FRAME DESCRIPTION: | USER NAME: bdcloor | DATE: 4/20/16 | PAGE: EW-1
Endwall EWB | JOB NAME: 26518A
PATH: R:\Jobs\Active\ENG\15-B-26518\ver02-bdcloor\Bldg-A\run04\
SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft.
TIME: 09:36:05

REACTION NOTATIONS

Grid Line "B"
Building "A"

LOAD GROUP REACTION TABLE

COLUMN	B-2			B-5			B-2.5			B-3.2			B-4		
LOAD GROUP	HL	VL	LL	HR	VR	LR	H1	V1	L1	H2	V2	L2	H3	V3	L3
D	0.1	6.7	0.	0.0	2.5	0.	0.	4.5	0.0	0.	6.4	0.0			
C	0.1	9.8	0.	-0.1	4.9	0.	0.	10.5	0.0	0.	13.5	0.0			
L	0.4	28.7	0.	-0.2	14.6	0.	0.	69.2	0.1	0.	30.6	-0.1	0.	40.6	0.0
S	0.3	25.1	0.	-0.1	6.7	0.	0.	44.7	0.0	0.	12.4	0.0	0.	19.2	0.0
SBAL	0.1	8.8	0.	-0.1	6.8	0.	0.	20.6	0.0	0.	15.4	0.0	0.	18.4	0.0
W+	-0.4	-32.1	2.0	-0.0	-10.4	7.1	0.	41.8	4.7	0.	2.8	4.4	0.	-7.8	4.3
W-	-0.4	-32.1	-2.3	0.0	5.0	0.	0.	-10.8	-5.2	0.	2.8	-4.9	0.	-7.8	-4.8
WR	-0.4	-32.1	0.	4.5	-10.4	0.	0.	-10.8	0.0	0.	2.8	0.0	0.	-0.2	0.0
WL	-0.4	-32.1	0.	0.0	4.7	0.	0.	-10.8	0.0	0.	2.8	0.0	-4.4	-15.3	0.0
DR	0.0	0.1	0.	0.	0.0	0.	0.	3.0	0.0	0.	0.5	0.0	0.	-0.1	0.
ER	0.	0.	0.	3.6	-6.1	0.	0.	0.	0.	0.	0.	0.	0.	6.1	0.
EL	0.	0.	0.	0.	6.0	0.	0.	0.	0.	0.	0.	0.	-3.6	-6.0	0.
E+	0.	0.	0.	0.	-17.4	16.2	0.	0.	0.	0.	0.	0.	0.	0.	0.
E-	0.	0.	0.	0.	17.7	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

