

POST	FOUNDATION TABLE												BASE CONNECTION DATA TABLE										
	FOUNDATION			REINFORCEMENT					STUB POST				BOLT SIZE AND TORQUE	A	B	C	D	E	T1	T2	W	R	
	DIA.	MIN. DEPTH	CY.* CONC.	VERTICAL BARS NO.	SIZE	LGTH.	BAR SPIRALS SIZE	O.D.	LGTH.	LBS.**	STUB LGTH.	STUB PROJECTION											LBS.***
W6x9	2'-0"	6'-0"	.70	8	#5	5'-9"	#3	20 1/2"	79'	78	2'-3"	3"	44	5/8" Ø x 3 1/4" LG. TORQUE = 450"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1/4"	1/32"
W6x15	2'-0"	6'-0"	.70	8	#5	5'-9"	#3	20 1/2"	79'	78	2'-6"	3"	71	5/8" Ø x 3 1/4" LG. TORQUE = 450"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1/4"	1/32"
W8x18	2'-0"	6'-0"	.70	8	#5	5'-9"	#3	20 1/2"	79'	78	2'-6"	3"	85	3/4" Ø x 3 3/4" LG. TORQUE = 750"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	5/16"	1/32"
W10x22	2'-6"	6'-6"	1.18	8	#5	6'-3"	#3	26 1/2"	105'	92	3'-0"	2 1/2"	110	3/4" Ø x 3 3/4" LG. TORQUE = 750"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	5/16"	1/32"
W10x26	2'-6"	7'-0"	1.27	8	#5	6'-9"	#3	26 1/2"	112'	98	3'-0"	2 1/2"	137	7/8" Ø x 4" LG. TORQUE = 950"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	3/8"	1/32"
W12x26	2'-6"	7'-9"	1.41	8	#5	7'-6"	#3	26 1/2"	119'	107	3'-0"	2 1/2"	140	7/8" Ø x 4" LG. TORQUE = 950"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	3/8"	1/32"
W14x30	3'-0"	7'-3"	1.90	8	#5	7'-0"	#3	32 1/2"	145'	113	3'-0"	2 1/2"	150	1" Ø x 4 1/2" LG. TORQUE = 1100"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1/32"	
W14x38	3'-0"	8'-0"	2.09	8	#5	7'-9"	#3	32 1/2"	153'	122	3'-6"	2 1/2"	208	1" Ø x 4 1/2" LG. TORQUE = 1100"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1/32"	
W16x45	3'-0"	8'-6"	2.23	8	#5	8'-3"	#3	32 1/2"	162'	130	3'-6"	2 1/2"	233	1" Ø x 4 1/2" LG. TORQUE = 1100"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1/32"	

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

1. ASSEMBLE POST TO STUB WITH H.S. BOLTS AND ONE OF THE THREE FLAT WASHERS ON EACH BOLT BETWEEN PLATES AS SHOWN.
2. SHIMS MAY BE USED BETWEEN PLATES TO LEVEL POST.
3. TIGHTEN BOLTS IN BASE PLATE IN A SYSTEMATIC ORDER TO THE REQUIRED TORQUE.
4. LOOSEN EACH BOLT AND RETIGHTEN TO THE REQUIRED TORQUE IN SAME ORDER AS INITIAL TIGHTENING.
5. BURR OR CENTER PUNCH THREADS AT JUNCTURE OF BOLT AND NUT TO PREVENT NUT FROM LOOSENING.

- * QUANTITY OF IDOT CLASS DS CONCRETE CONSISTS OF ALL CONCRETE NECESSARY FOR ONE FOUNDATION. (CUBIC YARDS)
- ** THIS INCLUDES REINFORCEMENT BARS AND SPIRAL HOOPING REQUIRED FOR ONE FOUNDATION.
- *** INCLUDES WEIGHT OF STUB POST WITH ANGLES, GUSSETS, BASE PLATES, BOLTS, NUTS, WASHERS, PLUS BASE PLATES AND GUSSETS ON MAIN POST, PLUS FUSE PLATE (IF ANY) WITH BOLTS, NUTS AND WASHERS. (ONE POST)

EQUIVALENT TORQUE VALUES

450" "	=	37.5' "
750" "	=	62.5' "
950" "	=	79.2' "
1100" "	=	91.7' "

