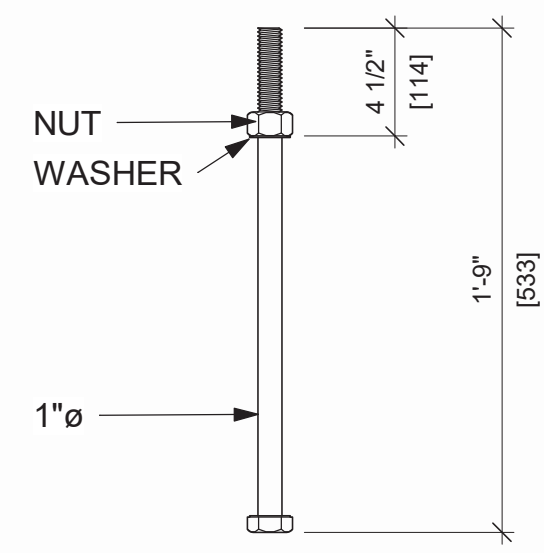


3D VIEW



ANCHOR BOLT 1"Ø (ASTM F1554)
AB-108
Fy = 55 ksi (379 MPa)
Fu = 75 ksi (517 MPa)

ANCHOR ROD 1"Ø AB-108
1.125" = 1.0"

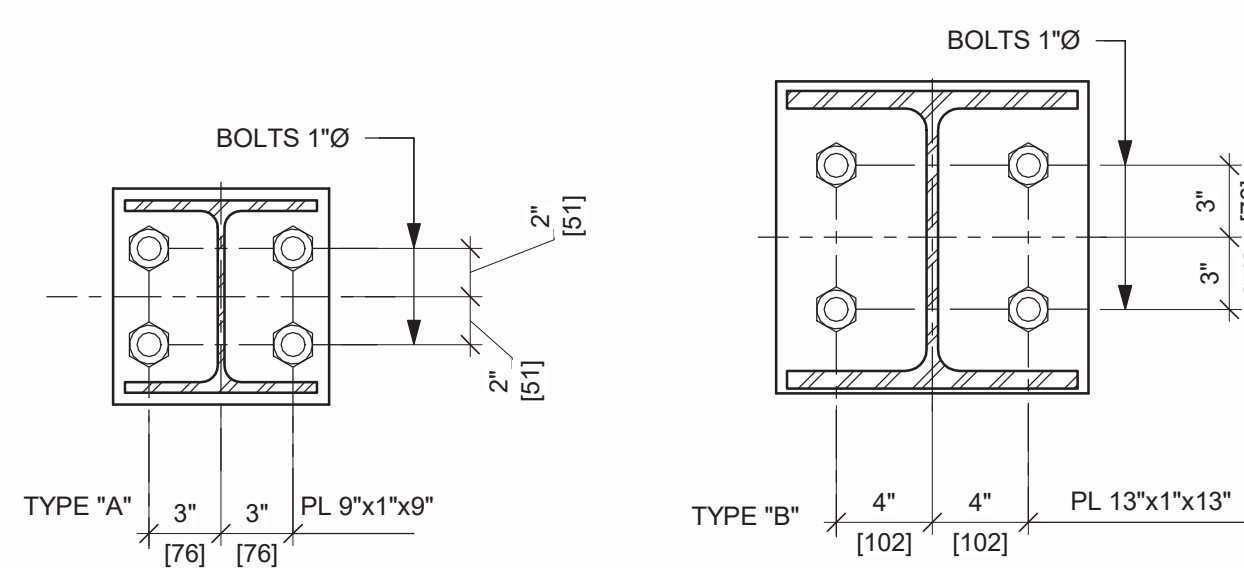
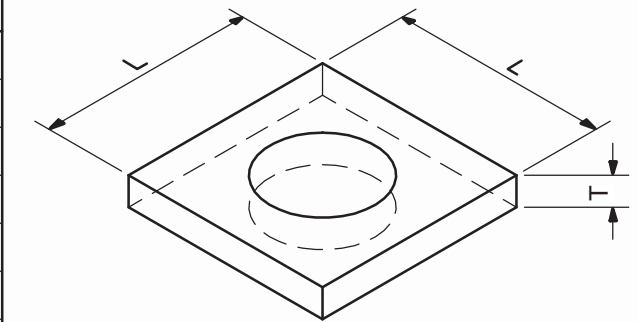


