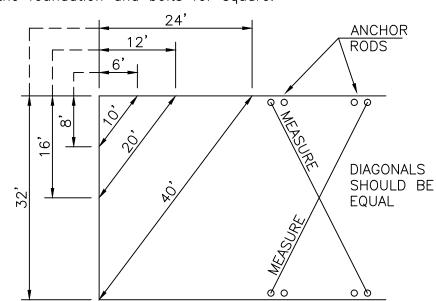
#### PRE-ERECTION NOTES:

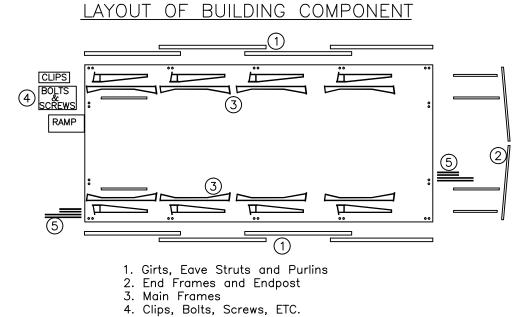
- The following notes, procedures and suggested recommendations are important parts of the pre-erection process.
- 1.) Prior to the time the erection crew arrives, a responsible person should check the job site for foundation readiness, square, and accuracy and Anchor Rod size and location.

The drawing shown below indicates a method which may be used to check the foundation and bolts for square.



Measure along adjacent sides of foundation using a pair of dimensions shown. If the diagonal distance between these points is as noted, the corner is square. Diagonal measurements between opposite Anchor Rods will indicate if these bolts are set square.

- 2.) When unloading the building, carefully check off each item from the packing list. Bundles and boxes will have a list attached indicating the contents.
- 3.) Unload and layout the building columns on the foundation.
- 4.) Unload the rafters onto the foundation so that they can be erected from whichever end of the building you wish to start. Your crane will move from one end of the building to the other while standing columns and hanging rafters.
- 5.) Layout the girts and purlins on dunnage or wood blocking around the foundation as near as possible to where they will be installed.
- 6.) Unload and place trim crates out of the way, since these will be the last required.
- 7.) Unload and place panels and insulation out of the way.
- NOTE: In extremely cold conditions, the vinyl facing on insulation will become brittle, requiring very careful handling.
- 8.) Avoid lifting panel stacks with cables, chains or other devices which could damage the panel. Upon unloading, and every morning thereafter, inspect he panel bundles for moisture between the panels. This is especially important with aglyalume or aglyanized panels. The panel finish must be protected at all times before and during erection to preserve the appearance and function of the
- 9.) All hardware boxes should be protected from theft and moisture, especially items such as tube caulking and locksets. Store mastic away from heat.



- 5. Endwall Girts 1.) Layout primary and secondary framing around the slab as shown.
- 2.) Place components and crates on the slab or on wood blocking to prevent contact with the ground.
- 3.) Block one end of components higher than other end to allow drainage of rain water.
- 4.) Leave one end of the building open for erection equipment access.
- 5.) Construct temporary ramp of timbers from grade to slab to prevent damage to concrete edge from equipment traffic.
- 6.) Install clips and flange braces onto columns and rafters before these members are in the air. Clip and flange brace locations are shown on erection dawings.

### GENERAL ERECTION NOTES

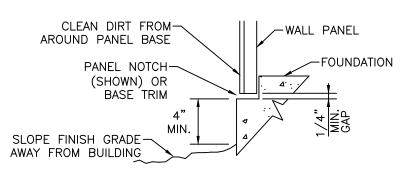
- 1.) All clips, flange braces, bolts, bracing systems, ETC. must be installed as shown on erection drawings.
- 2.) It is extremely important, especially during construction, that panels at the eaves, rakes and ridges be kept secure.
- 3.) Column bases must not be lag screwed or "RED HEADED" to concrete unless specified on erection drawings for the building.
- 4.) Tighten column wind brace rods/cables (exterior and interior) before tightening roof rods/cables. Roof rods/cables are tightened from eave to peak.
- 5.) High strength bolts (A325) must be used where specified.

#### TEMPORARY CONSTRUCTION BRACING

- 1.) It is the responsibility of the erector to maintain stability of the structure during all stages of erection, particularly when left overnight.
- 2.) Temporary supports, such as temporary guys, braces or other elements shall be the total and complete responsibility of the erector. The temporary supports required shall be determined and furnished by the erector.
- 3.) Temporary construction supports shall be provided wherever necessary to accommodate all construction loads to which the structure may be subjected, left in place as long as may be required for safety.

### PANEL CAUTIONS AND NOTES

- To minimize potential of corrosive action at the bottom edge of wall panels, the contractor must assure that the following procedures are followed:
- 1.) The concrete foundation should be cured for a minimum of seven (7) days before wall panels are installed. (un-cured concrete is highly alkaline and metal panels can undergo varying degrees of corrosive attack when in direct contact with the concrete.) After the first week of the curing cycle, the reaction between metallic coatings on steel and the concrete is essentially halted.



