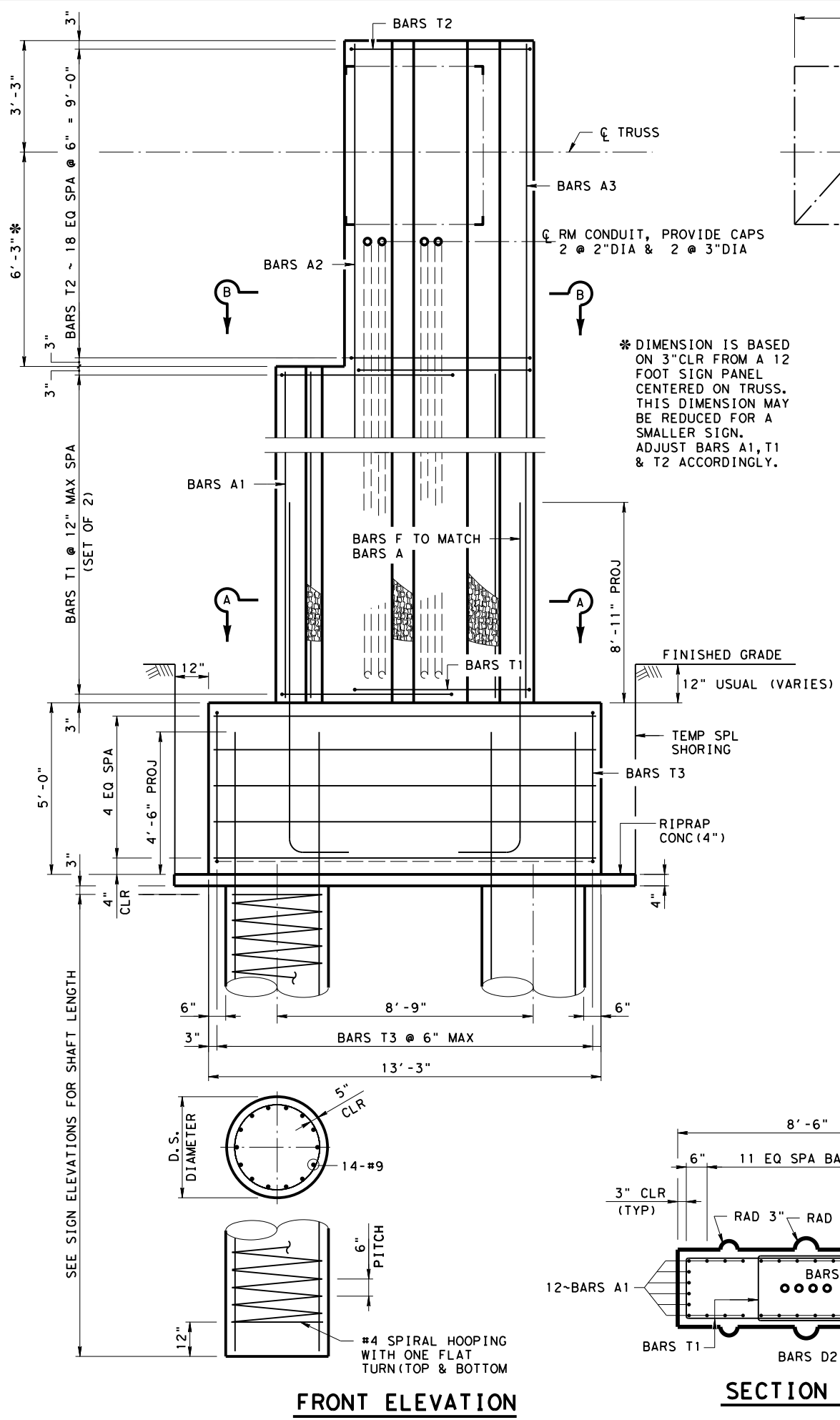
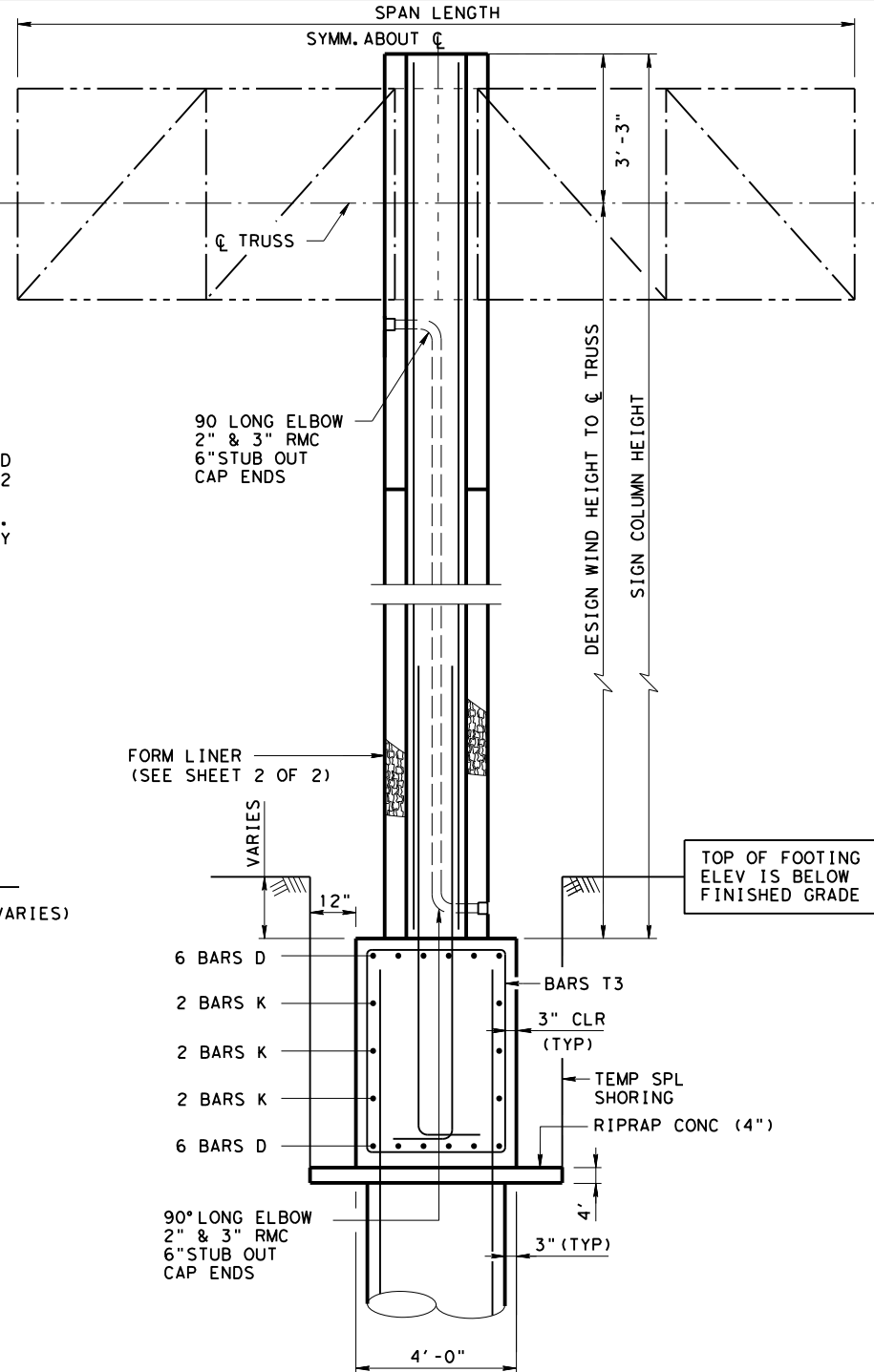


