

ERECTION NOTES

1. All bracing shown and provided by the Metal Building Provider for this building is required and shall be installed by the erector as a permanent part of the structure ("Code of Standard Practice for Steel Buildings and Bridges" in the ANSI/AISC 303–16; Section 7.10).
2. Temporary supports, such as guys, braces, falsework, cribbing or other elements required for the erection operation shall be determined and furnished by the erector ("Code of Standard Practice for Steel Buildings and Bridges" in the ANSI/AISC 303–16; Section 7.10.3).
3. Normal erection operations include the correction of minor misfits by moderate amounts of reaming, grinding, welding or cutting, and the drawing of elements into line through use of drift pins. Errors which require major changes in the member configuration are to be reported immediately to the Metal Building Provider by the customer to enable whoever is responsible either to correct the error or to approve the most efficient and economic method of correction to be used by others ("Code of Standard Practice for Steel Buildings and Bridges" in the ANSI/AISC 303–16; Section 7.14).
4. Erection tolerances are set forth in the "Code of Standard Practice for Steel Buildings and Bridges" in the ANSI/AISC 303–16; Section 7.13 note that individual members are considered plumb, level and aligned if the deviation does not exceed 1:500. Variations in finished overall dimensions of structural steel framing are deemed within the limits of good practice when they do not exceed the cumulative effect of rolling, fabricating, and erection tolerances.
- 4.1. When crane support systems are part of the metal building system erection tolerances Section 6.8, Erection Tolerances, 2018 MBMA Metal Building Systems Manual shall apply. To achieve the required tolerances grouting of the columns and shimming of the runway beams may be required. The customer shall provide grout if required. The contractor erecting the runway beams is responsible for shimming, plumbing, and leveling of the runway system. When aligning the runway beams the alignment shall be with respect to the beam webs so that the center of the aligned rail is over the runway web.
5. As a general rule field welding is not used to assemble a metal building system. In cases where the drawings indicate field welding and in cases where approved corrections are to be made by field welding the following requirements shall be met:
- 5.1. Welders must be qualified by an independent testing agency, with suitable documentation to AWS D1.1 Structural Welding Code – Steel or AWS D1.3 Structural Welding Code – Sheet Steel as applicable, for the processes, positions, and materials involved.
- 5.2. All welds must be made in conformance to a documented and approved Welding Procedure Specification (WPS). All joints which are not prequalified must be supported by a certified Procedure Qualification Record (PQR) by an independent testing agency.
6. All documentation and records shall be the responsibility of the customer.
7. Any claims or shortages by buyer must be made to the Metal Building Provider within seven (7) working days after delivery, or such claims will be considered to have been waived by the customer and disallowed. All claims should be directed to the Metal Building Provider's Customer Service Department.
8. Claims for correction of alleged misfits will be disallowed unless the Metal Building Provider shall have received prior notice thereof and allowed reasonable inspection of such misfits. Ordinary inaccuracies of shop work shall not be construed as misfits. No part of the building may be returned or charges assessed for alleged misfits without prior approval from the Metal Building Provider.
9. Neither the Metal Building Provider nor the customer will cut, drill or otherwise alter their work, or the work of other trades to accommodate other trades unless such work is clearly specified in the contract documents. Whenever such work is specified the customer is responsible for furnishing complete information as to materials, size, location, and number of alterations prior to preparation of shop drawings ("Code of Standard Practice for Steel Buildings and Bridges" in the ANSI/AISC 303–16; Section 7.15).
10. The Metal Building Provider Field Modifications Policy:
- 10.1. The Metal Building Provider will only be responsible for the field–modified parts designed and approved by the Metal Building Provider's Customer Service Department.
- 10.2. Any field modifications designed by third parties may not be approved by the Metal Building Provider and may limit the Metal Building Provider's warranty and liability.
- 10.3. The Metal Building Provider makes no warranty and hereby disclaims any responsibility with respect to the design, engineering, or construction of any field–modified parts performed by third parties.
11. WARNING – SOME PANELS AND TRIM PARTS ARE FURNISHED WITH A PROTECTIVE PEEL–OFF FILM. PARTS PROVIDED WITH THIS FILM CANNOT BE EXPOSED TO SUNLIGHT WITHOUT FIRST REMOVING THE FILM. THIS FILM MUST BE REMOVED PRIOR TO INSTALLATION. FILM MUST ALSO BE REMOVED FROM ALL NON EXPOSED PARTS WITHIN SIX MONTHS FROM FILM APPLICATION OR IRREPARABLE DAMAGE WILL OCCUR TO THE SURFACE. CLAIMS WILL NOT BE ACCEPTED FOR THIS ISSUE.

RESPONSIBILITIES

1. The Metal Building Provider Customer, hereafter referred to as the "customer", obtains and pays for all building permits, licenses, public assessments, paving or utility pro rata, utility connections, occupancy fees and other fees required by any governmental authority or utility in connection with the work provided for in the Contract Documents. The customer provides at his expense all plans and specifications required to obtain a building permit. It is the customer's responsibility to ensure that all plans and specifications comply with the applicable requirements of any governing building authorities.
2. The customer is responsible for identifying all applicable building codes, zoning codes, or other regulations applicable to the Construction Project, including the metal building system.
3. It is the responsibility of the customer to interpret all aspects of the End User's specifications and incorporate the appropriate specifications, design criteria, and design loads into the Order Documents submitted to the Metal Building Provider.
4. It is the responsibility of the Metal Building Provider to furnish the metal building system to meet the specifications including the design criteria and design loads incorporated by the Contractor into the Order Documents. The Metal Building Provider is not responsible for making an independent determination of any local codes or any other requirements not part of the Order Documents.
5. The Metal Building Provider's standard specifications apply unless stipulated otherwise in the Contract Documents. The Metal Building Provider design, fabrication, quality criteria, standards, practice, methods and tolerances shall govern the work any other interpretations to the contrary notwithstanding. It is understood by both parties that the customer is responsible for clarifications or exclusions from the Architectural plans.
6. In case of discrepancies between the Metal Building Provider's structural steel plans and plans for other trades, the Metal Building Provider's shall govern ("Code of Standard Practice for Steel Buildings and Bridges" in the AISC 303–16; Section 3.3)
7. The customer is responsible for overall project coordination. All interface, compatibility and design considerations concerning any materials not furnished by the Metal Building Provider and the Metal Building Provider's steel system are to be considered and coordinated by the customer. Specific design criteria concerning this interface between materials must be furnished by the customer before release for fabrication or the Metal Building Provider's assumptions will govern.
8. Foundations, anchor rods, and anchor rod embedment are designed, furnished, and set by the customer in accordance with an approved drawing. Dimensional accuracy shall satisfy the requirements of Section 7.5.1 of "Code of Standard Practice for Steel Buildings and Bridges" in the AISC 303–16.
9. All other embedded items or connection materials between the structural steel and the work of other trades are located and set by the customer in accordance with approved location on erection drawings. Accuracy of these items must satisfy the erection tolerance requirements.
10. The Metal Building Provider does not investigate the influence of the metal building system on existing buildings or structures. The End Customer assures that such buildings and structures are adequate to resist snow drifts, wind loads, or other conditions as a result of the presence of the metal building system.

GENERAL SPECIFICATIONS

1. Wall and liner panels are an integral part of the structural system. Unauthorized removal of panels or cutting panels for framed openings not shown is prohibited.
2. Oil–canning, a perceived waviness inherent to light gauge metal, may exist. This condition does not affect the structural integrity or the finish of the panel, and therefore is not a cause for rejection.
3. The Metal Building Provider's red–oxide and gray oxide primer are designed for short term field protection from exposure to ordinary atmospheric conditions.
4. All bolts are 1/2" x 1–1/4" A307 unless noted. Refer to the erection drawings for specific framing connections and the cross–section(s) for main frame connections.
5. Unless noted otherwise on the frame cross section(s), all bolted joints with ASTM F3125 Grade A325 bolts are specified as snug–tightened joints in accordance with the Specification for Structural Joints Using High–Strength Bolts, June 11, 2020. Installation inspection requirements for Snug–Tight Bolts (Specification for Structural joints, Section 9.1) is suggested.
6. Unless noted otherwise, all bolted connections are designed as bearing type connections with bolt threads not excluded from the shear plane.
7. Any type of suspended or load inducing system(s) is prohibited if zero collateral and zero sprinkler loads are designated on the contract. This would include lights, duct work, piping, and insulation types other than 3" standard duty fiberglass blanket insulation, etc.

ADDITIONAL NOTES

Building–A Roof panel design is not by the metal building manufacturer. Purlin spacing is designed assuming panel by others meets or exceeds the metal building manufacture's Super Span 26 ga panel. The metal building manufacturer assumed panel by others will provide lateral support for purlins that meets or exceeds the metal building manufacture's SSX panel.

Building A&B Wall panel design is not by the metal building manufacturer. Girt spacing is designed assuming panel by others meets or exceeds the metal building manufacture's Super Saan X 26ga panel. The metal building manufacturer assumed panel by others will provide lateral support for girts that meets or exceeds the metal building manufacture's SSX panel.

Building A&B 3/6 height Wall system not by metal building manufacturer is self–supported in vertical, lateral, and longitudinal directions. The metal building manufacturer has not provided support members or accounted for any loading from the wall system. Attachment to metal building system shall not be structural and only through trim/finishing.

The rigid frame at line 1, 11A,11B and 17 are designed as a non–expandable rigid frame. Corresponding frame reactions are calculated based upon actual tributary area.

Roof top units are to be supported by Beams.

The framing provided by the manufacturer has been designed with roof top units at the following locations. The dimensions shown are to the center of the unit and may be adjusted 2 ft in any direction to allow for any roof penetrations to clear the purlins or bracing.

RTU–1 [815 lbs] located 4.167 ft from FL 2 and 20 ft from BSW
RTU–2 [815 lbs] located 4.167 ft from FL 4 and 20 ft from BSW
RTU–3 [815 lbs] located 4.167 ft from FL 6 and 20 ft from BSW
RTU–4 [815 lbs] located 4.167 ft from FL 9 and 20 ft from BSW
RTU–5 [815 lbs] located 4.167 ft from FL 4 and 20 ft from FSW
RTU–6 [815 lbs] located 4.167 ft from FL 6 and 20 ft from FSW
RTU–7 [815 lbs] located 4.167 ft from FL 9 and 20 ft from FSW
RTU–8 [2175 lbs] located 6.083 ft from FL 10 and 23 ft from BSW
RTU–9 [2000 lbs] located 6.083 ft from FL 10 and 40 ft from BSW
RTU–10 [2175 lbs] located 6.083 ft from FL 10 and 23 ft from FSW

The metal building manufacturer has not designed the structure for snow accumulation loads at the ground level which may impose snow loads on the wall framing provided by the manufacturer.

"Customer is responsible for ensuring that any new structures is separated 20'0 from all sides of the Metal Building Structure to avoid additional Drifting and/or snow loads into the metal building, which is not permitted"

BUILDING DESIGN CODES

Building Code: MIBC 2015 (IBC 15)
Steel Specification: AISC 360–10
Cold–Formed Specification: AISI S100–12

GENERAL LOADS

Roof Dead Load: 18.50 psf (Metal bldg+Roof Panel) Building–A
8.00 psf (Metal bldg+Roof Panel) Building–B

Roof Collateral Load: 5.00 psf
Sprinkler Load: 0.00 psf
Roof Live Load: 20.00 psf
Tributary Live Load Reduction: No
Rainfall Intensity (5–minute duration 5–year recurrence): 4.00 in/hr

WIND LOAD

Wind Speed (3–sec gust), Vult: 120 mph
Wind Speed (3–sec gust): 93 mph
Serviceability Wind, Vserv: 76 mph
Wind Exposure Category: C
Wind Condition: Enclosed
Internal Pressure Coefficient (GCpi): 0.18,–0.18

SNOW LOAD

Roof Snow Load (Pf): 90.0 psf
Ground Snow Load (Pg): 90.0 psf
Snow Exposure Factor (Ce): 1.00
Snow Load Importance Factor (Is): 1.10
Thermal Factor (Ct): 1.00

DEFLECTION CRITERIA

Main Frames Lateral: H/120 Roof Panels: L/240
Main Frames Vertical: L/240 Purlins: L/240
Bearing Frame Rafter: L/240 Wall Panels: L/240
Endwall Columns: L/240 Girts: L/240
W.F. Lateral: H/120

For components, cladding, and MWFRS, deflections involvingwind are based on 10 year serviceability wind pressures.

SEISMIC LOAD

Risk Category: III– High
Seismic Importance Factor (Ie): 1.25
Spectral Response Acceleration (Ss): 0.0550
Spectral Response Acceleration (S1): 0.0190
Site Class: D
Spectral Response Coefficients (Sds): 0.0587
Spectral Response Coefficients (Sd1): 0.0304
Seismic Design Category: A

Basic Seismic Force Resisting Systems:

	Longitudinal	Lateral
Total Design Base Shear:	Building A 18.03 Kips Building B 16.03 Kips	4.64 Kips 2.48 Kips
Sesimic Response Coefficient(s) (Cs):	0.0245	0.0245
Response Modification Factor(s) (R):	3.0	3.0
Deflection Amplification Factor(s):	3.0	3.0

Analysis Procedure: Equivalent Lateral Force

* Structural Steel Systems Not Specifically Detailed for Seismic Resistance

Other Loads:

Building–A Wall Dead load 25.00 psf
Building–B Wall Dead Load 25.00 psf
Snow Drift 0.00 psf -- 133.80 psf for 20.82 ft FL 10–11
(7) Roof Top Units at 815.00 Lbs each
(2) Roof Top Units at 2125.00 Lbs each
(1) Roof Top Units at 2000.00 Lbs each

ROOF PANEL

Profile: N/A BLDG "A" Gauge: N/A Color: N/A
Profile: 1.5" BDeck BLDG "B" Gauge: 22 Color: Galvanized
UL580 Class 90: Yes
Clip Type if Standing Seam: _____

WALL PANEL

Profile: N/A Gauge: N/A Color: N/A

PRIMARY FRAMING

Built–Up & Hot–Rolled: Gray Oxide Primer

SECONDARY FRAMING

Purlins, Eave Struts: Pre–Galvanized
Girts, Light Gage Columns: Pre–Galvanized
Light Gage Jamb's & Headers: Pre–Galvanized

Hot–Dip Galvanizing conforms to the ASTM A123 specification.
Pre–Galvanized members conform to the ASTM A653, Grade 50,
Coating G–90 specification.

APPROVAL SPECIFICATIONS

1. Approval of the Metal Building Provider drawings and/or calculations indicate that the Metal Building Provider has correctly interpreted the contract requirements. This approval constitutes the customer acceptance of the Metal Building Provider design, concepts, assumptions, and loadings.
2. Failure to respond to clouded areas and areas to verify may result in additional costs and/or schedule delays for which the Metal Building Provider will not be responsible.
3. Any changes made after the Metal Building Provider's customer has signed and returned the Metal Building Provider drawings and/or calculations and the project is released for fabrication shall be billed to the Metal Building Provider customer including material, engineering, and other costs. An additional fee may be charged if the project must be moved in the fabrication and/or the shipping schedule.
4. It is the responsibility of the customer to field verify all existing conditions prior to fabrication.
5. It is imperative that any changes to these drawings:
- 5.1. Be made in contrasting ink.
- 5.2. Be legible and unambiguous.
- 5.3. Have all instances of changes clearly indicated.
6. A dated signature, in the designated areas, is required on all pages. The signature must be from the person authorized on the contract or a person authorized, in writing, by the Metal Building Provider customer.
7. The Metal Building Provider reserves the right to resubmit drawings with extensive or complex changes required to avoid misfabrication. This may impact the delivery schedule.
8. Any changes noted on the drawings not in conformance with the terms and requirements of the contract between the Metal Building Provider and its customer are not binding on the Metal Building Provider unless subsequently specifically acknowledged and agreed to in writing by change order or separate documentation.
9. Waiving the approval process by designating the order "For Production" supercedes notes 1, 2, 5, 6, and 8 in this section, and constitutes the customer acceptance of the Metal Building Provider's design, concepts, assumptions, and loadings.

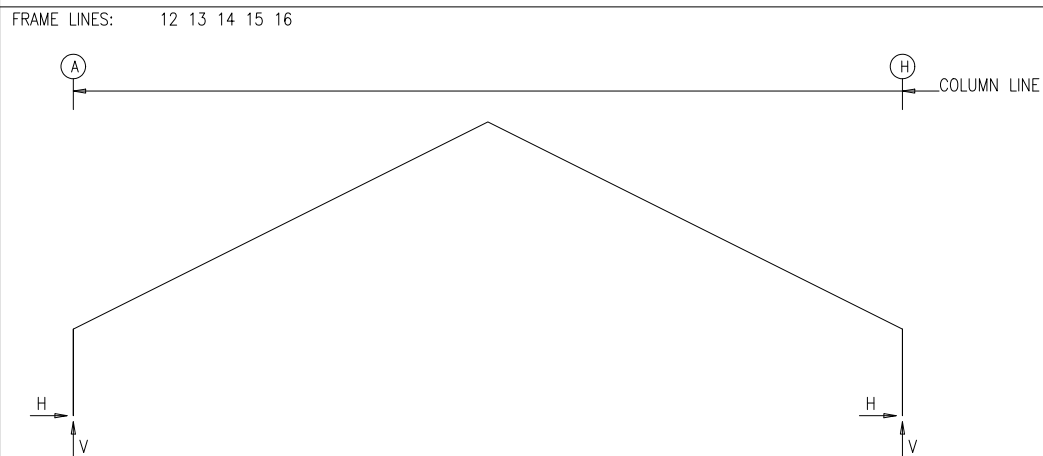
DRAWING INDEX		
ISSUE	DATE	DESCRIPTION
0	06.07.24	C1–Cover Page
0	05.15.24	F1–Anchor Bolt Plan & Details
0	05.15.24	F2–Anchor Bolt Reactions
0	05.15.24	F3–Anchor Bolt Reactions
0	06.07.24	P1–Rigid Frame Elevation
0	06.07.24	P2–Rigid Frame Elevation
0	06.07.24	P3–Rigid Frame Elevation
0	06.07.24	P4–Rigid Frame Elevation
0	06.07.24	P5–Rigid Frame Elevation
0	06.07.24	P6–Rigid Frame Elevation
0	06.07.24	P7–Rigid Frame Elevation
0	06.07.24	W1–Portal Frame Elevation
0	06.07.24	E1–Roof Framing Plan
0	06.07.24	E2–Roof Sheetting Plan
0	06.07.24	E3–Endwall Framing
0	06.07.24	E4–Endwall Framing
0	06.07.24	E5–Sidewall Framing
0	06.07.24	E6–Sidewall Framing
0	06.07.24	E7–Sidewal Framing
0	06.07.24	E8–Building Sections
0	06.07.24	D1–Details Drawing
0	06.07.24	D2–Details Drawing

TRIM COLOR

Roof Line:	N/A	Gauge:	N/A
Wall Trim:	N/A	Gauge:	N/A
Accessory Trim:	N/A	Gauge:	N/A
Downspout:	N/A	Gauge:	N/A

The Engineer whose seal and signature appear on these documents represent Whirlwind Steel Buildings, Inc., and is not the Engineer of Record for the overall project. The Engineer's responsibility is limited to material designed and manufactured by Whirlwind Steel Buildings, Inc., and excludes parts such as doors, windows, foundation design, and erection of the building.

DESC: COVER SHEET		BLDG. SIZE: VARIES	
CUSTOMER: First Apostolic Lutheran Church		LOCATION: Houghton, MI 49931	
REFERENCE: First Apostolic Lutheran Church			
JOB SITE: Houghton, MI 49931		COUNTY: Houghton	
DWN: HME	CHK: VN	DATE: 3/22/24	ENG: SC
JOB NO: 11479–32472	DWG NO: C1	ISSUE: 0	

[illegible]

RIGID FRAME:		MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES											
Frm Line	Col Line	Column Reactions (k)						Bolt(in) Qty	Dia	Base Plate(in)			Elev. (in)
		Load H	Hmax H	Vmax	Load k	Hmin H	V Vmin			Width	Length	Thick	
12*	A	5	2.1	0.2	3	-3.0	10.5	8	1.250	10.00	26.00	0.625	0.0
		1	-1.8	13.7	6	0.9	-2.5						
12*	H	5	2.1	0.2	3	-3.0	10.5	8	1.250	10.00	26.00	0.625	0.0
		1	-1.8	13.7	6	0.9	-2.5						
12*	Frame lines:		12	13	14	15	16						

BUILDING		BRACING		REACTIONS							
				± Reactions(k)		Wind		Seismic		Panel Shear	Note
Wall	Line	Col	Line	Horz	Vert	Horz	Vert	Wind	Seis	(lb/ft)	
L_EW	11										(h)
F_SW	H	12, 13									(a)
		14, 15									(a)
R_EW	17										(a)
B_SW	A	14, 15									(a)
		12, 13									(a)
(a)Wind bent in bay											
(h)Rigid frame at endwall											

Reactions for seismic represent shear force, Eh

GENERAL NOTES

1. All anchor bolts (by others) to have nuts and flat washers.
2. All anchor bolts are designed to full S.A.E. diameters with cut threads. No substitutions are allowed.
3. The Metal Building Provider is not responsible for the design, materials and workmanship of the foundation. Anchor bolt plans prepared by the Metal Building Provider are intended to show only location, diameter, and projection of anchor bolts required to attach the Metal Building System to the foundation. The Metal Building Provider is responsible for providing to the Builder the loads imposed by the Metal Building System on the foundation. It is the responsibility of the End Customer to ensure that adequate provisions are made for specifying bolt embedment, bearing angles, tie rods, and/or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System and imposed loads, and the bearing capacity of the soil and other conditions of the building site. This is typically the responsibility of the Design Professional or Engineer of Record, which is another section that their client in the End Customer Project Manual should specify. (highly recommended) (2012 MBMA Metal Building Systems Manual, Section 3.2.2)

RIGID FRAME: BASIC COLUMN REACTIONS (k)																
Frame Line	Column	---Dead---			---Collateral---			---Live---			---Snow---		---WindLeft1---		---WindRight1---	
		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert	Horz	Vert	Horz	Vert
11*	A	-0.3	2.9	0.1	0.6	-0.3	2.3	1.4	10.2	-3.2	-4.1	3.3	-0.6			
11*	B	-0.3	2.9	-0.1	0.6	-0.3	2.3	-1.4	10.2	-3.3	-0.6	3.2	-4.1			
11*	C	0.0	4.6	0.0	1.1	0.0	3.8	0.0	17.3	0.0	-0.3	0.0	-8.0			
11*	D	0.0	4.5	0.0	1.0	0.0	3.7	0.0	16.5	0.5	-6.1	0.0	-5.2			
11*	E	0.0	4.7	0.0	1.0	0.0	3.7	0.0	16.6	0.0	-1.2	0.0	-1.5			
11*	F	0.0	4.7	0.0	1.0	0.0	3.7	0.0	16.6	0.0	-1.5	0.0	-1.2			
11*	G	0.0	4.5	0.0	1.0	0.0	3.7	0.0	16.5	0.0	-5.2	0.0	-6.1			
11*	F	0.0	4.6	0.0	1.1	0.0	3.8	0.0	17.3	0.0	-8.0	0.0	-0.3			
Frame Line	Column	---WindLeft2---			---WindRight2---			---Wind_Press---			---Wind_Suct---		---Wind_Long1---		---Wind_Long2---	
		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert	Horz	Vert	Horz	Vert
11*	A	-2.9	1.1	3.8	-2.6	0.0	0.0	0.0	0.0	0.0	1.8	-7.0	-3.5	-1.4		
11*	B	-2.9	1.1	3.8	-2.6	0.0	0.0	0.0	0.0	0.0	1.8	-7.0	-3.5	-1.4		
11*	C	0.0	2.4	0.0	-5.6	-4.4	0.0	4.9	0.0	0.0	-12.1	0.0	-2.0			
11*	C	0.0	-3.2	0.0	-2.4	-6.0	0.0	6.7	0.0	0.0	-8.9	0.0	-6.7			
11*	D	0.0	1.2	0.0	-1.6	-7.8	0.0	8.7	-2.0	0.0	-2.2	0.0	1.4			
11*	E	0.0	-1.6	0.0	-1.2	-7.8	0.0	8.7	0.0	0.0	1.4	0.0	-2.2			
11*	F	0.0	-2.4	0.0	-3.2	-6.0	0.0	6.7	0.0	0.0	-6.7	0.0	-8.9			
11*	G	0.0	-5.6	0.0	2.4	-4.4	0.0	4.9	0.0	0.0	-2.0	0.0	-12.1			
Frame Line	Column	---Seismic_Left			Seismic_Right			F1UNB_SLL			F1UNB_SLR					
		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert				
11*	A	-1.2	1.0	1.2	1.0	0.8	7.9	0.8	3.0							
11*	B	-1.2	1.0	1.2	1.0	-0.8	3.0	-0.8	7.9							
11*	C	0.0	1.3	0.0	-1.3	0.0	13.5	0.0	3.6							
11*	C	0.0	-0.3	0.0	0.3	0.0	13.2	0.0	3.4							
11*	D	0.0	0.1	0.0	0.1	0.0	21.6	0.0	6.3							
11*	E	0.0	-0.1	0.0	-0.1	0.0	6.3	0.0	21.6							
11*	F	0.0	0.3	0.0	-0.3	0.0	3.4	0.0	13.2							
11*	G	0.0	-1.3	0.0	1.3	0.0	3.6	0.0	13.5							
11*	Frame lines:		11	17												
12*	Frame lines:		12	13	14	15	16									

PORTAL FRAME REACTIONS

	Wall		Col Line	Reactions						Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick
	Loc	Line		Horz	Wind(k)		Seismic(k)		Vert					
					Horz	Vert	Horz	Vert						
	F_SW	H	12	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	F_SW	H	13	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	F_SW	H	14	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	F_SW	H	15	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	B_SW	A	15	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	B_SW	A	14	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	B_SW	A	13	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	B_SW	A	12	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	F_SW	H	12	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	F_SW	H	13	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	F_SW	H	14	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		
	F_SW	H	15	4.1	4.9	2.3	2.6	4	0.750	8,000	16,000	0.375		

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. Positions 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)	=	115.0
Length (ft)	=	120.0
Eave Height (ft)	=	12.0/ 12.0
Roof Slope (rise/12)	=	6.0/ 6.0
Dead Load (psf)	=	18.5
Collateral Load (psf)	=	5.0
Live Load (psf)	=	20.0
Snow Load (psf)	=	90.0
Wind Speed (mph)	=	120.0
Wind Code	=	MIBC 15 (IBC 15)
Exposure	=	C
Closure	=	Enclosed
Importance Wind	=	1.00
Importance Seismic	=	1.25
Seismic Zone	=	
Seismic Coeff (Fa/Ss)	=	0.09

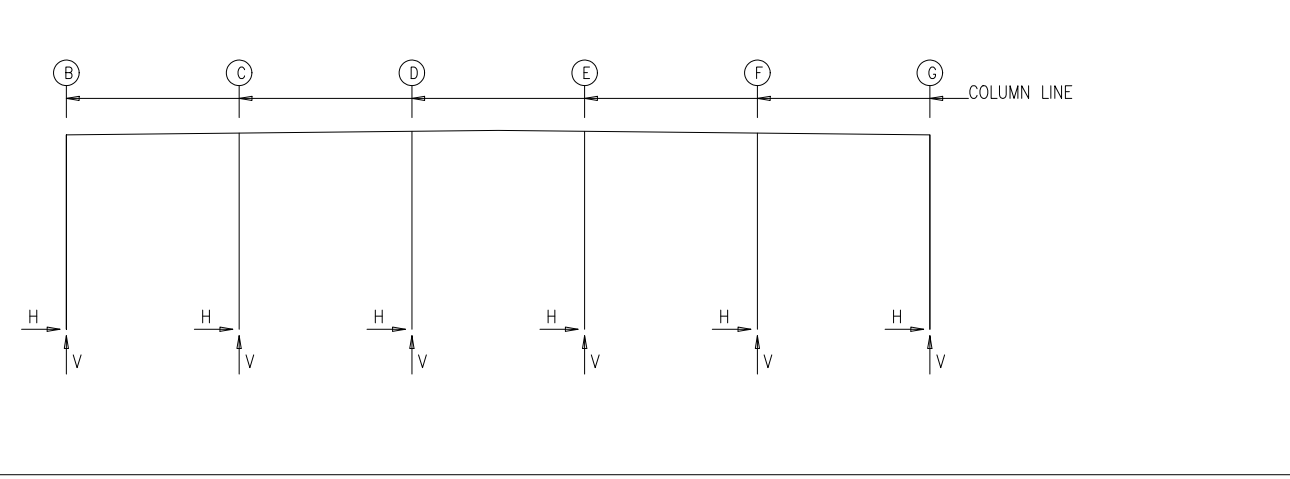
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 - 1 Dead+Collateral+Snow+Slide_Snow
 - 2 Dead+Collateral+0.75Snow+0.45Wind_LongLR+0.75Slide_Snow
 - 3 Dead+Collateral+0.75Snow+0.45Wind_LongLR+0.75Slide_Snow
 - 4 Dead+0.6Wind_Left
 - 5 Dead+0.6Wind_RightL
 - 6 Dead+0.6Wind_LongLR
 - 7 Dead+0.6Wind_LongLR
 - 8 Dead+Collateral+MIN_SNOW
 - 9 Dead+0.6Wind_Suction+0.6Wind_LongL
 - 10 Dead+0.6Wind_Pressure+0.6Wind_LongL
 - 11 Dead+Collateral
 - 12 Dead+0.6Wind_Suction+0.6Wind_LongL
 - 13 Dead+0.6Wind_Pressure+0.6Wind_LongL
 - 14 Dead+Collateral+E1UNB_SL
 - 15 Dead+Collateral+E1UNB_SLR
 - 16 Dead+Collateral+E2UNB_SL
 - 17 Dead+Collateral+E2UNB_SLR

METAL BUILDING
Outlet Corp.

