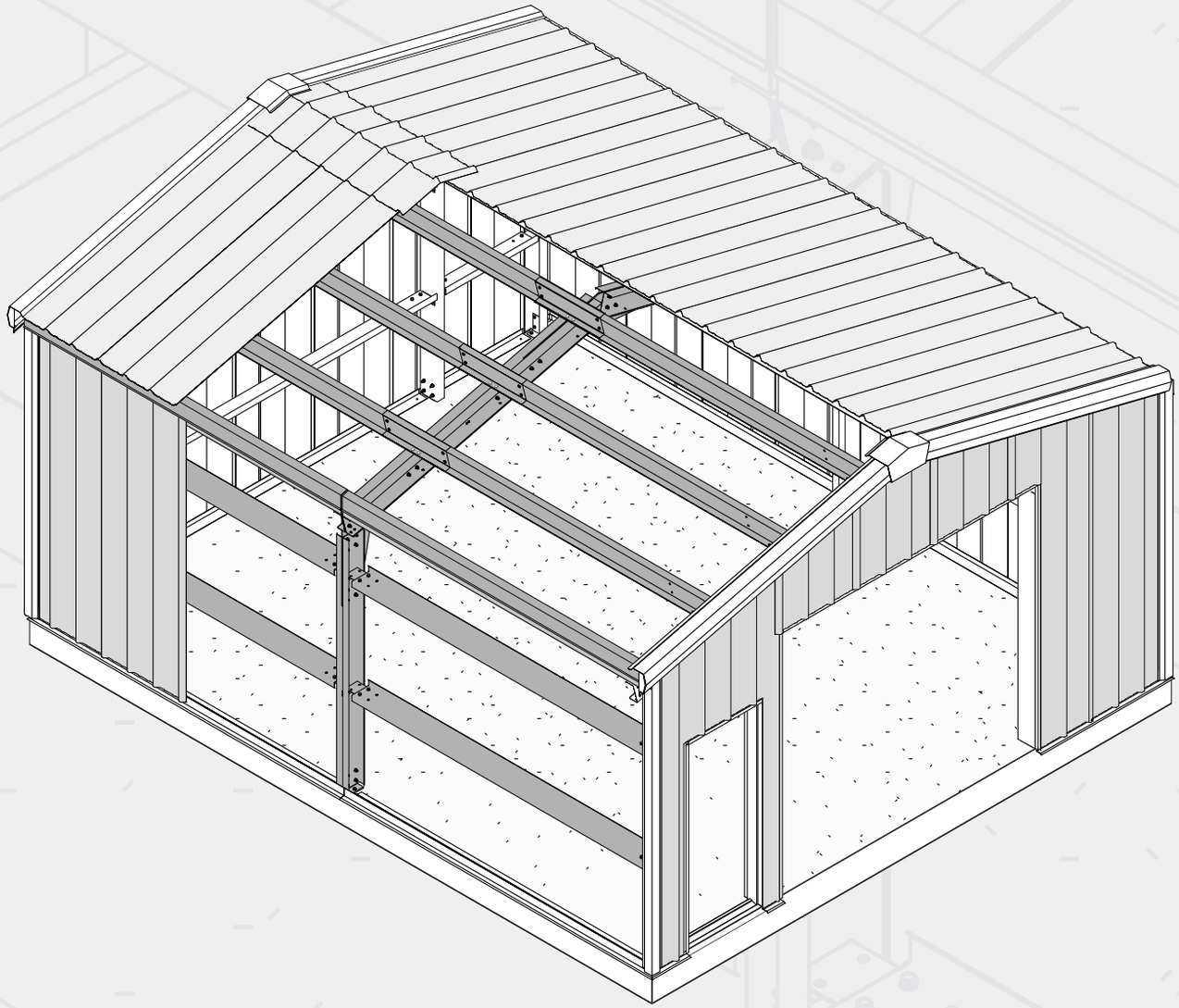
CENTRA™ SERIES

BOLT-UP STEEL BUILDINGS

24W X 30L X 10H

ASSEMBLY INSTRUCTIONS



CENTRAL® STATES MANUFACTURING, INC.