PLATE WASHER			
ANCHOR BOLT	MARK	DIMENSION (L x T x L)	HOLE
3/4"Ø	PLA	PL 2 1/2" x 3/8" x 2 1/2"	1 3/16"Ø
1"Ø	PLB	PL 3" x 3/8" x 3"	1 1/16"Ø
1 1/8"Ø	PLC	PL 3 1/2" x 3/8" x 3"	1 3/16"Ø
1 3/8"Ø	PLD	PL 3 1/2" x 5/8" x 3 1/2"	1 7/16"Ø
1 1/2"Ø	PLE	PL 3 1/2" x 3/4" x 3 1/2"	1 9/16"Ø
1 5/8"Ø	PLF	PL 4" x 3/4" x 4"	1 13/16"Ø
2"Ø	PLG	PL 5" x 1" x 5"	2 1/16"Ø



REACTIONS ON FOUNDATIONS FOR "MUROX" PANEL COLUMN @ 10'-0" C/C									
NOTE: ALL SERVICE LOADS ARE EXPRESSED IN KIPS									
AXIS	PANEL WEIGHT	VERTICAL LOAD				REACTION AT THE BASE ± TO FOUNDATIONS			
		P	D	S	L	W	WIND	SEISMIC	WIND
T & A	3.3	0.7	1.4	0.0	1.1	4.7	0.0	11.1	±35.5
A & B	3.3	14.7	28.0	0.0	21.9	4.7	0.0	11.1	±35.5

INTERIOR COLUMN SCHEDULE IMPERIAL																			
(NOTE: ALL SERVICE LOADS ARE EXPRESSED IN KIPS typ. U.N.)																			
Col. No.	Dimensions	Qty	EL. Top pier (see detail A-3)	Base plate type	Welded Plate Washer	Vertical loads							Moments (Kips-ft)						
						D	S	L	C	Gross uplift	W	E	V	H	V	H	V	C	S
1	WBX31	2	99'-0"	A	No	1.5	0.7	1.1	1.1	±55.0	11.5	±55.0	6.5	±36.0					
2	W12X79	2	99'-0"	B	No	32.8	8.7	11.5	±55.0	11.5	±55.0	6.5	±36.0						

DESIGN LOADS

BUILDING OCCUPANCY CATEGORY : II

1. DEAD LOAD (ROOFING, DECK, STRUCTURE) : 18 psf
MECHANICAL, ELECTRICAL OR OTHER LOADS : 4 psf
ROOF DESIGN DEAD LOAD : 22 psf