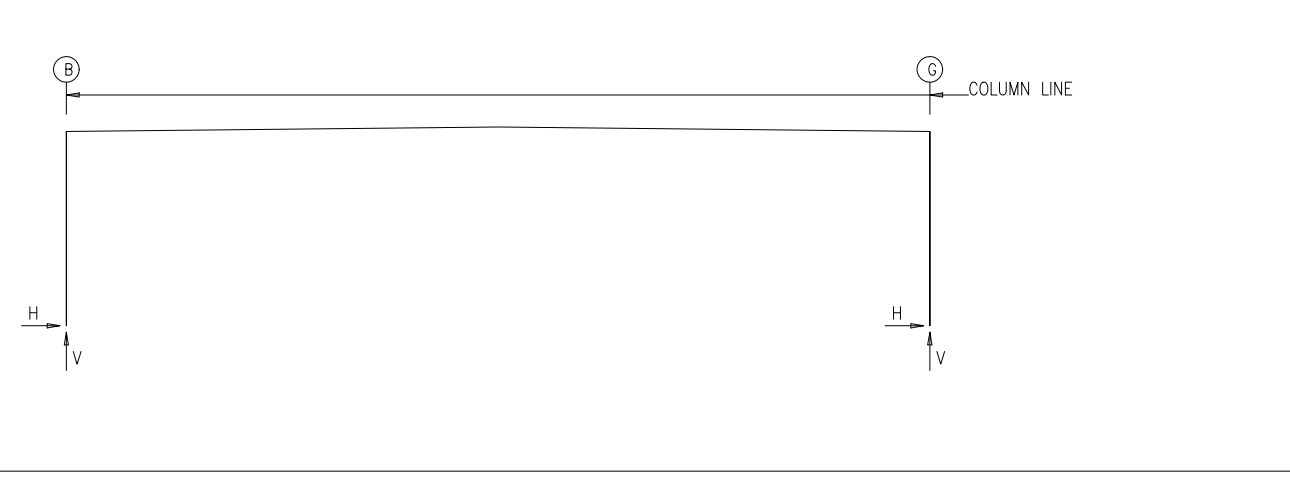
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A1	09.07.23	FOR APPROVAL	MBS	ELV	CUSTOMER:	First Apostolic Lutheran Church	
A2	09.19.23	REVISION FOR APPROVAL	MBS	AM	REFERENCE:	First Apostolic Lutheran Church	
A3	04.01.24	REVISION FOR APPROVAL	HME	VN	JOB SITE:	Houghton, MI 49931	COUNTY: Houghton
O	05.14.24	FOR ERECTOR INSTALLATION	DM	AM	DWN:	HME	CHK: VN
					DATE:	3/22/24	ENG: SC
					JOB NO:	11479-32472	DWG NO: F2
					ISSUE	0	

The Engineer whose seal and signature appear on these documents represent Whirlwind Steel Buildings, Inc., and is not the Engineer of Record for the overall project. The Engineer's responsibility is limited to material designed and manufactured by Whirlwind Steel Buildings, Inc., and excludes parts such as doors, windows, foundation design, and erection of the building.

FRAME LINES: 1 11



FRAME LINES: 2 3 4 5 6 7 8 9 10



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

Frm Line	Col Line	Column_Reactions(k)						Bolt(in) Qty	Dia	Base_Plate(in)			Elev. (in)
		Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin			Width	Length	Thick	
1	B	3	1.7	1.2	8	-1.9	-1.6	4	0.750	8.000	12.50	0.625	0.0
		10	0.4	8.9	6	-1.5	-2.2						
1	G	9	1.9	-1.6	2	-1.7	1.2	4	0.750	8.000	12.50	0.625	0.0
		11	-0.4	8.9	7	1.5	-2.2						
1	C	12	2.2	-2.6	13	-2.0	-2.6	4	0.750	8.000	12.00	0.625	0.0
		14	0.0	19.0	7	0.0	-2.3						
1	D	15	2.2	-2.2	13	-2.0	-2.2	4	0.750	8.000	12.00	0.625	0.0
		14	0.0	18.9	6	0.0	-2.6						
1	E	16	2.2	-2.2	17	-2.0	-2.2	4	0.750	8.000	12.00	0.625	0.0
		14	0.0	18.9	7	0.0	-2.6						
1	F	18	2.2	-2.6	17	-2.0	-2.6	4	0.750	8.000	12.00	0.625	0.0
		14	0.0	19.0	6	0.0	-2.3						

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

Frm Line	Col Line	Column_Reactions(k)						Bolt(in) Qty	Dia	Base_Plate(in)			Elev. (in)
		Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin			Width	Length	Thick	
2*	B	9	1.9	-1.6	2	-1.7	1.2	6	1.250	12.00	21.00	0.625	0.0
		11	-0.4	8.9	7	1.5	-2.2						
2*	G	9	1.9	-1.6	2	-1.7	1.2	6	1.250	12.00	21.00	0.625	0.0
		11	-0.4	8.9	7	1.5	-2.2						
2*	Frame lines: 2 3 4 5 6 7 8												

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

Frm Line	Col Line	Column_Reactions(k)						Bolt(in) Qty	Dia	Base_Plate(in)			Elev. (in)
		Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin			Width	Length	Thick	
9*	B	9	1.9	-1.6	2	-1.7	1.2	6	1.250	12.00	21.00	0.625	0.0
		11	-0.4	8.9	7	1.5	-2.2						
9*	G	9	1.9	-1.6	2	-1.7	1.2	6	1.250	12.00	21.00	0.625	0.0
		11	-0.4	8.9	7	1.5	-2.2						
9*	Frame lines: 9 10												

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

Frm Line	Col Line	Column_Reactions(k)						Bolt(in) Qty	Dia	Base_Plate(in)			Elev. (in)
		Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin			Width	Length	Thick	
11	B	5	2.0	12.7	8	-1.9	-1.6	4	0.750	8.000	12.50	0.625	0.0
		1	1.1	16.3	6	-1.5	-2.2						
11	G	9	1.9	-1.6	4	-2.0	12.7	4	0.750	8.000	12.50	0.625	0.0
		1	-1.1	16.3	7	1.5	-2.2						
11	C	18	2.1	-2.5	17	-1.9	-2.5	4	0.750	8.000	12.50	0.625	0.0
		1	0.0	34.7	7	0.0	-2.1						
11	D	16	2.1	-2.1	17	-1.9	-2.1	4	0.750	8.000	12.50	0.625	0.0
		1	0.0	34.2	6	0.0	-2.5						
11	E	15	2.1	-2.1	13	-1.9	-2.1	4	0.750	8.000	12.50	0.625	0.0
		1	0.0	34.1	7	0.0	-2.5						
11	F	12	2.1	-2.5	13	-1.9	-2.5	4	0.750	8.000	12.50	0.625	0.0
		1	0.0	34.7	6	0.0	-2.1						

PORTAL FRAME REACTIONS

Wall Loc	Line	Col Line	Reactions				Bolt(in) Qty	Dia	Base_Plate(in)			Thick
			Wind(k) Horz	Seismic(k) Vert	Horz	Vert			Width	Length		
F_SW	G	4	1.9	3.4	2.0	3.6	4	0.750	8.000	14.000	0.625	(h)
F_SW	G	5	1.9	3.4	2.0	3.6	4	0.750	8.000	14.000	0.625	(o)
F_SW	G	7	1.9	3.4	2.0	3.6	4	0.750	8.000	14.000	0.625	(h)
F_SW	G	8	1.9	3.4	2.0	3.6	4	0.750	8.000	14.000	0.625	(o)
B_SW	B	4	1.9	3.4	2.0	3.6	4	0.750	8.000	14.000	0.625	(o)
B_SW	B	5	1.9	3.4	2.0	3.6	4	0.750	8.000	14.000	0.625	(o)
B_SW	B	4	1.9	3.4	2.0	3.6	4	0.750	8.000	14.000	0.625	(o)

GENERAL NOTES

1. All anchor bolts (by others) to have nuts and flat washers.
2. All anchor bolts are designed to full S.A.E. diameters with cut threads. No substitutions are allowed.
3. The Metal Building Provider is not responsible for the design, materials and workmanship of the foundation. Anchor bolt plans prepared by the Metal Building Provider are intended to show only location, diameter, and projection of anchor bolts required to attach the Metal Building System to the foundation. The Metal Building Provider is responsible for providing to the Builder the loads imposed by the Metal Building System on the foundation. It is the responsibility of the End Customer to ensure that adequate provisions are made for specifying bolt embedment, bearing angles, tie rods, and/or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. This is typically the responsibility of the Design Professional or Engineer of Record, which is another reason that their involvement in the Construction Project from the outset is highly recommended (2012 MBMA Metal Building Systems Manual, Section 3.2.2.)

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead			Collateral			Live			Snow			Wind_Left1		
		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert	
1	B	0.0	1.0	0.0	0.4	0.1	1.6	0.4	7.2	-2.5	-4.7	2.7	0.3			
1	C	0.0	1.0	0.0	0.4	-0.1	1.6	-0.4	7.2	-2.7	0.3	2.5	-4.7			
1	D	0.0	1.9	0.0	0.9	0.0	3.5	0.0	15.7	0.0	-3.4	0.0	-5.7			
1	E	0.0	1.8	0.0	0.8	0.0	3.4	0.0	15.2	0.0	-6.2	0.0	-2.8			
1	F	0.0	1.8	0.0	0.8	0.0	3.4	0.0	15.2	0.0	-2.8	0.0	-6.2			
1	F	0.0	1.9	0.0	0.9	0.0	3.5	0.0	15.7	0.0	-5.7	0.0	-3.4			

Frame Line	Column Line	Wind_Left2			Wind_Right2			Wind_Press			Wind_Suct			Wind_Long1			Wind_Long2		
		Horz	Vert		Horz	Vert		HorzOP	Vert		Horz	Vert		Horz	Vert		Horz	Vert	
1	B	-3.2	-3.7	2.0	1.3	0.0	0.0	0.0	0.0	1.2	-3.0	1.2	-2.0						
1	C	-2.0	1.3	3.2	-3.7	0.0	0.0	0.0	0.0	-1.2	-2.0	-1.2	-3.0						
1	C	0.0	-1.9	0.0	-4.2	-3.3	0.0	3.6	0.0	0.0	-5.6	0.0	-2.8						
1	D	0.0	-4.5	0.0	-1.1	-3.3	0.0	3.6	0.0	0.0	-5.5	0.0	-3.5						
1	D	0.0	-1.1	0.0	-4.5	-3.3	0.0	3.6	0.0	0.0	-3.5	0.0	-5.5						
1	F	0.0	-4.2	0.0	-1.9	-3.3	0.0	3.6	0.0	0.0	-2.8	0.0	-5.6						

Frame Line	Column Line	Seismic_Left			Seismic_Right			MIN_SNOW			F1PAT_SL_1			F1PAT_SL_2			F1PAT_SL_3		
		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert	
1	B	-0.6	-0.9	0.6	0.9	0.4	7.2	0.1	3.9	0.1	3.9	0.1	3.4						
1	G	-0.6	0.9	0.6	-0.9	-0.4	7.2	-0.1	0.2	-0.1	3.9	-0.1	0.1						
1	C	0.0	1.1	0.0	-1.1	0.0	15.7	0.0	4.2	0.0	-0.3	0.0	8.5						
1	D	0.0	-0.3	0.0	0.3	0.0	15.2	0.0	-0.6	0.0	0.2	0.0	3.7						
1	E	0.0	0.3	0.0	-0.3	0.0	15.2	0.0	0.2	0.0	-0.6	0.0	-0.4						
1	F	0.0	-1.1	0.0	1.1	0.0	15.7	0.0	-0.3	0.0	4.2	0.0	0.0						

Frame Line	Column Line	Dead			Collateral			Live			Snow			Snow_Drift			Wind_Left1		
		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert		Horz	Vert	
11	B	0.1	1.1	0.0	0.3	0.1	1.6	0.5	7.4	0.5	7.5	-2.6	-4.7						
11	C	-0.1	1.1	0.0	0.3	-0.1	1.6	-0.5	7.4	-0.5	7.5	-2.7	0.3						
11	C	0.0	2.1	0.0	1.4	0.0	14.4	0.0	15.5	0.0	15.7	0.0	-3.4						
11	D	0.0	2.1	0.0	1.4	0.0	3.4	0.0	15.2	0.0	15.4	0.0	-6.2						
11	E	0.0	2.1	0.0	1.3	0.0	3.4	0.0	15.2	0.0	15.4	0.0	-2.8						
11	F	0.0	2.1	0.0	1.4	0.0	3.4	0.0	15.5	0.0	15.7	0.0	-5.6						

2*	Frame lines:	2	3	4	5	6	7	8
9*	Frame lines:	9	10					

NOTES FOR REACTIONS

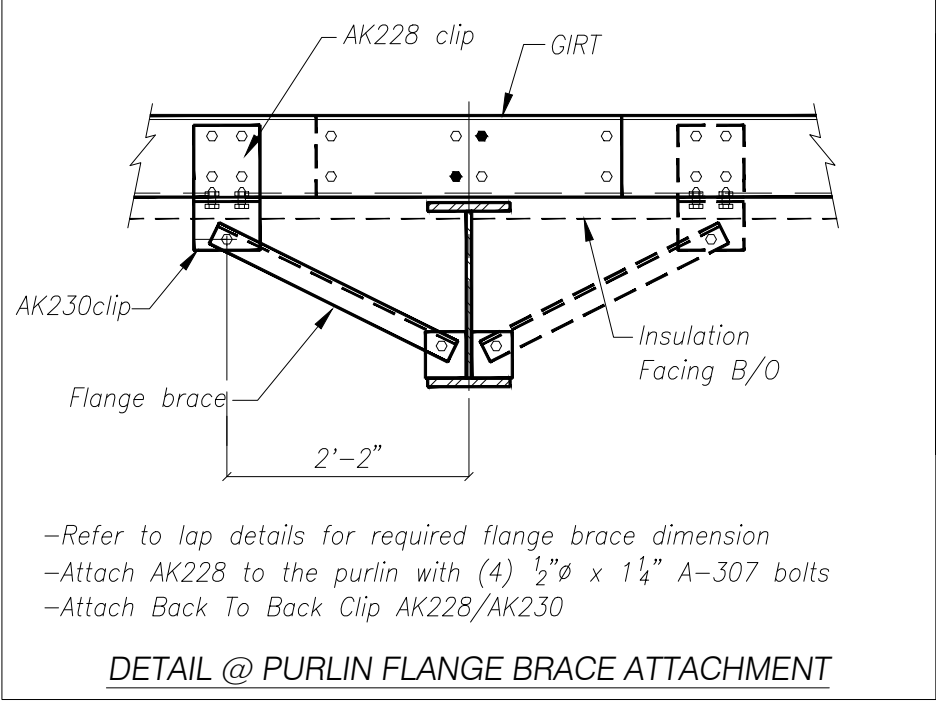
1. All loading conditions are examined and only maximum/minimum H or V and the corresponding H or V are reported.
2. Positive reactions are as shown in the sketch. Foundation loads are in opposite directions.
3. Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward.
4. Building reactions are based on the following building data:

SPLICE PLATE & BOLT TABLE										
Mark	Qty		Int	Type	Dia	Length	Width	Thick	Length	
SP-1	4	4	0	A325	3/4"	1 3/4"	6"	3/8"	1'-10	3/4"

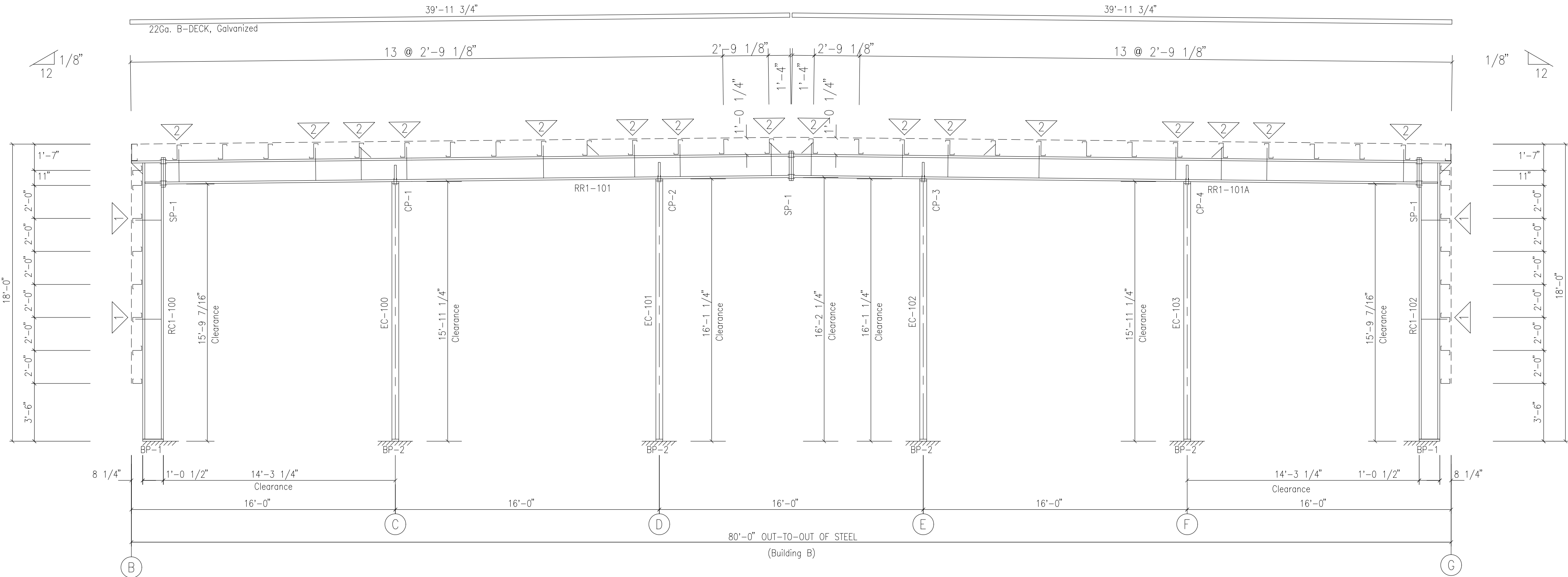
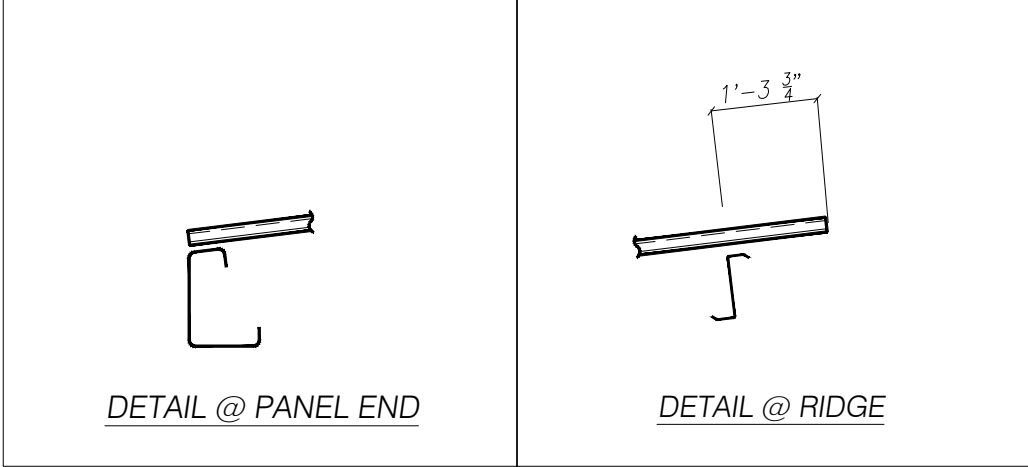
CAP PLATES							
Col Id	Qnt	Type	Bolt Dia	Len	Width	Plate Size Thick	Length
EC-100	4	A325	5/8"	1 1/2"	6.000	0.375	11.900
EC-101	4	A325	5/8"	1 1/2"	6.000	0.375	11.900
EC-102	4	A325	5/8"	1 1/2"	6.000	0.375	11.900
EC-103	4	A325	5/8"	1 1/2"	6.000	0.375	11.900

FLANGE BRACE TABLE						
A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16						
FRAME LINE: 1						
▽ ID	# SIDES	MARK	LENGTH	OFFSET	DETAIL	CLIP
1 2	1 1	FB102A FB100A	2'-6 1/2" 2'-3 1/2"	2'-4" 2'-2"	G26	AK228/AK230

BASE PLATE TABLE			
Col Mark	Width	Plate Size Thick	Length
BP-1	8"	5/8"	1'-0 1/2"
BP-2	8"	5/8"	1'-0"



MEMBER TABLE					
Mark	Web Depth Start/End	Web Thick	Web Plate Length	Outside Flange W x Thk x Length	Inside Flange W x Thk x Length
RC1-100	12.0/12.0	0.133	203.1	5 x 1/4" x 203.0 6 x 1/4" x 20.5 5 x 1/4" x 240.0	5 x 1/4" x 184.7
RR1-101/RR1-101A	14.0/14.0 14.0/14.0	0.133 0.133	240.0 218.5	5 x 1/4" x 240.0 5 x 1/4" x 218.4	5 x 1/4" x 240.0 5 x 1/4" x 218.4
RC1-102	12.0/12.0	0.133	203.1	6 x 1/4" x 20.5 5 x 1/4" x 203.0	5 x 1/4" x 184.7
EC-100	W12X14				
EC-101	W12X14				
EC-102	W12X14				
EC-103	W12X14				



BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.

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DRAWING STATUS	
☐ FOR APPROVAL:	These drawings, being for approval, are by definition not final and are for conceptual representation only. Their purpose is to confirm the proper interpretation of the project documents. Only drawings issued "For Erector Installation" can be considered complete.
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☒ FOR ERECTOR INSTALLATION:	Final drawings for construction.