METAL BUILDING COMPONENTS

WWW.CENTRASERIES.COM

D C E GUID_INSTL_CENTRASERIES24X30X10_240418

INDEX

Important Information / Safety 4
Care and Handling 5
Parts List 6-13
Concrete Foundation Specs 14-15
Project Overview. 16-17
Installation Steps. 18-61
Options 62-73
- Parts List 62-63
- Wainscot 64-67
- Remove or Add Endwall 68-69
- Gutters 70-71
- Add Sidewall Opening. 72-73

Notice: The application and detail drawings in this manual are strictly for illustration purposes and may not be applicable to all building designs or product installations. Projects should conform to local building codes. Central States Manufacturing is not responsible for the performance of the material if it is not installed correctly.

Information contained in this booklet was in effect at the time of publication and is subject to change without notice.

IMPORTANT INFORMATION

This manual contains suggestions and guidelines on how to erect your Centra Series building. The drawings in this guide are for illustration purposes only and may not apply to all building designs or product applications. The installation details shown are proven methods of construction, but are not intended to cover all instances, building requirements, designs, or codes. It is the responsibility of the designer/installer to ensure that the details meet particular building requirements. The details may require changes or revisions due to each project's conditions. It is the buyer's responsibility to verify all applicable code requirements, check all measurements, and determine suitability of product for the job. Failure to comply with stated recommendations relieves the manufacturer of responsibility for any damage or deterioration of the product incurred and voids any applicable warranty. Central States Manufacturing reserves the right to modify, without notice, information in this guide.

SAFETY

Each job site presents different hazards; therefore it is the responsibility of the buyer/installer to determine the safest way to erect your Centra Series building based on the recommended instructions contained in this guide. Provide crew members working on the project with required safety railing, netting or safety lines. If you must walk on a metal roof, take great care.

CAUTION

Always wear heavy gloves when working with steel panels to avoid cuts from sharp edges. When power cutting or drilling steel panels, always wear safety glasses to prevent eye injury from flying metal fragments.

Metal panels can become slippery, so always wear shoes with nonslip soles. Avoid working on metal roofs during wet conditions when the panels can become extremely slippery. If you must walk on the roof, always walk on the purlins, never between. OSHA safety regulations should be complied with at all times.

CARE AND HANDLING

STAGE

Galvalume® steel sheets have a good service life when exposed to normal weather conditions however, to protect the appearance of panels and trims from damage, there are a few simple precautions that can be taken. The steel sheets are subject to stain when water sits upon, or becomes trapped between the sheets. If the Galvalume® sheets are to be stored for any period of time, they should be stored only in a dry place, preferably under a roof. Stand panels on end and fan them out at the bottom to provide air circulation and moisture run off. If space does not allow this, the panels should be separated, blocked off of the floor at least 12 inches to allow air flow, and stored at an incline to encourage drainage. The panels should then be covered, yet still have good air flow through the sheets to prevent condensation. Do not use a plastic cover, as this may cause the panels to sweat or condensation to occur.

CUTTING

A portable field shear is the ideal method for cutting panels. Nibblers or a power shear may also be used. Although we do not recommend it, if you decide to cut with a saw, it is very important that the panels be turned upside down during cutting so that hot shavings do not come in contact with the painted surface. Make sure all adjacent panels are covered so that shavings are not imbedded in these panels. If metal shavings become imbedded in the paint surface, they will quickly rust. To avoid this, panels should be thoroughly wiped of all filings on both sides of the panel. Failure to comply with the recommended cutting procedures releases the manufacturer of any responsibility. **Do not use a graphite pencil to mark on the panel. Graphite marks may be hard to remove and will lead to discoloration and corrosion.**

STORAGE

Failure to follow these steps may result in wet storage stains and premature rusting. The manufacturers warranty will be void at this time, and the manufacturer will not be responsible.