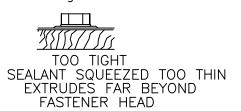
- 2.) Top of finish grade at building to be a minimum of four (4) inches below bottom of panel.
- 3.) Finish grade is to slope away from building to insure proper drainage.
- 4.) Upon completion of finish grading, all dirt is to be cleaned from around base of wall panel where it may have collected in panel notch or on base trim.

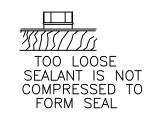
# FASTENER INSTALLATION

Correct fastener installation is one of the most critical steps when installing roof/wall panels. Drive the fastener in until it is tight and the washer is firmly seated. Do not overdrive fasteners. A slight extrusion of neoprene around the washer is a good visual tightness check.

Always use the proper tool to install fasteners. A fastener driver (screw gun) with a RPM of 1/00-2000 should be used for self-drilling screws. A 500-600 RPM fastener driver should be used for self—tapping screws. Discard worn sockets, these can cause the fastener to wobble during installation.







NOTE: Always remove metal filings from surface of panels at the end of each work period. Rusting filings can destroy the paint finish and void any warranty.

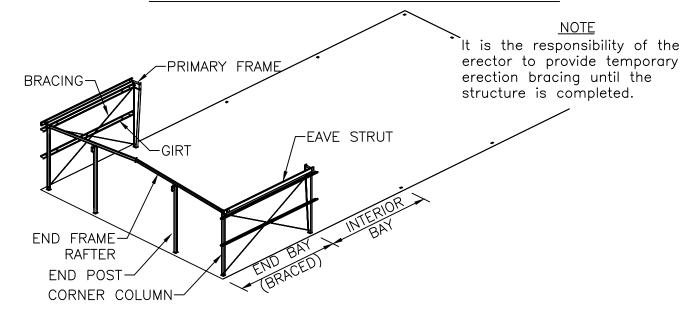
# MASTIC SEALANT

Proper mastic application is critical to the weather tightness of a building. Mastic should not be stretched when installed. Apply only to clean, dry surfaces. Keep only enough mastic on the roof that can be installed in a day. During warm weather, store mastic in a cool dry place. During cold weather (below 60°) mastic must be kept warm (60°-90°) until application. After mastic has been applied, keep protective paper in place until panel is ready to be installed.

# IMPORTANT NOTE:

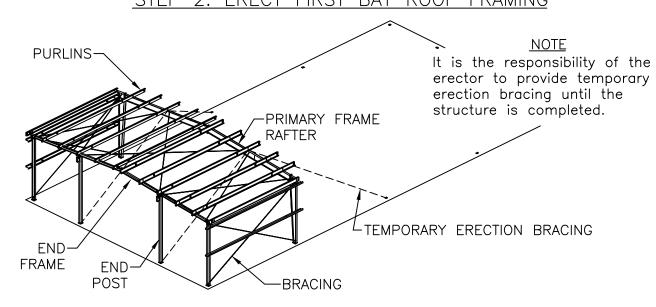
- All details, recommendations and suggestions contained in the ERECTION GUIDE portion of this drawings set are for general guidelines only, and not meant to be all—inclusive. Industry accepted installation practices with regard to all areas not specifically discussed in this section should be followed. Only experienced, knowledgeable installers familiar with accepted practices should be used to assure a quality project.
- It is emphasized that the Manufacturer is only a manufacturer of metal building components and is not engaged in the installation of its products. Opinions expressed by the Manufacturer about installation practices noted in the ERECTION GUIDE are intended to represent only a guide as to the sequencing and how the components could be assembled to create a building. Both the quality and safety of installation and the ultimate customer satisfaction with the completed building are determined by the experience, expertise, and skills of the installation crews, as well as the equipment available for handling the materials. Actual installation operations, techniques and site conditions are beyond the Manufacturers control.

