

VERTICAL 2x6 TO SUPPORT GIRTS
ABOVE ENDWALL COLUMN PER DETAIL
DW-6 (CUT FROM 12' PIECE)



WORLDWIDE

STEEL BUILDINGS

Building Assembly Instruction Manual

Congratulations

You have purchased one of the highest quality steel buildings available. It has been designed to provide years of satisfaction, in addition to enhancing the value of your property. This manual has been designed to assist you in the assembly of your Worldwide Steel Building. If you have any questions, please feel free to call our experts at 1-800-825-0316 Monday-Friday 8:00am-4:30pm Central time. Once again, thank you for investing in a Worldwide Steel Building.

IMPORTANT - Please Read

When receiving your building package, you are strongly encouraged to check it thoroughly before storing.

All sheet metal must be checked for possible moisture that might have collected during the shipping process. If any sheets are wet, it is the customer's responsibility to see that they are dried before they are stored. Failure to store materials without them being completely dried may result in damage such as rust.

Whenever sheet metal must be cut, it is to be cut with the backside facing up. All chips must be wiped off to prevent rusting of the material.

It is the sole responsibility of the customer to store and maintain building materials. Worldwide Steel Buildings assumes no responsibility for weather conditions during transportation, or the conditions of any items in the building package after delivery.

It is the responsibility of the customer to provide Builder's Risk Insurance so that all material will be insured during the completion process and construction.

Worldwide Steel Buildings is not responsible for materials damaged after delivery or during construction.

All details, recommendations, and suggestions in this manual are for general guidelines only and are not meant to be all inclusive.

Industry accepted installation practices regarding all areas not specifically discussed in this manual should be followed. Only experienced and knowledgeable installers familiar with accepted practices should be used to assure a quality project.

All safety requirements, whether statutory, regulatory, or customary, must always be adhered to during the installation of components supplied by manufacturer.

Knowledge of and adherence to OSHA and other local codes or laws is critical and is the responsibility of the installer.

Table of Contents

| | |
|--|----|
| Parts Description List | 5 |
| Recommended Tool List | 6 |
| Customer Supplied List | 6 |
| Profiles – Trim & Screws | 7 |
| Pre-Assembly | 8 |
| How Buildings Will Be Delivered | 8 |
| Means of Access to Site for Unloading the Building | 8 |
| Best Means of Unloading the Building | 8 |
| Storage of the Building | 12 |
| Foundation | 12 |
| Anchor Bolts | 12 |
| Getting Familiar with Your Paperwork | 13 |
| E-Drawings: | 13 |
| W- Drawings: | 14 |
| Details: | 14 |
| Ship List: | 15 |
| Understanding Tagged Materials | 16 |
| Columns and Trusses | 16 |
| Column Layout | 17 |
| Sidewall Girts | 18 |
| Wind Rod Bracing | 19 |
| Truss Placement | 21 |
| Purlins | 23 |
| Wind Rod Braces at Roof | 25 |
| Eave Purlin | 28 |
| End Wall Column | 30 |
| End Wall Girts | 31 |
| Base Girts | 32 |
| Gable Track | 32 |
| Steel Framing at Top of End Wall | 35 |
| Framing Overhead Doors, Windows, and Walk Doors | 39 |
| Overhead Door Trim | 40 |

| | |
|--|----|
| Door and Window Framing | 42 |
| Door and Window Trim | 45 |
| Base Trim..... | 46 |
| Sheeting..... | 47 |
| How-To Pre-Drill Holes | 47 |
| Eave Trim..... | 49 |
| End Walls | 49 |
| How to Mark End Wall Panels | 49 |
| Roof Panels | 50 |
| Corner and Gable Trim | 50 |
| Ridge Cap | 51 |
| Peak Plate..... | 52 |
| Components Book | 53 |
| Insulation..... | 53 |
| Installing Your Insulation | 53 |
| Roof | 58 |
| Insulation with Wainscot..... | 58 |
| Insulation Around Framings | 59 |
| Wainscot | 59 |
| Overhangs | 60 |
| Step 1 – Gable Overhangs | 60 |
| Step 2 – Eave Overhangs..... | 60 |
| Step 3 – Purlin for Overhangs | 60 |
| Step 4 – Gable Track..... | 61 |
| Step 5 – Steel Framing at Top of End Wall..... | 61 |
| Step 6 – Roof with Overhang..... | 61 |
| Step 7 – Starting Soffit..... | 62 |
| Step 8 – Finding the Correct Location for J-Trim | 62 |
| Step 9 – Installing Side Wall Soffit Panels | 64 |
| Step 10 – Installing End Wall Soffit Panels..... | 66 |
| Large Overhangs | 66 |
| Step 1 | 67 |
| Step 2 | 68 |
| Step 3 | 69 |

| | |
|-----------------------------------|----|
| Step 4 | 69 |
| Step 5 | 70 |
| Step 6 | 71 |
| Step 7 | 72 |
| Double Wind Rods | 72 |
| Mezzanine..... | 73 |
| Step 1 | 73 |
| Step 2 | 74 |
| Step 3 | 74 |
| Examples of Detailed Prints | 74 |

Parts Description List

See the Bill of Lading (Shipment List) for specific components and hardware required for your building. The Shipment List will explain where each component is used.

Girts can be called any of the following:

- SC-418
- SC-420
- SC-618
- SC-620

Girts are made up of different dimensions and gauges of metal secondary depending on how the building was engineered.

Purlins can be called any of the following:

- SC-618
- SC-620

Purlins are made up of different gauges of metal secondary depending on how the building was engineered.

4" track is called T-420

6" track is called T-620

Chord Brace - 3/4" x 1" angle

Tek Screw - #14 x 3/4 Screw

Self-drilling screw that will be used to install secondary.

Closure Strips

Inside Closures are 3' wide foam that matches the inside profile of your sheet metal.

Outside Closures are 3' wide foam that matches the outside profile of your sheet metal.

Universal Closures are 20' long rolls of 1"x1" foam used in certain areas of your building. The ship list contains locations used.

Sheet Metal Self-Drilling Screw

Colored screw with rubber washer.

Wind Rod

1/2" rod that is threaded on both ends.

End Wall Column Slide Plate

Bent plate used for attaching the end wall column to truss.

Recommended Tool List

The tool list below is recommended as the minimum requirements for the best assembly results.

- Safety Glasses
- First Aid Kit
- 100' Tape Measure
- 25' Tape Measure
- Ball Peen Hammer
- Claw Hammer
- 8" Screwdriver
- 15/16" Spud Wrench
- 15/16" Box Wrench
- 1/2" Open Wrench
- 3/8" Drive Ratchet and Sockets
 - 9/16" Socket
 - 15/16" Socket
 - 5/16" Magnetized Socket
 - 3/8" Magnetized Socket
 - 7/16" Magnetized Socket
- Tool Belt and Bags
- Tri-Square
- Shovel
- 3/8" Drill –1800 to 2000 RPM Drill Speed Recommended
- Qty. 2 - 50' Electric Extension Cords
- 10" Tin Snips - Right Hand
- 10" Tin Snips - Left Hand
- 10" Vice Grips
- 20' Extension Ladder
- 4' Level
- Plumb Bob
- Chalk Box
- Warehouse Broom
- 7 1/4" Heavy Duty Skill Saw
- Metal Cutting Blades

Customer Supplied List

- Concrete Anchors (Located in Foundation Sheets)
- 1/4 x 2" Concrete Fasteners
- Sill Seal

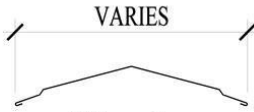
Profiles - Trim & Screws



Outside Closure



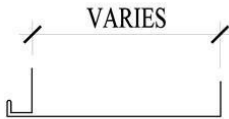
Inside Closure



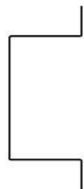
Ridge Cap



Cannonball Slider Door Track Cover



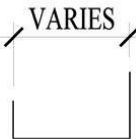
SP #36, 37, 38, 39 – OH Door Trim



SP #40 – Slider Door Header Beam



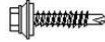
SP #41 – Slider Door Hat Shape



SP #42, 43 – 16 GA. OH Door Framing



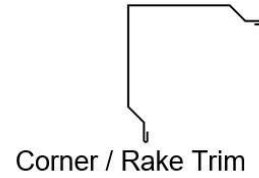
Tek Screws - 14 x 3/4"



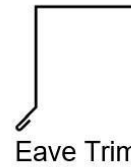
SELF-DRILLING SCREWS - 12 x 1-1/4"



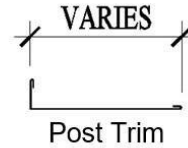
WOOD GRIP SCREWS - 9 x 1-1/2"



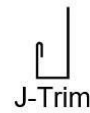
Corner / Rake Trim



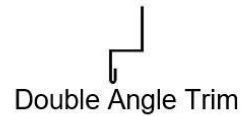
Eave Trim



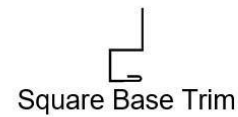
Post Trim



J-Trim



Double Angle Trim



Square Base Trim

Pre-Assembly

How Buildings Will Be Delivered

Buildings will be delivered on a flatbed trailer. Components of buildings will be bundled together along with the red iron and metal secondary. Sheet metal will be strapped and covered. Hardware will all come on a pallet and shrink wrapped to ensure everything has stayed together.



Means of Access to Site for Unloading the Building

It is important to have a clear unloading plan before the building is being delivered. The building will take a large area of space to successfully unload with no damages. Job sites where storage space is restricted require more detailed planning.

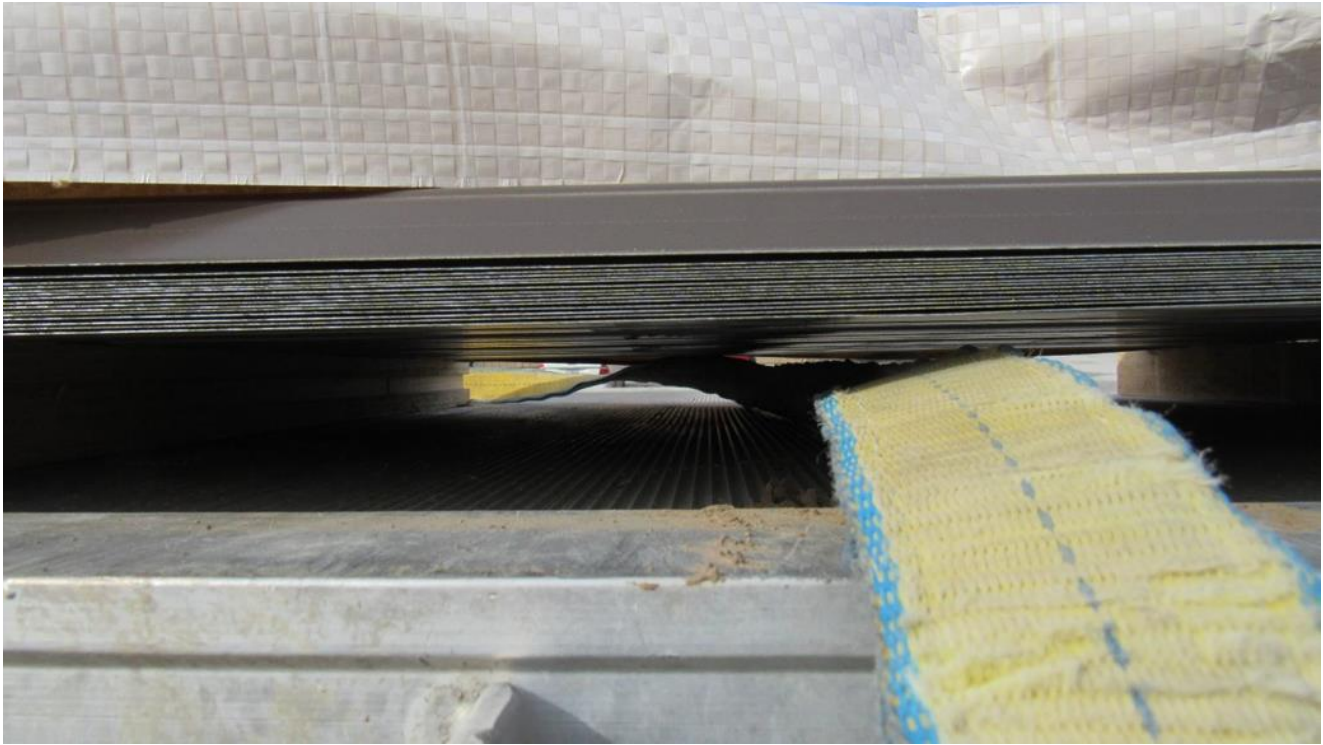
Load can shift during transit so be aware of surrounding's during the unload process. Trucks and semis will need space to maneuver around the build site. It is best to be prepared beforehand.

Best Means of Unloading the Building

Equipment should be on hand the day of delivery. Equipment should have a forks attachment and a lift capacity of 5000 pounds to be safe. If equipment does not have a 5000-pound lift capacity, arrangements can be made prior, but WWSB needs one-month notice to ensure all bundles and sheet metal are bundled to customer specs. (1000 lbs. minimum)



Panels over 25 feet should never be lifted with just forks. Tow or lift straps should be used to ensure the panel will not fold. (Straps are NOT provided by WWSB)



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Storage of the Building

The red iron of your building can be left banded until your building is ready to be constructed. Place bundles on wood blocks to keep away from direct contact with the ground. Metal secondary should also be placed on blocks and covered to keep water away. Metal panels should be elevated on blocks to allow for any water to drain and provide air circulation.



Foundation

The foundation is a crucial step in your building process. Problems with the foundation will lead to problems with assembly and poor overall performance of your building.

Your building has been drawn and engineered for a square and level concrete pad and/or piers. It is the customer responsibility to ensure that their foundation is correct.



Anchor Bolts

Anchor bolts are supplied by customer or contractor and must meet specification to the engineered foundation drawings. WWSB manufacture buildings all over the world, and 99% of buildings are different from each other depending on location, snow load, and wind load.

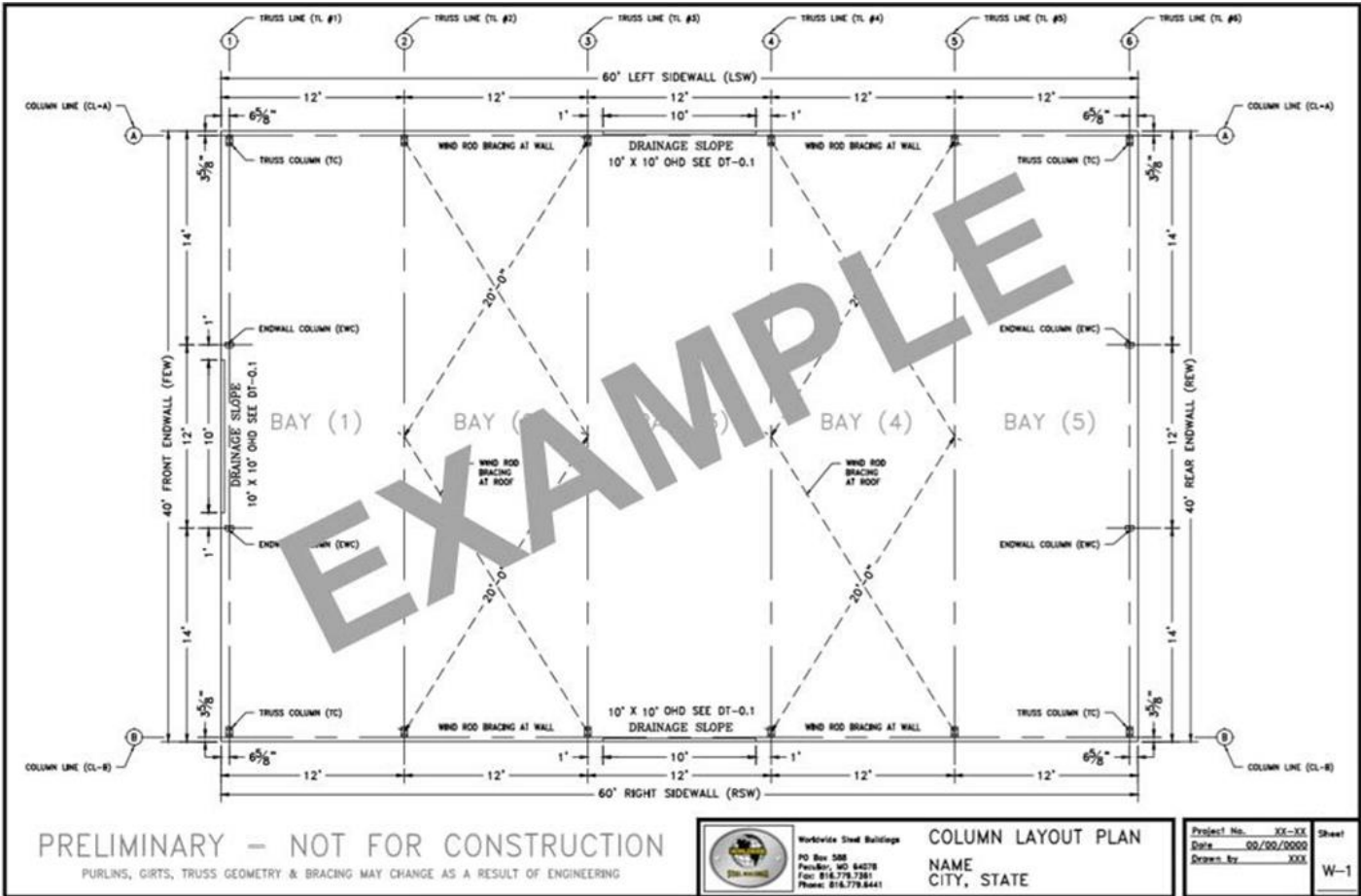
Getting Familiar with Your Paperwork

The paperwork that will be delivered with your building has all the information for the layout and actual components of your specific building. As stated, all buildings manufactured are custom made to how the customer designed it. In this guide we will be referencing an example 40'x60'x12' building. This reference is just to help you understand how the building assembly process should take place.

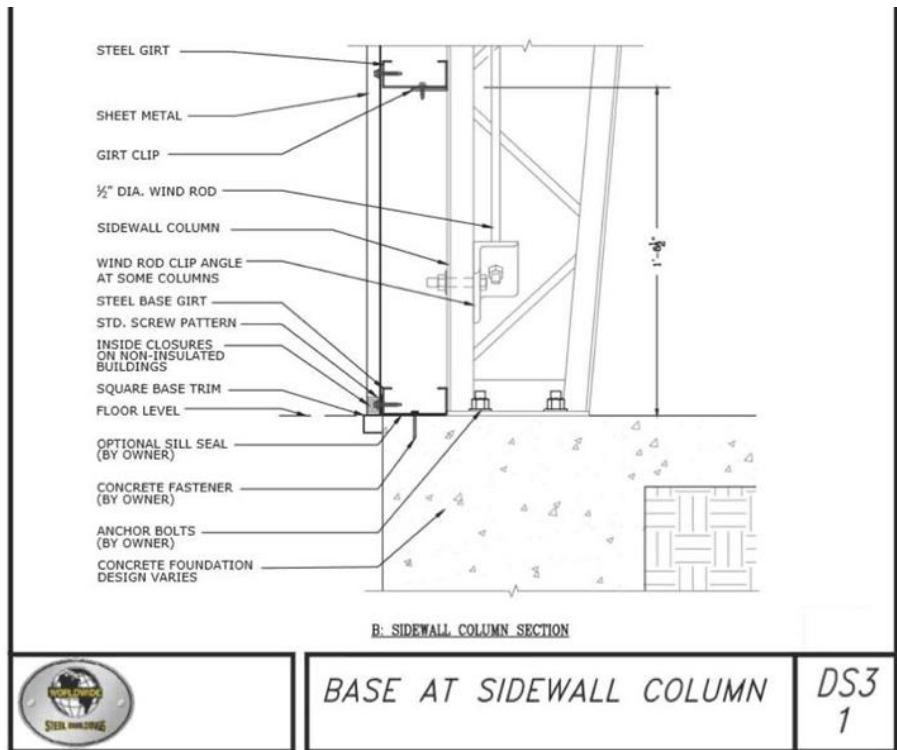
E-Drawings: Drawings that an outside engineer has drawn and stamped for your buildings.

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| <p>1) DESIGN CRITERIA</p> <p>A. STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE FOLLOWING CODES AND CRITERIA:</p> <ol style="list-style-type: none"> 1. 750 CMR 09 EDITION 2. ASCE 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES 3. AISC360-10, AMERICAN INSTITUTE OF STEEL CONSTRUCTION 4. NDS 2012, NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 5. AISI S100-12, NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS <p>B. BUILDING CLASSIFICATION BUILDING OCCUPANCY CLASSIFICATION: S/U</p> <p>C. DEAD LOADS 5 PSF + STEEL SELF WEIGHT</p> <p>D. LIVE LOADS ROOF = 20.0 PSF (REDUCIBLE)</p> <p>E. WIND LOADS DESIGN CRITERIA</p> <p>DESIGN WIND SPEED, V_{50} = 124 MPH NOMINAL WIND SPEED, V_{100} = 97 MPH RISK CATEGORY = II EXPOSURE CATEGORY = C INTERNAL PRESSURE, GC_p = +/- 0.18 VELOCITY PRESSURE, K_z = 0.85</p> <p>F. SEISMIC DESIGN CRITERIA</p> <p>DESIGN CATEGORY = B IMPORTANCE FACTOR, I_p = 1.00 MAPPED SPECTRAL RESPONSE ACCELERATION S_{DS} = 0.227 g S_{D1} = 0.072 g</p> <p>SITE CLASS = D</p> <p>SPECTRAL RESPONSE COEFFICIENTS: S_{DS} = 0.242 g S_{D1} = 0.115 g</p> <p>SEISMIC FORCE RESISTING SYSTEM: STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE</p> <p>ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE</p> <p>G. SNOW LOADS</p> <p>GROUND SNOW LOAD, P_g = 50.0 PSF FLAT ROOF SNOW LOAD, P_f = 42.0 PSF SNOW EXPOSURE FACTOR, C_e = 1.00 THERMAL FACTOR, C_t = 1.20</p> <p>2) FOUNDATIONS</p> <p>A. FOUNDATION AND ANCHORAGE TO BE DESIGNED BY OTHERS BASED ON REACTIONS PROVIDED ON SHEET E1.1</p> <p>B. MAXIMUM ANCHOR BOLT DIAMETER IS 5/8"; MINIMUM ANCHOR BOLT DIAMETER IS 1/2"</p> <p>C. PROVIDE WASHERS ON ALL ANCHOR BOLTS</p> | <p>3) STRUCTURAL STEEL</p> <p>A. MATERIAL</p> <ol style="list-style-type: none"> 1. HOT ROLLED STRUCTURAL MEMBERS, ALL HOT ROLLED STEEL PLATES, SHAPES, SHEET PILING, AND BARS SHALL BE NEW STEEL CONFORMING TO ASTM SPECIFICATION AS: 2. ASTM SPECIFICATION AND GRADE UNLESS NOTED OTHERWISE ON THE DRAWINGS, STRUCTURAL STEEL SHALL BE AS FOLLOWS: <table border="0"> <tr> <td>a) STRUCTURAL ANGLES:</td> <td>A572, Gr. 50</td> </tr> <tr> <td>b) STRUCTURAL ROD:</td> <td>A572, Gr. 50</td> </tr> <tr> <td>c) W-SHAPES:</td> <td>A992</td> </tr> <tr> <td>d) PLATE:</td> <td>A36</td> </tr> <tr> <td>e) S, C, M, AND MC SHAPES:</td> <td>A36</td> </tr> <tr> <td>f) HSS, RECTANGULAR:</td> <td>A500, Gr. C - Fy = 50 ksi</td> </tr> <tr> <td>g) HSS, ROUND:</td> <td>A500, Gr. C - Fy = 46 ksi</td> </tr> <tr> <td>h) PIPE:</td> <td>A53, Gr. B</td> </tr> </table> 3. STRUCTURAL BOLTS AND THREADED FASTENERS <ol style="list-style-type: none"> 1. ASTM A325 or SAE J429 GRADE 5 BOLTS U.N.O. 2. ALL BOLTS TO BE BEARING TYPE BOLTS WITH THREADS ASSUMED TO BE IN BEARING SURFACE (TYPE N) 3. ALL BOLTS TO BE TIGHTENED TO THE "PRETENSIONING JOINTS" REQUIREMENTS PER RCSC SPECIFICATION SECTION 4.2 UNLESS NOTED OTHERWISE. ANY OF THE INSTALLATION METHODS SPECIFIED IN SECTION 8.2 OF RCSC IS PERMITTED (TURN OF NUT, CALIBRATED WRENCH, ETC.) 4. WELDING <ol style="list-style-type: none"> 1. UNLESS NOTED OTHERWISE, ALL WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY SPECIFICATION FOR STRUCTURAL STEEL CONSTRUCTION (AWS D1.1) <p>4) COLD-FORMED STEEL</p> <p>A. ALL COLD-FORMED STEEL SHALL BE 29 GA., 80-KSI GALVALUME OR EQUIVALENT WITH THE FOLLOWING MINIMUM SECTION PROPERTIES:</p> <table border="0"> <tr> <td>INCH</td> <td>0.110 in²</td> </tr> <tr> <td>MIN. MOMENT OF INERTIA</td> <td>0.073 in⁴</td> </tr> <tr> <td>MIN. TORSION</td> <td>0.0181 in⁴</td> </tr> <tr> <td>MIN. STIFFNESS</td> <td>0.0190 in⁴</td> </tr> </table> <p>B. ROOF CURLINS: C8"x18"x18 ga $I_{min} = 1.7629 \text{ in}^4$ $S_{xmin} = 7.099 \text{ in}^3$</p> <p>DOUBLE WHERE NOTED</p> <p>C. WALL GIRTS: C3"x17"x20 ga $I_{min} = 0.5141 \text{ in}^4$ $S_{xmin} = 29.408 \text{ in}^3$</p> <p>D. ALL FRAMING MEMBERS SHALL BE FORMED FROM CORROSION-RESISTANT STEEL CORRESPONDING TO THE REQUIREMENTS OF ASTM A446 WITH A MINIMUM YIELD STRENGTH OF 50 KSI AS INDICATED.</p> <p>E. ALL MEMBERS SHOWN ARE STANDARD DESIGNATIONS OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA)</p> | a) STRUCTURAL ANGLES: | A572, Gr. 50 | b) STRUCTURAL ROD: | A572, Gr. 50 | c) W-SHAPES: | A992 | d) PLATE: | A36 | e) S, C, M, AND MC SHAPES: | A36 | f) HSS, RECTANGULAR: | A500, Gr. C - Fy = 50 ksi | g) HSS, ROUND: | A500, Gr. C - Fy = 46 ksi | h) PIPE: | A53, Gr. B | INCH | 0.110 in ² | MIN. MOMENT OF INERTIA | 0.073 in ⁴ | MIN. TORSION | 0.0181 in ⁴ | MIN. STIFFNESS | 0.0190 in ⁴ | <p>F. CONNECTIONS</p> <ol style="list-style-type: none"> 1. FASTENING OF COMPONENTS SHALL BE BY SELF-DRILLING SCREWS OR BY WELDING AS DEFINED BELOW U.N.O. ON THE DRAWINGS 2. SELF DRILLING SCREW CONNECTIONS <ol style="list-style-type: none"> a) A MINIMUM OF THREE (3) EXPOSED THREADS SHALL PENETRATE THROUGH ALL JOINED MATERIALS <p>5) TIMBER DESIGN</p> <p>A. LIMITATIONS</p> <ol style="list-style-type: none"> 1. ALL WOOD CONSTRUCTION IS TO BE PROVIDED BY OTHERS. PROVIDE BRIDGING AS REQUIRED <p>B. MATERIAL</p> <ol style="list-style-type: none"> 1. ALL DIMENSIONAL LUMBER FRAMING MEMBERS ARE TO BE #2 YELLOW SOUTHERN PINE. ALTERNATIVELY LUMBER FRAMING SHALL MEET THE FOLLOWING MINIMUM BASE DESIGN VALUES IN ACCORDANCE WITH THE EFFECTIVE LATEST EDITION OF THE NDS: <table border="0"> <tr> <td>1.1.1</td> <td>$F_b = 1,500 \text{ psi}$</td> </tr> <tr> <td>1.1.2</td> <td>$F_c = 1,600,000 \text{ psi}$</td> </tr> <tr> <td>1.1.3</td> <td>$F_t = 175 \text{ psi}$</td> </tr> <tr> <td>1.1.4</td> <td>$E = 1,650 \text{ psi}$</td> </tr> </table> 2. LUMBER WITH MOISTURE CONTENT NOT EXCEEDING 19% SHALL BE GRADUALLY STAMPED WITH THE APPROPRIATE WPA OR WPC STAMP INDICATING COMPLIANCE WITH PS-20 LUMBER DESIGN REQUIREMENTS OCCURRING IN THE CONNECTOR PLATE CONNECTIONS 3. PROVIDE A MINIMUM OF 1/2" PENETRATION INTO CROSS SECTION OF EACH MEMBER BEING JOINED. SIZE SCREWS ACCORDINGLY <p>6) MISCELLANEOUS</p> <p>A. WALK DOORS AND WINDOWS</p> <ol style="list-style-type: none"> 1. WALK DOORS AND WINDOWS MAY BE FIELD LOCATED. NO WIND ROD BRACING OR COLUMN CHORD BRACING SHALL BE CUT TO ACCOMMODATE WINDOWS OR DOOR <p>B. INSPECTION REQUIREMENTS</p> <ol style="list-style-type: none"> 1. AS BUILDING IS A UTILITY BUILDING THAT IS ACCESSORY TO A RESIDENCE, BUILDING IS EXEMPT FROM SPECIAL INSPECTIONS PER SECTION 1704.2 OF THE INTERNATIONAL BUILDING CODE <p>7) LEGEND</p> <table border="0"> <tr> <td>EL</td> <td>= RELATIVE ELEVATION W/ RESPECT TO GROUND FLOOR</td> </tr> <tr> <td>C/C</td> <td>= CENTER TO CENTER</td> </tr> <tr> <td>CL</td> <td>= CENTERLINE</td> </tr> <tr> <td>CONT</td> <td>= CONTINUOUS</td> </tr> <tr> <td>PSF</td> <td>= POUNDS PER SQUARE FOOT</td> </tr> <tr> <td>TYP</td> <td>= TYPICAL</td> </tr> <tr> <td>UNO</td> <td>= UNLESS NOTED OTHERWISE</td> </tr> <tr> <td>CB</td> <td>= CHORD BRACING</td> </tr> </table> | 1.1.1 | $F_b = 1,500 \text{ psi}$ | 1.1.2 | $F_c = 1,600,000 \text{ psi}$ | 1.1.3 | $F_t = 175 \text{ psi}$ | 1.1.4 | $E = 1,650 \text{ psi}$ | EL | = RELATIVE ELEVATION W/ RESPECT TO GROUND FLOOR | C/C | = CENTER TO CENTER | CL | = CENTERLINE | CONT | = CONTINUOUS | PSF | = POUNDS PER SQUARE FOOT | TYP | = TYPICAL | UNO | = UNLESS NOTED OTHERWISE | CB | = CHORD BRACING | <div style="text-align: center;">  <p>Worldwide Sheet Buildings 10000 Dr. Williams Hwy P.O. Box 14876 (800) 825-0116 www.worldwidesheetbuildings.com</p> </div> <div style="text-align: center;">  <p>Complete Structural Consulting, Inc. 10000 Dr. Williams Hwy P.O. Box 14876 (800) 825-0116 www.worldwidesheetbuildings.com</p> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">DRAWN</td> <td style="width: 20%;">JMP</td> </tr> <tr> <td>CHECKED</td> <td>DAL</td> </tr> <tr> <td>DATE</td> <td>5/8/2020</td> </tr> <tr> <td>REVISIONS</td> <td></td> </tr> </table> <p>JOB NUMBER 20 269</p> <p style="text-align: center;">SHEET E1.0</p> | DRAWN | JMP | CHECKED | DAL | DATE | 5/8/2020 | REVISIONS | |
| a) STRUCTURAL ANGLES: | A572, Gr. 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b) STRUCTURAL ROD: | A572, Gr. 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c) W-SHAPES: | A992 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| d) PLATE: | A36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| e) S, C, M, AND MC SHAPES: | A36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| f) HSS, RECTANGULAR: | A500, Gr. C - Fy = 50 ksi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| g) HSS, ROUND: | A500, Gr. C - Fy = 46 ksi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h) PIPE: | A53, Gr. B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INCH | 0.110 in ² | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIN. MOMENT OF INERTIA | 0.073 in ⁴ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIN. TORSION | 0.0181 in ⁴ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIN. STIFFNESS | 0.0190 in ⁴ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.1.1 | $F_b = 1,500 \text{ psi}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.1.2 | $F_c = 1,600,000 \text{ psi}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.1.3 | $F_t = 175 \text{ psi}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.1.4 | $E = 1,650 \text{ psi}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EL | = RELATIVE ELEVATION W/ RESPECT TO GROUND FLOOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C/C | = CENTER TO CENTER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CL | = CENTERLINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONT | = CONTINUOUS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PSF | = POUNDS PER SQUARE FOOT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYP | = TYPICAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNO | = UNLESS NOTED OTHERWISE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CB | = CHORD BRACING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRAWN | JMP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHECKED | DAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE | 5/8/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REVISIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