HANDLING

When unloading panels, extreme caution must be employed. Care needs to be used when unloading panels with a forklift. Panel edges and underside paint may become damaged if the forklift driver does not use caution. Once at the job site, care must be taken in order to protect the painted surface. When unbundling the panels, never drag them across the surface of one another. This may cause scratches across the underneath panels. It is recommended that the panels be "rolled" off the top of the bundle to prevent scratching. Never lift panels by the ends, instead lift the panels longitudinally and carry vertically.

Panel edges are very sharp, therefore, safety equipment should be worn by all workers handling the material.

DRILLING

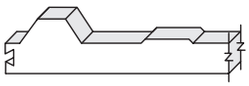
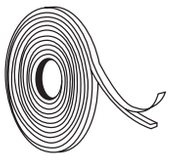
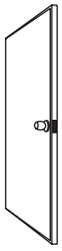
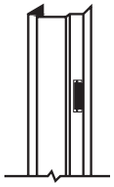
Panels should not be drilled while stacked. This will cause shavings that will become imbedded in the paint surface.

INSTALLING WALL PANELS

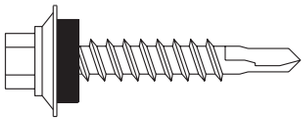
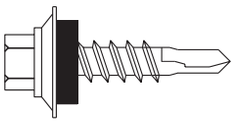
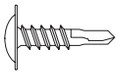
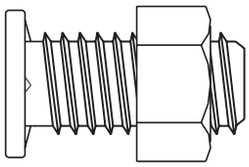
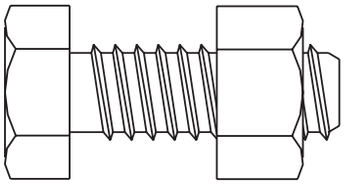
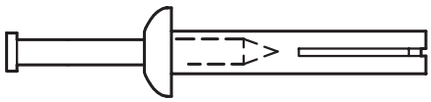
Panels and trim are subject to staining and premature rusting in conditions where moisture accumulates causing the exposed panel edge to stand in water. This may happen at the wainscot, head trim, or rat guard due to improper installation. Contractors should leave 1/8" space between wainscot trim and upper wall panel to prevent rusting and discoloration.

Shavings created by saw cutting or drilling may cause the panel to rust and will void warranties in affected areas.