### STEP 1: ERECT FIRST BAY WALL FRAMING



- 1A: Determine from erection drawings furnished with the building the location of the first braced bay. Framing for this bay will be erected first.
- 1B: Stand adjacent primary frame column and corner column over the anchor rods. Shim or chip out under the base plate if required to ensure that the base is level, at the correct elevation, and is in full contact with the foundation. Plumb and align the columns and install washers and nuts onto the Anchor Rods.
- NOTE: The end frame may be a bearing frame with the rafter supported by end posts, or a rigid frame with the rafter self-supporting, and not attached to the end posts. The procedure shown is for a bearing frame. If the building has a rigid end frame, it is erected the same as interior frames as described in steps 1 and 2.
- 1C: Attach wall girts to the primary frame column and corner column. Bolt girts to the corner column with two bolts. Bolt girt to primary frame column with one bolt through the column flange and secure bolt with sub-nut (see detail on erection drawings).
- 1D: Install the eave strut by bolting to the top of the columns. Refer to the erection drawings and attach column flange brace where shown. Flange braces may be required on one or both sides of the columns. If a flange brace connects to a girt in the adjacent bay, that brace will be bolted to the girt after the adjacent bay girts are installed.
- NOTE: As wall girts are installed around the building, framing for factory located framed openings and accessory framing to which the girts attach should be installed. Field located accessory framing may be installed at the same time as girts or at a later time.
- 1E: Install wall bracing systems (rods, cables, knee bracing, portal bracing) at this time but do not tighten completely until the bay is plumbed.
- 1F: Repeat steps 1B thru 1E for wall framing on the opposite side of the
- 1G: Attach clips to the end posts and stand these posts over the Anchor Rods. follow the procedure as described for corner columns in step 1B.
- 1H: Bolt required clips and flange braces to the end frame rafter sections and lift into place atop the end posts. Bolt rafter sections to corner column and end post cap plates. Bolt rafter sections together at peak.

# STEP 2: ERECT FIRST BAY ROOF FRAMING



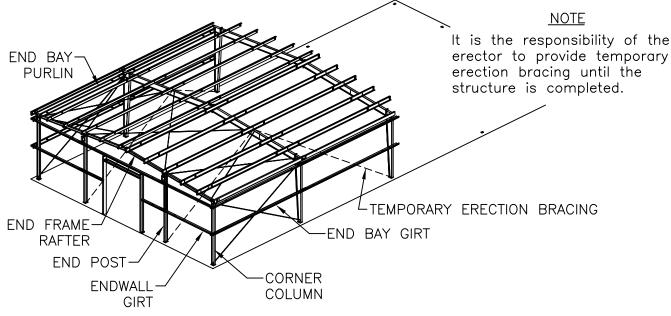
### <u>CAUTION</u>

Until rafters are bolted in place with purlins and flange braces installed, they are easily damaged by incorrect or careless handling procedures. Use extreme caution when lifting rafters. Two booms should be used to lift any pinched rafter section 80 feet or more in length.

- 2A: Bolt primary frame rafter together at peak connection (unless rafter length requires lifting in sections). Attach the required clips and flange braces to the rafter before lifting since these items are more easily installed on the ground. Lift rafter into place between sidewall columns and install bolts in rafter to column knee connections.
- 2B: Install end bay purlins from end frame rafter to the first interior frame rafter. The end bay purlins will overlap the interior bay purlins at the frame as described in step 1C. Complete flange brace connection to purlins.
- 2C: Install roof bracing systems but do not tighten completely until the bay is
- 2D: Plumb and square the first bay. After alignment, tighten wall bracing first and the roof bracing working from eave to peak. Tighten any remaining bolts.

Plumbing and aligning a total structural system begins with the first braced bay and continues through completion. Accurate alignment of the first bay is essential for correct alignment of succeeding bays. The installer is responsible for choosing the best method suited for plumbing and aligning the structural system.

STEP 3: ERECT ENDWALL GIRTS AND FIRST INTERIOR BAY



- 3A: After end frame is plumb and square, install endwall girts and flange braces for end post if required.
- 3B: Attach wall girts to the primary frame columns (see step 1C).
- 3C: Install eave struts (see step 1D).

END-

POST

- 3D: Attach roof purlins for this bay to the two rafters. Purlins will bolt to the rafter flange in the same manner as girts to column flanges (see step 1C). connect flange braces to purlins.
- 3E: Check alignment, plumb and square the two bays just erected. Tighten all bolts and bracing.

# STEP 4: FRECT REMAINING STRUCTURAL FRAMING

It is the responsibility of the erector to provide temporary erection bracing until the structure is completed. PURLINS-EAVE STRUT--PRIMARY FRAME TEMPORARY ERECTION BRACING **FRAME** 

Starting at the opposite end of the first bay erected, install the remaining interior frames, girts, purlins, eave struts, bracing, end frames and end posts using the procedures described in the preceding steps. Be sure all wall girts, roof purlins and flange braces as shown on the erection drawings are installed. Constant checks should be made to ensure the building is square, plumb and

-BRACING

All X—Bracing should be checked that it is installed to a taut condition with all slack removed. Do not tighten beyond this state.

EMS ST **⊘** ≥ 3 MS MO

BUILDING 103-19292 60TH AVE EY, BRITISH COLUMBIA, 94-530-3224 - FAX RR( Ш Scale: NOT TO SCALE Drawn by: RJA 2/28/13 Checked by: 2207 3/7/13 Project Engineer:

Job Number: 12-B-93855 R3 of 12 Sheet Number:

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 i not the overall engineer of record for this project.

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