

- NOTES FOR REACTIONS**
- All loading conditions are examined and only maximum/minimum H or V and the corresponding H or V are reported.
  - Positive reactions are as shown in the sketch. Foundation loads are in opposite directions.
  - Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward.
  - Building reactions are based on the following building data:
    - Width (ft) = 160.0
    - Length (ft) = 150.0
    - Eave Height (ft) = 31.5 / 31.5
    - Roof Slope (rise/run) = 3.6 / 3.6
    - Dead Load (psf) = 3.0
    - Collateral Load (psf) = 5.0
    - Crane Load = 10.0 Ton Top Running
    - Live Load (psf) = 42.0
    - Snow Load (psf) = 42.0
    - Wind Speed (mph) = 115.0
    - Wind Code = IBC 09
    - Exposure = C
    - Closed/Open = C
    - Importance Wind = 1.00
    - Importance Seismic = 1.00
    - Seismic Design Category = B
    - Seismic Coeff (F<sub>s</sub>/S<sub>s</sub>) = 0.36
  - Loading conditions are:
    - 1 Dead+Collateral+Snow
    - 2 Dead+Collateral+Snow+Slide\_Snow
    - 3 0.8Dead+Wind\_Left
    - 4 0.8Dead+Wind\_Right
    - 5 0.8Dead+Wind\_Left2
    - 6 0.8Dead+Wind\_Right2
    - 7 0.8Dead+Wind\_Long1+LWIND1\_L2E
    - 8 0.8Dead+Wind\_Long1+LWIND1\_R2E
    - 9 0.8Dead+Wind\_Long1+LWIND1\_L2E
    - 10 0.8Dead+Wind\_Long1+LWIND1\_R2E
    - 11 1.03Dead+1.03Collateral+0.75Seismic\_Left
    - 12 1.03Dead+1.03Collateral+0.75Seismic\_Right
    - 13 1.03Dead+1.03Collateral+0.75Live+0.52Seismic\_Left
    - 14 1.03Dead+1.03Collateral+0.75Live+0.52Seismic\_Right
    - 15 Dead+Wind\_Right2/2+F1CRANE2
    - 16 Dead+Wind\_Left1/2+F1CRANE3
    - 17 Dead+Collateral+FIUNB\_S1
    - 18 Dead+Collateral+FIUNB\_S2
    - 19 Dead+Collateral+0.75Snow+F2CRANE4
    - 20 Dead+Collateral+0.75Snow+0.75Slide\_Snow+F2CRANE2
    - 21 Dead+Collateral+0.75Snow+0.75Slide\_Snow+F2CRANE3
    - 22 Dead+Wind\_Left1/2+F2CRANE4
    - 23 Dead+Collateral+0.75Snow+F3CRANE4
    - 24 Dead+Collateral+0.75Snow+0.75Snow\_Drift+F3CRANE4
    - 25 Dead+Collateral+0.75Snow+0.75Slide\_Snow+F3CRANE1
    - 26 Dead+Collateral+0.75Snow+0.75Slide\_Snow+F3CRANE2
    - 27 Dead+Wind\_Left1/2+F3CRANE3
    - 28 0.8Dead+Wind\_Right2+Wind\_Suction
    - 29 0.8Dead+Wind\_Pressure+Wind\_Long2

**RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES**

Frm Line	Col Line	Column Reactions (k)						Anc Bolt Qty	Base Plate (in)			Grout (in)	
		Load ID	Hmax	V	Load ID	Hmin	V		Width	Length	Thick		
6/6.1*	A	4	5.3	-6.8	5	-7.6	-10.1	4	0.750	8.000	12.00	0.625	0.0
		24	1.6	80.1	3	-5.7	-14.4						
6/6.1*	M	6	5.8	-10.4	3	-7.5	-1.9	4	0.750	8.000	12.00	0.375	0.0
		25	-1.3	51.0	4	4.0	-14.3						
6/6.1*	B	7	0.0	-11.5	12	-0.7	58.5	4	0.750	10.00	14.00	0.500	0.0
		13	-0.7	73.1	7	0.0	-11.5						
6/6.1*	C	26	1.5	79.9	3	0.0	-13.8	4	0.750	12.00	14.50	0.375	0.0
6/6.1*	I	4	0.0	-12.0	27	-1.5	29.0	4	0.750	12.00	14.50	0.625	0.0
		24	-1.2	118.8	4	0.0	-12.0						
6/6.1*	J	9	0.0	-4.1	9	0.0	-4.1	4	0.750	8.000	13.75	0.375	0.0
		11	0.0	48.6									
6/6.1*	L	3	0.0	-13.0	3	0.0	-13.0	4	0.750	8.000	13.75	0.375	0.0
		23	0.0	21.2									