W- Drawings: Drawings that WWSB has drawn for you of your building.



Details: WWSB drawings that are made to show in depth details on certain aspects of your buildings. These details are not building specific but universal for all our customers to use.



Understanding Tagged Materials

Columns and Trusses

Jobs with special components have certain red iron components that are tagged. Tagged items have specific locations they must be put on your building.

All buildings are drawn on a gridline. Columns are labeled at the intersections. Trusses are drawn on a truss line that holds a numerical value. Columns are drawn on a column line that holds an alphabetical value.



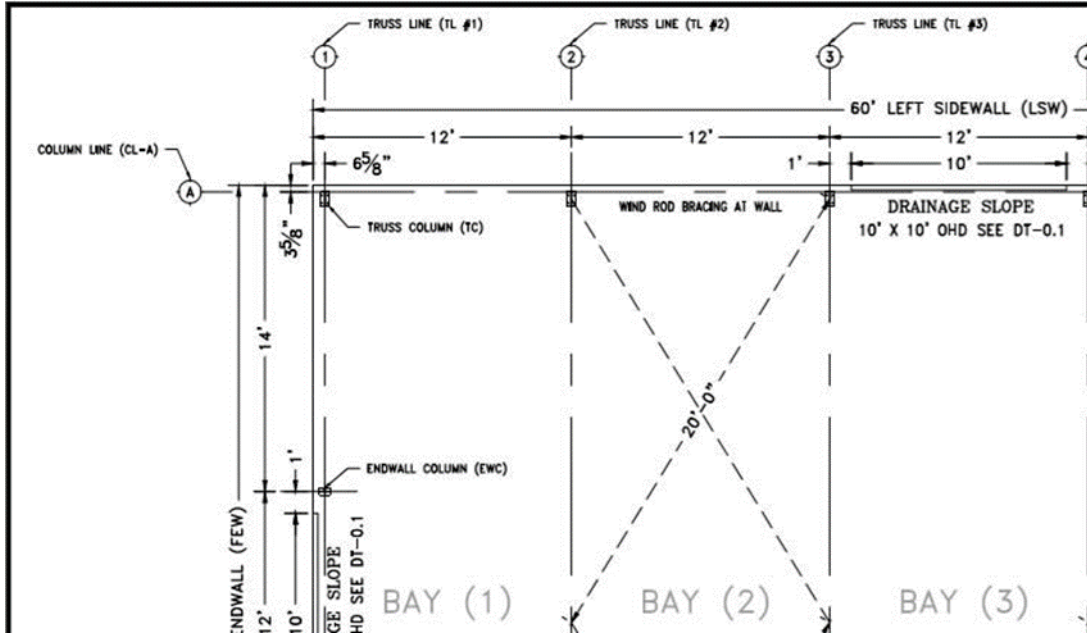
Tags will be marked on bottom of columns and/or trusses. Tags will be in writing along with silver tags tied to each part.

Only jobs with special component placements will be tagged.



Column Layout

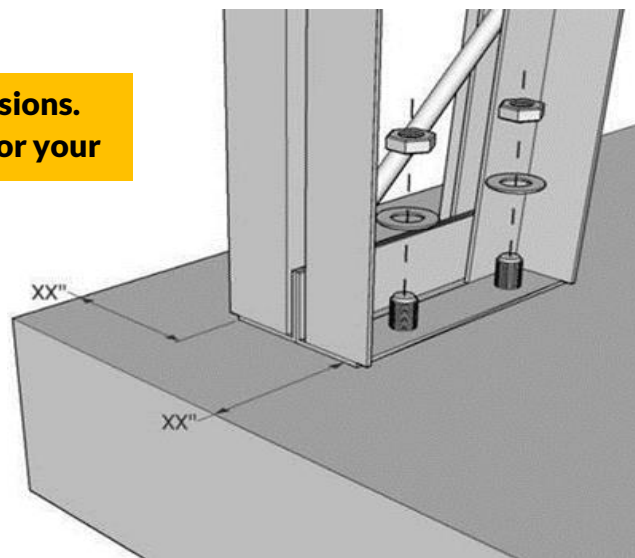
When laying out your columns for your building, the W-1 Drawing (Column Layout Plan) will give you measurements for proper column placement. Once you have determined the measurement for where the first outside corner column should be placed, stand column upright, and make sure it is level and square. Once it is level and square, it is now time to anchor it down.



You can see that for the example building shown the measurements are as follows:

- Column 1 is placed 6 5/8" away from the front-end wall concrete edge and sits 3 5/8" away from the left sidewall concrete edge.
- From the front-end wall concrete edge, measure and mark 12'. Place Column 2 at this mark, sitting back 3 5/8".
- Continue placing columns according to your specific W-1 drawing.

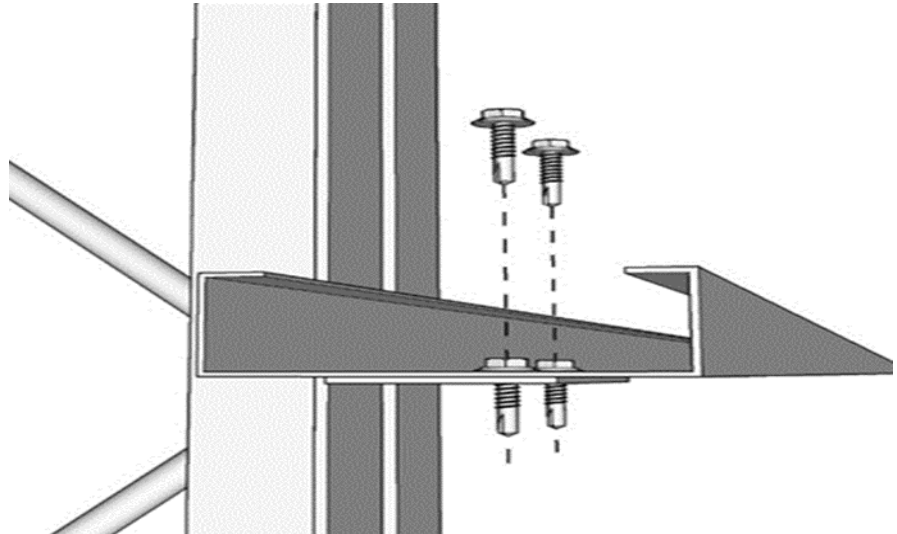
NOTE: Not all buildings will use these dimensions. Always verify with the W-Drawings specific for your



Sidewall Girts

Girts are the framing components that will make up the walls of your building.

When assembling the girts, both your W-Drawings and the BOL/Ship List will show you which girts should be used, and where they should be placed in your building. Girts will span from one column to the next by sitting on top of the welded-on tabs on each of the columns.



The first girt is located at the corner of the building and will sit 6 5/8" past the middle of the column. All other column girts will need to line up to the center point of each column. Girts that do not line up in the center could potentially mean that the column is twisted out of place or not level.

The corner girts will require 4 Tek self-drilling screws to be drilled into the girt through the clip welded on the column. All other girts will use only 2 screws per girt.

Once all side wall girts are installed, it is time to install your wind rod bracing for the sidewalls.

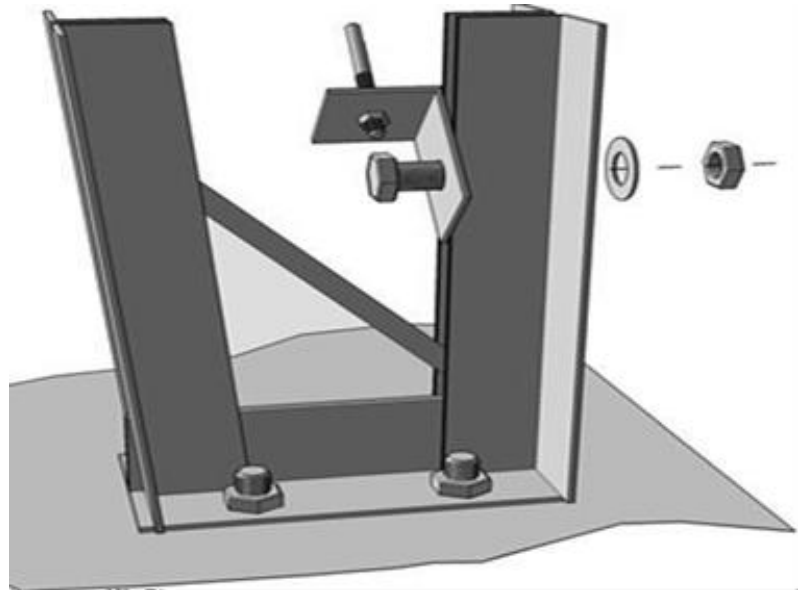
Note: Field measure at all non-standard lengths.



Wind Rod Bracing

Once the sidewall columns are in place and all girts are installed, install the wind rod braces at the location shown on your drawings, using 1/2" nuts at the ends of the wind rods and 5/8" or 1/2" bolts, washers, and nuts at wind rod clips. These sizes are specified in the hardware list.

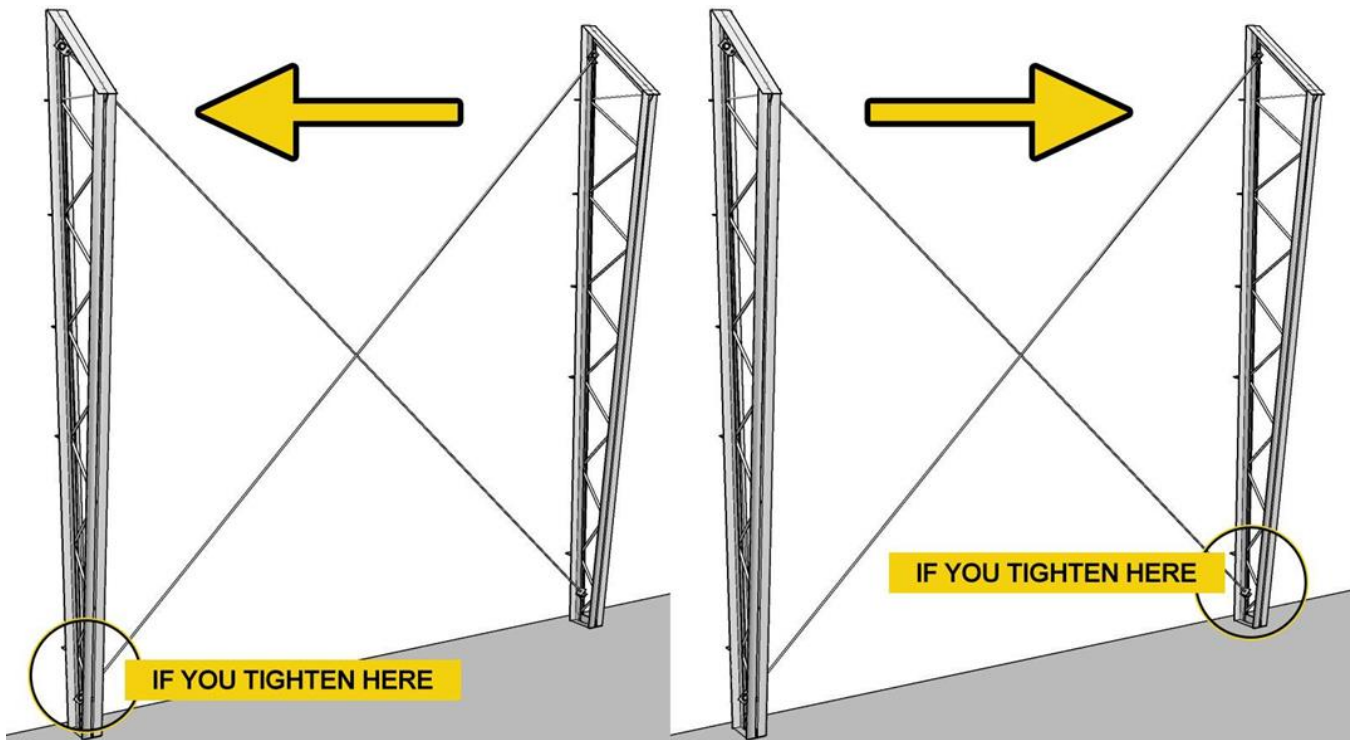
Once installed, use the wind rods to adjust the columns to be plumb. Once columns are plumb, make sure everything is tight.



See Building Drawings for Locations
DO NOT place doors or windows where wind rods will be installed.

The 1/2" nut that is on the wind rod can be tightened to pull your columns level. Tightening the nut at the right or left at the bottom of the wind rod will dictate what way the column will pull.

The wind rod is connected towards the base of the column, and at the top of column.

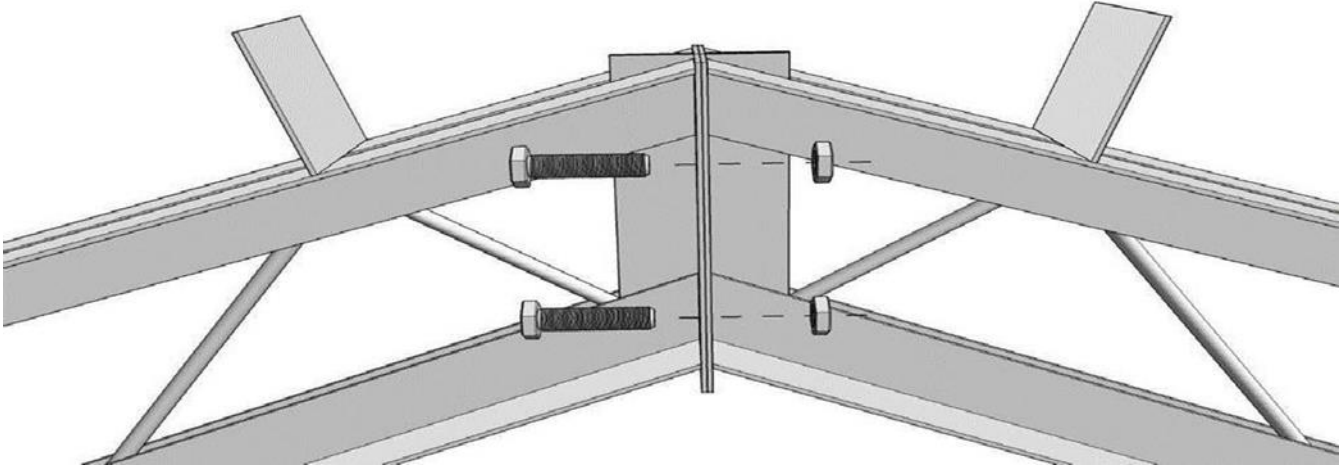




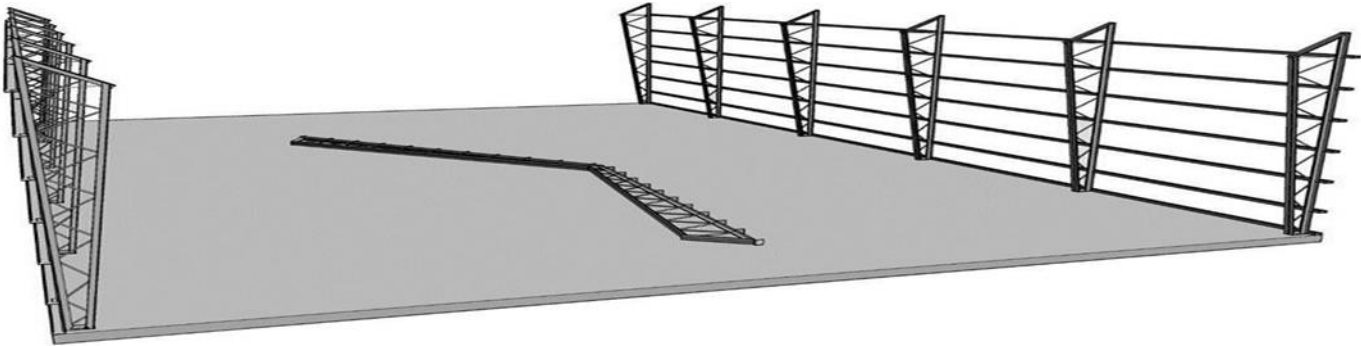
Truss Placement

Trusses should be bolted together at ridge connection using 5/8" x 1-1/2" nuts and bolts on the ground, and later lifted into place after columns are standing and girts are installed on the sidewall. The number of nuts and bolts will vary depending on the size of your building.

(See Shipment List and drawing for size and quantities.)



Note: Chord braces can be attached to the bolt tab on the truss using 5/16" x 3/4" nuts and bolts before lifting into place for easier assembly. See Chord Bracing section for details.



Note: If your building is wider than 40' it is recommended that a spreader bar be used to pick up the trusses.

Start at one end of the building, line up the holes of the knee connection using a drift pin and put all bolts in place. Once all bolts are in place, tighten all bolts at the connecting point. Before you release the truss from the equipment used to set it with, make sure all bolts are tight, and that the truss is stabilized with cables or a rope.

On each of the following trusses, you will need to attach purlins at every chord brace clip. Once you have all the trusses in place, attach the remaining purlins.



(Truss and Column at Knee Connection)

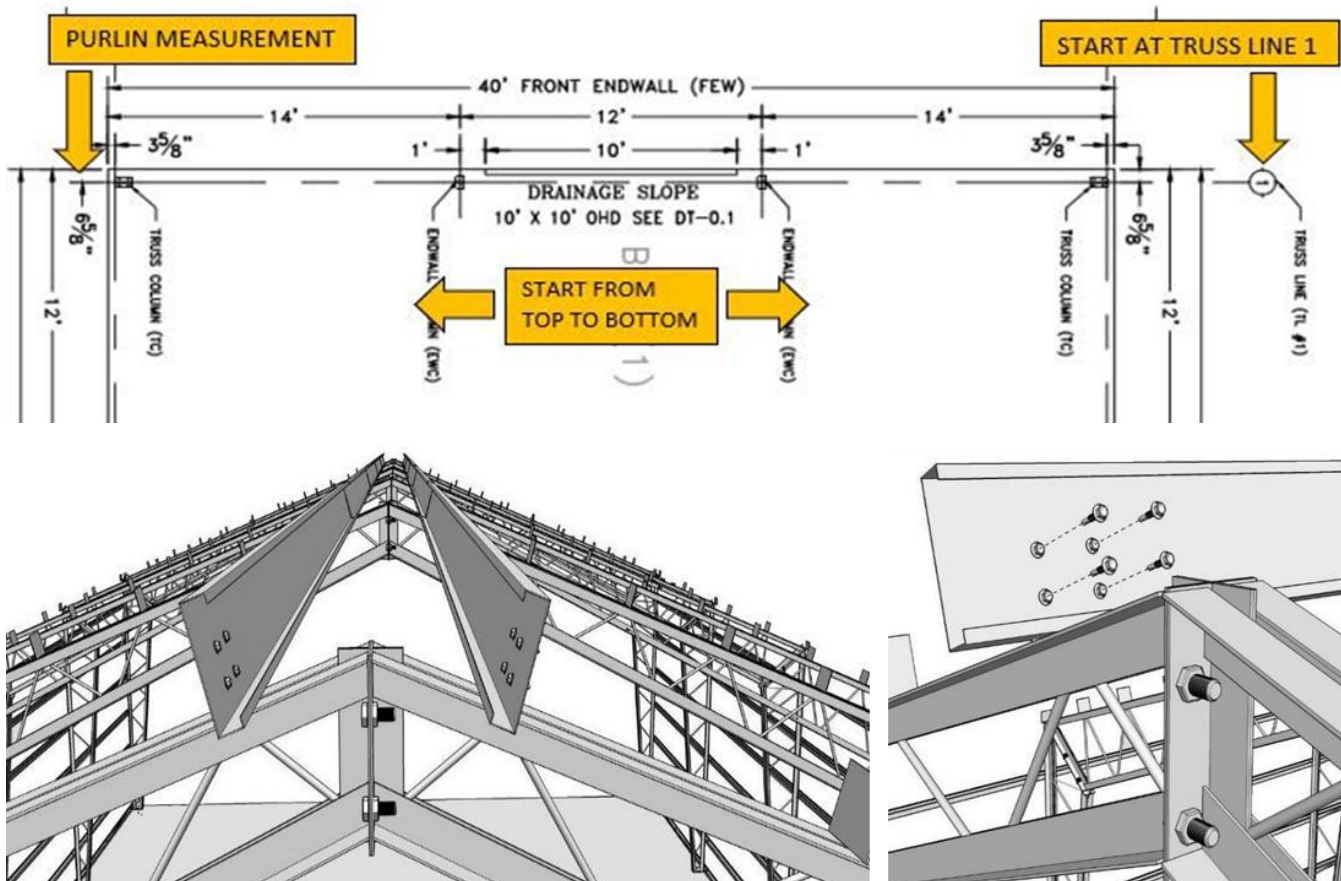
Purlins

Purlins are the framing components that will make up the roof of your building. The placement of your purlins is important to ensure that the trusses are not leaning in or out.

Truss line one is your starting point and locate the correct purlin size for that specific bay. Make a mark at 6 5/8" for every purlin in first outside bay – **Note: This mark may vary between buildings, view the W-Drawings for correct dimension for your building.**

If your building has Gable Overhangs, please read the Overhang Section of the Components Book.

The 6 5/8" mark you have created will need to be placed at the center of the outside truss. Attach the end with the 6 5/8" mark using 4 Tek self-drilling screws by drilling into the purlin through the clip.





Next, attach the other end of purlin to adjacent truss, making sure the purlins line up in the center of the second truss. Complete this process with remaining purlins in bay 1.

Purlins should be sitting past the end walls 6 5/8" with no Gable extensions. If you have gable extensions, find measurement on W sheets.

Trusses may need to be pushed or pulled to have purlins line up correctly.