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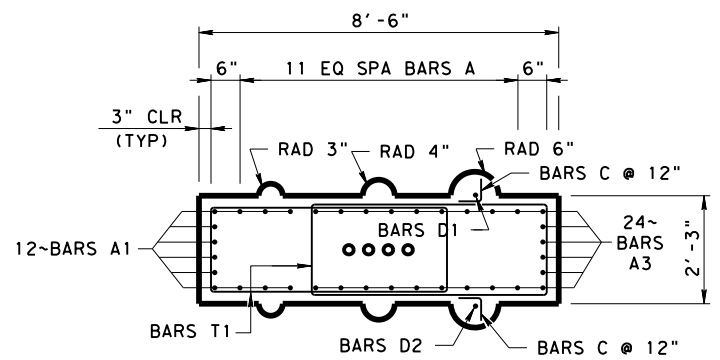
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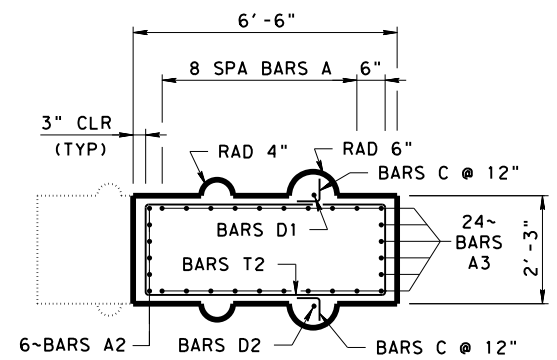
FRONT ELEVATION