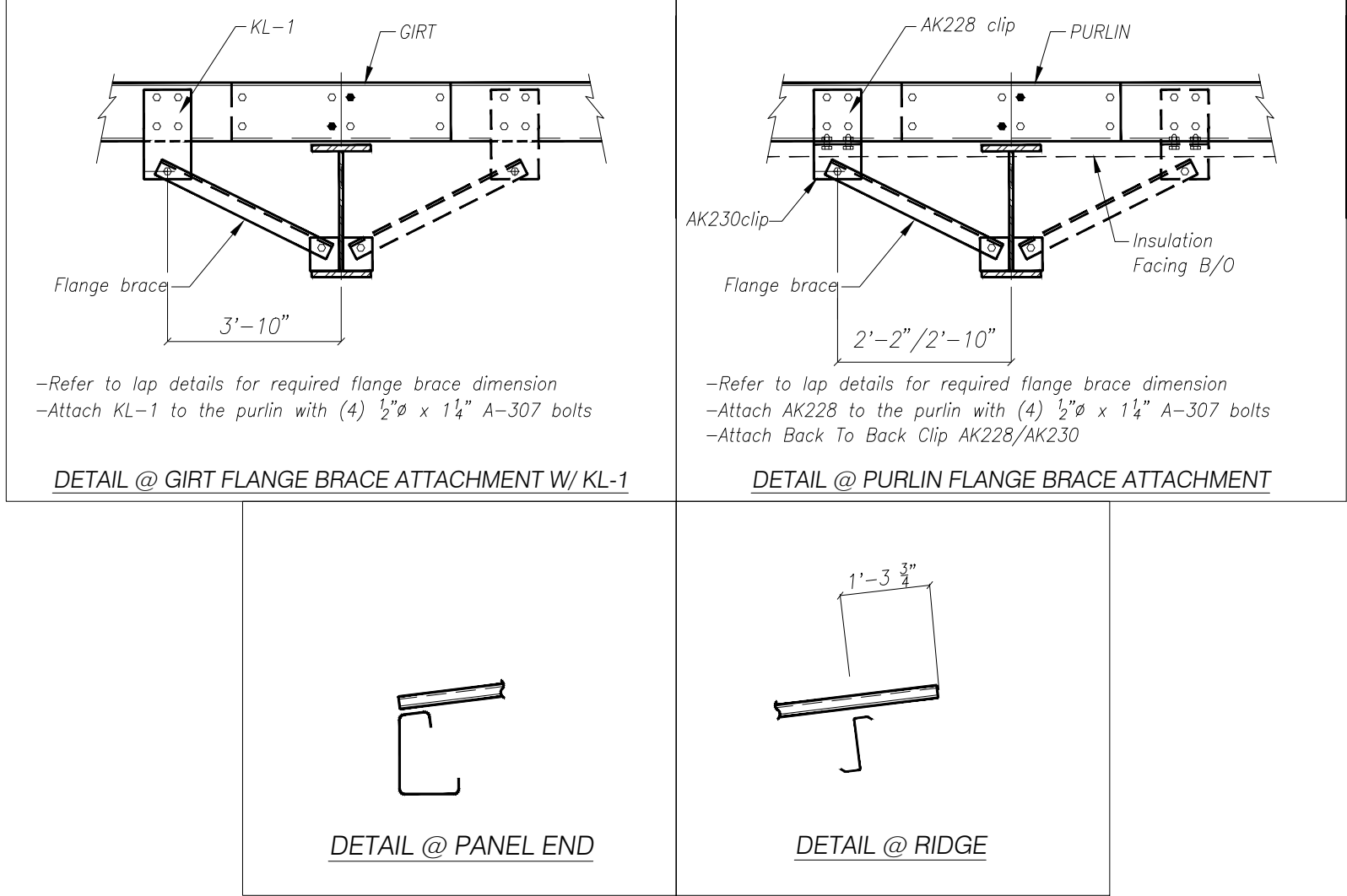


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A2	04.01.24	REVISION FOR APPROVAL	HME	VN	CUSTOMER:	LOCATION:
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	First Apostolic Lutheran Church	Houghton, MI 49931
0	06.07.24	FOR ERECTOR INSTALLATIONS/HR	FC		REFERENCE:	
					First Apostolic Lutheran Church	
					JOB SITE:	COUNTY:
					Houghton, MI 49931	Houghton
					DWN:	CHK:
					HME	VN
					DATE:	ENG:
					3/22/24	SC
					JOB NO:	DWG NO:
					11479-32472	P1
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					0	

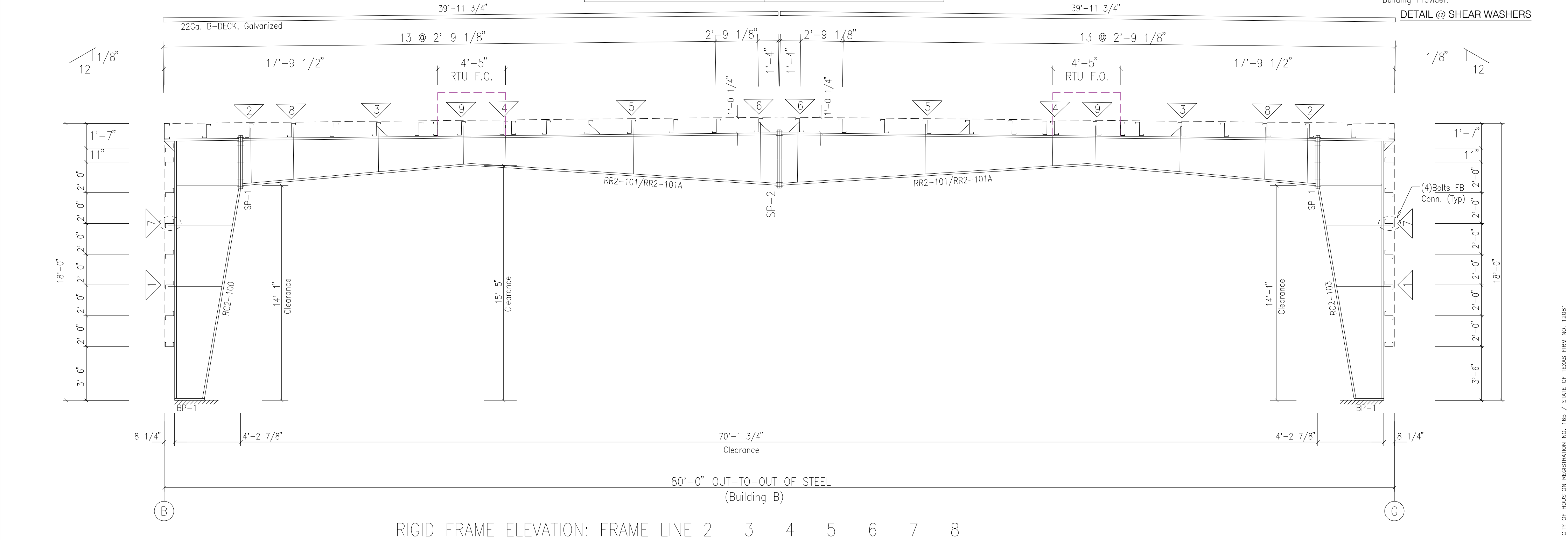
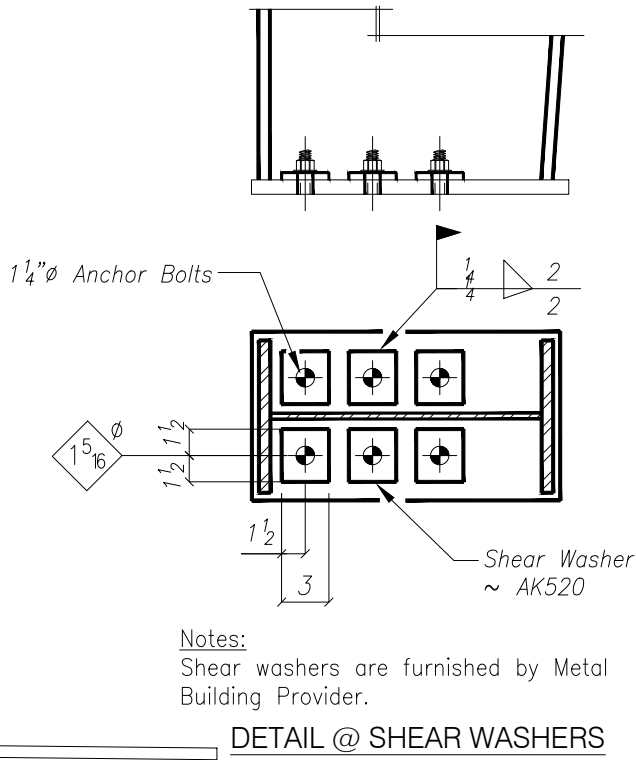
SPLICE PLATE & BOLT TABLE									
Mark	Qty	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP-1	6	6	2	A325	1 1/4	3 3/4"	1'-0"	1"	3'-7 1/4"
SP-2	4	4	2	A325	1"	2 3/4"	1'-0"	3/4"	3'-11 1/4"

FLANGE BRACE TABLE						
A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16						
FRAME LINE: 2 3 4 5 6 7 8						
▽ ID	#	MARK	LENGTH	OFFSET	DETAIL	CLIP
1	1	FB109D	5'-0 5/8"	4'-0"		
2	2	FB108C	3'-9"	2'-10"	G26	AK228/AK230
3	1	FB104C	2'-9 7/8"	2'-2"	G26	AK228/AK230
4	1	FB103A	2'-7 5/8"	2'-2"	G26	AK228/AK230
5	1	FB105A	3'-0 5/8"	2'-2"	G26	AK228/AK230
6	1	FB106A	3'-11 1/2"	2'-10"	G26	AK228/AK230
7	1	FB110D	5'-1 5/8"	3'-10"		KL-1
8	2	FB112C	3'-1 5/8"	2'-2"	G26	AK228/AK230
9	1	FB113C	2'-6 3/4"	2'-2"	G26	AK228/AK230

BASE PLATE TABLE			
Col Mark	Plate Size		Length
	Width	Thick	
BP-1	1'-0"	5/8"	1'-9"



Mark	Web Depth	Web Plate		Outside Flange		Inside Flange	
	Start/End	Thick	Length	W x Thk x Length		W x Thk x Length	
RC2-100	20.0/50.0	0.375	203.0	12 x 3/8" x 202.5		12 x 1/2" x 167.0	
RR2-101/RR2-101A	34.0/20.0	0.375	179.0	12 x 3/4" x 58.6		12 x 5/8" x 179.5	
	20.0/38.0	0.250	240.0	12 x 1/2" x 178.6		12 x 1/2" x 216.2	
RC2-103	50.0/20.0	0.375	203.0	12 x 5/8" x 240.0		12 x 1/2" x 24.0	
				12 x 3/4" x 58.6		12 x 1/2" x 167.0	
				12 x 3/8" x 202.5			



BOLT TIGHTENING (Snug-Tight)

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Final drawings for construction.

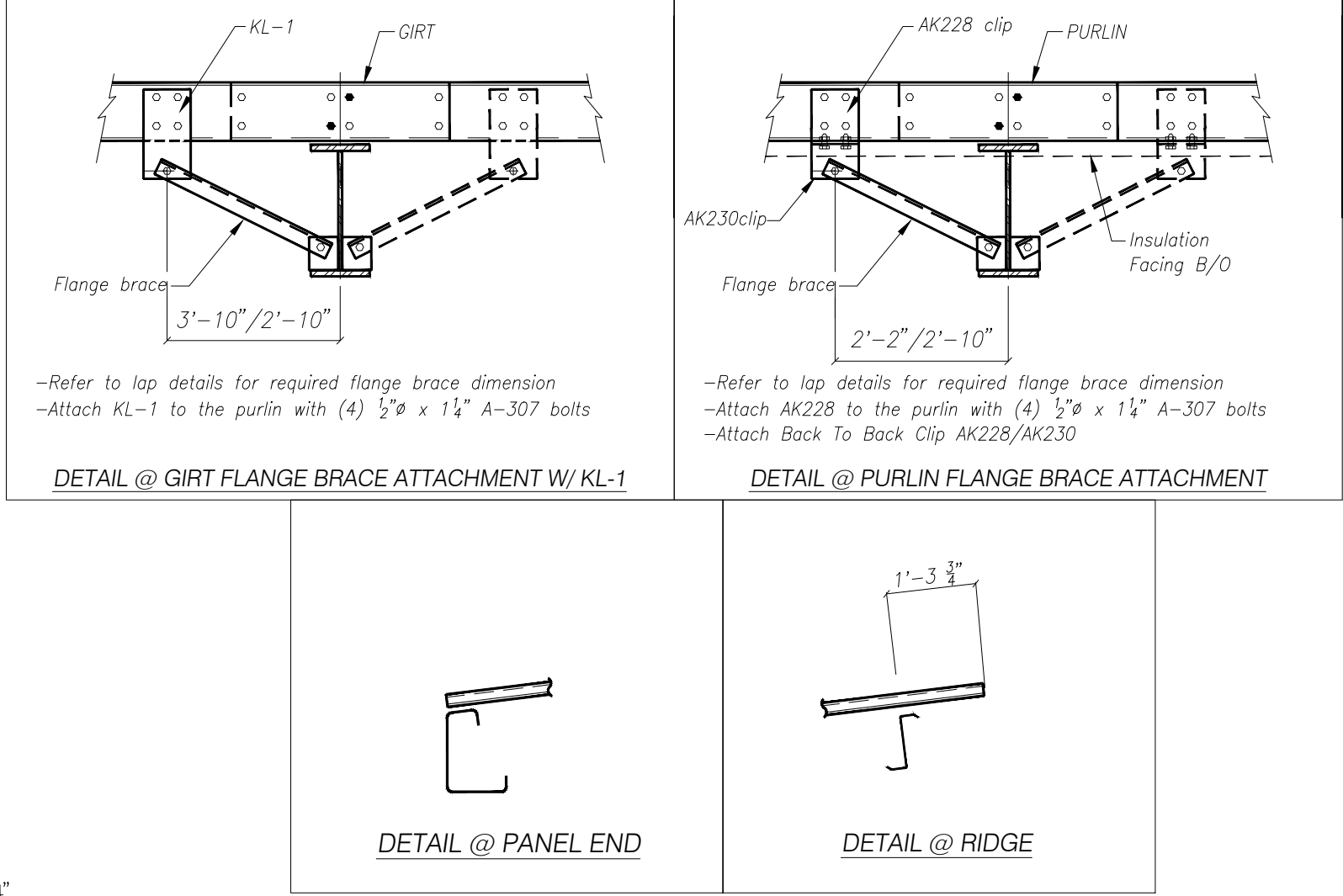
METAL BUILDING
Outlet Corp.

REV	DATE	DESCRIPTION	BY	CHK	DESC:	BLDG. SIZE:
A1	09.07.23	FOR APPROVAL	MBS	ELV	RIGID FRAME ELEVATION	VARIES
A2	04.01.24	REVISION FOR APPROVAL	HME	VN	CUSTOMER:	LOCATION:
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	First Apostolic Lutheran Church	Houghton, MI 49931
0	06.07.24	FOR ERECTOR INSTALLATION	MS/HR	FC	REFERENCE:	
					First Apostolic Lutheran Church	
					JOB SITE:	COUNTY:
					Houghton, MI 49931	Houghton
					DWN:	ISSUE
					CHK: VN	0
					DATE: 3/22/24	
					ENG: SC	
					JOB NO: 11479-32472	
					DWG NO: P2	

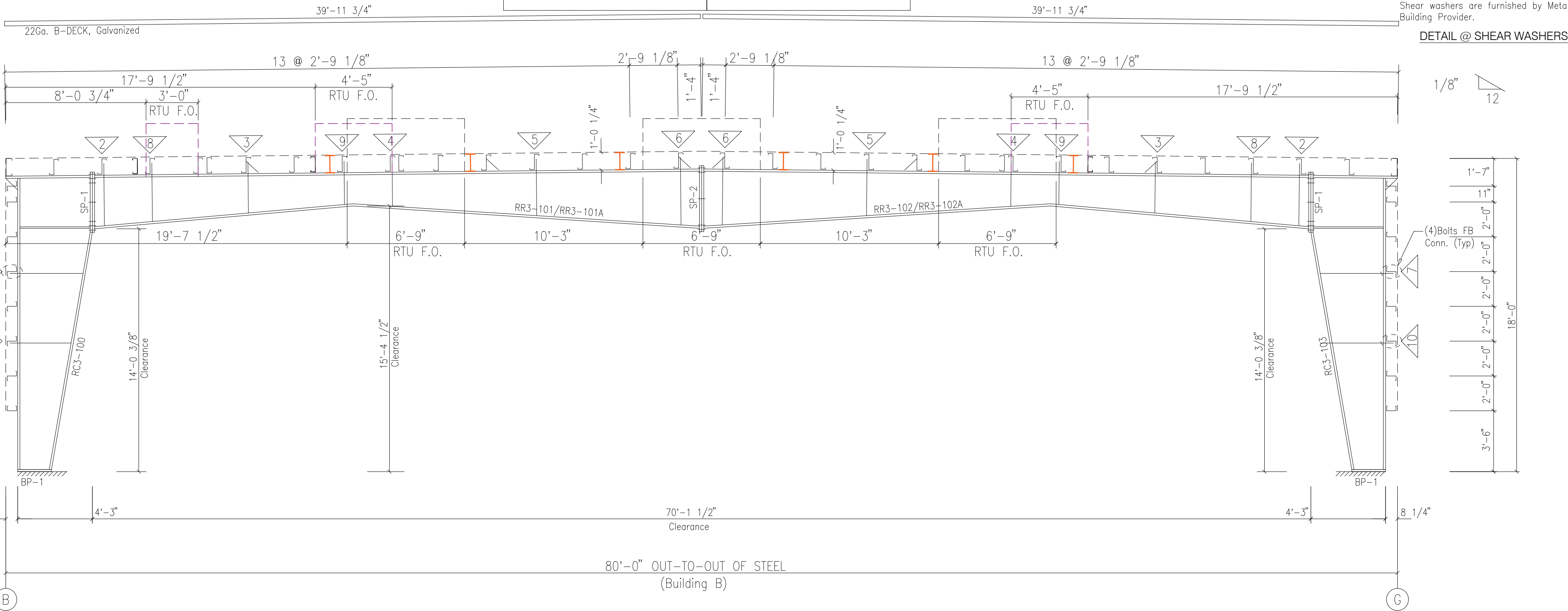
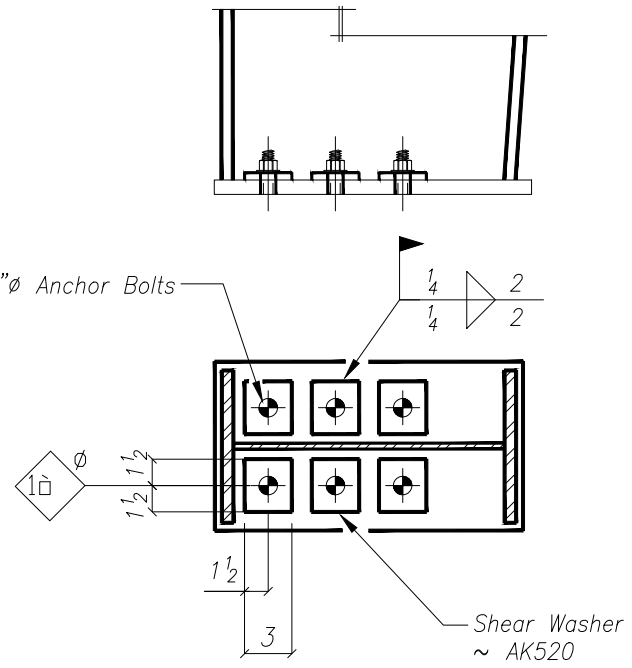
SPLICE PLATE & BOLT TABLE									
Mark	Qty		Bot	Int	Type	Dia	Length	Width	Thick
	Top								
SP-1	6	6	2		A325	1 1/4	3 3/4"	1'-0"	1"
SP-2	4	4	2		A325	1 1/4	3 3/4"	1'-0"	1"

FLANGE BRACE TABLE						
A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16						
FRAME LINE: 9 10						
▽ ID	# SIDES	MARK	LENGTH	OFFSET	DETAIL	CLIP
1	2	FB109D	5'-0 5/8"	4'-0"	G26	AK228/AK230
2	2	FB107D	3'-9"	2'-10"		
3	2	FB104C	2'-9 7/8"	2'-2"	G26	AK228/AK230
4	1	FB103A	2'-7 5/8"	2'-2"	G26	AK228/AK230
5	1	FB105A	3'-0 5/8"	2'-2"	G26	AK228/AK230
6	1	FB106A	3'-11 1/2"	2'-10"	G26	AK228/AK230
7	2	FB110D	5'-1 5/8"	3'-10"	G26	KL-1
8	2	FB114D	3'-1 5/8"	2'-2"		
10	2	FB130D	4'-5"	2'-10"	G26	KL-1
9	1	FB113C	2'-6 3/4"	2'-2"		

BASE PLATE TABLE			
Col Mark	Plate Size		
	Width	Thick	Length
BP-1	1'-0"	5/8"	1'-9"



MEMBER TABLE					
Mark	Web Depth		Web Plate		Outside Flange W x Thk x Length
	Start/End	Thick	Length		
RC3-100	20.0/50.0	0.375	163.4		12 x 3/8" x 201.8
RR3-101/RC3-101A	50.0/50.0	0.500	39.0		12 x 1" x 58.6
	34.0/20.0	0.375	178.8		12 x 1/2" x 178.4
	20.0/38.0	0.250	240.0		12 x 5/8" x 240.0
RR3-102/RC3-102A	38.0/20.0	0.250	240.0		12 x 5/8" x 240.0
	20.0/34.0	0.375	178.8		12 x 1/2" x 178.4
RC3-103	50.0/50.0	0.500	39.0		12 x 1" x 58.6
	50.0/20.0	0.375	163.4		12 x 3/8" x 201.8
					Inside Flange W x Thk x Length
					12 x 5/8" x 166.0
					12 x 1" x 179.2
					12 x 3/4" x 216.2
					12 x 3/4" x 24.0
					12 x 3/4" x 24.0
					12 x 3/4" x 216.2
					12 x 1" x 179.2
					12 x 5/8" x 166.0



RIGID FRAME ELEVATION: FRAME LINE 9 10

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.

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REV	DATE	DESCRIPTION	BY	CHK	DESC	BLDG. SIZE
A1	09.07.23	FOR APPROVAL	MBS	ELV	RIGID FRAME ELEVATION	VARIES
A2	04.01.24	REVISION FOR APPROVAL	HME	VN	CUSTOMER:	LOCATION:
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	First Apostolic Lutheran Church	Houghton, MI 49931
0	06.07.24	FOR ERECTOR INSTALLATION	MS/HR	FC	REFERENCE:	
					First Apostolic Lutheran Church	
					JOB SITE:	COUNTY:
					Houghton, MI 49931	Houghton
					DWN:	CHK:
					HME	VN
					DATE:	ENG:
					3/22/24	SC
					JOB NO:	DWG NO:
					11479-32472	P3
					ISSUE	
					0	

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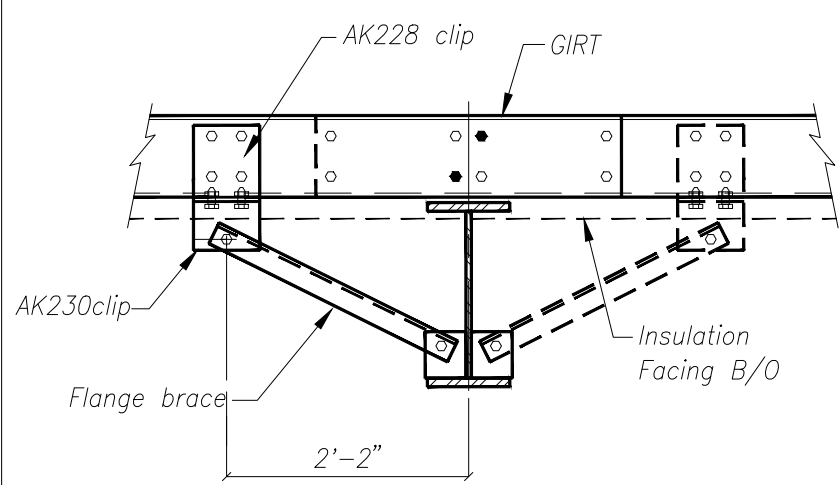
SPLICE PLATE & BOLT TABLE									
Mark	Qty	Top	Bot	Int	Type	Dia	Length	Width	Thick
SP-1	4	4	0		A325	3/4"	1 3/4"	6"	3/8"

CAP PLATES									
Col Id	Qnt	Type	Bolt Dia	Len	Width	Plate Thick	Size	Length	
EC-107	4	A325	5/8"	1 1/2"	6.000	0.375		12.200	
EC-106	4	A325	5/8"	1 1/2"	6.000	0.375		12.200	
EC-105	4	A325	5/8"	1 1/2"	6.000	0.375		12.200	
EC-104	4	A325	5/8"	1 1/2"	6.000	0.375		12.200	

FLANGE BRACE TABLE									
A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16									
FRAME LINE: 11									

∇ ID	#	MARK	LENGTH	OFFSET	DETAIL	CLIP
2	1	FB101A	2'-5 1/4"	2'-2"	G26	AK228/AK230

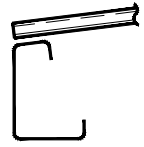
BASE PLATE TABLE				
Col Mark	Width	Plate Thick	Length	
BP-1	8"	5/8"	1'-0 1/2"	



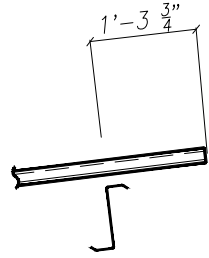
-Refer to lap details for required flange brace dimension
-Attach AK228 to the purlin with (4) 1/2"ø x 1 1/4" A-307 bolts
-Attach Back To Back Clip AK228/AK230

DETAIL @ PURLIN FLANGE BRACE ATTACHMENT

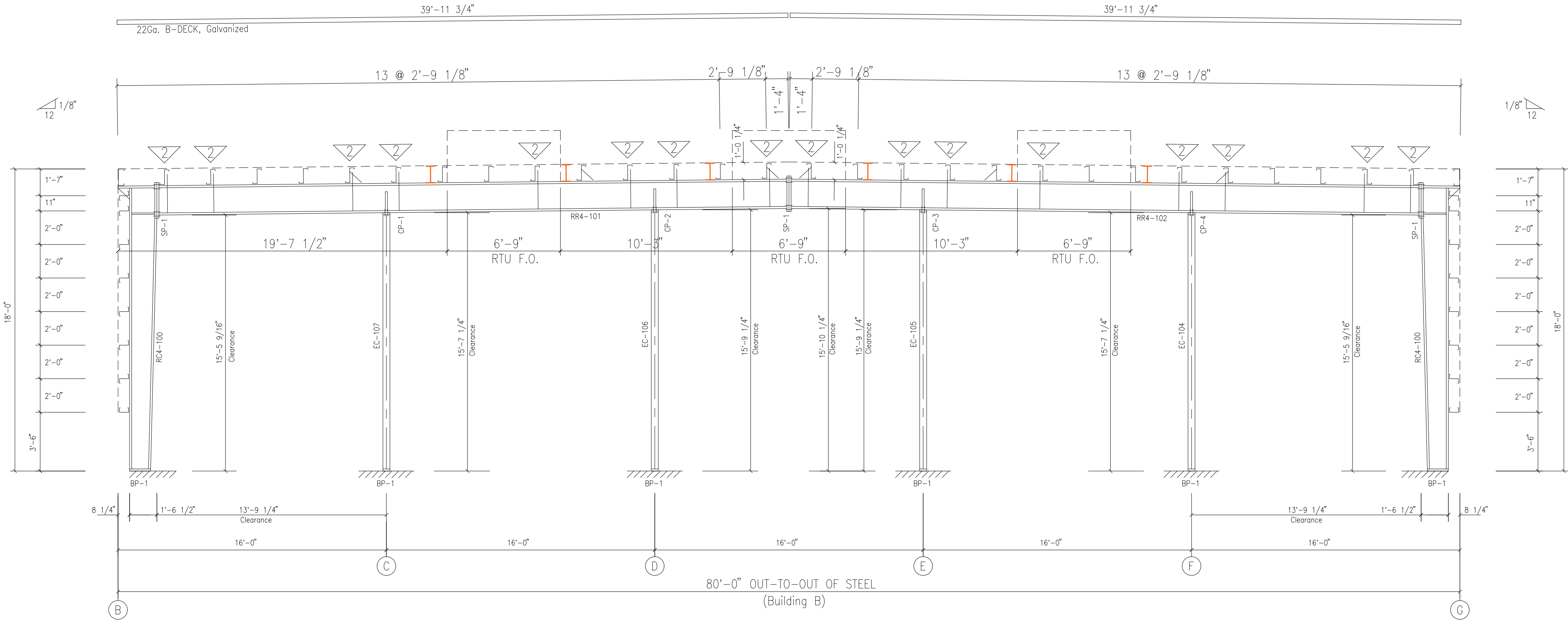
MEMBER TABLE					Outside Flange			Inside Flange		
Mark	Web	Depth	Thick	Plate Length	W x Thk x Length			W x Thk x Length		
RC4-100	12.0/18.0		0.133	203.2	6 x 1/4" x 203.0			6 x 1/4" x 180.9		
RR4-101	18.0/18.0		0.161	240.0	6 x 1/4" x 240.0			6 x 1/4" x 240.0		
RR4-102	18.0/18.0		0.161	212.6	6 x 1/4" x 212.4			6 x 1/4" x 212.4		
EC-107	18.0/18.0		0.161	212.6	6 x 1/4" x 212.4			6 x 1/4" x 212.4		
EC-106	W12X26			240.0	6 x 1/4" x 240.0			6 x 1/4" x 240.0		
EC-105	W12X26									
EC-104	W12X26									



DETAIL @ PANEL END



DETAIL @ RIDGE



RIGID FRAME ELEVATION: FRAME LINE 11

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.

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☒ FOR ERECTOR INSTALLATION:	Final drawings for construction.