2. ROOF SNOW LOAD : 42 psf
Pg. 00, par. 1-1, Cn. 1, Ct. 1

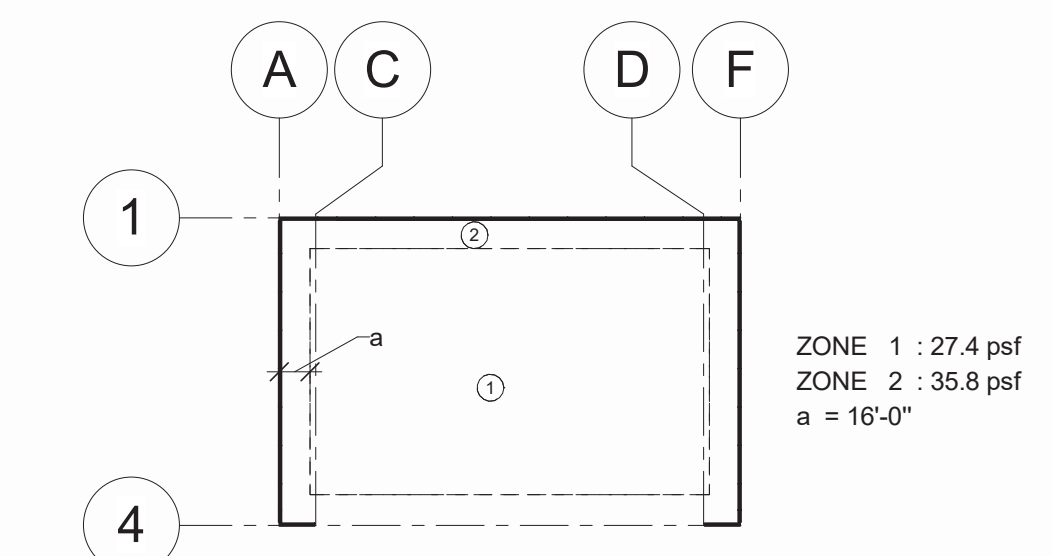
3. WIND INFORMATION
BASIC WIND SPEED : 100 mph
W : 1
WIND EXPOSURE CATEGORY : C
GOF : 0.85
VELOCITY PRESSURE (qp) : 22.1 psf

4. EARTHQUAKE DESIGN DATA
Ie : 1
Sa : 0.319
S1 : 0.077
SITE CLASS : D
SDS : 0.329
SD1 : 0.184
SEISMIC DESIGN CATE : B
SEISMIC FORCES RESISTING SYSTEM : H-STEEL SYSTEM
NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
RESPONSE MODIFICATION FACTOR (R) : 3
DEFLECTION AMPLIFICATION FACTOR (Cd) : 3
SYSTEM OVERSTRENGTH FACTOR (OO) : 2.5 (flexible diaphragm, ASCE-05 T12.2-1)
Cb : 0.109
DESIGN BASE SHEAR : 40 kips
ANALYSIS PROCEDURE : EQUIVALENT LATERAL FORCE PROCEDURE

CONNECTIONS: ALL SEISMIC LOADS INDICATED ON DRAWINGS ARE SERVICE LOADS. THEREFORE THEY DO NOT INCLUDE THE APPLICABLE FACTORS FOR CONNECTIONS. REFER TO ASCE 7-05 CLAUSE 14.1, FOR CONNECTION DESIGN.

5. ROOF DEFLECTION : L/240
TYPICAL UNLESS NOTED

6. GROSS UPLIFT SEE DIAGRAM
(0.5 D + 1.6 W, D = 16 psf)



DESIGN NOTES

- THE DESIGN OF THE COMPONENTS SHOWN ON THESE DRAWINGS IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE IBC 2009
- STRUCTURAL STEEL DESIGN ACCORDING TO MANUAL OF STEEL CONSTRUCTION, 14 TH EDITION (MSC, 14TH EDITION)
- THE DESIGN OF THE COMPONENTS SHOWN ON THESE DRAWINGS IS THE PROPERTY OF "CANAM". REPRODUCTION OF THESE DRAWINGS OR MANUFACTURE OF COMPONENTS SHOWN ON THESE DRAWINGS, WITHOUT PERMISSION FROM "CANAM", IS STRICTLY PROHIBITED.
- SCUPPERS IN THE ROOF PARAPET MUST BE DONE BY GENERAL CONTRACTOR TO PREVENT EXCESSIVE PONDING IN CASE OF ROOF DRAIN BLOCKAGE.
- CANAM ACCEPTS RESPONSIBILITY ONLY FOR THE DESIGN, FABRICATION AND PERFORMANCE OF THE COMPONENTS SHOWN ON THESE DRAWINGS. CANAM IS NOT RESPONSIBLE FOR ANY ERRORS, OMISSIONS OR DAMAGES INCURRED IN THE ERECTION OF THE COMPONENTS SHOWN ON THESE DRAWINGS, NOR FOR INSPECTION OF ERECTED COMPONENTS TO ASCERTAIN SAME.