POST	FUSE PLATE DATA TABLE				FUSE PLATE BOLT SIZE TABLE													
	J	K	L	T3	SIGN DEPTH													
					4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'			
W6x9	4"	2 1/4"	7/8"	1/4"	1/2" Ø x 1 1/2"	1/2" Ø x 1 1/2"	1/2" Ø x 1 1/2"	5/8" Ø x 1 3/4"	5/8" Ø x 1 3/4"	5/8" Ø x 1 3/4"	---	---	---	---	---	---		
W6x15	6"	3 1/2"	1 1/4"	3/8"	1/2" Ø x 1 3/4"	1/2" Ø x 1 3/4"	5/8" Ø x 2"	5/8" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	---		
W8x18	5 1/4"	2 3/4"	1 1/4"	3/8"	1/2" Ø x 1 3/4"	1/2" Ø x 1 3/4"	5/8" Ø x 2"	5/8" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	---		
W10x22	5 3/4"	2 3/4"	1 1/2"	1/2"	1/2" Ø x 2"	1/2" Ø x 2"	5/8" Ø x 2"	5/8" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	---		
W10x26	5 3/4"	2 3/4"	1 1/2"	5/8"	1/2" Ø x 2"	1/2" Ø x 2"	5/8" Ø x 2"	5/8" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	---		
W12x26	6 1/2"	3 1/2"	1 1/2"	5/8"	---	---	---	---	---	---	---	---	---	---	---	---		
W14x30	6 3/4"	3 1/2"	1 5/8"	1/2"	1/2" Ø x 2"	1/2" Ø x 2"	5/8" Ø x 2"	5/8" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	---		
W14x38	6 3/4"	3 1/2"	1 5/8"	1/2"	---	1/2" Ø x 2"	1/2" Ø x 2"	5/8" Ø x 2"	5/8" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	---		
W16x45	7"	3 1/2"	1 3/4"	1/2"	---	---	---	1/2" Ø x 2"	1/2" Ø x 2"	5/8" Ø x 2"	5/8" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	3/4" Ø x 2"	---		

POST	FUSE PLATE DATA TABLE				FUSE PLATE BOLT SIZE TABLE													
	J	K	L	T3	SIGN DEPTH													
					15'	16'	17'	18'	19'	20'	21'	22'	23'	24'	---			
W6x9	4"	2 1/4"	7/8"	1/4"	---	---	---	---	---	---	---	---	---	---	---	---		
W6x15	6"	3 1/2"	1 1/4"	3/8"	---	---	---	---	---	---	---	---	---	---	---	---		
W8x18	5 1/4"	2 3/4"	1 1/4"	3/8"	5/8" Ø x 2 1/4"	5/8" Ø x 2 1/4"	---	---	---	---	---	---	---	---	---	---		
W10x22	5 3/4"	2 3/4"	1 1/2"	1/2"	1" Ø x 2 3/4"	1" Ø x 2 3/4"	1" Ø x 2 3/4"	1" Ø x 2 3/4"	1" Ø x 2 3/4"	1" Ø x 2 3/4"	---	---	---	---	---	---		
W10x26	5 3/4"	2 3/4"	1 1/2"	5/8"	1" Ø x 2 3/4"	1 1/8" Ø x 3"	1 1/8" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	---		
W12x26	6 1/2"	3 1/2"	1 1/2"	5/8"	1" Ø x 2 3/4"	1" Ø x 2 3/4"	1 1/8" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	---		
W14x30	6 3/4"	3 1/2"	1 5/8"	1/2"	1" Ø x 2 3/4"	1" Ø x 2 3/4"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	---		
W14x38	6 3/4"	3 1/2"	1 5/8"	1/2"	1" Ø x 2 1/2"	1" Ø x 2 3/4"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	---		
W16x45	7"	3 1/2"	1 3/4"	1/2"	5/8" Ø x 2 1/2"	1" Ø x 2 3/4"	1" Ø x 2 3/4"	1 1/8" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	1 1/4" Ø x 3"	---		

PROCEDURE FOR FUSE PLATE BOLT TIGHTENING:

ALL FRICTION FUSE BOLTS SHALL BE TIGHTENED IN THE SHOP AS APPROVED BY THE ENGINEER ACCORDING TO ONE OF THE FOLLOWING METHODS:

1. TURN-OF-NUT TIGHTENING.
2. TIGHTENING BY USE OF A DIRECT TENSION INDICATOR.

THE ABOVE METHODS OF INSTALLATION AND TIGHTENING SHALL CONFORM TO THE LATEST ISSUE OF THE SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A-325 OR A-490 BOLTS, FOR SLIP-CRITICAL CONNECTIONS AS ISSUED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS OF THE ENGINEERING FOUNDATION.

TIGHTENING SHALL BE TO SUCH A DEGREE AS TO OBTAIN THE FOLLOWING MINIMUM RESIDUAL TENSION IN EACH BOLT.

BOLT DIA.	MIN. RESIDUAL BOLT TENSION	BOLT DIA.	MIN. RESIDUAL BOLT TENSION	BOLT DIA.	MIN. RESIDUAL BOLT TENSION
1/2"	12,050	7/8"	39,250	1 1/4"	71,700
5/8"	19,200	1"	51,500		
3/4"	28,400	1 1/8"	56,450		



BREAKAWAY SIGN SUPPORT DETAILS

STANDARD F9-03

CONTRACT 60I31 SHEET 945B OF 963

APPROVED: *Paul Kovacs* CHIEF ENGINEER DATE 1-1-2010