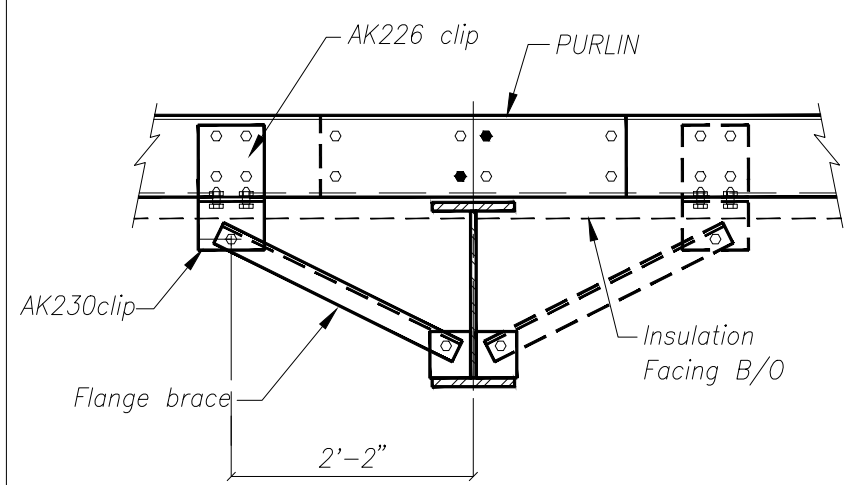
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A1	09.07.23	FOR APPROVAL	MBS	ELV	RIGID FRAME ELEVATION	VARIES
A2	04.01.24	REVISION FOR APPROVAL	HME	VN	CUSTOMER:	LOCATION:
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	First Apostolic Lutheran Church	Houghton, MI 49931
0	06.07.24	FOR ERECTOR INSTALLATION	MS/HR	FC	REFERENCE:	
					First Apostolic Lutheran Church	
					JOB SITE:	COUNTY:
					Houghton, MI 49931	Houghton
					DWN:	CHK:
					HME	VN
					DATE:	ENG:
					3/22/24	SC
					JOB NO:	DWG NO:
					11479-32472	P4
					ISSUE	0

SPLICE PLATE & BOLT TABLE									
Mark	Qty	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP-1	4	4	0	A325	3/4"	1 3/4"	6"	3/8"	2'-1 3/4"
SP-2	4	4	0	A325	3/4"	1 3/4"	6"	3/8"	1'-11 3/4"

CAP PLATES							
Col Id	Qnt	-----Bolt----- Type Dia Len	Width	Plate Size Thick	Length		
EC-107	4	A325 5/8" 1 1/2"	8.000	0.375	12.000		
EC-106	4	A325 5/8" 1 1/2"	8.000	0.375	12.000		
EC-105	4	A325 5/8" 1 1/2"	8.000	0.375	12.000		
EC-104	4	A325 5/8" 1 1/2"	8.000	0.375	12.000		

FLANGE BRACE TABLE						
A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16						
FRAME LINE: 11						
▽ ID	#	MARK	LENGTH	OFFSET	DETAIL	CLIP
1	1	FB1A	2'-3 7/8"	2'-2"	G26	AK226/AK230

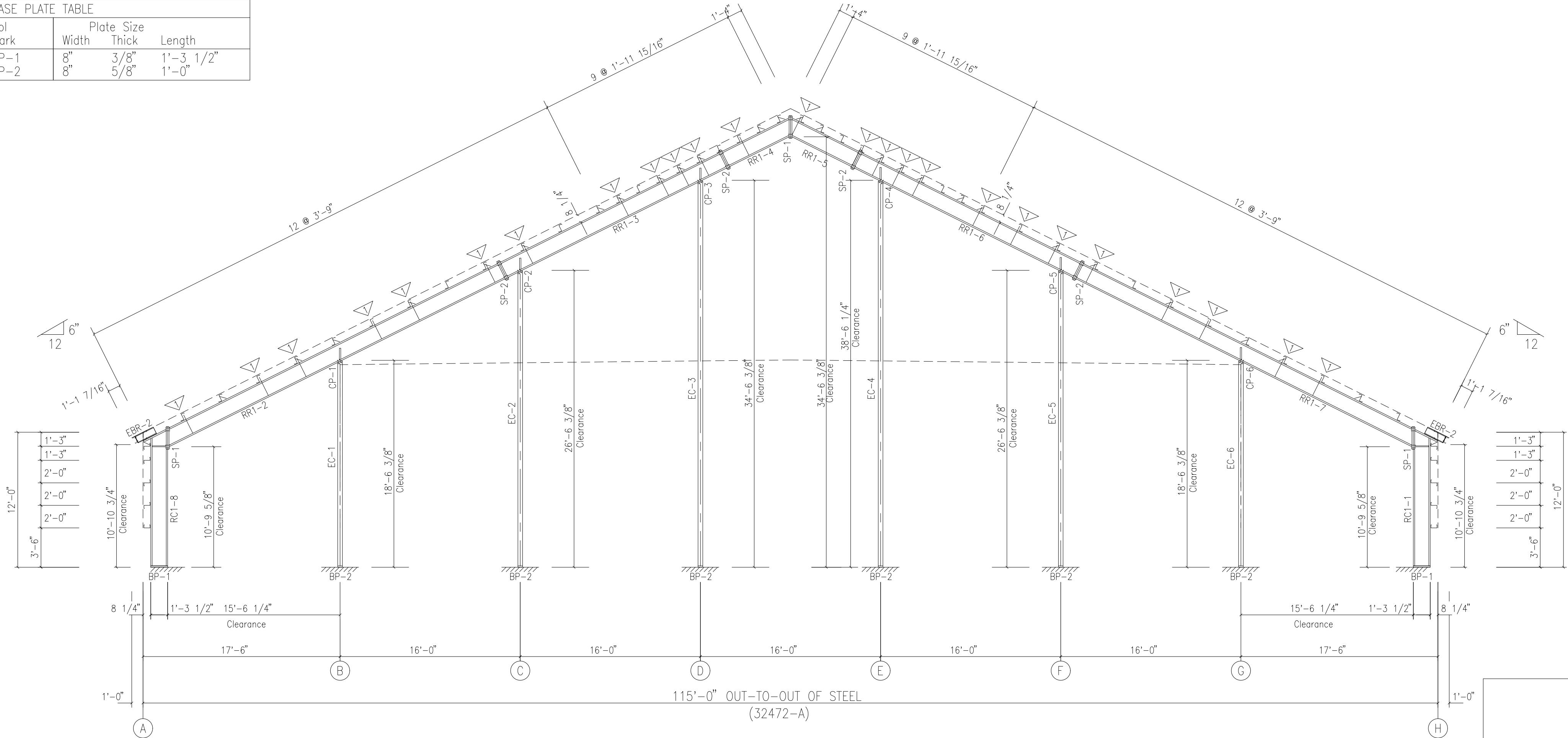
BASE PLATE TABLE			
Col Mark	Width	Plate Size Thick Length	
BP-1	8"	3/8" 1'-3 1/2"	
BP-2	8"	5/8" 1'-0"	



-Refer to lap details for required flange brace dimension
-Attach AK226 to the purlin with (4) 1/2"Ø x 1 1/4" A-307 bolts
-Attach Back To Back Clip AK226/AK230

DETAIL @ PURLIN FLANGE BRACE ATTACHMENT

MEMBER TABLE					
Mark	Web Depth		Web Plate		Outside Flange W x Thk x Length
	Start/End	Thick	Length		
RC1-1/RC1-8	15.0/15.0	0.133	145.9		6 x 1/4" x 138.2 6 x 1/4" x 26.1 6 x 1/4" x 240.0
RR1-2	15.0/15.0	0.133	240.0		6 x 1/4" x 240.0
RR1-3	15.0/15.0	0.133	164.3		6 x 1/4" x 156.6 6 x 1/4" x 240.0
RR1-4	15.0/15.0	0.133	240.0		6 x 1/4" x 240.0
RR1-5	15.0/15.0	0.133	27.9		6 x 1/4" x 27.9
RR1-6	15.0/15.0	0.133	77.8		6 x 1/4" x 77.8
RR1-7	15.0/15.0	0.133	77.8		6 x 1/4" x 77.8
EC-1	15.0/15.0	0.133	27.9		6 x 1/4" x 27.9
EC-2	15.0/15.0	0.133	240.0		6 x 1/4" x 240.0
EC-3	15.0/15.0	0.133	164.3		6 x 1/4" x 156.6
EC-4	15.0/15.0	0.133	240.0		6 x 1/4" x 240.0
EC-5	15.0/15.0	0.133	164.3		6 x 1/4" x 156.6
EC-6	15.0/15.0	0.133	240.0		6 x 1/4" x 240.0
EBR-2	15.0/15.0	0.133	240.0		6 x 1/4" x 240.0
EC-1	W12641				
EC-2	W12641				
EC-3	W12651				
EC-4	W12651				
EC-5	W12641				
EC-6	W12641				
EBR-2	W8X10				



RIGID FRAME ELEVATION: FRAME LINE 11

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.

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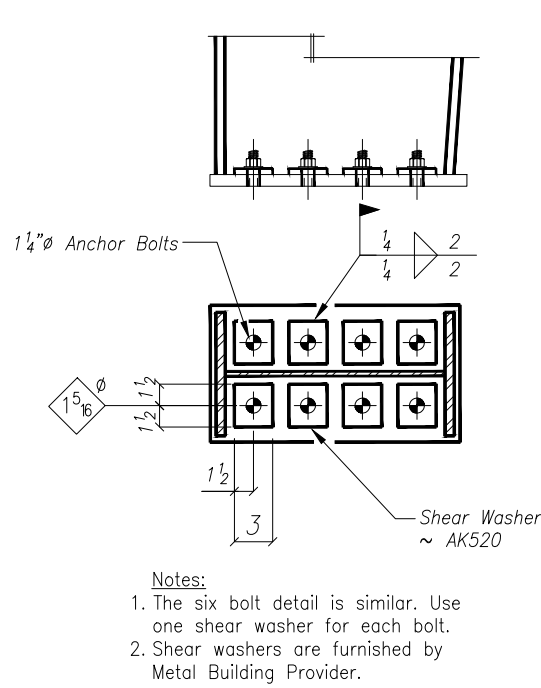
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A2	04.01.24	REVISION FOR APPROVAL	HME	VN	REFERENCE: First Apostolic Lutheran Church	
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	JOB SITE: Houghton, MI 49931	COUNTY: Houghton
0	06.07.24	FOR ERECTOR INSTALLATION	MS/HHR	FC	DWN: HME	CHK: VN
					DATE: 3/22/24	ENG: SC
					JOB NO: 11479-32472	DWG NO: P5
					ISSUE: 0	

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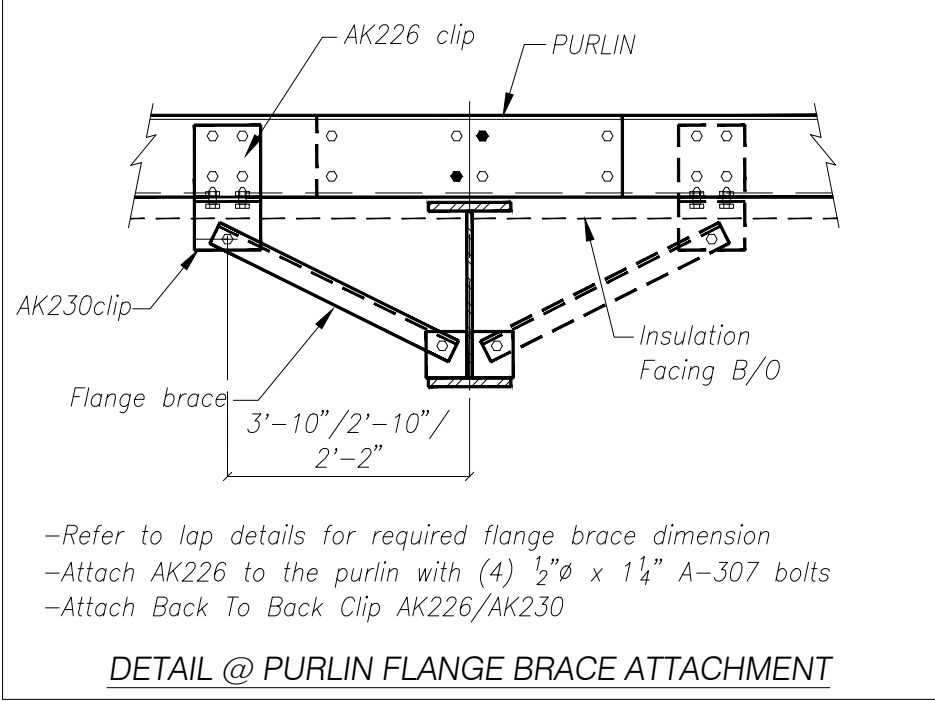
SPLICE PLATE & BOLT TABLE									
Mark	Qty		Bot	Int	Type	Dia	Length	Width	Thick
	Top								
SP-1	4	4	4	4	A325	1 1/4	3 3/4"	10"	1"
SP-2	4	4	2	2	A325	1"	2 3/4"	10"	3/4"
SP-3	4	4	2	2	A325	3/4"	2 1/4"	10"	5/8"

FLANGE BRACE TABLE						
A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16						
FRAME LINE: 12 13 14 15 16						
▽ ID	#	MARK	LENGTH	OFFSET	DETAIL	CLIP
1	2	FB8D	5'-4 3/4"	3'-10"	G26	AK226/AK230
2	2	FB7C	4'-1 3/4"	2'-10"	G26	AK226/AK230
3	2	FB6C	3'-1 7/8"	2'-2"	G26	AK226/AK230
4	1	FB5C	3'-1"	2'-2"	G26	AK226/AK230
5	1	FB4A	3'-1 1/8"	2'-2"	G26	AK226/AK230
6	1	FB3C	3'-0 7/8"	2'-2"	G26	AK226/AK230

BASE PLATE TABLE				
Col Mark	Plate Size		Length	
	Width	Thick		
BP-1	1'-0"	5/8"	2'-2"	

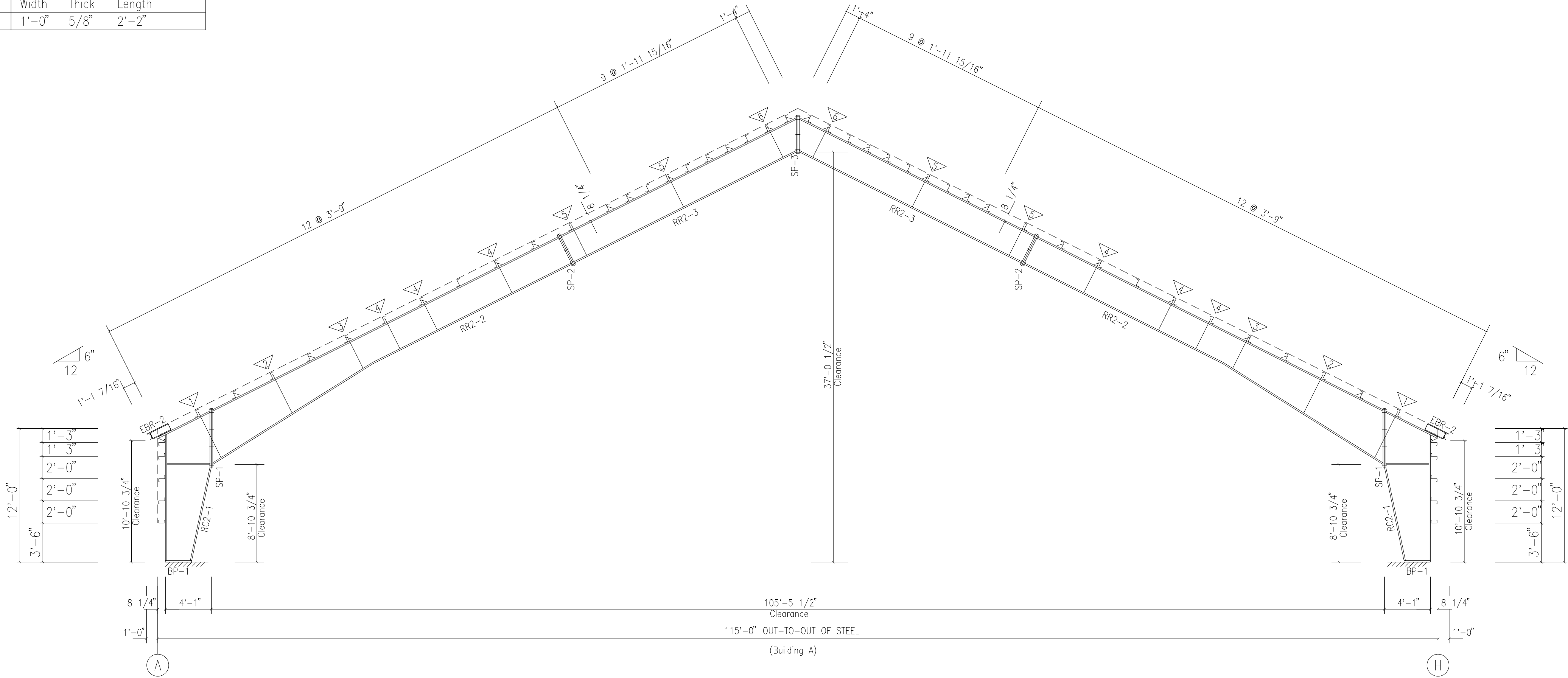


DETAIL @ SHEAR WASHERS



DETAIL @ PURLIN FLANGE BRACE ATTACHMENT

MEMBER TABLE					
Mark	Web Depth		Web Plate		Outside Flange W x Thk x Length
	Start/End	Thick	Length		
RC2-1	25.0/48.0	0.500	161.7		10 x 1/2" x 137.4
RR2-2	50.0/30.0	0.375	203.1		10 x 3/4" x 63.1
RR2-3	30.0/30.0	0.250	240.0		10 x 3/8" x 177.9
EBR-2	30.0/30.0	0.250	165.5		10 x 5/8" x 240.0
	30.0/30.0	0.313	120.0		10 x 3/4" x 165.5
					10 x 1/2" x 120.0



RIGID FRAME ELEVATION: FRAME LINE 12 13 14 15 16

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

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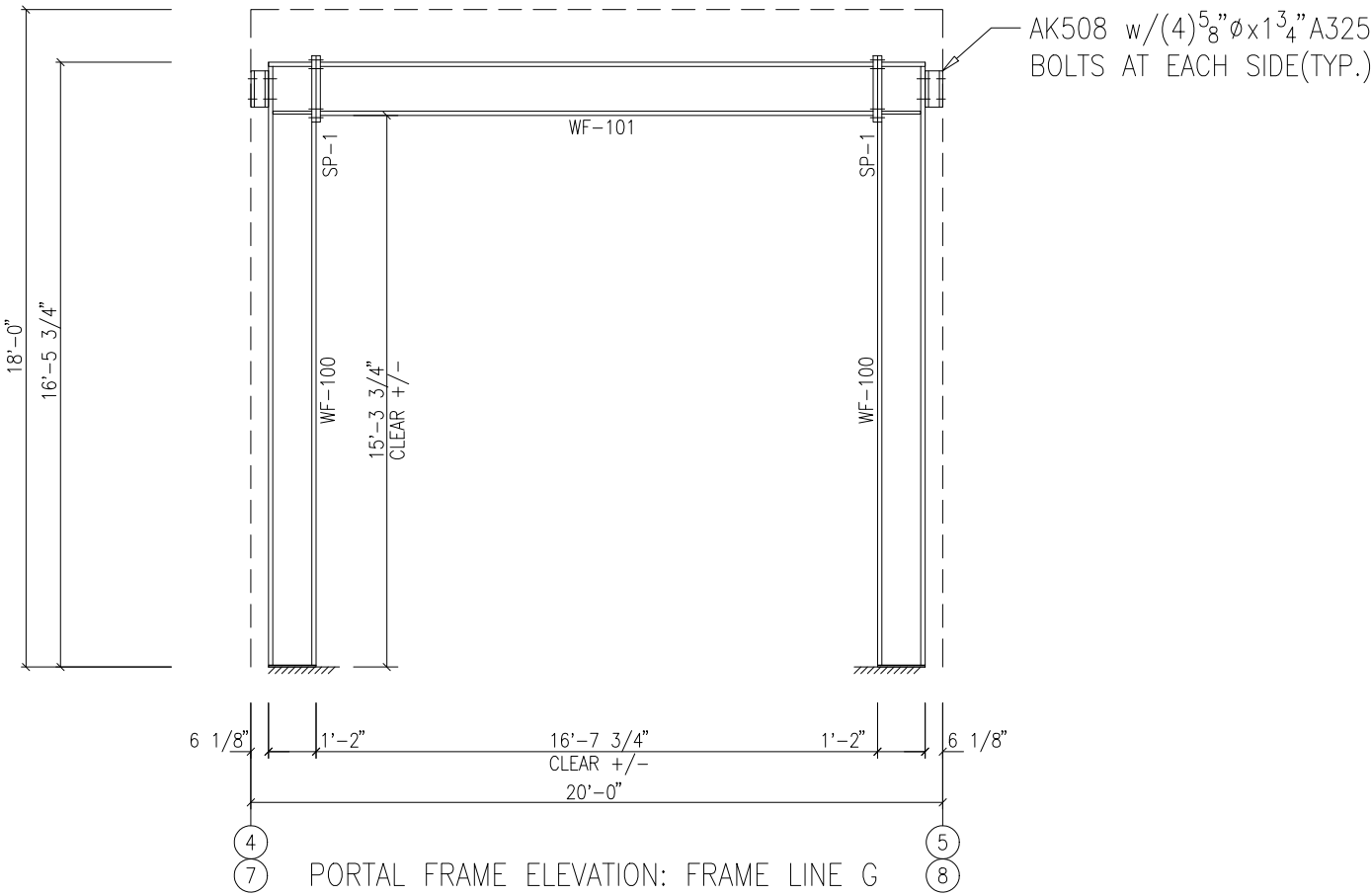
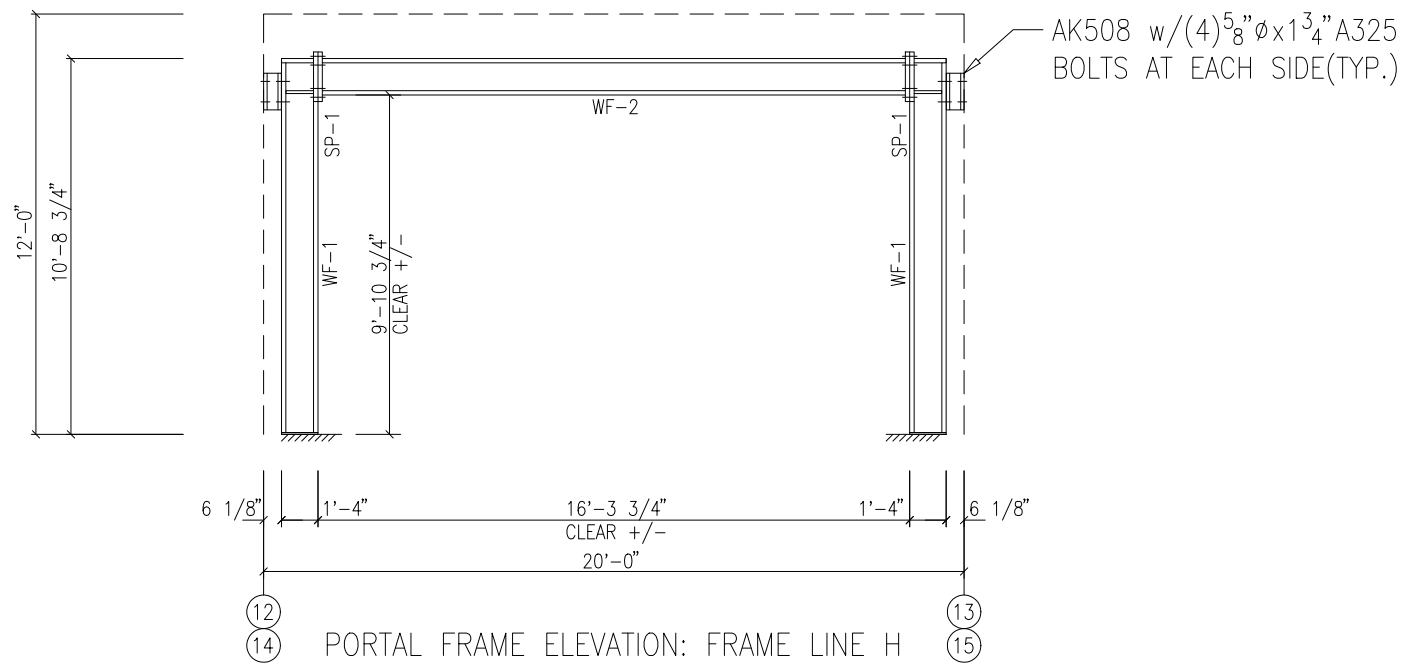


REV	DATE	DESCRIPTION	BY	CHK	DESC:	BLDG. SIZE:
A1	09.07.23	FOR APPROVAL	MBS	ELV	RIGID FRAME ELEVATION	VARIES
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0	06.07.24	FOR ERECTOR INSTALLATION	MS/HR	FC	REFERENCE:	
					First Apostolic Lutheran Church	
					JOB SITE:	COUNTY:
					Houghton, MI 49931	Houghton
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					ISSUE	0