ERECTION NOTES

- BEFORE LEAVING THE SITE FOR A PROLONGED PERIOD OF TIME, THE ERECTOR MUST:
 - INSTALL ALL THE BRACING AND INSTALL AND TIGHTEN ALL BOLTS FOR STRUCTURE AND THE JOIST
 - INSTALL THE SUPPORT PIECES FOR THE NON-BEARING PANELS WITH ALL BOLTS WELL TIGHTENED.
 - INSTALL AND TIGHTEN BOLTS OF THE TIE JOIST
 - INSTALL AND TIGHTEN BOLTS AT JOINTS ON TOP OF PANEL
 - USE GUY LINES TO FASTEN THE TOP OF PANELS TO SOLID ANCHORS ON THE GROUND WHEN REQUIRED.
- ERECTION PROCEDURES, REFER TO CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AISC 308-02 CHAPTER 16.3 SECTION 7 OF MSC, 14TH EDITION.
- BEARING BOLTS ARE REQUIRED TO BE TIGHTENED TO THE "SNUG-TIGHT" CONDITION AS PER SECTION 8 OF 2004 EDITION OF SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. (SEE CHAPTER 16.2 IN MSC, 14TH EDITION)
- HIGH STRENGTH BOLTS IN BRACING OR IN CRANE RUNWAY CONNECTIONS SHALL BE PRETENSIONNED USING THE "TURN OF NUT" METHOD AS PER SECTION 8.2.1 OF 2004 EDITION OF SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS (TYP. UN). (SEE CHAPTER 16.2 IN MSC, 14TH EDITION)
- ALL WELDING SHALL CONFORM TO THE STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY. (AWS D1.1/D1.1M:2010)

FOUNDATION NOTES

- REACTIONS ARE ROUNDED VALUES EXPRESSED IN Kips. (SERVICE LOADS)
- FOUNDATIONS MUST BE ADEQUATELY DESIGNED FOR LOCAL SOIL CONDITIONS BY A QUALIFIED FOUNDATION ENGINEER.
- THE CONCRETE MUST MEET OR EXCEED 3000 psi AFTER 28 DAYS.
- ALL ANCHOR BOLTS MUST MEET OR EXCEED ASTM A307 SPECIFICATIONS.
- FINISHED FLOOR ELEVATION: 104'-0" UNLESS NOTED. UNDERSIDE OF "MUROX" PANELS BASE PLATE ELEVATION: 102'-0" UNLESS NOTED.
- ANCHOR BOLT FOR "MUROX" PANEL TO HAVE 3 in. PROJECTION FROM UNDERSIDE OF BASE PLATE (SEE DETAIL A-2).
- ANCHOR BOLT PROJECTION FOR INTERIOR COLUMNS IS INDICATED ON DETAIL A-1.
- THE GROUT UNDER BASE PLATES (BY OTHERS) FOR ALL COLUMNS EXCEPT "MUROX" PANEL IS 1 in., UNLESS OTHERWISE INDICATED.
- THE GAP BETWEEN LEVELING PLATES AND COLUMN BASE PLATES MUST NOT EXCEED 1/16" TO ASSURE SUFFICIENT CONTACT. IF THE GAP EXCEEDS TOLERANCE, THE LEVELING PLATE SHALL BE RESET. GROUT SHALL BE CHIPPED OUT AND RE-POURED.
- THE ANCHOR BOLTS INSTALLATION TOLERANCE MUST NOT EXCEED:
 - A) 1/8" BETWEEN 2 ANCHOR BOLTS
 - B) 1/8" BETWEEN 2 GROUPS OF ANCHOR BOLTS
 IT IS THE RESPONSIBILITY OF THE CLIENT AND/OR GENERAL CONTRACTOR TO ASSURE THAT ANCHOR BOLTS ARE CORRECTLY POSITIONED ACCORDING TO THE ABOVE TOLERANCES. ANY COSTS OR DELAYS RESULTING FROM CORRECTIONS IN ANCHOR BOLT INSTALLATION WILL BE THE ENTIRE RESPONSIBILITY OF THE CLIENT AND/OR GENERAL CONTRACTOR.

