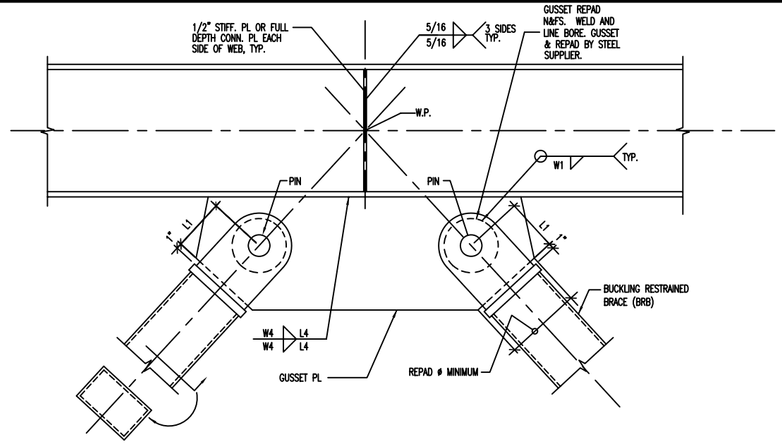
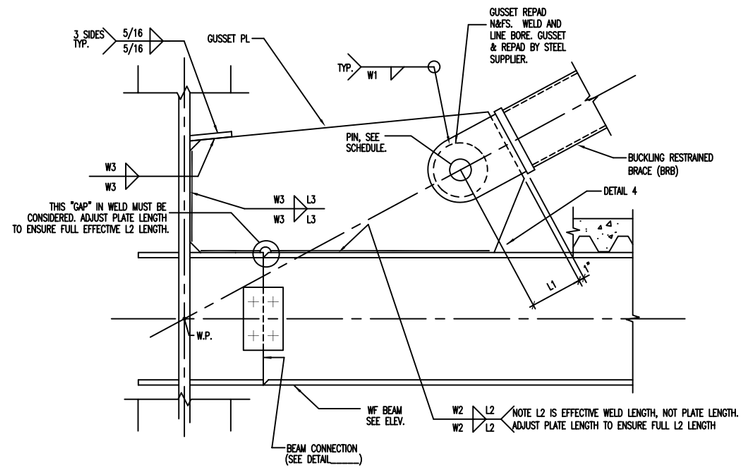
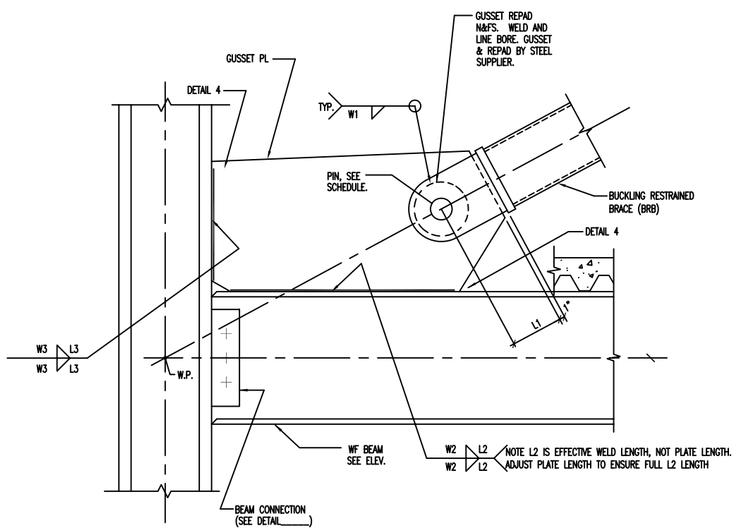