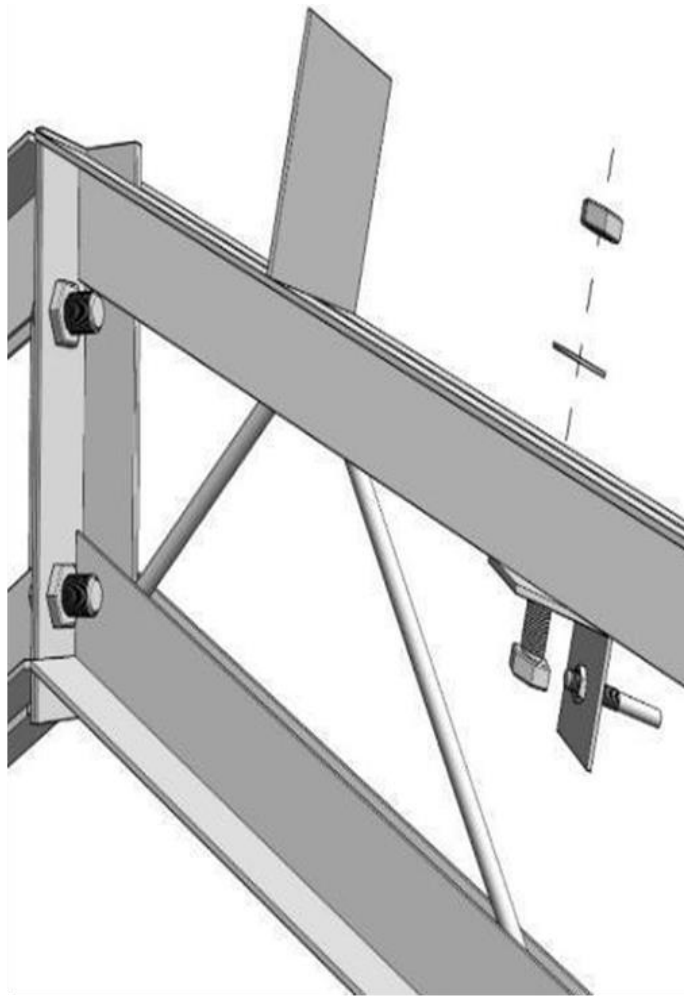
Inside trusses should have purlins lined up from the center of one truss to the next. Once you get to the last outside truss make another 6 5/8" mark to make sure that the purlins line up with mark in the center of the truss. Once all purlins are installed it is time to install wind rod bracing at the roof.



Wind Rod Braces at Roof

Once the trusses have been set and all purlins are installed, it is time to install the wind rod braces in the bays as shown on the building drawings using 1/2" nuts at the ends of the wind rods and 5/8" or 1/2" bolts, washers, and nuts at wind rod clips. Once wind rods are installed, tighten 1/2" nut to adjust trusses to be plumb. Once everything is plumb, tighten all bolts and anchor bolts.





Chord Bracing at Roof

Make sure that the trusses are vertical and plumb before attaching the chord braces to the purlins. Attach the chord braces to the trusses at a 45° angle using a 1/2" hex head bolt and 3/8" hex head nut if they were not previously attached. Attach the chord braces to the roof purlins with two #14 x 3/4" Tek self-drilling screws.

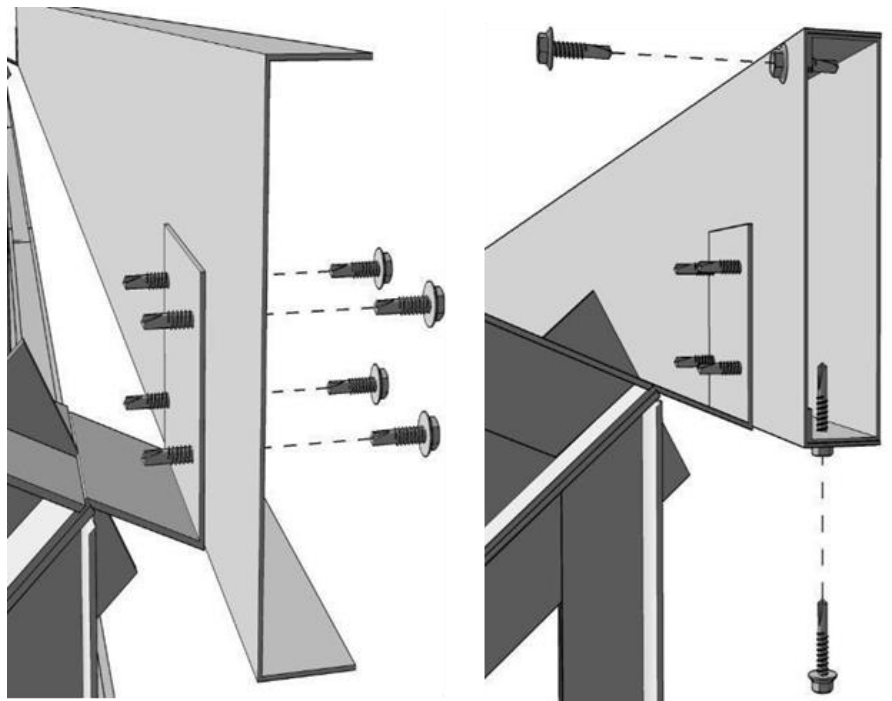
One Tek screw will go through pre-punched hole, and the other will screw into the knee brace.



Eave Purlin

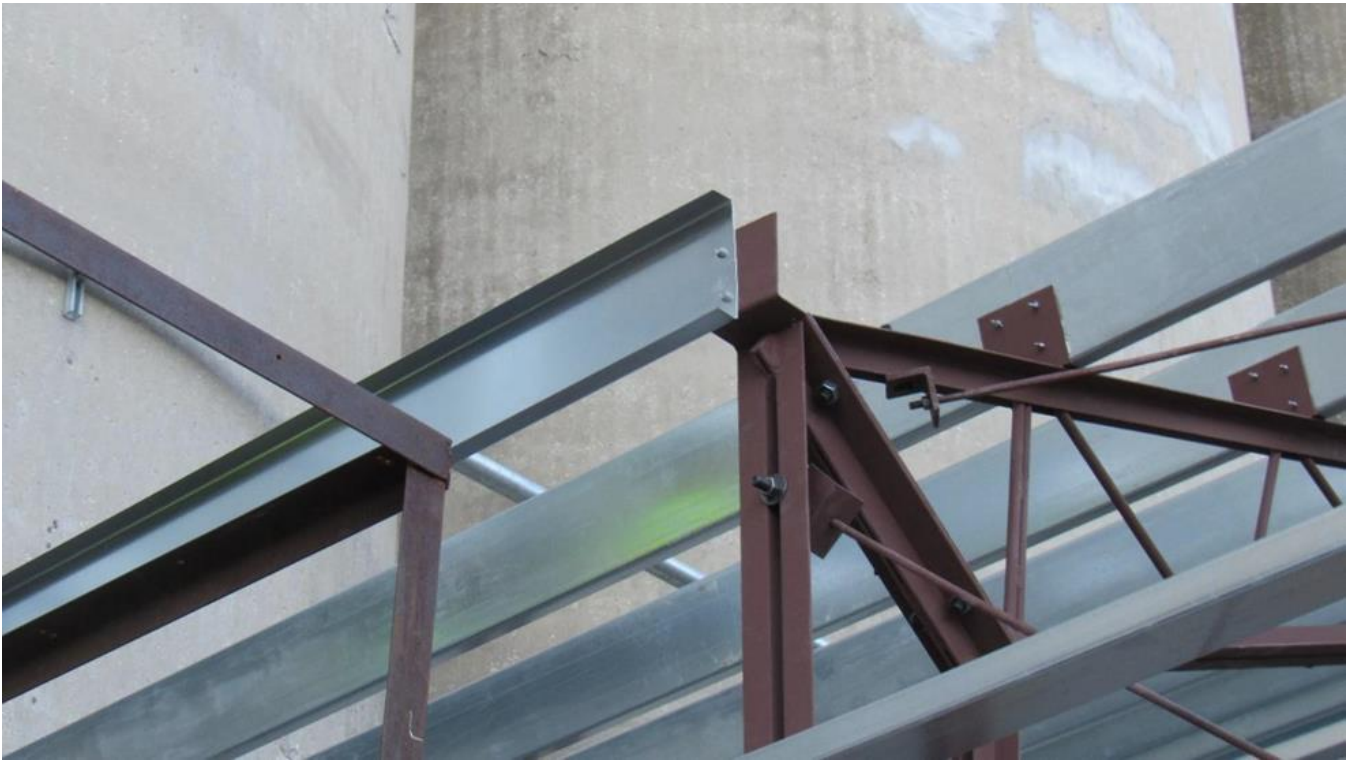
The eave purlin goes at the side wall of your building.

Your eave purlin will consist of a track and purlin nested together to create a solid cover beam. The eave clip is welded on to the column to be sure the face of the clips is plumb. The clips may need to be straightened.



(Left - 6" track installed to eave clip before the purlins are nested into track. Right - 6" purlins nested into 6" track.)





(6" Track at Gables at end of Purlins)



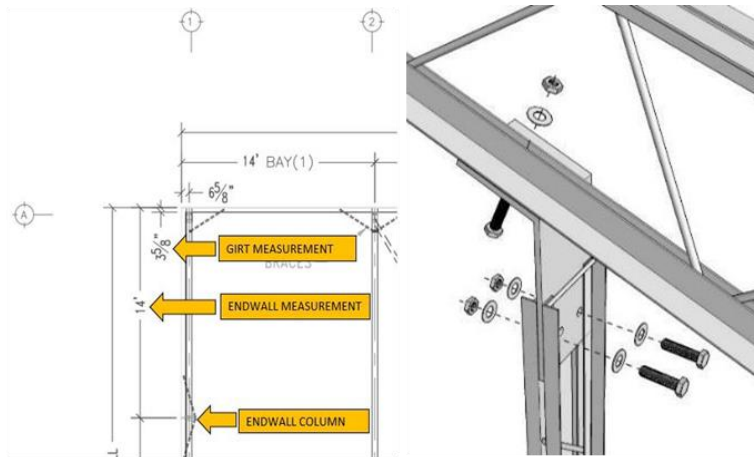
(6" Purlin Nested in 6" Track)

End Wall Column

The end wall will be placed using the dimensions from the W-Drawing.

Example Below: Measure 14' from the edge of the concrete and make a mark for your first bay space. From this mark, measure back 3 5/8". The center of the column should stand where the two marks meet. The end wall bent plate must be in place before standing the columns.

Note: Dimensions will NOT all be the same as this guide.



The end wall bent plate will be inserted in between the top two rods and welded on the end wall column. (2) 5/8" x 1 1/2" bolts, (2) 5/8" nuts, and (4) 5/8" washers will be used to attach plate to the column. (1) 1/2" or 5/8" x 3" bolt, along with corresponding nut and washer, will be used to attach the bent plate to the truss.

Anchor the columns in place and be sure that the each are square and level. Once anchored, attach the bent plate to the truss and check that each is square and level.



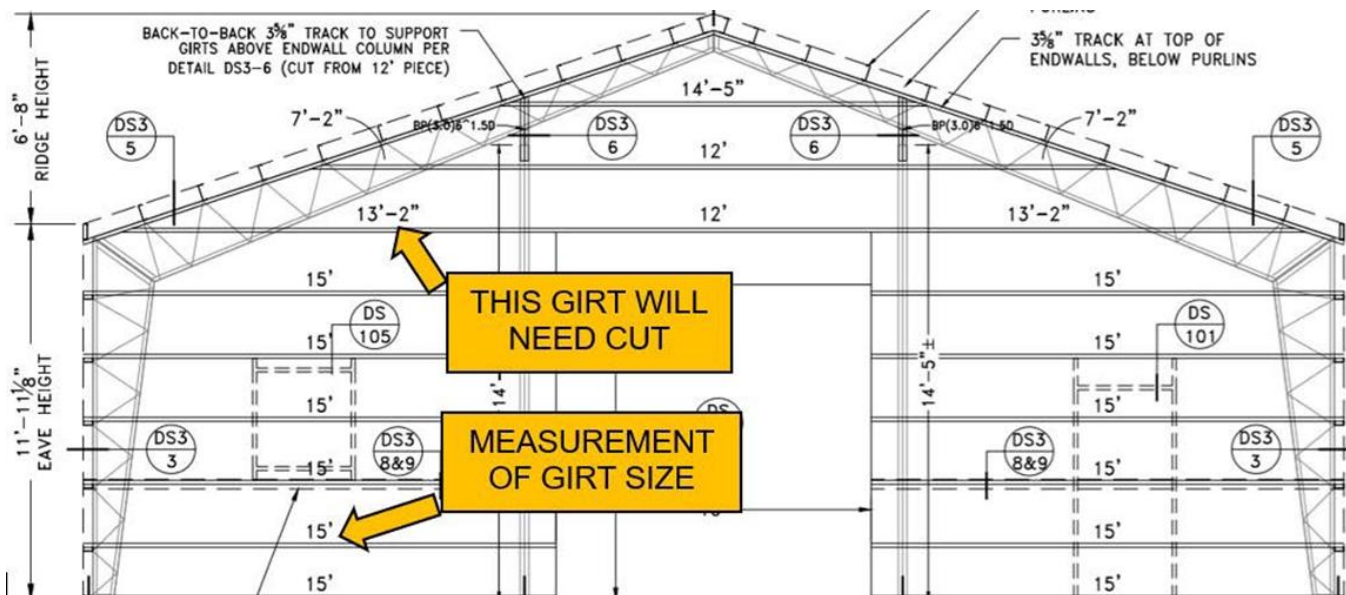
End Wall Girts

Attach all the girts to the end wall. The end wall girts will overlap side wall girts at the corner connections. The end wall girts will overlap on top of the side wall girts at the corners, and the depth of the girt.



Note: ALL measurements MUST BE field verified for proper lengths.

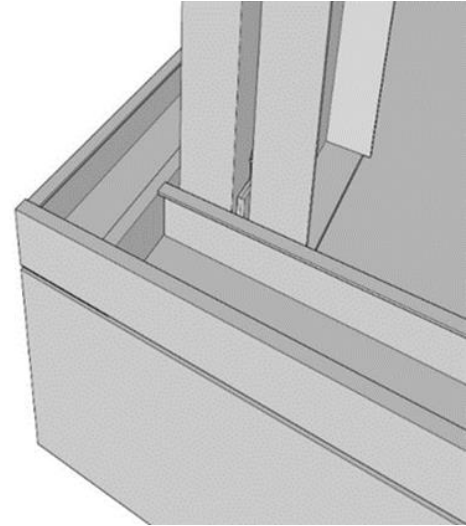
The gable track and steel framing at top of end wall will need to be installed before all end wall girts can be set.



(Girts will be called out for use at the end wall.)

Base Girts

Base girts are those that will be located along the entire building and connected to the concrete. Base girts should be fastened to the concrete using 1/4" x 2" concrete fasteners supplied by the customer. Girts will be placed against the face of the columns at the corner where the side wall and end wall base girt meet. The end wall girt will need to be notched to fit under sidewall girt. An optional sill seal will need to be placed at this time if needed.

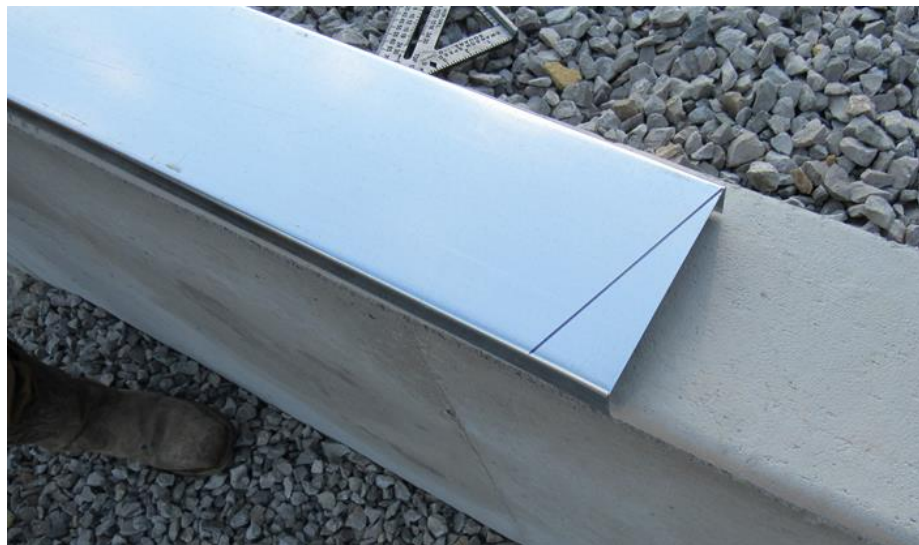


Gable Track

The 6" gable track will be supplied to cover the ends of the purlin on the outside end of the building. This process will start from the bottom purlin and work upwards. Cut the ends of the bottom side purlin to match the roof pitch.

Use the chart below to determine the proper degree and cut dimensions to complete the gable cover:

| Roof Pitch | Cut Dimension |
|------------|---------------|
| 1:12 | 1/2" |
| 2:12 | 1" |
| 3:12 | 1 1/2" |
| 4:12 | 2" |
| 5:12 | 2 1/2" |
| 6:12 | 3" |
| 7:12 | 3 1/2" |
| 8:12 | 4" |
| 9:12 | 4 1/2" |
| 10:12 | 5" |



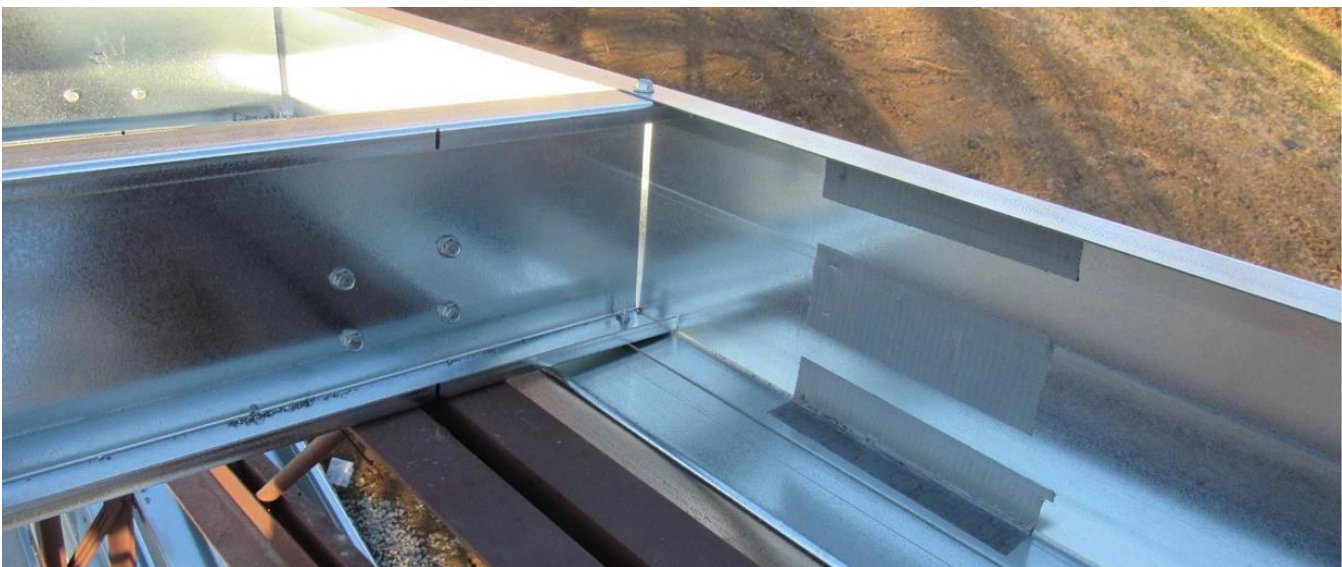


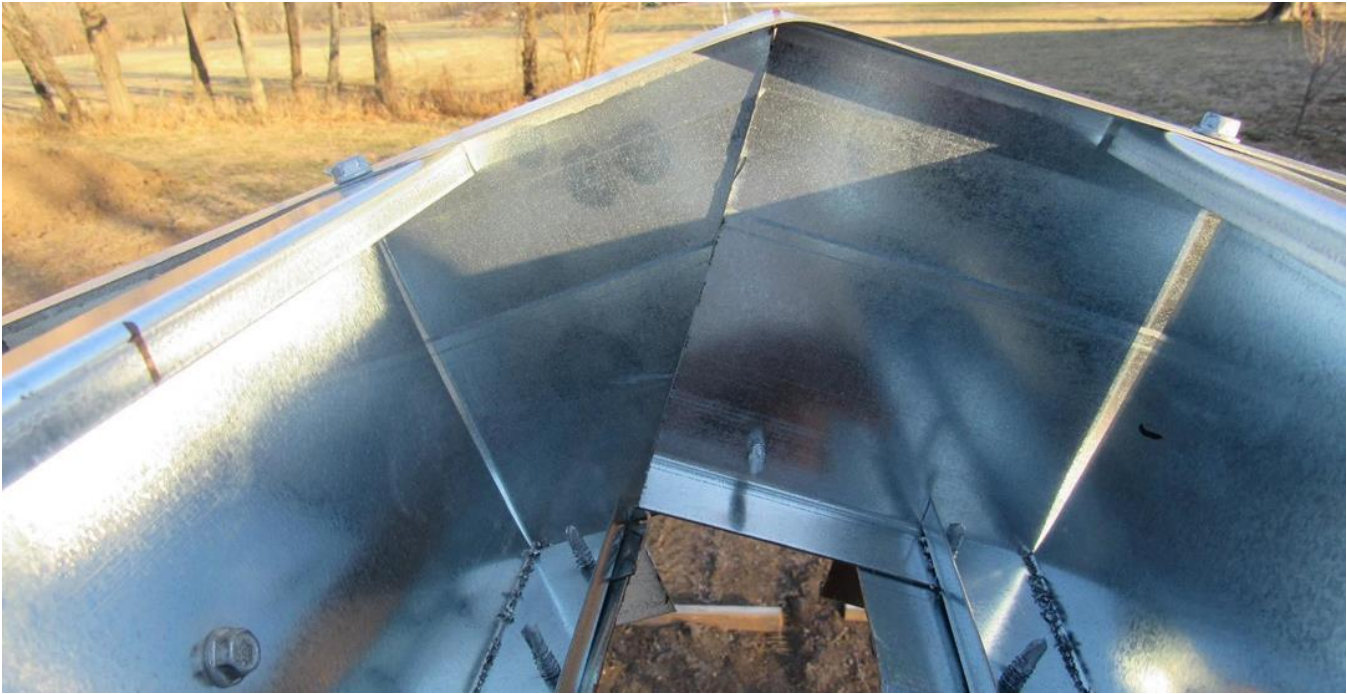
The gable track will go over the purlins. The purlins may need adjusted to properly fit cap over purlin. Before the track is fastened down, make sure the track does not have any major bows and is running straight. Secure by using (1) Tek self-drilling screw in the top of track and fastening through purlin.

The center piece of the gable cover will be placed on both sides of the ridge. The cut to achieve the bend is as followed: Find the center of your track and make a mark. Draw a line on the face of the track along with the bottom edge.

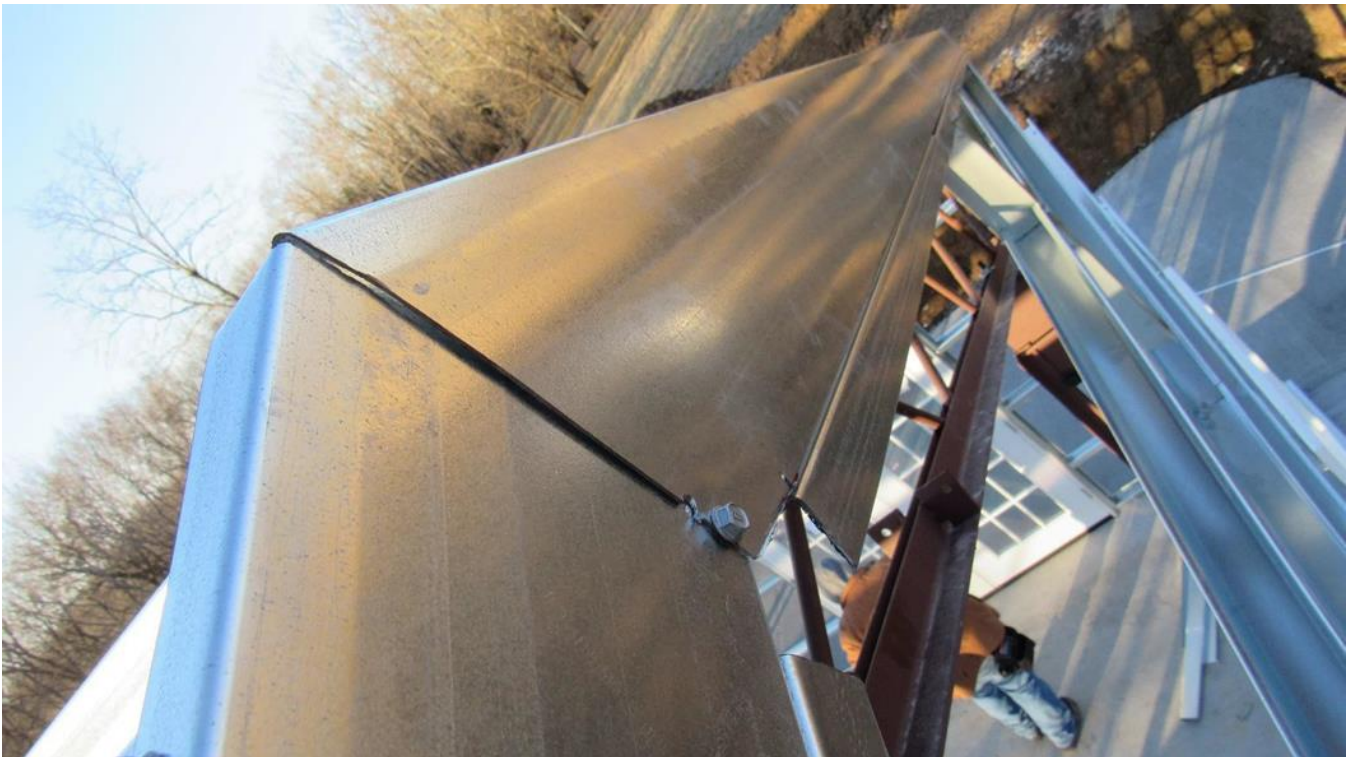
Measure over 2" and make a mark. Draw a diagonal line from top center line to the 2" mark. At the 2" mark,

measure 2" and make mark on bottom edge and connect diagonal mark to two-inch mark. Final two-inch mark will be taken down on bottom side of track. cut out marks to allow for the track to fold.





(Backside of gable track at peak.)