REFERENCE NOTE

1. THE PANEL NUMBER INDICATES PROPOSED ERECTION SEQUENCE.

MATERIAL NOTES

- STRUCTURAL STEEL SHALL BE NEW MATERIAL CONFORMING TO THE FOLLOWING SPECIFICATIONS.
 - A) STRUCTURAL STEEL
 - JOIST AND TRUSS MEMBERS FABRICATED FROM STRUCTURAL STEEL, AS PER CANAM STANDARD.
 - HOT ROLLED "W", "C", "S" AND PLATES STEEL ASTM A992, A572 - 50W, UN.
 - HOT ROLLED "MC" STEEL, CSA G40 21 - 44W, UN.
 - HOLLOW STRUCTURAL SECTIONS "HSS" STEEL ASTM A500 GRADE C (Fy = 50 ksi AND 46 ksi FOR ROUND "HSS"), UN.
 - OTHER HOT ROLLED STRUCTURAL STEEL, ASTM A992, A572 - 50W, UN.
 - B) STRUCTURAL BOLTS - HIGH STRENGTH BOLTS ASTM A325 (3/4"Ø) OR A490 (1"Ø), UN.
 - PAINT
 - THE SURFACE PREPARATION CONSISTS IN A SSPC-SP2 (HAND TOOLS CLEANING)
 - THE PAINT CONFORMS TO CISCCPMA STANDARDS 1-73A.
 - THE STANDARD COLOR IS GREY.

SUSPENDED LOADS

ALL SUPPORTS FIXED TO ROOF JOISTS AND TRUSSES USED TO SUSPEND EQUIPMENT OR OTHER LOADS OF ANY SORT MUST BE LOCATED AT THE INTERSECTION OF VERTICAL AND HORIZONTAL MEMBERS.

NOTES FOR JOISTS

- THE JOIST SITTING ON "MUROX" PANELS MUST BE DESIGNED TO TRANSFER THE LOAD TO 12 INCH FROM THE END OF JOIST SHOE.
- ALL HOLES FOR BOTTOM CHORD TIES SHALL BE SLOTTED 13/16" x 1 1/2" UNLESS NOTED OTHERWISE BY THE SYMBOL "Z" INDICATING THE USE OF STANDARD ROUND HOLES.
- TYPE OF BRACING REQUIRED.
- FOR ALL CASES, USE DIAGONAL BRIDGING, UPLIFT BRIDGING, MUST BE PROVIDED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.
- THERE WILL BE HORIZONTAL AND CROSS BRIDGING AT EACH BAY END BETWEEN THE LAST JOIST AND THE ADJACENT ONE. (SEE DETAIL R.)

SHEET LIST		
SHEET #	SHEET NAME	CURRENT REVISION
Mx1	GENERAL NOTES	C
Mx2	ANCHOR PLAN & DETAILS	D
Mx3	ROOF PLAN & DETAILS	B
Mx4	ELEVATIONS PLAN & DETAILS & SHOP-FINISHING DETAILS	B
Grand total: 4		

REVISION	DATE	DESCRIPTION	DESIGNED	CHECKED
C	08/02/2017	For permit	M.V.	
B	08/22/2017	For approval	G.S.	M.V.
A	08/14/2017	For preliminary needs	M.V.	

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PROFESSIONAL SEAL
GARY C. VIOLETTE
REGISTERED PROFESSIONAL ENGINEER
No. 10144
11 Sept 2017

PROJECT
NEA HANGAR
PORTLAND
MAINE, USA

DRAWING TITLE
GENERAL NOTES

CONTRACT NUMBER: P2017-116R2
DRAWING NUMBER: Mx1
DIVISION:

FOR PERMIT