\*COMBINED REACTIONS FOR LINES 6 & 6.1

**ENDWALL COLUMN: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES**

Frm Line	Col Line	Column Reactions (k)						Anc Bolt Qty	Base Plate (in)			Grout (in)	
		Load ID	Hmax	V	Load ID	Hmin	V		Width	Length	Thick		
1	B	28	14.1	0.9	29	-12.8	0.9	4	0.750	8.000	14.00	0.375	0.0
		12	0.0	1.6									
1	C	28	10.2	1.2	29	-9.3	1.2	4	0.750	10.00	14.25	0.375	0.0
		12	0.0	2.1									
1	D	28	10.6	1.4	29	-9.7	1.4	4	0.750	10.00	14.25	0.375	0.0
		12	0.0	2.4									
1	H	28	10.6	1.4	29	-9.7	1.4	4	0.750	10.00	14.25	0.375	0.0
		12	0.0	2.4									
1	I	28	10.2	1.2	29	-9.3	1.2	4	0.750	10.00	14.25	0.375	0.0
		12	0.0	2.1									
1	K	28	14.1	0.9	29	-12.8	0.9	4	0.750	8.000	14.00	0.375	0.0
		12	0.0	1.6									
6	L	28	10.6	0.6	29	-9.5	0.6	4	0.750	8.000	14.25	0.375	0.0
		12	0.0	1.0									
6	J	28	10.6	1.0	29	-9.8	1.0	4	0.750	8.000	14.00	0.375	0.0
		12	0.0	1.8									
6	I	28	7.8	0.9	29	-7.1	0.9	4	0.750	8.000	14.25	0.375	0.0
		12	0.0	1.5									
6	C	28	14.9	1.8	29	-13.6	1.8	4	0.750	11.00	14.50	0.250	0.0
		12	0.0	3.0									
6	B	28	14.1	0.9	29	-12.8	0.9	4	0.750	8.000	14.00	0.375	0.0
		12	0.0	1.6									

**WIND BENT REACTIONS (160x150)**

Wall Loc	Line	Col Line	Horz	± Reactions (k)		Seismic (k)	Panel Shear (lb/ft)
				Wind	Crane		
F-SW	M	2	10.6	21.0	4.2	8.3	
F-SW	M	3	10.6	21.0	4.2	8.3	
F-SW	M	4	10.6	21.0	4.2	8.3	
F-SW	M	5	10.6	21.0	4.2	8.3	
B-SW	A	5	10.6	21.0	4.1	8.2	
B-SW	A	4	10.6	21.0	4.1	8.2	
B-SW	A	3	10.6	21.0	4.1	8.2	
B-SW	A	2	10.6	21.0	4.1	8.2	