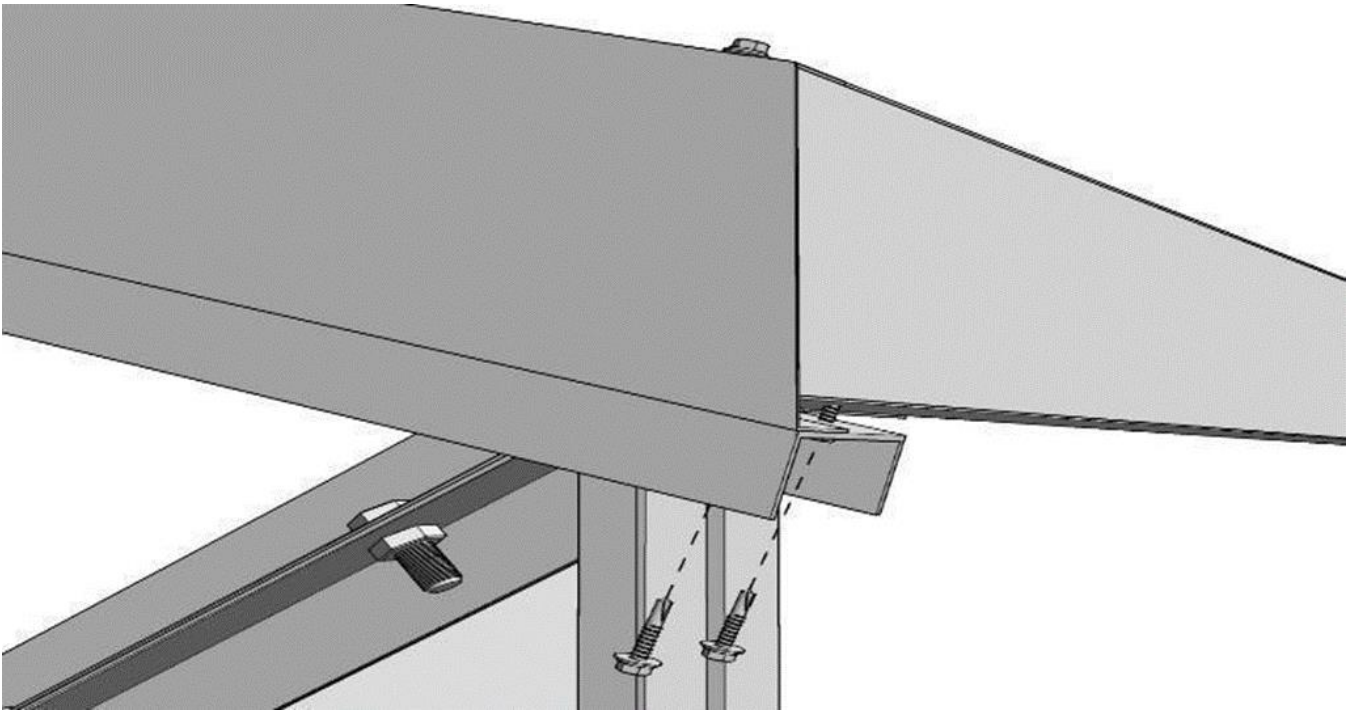
(Frontside of gable track at peak.)

Steel Framing at Top of End Wall

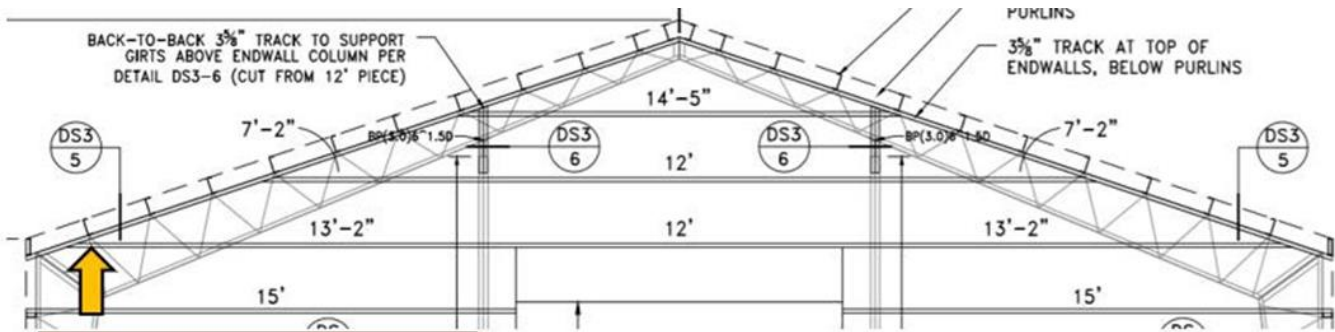
A piece of 3 5/8" track will need to be installed along the whole gable of the building. This piece of track will allow you to attach the final girts on the end wall. The track will be fastened to the underside of the purlins.

Note: It is important that the track runs straight the entire gable and falls in line with the end wall girts below.

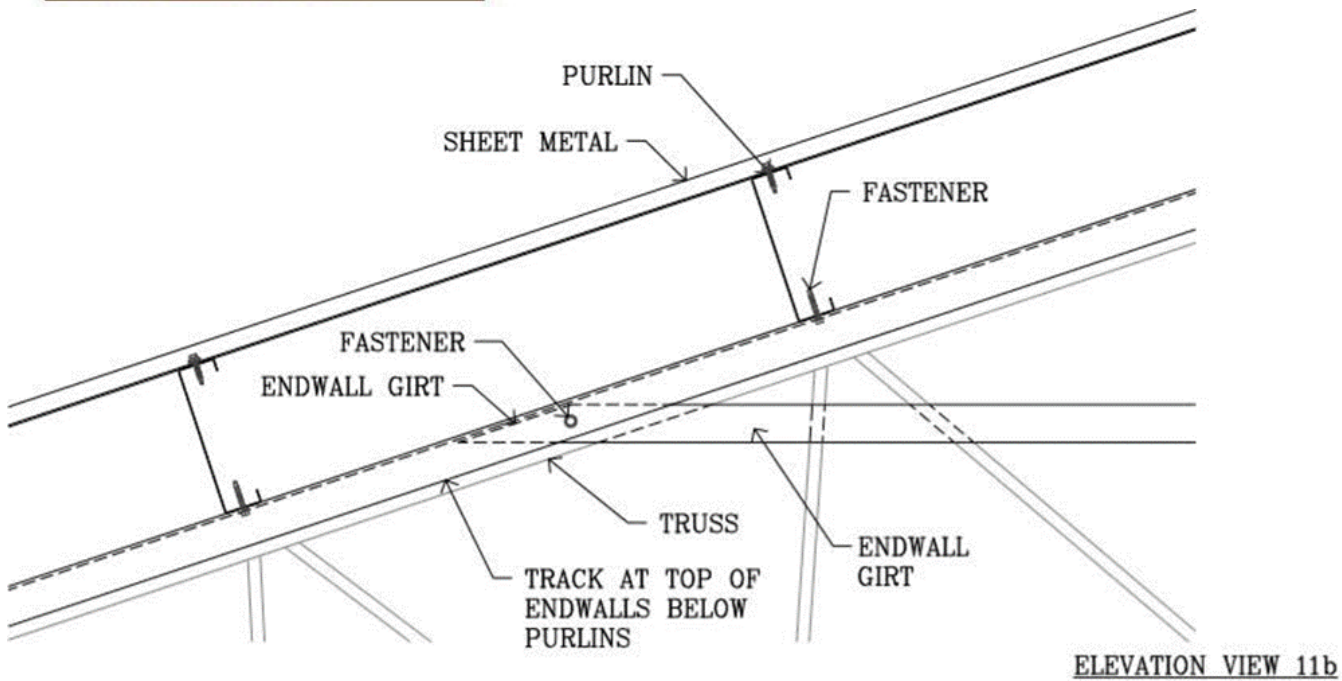




Once the track is installed on the entire gable, the remaining end wall girts should be installed. From the top girt installed measure up 2' on 3 5/8" track and make a mark. Measure from the clip on the end wall column to the mark made. This measurement is the length your girt will need to be cut down to fit in the final section. The girt will sit on the clip and be pushed into the 3 5/8" track. Repeat this step until all girts are in place. All girts should match your W- drawings.



FROM THE TOP OF THIS GIRT, TO THE 3-5/8" TRACK MUST BE 2'





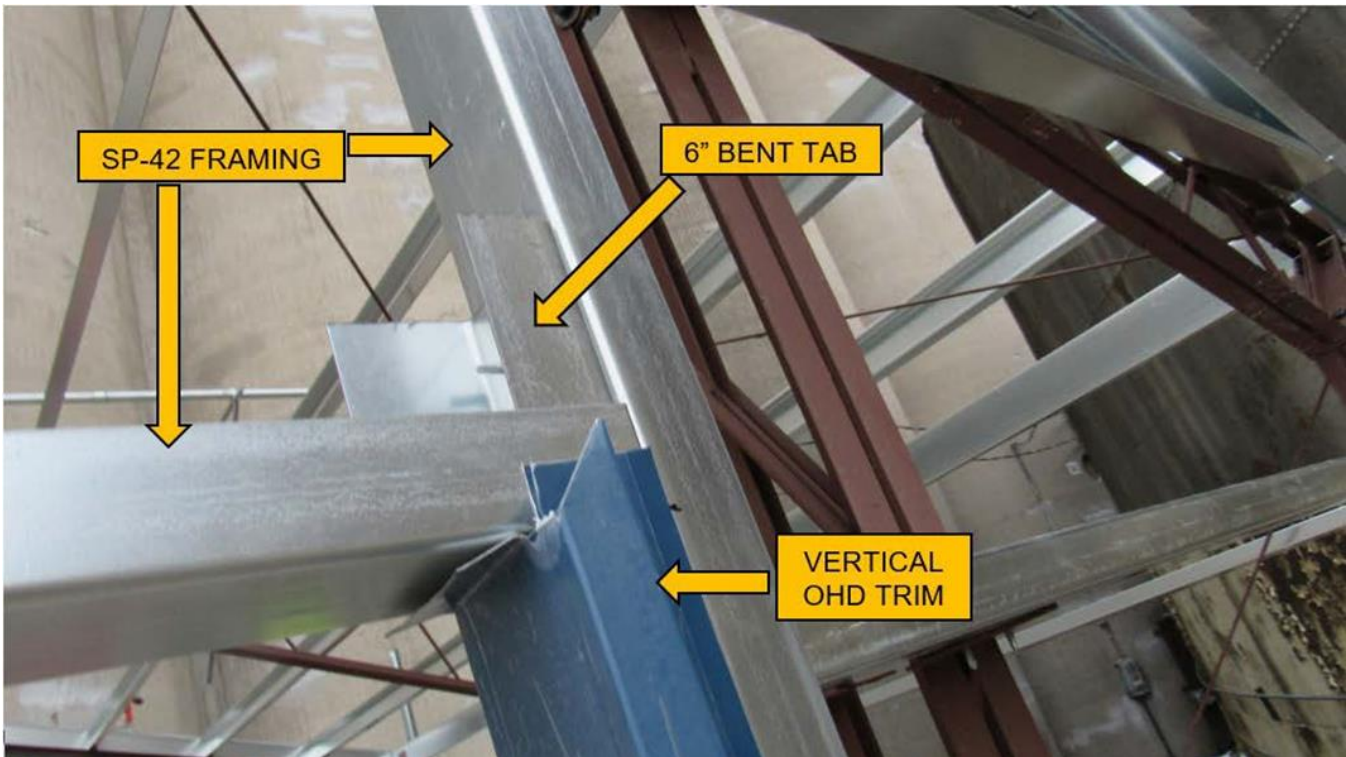
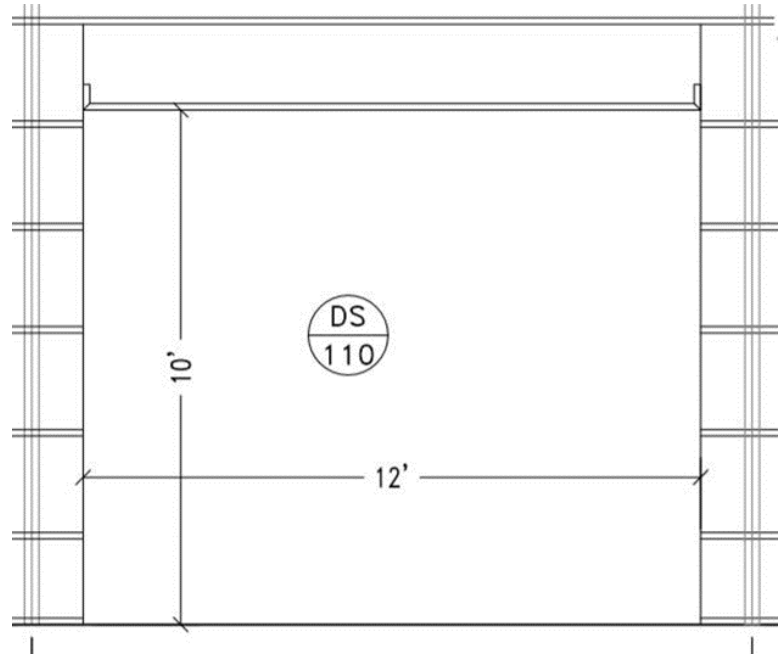
Complete previous steps on the second end wall.



Note: Back-to-back track may be necessary to use at end walls.

Framing Overhead Doors, Windows, and Walk Doors

Overhead doors will be framed out of SP42. Verticals will need to have a 6-inch tab bent at the top that will be fastened into the girt that spans the entire bay. Horizontal SP-42 will have two 6-inch tabs that will be bent up and fastened into the verticals.



Overhead Door Trim

The overhead trim will fit on the outside of the SP42. Your trim will need to be cut to fit the vertical framing. Horizontal trim will span from the outside edge to outside edge.



(Left - Vertical trim cut. Right - Horizontal trim cut.)



(End view of overhead door trim.)



(Above is how trim will install together.)



(Overhead door finished trim.)

Door and Window Framing

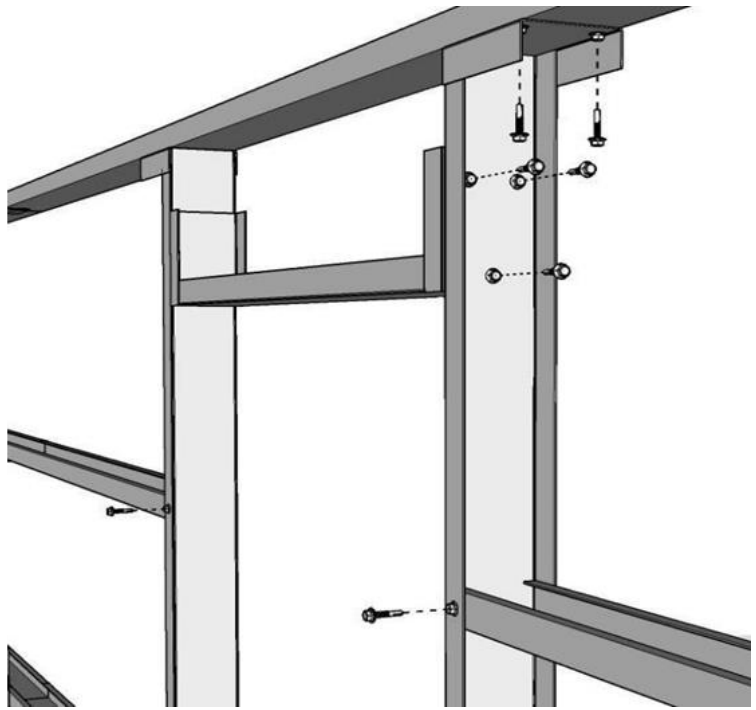
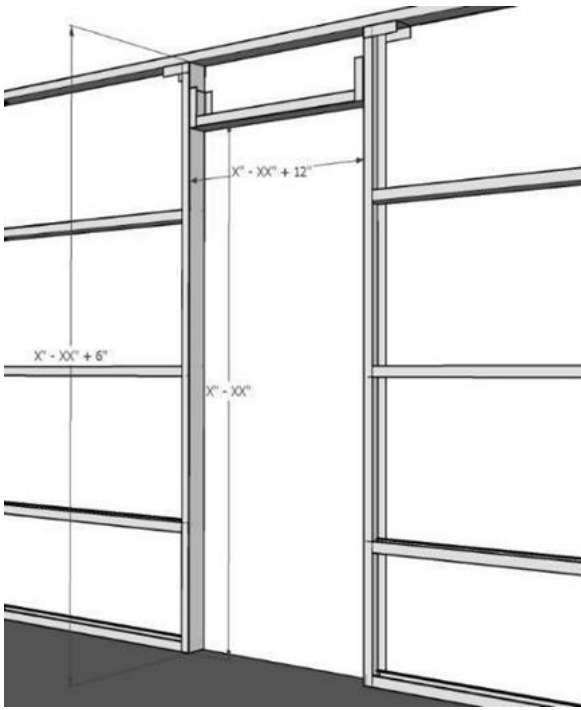
Framed openings for doors and windows will be framed out using track that fits over the girts and is then fastened to the girts. The track will need to be cut 12" longer than the length and width of each door and window. You will need to create a 6" bend on each end of your track for the Tek self-drilling screws to fasten into. Once you have cut your track to length, attach the vertical piece first and fasten into place by screwing the bends into the girts.

The horizontal track will fit in between the vertical track with the face of track towards the opening.

Note: Doors and windows should be framed out to the exact size of the door and window.

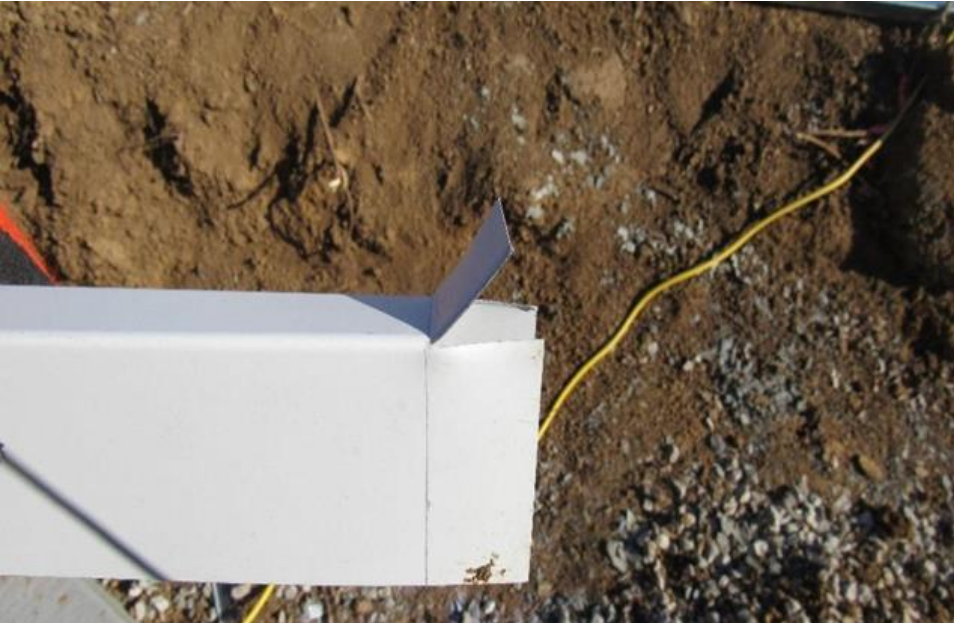






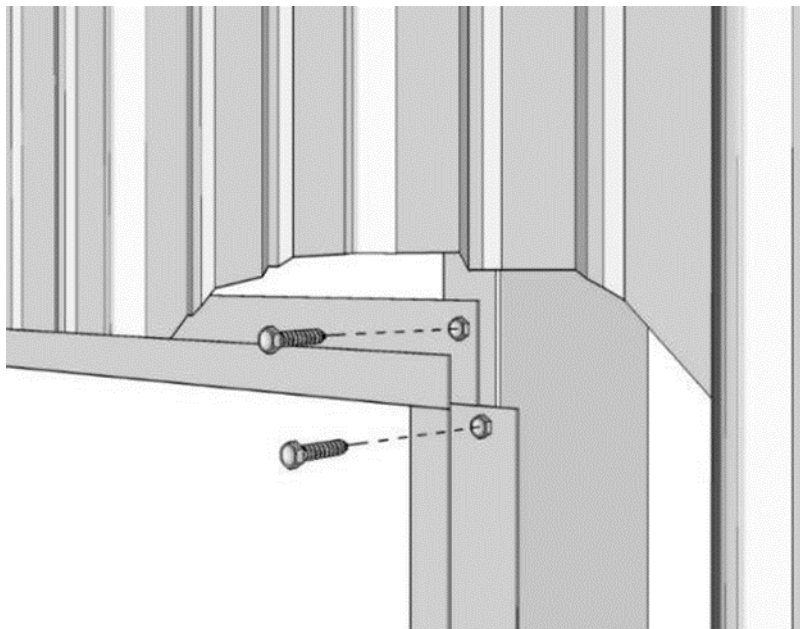
Door and Window Trim

Doors will be trimmed out with J-trim using two vertical and one horizontal. Vertical trim should sit halfway between the door frame and the door. Horizontal trim will need to span from one outside face edge to the opposite outside face edge. A tab will need to be cut in the base channel and bent inside of the vertical trim so that the sheet will fit all the way to the door edge.



Note: Trim that does not have a tab bent will allow water to leak inside of the building.

When cutting trim, it is best to use tin snips to achieve clean and accurate cuts.





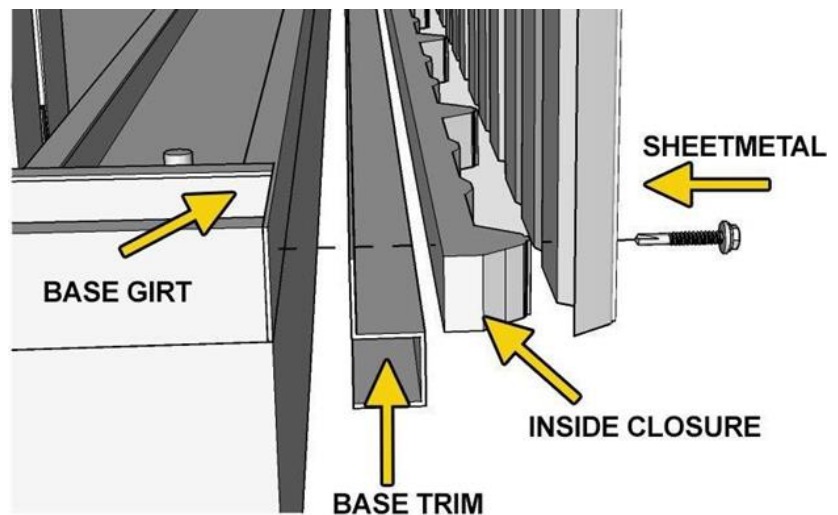
(Finished door and window trim.)

Base Trim

Base trim will go along the bottom girt that is secured to the concrete. To ensure the base trim is level - run a string line from one end of building to the other. Use a string line level while making sure the string is pulled tight. The top of the square base will need to be below the string line. Use panhead screws to fasten the base trim to the girt.

If your building is not insulated, you must put inside closure on the base trim between the panel. Match the high ribs on the closure with the panels. If your building is insulated, you do not need to use inside closure at the base trim.

Once all the base trim is installed around the building, and all openings are trimmed out, you are ready to begin sheeting.



Sheeting

How-To Pre-Drill Holes

Pre-drilling holes with a 1/8" drill bit will allow you know where the girts are located.

Measure from the top of the square base to the top eave purlin and write down the measurement at each girt center point. It is important to check the measurement at each column along wall. The base trim may need to be moved or girts pulled up or down to have even screw lines.

Sheets should only be stacked at max 20 panels when being drilled. To ensure that panels are even at the bottom edge of the panel, using a wood block hit the block with a hammer against the panels to align the bottom edges.

Using the measurements that you have gathered, make marks on the top panel in between the first high and low rib. Repeat marks on the remaining high ribs on the panel, and then drill holes.

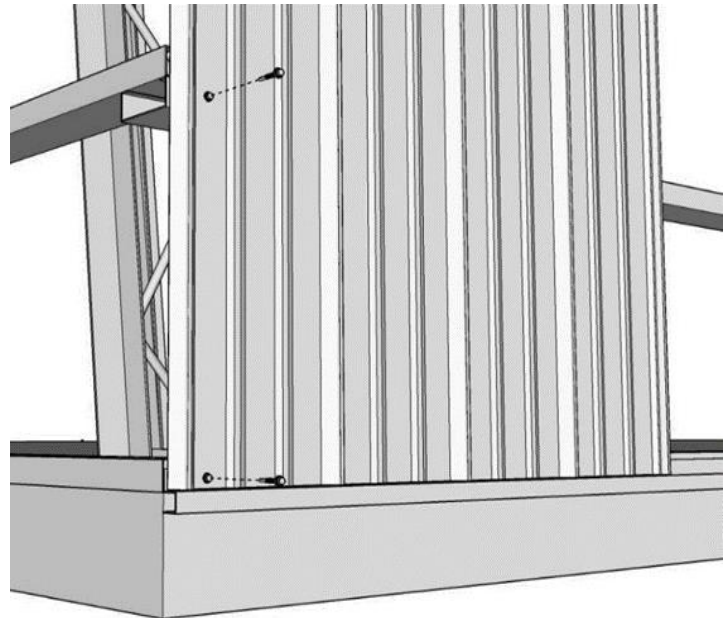
Once the panels are drilled, it is time to put the sheets on the walls. If your building is not insulated inside, closures need to be placed on the square base trim before the panel to prevent water leaks.

Screw panel off and place level against high rib to make sure panel is level. Panels that are not level can lead to screws missing their proper marks and panels not overlapping properly - likely resulting in building leaks and poor appearance.

When a panel is coming to an opening on your building it is important to know when to cut the panel. When a panel is less than 3' from any opening it will need to be cut to fit. Always measure from the middle of the outside high rib to the inside of the trim to find the panels width. When finding length, make sure your panels are not too loose to ensure the trim and panels will not leak. Once sidewalls are sheeted the eave trim needs to be installed.

Tips for Sheeting

- Use caution when handling cut panels. Roll panels into a "taco shape" to carry safely.
- Fasten the bottom row, top row, and seam row, followed by the remainder of the panel.
- Panels can be manipulated to line up correctly.
- Always measure twice.
- Panels need to be as close to trim as possible to prevent water leaking inside building.
- Panels are 39" in width. Once panels are overlapped together, panels cover a 36" area.
- Bottom of panels that rest on base trim should not be cut to prevent rust.
- Use caution when handling sheets in windy conditions.





Eave Trim

The eave trim will only go on the sidewalls. Place the eave trim on the top of wall at nested eave purlin and fasten from the top.

Note: Once eave trim has been installed the complete length of the wall, you may begin sheeting your end walls.

End Walls

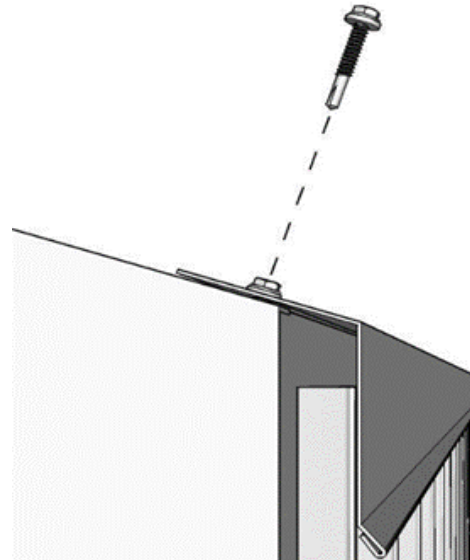
End wall panels need to be cut to fit the pitch of your building. Panels should be cut on the ground to allow for the most accurate measurements.

How to Mark End Wall Panels

- 1) Measure from base trim to top of end wall for low side.
- 2) Measure over 3 feet and make a mark.
- 3) Measure from base trim to top of end wall on your mark for high side.