LOAD GROUP DESCRIPTION

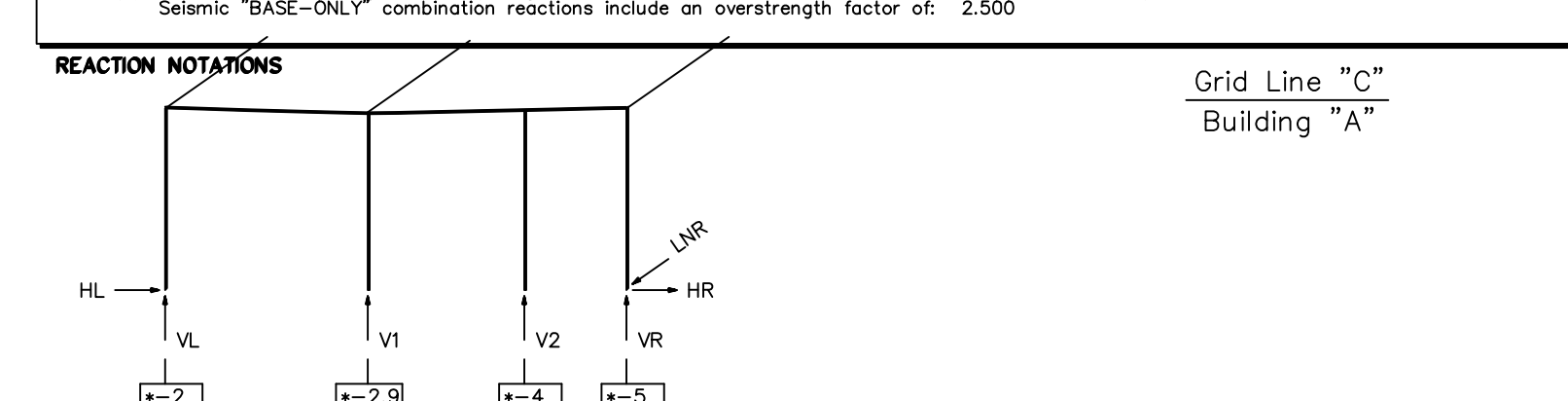|		
D	:	DEAD LOAD
C	:	COLLATERAL LOAD
L	:	LIVE LOAD
S	:	DESIGN SNOW LOAD
SBAL	:	BALANCED ROOF SNOW
W+	:	WIND LOAD AS AN INWARD ACTING PRESSURE
W-	:	WIND LOAD AS AN OUTWARD ACTING SUCTION
WR	:	WIND FORCE FROM THE RIGHT
WL	:	WIND FORCE FROM THE LEFT
DR	:	DRIFT SNOW
ER	:	EARTHQUAKE FORCE FROM RIGHT
EL	:	EARTHQUAKE FORCE FROM LEFT
E+	:	EARTHQUAKE FORCE ACTING INWARD
E-	:	EARTHQUAKE FORCE ACTING OUTWARD
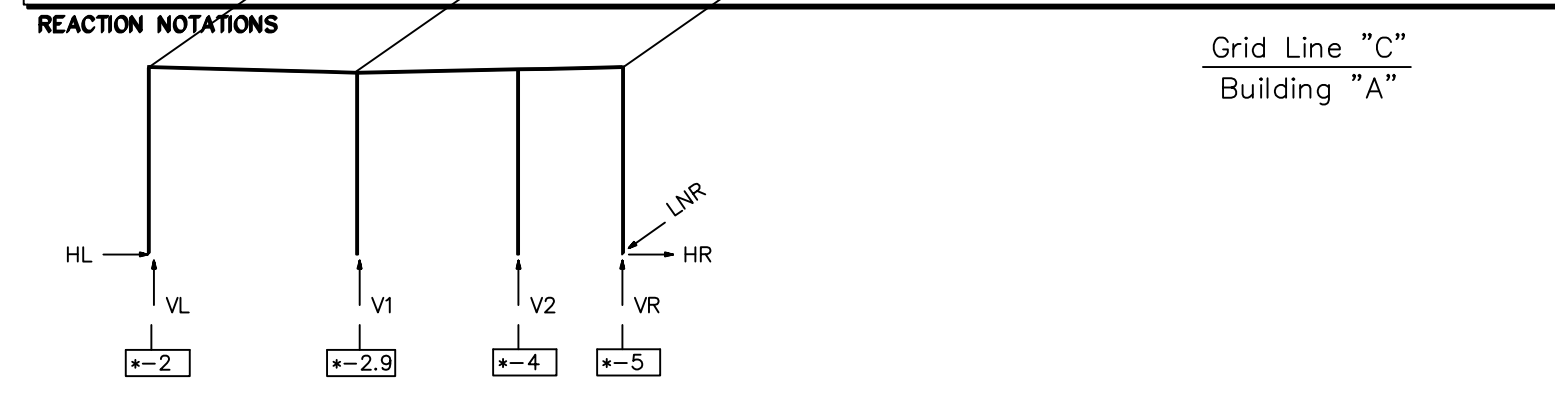
FRAME ID #1 | USER NAME: bdcloor | DATE: 4/20/16 | PAGE: 1-3
ms2 81.792/32.5/25.458   20./ | JOB NAME: 26518A | FILE: frame_c.fra
SUPPORT REACTIONS FOR EACH LOAD GROUP
•LOCATION: Gridlines:
NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
TIME: 12:37:42

REACTION NOTATIONS

Grid Line "C"
Building "A"