SIDE ELEVATION



SECTION A-A



SECTION B-B

GENERAL NOTES:

1. CONCRETE SHALL BE CLASS "C" F' C = 3600 psi.
2. ALL REINFORCING SHALL BE ASTM A615 GRADE 60.
3. ALL DIMENSIONS OF THE REINFORCING BARS ARE TO CL OF BARS UNLESS OTHERWISE NOTED
4. CHAMFER ALL EXPOSED CORNERS 3/4".
5. ANGLE AND STUD ASSEMBLIES AND ALL STEEL HARDWARE, INCLUDING EMBEDDED CHORD ANGLES, STUDS & CONDUIT IN THE COLUMNS ARE INCIDENTAL TO ITEM 650 OVERHEAD SIGN SUPPORTS.
6. ALL STEEL HARDWARE SHALL BE GALVANIZED.
7. FORM LINER IS "FRACTURED GRANITE", MODEL NO. 110 BY SCOTT SYSTEMS, INC. OR EQUAL AS APPROVED BY ARCHITECT.
8. COMPONENTS OF THE STRUCTURE DESIGNED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND/OR AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.
9. EMBEDDED CHORD ANGLES, COMPLETE WITH STUDS & HOLES, SHALL BE PROVIDED BY THE TRUSS FABRICATOR.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING & MAINTAINING LOCATION & ORIENTATION OF THE EMBEDDED ANGLES FOR TRUSS FIT-UP, CAMBER & DEFLECTION. TEMPLATES MAY BE NEEDED TO HOLD THE ANGLES IN PLACE. (NO DIRECT PAY)
11. IF SINGLE SHEAR SPLICES CONFLICT WITH THE GUSSET PLATES, THEN USE DOUBLE SHEAR SPLICES.
12. WELD STUDS TO ANGLE FLANGES IN ACCORDANCE WITH AWS D1.5.
13. FOR CANTILEVER TRUSS LENGTHS FALLING BETWEEN THOSE SHOWN USE SIZES CALLED FOR IN THE NEXT LONGER SPAN.
14. CONCRETE COLUMNS ARE DESIGNED FOR THE EQUIVALENT AREA OF A 12'-0" DEEP SIGN PANEL OVER 100% OF THE SPAN LENGTH. DESIGN INCLUDES 3 POUNDS PER FOOT SQUARED FOR SIGN PANEL AND 20 POUNDS PER FOOT FOR LIGHTS AND 50 POUNDS PER FOOT FOR WALKWAYS OVER 100% OF THE SPAN LENGTH.