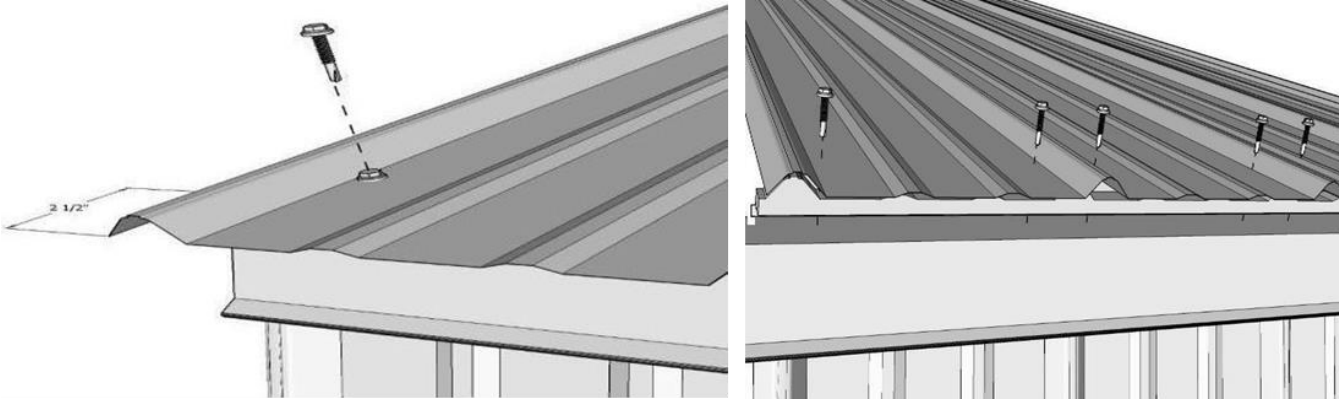
After you gather your two lengths of the panels translate that to the panels. With a pencil connect the two lengths with straight edge. Then cut your panel and continue to the next section.

Note: End wall panels will be covered with gable trim that sits halfway on the roof and halfway on the end wall panels.



Roof Panels

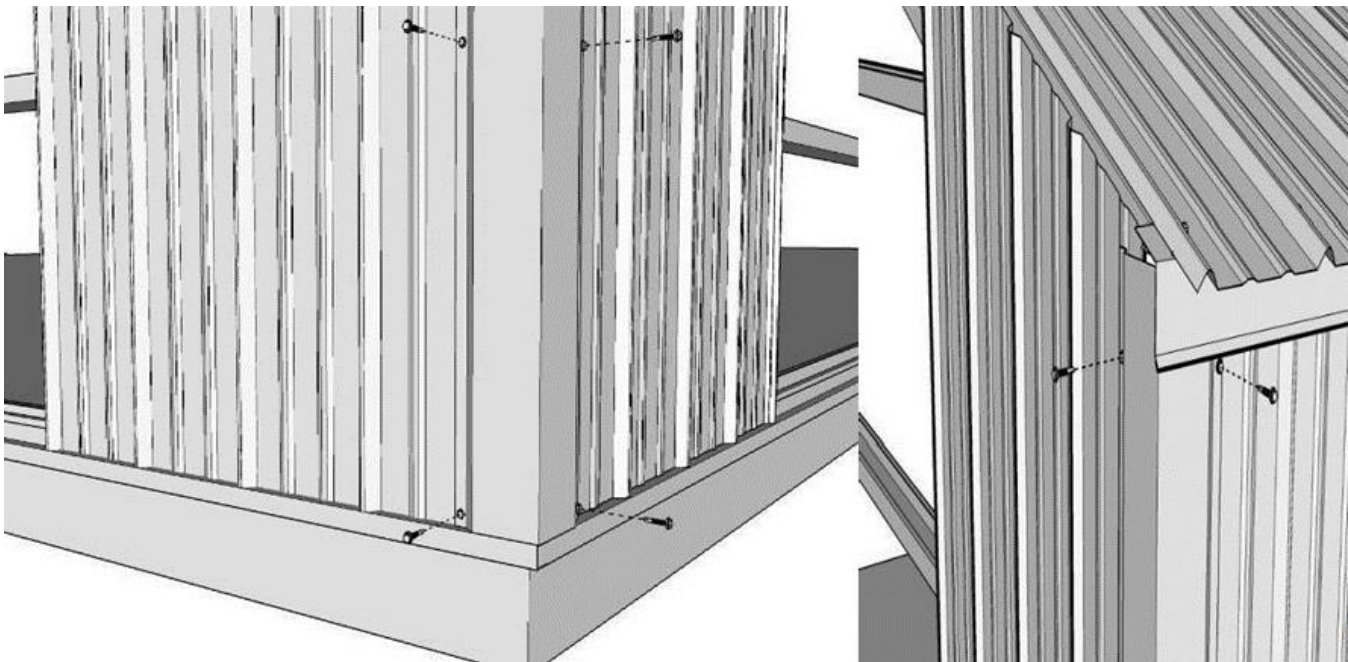
Repeat the pre-drilling process for the roof allowing for a 2 1/2" overhang for the bottom edge of roof panels. Inside closures will be placed at the eave trim to prevent water from leaking. Purlins may need to be adjusted for screw lines to be even. It is always better to move a purlin to ensure the screw hits in the center, rather than to try and put screw in at an angle to hit the purlin.

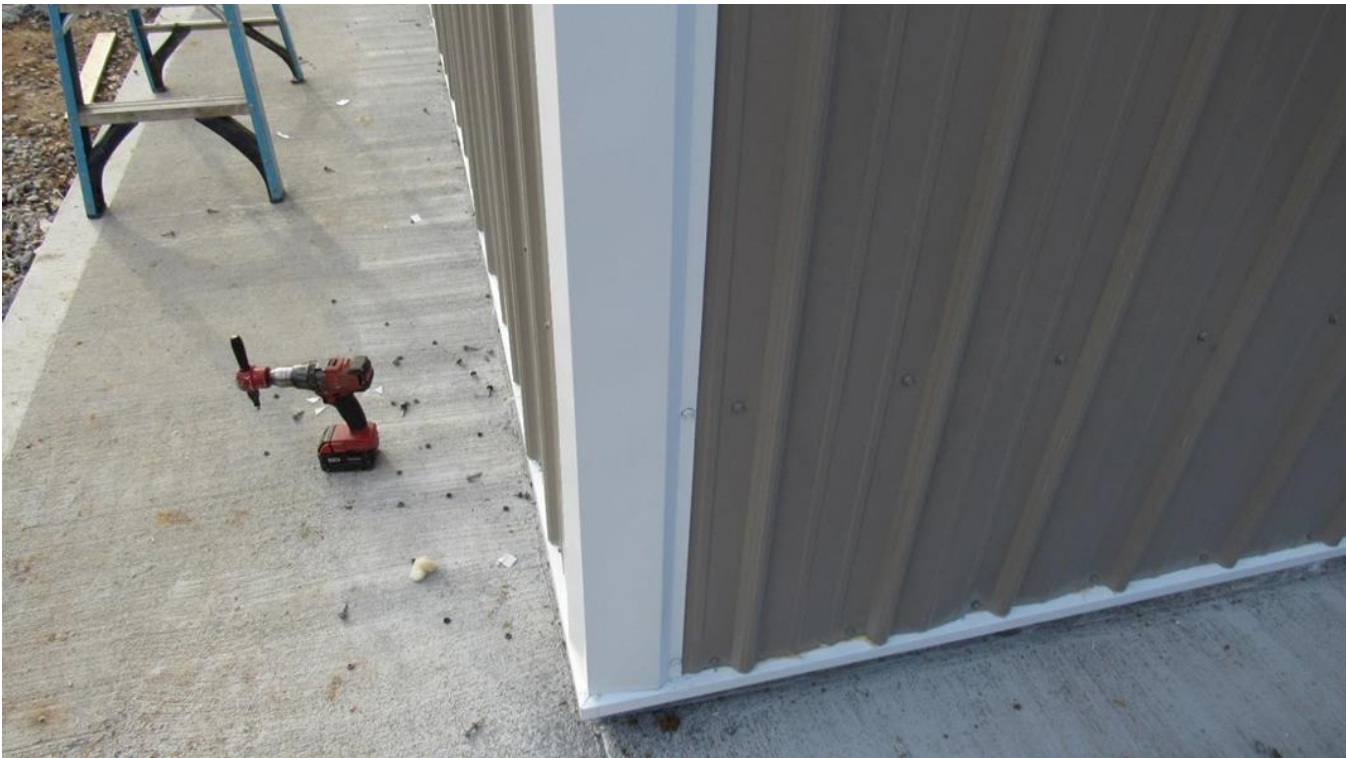


Corner and Gable Trim

Corner and gable trim are the same profile. Corner trim should be installed before gable trim. Corner trim should be notched on the bottom and set on top of the base trim. Corners are to be fastened at every girt to match the screw lines.

Gable trim will also have a 2 to 0 cut to match the roof pitch. The roof side of the gable trim should fasten at every purlin, while the gable side is fastened at the end wall panel seam overlap. The center section of the gable will be made of one piece of gable trim that folds to cover both sides of ridge.

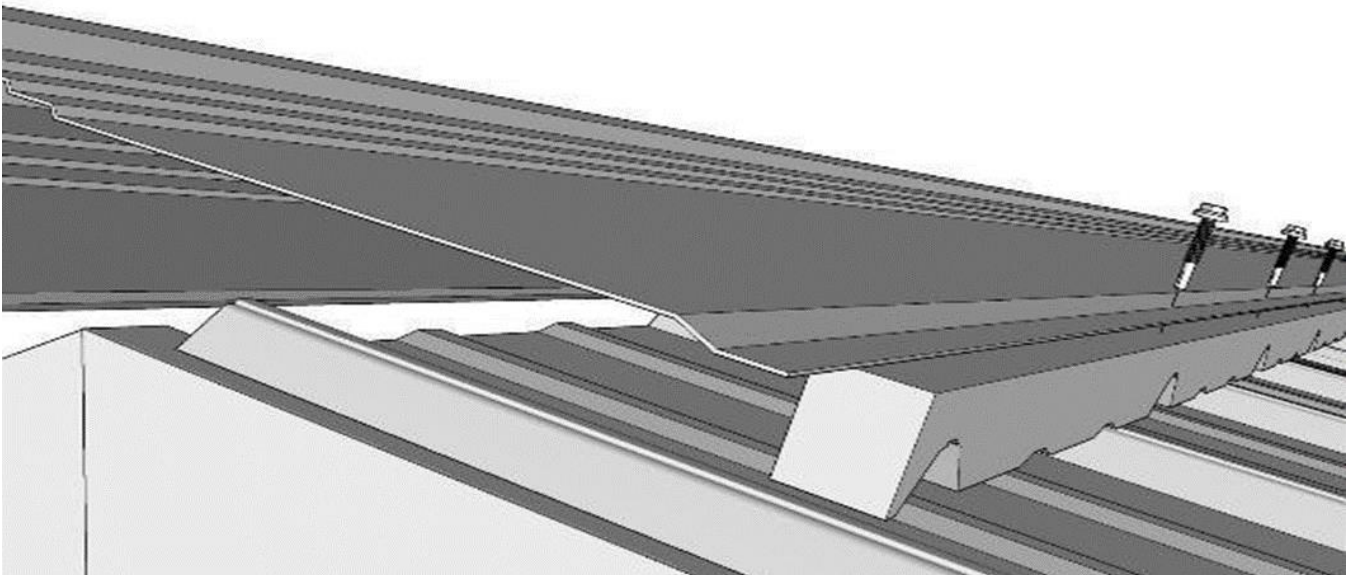




(Finished corner.)

Ridge Cap

The ridge cap will be installed over the gable trim. The ridge should overhang 2" from the building, and it is to be fastened at every high rib on both sides of the roof - fastening into the high rib. Outside closures should be placed on the panel before ridge cap. The ridge cap will not screw into the top purlins. Each ridge should overlap each other a maximum of 4 to 6 inches to be sure that enough trim has been provided.



Peak Plate

The peak plate will be installed under the ridge cap and fastened into the gable trim. Solar light will clip together and placed behind the plate. Attach peak plate with 2" self-drilling screws that are located with the plate in the enclosed envelope.



Components Book

Insulation

Insulation will be delivered separate from your building.

Your insulation will need to be stored in a dry area, where no moisture can come in contact with it.

A cut list for your insulation will be provided with your other building paperwork. The cut list will provide a rough drawing of your building, and where the insulation will be installed.

Note: The insulation company and WWSB do NOT call the walls the same name.

Along with the insulation you will also receive two types of tape:



The large tape you will receive is patch tape that is used to repair your insulation from tears.

The smaller tape is double-sided stick tape. This tape is used to hold the insulation in place while allowing you to place your panels in position.

Installing Your Insulation

Insulation will be installed as follows:

- Girts / Purlins
- Base Trim / Eave Trim
- Double sided tape
- Insulation
- Panels

You will need to have your panels pre-drilled before starting your sheeting process. **(See Pre-Drill Hole section in book one.)**

Rolls are typically made a little long for each location to allow hand hold space for stretching into location.

When installing your insulation, you will have 4' wide rolls and 6' wide rolls. The first roll you will use is a 4' wide roll. Once this roll is used you will continue with installation using the 6' wide rolls, and finish with 4' rolls if additional rolls are provided.



Note: The base trim must be installed before rolling the insulation out.







Starting at one side wall run double sided tape along top eave purlin, the middle girt, and the base girt.

Once you have run the tape along one side of your building, using your first 4' wide roll, drop the insulation from the top of the sidewall to the base trim. Make sure to have excess insulation at the top of the wall or the bottom of the wall.

Once the insulation is running straight and is stretched tight press the insulation against the tape and secure your panel.





Roof

Your roof insulation will span from one eave side of the building to the other eave side of your building. Start by pre-drilling your panels for the roof. Once your panels are ready to be installed, use a 4' wide starter roll and place bottom edge on the eave trim.

You must secure your roof panel on before walking on panel. Insulation dust can cause the panel to be slippery on top of the painted surface - use extreme caution and use the proper safety equipment to complete the job.

Once you have secured your roof panel, continue to the other side of the roof. It is important to only roll out insulation that you can cover in a days' time. Insulation should not be left overnight uncovered.

Insulation with Wainscot

When setting up wainscot you will need to make sure to lay out the panels before you start putting insulation on.

If your building has wainscot, you will have to use more rolls of insulation at once in order to avoid the need to slide the insulation behind double angle trim. Double angle trim is 10'2" long and will be overlapped 2" on the previous piece of trim. Start by screwing off wainscot panel, followed by attaching double angle trim. Finally attach the top side wall panel.



Insulation Around Framings

For framed openings you will need to install trim before insulation. Once trim is installed you will need to put double-sided tape around all sides of opening. For the best results, roll insulation out and cut out opening against the wall.



Some overhead doors will already have a pre-cut piece of insulation. Use insulation drawing for reference.

Note: Insulation for overhangs is only provided for the gable overhang. Eave overhangs will not be insulated.

Wainscot

Wainscot for building is at a length of 3'7". Track will need to be installed around the entire building on the third girt. Once track is installed around entire building, you can start sheeting with wainscot panels.

Wainscot panels will be screwed just like wall sheeting with your double angle trim placed on top of panels. It is important to make sure the trim is running level so it does not interfere with the sheeting above trim.



Overhangs

Note: 1' - 3' overhangs will all be installed the same.

Step 1 – Gable Overhangs

When your building has overhangs, the purlins on the outside trusses will extend out 6 5/8" plus overhang size. (Note: 6 5/8" will depend on the girt size)

- 1' Overhang = 18-5/8"
- 1' 6" Overhang = 24-5/8"
- 2' Overhang = 30-5/8"
- 3' Overhang = 42-5/8"

Finish installing purlins before moving on to Step 2. Gable cover will be installed same as in book one.

Step 2 – Eave Overhangs

Eave overhangs are separate red iron components that will bolt onto your trusses. Bolt size will depend on what size rod is used on your building. Your ship list will verify what bolts to use.

Wind rods may need to be bolted together with the overhang. In order to find where the overhang needs to sit, clamp a piece of track against the face of the side wall girt. The back-overhang clip needs to hit the track that is clamped down.



Step 3 – Purlin for Overhangs

The purlins that will span in between the overhangs will need to be cut to length and have two notches cut in the top end to fit in between the red iron.

Purlins that are on the eave and gable will need to extend the same measurement to match. Inside purlins will be cut to fit in between overhang dimension and notched to fit in red iron.

Step 4 – Gable Track

Once all purlins are set, it is time to install the gable track. When installing the gable track with a gable extension, you will need to be sure that all purlins are lined up straight.



The eave purlin is installed the same as shown in book one.

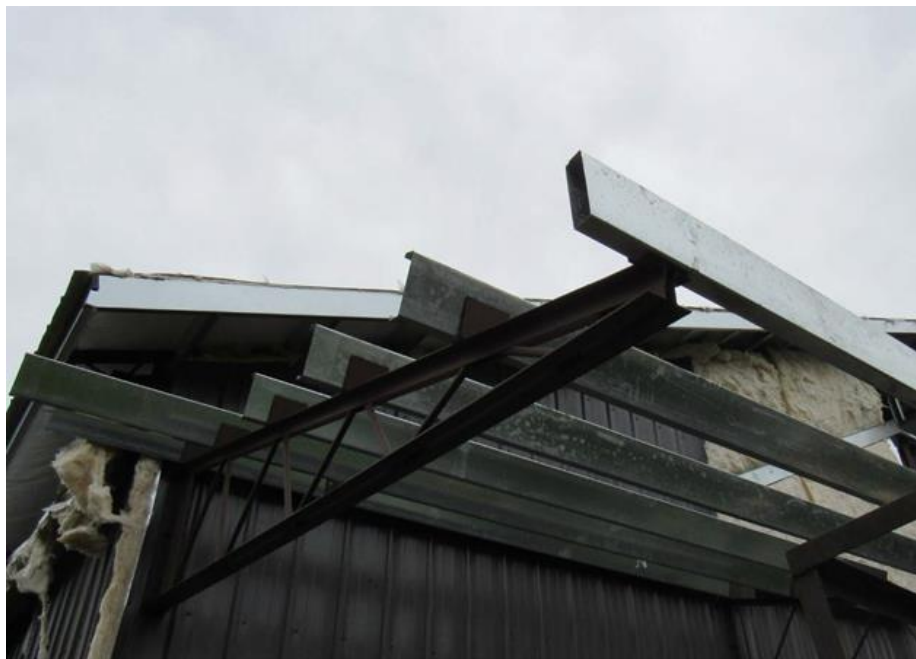
Step 5 – Steel Framing at Top of End Wall

The framing at the top of the building will need to set in line with girts below on end wall. Once the overhang is all framed out, return to book one and follow instructions. When you reach the roof refer back to the components book.

Sidewall panels will need to be cut to fit around soffit bracket.

Step 6 – Roof with Overhang

If your building has insulation and a small overhang, do not start your roof insulation at the overhang. Insulation is only going to cover from the sidewall to the sidewall. Roofs with overhangs will be the same as shown in book one.



Step 7 – Starting Soffit

Note: Walls MUST be sheeted before soffit.

J-Trim will need to be placed along the walls of the building to allow for soffit panels to be secured to the building.

Step 8 – Finding the Correct Location for J-Trim

To locate where the J-Trim needs to be placed, you will need to run a level from the eave purlin to the wall. You must make a mark at the top of the level. The mark you made is where the top of the J-trim needs to be placed. Make this mark at every panel seam.

On the sidewalls J-Trim goes past the corner of building to the outside of the gable extension.





J-Trim at the end walls will need to run level with the bottom of the purlin. For the sidewalls, you will need to place outside closure before securing J-Trim. For the end walls you will need to place universal closure before securing J-trim.

J-Trim will be secured by using colored sheet metal screws that are placed into the high ribs overlap of the panel. Make sure the screw is lined up in the center of the high rib.

Once the J-trim is fastened to the building it is time to install soffit panels.

Step 9 – Installing Side Wall Soffit Panels

A bird box will need to be made from post trim before sheets can be installed. The bird box will be cut out of post trim and wrap around from back of the soffit to the front of the soffit.





Soffit panels will slide into the J-Trim and screw into the eave purlin. Panels need to be screwed in place at the first high rib, middle high rib, and last high rib.

Once your panels are screwed into the building, you can finish installing post trim. Post trim will slide behind eave trim and screw into the high ribs of the soffit panels at every panel seam.

Step 10 – Installing End Wall Soffit Panels

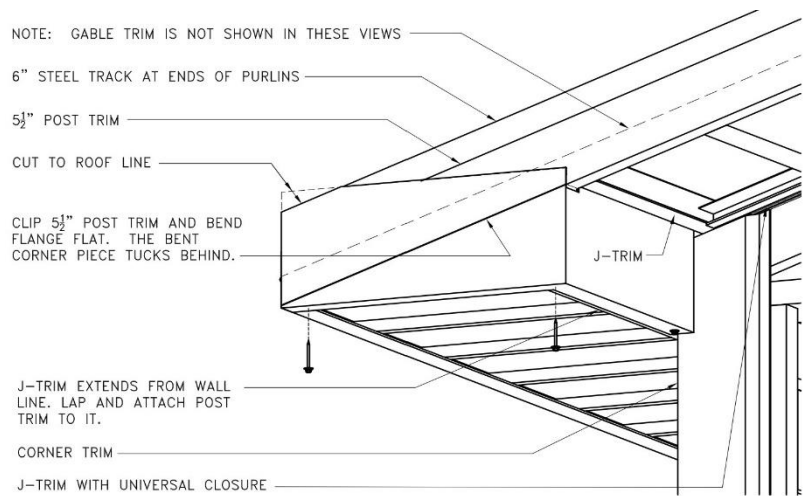
Before starting to run soffit panels on the end walls you must first install J-Trim on back side of the bird box.

When you reach the peak of the building the panel in the center may need to bend to fit on both sides of the peak. Install the post trim first, and then fasten gable trim to fascia track.

Large Overhangs

Walls must be sheathed before installing large overhangs. Mounts that are welded on the columns for the large overhangs. When sheathing panels will need to be cut around the mounts.

The photo below shows how to cut the panel when the overhang will hit a high rib.

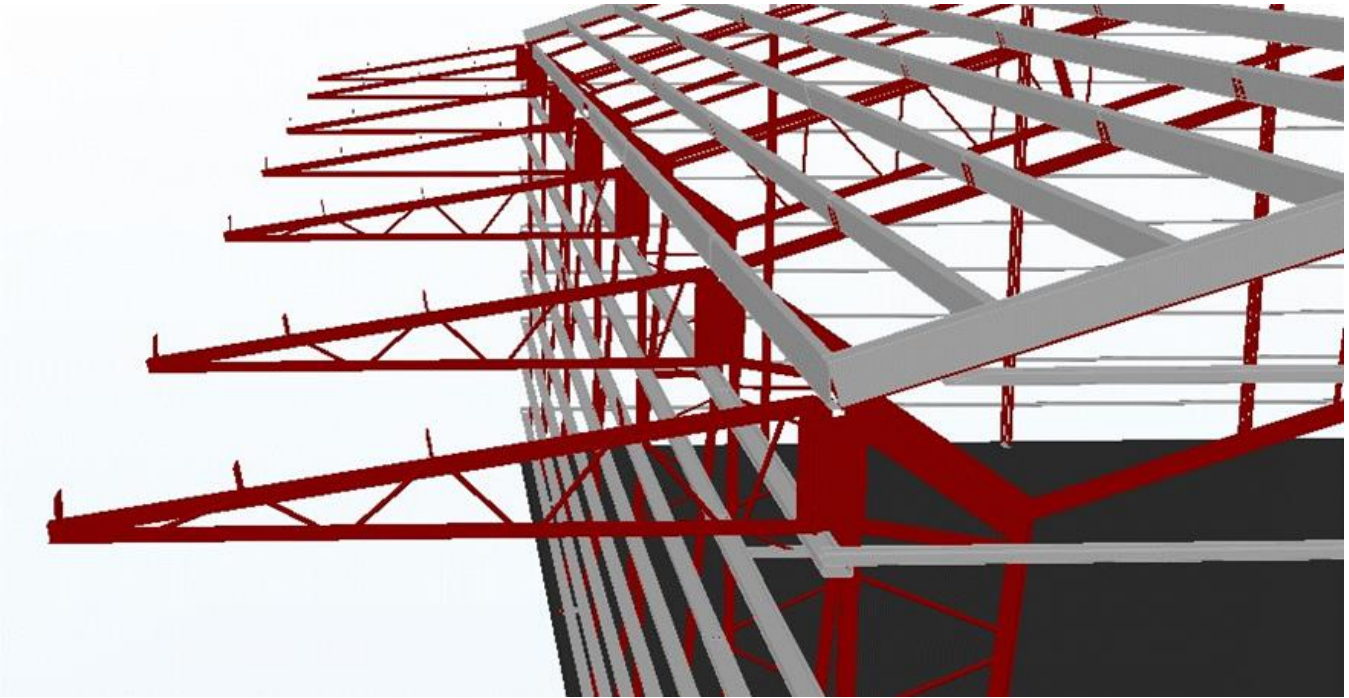


Use the details that go along with your building. Overhangs are very specific from building to building.

Step 1

Overhangs will get will bolted to the columns after the walls have been sheeted. Large overhangs will have mounts welded onto the columns.





Step 2

Purlins are placed on overhangs in the same way as the roof purlins. Overhang may need to be pushed or pulled to line up correctly when setting purlins.



Note: If overhangs do NOT have soffit proceed to Step 6.

Step 3

After the purlins are in place you will need to start setting up your overhang with all other framing components. Girts will need to be installed along the bottom side of the overhang to allow you to have something to screw into when sheeting the overhang. Look at building specific detail for how girts need to be installed.



Step 4

Eave trim will need to be installed before roof sheeting is installed. Once eave trim is installed you will need to install your roof panels.



Step 5

Starting your soffit panel. First place J-Trim below girt that is located on side wall. Soffit panels will slide into J-Trim and screw into girts on the bottom of the overhang.



Step 6

After the soffit panels are set it is time to place the post trim on the front side of the overhang. Post trim slides underneath the eave trim. Post trim will be screwed in at every panel lap.



Step 7

The next step is to sheet the side of the overhang. Smaller sheet metal panels will be supplied for large overhangs to cover the ends. Sizes for the panels can be found on the Ship List under the sheet metal page on the end wall sheets. Panels will need to be cut to fit.

Double Wind Rods

Double wind rods will have a special wind rod clip angle. Clips will have two holes punched for your 1/2" rod. Install doubles the same way as singles.



Mezzanine

The mezzanine will need to be installed after the building is framed out.

Step 1

If your building has a mezzanine, place the columns with the mezzanine mount in the correct locations stated on the W-Drawing.

If mezzanine is split, bolt together before moving to Step 2.



Step 2

Starting at the mezzanine closest to your end wall - lift bar joist up and into position (it is best to use equipment and lift with straps for more control). Once the bar joist is in place, use drift pin to line holes up and bolt bar joist to column. Continue with remaining bar joists.