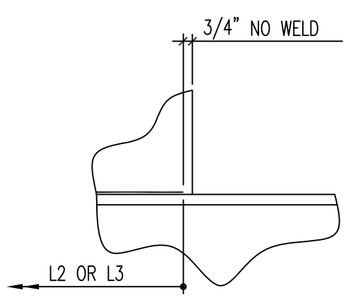
1 TYPICAL CHEVRON BRACE (BRB) NTS



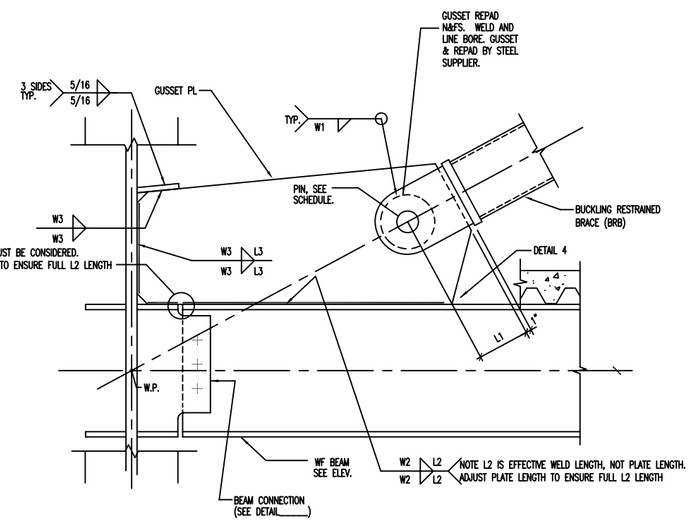
2 TYPICAL BRACE (BRB) TO COLUMN WEB @ MOMENT CONN. BEAM NTS



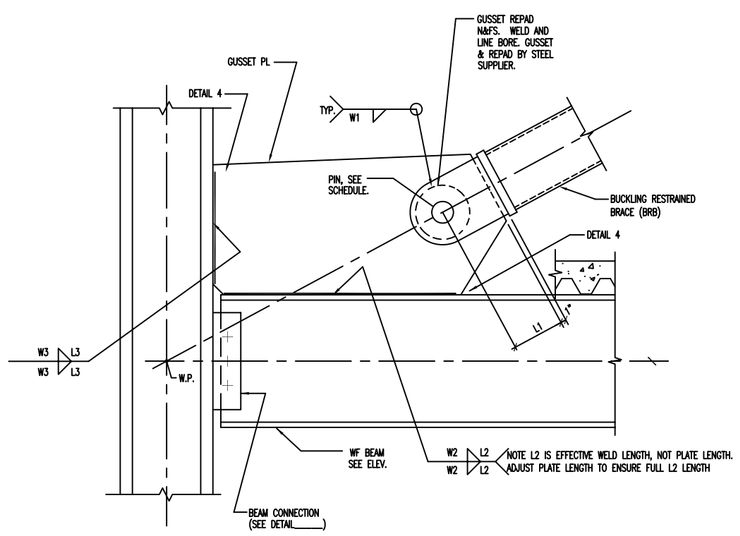
3 TYPICAL BRACE (BRB) TO COLUMN FLG @ MOMENT CONN. BEAM NTS



4 EXTENDED GUSSET PLATE NTS



5 TYPICAL BRACE (BRB) TO COLUMN WEB @ NON-MOMENT BEAM NTS



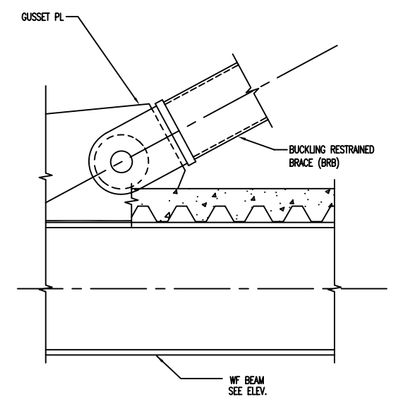
6 TYPICAL BRACE (BRB) TO COLUMN FLG @ NON-MOMENT BEAM NTS