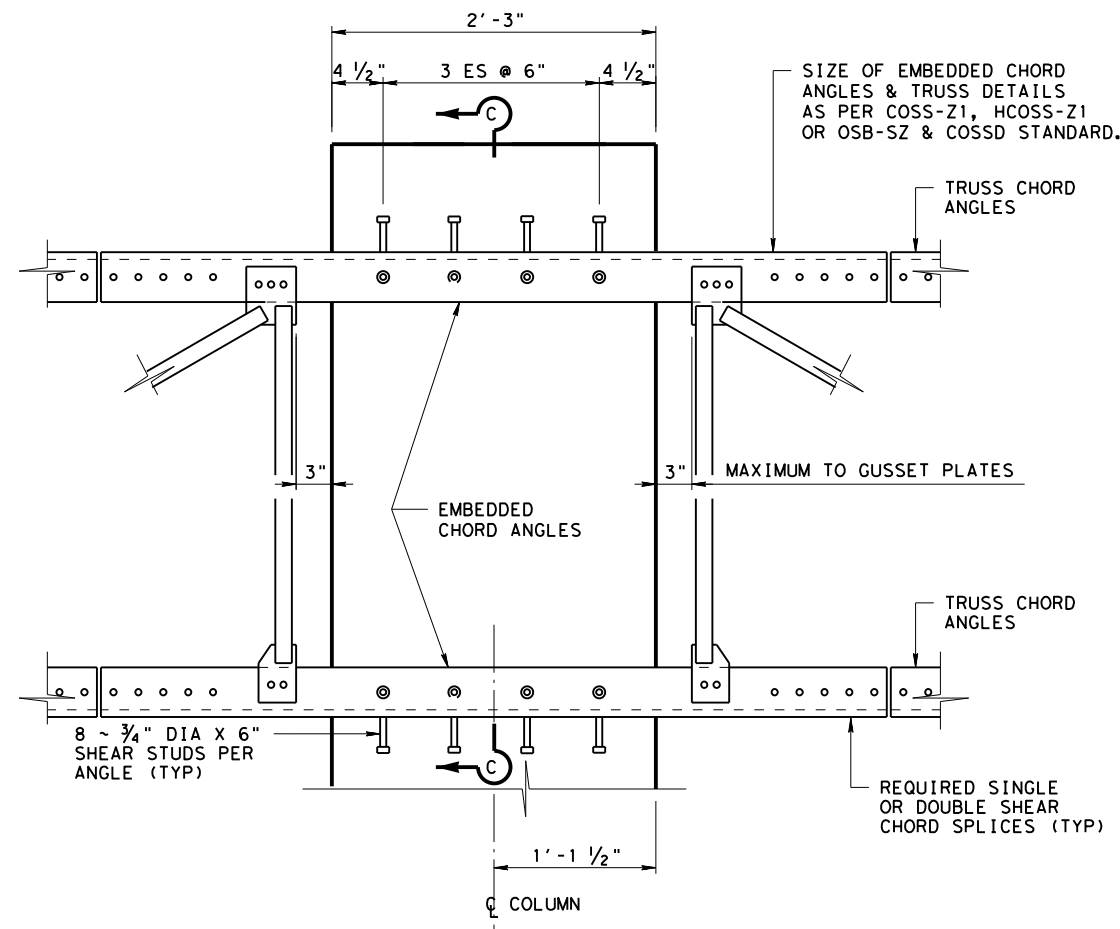
BRACED TEE OVERHEAD SIGN STRUCTURE DETAILS VERTICAL SCHEME

BTOSS-VS-25 (HOU)