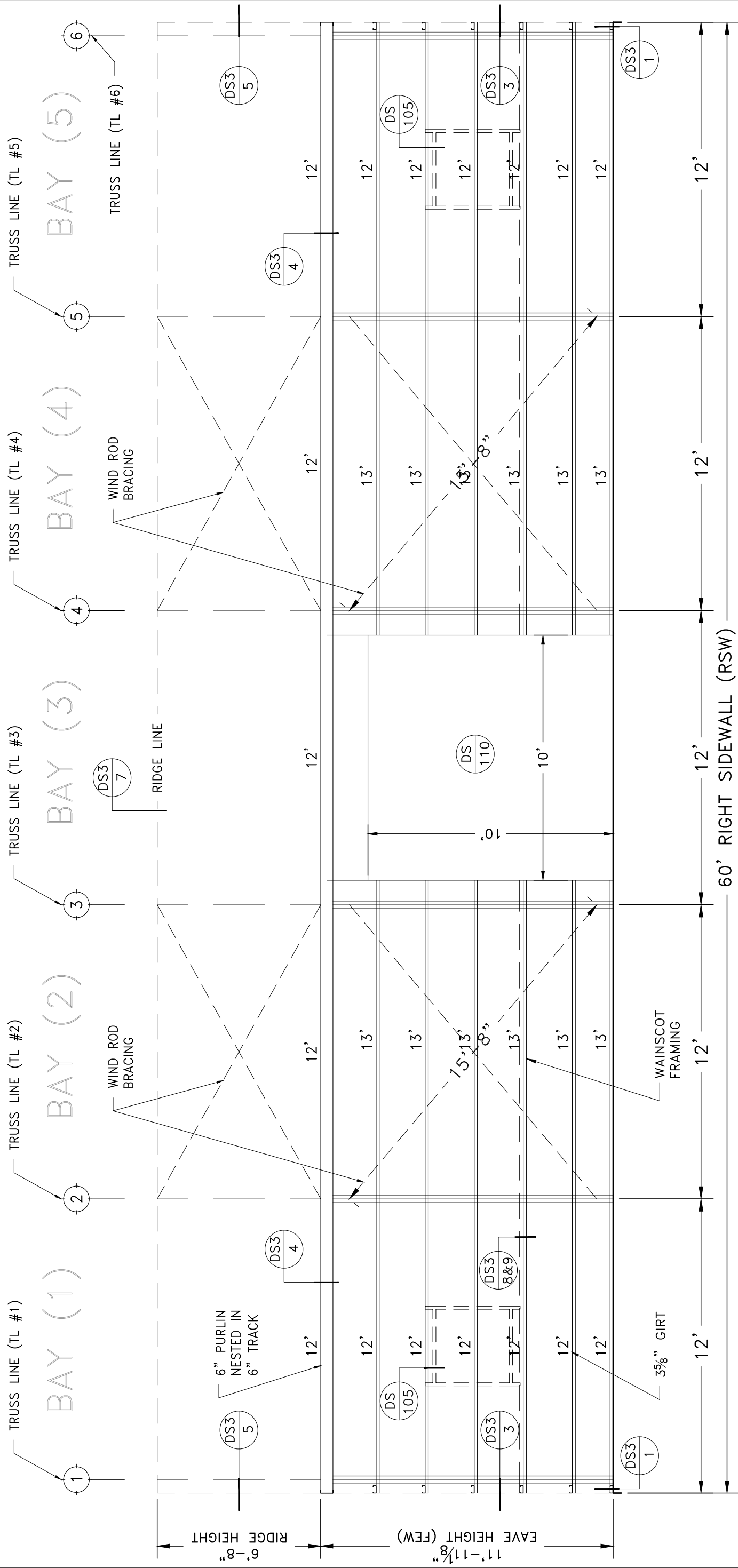


Step 3

Wood joists supplied by others. 2x10 joist will need to cut the top ear of joist to fit between red iron.

Examples of Detailed Prints

The following detailed prints are standard details. Any job specific details will be delivered with your building package.



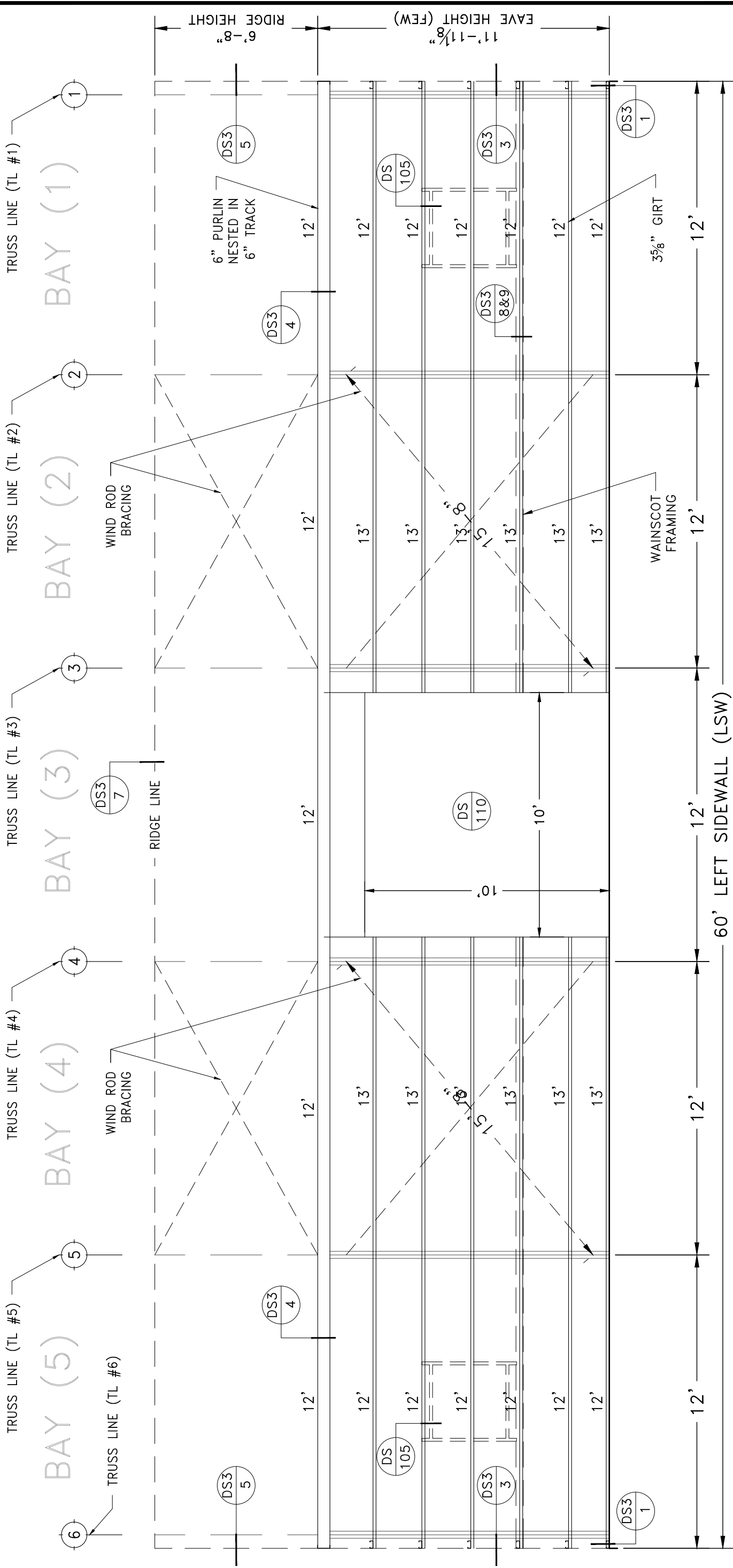
Project No. XX-XX
 Date 00/00/0000
 Drawn by XXX

Worldwide Steel Buildings
 PO Box 588
 Peculiar, MO 64078
 Fax: 816.779.7361
 Phone: 816.779.6441

PRELIMINARY – NOT FOR CONSTRUCTION
 PURLINS, GIRTS, TRUSS GEOMETRY & BRACING MAY CHANGE AS A RESULT OF ENGINEERING

RIGHT SIDE WALL (RSW)
 NAME
 CITY, STATE





PRELIMINARY – NOT FOR CONSTRUCTION

PURLINS, GIRTS, TRUSS GEOMETRY & BRACING MAY CHANGE AS A RESULT OF ENGINEERING

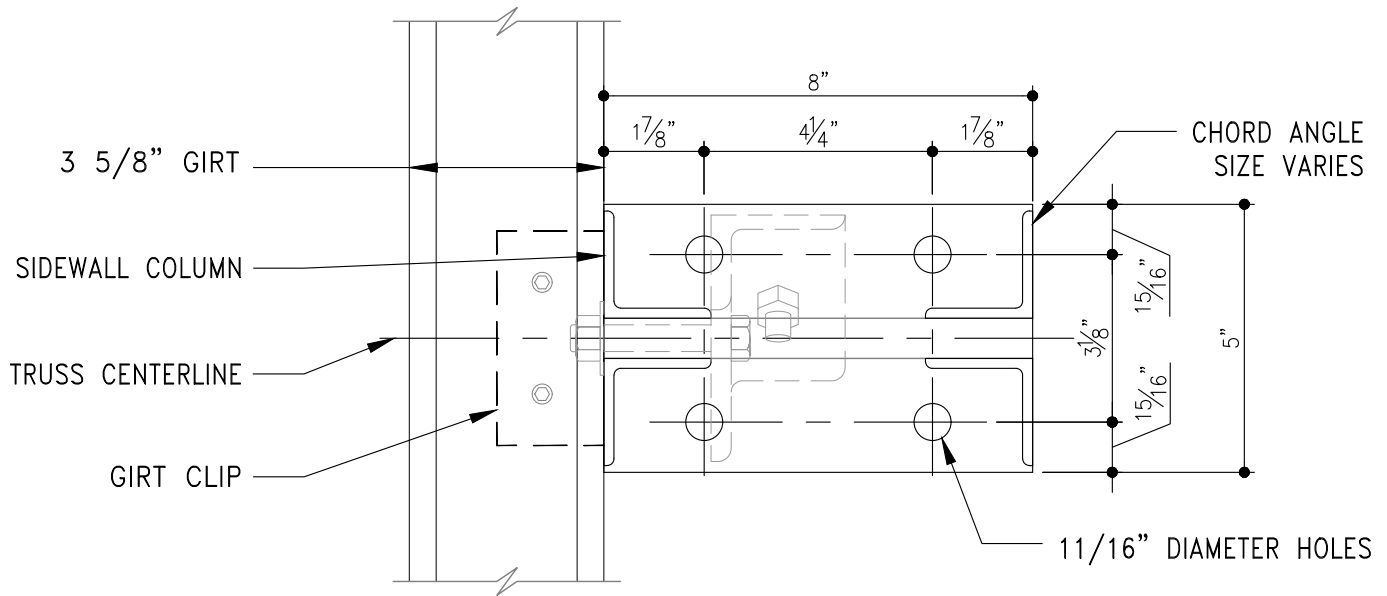


Worldwide Steel Buildings
 PO Box 588
 Peculiar, MO 64078
 Fax: 816.779.7361
 Phone: 816.779.6441

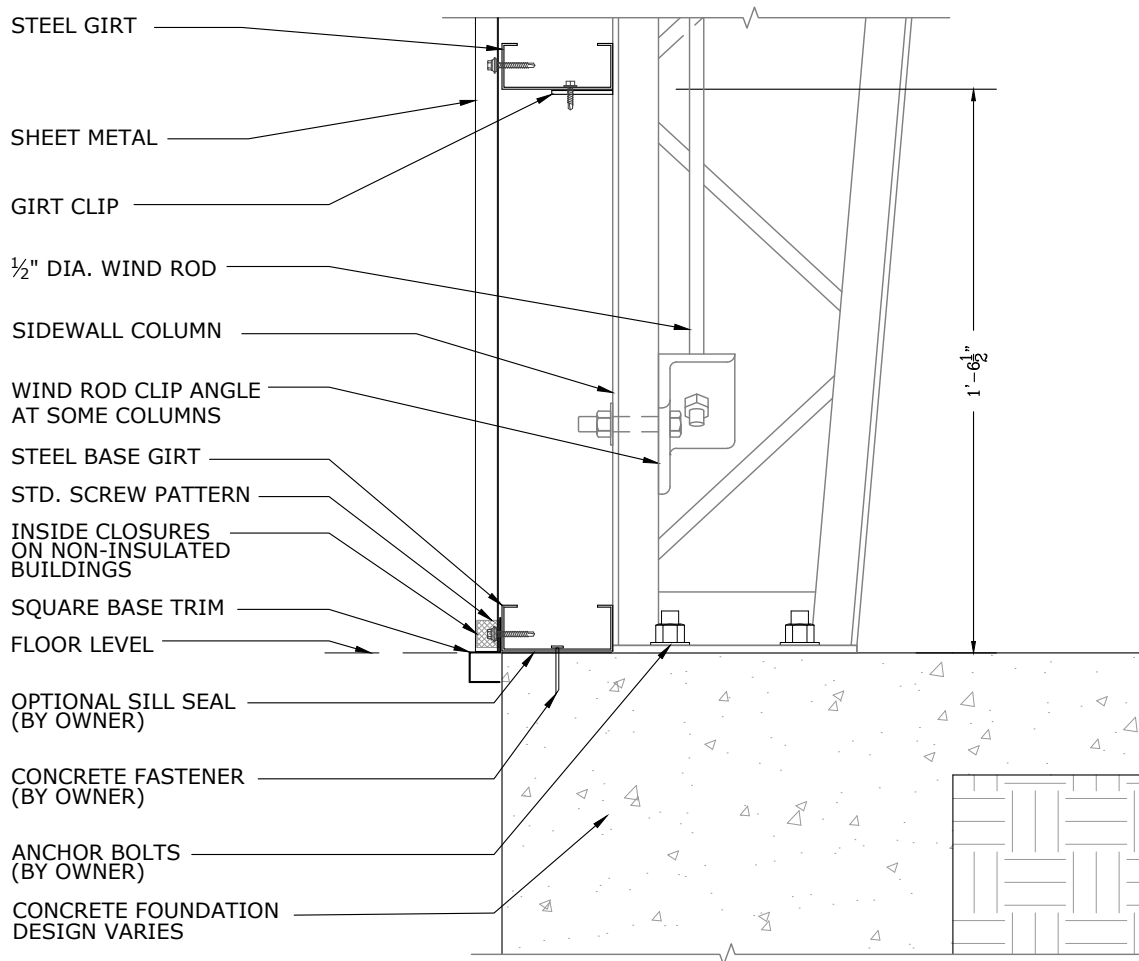
LEFT SIDE WALL (LSW)

NAME
 CITY, STATE

Project No. XX-XX
 Date 00/00/0000
 Drawn by XXX
 Sheet W-5



A: SIDEWALL COLUMN BASE PLAN



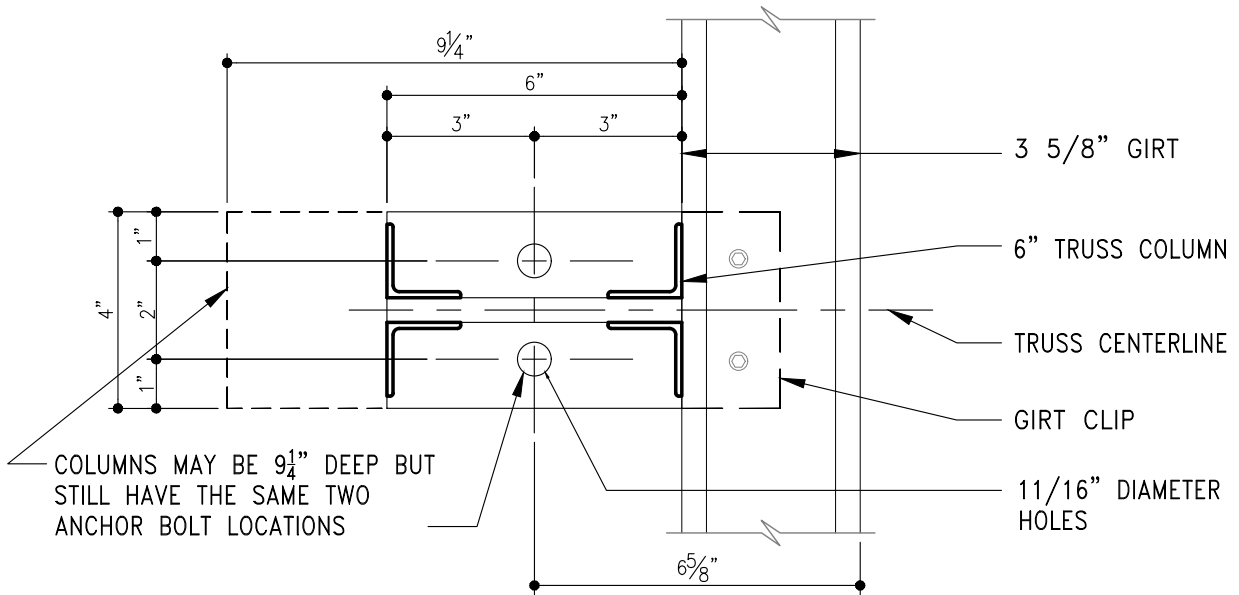
B: SIDEWALL COLUMN SECTION

REVISION:
03/19/2020

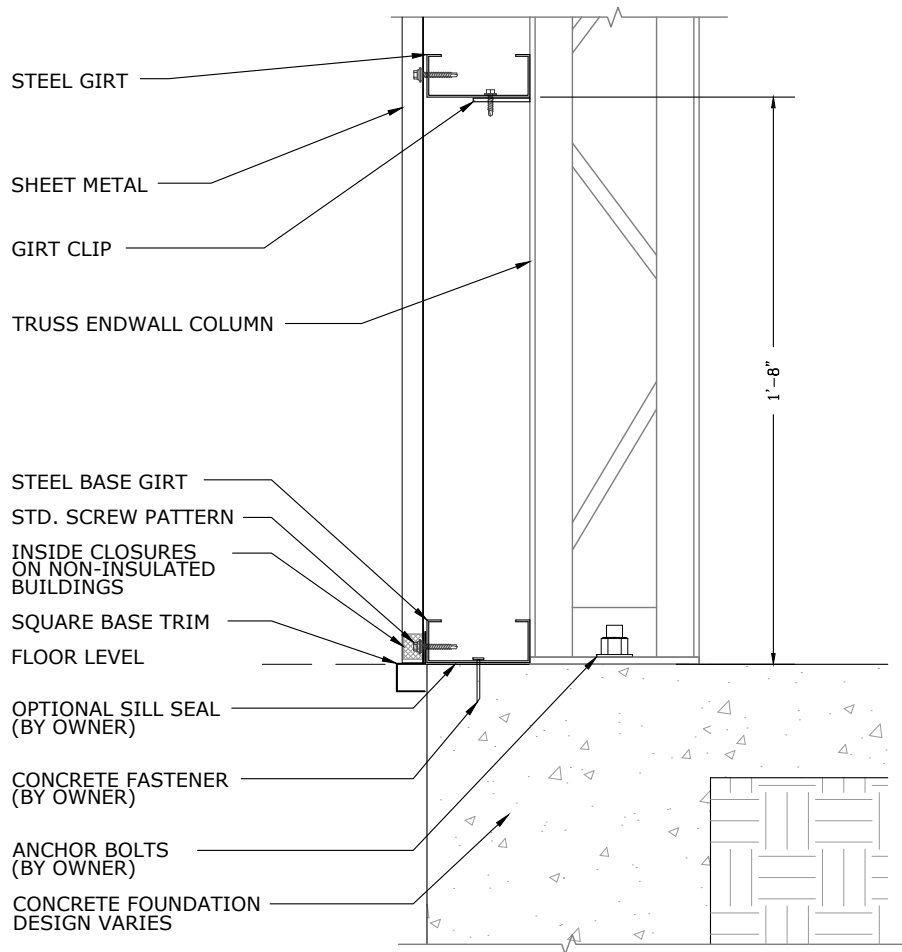


BASE AT SIDEWALL COLUMN

DS3
1



B: ENDWALL COLUMN BASE PLAN



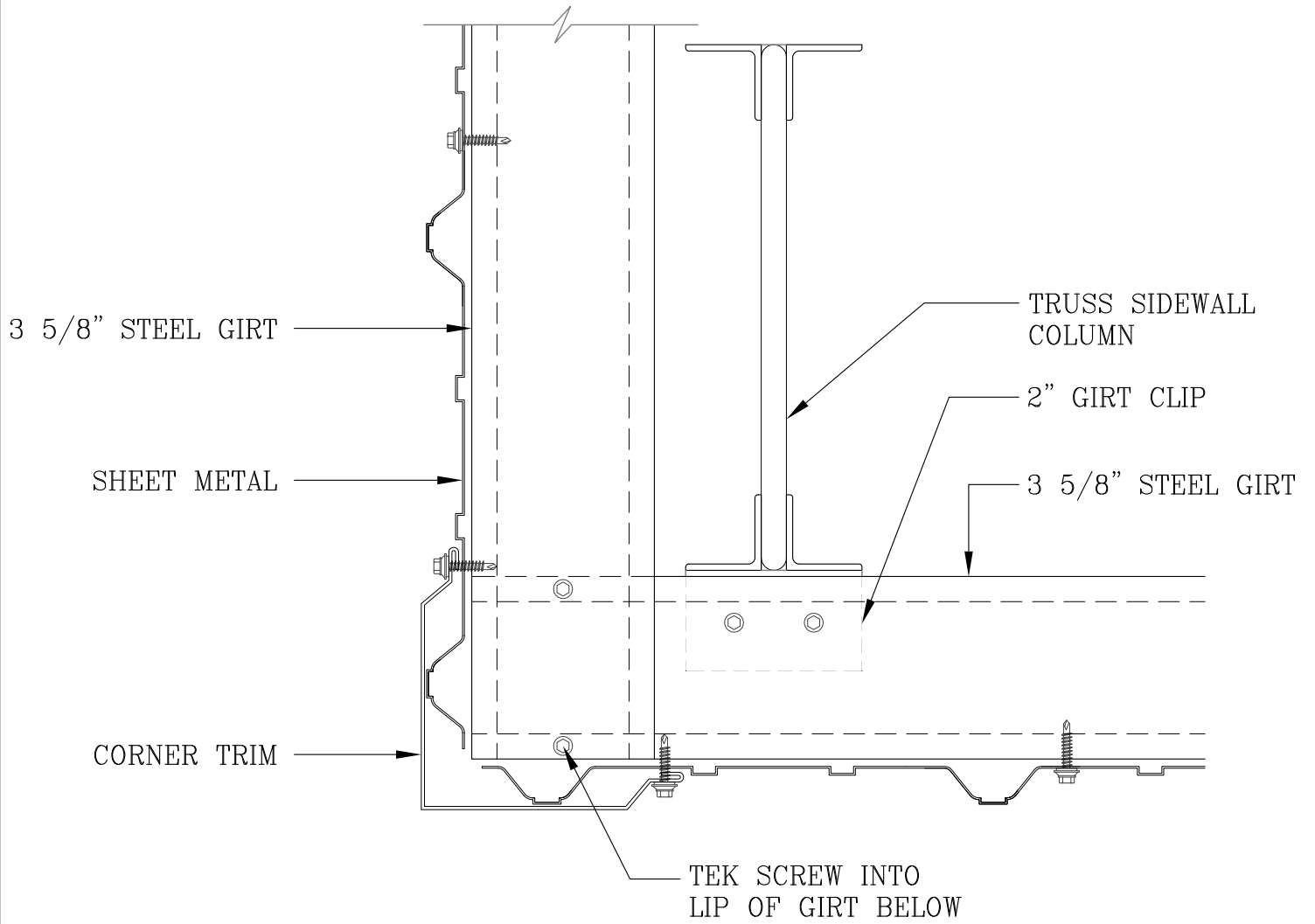
B: ENDWALL COLUMN BASE SECTION

REVISION:
03/19/2020



BASE AT ENDWALL COLUMN

DS3
2



STANDARD CORNER

*DS3
3*

EAVE SCREW PATTERN
INSIDE CLOSURES SET ON
EAVE TRIM BEFORE SCREWING
PANEL TO EAVE PURLIN

ROOF PANELS

EAVE TRIM

STD. SCREW PATTERN

EAVE PURLIN IS NESTED
6" TRACK & 6" PURLIN

EAVE CLIP

SHEET METAL

TRUSS COLUMN

6" TRACK IS FASTENED
TO EAVE CLIPS WITH
TEK SCREWS

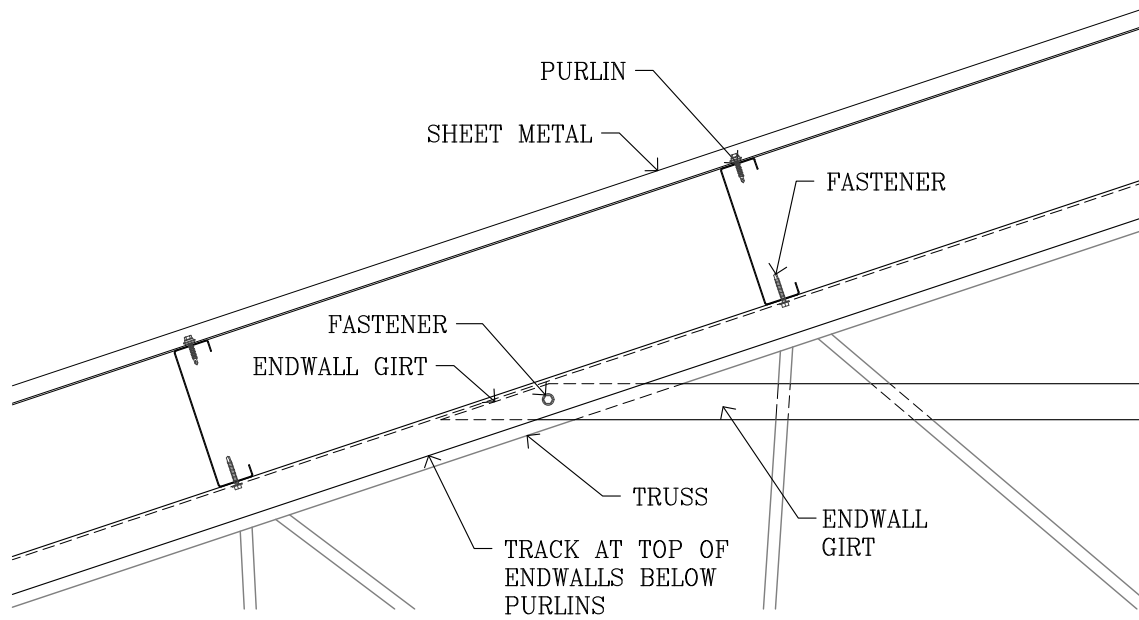
3-5/8" GIRT FASTENED TO
GIRT CLIP WITH TEK SCREW

REVISION:
03/19/2020



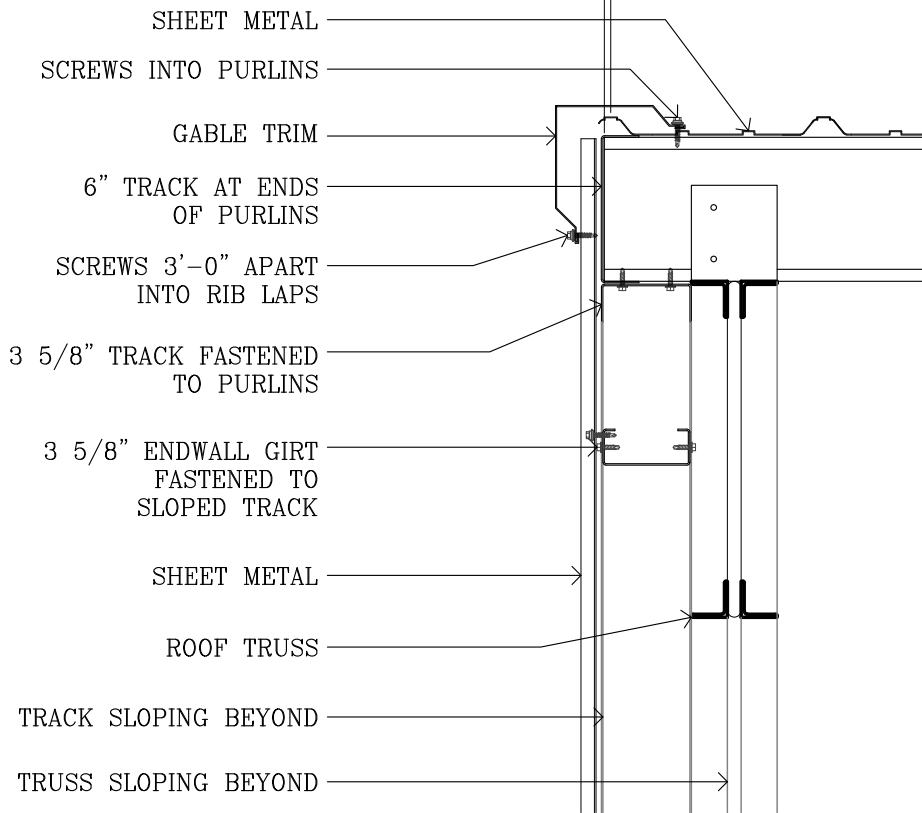
STANDARD EAVE

DS3
4



ELEVATION VIEW 11b

ADJUST THIS DIMENSION TO PLAN AHEAD FOR THE RIB LOCATION AT THE OPPOSITE END SO THAT THE TRIM DOES NOT FALL ON THE PANEL RIB. FOR EXAMPLE; ON A 40'-0" LONG BUILDING, IT SHOULD BE 1½". ON A 30'-0" LONG BUILDING, IT SHOULD BE 0".