LOAD GROUP REACTION TABLE * = C

COLUMN	←2			←5			←2.9			←4		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR	H1	V1	LN1	H2	V2	LN2
DL	0.5	11.2	0.0	-0.6	5.9	0.0	0.0	18.3	0.0	0.0	9.0	0.0
COLL	1.3	20.2	0.0	-1.3	10.9	0.0	-0.0	37.6	0.0	-0.0	18.9	0.0
PSL1	1.7	24.5	0.0	-1.7	5.2	0.0	0.0	31.5	0.0	-0.0	-10.6	0.0
PSL2	-0.3	-1.8	0.0	0.3	-4.3	0.0	-0.0	20.5	0.0	0.0	24.0	0.0
PSL3	0.4	0.5	0.0	-0.4	14.0	0.0	-0.0	-1.3	0.0	0.0	13.3	0.0
SNOW	1.8	36.6	0.0	-2.0	15.6	0.0	0.0	55.5	0.0	-0.0	25.1	0.0
LL	0.6	15.5	0.0	-0.7	5.7	0.0	0.0	20.4	0.0	-0.0	8.9	0.0
PL	3.2	41.8	0.0	-3.2	26.8	0.0	0.0	91.5	0.0	-0.0	48.1	0.0
H1	0.0	0.3	0.0	-0.0	0.0	0.0	0.0	-0.4	0.0	-0.0	0.1	0.0
H2	0.0	0.3	0.0	-0.0	0.0	0.0	0.0	-0.3	0.0	-0.0	-0.1	0.0
H3	0.0	0.2	0.0	-0.0	0.1	0.0	0.0	0.1	0.0	-0.0	-0.4	0.0
H4	0.0	0.2	0.0	-0.0	0.1	0.0	0.0	0.1	0.0	-0.0	-0.4	0.0
RBDWEQ	0.0	0.1	0.0	-0.0	17.6	0.0	-0.0	-0.2	0.0	0.0	-0.1	0.0
EQ	-8.2	-9.3	0.0	-10.2	22.3	0.0	0.0	15.5	0.0	-0.0	-28.3	0.0
RBUPEQ	0.1	0.1	0.0	-0.1	-17.8	-16.2	-0.0	-0.1	0.0	0.0	0.1	0.0
WL1	-4.2	-20.1	0.0	-4.8	1.6	0.0	-0.0	-11.4	0.0	0.0	-9.2	0.0
WL2	-8.3	-13.6	0.0	-5.2	8.5	0.0	-0.0	-5.8	0.0	-0.0	-11.8	0.0
WL3	6.6	-10.8	0.0	6.5	-14.1	0.0	-0.0	-18.9	0.0	0.0	5.5	0.0
WL4	2.5	-4.3	0.0	6.1	-7.2	0.0	-0.0	-13.3	0.0	0.0	2.9	0.0
LWL1	4.5	-20.1	0.0	-0.4	-11.0	0.0	0.0	-17.7	0.0	0.0	0.9	0.0