**ANCHOR BOLT SUMMARY (160x150)**

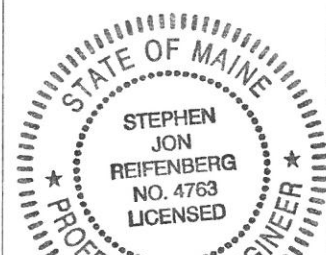
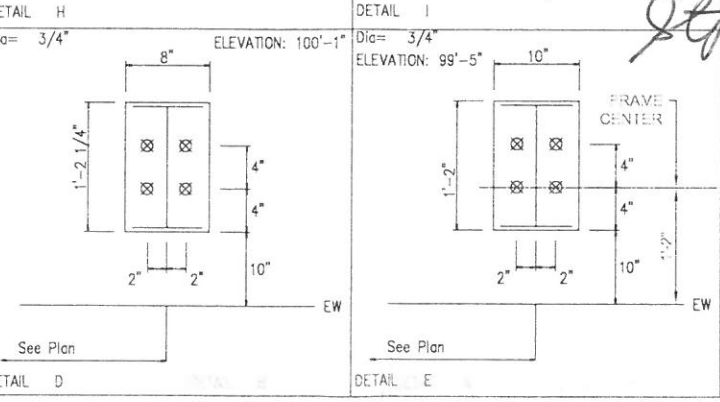
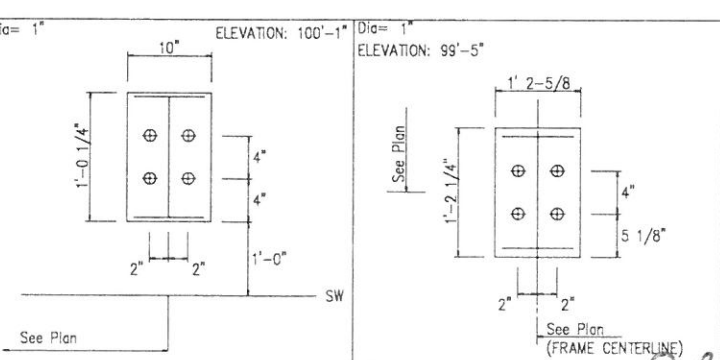
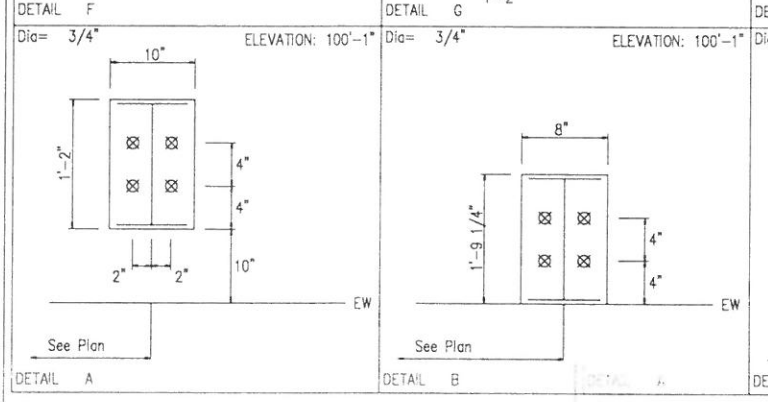
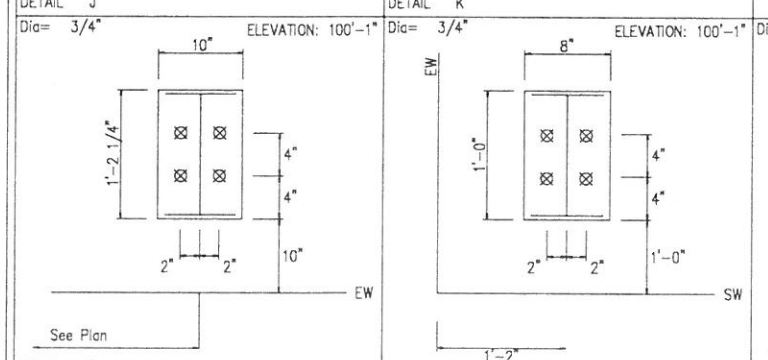
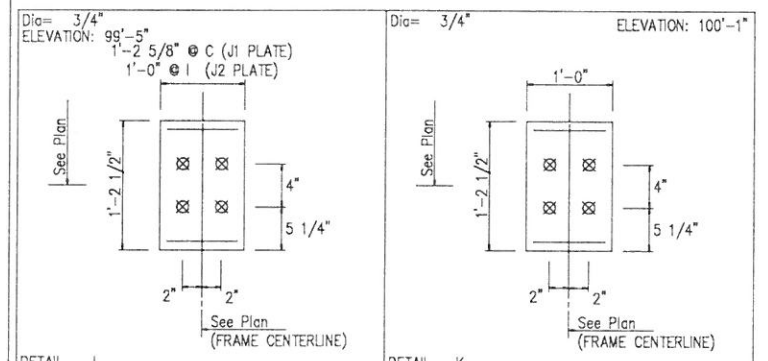