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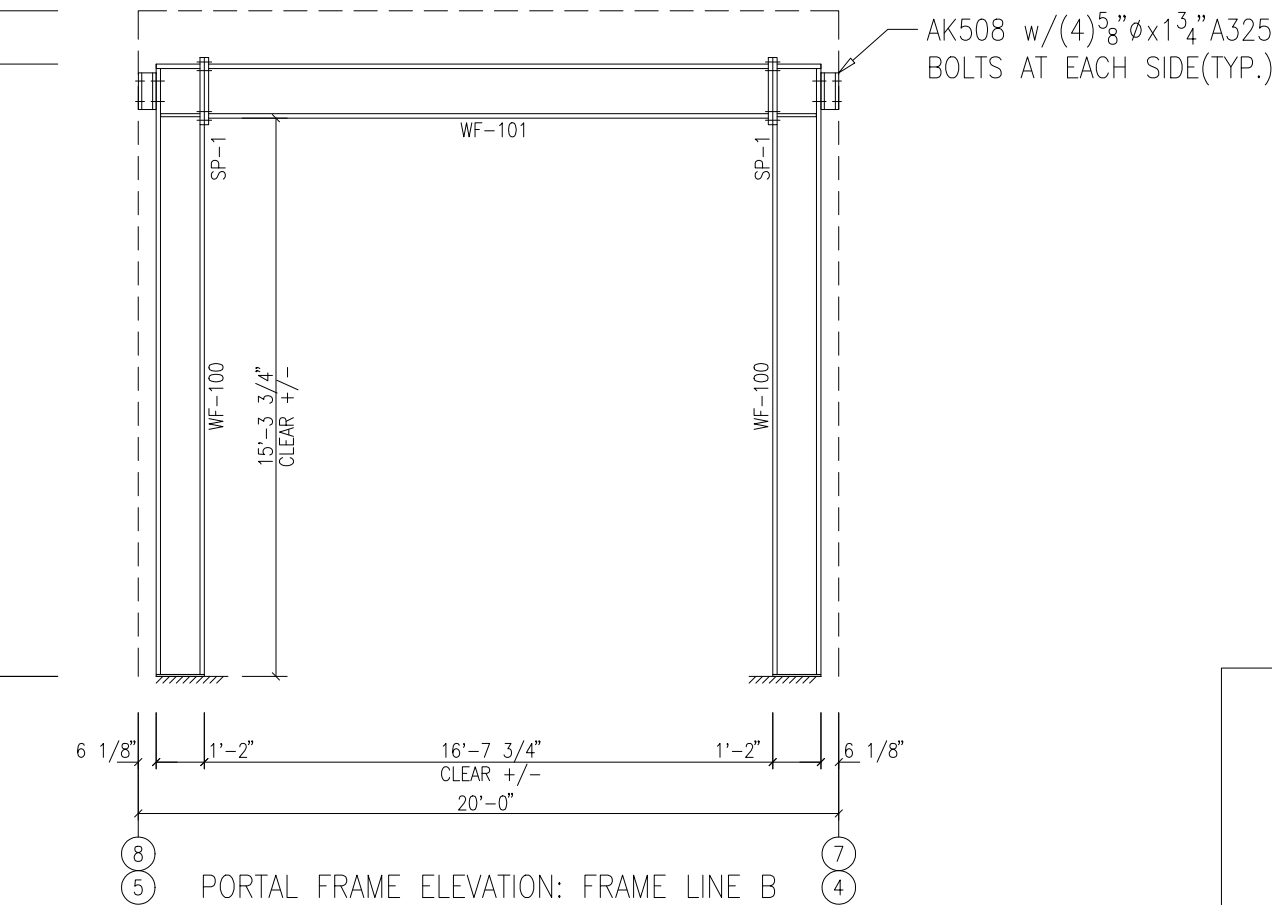
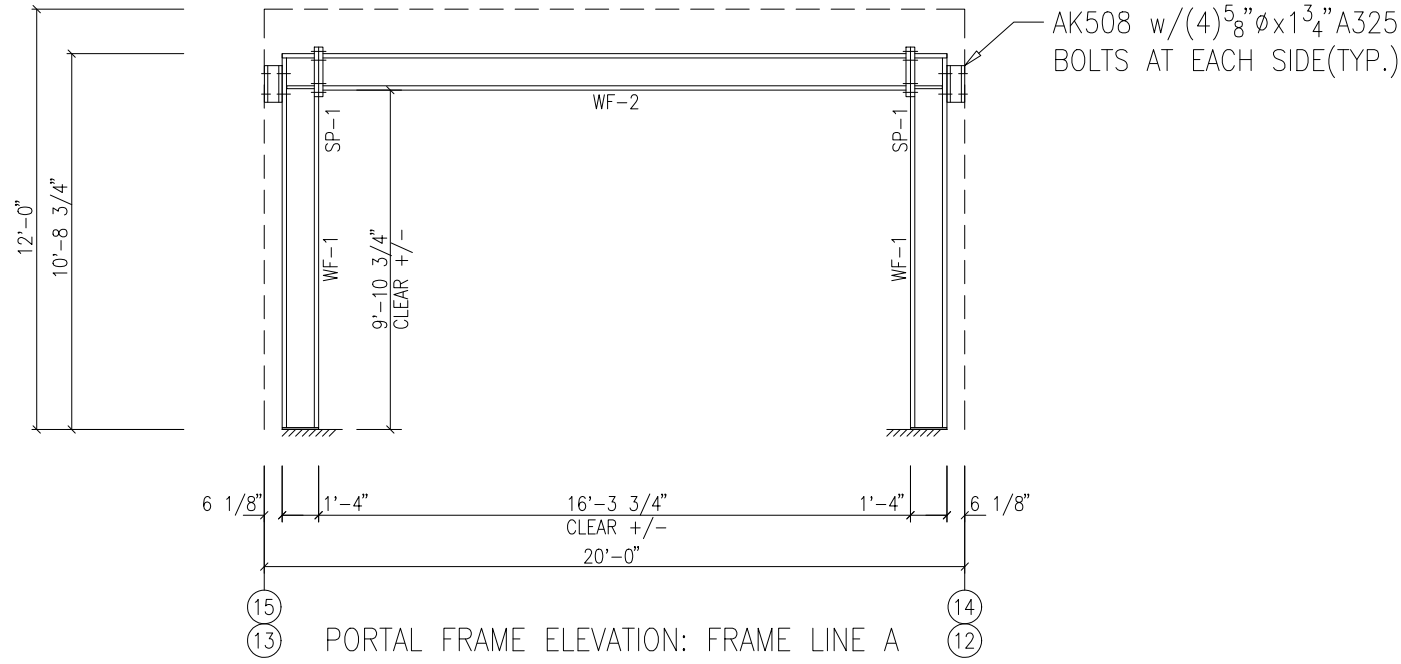
SPlice PLATES & BOLTS									
Splice Mark	Quan Top/	Bot	Type	-----Bolt----- Dia	Length	Plate Width	Size Thick	Length	
SP- 1	4	4	A325	3/4"	2 1/4"	6"	5/8"	1'-6 1/4"	

MEMBER SIZE TABLE	
MARK	MEMBER
WF-2	W10541
WF-1	W16641



SPlice PLATES & BOLTS									
Splice Mark	Quan Top/	Bot	Type	-----Bolt----- Dia	Length	Plate Width	Size Thick	Length	
SP- 1	4	4	A325	3/4"	2 1/4"	6"	5/8"	1'-6 1/4"	

MEMBER SIZE TABLE	
MARK	MEMBER
WF-2	W10541
WF-1	W16641



BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.

SPlice PLATES & BOLTS									
Splice Mark	Quan Top/	Bot	Type	-----Bolt----- Dia	Length	Plate Width	Size Thick	Length	
SP- 1	4	4	A325	3/4"	2 1/4"	6"	5/8"	1'-10 1/4"	

MEMBER SIZE TABLE	
MARK	MEMBER
WF-101	W14641
WF-100	W14641

SPlice PLATES & BOLTS									
Splice Mark	Quan Top/	Bot	Type	-----Bolt----- Dia	Length	Plate Width	Size Thick	Length	
SP- 1	4	4	A325	3/4"	2 1/4"	6"	5/8"	1'-10 1/4"	

MEMBER SIZE TABLE	
MARK	MEMBER
WF-101	W14641
WF-100	W14641

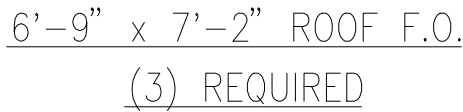
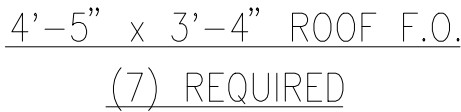
DRAWING STATUS	
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☒ FOR ERECTOR INSTALLATION:	Final drawings for construction.



REV	DATE	DESCRIPTION	BY	CHK	DESC:	PORTAL FRAME ELEVATION	BLDG. SIZE:	VARIES
A1	09.07.23	FOR APPROVAL	MBS	ELV	CUSTOMER:	First Apostolic Lutheran Church	LOCATION:	Houghton, MI 49931
A2	04.01.24	REVISION FOR APPROVAL	HME	VN	REFERENCE:	First Apostolic Lutheran Church		
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	JOB SITE:	Houghton, MI 49931	COUNTY:	Houghton
0	06.07.24	FOR ERECTOR INSTALLATION	MS/HR	FC	DWN:	HME	CHK:	VN
					DATE:	3/22/24	ENG:	SC
					JOB NO:	11479-32472	DWG NO:	W1
					ISSUE	0		

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MEMBER TABLE	
ROOM PLAN	
MARK	PART
32472-A	
PM106	.
EBR-2	W8X10
P-1	8X25Z12
P-2	8X25Z12
P-3	8X25Z12
P-4	8X25Z12
P-5	8X25Z12
E-1	8E514
E-2	8E514
C-1	8X35C14
C-2	8X35C12
E-5	8E514
CB-1	0.38_CBL
CB-2	0.31_CBL
CB-3	0.25_CBL
CB-4	0.25_CBL
SP-1	6X25C14
C-3	6X25C16
C-4	6X25C16
C-5	6X25C16
32472-B	
RO-100	12X35C14
RO-101	12X35C14
RO-102	12X35C14
RO-103	12X35C14
RO-103A	12X35C14
RO-104	W12X19
RO-104A	W12X19
RO-106	W12X26
RO-106A	W12X26
RO-107	W12X19
RO-107A	W12X19
RO-109	12X35C14
RO-110	12X35C14
RO-111	W12X19
RO-111A	W12X19
P-100	12X25Z12
P-101	12X25Z12
P-102	12X25Z12
P-102A	12X25Z12
P-102B	12X25Z12
P-104	12X25Z12
P-105	12X25Z14
P-106	12X25Z12
P-107	12X25Z12
P-109	12X25Z12
P-110	12X25Z12
P-111	12X25Z12
P-112	12X25Z12
P-114	12X25Z12
P-115	12X25Z12
P-117	12X25Z12
P-118	12X25Z12
P-119	12X25Z12
P-121	12X25Z12
P-123	12X25Z12
P-124	12X35C14
P-125	12X35C14
P-126	12X35C14
P-127	12X35C14
P-129	12X35C14
P-130	12X35C14
E-100	12E5120
E-101	12E5120
CB-100	0.50_CBL
CB-101	0.50_CBL
CB-102	0.50_CBL
SP-100	10X25C14
C-100	10X25C16
C-110	10X25C16
C-111	10X25C16
C-112	10X25C16
C-113	10X25C16
C-114	10X25C16
C-115	10X25C16
C-116	10X25C16
C-117	10X25C16
C-118	10X25C16



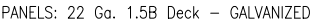
DRAWING STATUS

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☒	<u>FOR ERECTOR INSTALLATION:</u> Final drawings for construction.



REV	DATE	DESCRIPTION	BY	CHK	DESC:	BLDG. SIZE:	VARIABLES
A1	09.07.23	FOR APPROVAL	MBS	ELV	ROOF FRAMING PLAN		
A2	04.01.24	REVISION FOR APPROVAL	HME	VN	CUSTOMER:	LOCATION:	
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	First Apostolic Lutheran Church	Houghton, MI 49931	
0	06.07.24	FOR ERECTOR INSTALLATION	MHS	FC	REFERENCE:	First Apostolic Lutheran Church	
					JOB SITE:	Houghton, MI 49931	COUNTY: Houghton
					DWN:	CHK:	DATE:
					HME		03/22/24
					ENG:	JOB NO:	DWG NO:
					SC	11479-32472	E1
							ISSUE
							0

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REV	DATE	DESCRIPTION	BY	CHK	DESC:	BLDG. SIZE:
A1	09.07.23	FOR APPROVAL	MBS	ELV	ROOF SHEETING PLAN	VARIES
A2	04.01.24	REVISION FOR APPROVAL	HME	VN	CUSTOMER:	LOCATION:
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	First Apostolic Lutheran Church	Houghton, MI 49931
0	06.07.24	FOR ERECTOR INSTALLATION	MW/HSR	FC	REFERENCE:	
					First Apostolic Lutheran Church	
					JOB SITE:	COUNTY:
					Houghton, MI 49931	Houghton
					DWN:	CHK:
					HME	VN
					DATE:	ENG:
					3/22/24	SC
					JOB NO:	DWG NO:
					11479-32472	E2
					ISSUE	0

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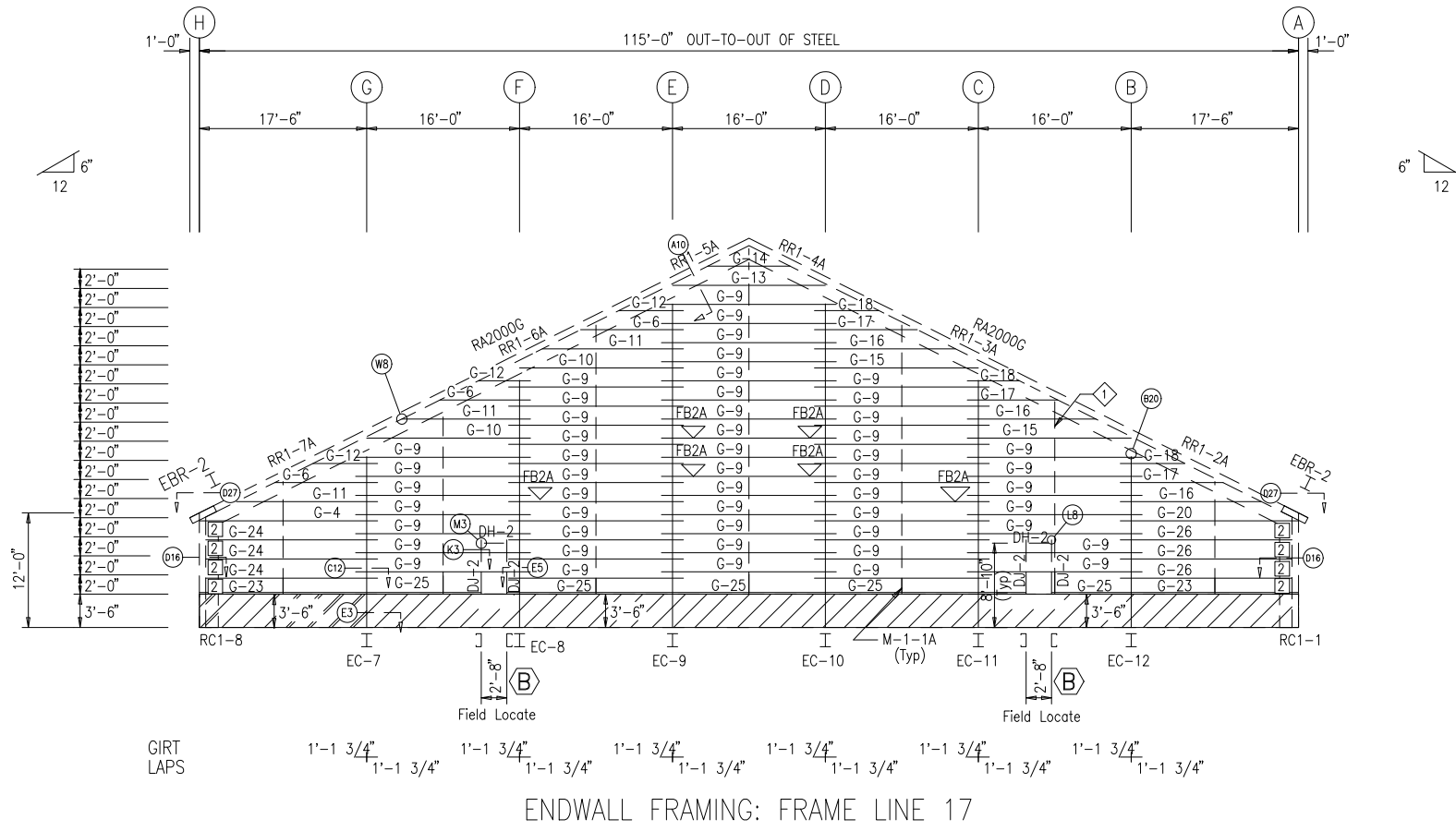
BOLT TABLE				
FRAME LINE 17				
LOCATION	QUAN	TYPE	DIA	LENGTH
Columns/Rof	4	A325	5/8"	1 1/2"

ANGLE TABLE		
FRAME LINE 17		
◇ID	MARK	LENGTH
1	PS-104	104'-0"

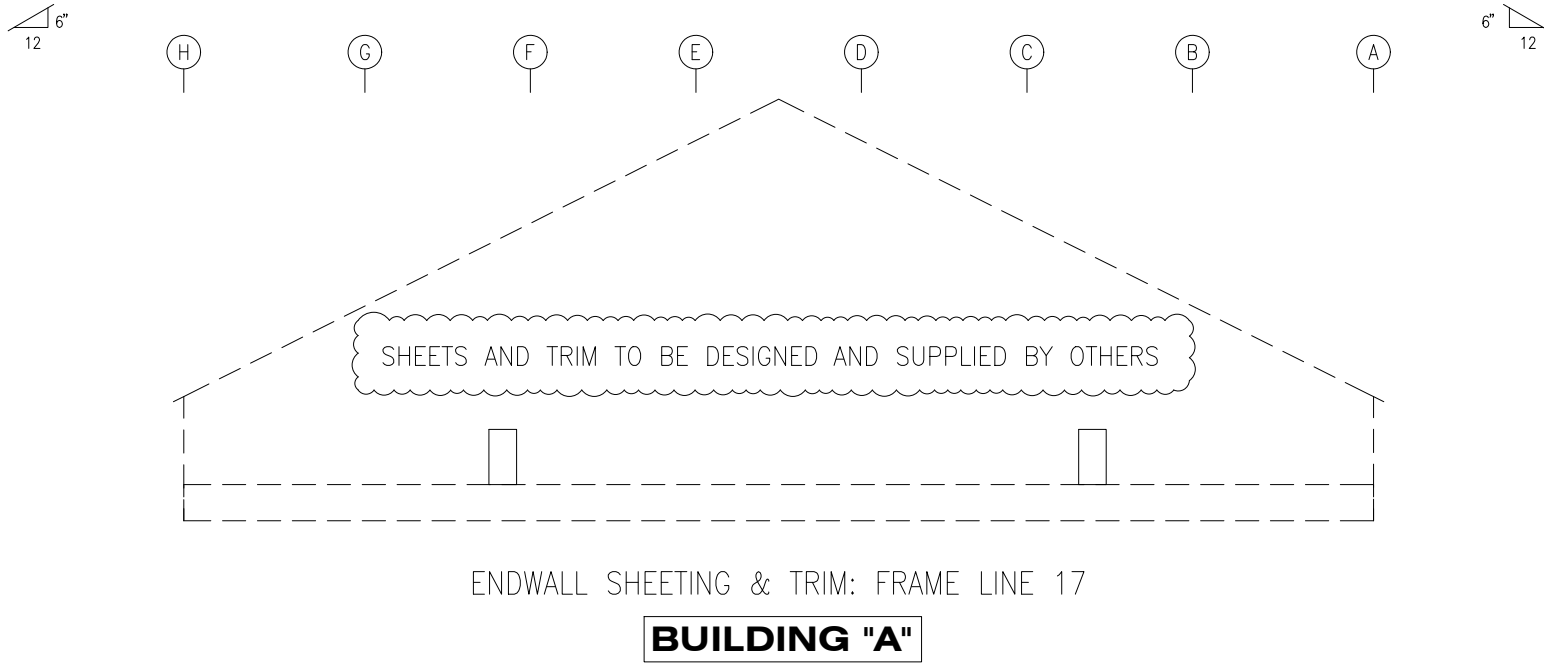
FLANGE BRACE TABLE		
FRAME LINE 17		
▽ID	MARK	LENGTH
1	FB2A	2'-6 1/4"

CONNECTION PLATES	
FRAME LINE 17	
□ID	MARK/PART
2	AK244

MEMBER TABLE	
FRAME LINE 17	
MARK	PART
EBR-2	W8X10
EC-7	W12641
EC-8	W12641
EC-9	W12651
EC-10	W12651
EC-11	W12641
EC-12	W12641
DJ-2	8X25C14
DH-2	8X25C14
G-4	8X25Z16
G-6	8X25Z16
G-9	8X25Z16
G-10	8X25Z16
G-11	8X25Z16
G-12	8X25Z16
G-13	8X25Z16
G-14	8X25Z16
G-15	8X25Z16
G-16	8X25Z16
G-17	8X25Z16
G-18	8X25Z16
G-20	8X25Z16
G-23	8X25C16
G-24	8X25Z16
G-25	8X25C16
G-26	8X25Z16



ENDWALL FRAMING: FRAME LINE 17



ENDWALL SHEETING & TRIM: FRAME LINE 17

BUILDING "A"

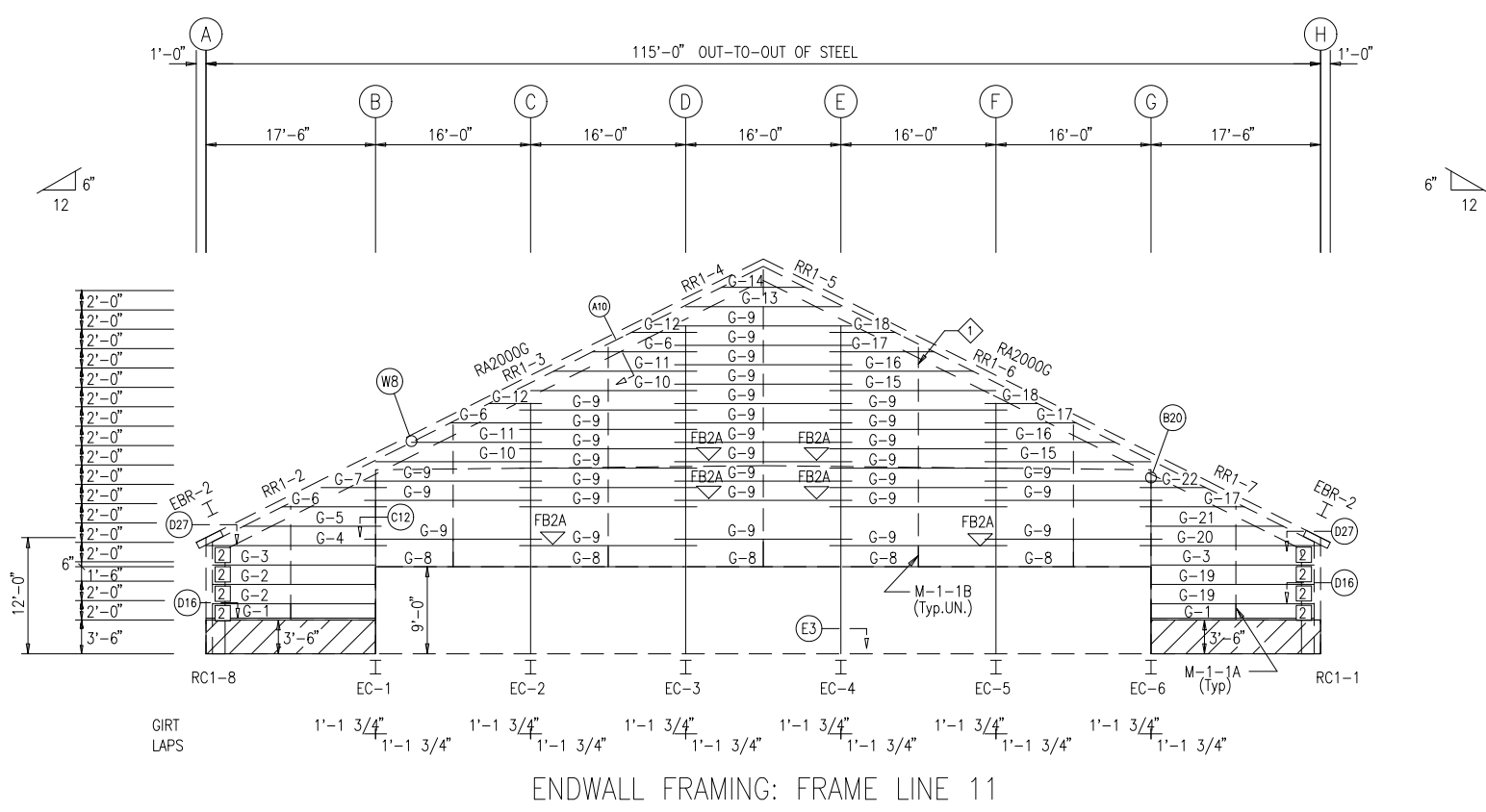
BOLT TABLE				
FRAME LINE 11				
LOCATION	QUAN	TYPE	DIA	LENGTH
Columns/Rof	4	A325	5/8"	1 1/2"

ANGLE TABLE		
FRAME LINE 11		
◇ID	MARK	LENGTH
1	PS-104	104'-0"

FLANGE BRACE TABLE		
FRAME LINE 11		
▽ID	MARK	LENGTH
1	FB2A	2'-6 1/4"

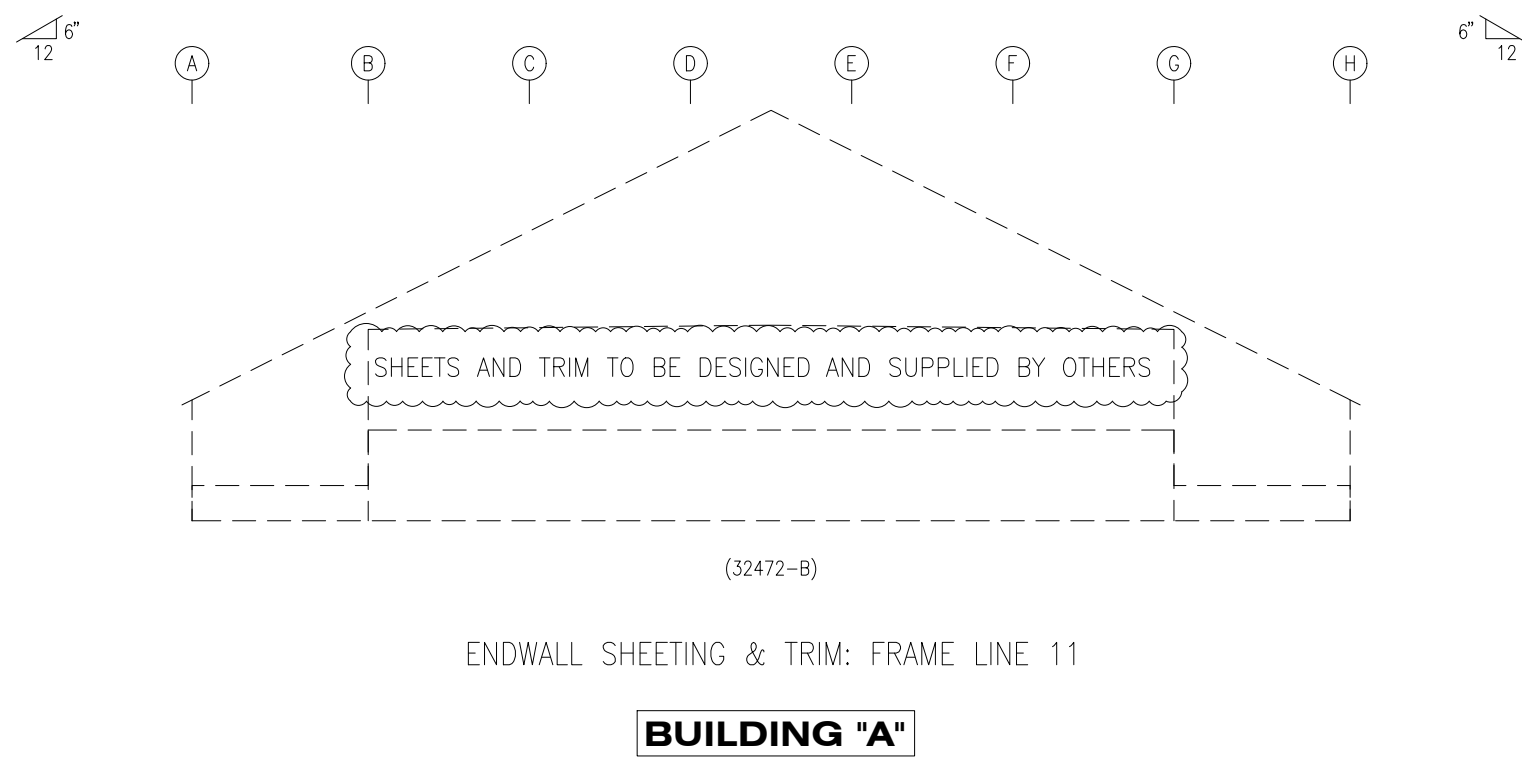
CONNECTION PLATES	
FRAME LINE 11	
□ID	MARK/PART
2	AK244

MEMBER TABLE	
FRAME LINE 11	
MARK	PART
EBR-2	W8X10
EC-1	W12641
EC-2	W12641
EC-3	W12651
EC-4	W12651
EC-5	W12641
EC-6	W12641
G-1	8X25C16
G-2	8X25Z16
G-3	8X25Z16
G-4	8X25Z16
G-5	8X25Z16
G-6	8X25Z16
G-7	8X25Z16
G-8	8X25C16
G-9	8X25Z16
G-10	8X25Z16
G-11	8X25Z16
G-12	8X25Z16
G-13	8X25Z16
G-14	8X25Z16
G-15	8X25Z16
G-16	8X25Z16
G-17	8X25Z16
G-18	8X25Z16
G-19	8X25Z16
G-20	8X25Z16
G-21	8X25Z16
G-22	8X25Z16



ENDWALL FRAMING: FRAME LINE 11

BUILDING "A"



ENDWALL SHEETING & TRIM: FRAME LINE 11

BUILDING "A"

GENERAL SHEETING & TRIM NOTES:

- Refer to erection drawings for rake angle locations.
- Roof member screws are on 12" centers at the intermediate purlins. The spacing at the eave, end lap, and peak purlins are as shown.
- Wall member screws are on 6" centers at the base member and 12" centers for all remaining members.
- Roof stitch screws are located (1) at each member and (2) between members spaced evenly apart (20" maximum spacing).
- Wall stitch screws are located (1) at each member then spaced evenly apart between members with the spacing not to exceed 20".
- Skylight stitch screws are at 6" o.c.
- Start endwall panels at centerline of bldg, unless noted.
- Gutter, rake, & eave trim lap 2". All other trims lap 1".
- Field cut or lap panels as required to fit.
- Field cut panels for all openings.
- Pop rivet gutter counterflashing to wall panel on 3'-0" centers and caulk all laps.
- Gutter support strap spacing: Super Span 36", Super Seam 48", Weather Lok-16 32".
- Downspout strap spacing: 4" x 4" 8'-0" o.c. max, larger downspouts 5'-0" o.c. max.
- Corner and/or peak boxes are not furnished with trim profiles. Field miter as required.
- Hot-Rolled or Built-Up members must be pre-drilled before attaching members screws.
- Metal shavings must be swept from the roof each day to avoid surface rusting.
- Windows and louvers must be installed before sheeting the walls.
- For clarity, tape sealant, closures, etc. may not be shown. Refer to the appropriate standing seam technical/erection manual or standard pull outs for through-fastened (screw-down) type roof systems for additional installation instructions.

