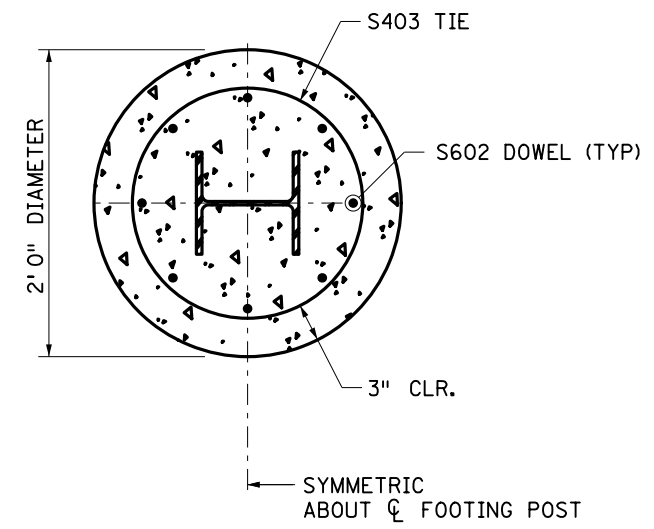
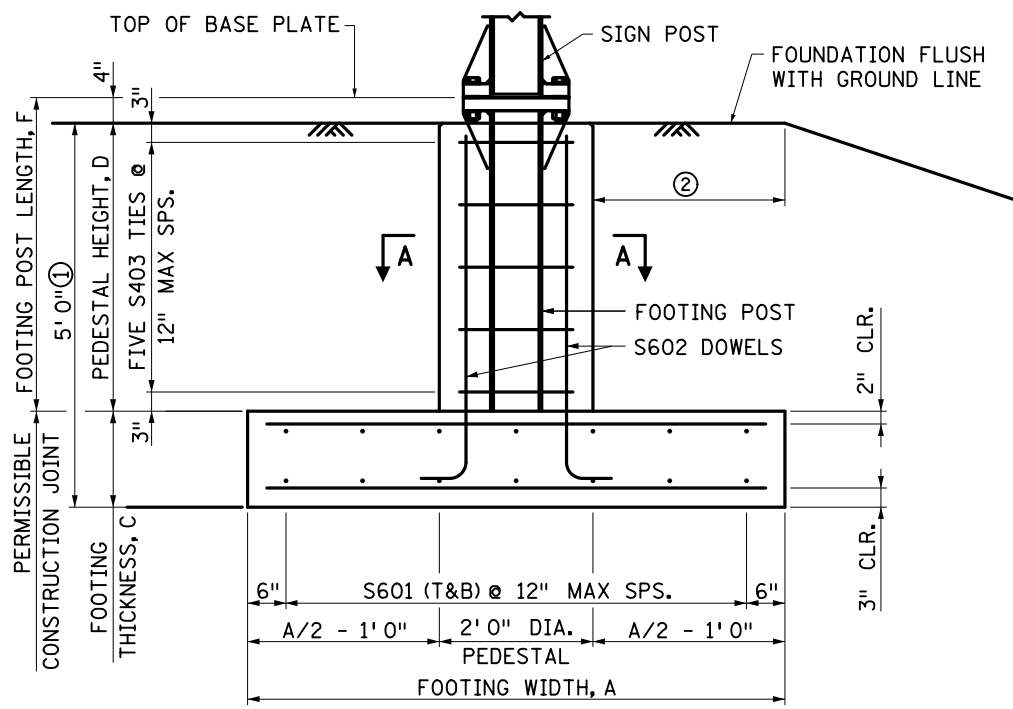


FOOTING PLAN



SECTION A-A



FOOTING ELEVATION

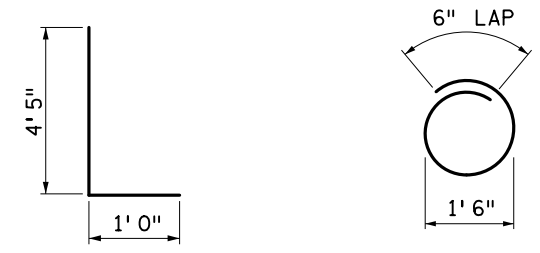
FOUNDATION DATA AND QUANTITIES								
POST TYPE	SPREAD FOOTING DIMENSIONS			PEDESTAL DIMENSIONS AND MISCELLANEOUS QUANTITIES			STRUCTURAL CONCRETE (3G52)	REINFORCEMENT BARS
	A	B	C	D	F	H	CU YD	POUND
W4x13	5' 3"	5' 3"	1' 0"	4' 0"	4' 4"	24	2.88	254
W6x20	7' 0"	7' 0"	1' 0"	4' 0"	4' 4"	28	3.68	356
W8x24	8' 0"	8' 0"	1' 0"	4' 0"	4' 4"	32	4.23	444
W8x31	8' 6"	8' 6"	1' 6"	3' 6"	3' 10"	36	5.64	516
W10x39	9' 0"	9' 0"	1' 6"	3' 6"	3' 10"	36	6.64	570