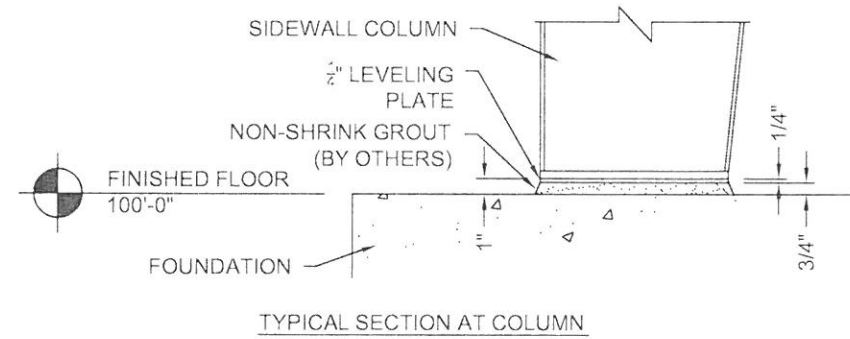
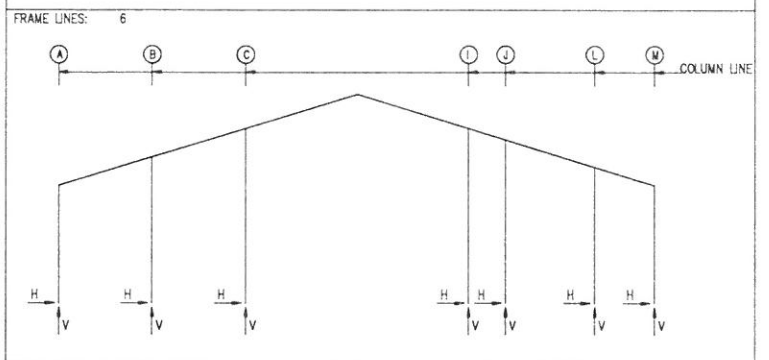
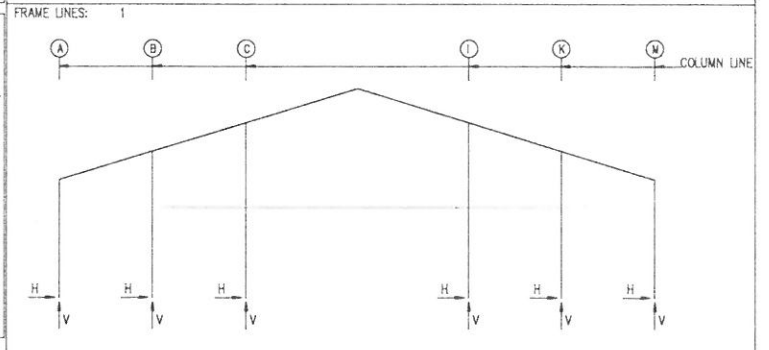
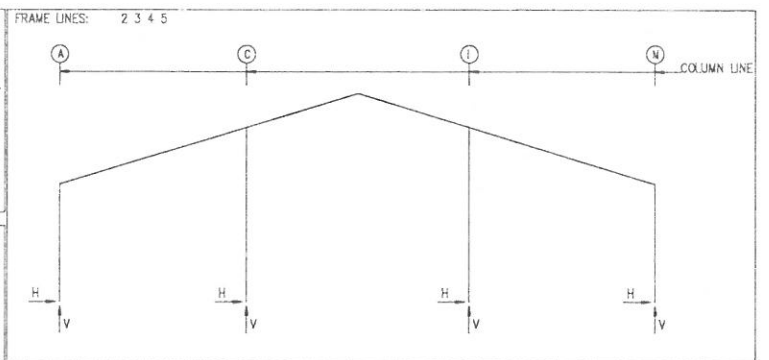
Qty	Locate	(in)	Type	(in)
32	Endwall	3/4"	A307	3.00
40	Frame	3/4"	A307	3.00
68	Frame	1"	A307	3.00