LOAD GROUP DESCRIPTION

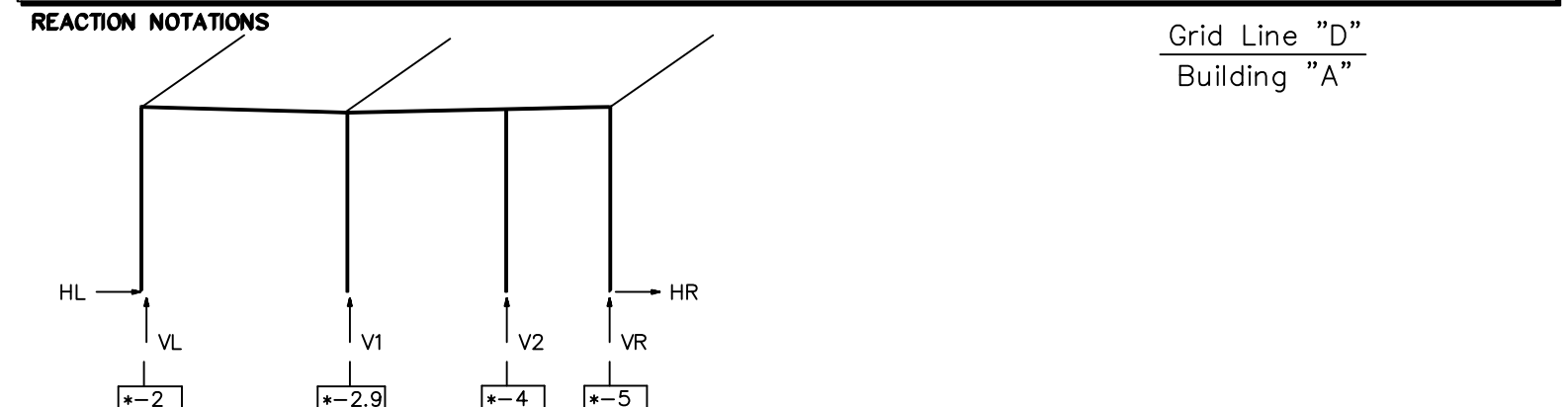|		
DL	:	Roof Dead Load
COLL	:	Roof Collateral Load
PSL1	:	Pattern Snow Load [PSLxx]
PSL2	:	Pattern Snow Load [PSLxx]
PSL3	:	Pattern Snow Load [PSLxx]
SNOW	:	Roof Snow Load
LL	:	Roof Live Load
PL	:	User Entered Load
H1	:	User Entered Load
H2	:	User Entered Load
H3	:	User Entered Load
H4	:	User Entered Load
RBDWEQ	:	Downward Acting Rod Brace Load from Long. Seismic
EQ	:	Lateral Seismic Load [parallel to plane of frame]
RBUPEQ	:	Upward Acting Rod Brace Load from Longit. Seismic
WL1	:	Lateral Primary Wind Load
WL2	:	Lateral Primary Wind Load
WL3	:	Lateral Primary Wind Load
WL4	:	Lateral Primary Wind Load
LWL1	:	Longitudinal Primary Wind Load

FRAME ID #1 | USER NAME: bdcloor | DATE: 4/20/16 | PAGE: 1-4
ms2 81.792/32.5/25.458   20./ | JOB NAME: 26518A | FILE: frame_c.fra
SUPPORT REACTIONS FOR EACH LOAD GROUP
•LOCATION: Gridlines:
NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.500
TIME: 12:37:42

REACTION NOTATIONS

Grid Line "C"
Building "A"

LOAD GROUP REACTION TABLE * = C

COLUMN	←2			←5			←2.9			←4		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR	H1	V1	LN1	H2	V2	LN2
RBUPLW	0.0	0.0	0.0	-0.0	-7.8	-7.1	-0.0	-0.0	0.0	0.0	0.0	0.0
LWL2	4.5	-18.2	0.0	-0.5	-12.1	0.0	-0.0	-16.9	0.0	0.0	0.4	0.0
LWL3	4.9	-8.9	0.0	-0.8	-8.6	0.0	-0.0	-7.9	0.0	0.0	1.8	0.0
LWL4	4.9	-8.1	0.0	-0.9	-9.1	0.0	-0.0	-7.6	0.0	0.0	1.2	0.0
SBAL	1.5	32.0	0.0	-1.7	14.8	0.0	0.0	50.5	0.0	-0.0	26.9	0.0
DSNW	0.2	17.7	0.0	-0.4	1.1	0.0	0.0	5.9	0.0	-0.0	-2.4	0.0
RBDWLW	0.0	0.0	0.0	-0.0	7.7	0.0	-0.0	-0.1	0.0	0.0	0.0	0.0

LOAD GROUP DESCRIPTION

RBUPLW	:	Upward Acting Rod Brace Load from Longitud. Wind
LWL2	:	Longitudinal Primary Wind Load
LWL3	:	Longitudinal Primary Wind Load
LWL4	:	Longitudinal Primary Wind Load
SBAL	:	Code Calculated Balanced Roof Snow Load
DSNW	:	Drifting Snow
RBDWLW	:	Downward Acting Rod Brace Load from Longit. Wind