PARTS LIST ACCESSORIES

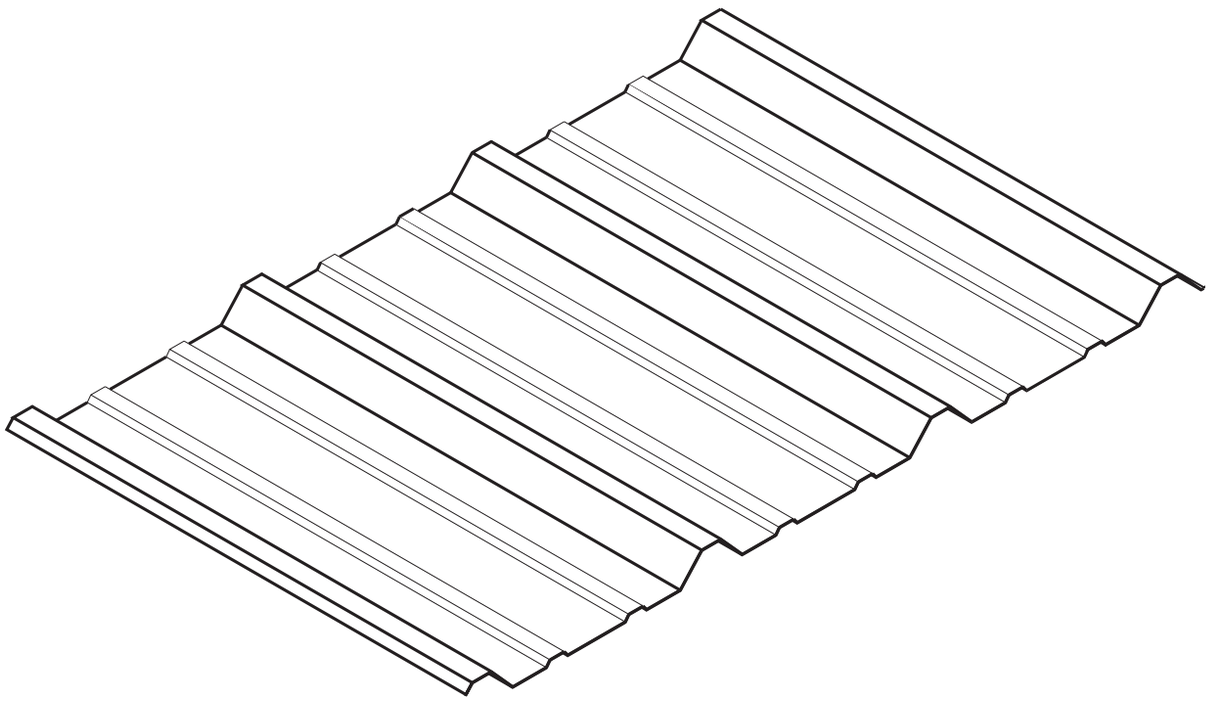
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	NOTE
ACC50 	RLCLINGLUE	Inside Closure	20	
ACC51 	BTL	Butyl Tape	10	
ACC52	MRS10CLEAR	Clear Sealant Tube	2	
ACC53	GRAYFLEX115	Expandable Foam Roll	4	
DOOR47 	3070DOOR	Commercial Walk Door	1	Steel door leaf only
DOOR48 	8X3070JAMB	Jamb Kit for Walk Door	1	Include jambs, header, threshold, door lever with key lock, hinges, and weather strip kit. Frames are non-reusable. Swing out only.

PARTS LIST FASTENERS

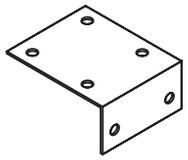
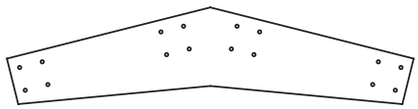
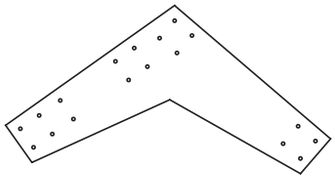
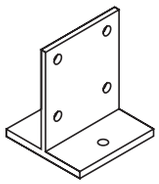
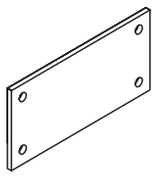
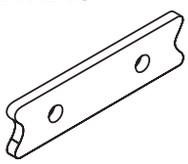
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	NOTE
FAST3	114(color)MM	Metal Screws in Roof color	500	
FAST12	114(color)MM	Metal Screws in Wall color	750	
				
FAST4	78(color)LAP	Lap Screws in Roof color	250	May have additional bags of 78LAP in multiple trim colors.
FAST13	78(color)LAP	Lap Screws in Wall color	250	
FAST23	78(color)LAP	Lap Screws in Trim color	250	
				
FAST 24	8x12LATH	#8 x 0.5" Screw, No Washer	250	
				
FAST20	POP	Pop Rivets, 100 per Bag	100	
FAST46	114FINNECK	.5" x 1.25" Fin Neck Bolt with Nuts, 50 per Box	100	
				