POWERCAT™ GUSSET CONNECTION SCHEDULE

@ GRIDS	BRACE FRAME	@ FLOOR	BRB MARK	PIECE MARK	GUSSET REPAD THK.	GUSSET REPAD Ø	PIN HOLE DIAMETER	PIN DIAMETER	REPAD WELD-W1	L1	LOWER GUSSET PL WELDS				UPPER GUSSET PL WELDS				CHEVRON		GUSSET PL THICKNESS
											W2	L2min	W3	L3min	W2	L2min	W3	L3min	W4	L4min	
H2.5-H3	HE	4-R	BRB-6.5A	PC273a	1	12	3	2 31/32	5/16	7	7/16	14	7/16	23	7/16	16	3/8	25	—	—	1 1/4
H3-H3.5	HE	4-R	BRB-6.5A	PC273a	1	12	3	2 31/32	5/16	7	7/16	14	7/16	23	7/16	16	3/8	25	—	—	1 1/4
H8.5-H9	HE	4-R	BRB-6.5A	PC273a	1	12	3	2 31/32	5/16	7	7/16	14	7/16	23	7/16	16	3/8	25	—	—	1 1/4
H9-H9.5	HE	4-R	BRB-6.5A	PC273a	1	12	3	2 31/32	5/16	7	7/16	14	7/16	23	7/16	16	3/8	25	—	—	1 1/4
H2.5-H3	HG	4-R	BRB-6.5A	PC273a	1	12	3	2 31/32	5/16	7	7/16	14	7/16	23	7/16	16	3/8	25	—	—	1 1/4
H3-H3.5	HG	4-R	BRB-6.5A	PC273a	1	12	3	2 31/32	5/16	7	7/16	14	7/16	23	7/16	16	3/8	25	—	—	1 1/4
H8.5-H9	HG	4-R	BRB-6.5A	PC273a	1	12	3	2 31/32	5/16	7	7/16	14	7/16	23	7/16	16	3/8	25	—	—	1 1/4
H9-H9.5	HG	4-R	BRB-6.5A	PC273a	1	12	3	2 31/32	5/16	7	7/16	14	7/16	23	7/16	16	3/8	25	—	—	1 1/4
(2)HE-HG	H4	4-R	BRB-7.5A	PC315a	1	12	3	2 31/32	5/16	7	1/2	15	7/16	24	—	—	—	—	5/16	59	1 1/4
(2)HE-HG	H4	4-R	BRB-7.5A	PC315a	1	12	3	2 31/32	5/16	7	1/2	15	7/16	24	—	—	—	—	5/16	59	1 1/4
(2)HE-HG	H8	4-R	BRB-7.5A	PC315a	1	12	3	2 31/32	5/16	7	1/2	15	7/16	24	—	—	—	—	5/16	59	1 1/4
(2)HE-HG	H8	4-R	BRB-7.5A	PC315a	1	12	3	2 31/32	5/16	7	1/2	15	7/16	24	—	—	—	—	5/16	59	1 1/4
H2.5-H3	HE	3-4	BRB-12.5A	PC525a	1 1/4	14	4	3 31/32	3/8	8	13/16	18	3/4	25	5/8	18	5/8	27	—	—	1 1/2
H3-H3.5	HE	3-4	BRB-12.5A	PC525a	1 1/4	14	4	3 31/32	3/8	8	13/16	18	3/4	25	5/8	18	5/8	27	—	—	1 1/2
H8.5-H9	HE	3-4	BRB-12.5A	PC525a	1 1/4	14	4	3 31/32	3/8	8	13/16	18	3/4	25	5/8	18	5/8	27	—	—	1 1/2
H9-H9.5	HE	3-4	BRB-12.5A	PC525a	1 1/4	14	4	3 31/32	3/8	8	13/16	18	3/4	25	5/8	18	5/8	27	—	—	1 1/2
H2.5-H3	HG	3-4	BRB-12.5A	PC525a	1 1/4	14	4	3 31/32	3/8	8	13/16	18	3/4	25	5/8	18	5/8	27	—	—	1 1/2
H3-H3.5	HG	3-4	BRB-12.5A	PC525a	1 1/4	14	4	3 31/32	3/8	8	13/16	18	3/4	25	5/8	18	5/8	27	—	—	1 1/2
H8.5-H9	HG	3-4	BRB-12.5A	PC525a	1 1/4	14	4	3 31/32	3/8	8	13/16	18	3/4	25	5/8	18	5/8	27	—	—	1 1/2
H9-H9.5	HG	3-4	BRB-12.5A	PC525a	1 1/4	14	4	3 31/32	3/8	8	13/16	18	3/4	25	5/8	18	5/8	27	—	—	1 1/2
(2)HE-HG	H4	3-4	BRB-13.5A	PC567a	1 1/2	16	4	3 31/32	3/8	9	13/16	19	3/4	26	—	—	—	—	7/16	73	1 1/2
(2)HE-HG	H4	3-4	BRB-13.5A	PC567a	1 1/2	16	4	3 31/32	3/8	9	13/16	19	3/4	26	—	—	—	—	7/16	73	1 1/2
(2)HE-HG	H8	3-4	BRB-13.5A	PC567a	1 1/2	16	4	3 31/32	3/8	9	11/16	17	3/4	27	—	—	—	—	7/16	73	1 1/2
(2)HE-HG	H8	3-4	BRB-13.5A	PC567a	1 1/2	16	4	3 31/32	3/8	9	11/16	17	3/4	27	—	—	—	—	7/16	73	1 1/2

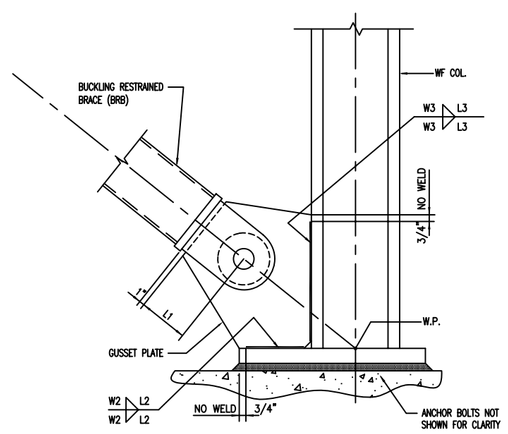
7 BRB CONNECTION SCHEDULE (PINNED CONNECTIONS)