SECTION CUT 11a

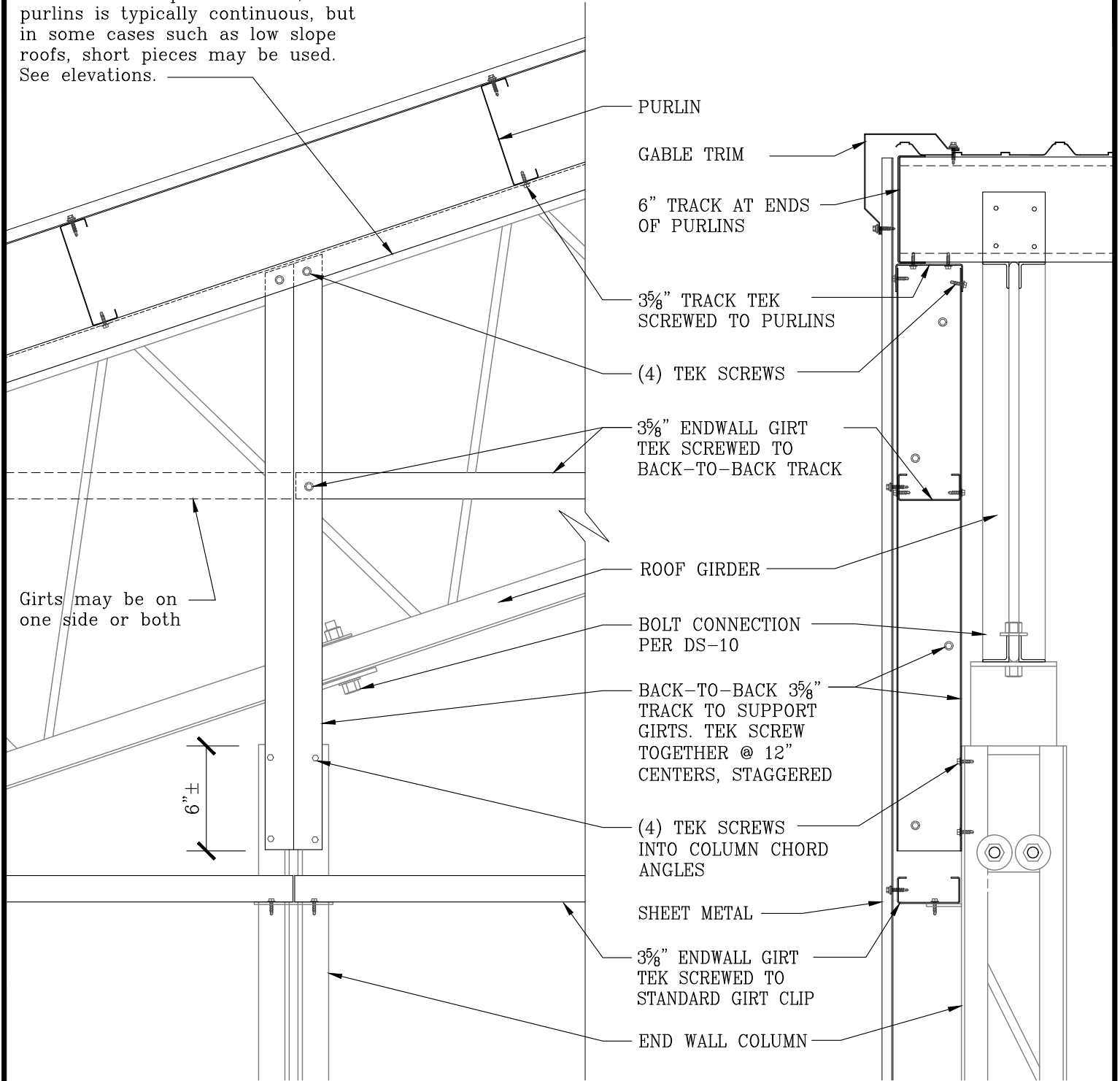
REVISION:
03/19/2020



STANDARD GABLE

DS3
5

The track at top of endwalls, below purlins is typically continuous, but in some cases such as low slope roofs, short pieces may be used. See elevations.



Girts may be on one side or both

6" ±

ELEVATION VIEW

SECTION CUT

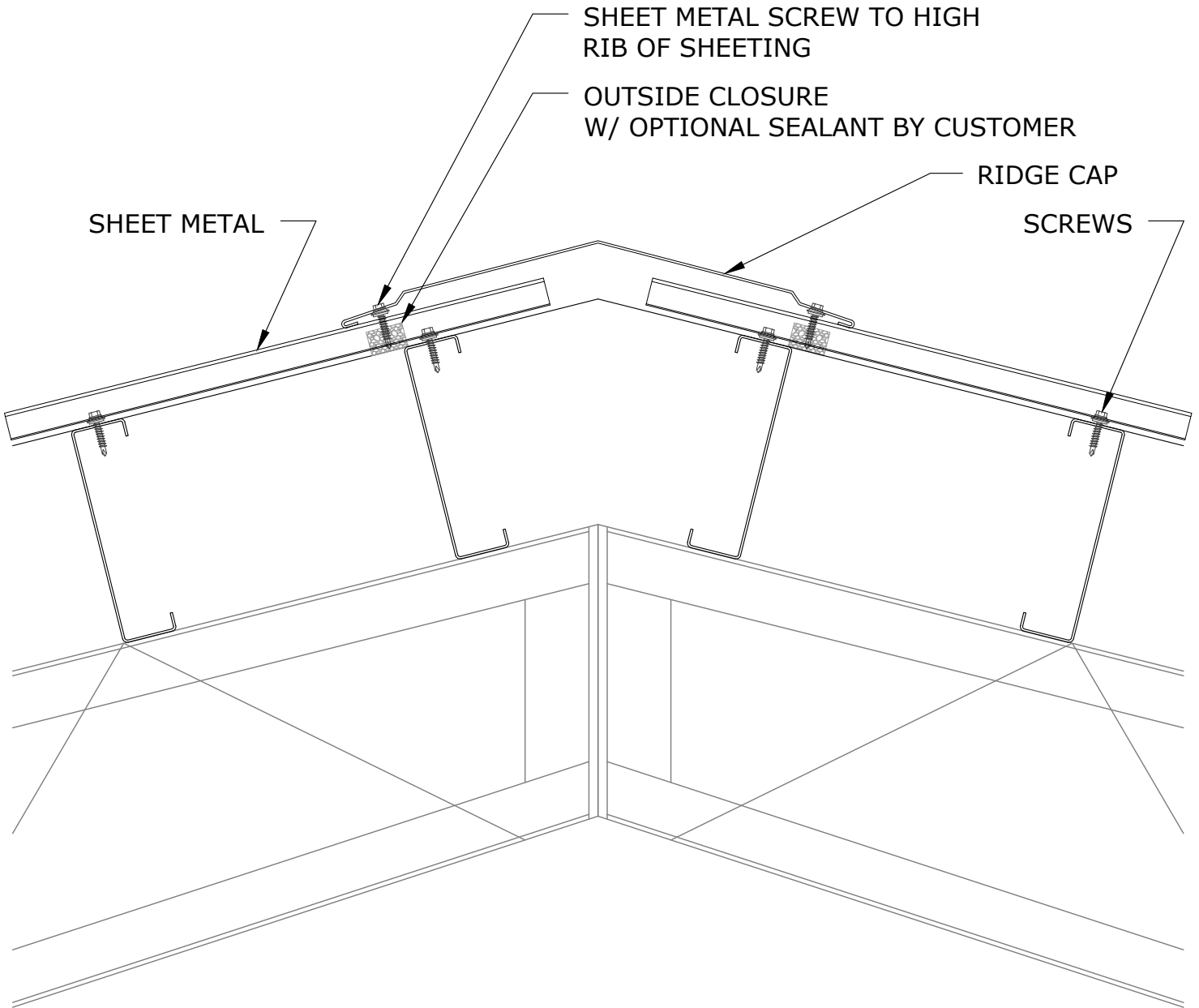
REVISION:
03/19/20



GIRT SUPPORT

Above Endwall Column

DS3
6

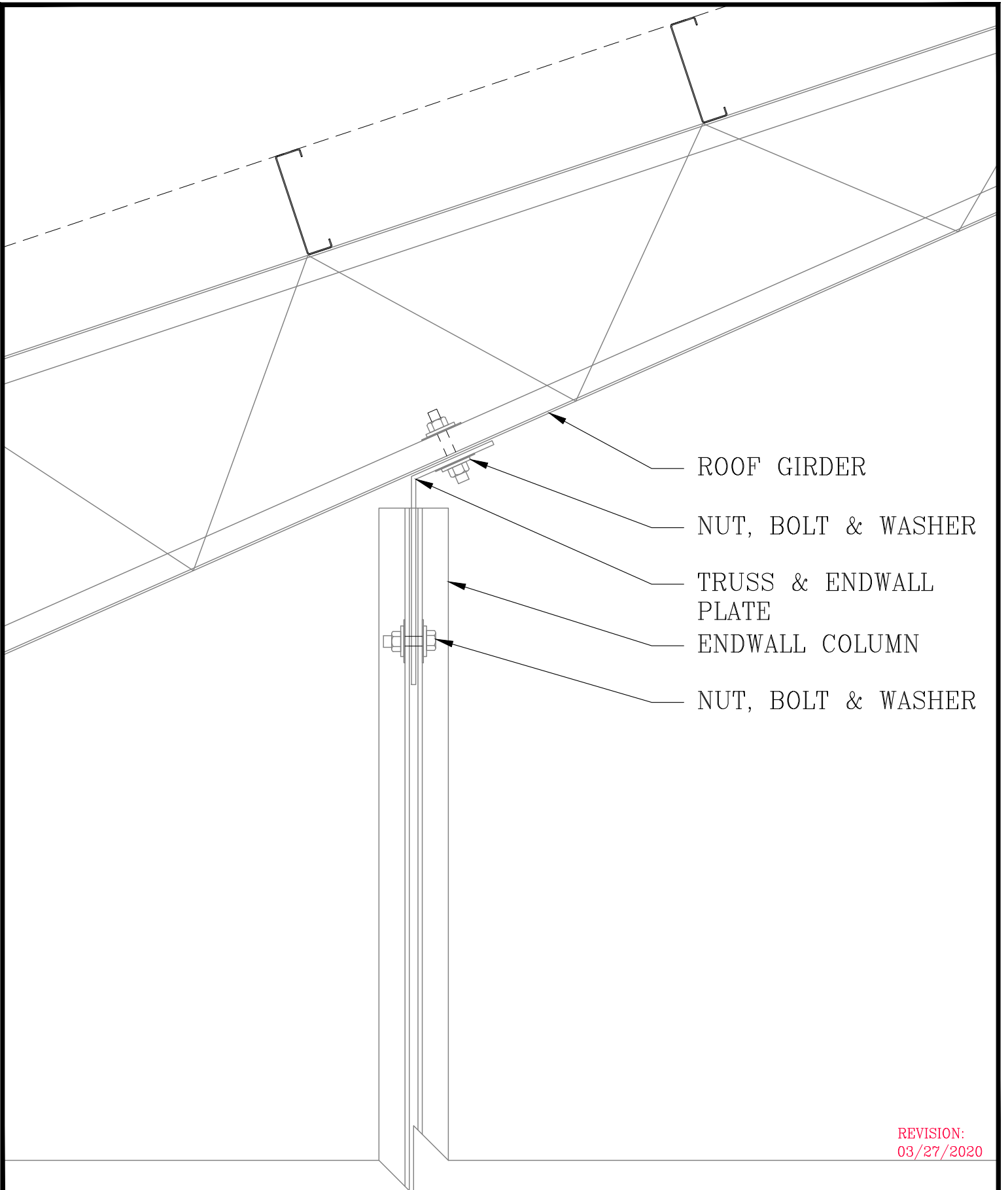


REVISION:
03/19/2020



STANDARD RIDGE

DS3
7

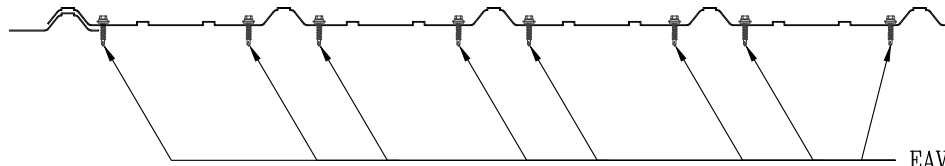


REVISION:
03/27/2020

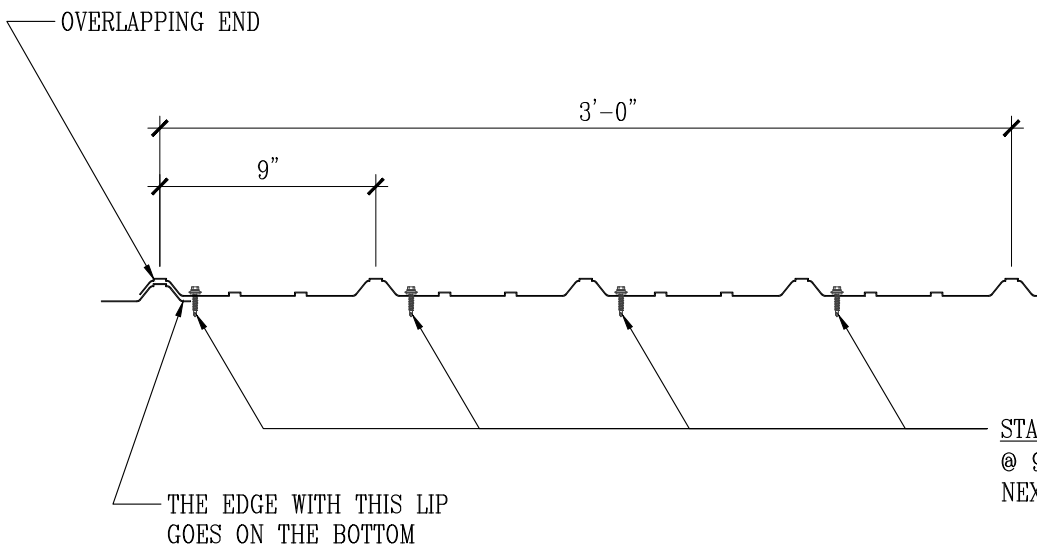


STANDARD EWC

DS
10



EAVE SCREW PATTERN:
 ADDITIONAL SCREWS ON
 THE OTHER SIDE OF
 HIGH RIBS.
 USE ALSO AT END LAPS



29 GAUGE (80 KSI) SHEET METAL AT ROOF AND WALLS

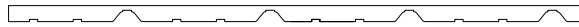
ATTACH WITH #12 x 1 1/4" METAL TO METAL SELF
 DRILLING SCREWS WITH RUBBER WASHERS

03/27/20

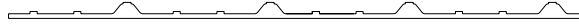


STD. SHEET METAL

*DS
17*



OUTSIDE CLOSURE



INSIDE CLOSURE



TEK SCREWS - #14 x 3/4"

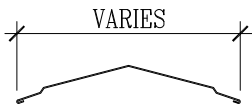


SELF-DRILLING SCREWS
#12 x 1-1/4"



PANCAKE HEAD SCREWS
#12 x 3/4"

Use (3) per piece on J-trim,
Square Base, & OH. Door Trim
to hold them in place until the
panels screws are put in.



RIDGE CAP



CORNER TRIM



CANNONBALL SLIDER DOOR
TRACK COVER



GABLE TRIM



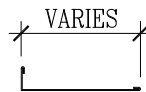
SP #36, 37, 38, 39 - OH DOOR
TRIM



EAVE TRIM



SP #40 - SLIDER DOOR HEADER
GALVANIZED FRAMING



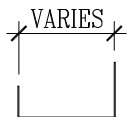
POST TRIM



SP #41 - SLIDER DOOR
HAT SHAPE
GALVANIZED FRAMING



J-TRIM



SP #42 or #43 - 16 GA. OH DOOR
GALVANIZED FRAMING



DOUBLE ANGLE TRIM



SQUARE BASE TRIM

03/27/20



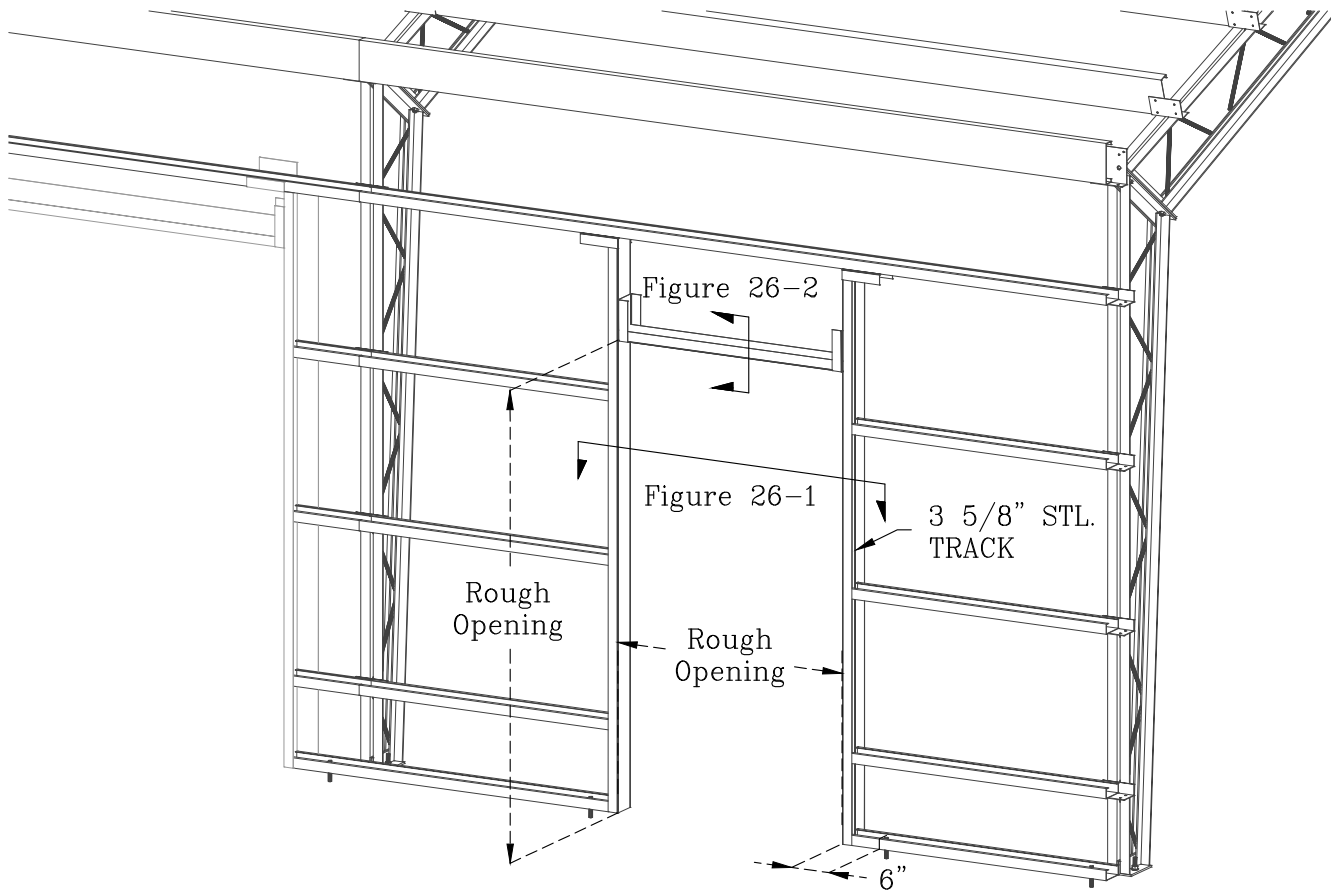
TRIM PROFILES

STANDARD TRIM AND SCREWS

DS
18

Service Door Framing

The following details are suggested framing methods for exterior door. Actual framing may vary depending upon building design and local building codes.



Trim the girts from the rough opening and install 3 5/8" track studs. Attach the track to the girts with 14 x 3/4" Tek-screws. To trim around the opening fasten J-trim (Figure 26-1) to each side of the door and J-trim above the opening as shown in (Figure 26-2). Use (3) trim screws per piece, but they can be removed as panel screws are put in.

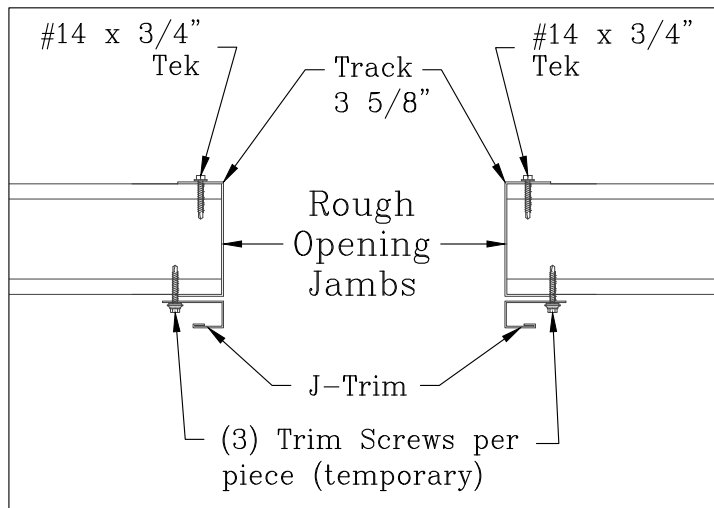


Figure 26-1

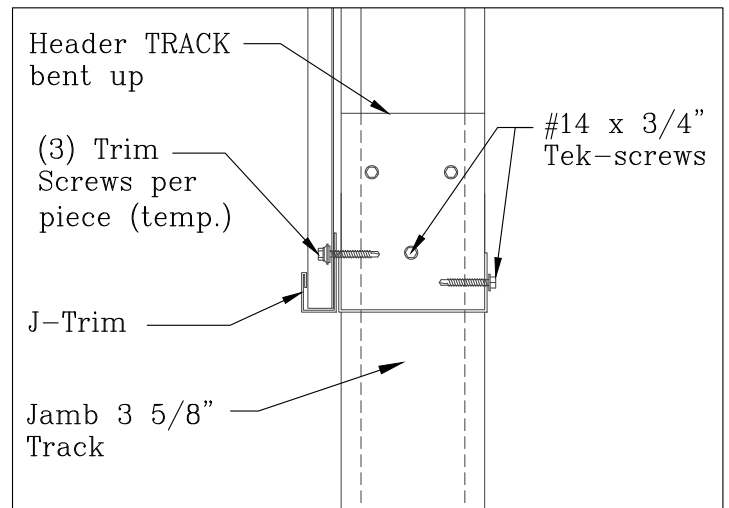


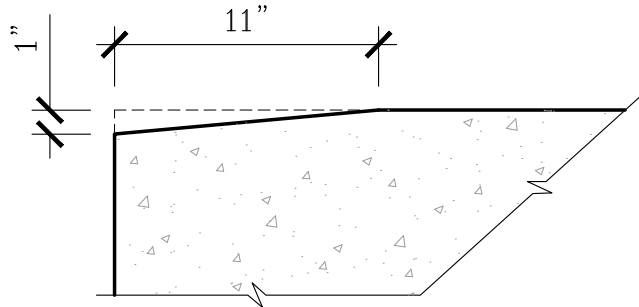
Figure 26-2

REVISION:
03/31/2020



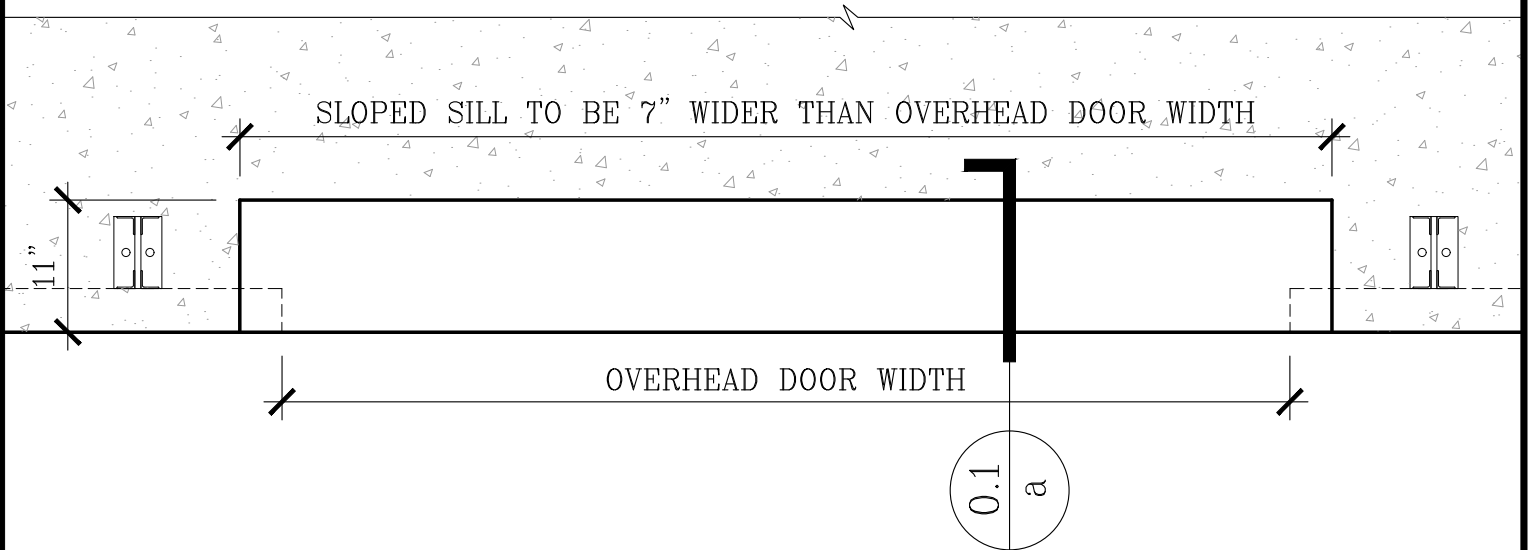
DOOR FRAMING

DS
101



0.1a SLOPED SILL SECTION

SCALE: 1 1/2" + 1'-0"



0.1b SLOPED SILL PLAN

SCALE: 3/4" + 1'-0"

THIS IS GENERALLY RECOMMENDED FOR STANDARD SECTIONAL OVERHEAD DOORS.

CONSULT YOUR DOOR MANUFACTURER FOR THEIR SPECIFICATIONS OR RECOMMENDATIONS.