FAST54	112A325	.5" x 1.5" A325 Bolt with Nuts, , 50 per Box	350	
				
FAST55	11FASTENER	.25" x 1.25" Nail Drive Masonry Anchor	100	
				

PARTS LIST PANELS

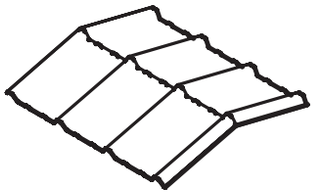
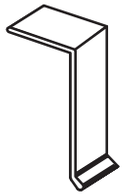
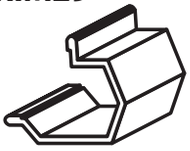
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
PANEL2	RL6(color)	Roof Panels	20	20' 0.5"
PANEL6	RL6(color)	Wall Panels	4	12' 2.5"
PANEL8	RL6(color)	Wall Panels	4	11' 5.5"
PANEL10	RL6(color)	Wall Panels	4	10' 8.5"
PANEL11	RL6(color)	Wall Panels	20	9' 11.5"
PANEL12	RL6(color)	Wall Panels	5	12' 11.5"



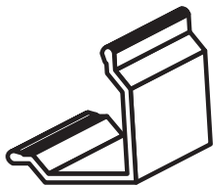
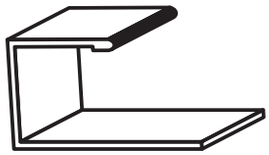
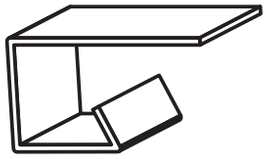
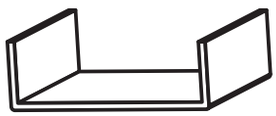
PARTS LIST PLATES

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
PLATE35 	GIRTCLIP	Girtclip	50	
PLATE41 	RFPEAK	Rigid Frame Peak Plate	1	
PLATE42 	RFHAUNCH	Rigid Frame Haunch Plate	2	
PLATE43 	RFBASE	Rigid Frame Base Plate	2	
PLATE44 	EWPEAK	Peak Plate for Endwall Frame	2	
PLATE45 	RFSPACER	Spacer Plate	4	

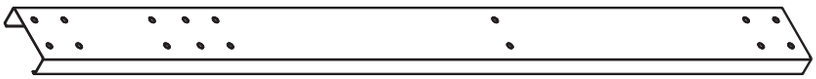
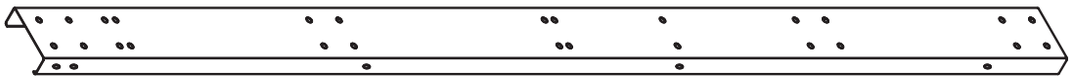
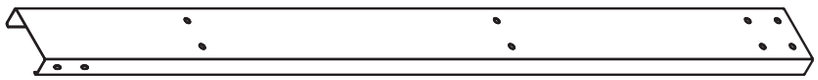
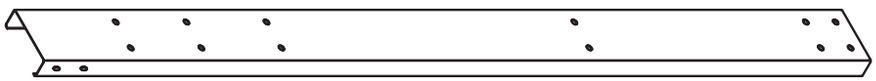
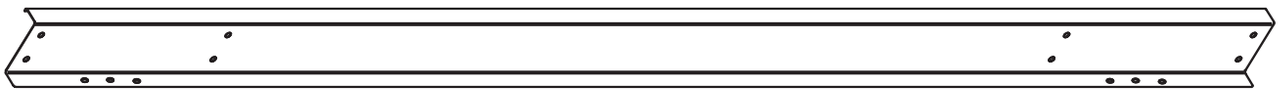
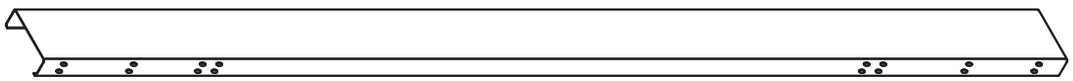
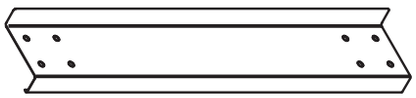
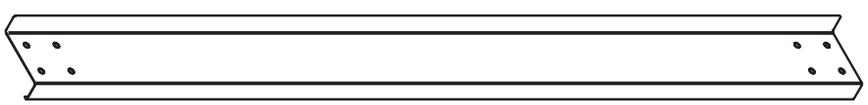
PARTS LIST TRIM