**BUILDING BRACING REACTIONS (160x150 PART)**

Wall Loc	Line	Col Line	± Reactions (k)		Panel Shear (lb/ft)
			Wind	Seis	
L-EW	1	Rigid Frame At Endwall			
F-SW	M	Wind Bent In Wall			
R-EW	6	Rigid Frame At Endwall			
B-SW	A	Wind Bent In Wall			

**CRANE BRACING REACTIONS**

Wall Loc	Line	Col Line	± Reactions (k)	
			Crane	Wind
INT	C	2, 3	1.5	1.9
	C	4, 5	1.5	1.9
	I	2, 3	1.5	1.9
	I	4, 5	1.5	1.9



*Stephen J. Reifenberg*  
9/12/14

**RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES**

Frm Line	Col Line	Column Reactions (k)						Anc Bolt Qty	Base Plate (in)			Grout (in)	
		Load ID	Hmax	V	Load ID	Hmin	V		Width	Length	Thick		
1	A	4	5.3	-6.9	5	-7.8	-10.7	4	0.750	8.000	12.00	0.375	0.0
		19	2.2	50.8	3	-6.0	-15.0						
1	M	6	5.8	-10.1	3	-7.3	-6.3	4	0.750	8.000	12.00	0.375	0.0
		2	0.0	54.6	4	4.0	-14.5						
1	B	7	0.0	-11.6	7	0.0	-11.6	4	0.750	10.00	14.00	0.375	0.0
		13	0.0	74.2									
1	C	20	1.5	98.8	3	0.0	-14.4	4	0.750	12.00	14.50	0.500	0.0
1	I	4	0.0	-13.6	22	-1.5	31.1	4	0.750	12.00	14.50	0.500	0.0
		21	-1.5	99.0	4	0.0	-13.6						
1	K	8	0.0	-11.7	8	0.0	-11.7	4	0.750	10.00	14.00	0.375	0.0
		14	0.0	73.6									

**RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES**

Frm Line	Col Line	Column Reactions (k)						Anc Bolt Qty	Base Plate (in)			Grout (in)	
		Load ID	Hmax	V	Load ID	Hmin	V		Width	Length	Thick		
2*	A	4	7.7	-21.4	5	-15.7	-20.4	4	1.000	10.00	12.25	0.625	0.0
		2	1.7	122.6	7	3.9	-51.0						
2*	M	6	12.0	-21.5	3	-11.4	-22.5	4	1.000	10.00	12.25	0.625	0.0
		1	-1.2	128.8	8	-3.9	-50.7						
2*	C	15	1.5	31.5	12	-0.6	78.0	4	1.000	10.00	14.25	0.625	0.0
		17	-0.6	174.6	9	0.0	-35.3						
I		10	0.0	-35.3	16	-1.5	22.2	4	1.000	10.00	14.25	0.625	0.0
		18	0.0	173.2	10	0.0	-35.3						

Frame lines: 2 3 4 5

SEE GENERAL NOTES SHEET 2A  
ERECTION REQUIRES MINOR ADJUSTMENTS

ESSEX STRUCTURAL STEEL CO., INC.  
CORTLAND, NEW YORK 13045

REVISIONS	PROJECT: CANAL LANDING 100 WEST COMMERCIAL STREET PORTLAND, MAINE 04101
REV. A, 7/14/2014, JCK: REMOVED COL REACTIONS AT 6-G, 6-E. DETAIL B	CONTRACTOR: IRISHSPAN INDUSTRIES
PLATE LENGTH	PROJECT NO.: S-1468
REV. B, 7/22/2014, JCK: REVISED	TITLE: REACTIONS 160x150 PART
LINE 6 TO INCLUDE 6.1	DRAWN BY: WPK
REV. C, 8/5/2014, JCK: DETAIL I WIDTH	DATE: 6/23/14
	SCALE: -D.N.S.

SHEET: 2