GENERAL FRAMING NOTES:

- Angles are marked by their length in feet and inches.
- Field cut or lap angles as required to fit.
- Flange braces are marked by their length in decimal inches.
- Outside flange of girt turns down unless noted.
- Endwall girts and eave struts do not lap.
- Field cut and self-top girts at walk doors.
- Field slot girts for brace rods or cables.
- Field locate windows and walk doors.
- Field weld all splices at 14 gauge valley gutters.
- Field Bolt Ak400 base clip to endwall columns:
- (2) 5/8" x 1-1/2" A325 bolts if (1) AK400 required.
- (2) 5/8" x 1-3/4" A325 bolts if (2) AK400 required.
- Locate top of roof framed openings flush with the pan of the roof panel.
- Some field drilling at framed openings may be required. Field drill 9/16" diameter holes.
- Sub-joints for overhead or roll-up doors, if required, are not furnished by Metal Building Provider.

DRAWING STATUS

- ☐ FOR APPROVAL:
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- ☐ FOR CONSTRUCTION PERMIT:
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- ☒ FOR ERECTOR INSTALLATION:
Final drawings for construction.

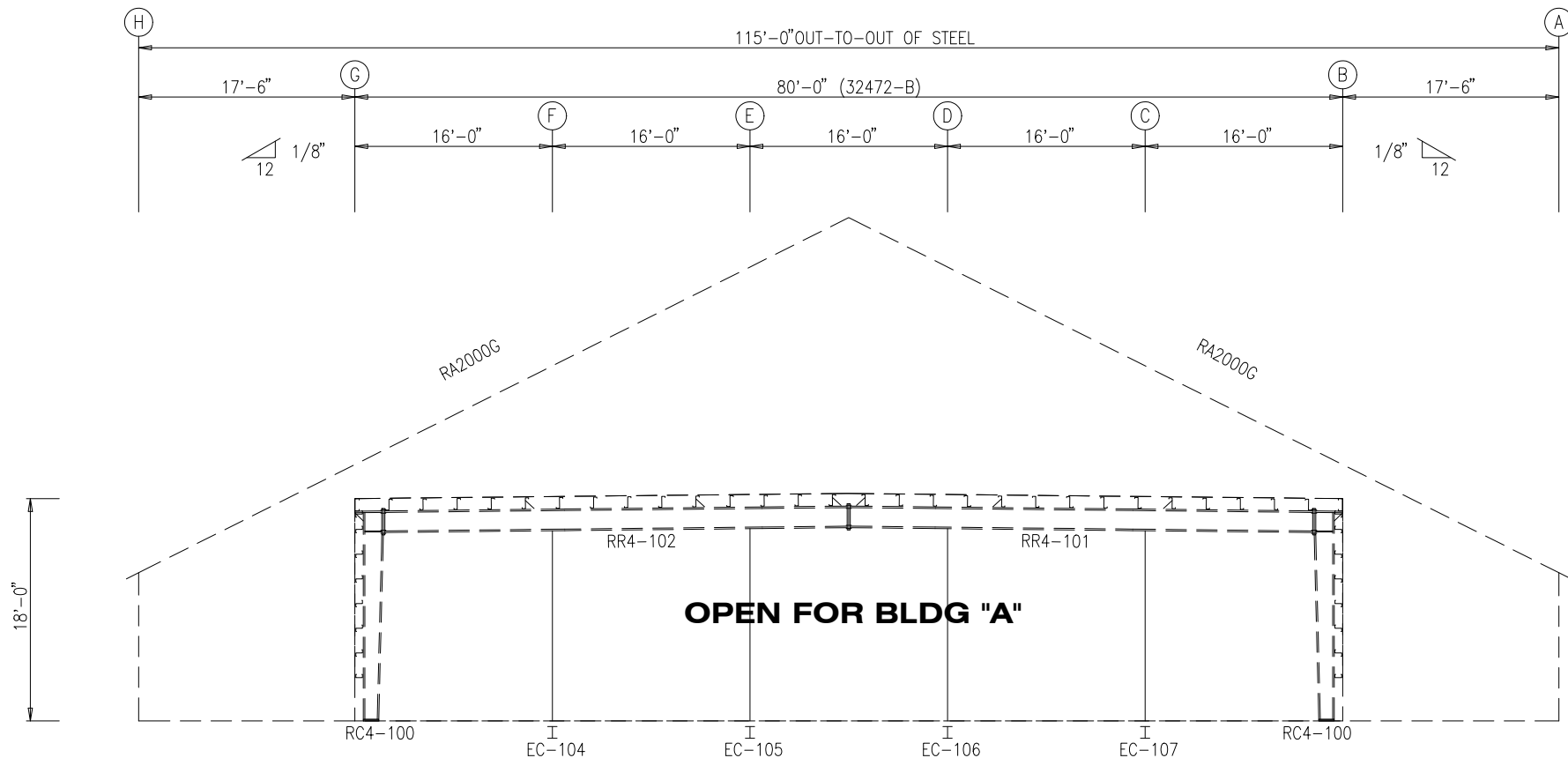
METAL BUILDING
Outlet Corp.

REV	DATE	DESCRIPTION	BY	CHK	DESC:	BLDG. SIZE:
A1	09.07.23	FOR APPROVAL	MBS	ELV	CUSTOMER:	VARIES
A2	04.01.24	REVISION FOR APPROVAL	HME	VN	First Apostolic Lutheran Church	LOCATION: Houghton, MI 49931
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	REFERENCE:	First Apostolic Lutheran Church
0	06.07.24	FOR ERECTOR INSTALLATION	MS/HR	FC	JOB SITE:	Houghton, MI 49931
					COUNTY:	Houghton
					DWN:	CHK:
					HME	VN
					DATE:	3/22/24
					ENG:	SC
					JOB NO:	11479-32472
					DWG NO:	E3
					ISSUE	0

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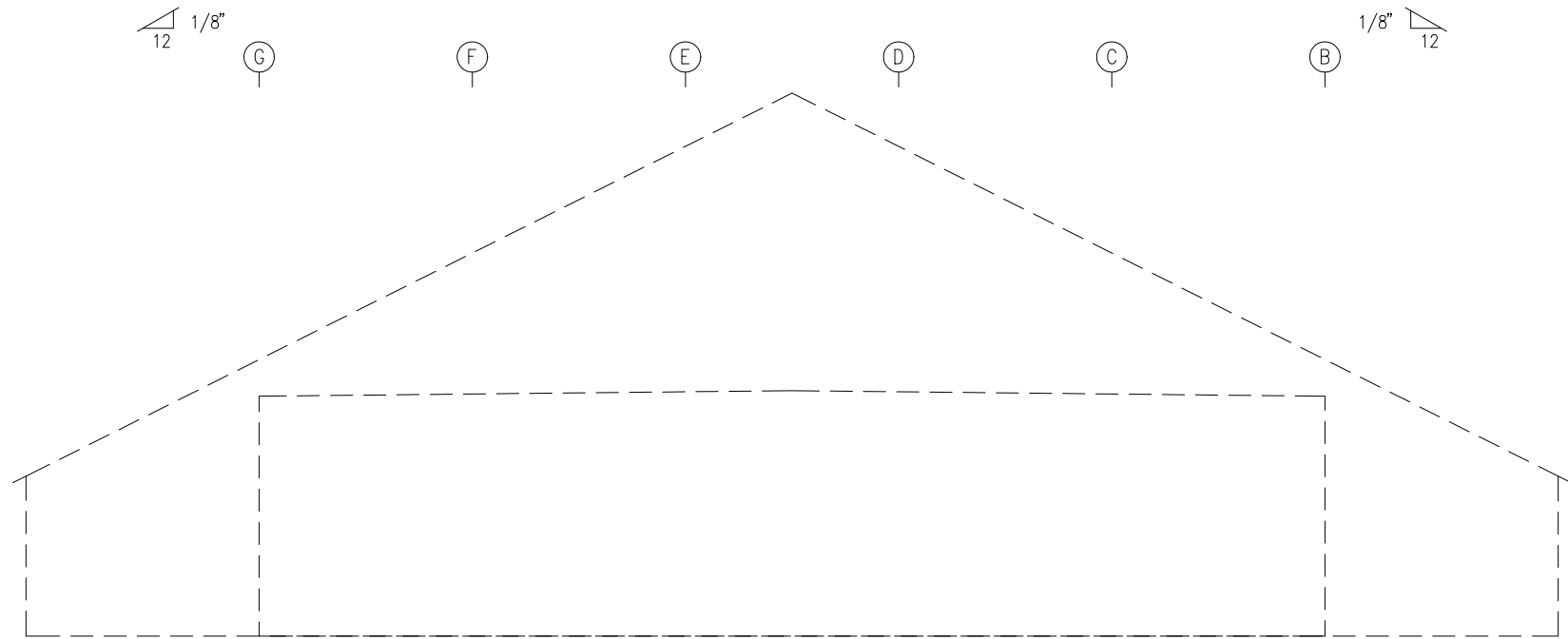
BOLT TABLE FRAME LINE 11				
LOCATION	QUAN	TYPE	DIA	LENGTH
Columns/Rof	4	A325	5/8"	1 1/2"

MEMBER TABLE FRAME LINE 11	
MARK	PART
EC-104	W12X26
EC-105	W12X26
EC-106	W12X26
EC-107	W12X26



ENDWALL FRAMING: FRAME LINE 11

BUILDING "B"



ENDWALL SHEETING & TRIM: FRAME LINE 11

BUILDING "B"

GENERAL SHEETING & TRIM NOTES:

- Refer to erection drawings for rake angle locations.
- Roof member screws are on 12" centers at the intermediate purlins. The spacing at the eave, end lap, and peak purlins are as shown.
- Wall member screws are on 6" centers at the base member and 12" centers for all remaining members.
- Roof stitch screws are located (1) at each member and (2) between members spaced evenly apart (20" maximum spacing).
- Wall stitch screws are located (1) at each member then spaced evenly apart between members with the spacing not to exceed 20".
- Skylight stitch screws are at 6" o.c.
- Start endwall panels at centerline of bldg, unless noted.
- Gutter, rake, & eave trim lap 2". All other trims lap 1".
- Field cut or lap panels as required to fit.
- Field cut panels for all openings.
- Pop rivet gutter counterflashing to wall panel on 3'-0" centers and caulk all laps.
- Gutter support strap spacing: Super Span 36", Super Seam 48", Weather Lok-16 32".
- Downspout strap spacing: 4" x 4" 8'-0" o.c. max, larger downspouts 5'-0" o.c. max.
- Corner and/or peak boxes are not furnished with trim profiles. Field miter as required.
- Hot-Rolled or Built-Up members must be pre-drilled before attaching members screws.
- Metal shavings must be swept from the roof each day to avoid surface rusting.
- Windows and louvers must be installed before sheathing the walls.
- For clarity, tape sealant, closures, etc. may not be shown. Refer to the appropriate standing seam technical/erection manual or standard pull outs for through-fastened (screw-down) type roof systems for additional installation instructions.

GENERAL FRAMING NOTES:

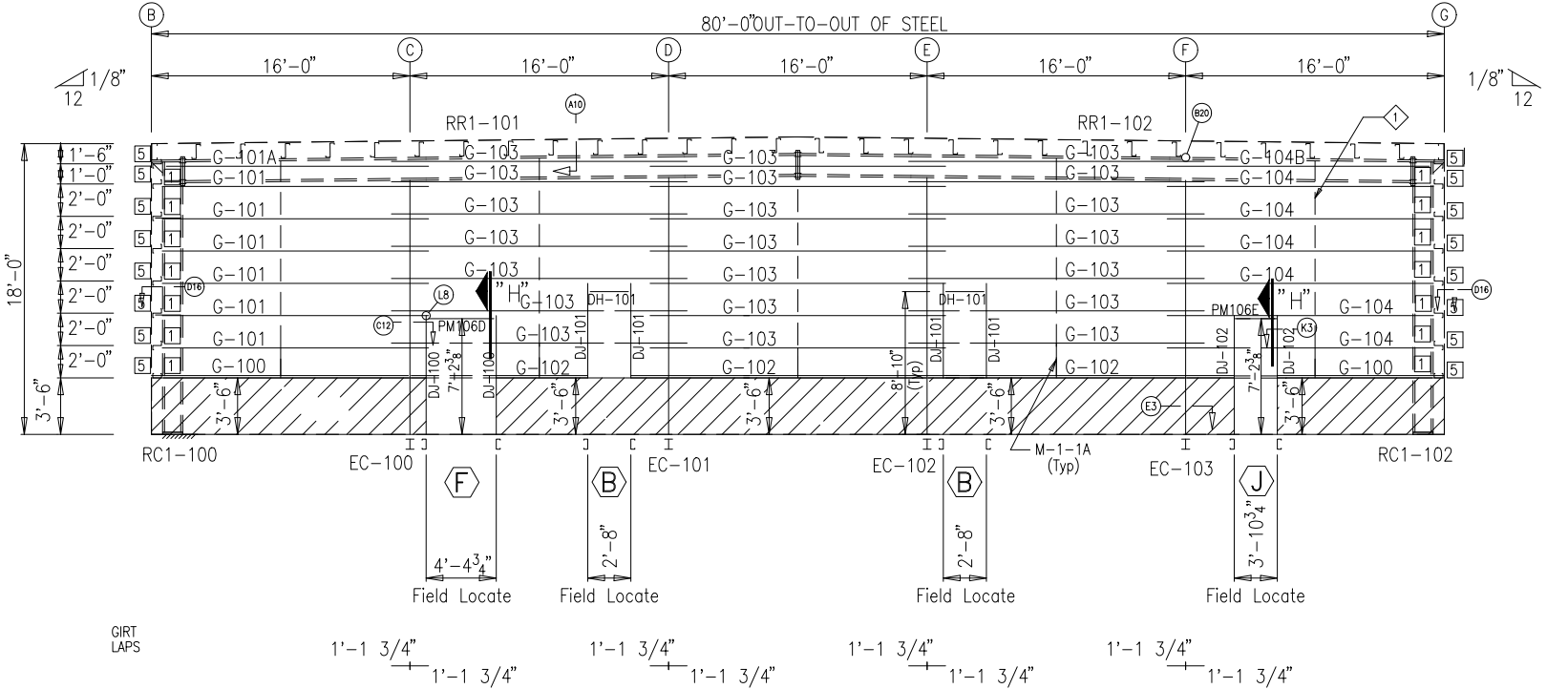
- Angles are marked by their length in feet and inches.
- Field cut or lap angles as required to fit.
- Flange braces are marked by their length in decimal inches.
- Outside flange of girt turns down unless noted.
- Endwall girts and eave struts do not lap.
- Field cut and self-top girts at walk doors.
- Field slot girts for brace rods or cables.
- Field locate windows and walk doors.
- Field weld all splices at 14 gauge valley gutters.
- Field Bolt Ak400 base clip to endwall columns:
- (2) 5/8" x 1-1/2" A325 bolts if (1) AK400 required.
- (2) 5/8" x 1-3/4" A325 bolts if (2) AK400 required.
- Locate top of roof framed openings flush with the pan of the roof panel.
- Some field drilling at framed openings may be required. Field drill 9/16" diameter holes.
- Sub-joints for overhead or roll-up doors, if required, are not furnished by Metal Building Provider.

BOLT TABLE FRAME LINE 1				
LOCATION	QUAN	TYPE	DIA	LENGTH
Columns/Rof	4	A325	5/8"	1 1/2"

ANGLE TABLE FRAME LINE 1		
◇ ID	MARK	LENGTH
1	PS-104	104'-0"

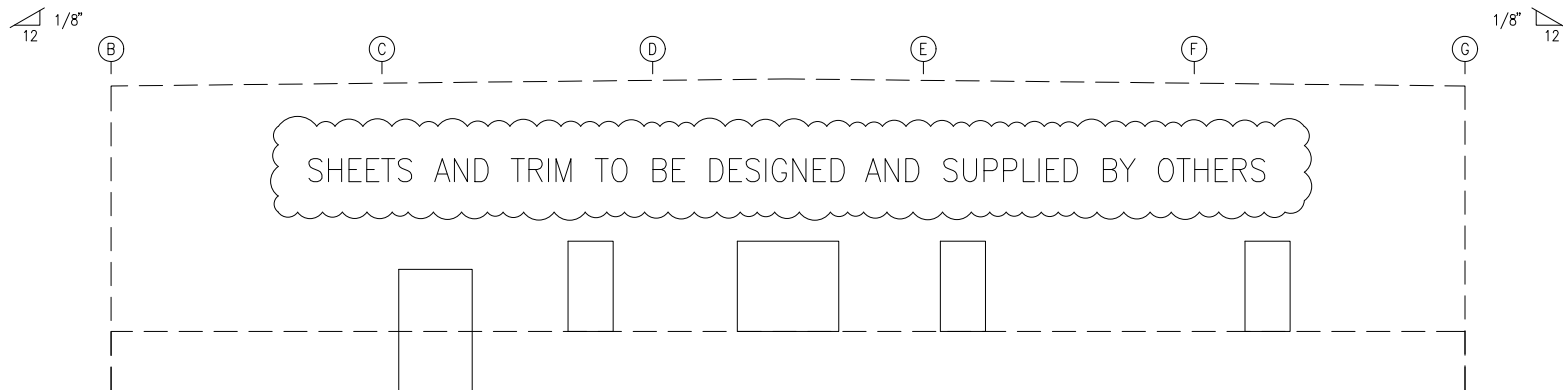
MEMBER TABLE FRAME LINE 1	
MARK	PART
EC-100	W12X14
EC-101	W12X14
EC-102	W12X14
EC-103	W12X14
DJ-100	8X25C14
DJ-101	8X25C14
DJ-102	8M25C14
DH-101	8X25C14
PM106E	
PM106D	
G-100	8X25C16
G-101	8X25Z16
G-101A	8X25Z16
G-102	8X25C16
G-103	8X25Z16
G-104	8X25Z16
G-104B	8X25Z16

CONNECTION PLATES FRAME LINE 1	
□ ID	MARK/PART
1	AK244
5	SC-5



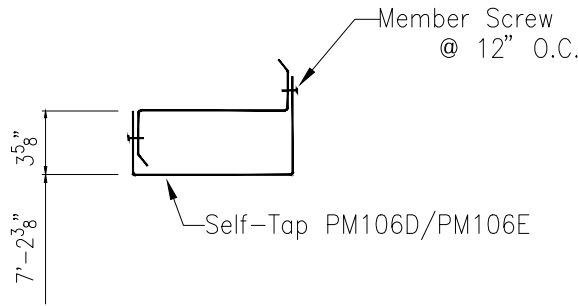
ENDWALL FRAMING: FRAME LINE 1

BUILDING "B"



ENDWALL SHEETING & TRIM: FRAME LINE 1

BUILDING "B"



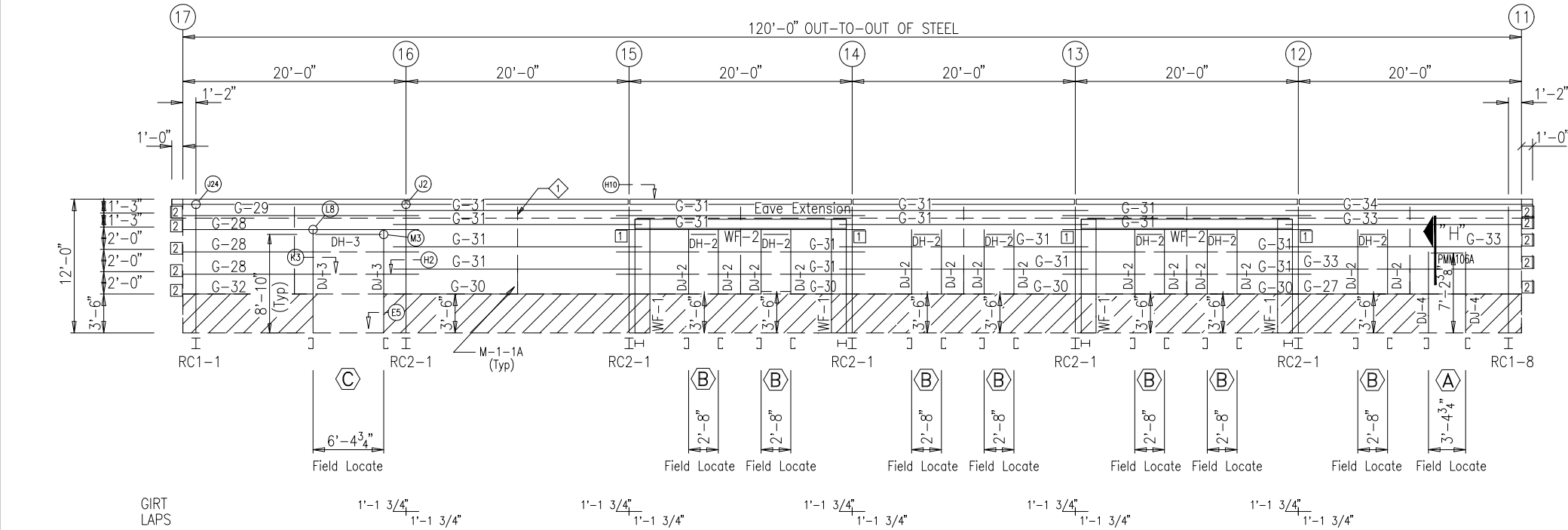
SECTION "H"

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DRAWING STATUS										REV	DATE	DESCRIPTION	BY	CHK	DESC:	ENDWALL FRAMING	BLDG. SIZE:	VARIES		
☐ FOR APPROVAL: These drawings, being for approval, are by definition not final and are for conceptual representation only. Their purpose is to confirm the proper interpretation of the project documents. Only drawings issued "For Erector Installation" can be considered complete.										A1	09.07.23	FOR APPROVAL	MBS	ELV	CUSTOMER:	First Apostolic Lutheran Church	LOCATION:	Houghton, MI 49931		
☐ FOR CONSTRUCTION PERMIT: These drawings, being for permit, are by definition not final. Only drawings issued "For Erector Installation" can be considered complete.										A2	04.01.24	REVISION FOR APPROVAL	HME	VN	REFERENCE:	First Apostolic Lutheran Church				
METAL BUILDING Outlet Corp.										P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	JOBBSITE:	Houghton, MI 49931	COUNTY:	Houghton		
										0	06.07.24	FOR ERECTOR INSTALLATION	MS/HR	FC	DWN:	HME	CHK:	VN	DATE:	3/22/24

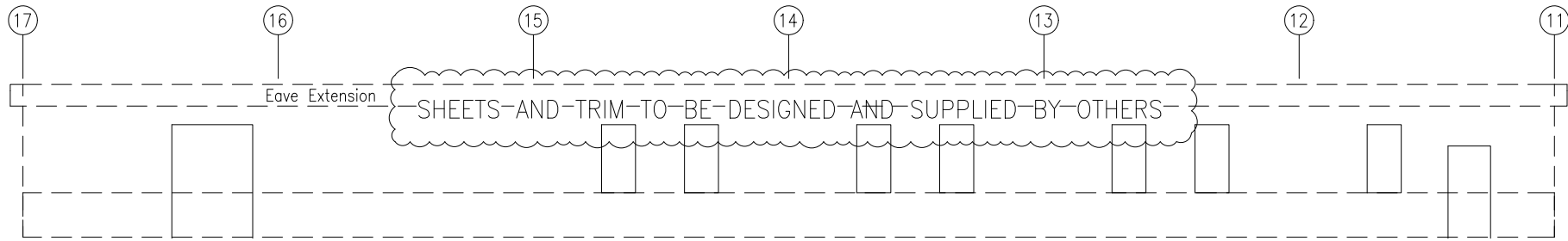
METAL BUILDING
Outlet Corp.

