

SPAN (ft)	DESIGN WIND HEIGHT TO ϕ TRUSS (ft)	MAXIMUM DRILLED SHAFT AXIAL LOAD (kips)	MAXIMUM DRILLED SHAFT MOMENT (k-ft)	DRILLED SHAFT DIAMETER (in)	DRILLED SHAFT EMBEDMENT LENGTH (ft)			
					AVERAGE N (BLOWS/12")			
					10	20	30	40
150	15	142	60	36	46	24	17	14
	20	180	96	36	58	30	21	17
	25	220	141	36	70	36	25	20
	30	262	196	36	82	43	29	23
	35	280	261	42	76	39	27	21
	40	300	336	48	71	37	26	20
	45	320	421	54	68	35	25	23
	50	355	516	54	75	39	27	25
160	15	151	69	36	49	26	18	14
	20	192	110	36	61	32	22	18
	25	235	161	36	74	39	27	21
	30	279	223	36	88	45	31	24
	35	281	295	48	67	35	24	19
	40	319	379	48	76	39	27	21
	45	340	474	54	72	37	26	23
	50	378	581	54	79	41	28	25
170	15	158	69	36	51	27	19	15
	20	200	110	36	64	33	23	18
	25	245	161	36	77	40	28	22
	30	268	223	42	73	38	26	20
	35	291	295	48	69	36	25	20
	40	331	379	48	78	41	28	22
	45	352	474	54	74	39	27	23
	50	391	581	54	82	43	29	25
180	15	157	74	42	44	23	17	13
	20	197	117	42	54	29	20	16
	25	239	171	42	65	34	24	19
	30	265	236	48	63	33	23	18
	35	306	313	48	73	38	26	20
	40	330	401	54	70	36	25	20
	45	369	501	54	78	40	28	23
	50	392	613	60	74	39	27	25
190	15	165	79	42	46	24	17	14
	20	206	125	42	57	30	21	16
	25	250	182	42	68	35	25	19
	30	277	250	48	66	34	24	19
	35	319	331	48	76	39	27	21
	40	344	424	54	72	38	26	20
	45	369	529	60	70	37	25	23
	50	408	647	60	77	40	28	25
200	15	171	79	42	47	25	18	14
	20	214	125	42	59	31	22	17
	25	259	182	42	70	37	25	20
	30	287	250	48	68	36	25	19
	35	331	331	48	78	41	28	22
	40	355	424	54	75	39	27	21
	45	380	529	60	72	38	26	23
	50	421	647	60	80	41	29	25

SPAN (ft)	DESIGN WIND HEIGHT TO ϕ TRUSS (ft)	MAXIMUM DRILLED SHAFT AXIAL LOAD (kips)	MAXIMUM DRILLED SHAFT MOMENT (k-ft)	DRILLED SHAFT DIAMETER (in)	DRILLED SHAFT EMBEDMENT LENGTH (ft)			
					AVERAGE N (BLOWS/12")			
					10	20	30	40
210	15	179	84	42	50	26	19	15
	20	224	133	42	61	32	22	18
	25	271	193	42	73	38	26	21
	30	299	265	48	71	37	26	20
	35	327	349	54	69	36	25	20
	40	355	447	60	68	35	25	20
	45	396	557	60	75	39	27	23
	50	438	681	60	83	43	30	25
220	15	186	84	42	51	27	19	15
	20	232	133	42	63	33	23	18
	25	281	193	42	76	39	27	21
	30	310	265	48	73	38	26	21
	35	338	349	54	71	37	26	20
	40	382	447	54	80	42	29	22
	45	408	557	60	77	40	28	23
	50	451	681	60	85	44	30	25

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.

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

**OVERHEAD SIGN BRIDGE
 FOUNDATION DATA AND
 EMBEDMENT SELECTION
 TABLE
 WAVE SCHEME
 OSB-WS**

FILE#	STDN39.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		

FOUNDATION DATA AND EMBEDMENT LENGTH TABLE (CONT)