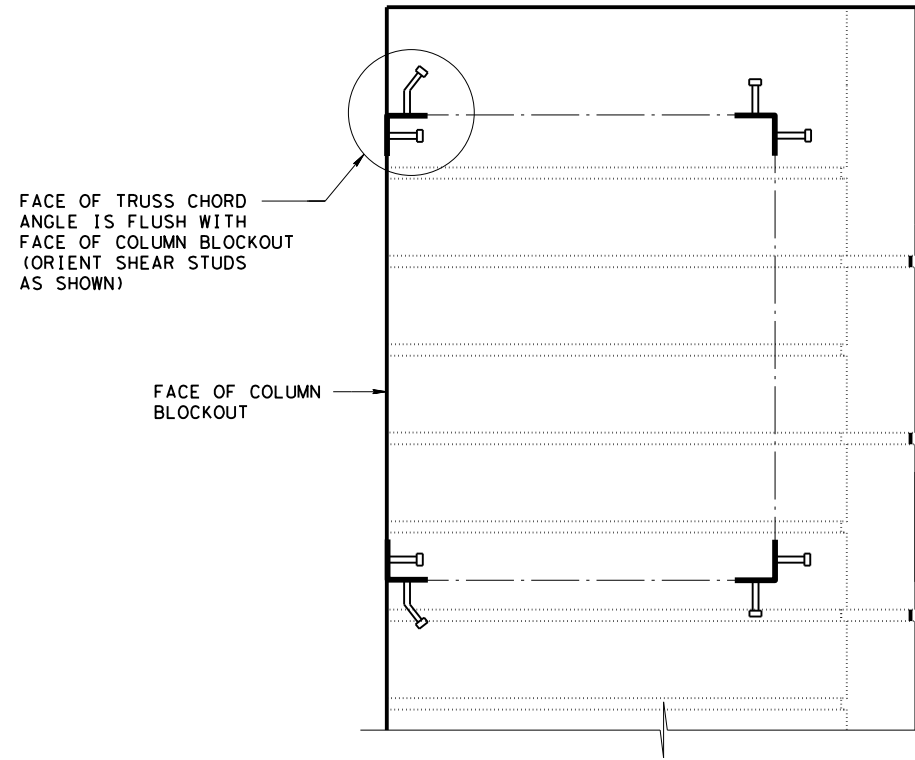
FILE: BTOSS-VS-25 (HOU).DGN	DN: TxDOT	CK: TxDOT	OW: TxDOT	CK: TxDOT
© TxDOT April 2025	CONT	SECT	JOB	HIGHWAY
04/2025: 2024 Spec Updates	REVISIONS			
DIST	COUNTY	SHEET NO.		
HOU				

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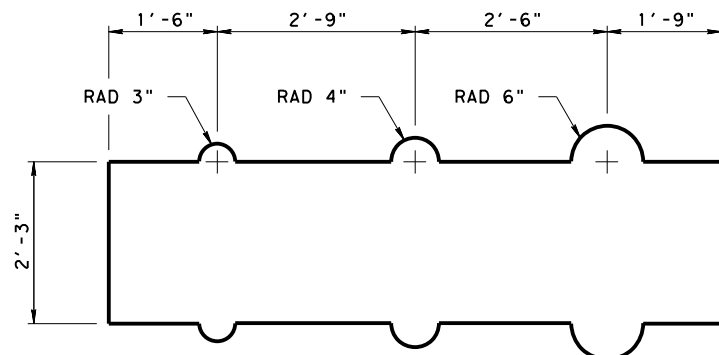
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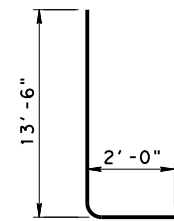
SECTION THRU EMBEDDED TRUSS



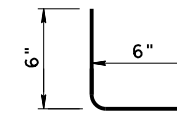
SECTION B-B



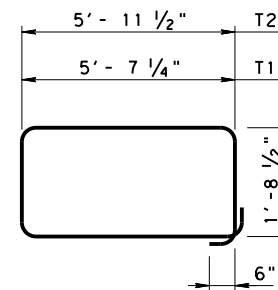
FORM LINER



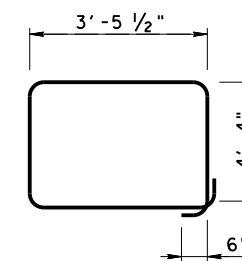
BAR F (#11)



