Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 10/03/14

NOTES FOR REACTIONS

1. All loading conditions are examined and only maximum/minimum H or V and the corresponding H or V are reported.
2. Positive reactions are as shown in the sketch. Foundation loads are in opposite directions.
3. Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward.
4. 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/12)	=	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 (Fa*Ss)	=	0.36

5. Loading conditions are:

1 Dead+Collateral+Snow
2 Dead+Collateral+Snow+Slide_Snow
3 0.6Dead+Wnd_Left1
4 0.6Dead+Wnd_Right1
5 0.6Dead+Wnd_Left2
6 0.6Dead+Wnd_Right2
7 0.6Dead+Wnd_Long1+LWND1_L2E
8 0.6Dead+Wnd_Long1+LWND1_R2E
9 0.6Dead-Wnd_Long1+LWND1_L2E
10 0.6Dead-Wnd_Long1+LWND1_R2E
11 1.03Dead+1.03Collateral+0.7Seismic_Left
12 1.03Dead+1.03Collateral+0.7Seismic_Right
13 1.03Dead+1.03Collateral+0.75Live+0.52Seismic_Left
14 1.03Dead+1.03Collateral+0.75Live+0.52Seismic_Right
15 Dead+Wnd_Right2/2+F1CRANEA2
16 Dead+Wnd_Left1/2+F1CRANEA3
17 Dead+Collateral+F1UNB_SL_L
18 Dead+Collateral+F1UNB_SL_R
19 Dead+Collateral+0.75Snow+F2CRANEA4
20 Dead+Collateral+0.75Snow+0.75Slide_Snow+F2CRANEA2
21 Dead+Collateral+0.75Snow+0.75Slide_Snow+F2CRANEA3
22 Dead+Wnd_Left1/2+F2CRANEA3
23 Dead+Collateral+0.75Snow+F3CRANEA4
24 Dead+Collateral+0.75Snow+0.75Snow_Drift+F3CRANEA4
25 Dead+Collateral+0.75Snow+0.75Slide_Snow+F3CRANEA1
26 Dead+Collateral+0.75Snow+0.75Slide_Snow+F3CRANEA2
27 Dead+Wnd_Left1/2+F3CRANEA3
28 0.6Dead+Wnd_Right2+Wnd_Suction
29 0.6Dead+Wnd_Pressure+Wnd_Long2

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

Frm Line	Col Line	Load ID	Hmax H	V Vmax	Load ID	Hmin H	V Vmin	Anc. Qty	Bolt Dia	Base_Plate (in) Width	Length	Thick	Grout (in)
		Column Reactions (k)											
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	Load ID	Hmax H	V Vmax	Load ID	Hmin H	V Vmin	Anc. Qty	Bolt Dia	Base_Plate (in) Width	Length	Thick	Grout (in)
		Column Reactions (k)											
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	10.8	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	Wall Line	Col Line	Wind(k) Horz	Wind(k) Vert	Seismic(k) Horz	Seismic(k) Vert
			± Reactions			
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	Wall Line	Col Line	Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear (lb/ft) Wind	Panel_Shear (lb/ft) Seis
			± Reactions (k)					
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	Wall Line	Col Line	Crane Horz	Crane Vert
			±Reactions(k)	
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

FRAME LINES: 2 3 4 5

FRAME LINES: 1

FRAME LINES: 6

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

Frm Line	Col Line	Load ID	Hmax H	V Vmax	Load ID	Hmin H	V Vmin	Anc. Qty	Bolt Dia	Base_Plate (in) Width	Length	Thick	Grout (in)
		Column Reactions (k)											
1	A	4	5.3	-6.9	5	-7.6	-10.7	4	0.750	8.000	12.00	0.375	0.0
		19	2.2	50.9	3	-6.0	-15.0						
1	M	6	5.6	-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	Load ID	Hmax H	V Vmax	Load ID	Hmin H	V Vmin	Anc. Qty	Bolt Dia	Base_Plate (in) Width	Length	Thick	Grout (in)
		Column Reactions (k)											
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						
2*	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						

2* Frame lines: 2 3 4 5

STATE OF MAINE
STEPHEN JON REIFENBERG
NO. 4763
LICENSED
PROFESSIONAL ENGINEER

9/12/14

SEE GENERAL NOTES SHEET 2A

ERECTION REQUIRES MINOR ADJUSTMENTS

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

REVISIONS
REV. A, 7/14/2014, JCK: REMOVED COL. REACTIONS AT 6-G, 6-E. DETAIL B PLATE LENGTH
REV. B, 7/22/2014, JCK: REVISED LINE 6 TO INCLUDE 6.1
REV. C, 8/5/2014, JCK: DETAIL I WIDTH

PROJECT: CANAL LANDING
100 WEST COMMERCIAL STREET
PORTLAND, MAINE 04101
CONTRACTOR: IRISHSPAN INDUSTRIES
PROJECT NO.: S-1468

TITLE: REACTIONS 160x150 PART
DRAWN BY: WPK
DATE: 6/23/14
SCALE: - D.N.S.
SHEET: 2