILLING SHAFT 42-INCH	LF	----	----
531.2048	DRILLING SHAFT 48-INCH	LF	----	----
531.6110	FOUNDATION TWO-SHAFT TYPE FF-I	EA	----	XX
531.6120	FOUNDATION TWO-SHAFT TYPE FF-II	EA	----	----
531.6130	FOUNDATION TWO-SHAFT TYPE FF-III	EA	----	----
531.6140	FOUNDATION TWO-SHAFT TYPE FF-IV	EA	----	----
531.6150	FOUNDATION TWO-SHAFT TYPE FF-V	EA	----	----
532.6100	TRUSS FULL SPAN 4-CHORD TYPE NS	EA	XX	----
532.6110	TRUSS FULL SPAN 4-CHORD TYPE I	EA	----	XX
532.6120	TRUSS FULL SPAN 4-CHORD TYPE II	EA	----	----
532.6130	TRUSS FULL SPAN 4-CHORD TYPE III	EA	----	----
532.6140	TRUSS FULL SPAN 4-CHORD TYPE IV	EA	----	----
532.6150	TRUSS FULL SPAN 4-CHORD TYPE V	EA	----	----

PROVIDE QUANTITIES FOR EACH SIGN STRUCTURE IN THE PLAN SET.

NOTES TO DESIGNER

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

STRUCTURE DATA

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

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

STANDARD DESIGN TRUSS
X
X

FILL IN ADT, DESIGN YEAR FOR ADT, AND RDS

SELECT STD DESIGN TRUSS FROM TABLE ON STD DESIGN DRAWING 1 (OF VIII)

STATE PROJECT NUMBER

XXXX-XX-XX

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 STANDARD DESIGN DRAWINGS

4.	I.	4-CHORD TRUSS FULL SPAN TRUSS DETAILS
5.	II.	4-CHORD TRUSS FULL SPAN COLUMN DETAILS
6.	III.	4-CHORD TRUSS FULL SPAN CONNECTIONS 1
7.	IV.	4-CHORD TRUSS FULL SPAN CONNECTIONS 2
8.	V.	4-CHORD TRUSS FULL SPAN CATWALK DETAILS
9.	VI.	4-CHORD TRUSS FULL SPAN ELECTRICAL DETAILS
10.	VII.	4-CHORD TRUSS FULL SPAN FOUNDATIONS 1
11.	VIII.	4-CHORD TRUSS FULL SPAN FOUNDATIONS 2

UPDATE OVERALL SHEET NUMBERS

STRUCTURE DESIGN CONTACTS:
(608)
(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.

PE STAMP

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED _____ _____
CHIEF STRUCTURES DESIGN ENGINEER DATE

4-CHORD TRUSS FULL SPAN PLANS

ENTER DESCRIPTION

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

DESIGN SPEC.
AASHTO LRFDLTS-1 W/INTERIMS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BOS	BOS	XYZ	XYZ

GENERAL NOTES & DESIGN DATA

SHEET 1 OF XX

I.D. XXXX-XX-XXYY DATE: MMMM YYYY

SCALE = 0.50

8

8