BAR C (#4)



BAR T1 & T2 (#5)



BAR T2 (#5)

TABLE OF ESTIMATED COLUMN QUANTITIES (FOR ONE COLUMN)

4.5' x 4.5' TRUSS

BARS	NO.	SIZE	LENGTH	WEIGHT
A1	12	#11	20'-4"	1,296
A2	6	#9	12'-9"	260
A3	24	#11	29'-10"	3,804
C	60	#4	1'-0"	40
D	12	#11	12'-11"	824
D1	2	#4	29'-10"	40
F	36	#11	15'-6"	2,965
K	6	#6	12'-11"	116
T1	42	#5	15'-7 1/2"	684
T2	19	#5	16'-4"	324
T3	27	#5	16'-7"	467
REINFORCING STEEL			LBS	10,820
TEMPORARY SPECIAL SHORING			SF	269
CL C CONC (SIGN FOOTING)			CY	9.8
CL C CONC (SIGN COLUMN)			CY	21.1
RIPRAP CONC (4 IN)			CY	1.1

① QUANTITIES SHOWN ARE BASED ON A SIGN COLUMN HEIGHT OF 30'. FOR EACH LINEAR FOOT VARIATION IN HEIGHT MAKE THE FOLLOWING ADJUSTMENTS:

BARS A LENGTH, 1'-0"
REINFORCING STEEL, 227 LB
CL C CONC (SIGN COLUMN), 0.76 CY.

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SPAN (ft)	DESIGN WIND HEIGHT TO ϕ TRUSS (ft)	MAXIMUM DRILLED SHAFT AXIAL LOAD (kips)	MAXIMUM DRILLED SHAFT MOMENT (k-ft)	DRILLED SHAFT EMBEDMENT LENGTH (ft)			
				AVERAGE N (BLOWS/12") (SEE NOTE 8)			
				10	20	30	40
10	15	63	56	19	14	14	14
	20	76	89	23	14	14	14
	25	91	130	27	17	17	17
	30	106	180	31	20	20	20
	35	122	239	35	23	23	23
	40	139	307	39	27	27	27
	45	157	384	44	30	30	30
	50	176	470	49	33	33	33
15	15	69	56	21	14	14	14
	20	84	89	25	14	14	14
	25	100	130	29	17	17	17
	30	118	180	34	20	20	20
	35	136	239	38	23	23	23
	40	155	307	43	27	27	27
	45	175	384	48	30	30	30
	50	196	470	54	33	33	33
20	15	74	56	22	14	14	14
	20	91	89	27	15	14	14
	25	109	130	31	17	17	17
	30	128	180	36	20	20	20
	35	148	239	41	23	23	23
	40	169	307	47	27	27	27
	45	191	384	53	30	30	30
	50	214	470	59	33	33	33
25	15	80	56	24	14	14	14
	20	98	89	29	16	14	14
	25	118	130	34	18	17	17
	30	139	180	39	21	20	20
	35	161	239	45	24	23	23
	40	183	307	51	27	27	27
	45	207	384	57	30	30	30
	50	232	470	63	33	33	33
30	15	85	56	25	14	14	14
	20	105	89	30	17	14	14
	25	127	130	36	19	17	17
	30	149	180	42	22	20	20
	35	173	239	48	25	23	23
	40	197	307	54	29	27	27
	45	223	384	61	32	30	30
	50	250	470	68	35	33	33
55	278	566	75	39	37	37	