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03/31/2020

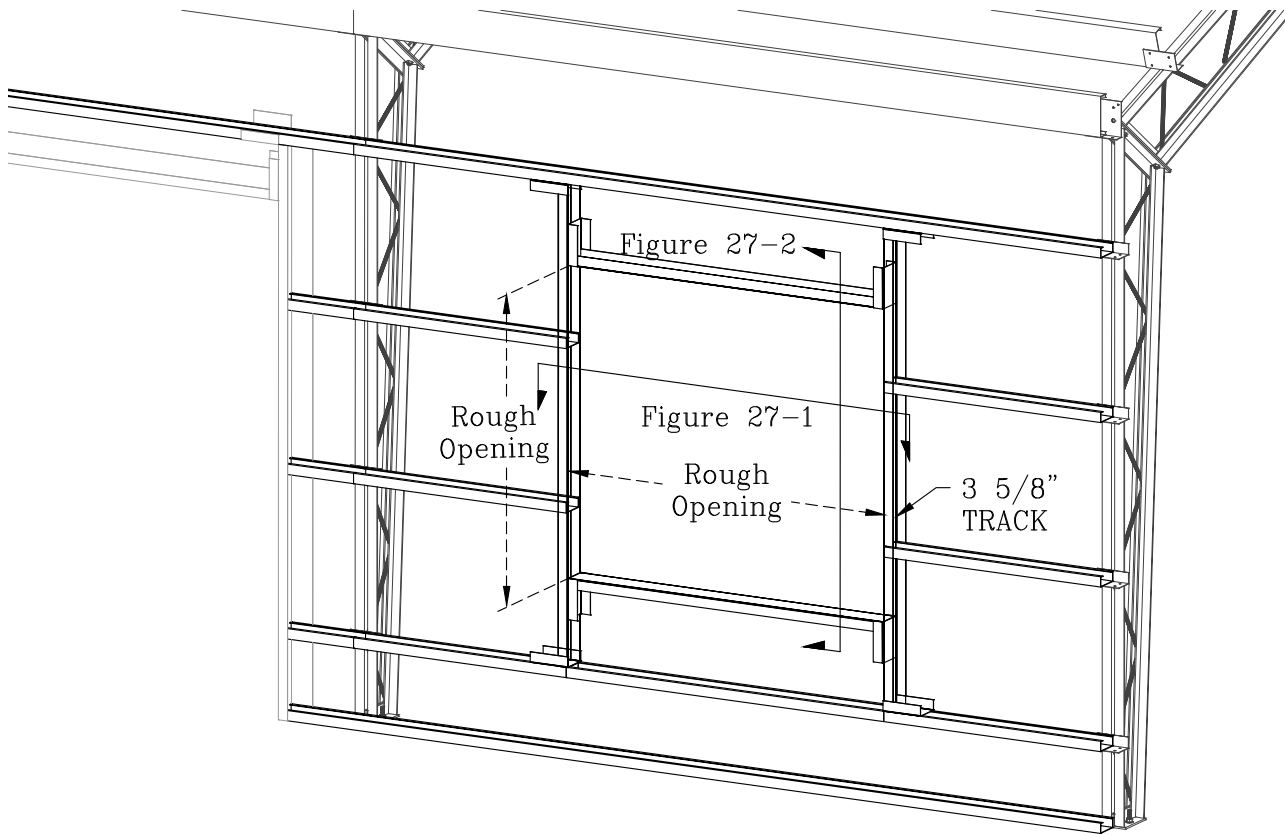


*OHD DOOR SILL
DRAINAGE SLOPE*

DS 103

Window Framing

The following details are suggested framing methods for exterior windows. Actual framing may vary depending upon building design and local building codes.



Trim the girts from the rough opening and install 3 5/8" track studs. Attach the track to the girts with 14 x 3/4" Tek-screws. To trim around the opening fasten J-trim (Figure 27-1) to each side of the door and J-trim above the opening as shown in (Figure 27-2). Use (3) trim screws per piece, but they can be removed as panel screws are put in.

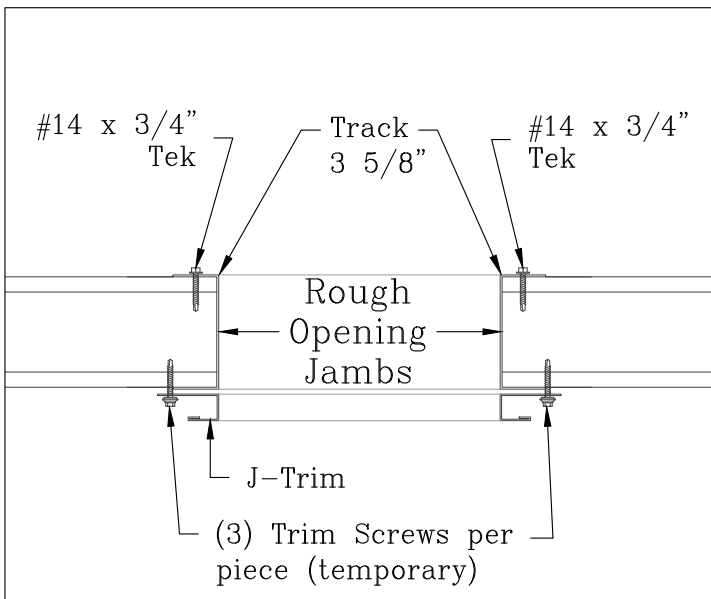


Figure 27-1

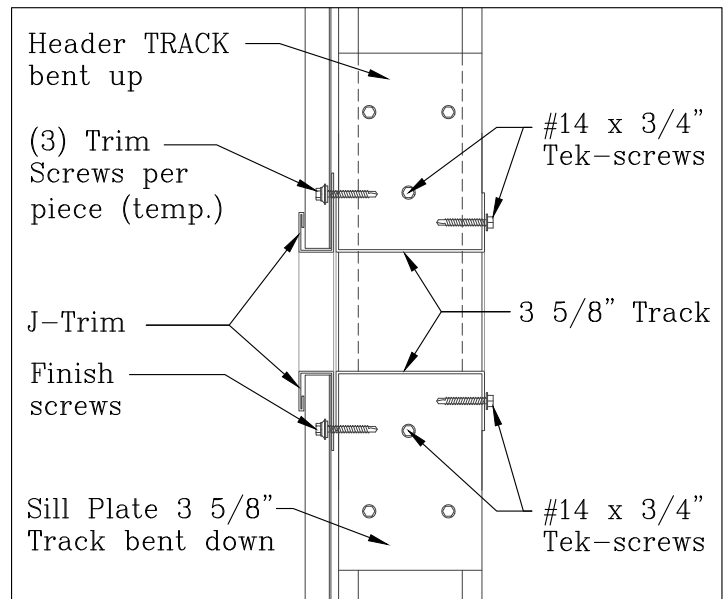
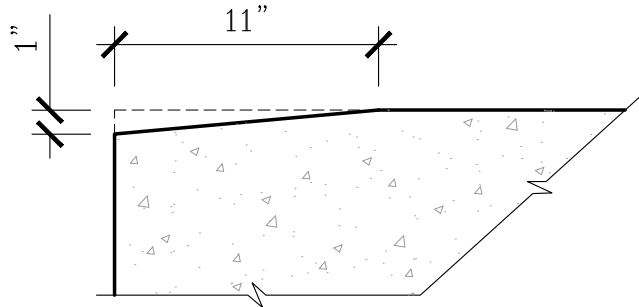


Figure 27-2

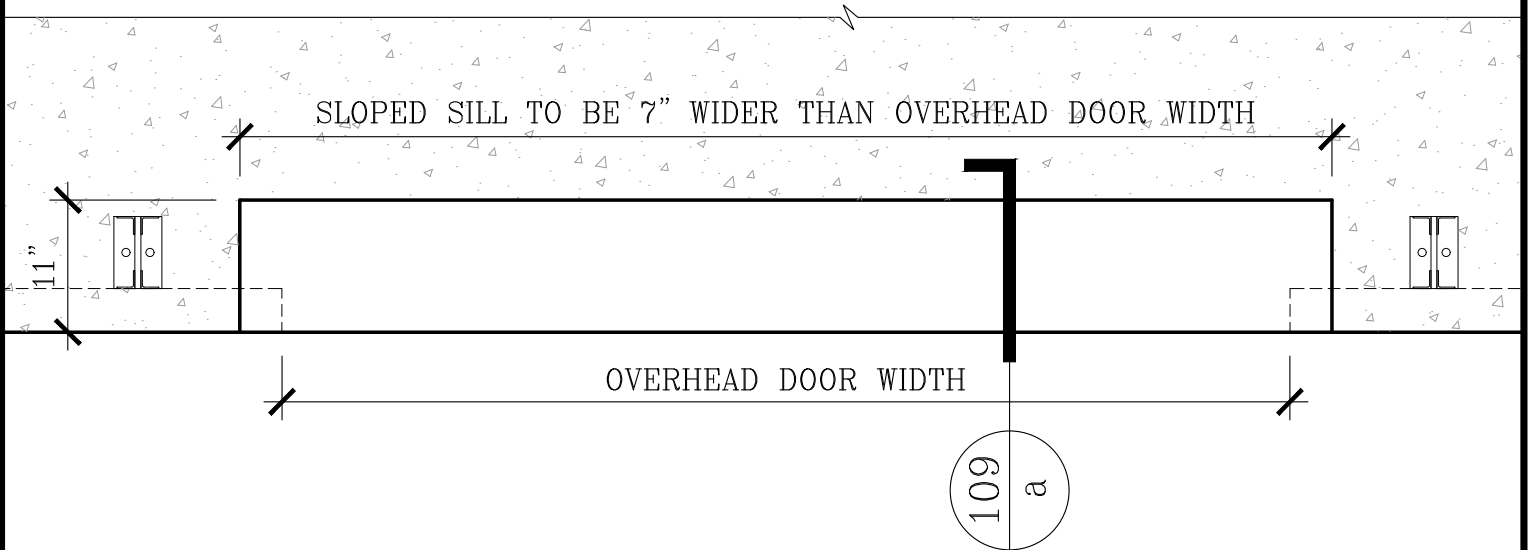
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109a SLOPED SILL SECTION

SCALE: 1 1/2" + 1'-0"



109b SLOPED SILL PLAN

SCALE: 3/4" + 1'-0"

THIS IS GENERALLY RECOMMENDED FOR STANDARD SECTIONAL OVERHEAD DOORS.

CONSULT YOUR DOOR MANUFACTURER FOR THEIR SPECIFICATIONS OR RECOMMENDATIONS.

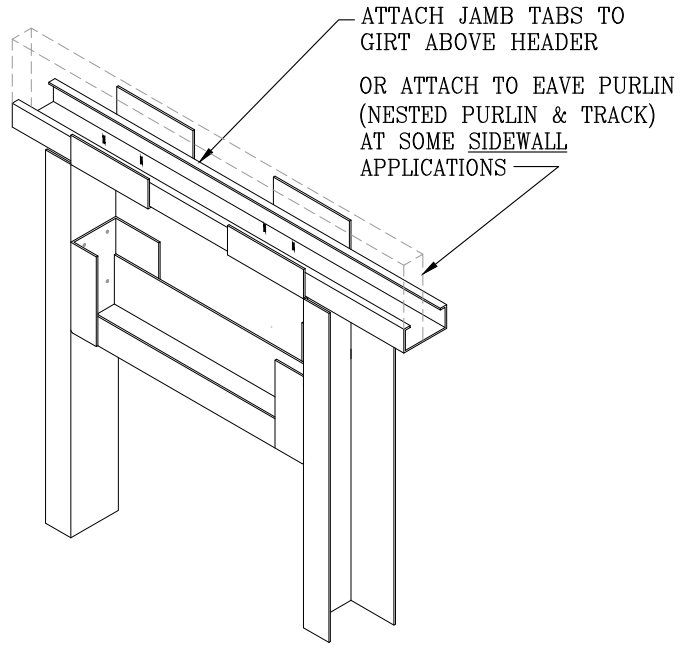
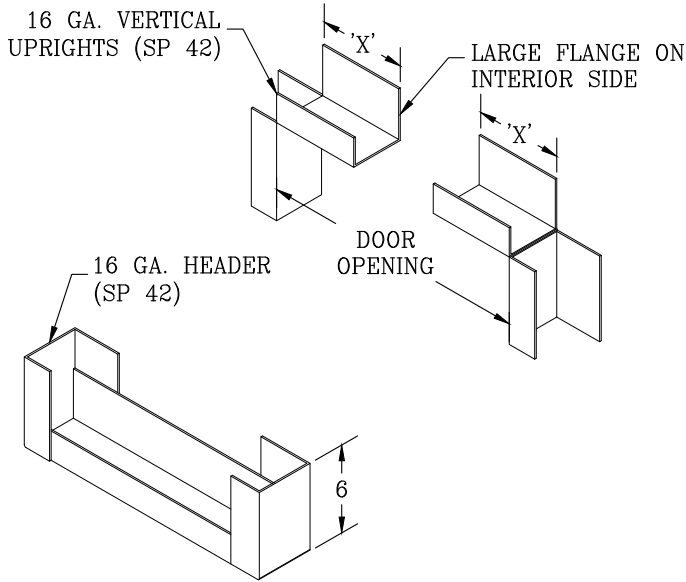
REVISION:
03/31/2020



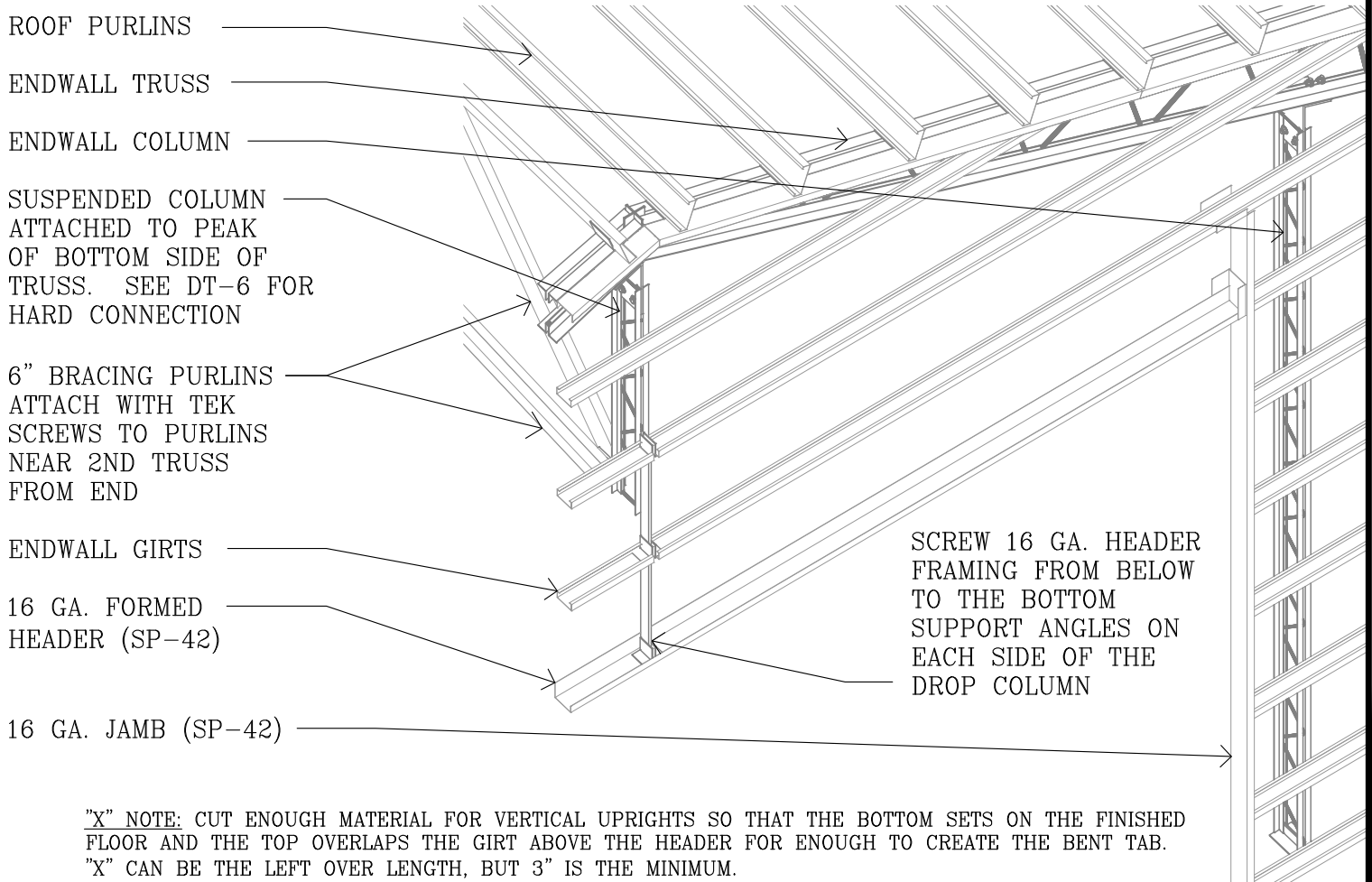
*OVERHEAD DOOR SILL
DRAINAGE SLOPE FOR STD. O.H. DR.*

*DS
109*

FOR O.H. DOORS UNDER 16'-0" WIDE



FOR O.H. DOORS 16'-0" WIDE OR MORE



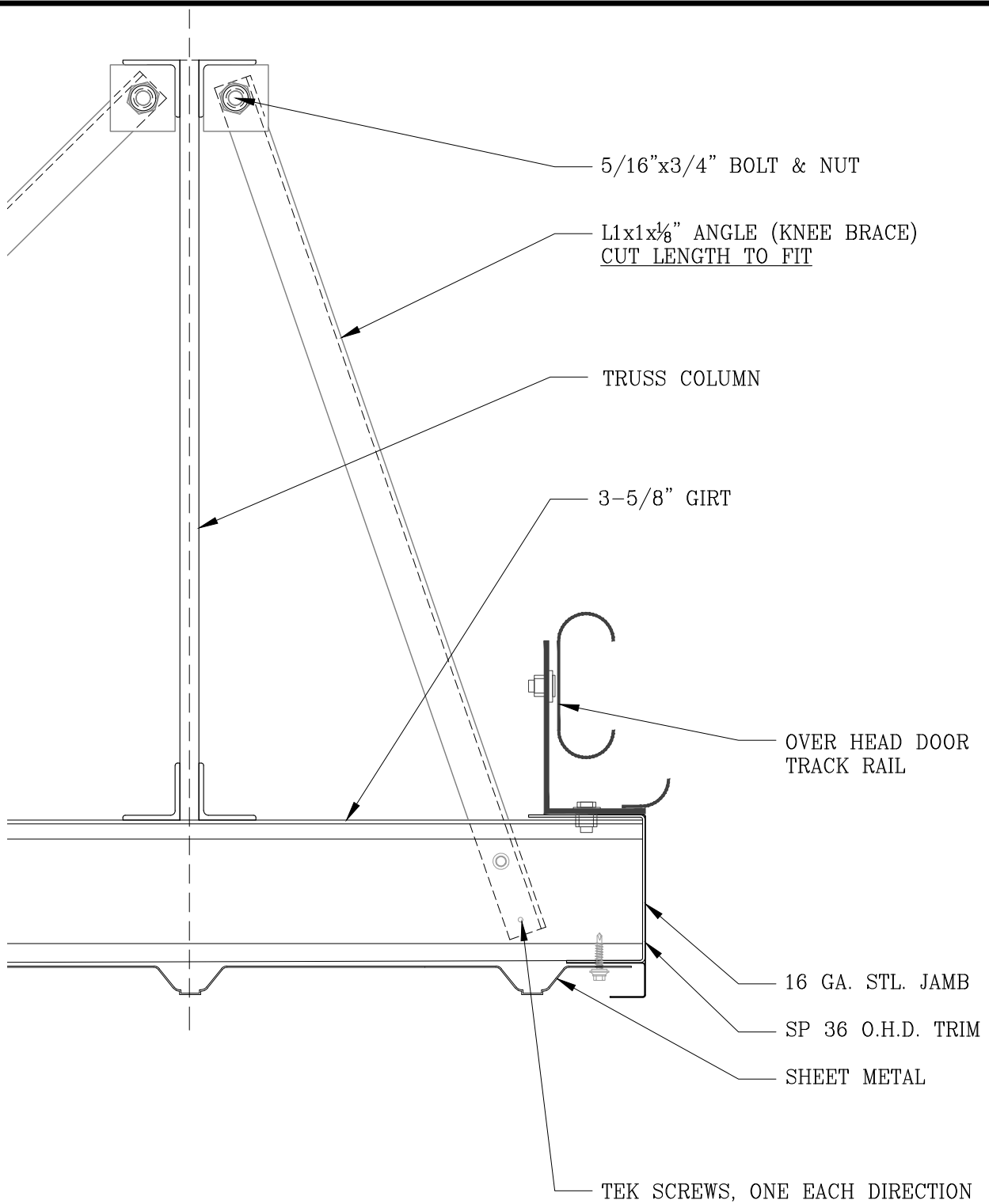
"X" NOTE: CUT ENOUGH MATERIAL FOR VERTICAL UPRIGHTS SO THAT THE BOTTOM SETS ON THE FINISHED FLOOR AND THE TOP OVERLAPS THE GIRT ABOVE THE HEADER FOR ENOUGH TO CREATE THE BENT TAB. "X" CAN BE THE LEFT OVER LENGTH, BUT 3" IS THE MINIMUM.



O.H.D.

REVISION:
03/31/2020

DS
110

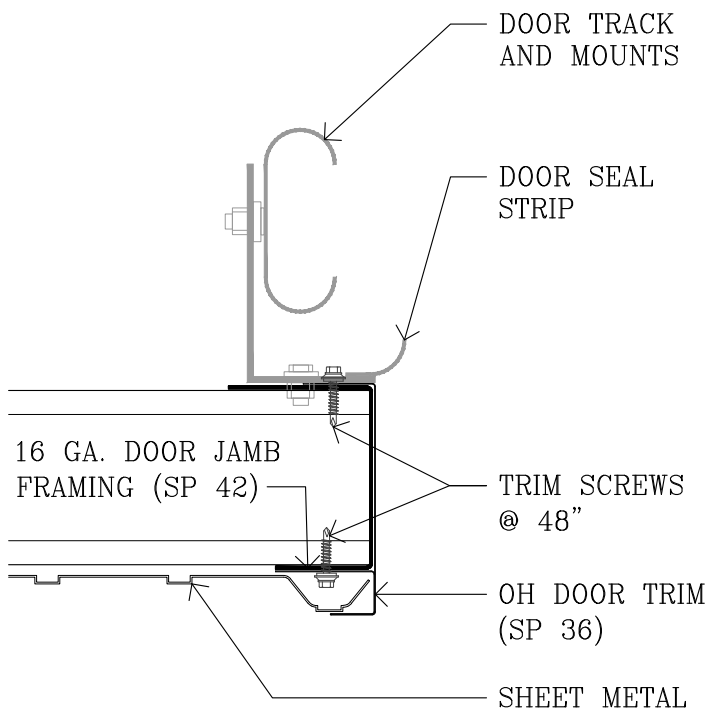


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04/01/2020

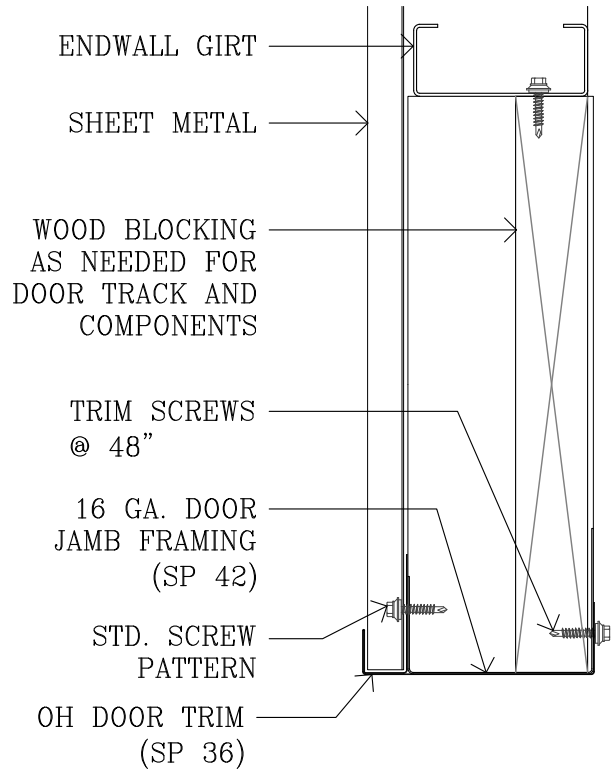


CHORD BRACE
@ O.H.D. JAMB

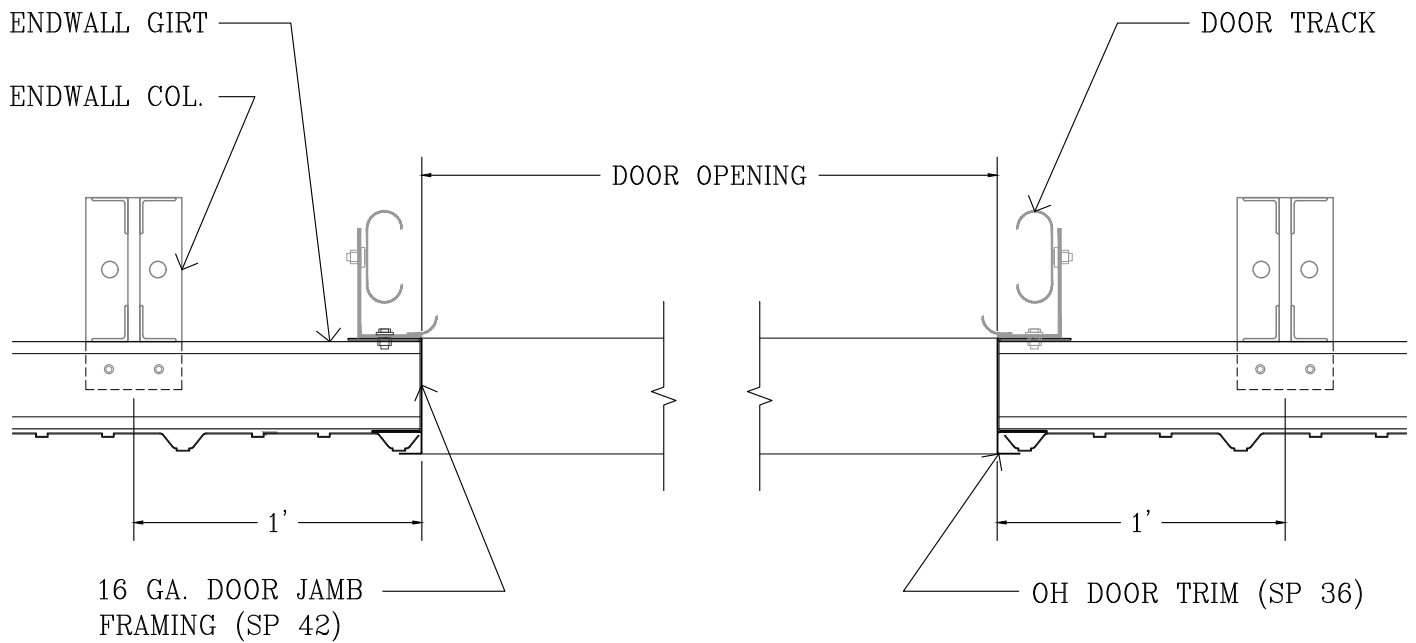
DS
113



PLAN SECTION 21b



WALL SECTION 21c



PLAN SECTION 21a

REVISION:
04/01/2020



O.H.D. TRIM & FLASHING

*DS
115*