FRAME ID #2 | USER NAME: bdcloor | DATE: 4/20/16 | PAGE: 2-3
ms2 81.792/32.5/22.333   20./ | JOB NAME: 26518A | FILE: frame_d.fra
SUPPORT REACTIONS FOR EACH LOAD GROUP
•LOCATION: Gridlines: D
NOTE: All reactions are in kips and kip-ft.
TIME: 12:37:44

REACTION NOTATIONS

Grid Line "D"
Building "A"

LOAD GROUP REACTION TABLE * = D

COLUMN	←2			←5			←2.9			←4		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR	H1	V1	LN1	H2	V2	LN2
DL	0.3	6.6	0.0	-0.3	3.9	0.0	0.0	13.1	0.0	0.0	7.9	0.0
COLL	0.7	11.4	0.0	-0.8	6.2	0.0	-0.0	21.0	0.0	-0.0	11.3	0.0
PSL1	1.5	21.5	0.0	-1.5	4.6	0.0	0.0	27.6	0.0	-0.0	-9.3	0.0
PSL2	-0.3	-1.6	0.0	0.3	-3.8	0.0	-0.0	18.0	0.0	0.0	21.0	0.0
PSL3	0.3	0.4	0.0	-0.3	12.3	0.0	-0.0	-1.2	0.0	0.0	11.7	0.0
SNOW	1.3	28.1	0.0	-1.5	13.0	0.0	0.0	44.3	0.0	-0.0	23.6	0.0
LL	0.7	12.7	0.0	-0.8	5.4	0.0	0.0	19.3	0.0	-0.0	7.0	0.0
PL	1.4	18.4	0.0	-1.4	12.3	0.0	0.0	40.1	0.0	-0.0	25.1	0.0
H1	0.0	0.7	0.0	-0.0	0.0	0.0	0.0	-0.8	0.0	-0.0	0.1	0.0
H2	0.0	0.6	0.0	-0.0	0.0	0.0	0.0	-0.6	0.0	-0.0	-0.1	0.0
H3	0.0	0.4	0.0	-0.0	0.3	0.0	0.0	0.2	0.0	-0.0	-0.8	0.0
H4	0.0	0.3	0.0	-0.0	0.1	0.0	0.0	0.2	0.0	-0.0	-0.8	0.0
RBDWEQ	0.0	0.0	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EQ	-5.5	-6.1	0.0	-6.7	14.7	0.0	0.0	10.1	0.0	-0.0	-18.6	0.0
RBUPEQ	0.0	0.0	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WL1	-3.5	-11.7	0.0	-4.4	2.1	0.0	0.0	-6.1	0.0	0.0	-9.4	0.0
WL2	-7.1	-6.0	0.0	-4.7	8.1	0.0	-0.0	-1.2	0.0	-0.0	-11.7	0.0
WL3	6.0	-3.5	0.0	5.5	-11.7	0.0	-0.0	-12.7	0.0	0.0	3.4	0.0
WL4	2.4	2.2	0.0	5.2	-5.7	0.0	-0.0	-7.8	0.0	0.0	1.2	0.0
LWL1	4.1	-11.7	0.0	-0.5	-9.0	0.0	-0.0	-11.7	0.0	0.0	-0.6	0.0

LOAD GROUP DESCRIPTION

DL	:	Roof Dead Load
COLL	:	Roof Collateral Load
PSL1	:	Pattern Snow Load [PSLxx]
PSL2	:	Pattern Snow Load [PSLxx]
PSL3	:	Pattern Snow Load [PSLxx]
SNOW	:	Roof Snow Load
LL	:	Roof Live Load
PL	:	User Entered Load
H1	:	User Entered Load
H2	:	User Entered Load
H3	:	User Entered Load
H4	:	User Entered Load
RBDWEQ	:	Downward Acting Rod Brace Load from Long. Seismic
EQ	:	Lateral Seismic Load [parallel to plane of frame]
RBUPEQ	:	Upward Acting Rod Brace Load from Longit. Seismic
WL1	:	Lateral Primary Wind Load
WL2	:	Lateral Primary Wind Load
WL3	:	Lateral Primary Wind Load
WL4	:	Lateral Primary Wind Load
LWL1	:	Longitudinal Primary Wind Load