SPAN (ft)	DESIGN WIND HEIGHT TO ϕ TRUSS (ft)	MAXIMUM DRILLED SHAFT AXIAL LOAD (kips)	MAXIMUM DRILLED SHAFT MOMENT (k-ft)	DRILLED SHAFT EMBEDMENT LENGTH (ft)			
				AVERAGE N (BLOWS/12") (SEE NOTE 8)			
				10	20	30	40
35	15	90	56	26	15	14	14
	20	112	89	32	18	14	14
	25	135	130	38	21	17	17
	30	160	180	44	24	20	20
	35	185	239	51	27	23	23
	40	211	307	58	30	27	27
	45	239	384	65	34	30	30
	50	268	470	73	38	33	33
40	15	96	56	28	15	14	14
	20	119	89	34	18	14	14
	25	144	130	40	22	17	17
	30	170	180	47	25	20	20
	35	197	239	54	29	23	23
	40	226	307	62	32	27	27
	45	255	384	69	36	30	30
	50	286	470	77	40	33	33
45	15	101	56	29	16	14	14
	20	126	89	36	19	14	14
	25	153	130	43	23	17	17
	30	180	180	50	26	20	20
	35	209	239	57	30	23	23
	40	240	307	65	34	27	27
	45	271	384	73	38	30	30
	50	304	470	82	42	33	33
55	338	566	91	47	37	37	

1. DETERMINE DRILLED SHAFT DIAMETER AND MAXIMUM DRILLED SHAFT AXIAL LOAD (KIPS) FROM TABLE BASED ON SPAN LENGTH AND DESIGN WIND HEIGHT TO CENTERLINE OF TRUSS.
2. CONTACT THE HOUSTON DISTRICT LABORATORY FOR CONCISE DRILLED SHAFT EMBEDMENT LENGTH OR USE THE FOLLOWING ITERATIVE PROCEDURE.
3. MAKE AN INITIAL ESTIMATE OF THE DRILLED SHAFT EMBEDMENT LENGTH.
4. FROM SOIL EXPLORATION DATA, DETERMINE AN AVERAGE N VALUE (BLOWS/12") OF THE SOIL THROUGHOUT THE INITIAL EMBEDMENT LENGTH. USE A WEIGHTED-AVERAGE OF THE BLOW COUNT OF INDIVIDUAL STRATA.
5. USE TABLE TO DETERMINE THE REQUIRED DRILLED SHAFT EMBEDMENT LENGTH BASED ON AXIAL LOAD AND AVERAGE N.
6. IF THE REQUIRED EMBEDMENT LENGTH DIFFERS SIGNIFICANTLY FROM THE INITIAL ESTIMATED EMBEDMENT LENGTH, RETURN TO STEP 3 WITH THE REQUIRED EMBEDMENT LENGTH DETERMINED IN STEP 5 AND REPEAT STEPS 3, 4 & 5.
7. THE EMBEDMENT LENGTH TABLE IS BASED UPON THE GREATEST EMBEDMENT LENGTH DERIVED FROM MOMENT, UPLIFT, OR THE AXIAL LOAD IN THE DRILLED SHAFT.
8. TCP N-VALUE, REFER TO APPENDIX 2, TXDOT GEOTECHNICAL MANUAL-LRFD, APRIL 2024 FOR SPT N-VALUES AND TCP BLOW COUNTS CONVERSION

DESIGNER NOTE:
 THIS SHEET IS FOR DESIGNER'S USE IN DETERMINING DRILLED SHAFT DIAMETER, LOADS AND EMBEDMENT. DO NOT INSERT INTO PLANSET.

FOUNDATION DATA AND EMBEDMENT LENGTH TABLE
 (42" DIAMETER DRILLED SHAFT FOR ALL CASES)

 Texas Department of Transportation	 Bridge Houston District Standard		
BRACED TEE OVERHEAD SIGN STRUCTURE FOUNDATION DATA AND EMBEDMENT SELECTION TABLE VERTICAL SCHEME BTSS-VS-25 (HOU)			
FILE: BTSS-VS-25 (HOU).DGN	DN: TXDOT	CK: TXDOT	OW: TXDOT
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