MEMBER TABLE FRAME LINE A		CONNECTION PLATES FRAME LINE A		BOLT TABLE FRAME LINE A				BOLT TABLE FRAME LINE H					CONNECTION PLATES FRAME LINE H		MEMBER TABLE FRAME LINE H		
MARK	PART	□ ID	MARK/PART	LOCATION	QUAN	TYPE	DIA	LENGTH	LOCATION	QUAN	TYPE	DIA	LENGTH	□ ID	MARK/PART	MARK	PART
WF-1	W16641	1	AK508	WF-1 – WF-2	8	A325	3/4"	2 1/4"	WF-1 – WF-2	8	A325	3/4"	2 1/4"	1	AK508	WF-1	W16641
WF-2	W10541	2	SC-5	WF-1 – RC2-1	8	A325	5/8"	1 3/4"	WF-1 – RC2-1	8	A325	5/8"	1 3/4"	2	SC-5	WF-2	W10541
DJ-2	8X25C14	ANGLE TABLE FRAME LINE A							ANGLE TABLE FRAME LINE H							DJ-1	8X25C14
DJ-3	8X25C14															DJ-2	8X25C14
DJ-4	8X25C14															DJ-3	8X25C14
DH-2	8X25C14	◇ ID	MARK	LENGTH						◇ ID	MARK	LENGTH					
DH-3	8X25C14	1	PS-104	SCRAP						1	PS-104	SCRAP					
G-27	8X25C16															G-27	8X25C16
G-28	8X25Z16															G-28	8X25Z16
G-29	8X25Z16															G-29	8X25Z16
G-30	8X25C16															G-30	8X25C16
G-31	8X25Z16															G-31	8X25Z16
G-32	8X25C16															G-32	8X25C16
G-33	8X25Z16															G-33	8X25Z16
G-34	8X25Z16															G-34	8X25Z16

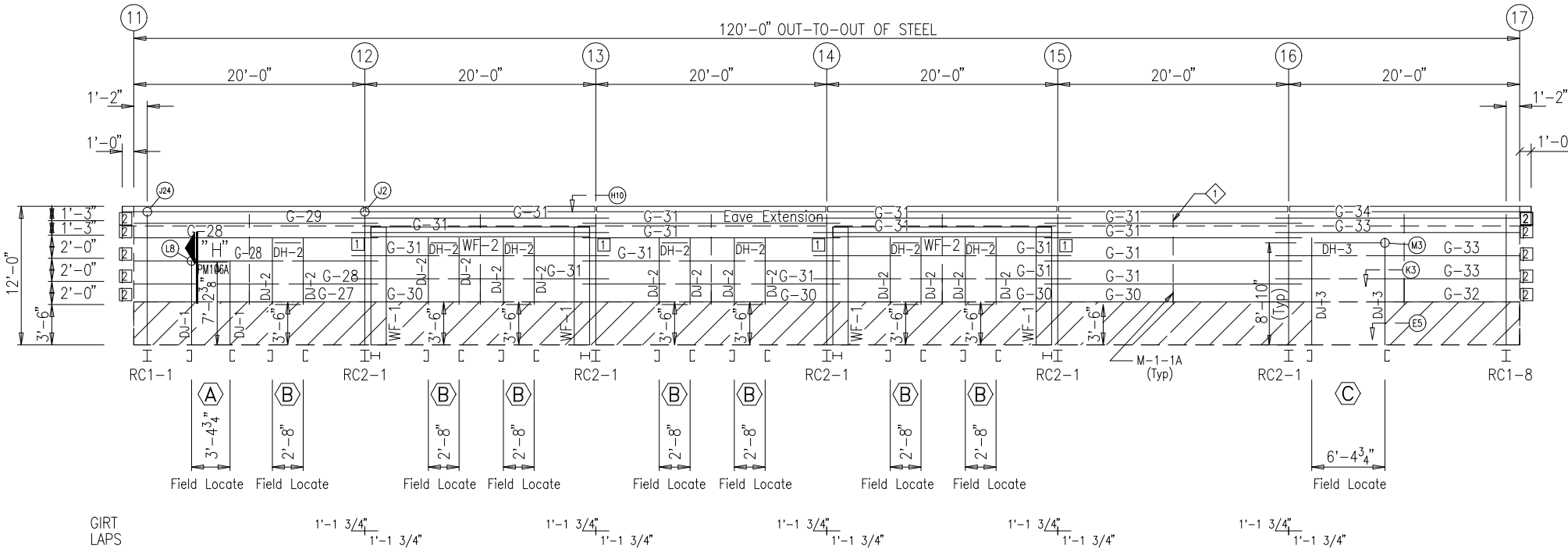


SIDEWALL FRAMING: FRAME LINE A

BUILDING "A"

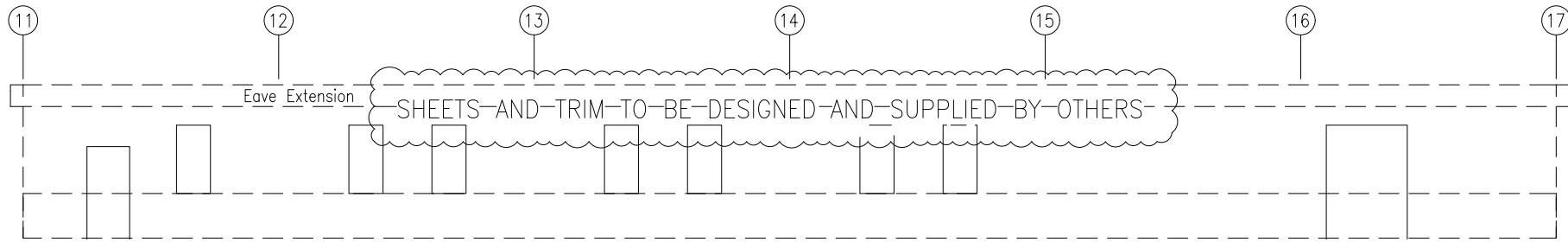


SIDEWALL SHEETING & TRIM: FRAME LINE A



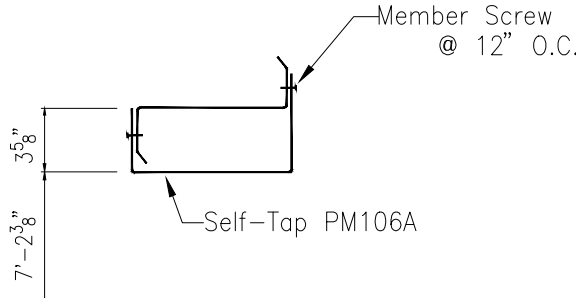
SIDEWALL FRAMING: FRAME LINE H

BUILDING "A"



SIDEWALL SHEETING & TRIM: FRAME LINE H

BUILDING "A"



SECTION "H"

GENERAL SHEETING & TRIM NOTES:

- Refer to erection drawings for rake angle locations.
- Roof member screws are on 12" centers at the intermediate purlins. The spacing at the eave, end lap, and peak purlins are as shown.
- Wall member screws are on 6" centers at the base member and 12" centers for all remaining members.
- Roof stitch screws are located (1) at each member and (2) between members spaced evenly apart (20" maximum spacing).
- Wall stitch screws are located (1) at each member then spaced evenly apart between members with the spacing not to exceed 20".
- Skylight stitch screws are at 6" o.c.
- Start endwall panels at centerline of bldg. unless noted.
- Gutter, rake, & eave trim lap 2". All other trims lap 1".
- Field cut or lap panels as required to fit.
- Field cut panels for all openings.
- Pop rivet gutter counterflashing to wall panel on 3'-0" centers and caulk all laps.
- Gutter support strap spacing: Super Span 36", Super Seam 48", Weather Lok-16 32".
- Downspout strap spacing: 4" x 4" 8'-0" o.c. max, larger downspouts 5'-0" o.c. max.
- Corner and/or peak boxes are not furnished with trim profiles. Field miter as required.
- Hot-Rolled or Built-Up members must be pre-drilled before attaching members screws.
- Metal shavings must be swept from the roof each day to avoid surface rusting.
- Windows and louvers must be installed before sheathing the walls.
- For clarity, tape sealant, closures, etc. may not be shown. Refer to the appropriate standing seam technical/erection manual or standard pull outs for through-fastened (screw-down) type roof systems for additional installation instructions.

GENERAL FRAMING NOTES:

- Angles are marked by their length in feet and inches.
- Field cut or lap angles as required to fit.
- Flange braces are marked by their length in decimal inches.
- Outside flange of girt turns down unless noted.
- Endwall girts and eave struts do not lap.
- Field cut and self-top girts at walk doors.
- Field slot girts for brace rods or cables.
- Field locate windows and walk doors.
- Field weld all splices at 14 gauge valley gutters.
- Field Bolt Ak400 base clip to endwall columns:
- (2) 5/8" x 1-1/2" A325 bolts if (1) AK400 required.
- (2) 5/8" x 1-3/4" A325 bolts if (2) AK400 required.
- Locate top of roof framed openings flush with the pan of the roof panel.
- Some field drilling at framed openings may be required. Field drill 9/16" diameter holes.
- Sub-joints for overhead or roll-up doors, if required, are not furnished by Metal Building Provider.

DRAWING STATUS	
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METAL BUILDING
Outlet Corp.

REV	DATE	DESCRIPTION	BY	CHK	DESC:	BLDG. SIZE:
A1	09.07.23	FOR APPROVAL	MBS	ELV	SIDEWALL FRAMING	VARIES
A2	04.01.24	REVISION FOR APPROVAL	HME	VN	CUSTOMER:	LOCATION:
P1	05.15.24	FOR CONSTRUCTION PERMIT	DM	AM	First Apostolic Lutheran Church	Houghton, MI 49931
0	06.07.24	FOR ERECTOR INSTALLATION	MS/HR	FC	REFERENCE:	
					First Apostolic Lutheran Church	
					JOB SITE:	COUNTY:
					Houghton, MI 49931	Houghton
					DWN:	CHK:
					HME	VN
					DATE:	ENG:
					09/01/23	SC
					JOB NO:	DWG NO:
					11479-32472	E5
					ISSUE	0

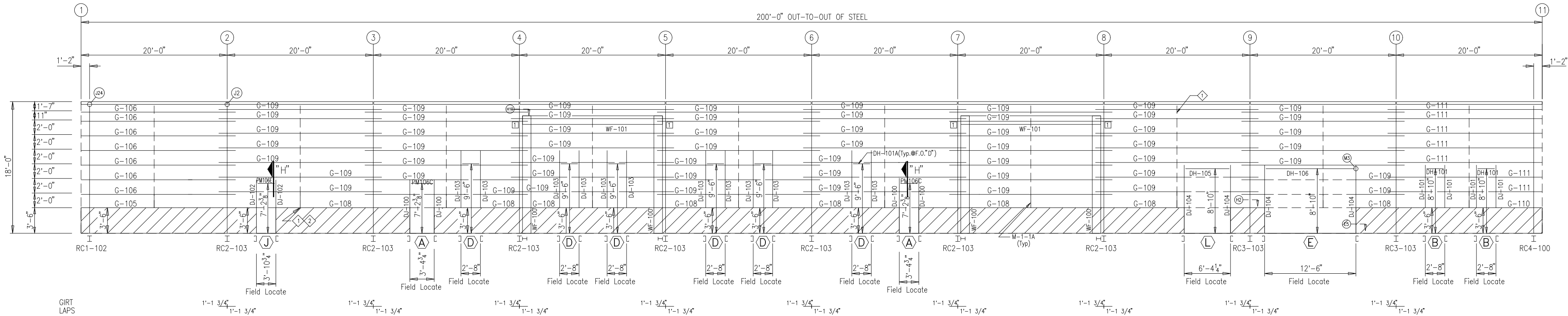
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BOLT TABLE				
FRAME LINE G				
LOCATION	QUAN	TYPE	DIA	LENGTH
WF-100 - WF-101	8	A325	3/4"	2 1/4"
WF-100 - RC2-103	8	A325	5/8"	1 3/4"

ANGLE TABLE		
FRAME LINE G		
◊ID	MARK	LENGTH
1	PS-104	104'-0"

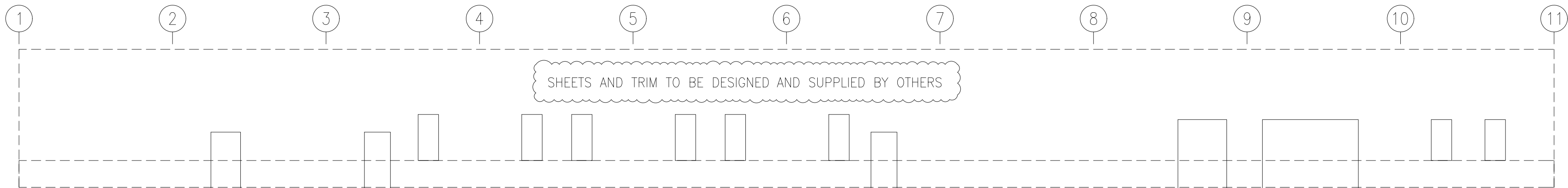
CONNECTION PLATES	
FRAME LINE G	
◻ID	MARK/PART
1	AK508

MEMBER TABLE	
FRAME LINE G	
MARK	PART
WF-100	W14641
WF-101	W14641
DJ-100	8X25C14
DJ-101	8X25C14
DJ-102	8X25C14
DJ-103	8X25C14
DJ-104	8X25C14
DH-101	8X25C14
DH-101A	8X25C14
PM106E	.
PM106C	.
DH-105	8X25C14
DH-106	8X25C14
G-105	8X25C16
G-106	8X25Z16
G-107	8X25Z16
G-108	8X25C16
G-109	8X25Z16
G-110	8X25C16
G-111	8X25Z16



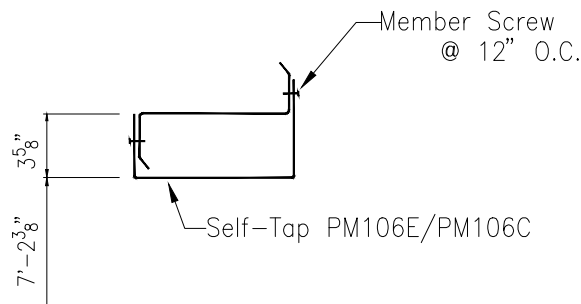
SIDEWALL FRAMING: FRAME LINE G

BUILDING "B"



SIDEWALL SHEETING & TRIM: FRAME LINE G

BUILDING "B"



SECTION "H"

GENERAL SHEETING & TRIM NOTES:

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- Gutter support strap spacing: Super Span 36", Super Seam 48", Weather Lok-16 32".
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- Corner and/or peak boxes are not furnished with trim profiles. Field miter as required.
- Hot-Rolled or Built-Up members must be pre-drilled before attaching members screws.
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- Some field drilling at framed openings may be required. Field drill 9/16" diameter holes.
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					Houghton, MI 49931	Houghton
					DWN:	CHK:
					HME	VN
					DATE:	ENG:
					3/22/24	SC
					JOB NO:	DWG NO:
					11479-32472	E6
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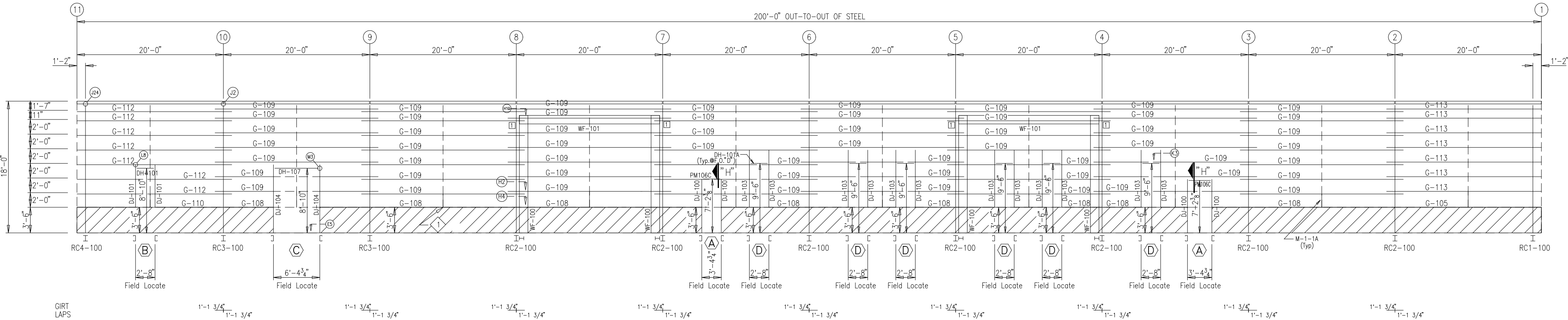
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BOLT TABLE				
FRAME LINE B				
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WF-100 - RC2-100	8	A325	5/8"	1 3/4"

ANGLE TABLE		
FRAME LINE B		
◊ID	MARK	LENGTH
1	PS-104	104'-0"

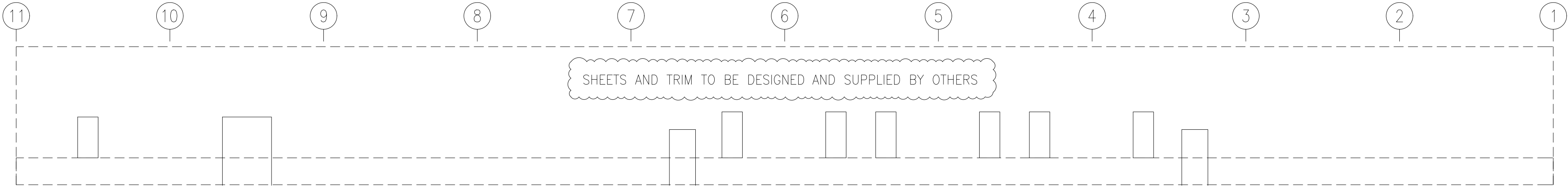
MEMBER TABLE	
MARK	PART
WF-100	W14641
WF-101	W14641
DJ-100	8X25C14
DJ-101	8X25C14
DJ-103	8X25C14
DJ-104	8X25C14
DH-101	8X25C14
DH-101A	8X25C14
PM106C	
DH-107	8X25C14
G-105	8X25C16
G-108	8X25C16
G-109	8X25Z16
G-110	8X25C16
G-112	8X25Z16
G-113	8X25Z16

CONNECTION PLATES	
FRAME LINE B	
◻ID	MARK/PART
1	AK508



SIDEWALL FRAMING: FRAME LINE B

BUILDING "B"



SIDEWALL SHEETING & TRIM: FRAME LINE B

BUILDING "B"

GENERAL SHEETING & TRIM NOTES:

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GENERAL FRAMING NOTES:

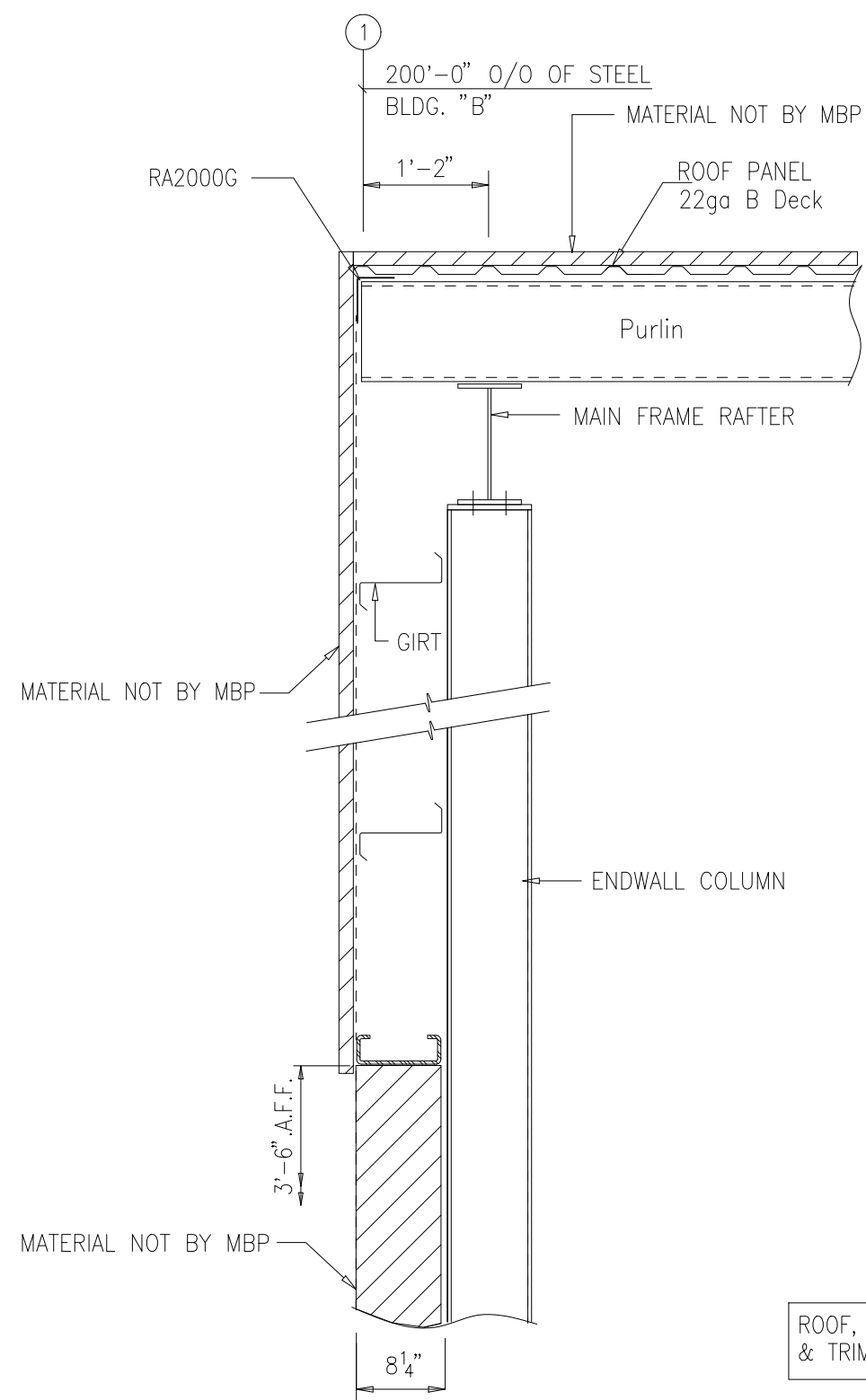
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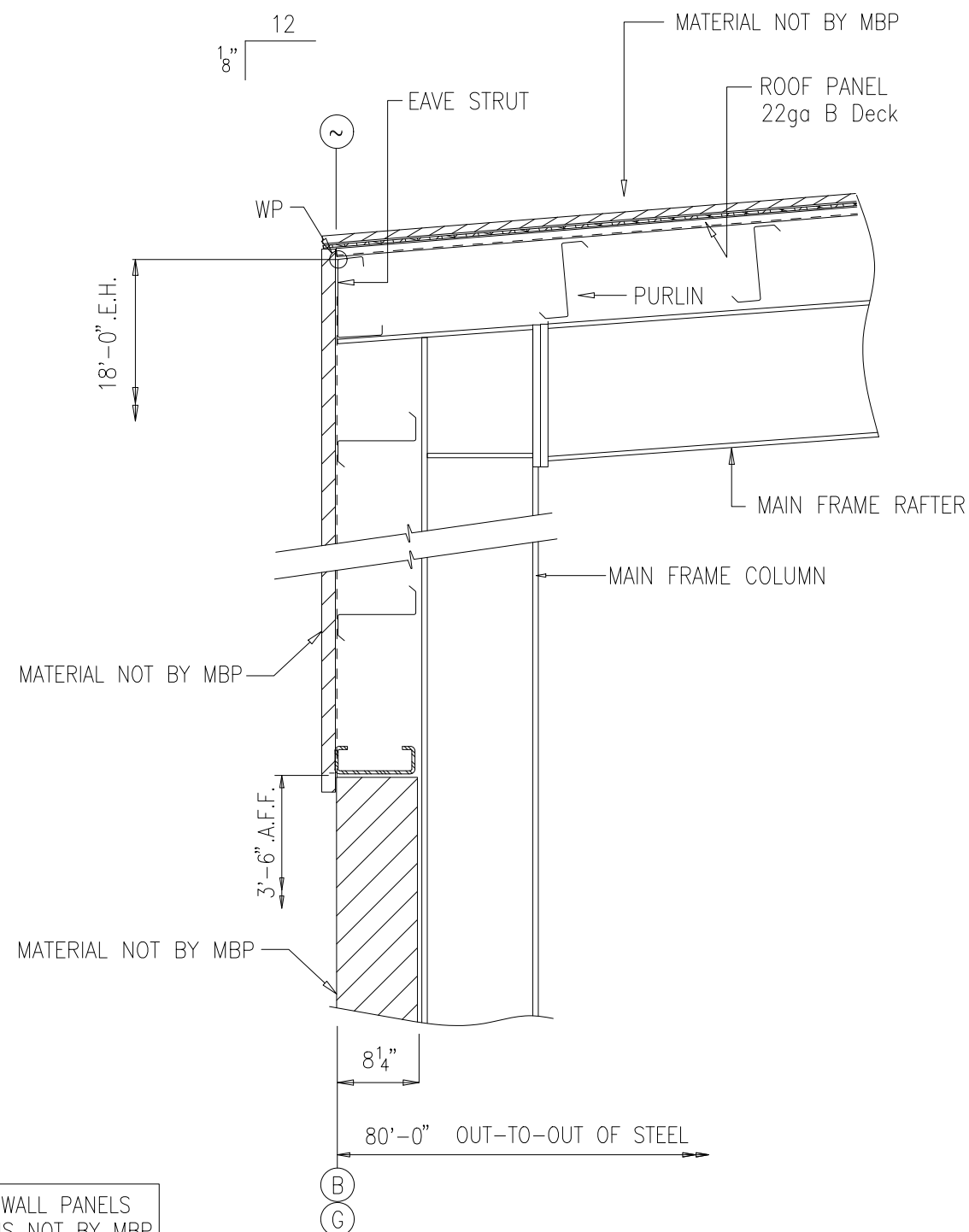
METAL BUILDING
Outlet Corp.