FRAME ID #2 | USER NAME: bdcloor | DATE: 4/20/16 | PAGE: 2-4
ms2 81.792/32.5/22.333   20./ | JOB NAME: 26518A | FILE: frame_d.fra
SUPPORT REACTIONS FOR EACH LOAD GROUP
•LOCATION: Gridlines: D
NOTE: All reactions are in kips and kip-ft.
TIME: 12:37:44

REACTION NOTATIONS

Grid Line "D"
Building "A"

LOAD GROUP REACTION TABLE * = D

COLUMN	←2			←5			←2.9			←4		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR	H1	V1	LN1	H2	V2	LN2
RBUPLW	0.0	0.0	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LWL2	4.1	-10.0	0.0	-0.6	-10.0	0.0	-0.0	-11.0	0.0	0.0	-1.7	0.0
LWL3	4.3	-7.8	0.0	-0.7	-7.5	0.0	-0.0	-7.0	0.0	0.0	1.5	0.0
LWL4	4.3	-7.1	0.0	-0.8	-8.0	0.0	-0.0	-6.7	0.0	0.0	1.0	0.0
SBAL	1.3	28.1	0.0	-1.5	13.0	0.0	0.0	44.3	0.0	-0.0	23.6	0.0
DSNW	-0.2	10.1	0.0	0.1	-0.1	0.0	-0.0	-0.0	0.0	0.0	0.1	0.0
RBDWLW	0.0	0.0	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LOAD GROUP DESCRIPTION

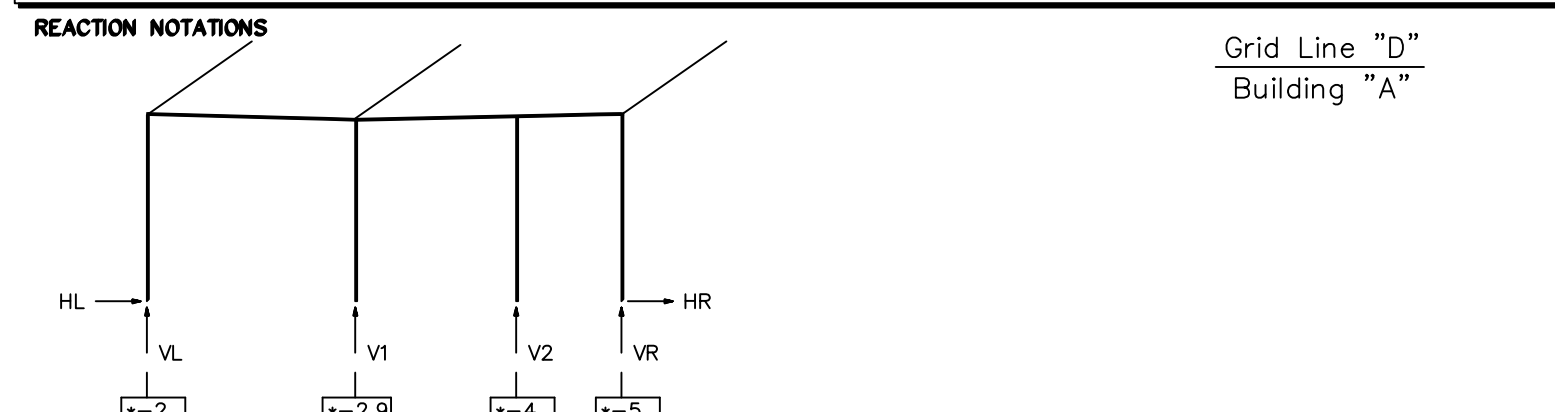|		
RBUPLW	:	Upward Acting Rod Brace Load from Longitud. Wind
LWL2	:	Longitudinal Primary Wind Load
LWL3	:	Longitudinal Primary Wind Load
LWL4	:	Longitudinal Primary Wind Load
SBAL	:	Code Calculated Balanced Roof Snow Load
DSNW	:	Drifting Snow
RBDWLW	:	Downward Acting Rod Brace Load from Longit. Wind