NOTE:
1. GUSSET PLATES & REPADS ARE TO BE A572-GR50
2. PINS TO BE 4140 ROD Q&T Fu = 125 FOR DIA. ≤ 2 1/2" & 115 FOR DIA. > 2 1/2"



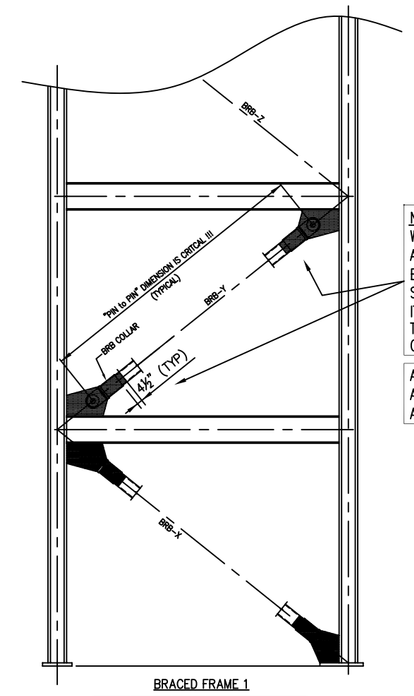
8 TYPICAL BRACE (BRB) @ FLOOR SLAB NTS

NOTE:
IF END OF BRACE EXTENDS DIMENSIONALLY INTO SLAB, A 1/2" FOAM BOND BREAKER IS TO BE USED AROUND THE END.



9 TYPICAL BRACE TO BASE PLATE (PINNED CONNECTION) NTS

NOTE:
IF END OF BRACE EXTENDS DIMENSIONALLY INTO SLAB, A 1/2" FOAM BOND BREAKER IS TO BE USED AROUND THE END.



NOTICE:
WELDED, BOLTED, SCREWED, OR SHOT-IN ATTACHMENTS FOR NON-STRUCTURAL ELEMENTS ARE PROHIBITED WITHIN THE SHADED REGION DEFINED IN THIS NOTICE. IT IS A VIOLATION OF THE CONTRACT AND THE BUILDING CODE TO MAKE SUCH CONNECTIONS.

ANY OTHER CONNECTIONS TO THE BRACE ARE TO BE APPROVED BY THE ENGINEER AND THE BRB MANUFACTURER.

BRACED FRAME 1

BRACED FRAME	BRACE TYPE	Pu (KIPS)	Asc	STIFF. MODIFIED FACTOR (SMF)
BF-1	BRB-X		X	
	BRB-Y		Y	
	BRB-Z		Z	

10 BUCKLING RESTRAINED BRACE FRAME SCHEDULE NTS

BRACE FRAME ELEVATION NOTES:
1. BUCKLING RESTRAINED BRACES ARE TO BE TESTED PER THE PROVISIONS OF AISC 341-05. SUPPLIER TO SUBMIT PROOF OF EACH BRACE'S COMPLIANCE WITH THE QUALIFIED LOAD & STRAIN RANGES.
2. Pu GIVEN IS THE GOVERNING CODE LEVEL FORCE IN THE BRACE, USING LRFD FORCE LEVELS Pu ≤ 0.9 Asc Fymin.
3. Fysc IS THE ACTUAL YIELD STRESS OF THE STEEL CORE AS DETERMINED BY A COUPON TEST. 38 ksi ≤ Fysc ≤ 46 ksi. CHARPY TESTING REQUIRED WHEN THICKNESS OF THE CORE MATERIAL EXCEEDS 2".
4. BRACE STIFFNESS Keff TO BE SMF * $\frac{Asc\ E}{Lwp-wp}$ ±5%, WHERE THE VALUES FOR STIFFNESS MODIFICATION. FACTOR (SMF) & Asc ARE TAKEN FROM THE TABLE & Lwp-wp IS THE WORKPOINT - WORKPOINT LENGTH OF THE BRACE.
5. BRACE STRAINS TO BE CALCULATED AS $\frac{Pservice}{Keff}$, WHERE Pservice = $\frac{Pu}{\rho\ I}$ ... (ρ= CODE REDUNDANCY FACTOR & I = CODE IMPORTANCE FACTOR).
6. MAXIMUM ρu NOT TO EXCEED x.xx.

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