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
TRIM2	RLFRC36	Ridge Cap Panels for Roof	10	3'
				
TRIM25	LEA	Eave Trim	4	16' 2"
				
TRIM30	RGC	Ratguard Trim	4	16' 2"
TRIM16	RGC	Ratguard Trim	4	14' 2"
TRIM29	RA	Rake Trim	4	14' 2"
				
TRIM18	REND	Rake Trim End Cap	4	

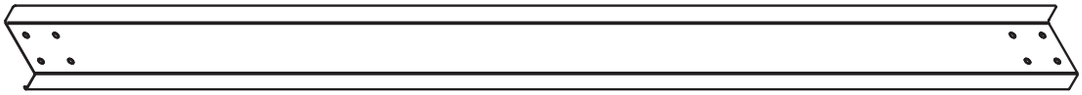
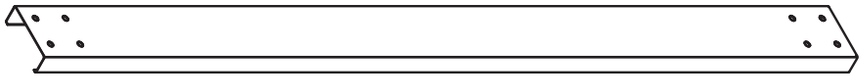
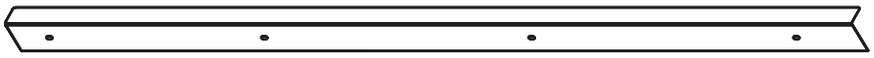
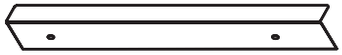
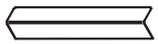
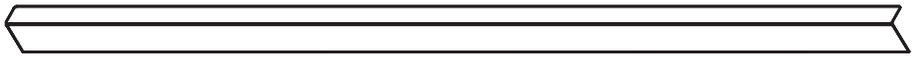
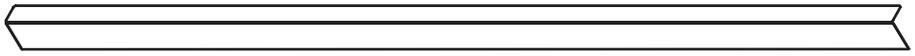
PARTS LIST TRIM