BILL OF REINFORCEMENT				
BAR	QTY.	LENGTH	SHAPE	LOCATION
S601	H	A - 6"	—	FOOTING REINFORCEMENT
S602	8	5' 5"	—	FOOTING DOWELS
S403	5	5' 3"	TIES	PEDESTAL TIES

BAR BENDING DIAGRAMS

BENT BAR DIMENSIONS GIVEN ARE OUT-TO-OUT. DETERMINE ACTUAL BAR LENGTHS BASED ON THE DETAIL DIMENSIONS SHOWN IN THE BAR BENDING DIAGRAMS.

* DENOTES STANDARD STIRRUP HOOK.



S601

S403

NOTES:

- SEE STANDARD PLANS 5-297.711 FOR ADDITIONAL DETAILS NOT SHOWN.
- PROVIDE STRUCTURAL STEEL IN ACCORDANCE WITH SPEC 3308. GALVANIZE STRUCTURAL STEEL IN ACCORDANCE WITH SPEC. 3394 AND HARDWARE IN ACCORDANCE WITH SPEC. 3392. FURNISH HIGH-STRENGTH BOLTS AND DIRECT TENSION INDICATORS IN ACCORDANCE WITH SPEC. 3391. UNLESS NOTED OTHERWISE, PLACE HIGH-STRENGTH BOLTS IN ACCORDANCE WITH SPEC. 2402.
- PROVIDE CONCRETE IN ACCORDANCE WITH SPEC. 2461, MIX 3G52.
- PROVIDE REINFORCING BARS IN ACCORDANCE WITH SPEC. 3301.
- FOOTING POST AND SIGN POST TO BE THE SAME SIZE.
- (EF) DENOTES EACH FACE.
- (T&B) DENOTES TOP AND BOTTOM.
- ① BOTTOM OF FOOTING TO BE 5' 0" BELOW PROPOSED GROUNDLINE. IF ROCK IS ENCOUNTERED, EXCAVATE TO 5' 0" BELOW PROPOSED GROUNDLINE.
- ② GROUND ABOVE FOOTING TO BE LEVEL OVER THE PLAN DIMENSIONS OF THE FOOTING.

BOLTING PROCEDURE - BASE CONNECTION:

- ASSEMBLE SIGN POST TO FOOTING POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETWEEN PLATES.
- SHIM AS REQUIRED TO PLUMB POST.
- TIGHTEN ALL BOLTS TO THE MAXIMUM EXTENT POSSIBLE WITH A 12" OR 15" WRENCH TO BED WASHERS AND SHIMS AND TO CLEAN BOLT THREADS. THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN TO THE PRESCRIBED TORQUE (SEE STANDARD PLAN 5-297.711 SHEET 1 OF 2).
- BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

BASIS OF DESIGN:

THE DETAILS SHOWN ON THESE STANDARD PLANS ARE BASED ON THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS," FIRST EDITION, 2015, 2017, 2018, 2019, AND 2020 INTERIM REVISIONS.

STRENGTH LIMIT WIND LOADING OF 120 MPH, SERVICE LIMIT WIND LOADING OF 76 MPH.

GEOTECHNICAL PARAMETERS:

THE WATER TABLE IS AT THE BOTTOM OF FOOTING ELEVATION OR LOWER.

THE FOUNDATION DIMENSIONS SHOWN ON THIS SHEET HAVE BEEN DESIGNED WITH THE FOLLOWING ASSUMED SOIL PROPERTIES:

SPREAD FOOTINGS:
STRENGTH LIMIT STATE:
MAXIMUM BEARING PRESSURE: 4.0 KSF
BEARING RESISTANCE FACTOR: 0.45

A SPECIAL FOUNDATION DESIGN IS REQUIRED IN CASES WHERE THE REQUIRED VALUES AND/OR CONDITIONS LISTED ABOVE ARE NOT MET.

REVISION:
APPROVED: 05-03-2021
Kevin Western
KEVIN WESTERN
STATE BRIDGE ENGINEER

m MINNESOTA
DEPARTMENT OF TRANSPORTATION
STANDARD PLAN 5-297.713 1 OF 1
Tom Styrbicki
THOMAS STYRBICKI
STATE DESIGN ENGINEER
APPROVED: 05-03-2021
REVISED:
STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

I-BEAM SUPPORTED SIGN STRUCTURAL DETAILS
SHALLOW SPREAD FOUNDATION