

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	139	60	36	45	24	17	14
	20	176	96	36	56	30	21	16
	25	216	141	36	68	36	25	19
	30	236	196	42	64	34	23	18
	35	275	261	42	74	39	27	21
	40	293	336	48	70	36	25	20
	45	330	421	48	78	41	28	23
	50	368	516	48	87	45	31	25
160	15	149	69	36	48	26	18	14
	20	189	110	36	60	32	22	17
	25	231	161	36	73	38	26	20
	30	238	223	48	57	30	21	17
	35	275	295	48	66	34	24	19
	40	313	379	48	74	39	27	21
	45	334	474	54	70	37	25	23
	50	371	581	54	78	40	28	25
170	15	155	69	36	50	27	19	15
	20	197	110	36	63	33	23	18
	25	241	161	36	76	40	27	21
	30	248	223	48	59	31	22	17
	35	286	295	48	68	35	25	19
	40	325	379	48	77	40	28	21
	45	346	474	54	73	38	26	23
	50	367	581	60	70	36	25	25
180	15	155	74	42	43	23	16	13
	20	194	117	42	53	28	20	16
	25	235	171	42	64	34	23	18
	30	261	236	48	62	33	23	18
	35	301	313	48	71	37	26	20
	40	324	401	54	69	36	25	20
	45	363	501	54	76	40	27	23
	50	385	613	60	73	38	26	25
190	15	163	79	42	45	24	17	14
	20	204	125	42	56	29	21	16
	25	247	182	42	67	35	24	19
	30	291	250	42	79	41	28	22
	35	315	331	48	75	39	27	21
	40	339	424	54	72	37	26	20
	45	380	529	54	80	41	29	23
	50	403	647	60	76	40	27	25
200	15	169	79	42	47	25	18	14
	20	211	125	42	58	30	21	17
	25	256	182	42	70	36	25	20
	30	302	250	42	82	42	29	23
	35	327	331	48	77	40	28	22
	40	351	424	54	74	38	27	21
	45	375	529	60	71	37	26	23
	50	416	647	60	79	41	28	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	178	84	42	49	26	18	15
	20	222	133	42	61	32	22	17
	25	269	193	42	73	38	26	20
	30	317	265	42	85	44	30	24
	35	342	349	48	81	42	29	22
	40	367	447	54	77	40	28	22
	45	392	557	60	74	39	27	23
	50	434	681	60	82	42	29	25
220	15	184	84	42	51	27	19	15
	20	230	133	42	63	33	23	18
	25	278	193	42	75	39	27	21
	30	307	265	48	73	38	26	20
	35	335	349	54	71	37	26	20
	40	379	447	54	80	41	29	22
	45	404	557	60	76	40	27	23
	50	447	681	60	84	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
VERTICAL SCHEME
OSB-VS

FILE# STDN38.DGN	DN# HOU	CK# HOU	DW# HOU	CK# HOU
©TXDOT AUGUST 2011	DISTRICT HOUSTON	FED REG 6	PROJECT NO.	SHEET
REVISIONS	COUNTY	CONTROL	SECT	JOB HIGHWAY

FOUNDATION DATA AND EMBEDMENT LENGTH TABLE (CONT)