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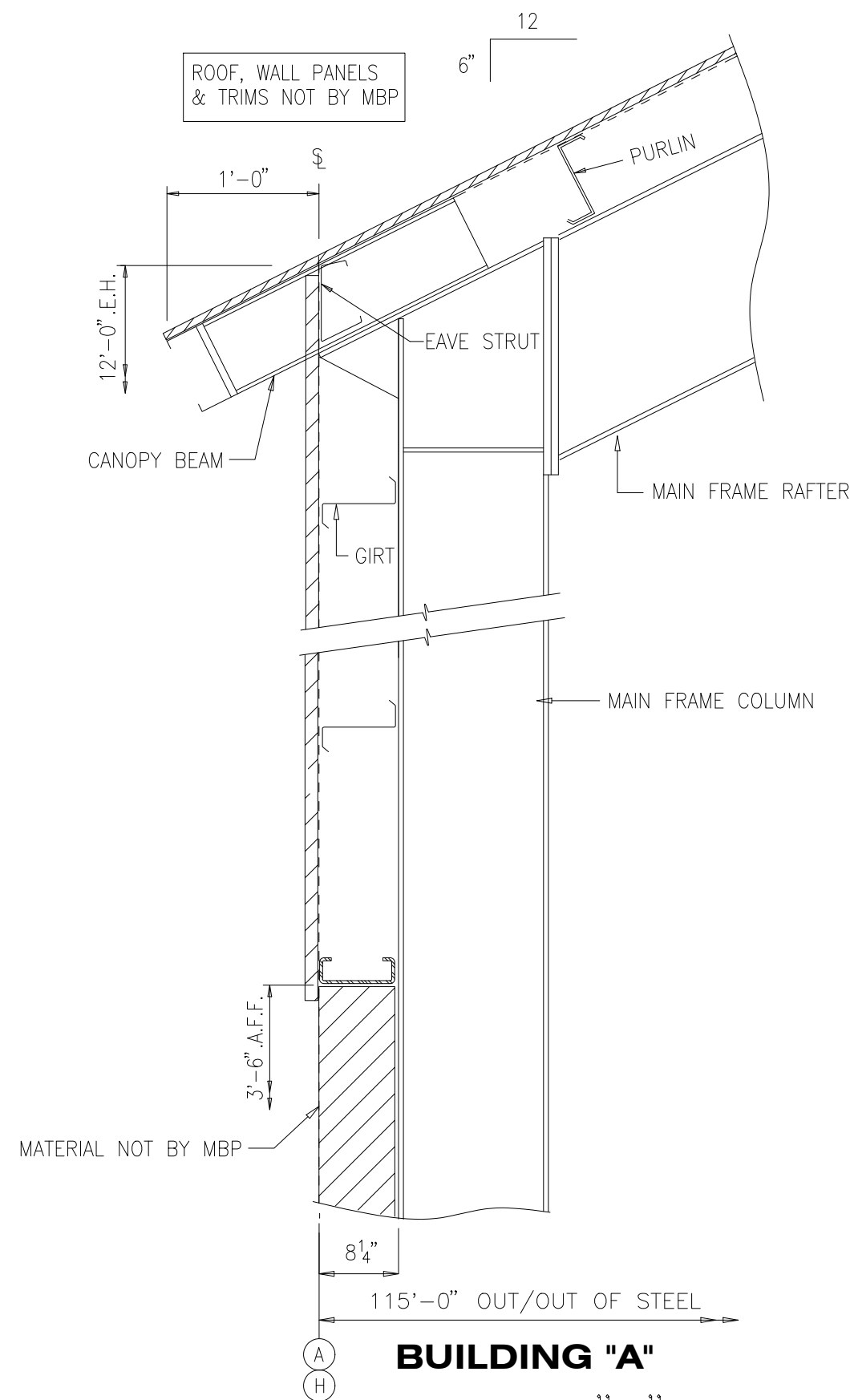
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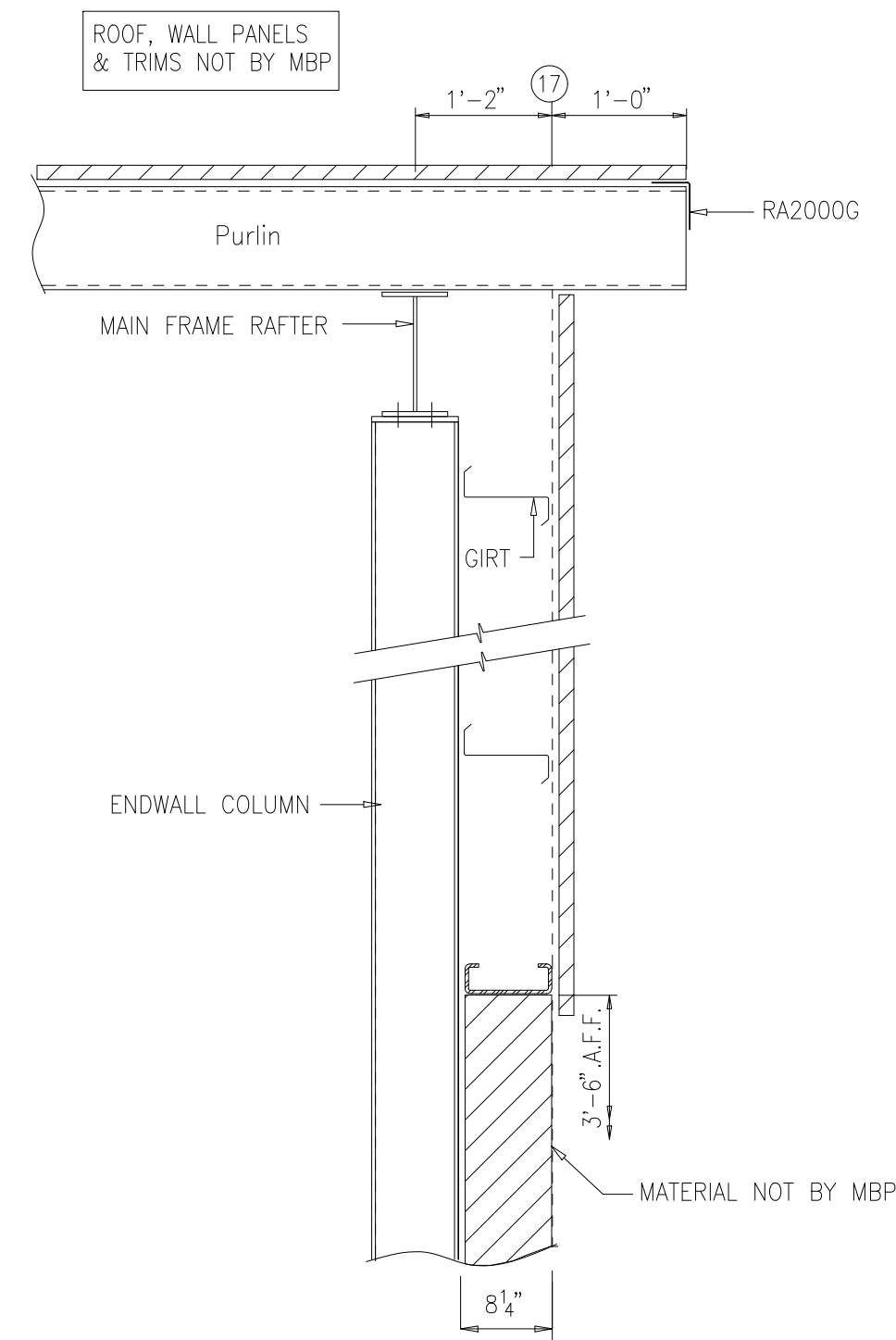
SECTION "A"
BUILDING "B"



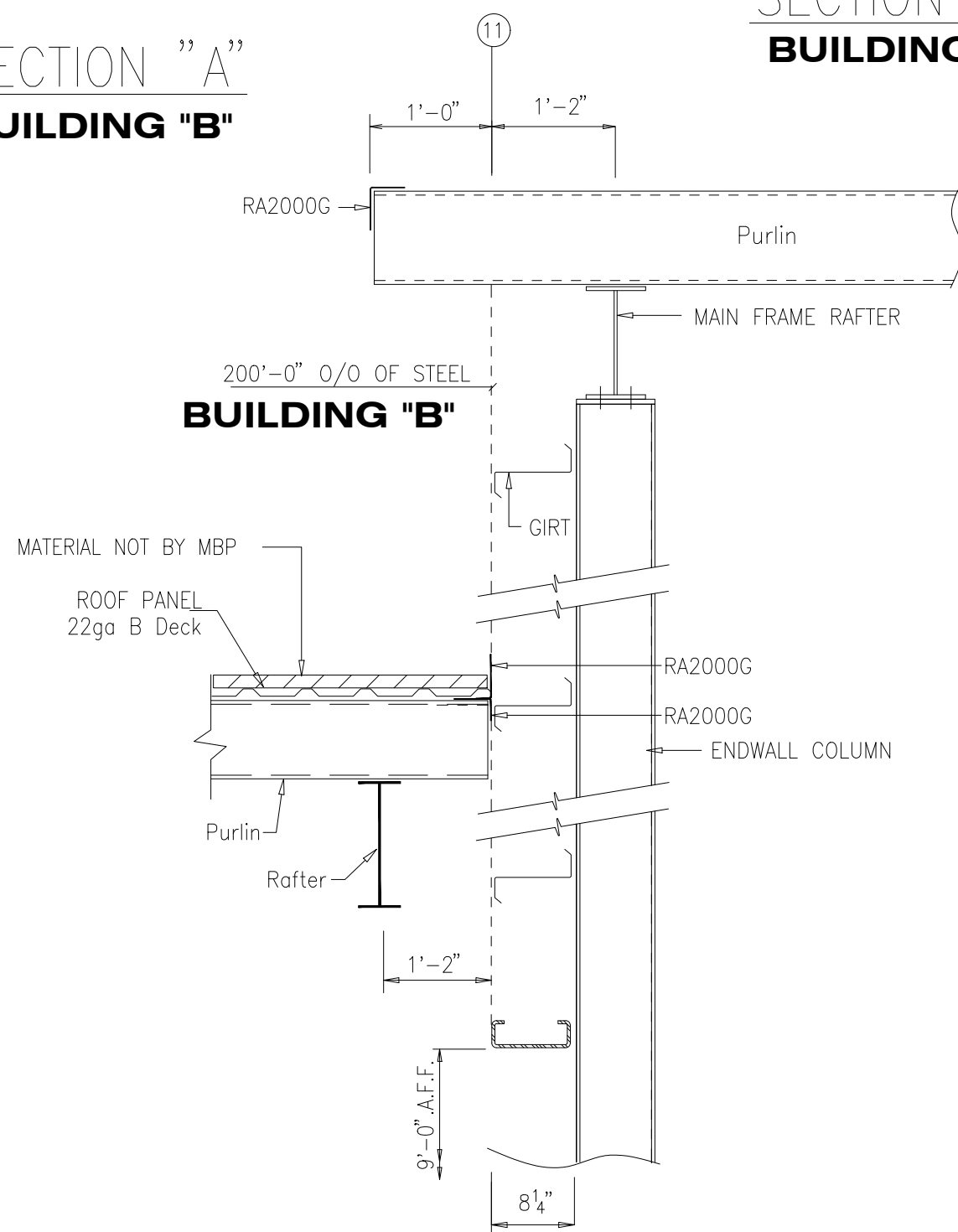
SECTION "B"
BUILDING "B"



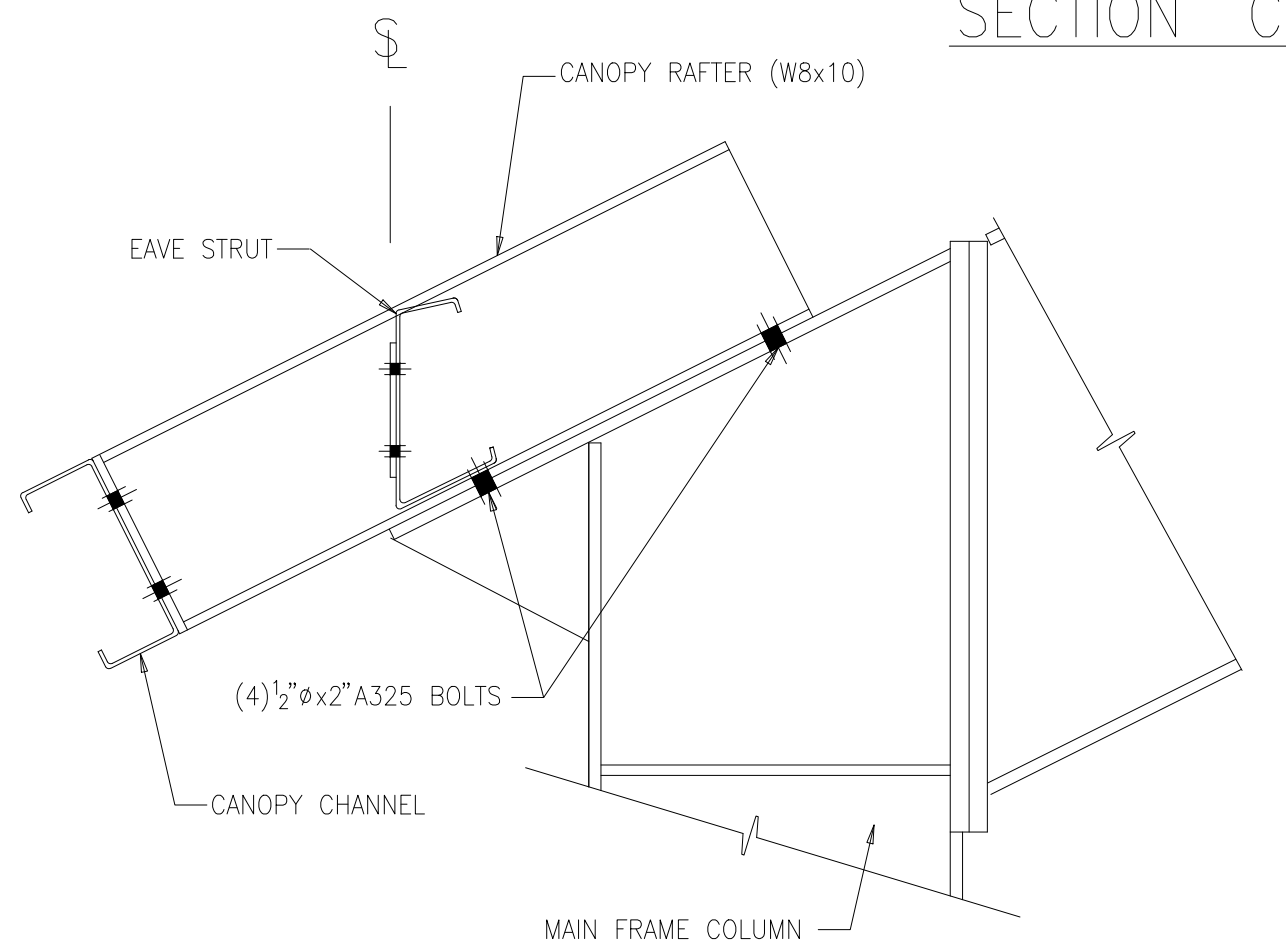
BUILDING "A"
SECTION "C"



SECTION "D"
BUILDING "A"



SECTION "E"
BUILDING "A"



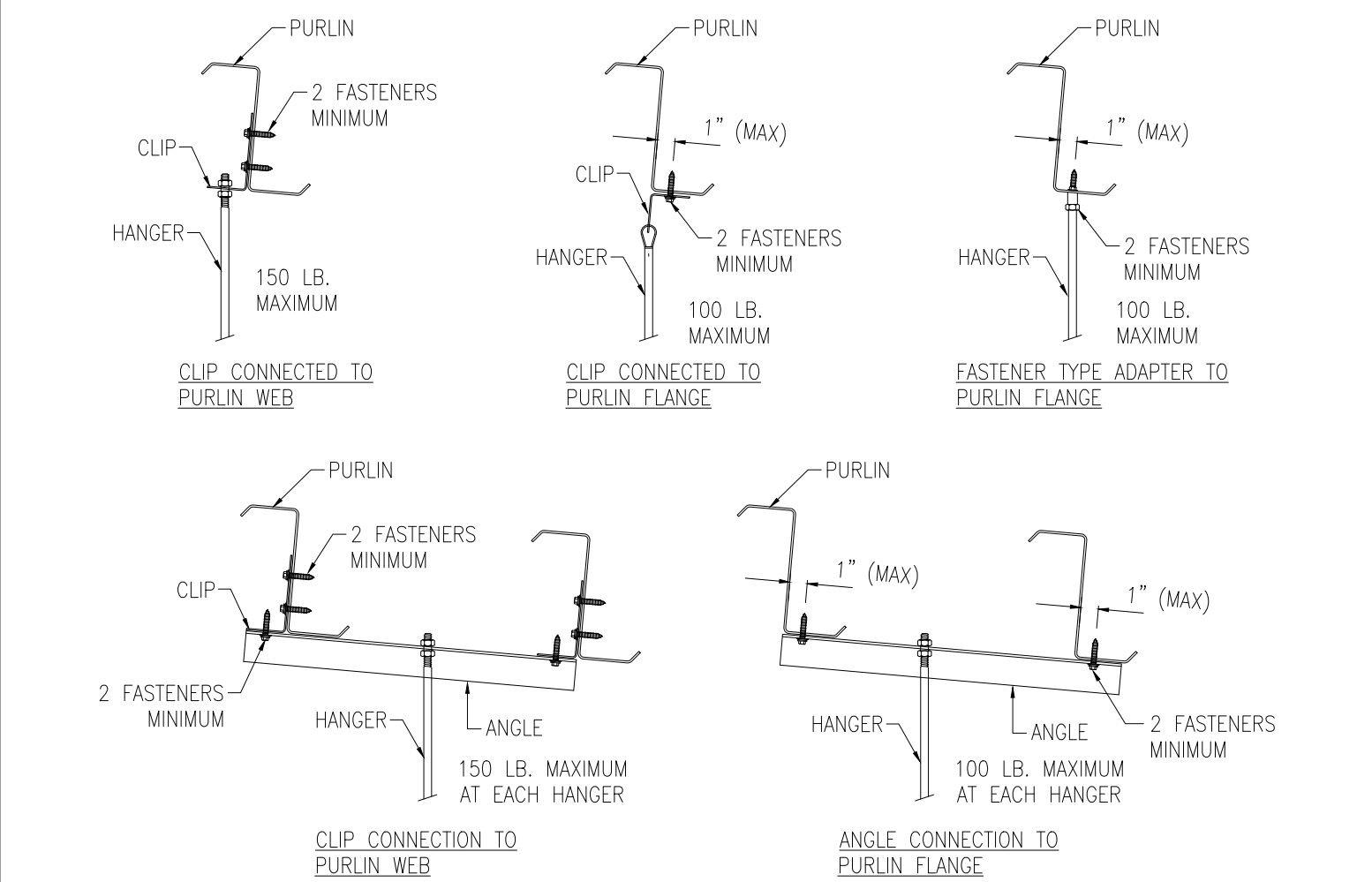
CANOPY RAFTER CONNECTION
BUILDING "A"

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A2	04.01.24	REVISION FOR APPROVAL	HME	VN	CUSTOMER:	LOCATION:
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					HME	VN
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					11479-32472	E8
					ISSUE	
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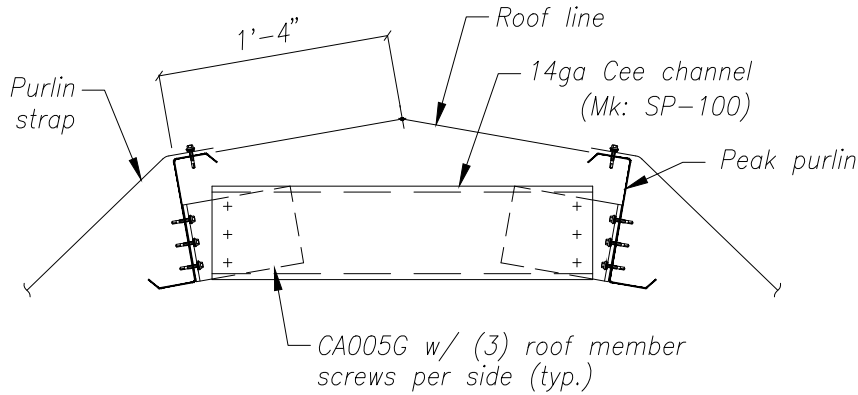
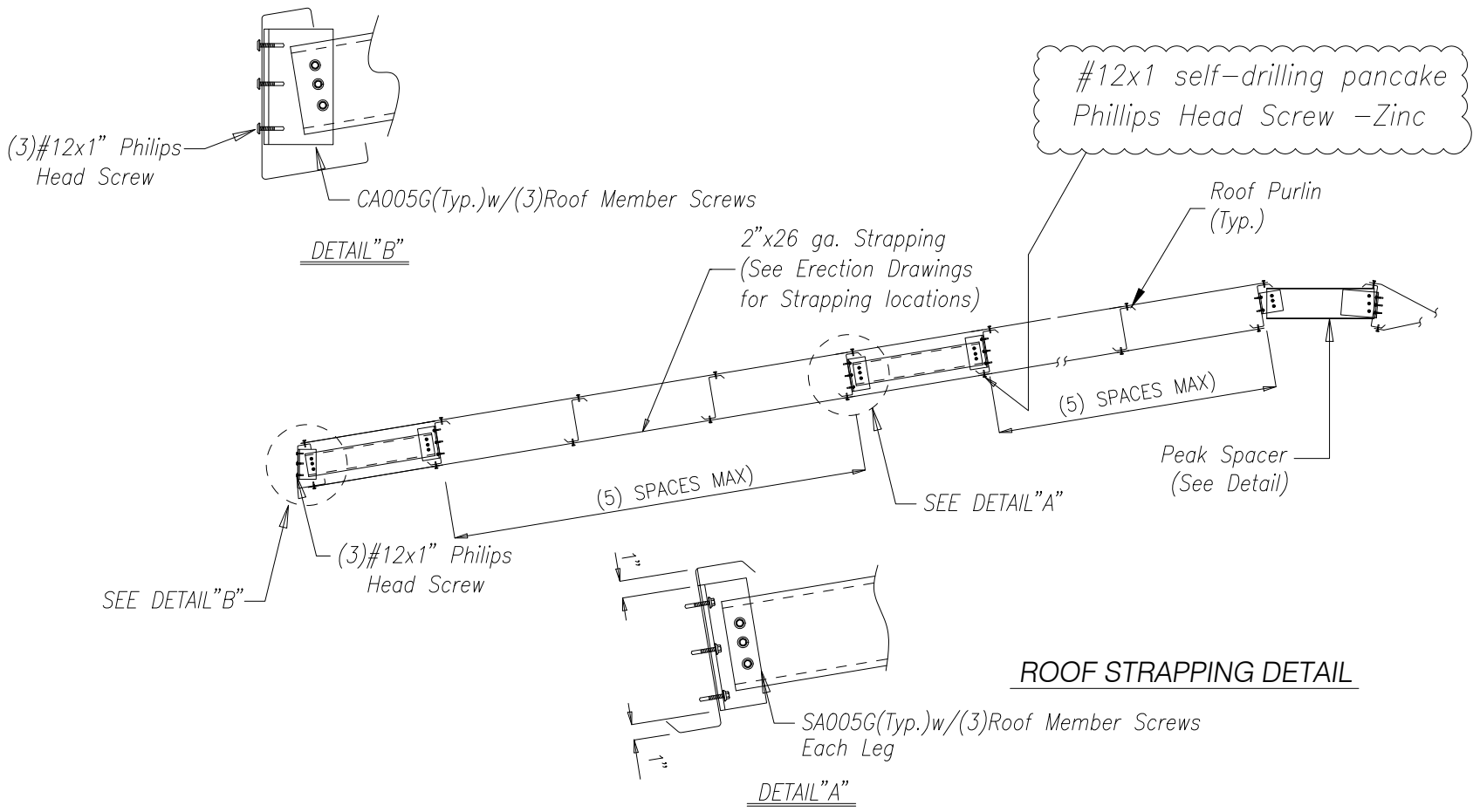
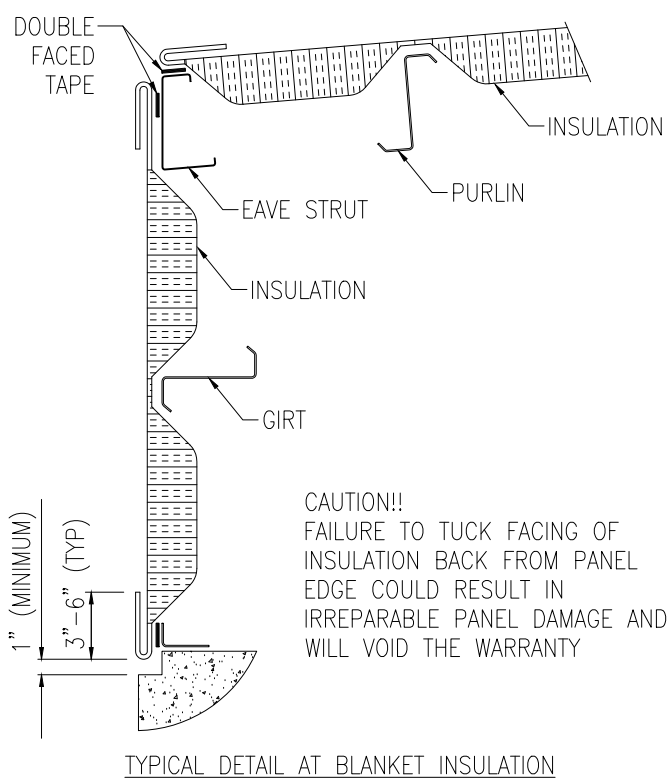
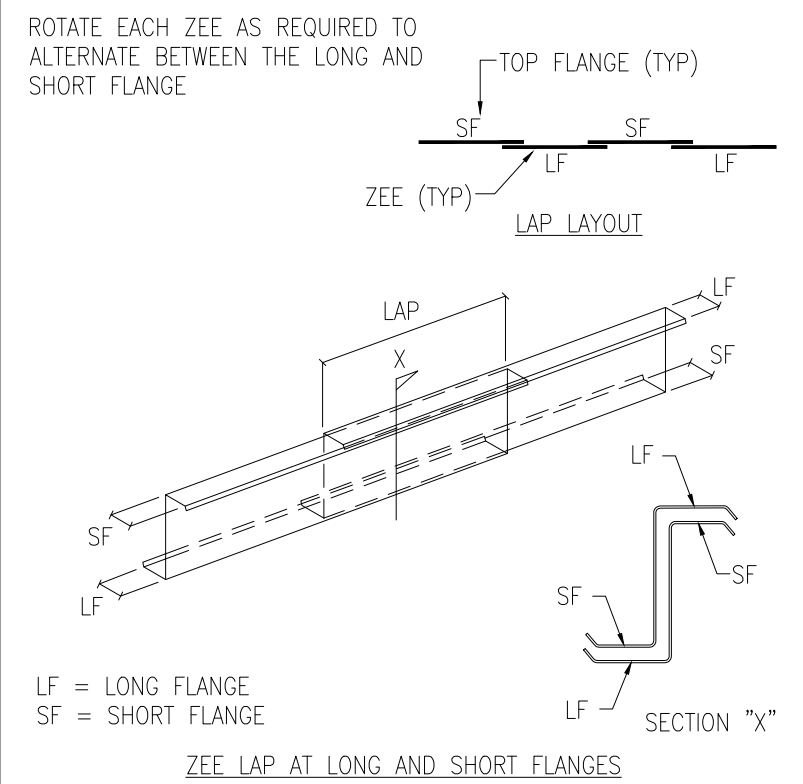
Metal Building Provider is providing the Purlin Only.All other Hardware and Accessories are not by Metal Building Provider.

The total hanger load shall not exceed the Design Collateral Load for the Building.
Example:
5'-0" Purlin Spacing X 5'-0" hanger spacing X
6 Psf Collateral Load = 150 Lbs. Hanger Load

See C1 for the Design Collateral Loads for this Building.

Note: If the building is designed for 0 Psf Collateral then adding any suspended system (i.e. Duct Work, Piping, Lights, Ceiling, Etc..) will correspondingly reduce the Design Live Load.

ACCEPTABLE CONNECTIONS FOR BUILDING ACCESSORIES TO PURLIN ATTACHMENT



BUILT-UP SECTION		OVERALL DEPTH (IN INCHES)	
W20851			
FLANGE WIDTH (IN INCHES)	FLANGE THICKNESS (IN INCHES)	WEB THICKNESS (IN INCHES)	
5 = 5	3 = 8 = 1/2	1 = 10GA.	
6 = 6	3/16	2 = 5/8	
8 = 8	4 = 1/4	3 = 3/4	
0 = 10	5 = 1 = 1	4 = 1/4	
2 = 12	5/16	6 = 3/8	
	6 = 3/8		

BUILT-UP SECTION LEGEND

NOTE:
CORNERS MUST HAVE RADIUS. DO NOT SQUARE OFF CORNERS.

FIELD SLOT GIRT OR SPANDREL BEAM FOR THE BRACING TO PASS THROUGH

3-1/2" ±

1-1/4" (MAX)

BRACING

4" (MAX)

GIRT OR SPANDREL BEAM

DETAIL @ FIELD LOCATED BRACING SLOT

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