NOTES

1) THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING. ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.
2) THE REACTIONS PROVIDED HAVE BEEN CREATED WITH THE FOLLOWING LAYOUT (UNLESS NOTED OTHERWISE).
  a) A REACTION TABLE IS PROVIDED WITH THE REACTIONS FOR EACH LOAD GROUP.
  b) RIGID FRAMES
   (1) GABLED BUILDINGS
    (a) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE LEFT SIDE OF THE BUILDING, AS SHOWN ON THE ANCHOR ROD DRAWING, FROM THE OUTSIDE OF THE BUILDING.
    (b) INTERIOR COLUMNS ARE SPACED FROM LEFT SIDE TO RIGHT SIDE.
   (2) SINGLE SLOPE BUILDINGS
    (a) LEFT COLUMN IS THE LOW SIDE COLUMN.
    (b) RIGHT COLUMN IS THE HIGH SIDE COLUMN.
    (c) INTERIOR COLUMNS ARE SPACED FROM LOW SIDE TO HIGH SIDE.
  c) ENDWALLS
   (1) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE WALL FROM THE OUTSIDE.
   (2) INTERIOR COLUMNS ARE SPACED FROM LEFT TO RIGHT.
  d) ANCHOR ROD SIZE IS DETERMINED BY SHEAR AND TENSION AT THE BOTTOM OF THE BASE PLATE. THE LENGTH OF THE ANCHOR ROD AND METHOD OF LOAD TRANSFER TO THE FOUNDATION ARE TO BE DETERMINED BY THE FOUNDATION ENGINEER.
  e) ANCHOR RODS ARE ASTM F1554 Gr. 36 MATERIAL UNLESS NOTED OTHERWISE ON THE ANCHOR ROD LAYOUT DRAWING.
  f) X-BRACING
   (1) ROD BRACING REACTIONS HAVE BEEN INCLUDED IN VALUES SHOWN IN THE REACTION TABLES.
   (2) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE SIDEWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ AND RBDWEQ) DO NOT INCLUDE THE AMPLIFICATION FACTOR, Ω_0.
   (3) FOR CANADA BUILDING CODE (NBC), WHEN X-BRACING IS PRESENT IN THE SIDEWALL OR ENDWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ & RBDWEQ) ARE MULTIPLIED BY FORCE REDUCTION FACTOR, Rd, WHEN SPECIFIED SHORT-PERIOD SPECTRAL ACCELERATION RATIO I$_E$FaS$_a$(0.2) IS GREATER THAN 0.45.
3) REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FOUNDATION ENGINEER WILL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS TO DETERMINE BEARING PRESSURES AND CONCRETE DESIGN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN.
  a) FOR PROJECTS USING ULTIMATE DESIGN WIND SPEEDS SUCH AS 2012 IBC OR 2014 FLORIDA BUILDING CODE, THE WIND LOAD REACTIONS ARE AT A STRENGTH VALUE WITH A LOAD FACTOR OF 1.0. THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS. HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN.

A&S BUILDING SYSTEMS

1880 HWY. 176, CARYVILLE, TENNESSEE 37714
PHONE: 865-426-2141   FAX: 865-426-2011

Project Name & Location:
BAYSIDE BOWL ADDITION
58 ALDER STREET
PORTLAND ME 04101

Customer:
AMERICAN AERIAL SERVICES
75 BISHOP STREET
PORTLAND ME 04103

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE	
Drawn by:	ML	4/23/16
Checked by:	MARK	4/23/16
Project Engineer:	BDC	
Job Number:	15-B-26518-1	
Sheet Number:	F4 of 8	

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

Lee W. Lowe, P.E.
Maine P.E. 8861

Apr 26, 2016

STATE OF MAINE
LEE W. LOWE
8861
LICENSED
PROFESSIONAL ENGINEER