SPAN (ft)	DESIGN WIND HEIGHT TO ℄ TRUSS (ft)	MAXIMUM DRILLED SHAFT AXIAL LOAD (kips)	MAXIMUM DRILLED SHAFT MOMENT (k-ft)	DRILLED SHAFT EMBEDMENT LENGTH (ft) AVERAGE N (BLOWS/12")			
				10	20	30	40
10	15	62	73	19	14	14	14
	20	75	114	23	14	14	14
	25	89	165	26	17	17	17
	30	103	227	30	20	20	20
	35	118	299	34	23	23	23
	40	134	383	38	27	27	27
	45	150	478	42	30	30	30
	50	167	585	46	33	33	33
	55	184	703	51	37	37	37
15	15	69	79	21	14	14	14
	20	83	119	25	14	14	14
	25	99	171	29	17	17	17
	30	115	232	33	20	20	20
	35	132	305	37	23	23	23
	40	150	388	42	27	27	27
	45	168	483	47	30	30	30
	50	187	590	52	33	33	33
	55	207	709	57	37	37	37
20	15	74	86	22	14	14	14
	20	91	127	27	15	14	14
	25	108	178	31	17	17	17
	30	126	240	36	20	20	20
	35	145	312	41	23	23	23
	40	164	396	46	27	27	27
	45	185	491	51	30	30	30
	50	206	598	57	33	33	33
	55	228	716	62	37	37	37
25	15	80	96	24	14	14	14
	20	98	136	28	16	14	14
	25	117	188	33	18	17	17
	30	137	249	39	21	20	20
	35	158	322	44	24	23	23
	40	180	405	50	27	27	27
	45	202	500	55	30	30	30
	50	225	607	62	33	33	33
	55	249	726	68	37	37	37
30	15	85	107	25	14	14	14
	20	105	148	30	17	14	14
	25	126	199	36	19	17	17
	30	148	261	41	22	20	20
	35	171	333	47	25	23	23
	40	194	417	53	28	27	27
	45	219	512	60	31	30	30
	50	244	619	66	35	33	33
	55	270	737	73	38	37	37

SPAN (ft)	DESIGN WIND HEIGHT TO ℄ TRUSS (ft)	MAXIMUM DRILLED SHAFT AXIAL LOAD (kips)	MAXIMUM DRILLED SHAFT MOMENT (k-ft)	DRILLED SHAFT EMBEDMENT LENGTH (ft) AVERAGE N (BLOWS/12")			
				10	20	30	40
35	15	91	121	27	15	14	14
	20	113	162	32	18	14	14
	25	135	213	38	21	17	17
	30	159	275	44	24	20	20
	35	183	347	51	27	23	23
	40	209	431	57	30	27	27
	45	235	526	64	34	30	30
	50	262	633	71	37	33	33
	55	291	751	78	41	37	37
40	15	96	137	28	16	14	14
	20	120	178	34	19	14	14
	25	144	229	40	22	17	17
	30	170	291	47	25	20	20
	35	196	363	54	28	23	23
	40	224	447	61	32	27	27
	45	252	542	68	36	30	30
	50	281	649	76	40	33	33
	55	311	767	84	43	37	37
45	15	102	155	30	16	14	14
	20	127	196	36	20	14	14
	25	153	247	43	23	17	17
	30	181	309	50	26	20	20
	35	209	381	57	30	23	23
	40	238	465	65	34	27	27
	45	268	560	73	38	30	30
	50	300	667	81	42	33	33
	55	332	785	89	46	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 UPPER THIRD OF THE 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.

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
Houston District Bridge
Green Ribbon Project

CANTILEVER OVERHEAD SIGN STRUCTURE FOUNDATION DATA AND EMBEDMENT SELECTION TABLE

HORIZONTAL SCHEME
COSS-HS

FILE: STDN40.DGN	DN: HOU	CK: HOU	DW: HOU	CK: HOU
©TxDOT AUGUST 2011	DISTRICT	FED REG	PROJECT NO.	SHEET
REVISIONS	HOUSTON	6		
	COUNTY		CONTROL	SECT	JOB	HIGHWAY

STDN40C