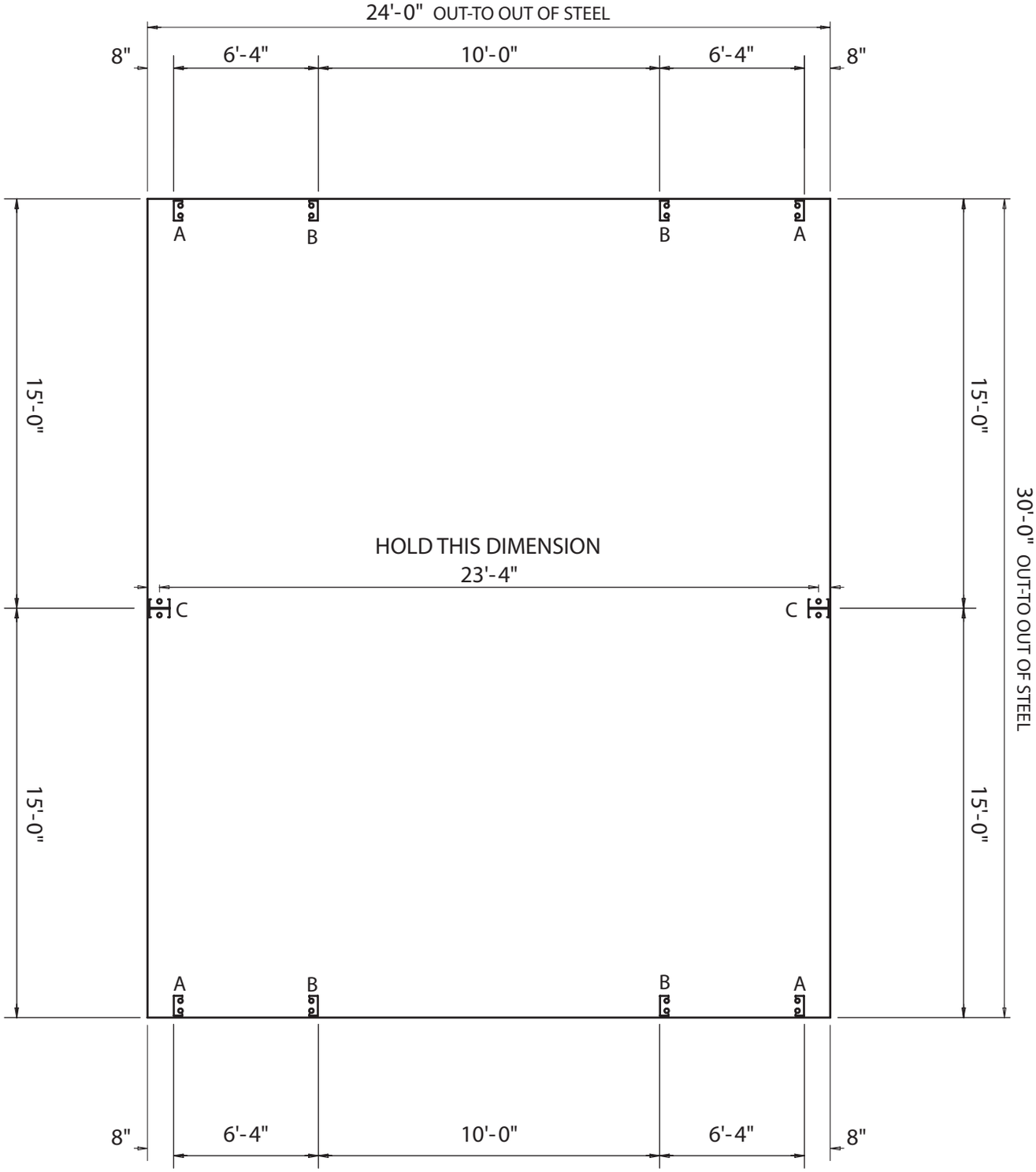
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
TRIM19	PBOXF	PBOXFGRAPHIC	2	
TRIM21	OU	Outside Corner Trim	4	10' 2"
				
TRIM22	HE	Head Trim	1	10' 3"
TRIM26	HE	Head Trim	1	3' 6"
				
TRIM23	JA	Jamb Trim	2	10' 2"
TRIM27	JA	Jamb Trim	2	7' 2"
				
TRIM24	JH	Jamb Header Trim	3	10' 2"
				

PARTS LIST PURLINS

ASSEMBLY PART #	MANUFACTURER PART #	PART MARK	QUANTITY	LENGTH
PURLIN25	C82514R C83512R (145mph Wind Option)	RF1-1 (SIDE COLUMN)	4	8' 6.8125"
				
PURLIN15	C82514R C83512R (145mph Wind Option)	RF1-2,ER-1&2 (RAFTER)	8	12' 1.1875"
				
PURLIN27	C83516R C83514R (145mph Wind Option)	EC-1 (END COLUMN)	4	9' 5.6875"
				
PURLIN17	C83516R	EC-2 (END COLUMN)	4	11' 1.8125"
				
PURLIN18	Z82516R	P-1, P-2 (PURLIN)	12	16' 1.5"
				
PURLIN11	E84316LR	E-1 (EAVE STRUT)	4	14' 11.5"
				
PURLIN24	Z82516R	G-1 (END GIRT)	8	5' 7.5"
				
PURLIN32	Z82516R	G-2 (END GIRT)	2	9' 11.5"
				

PARTS LIST PURLINS

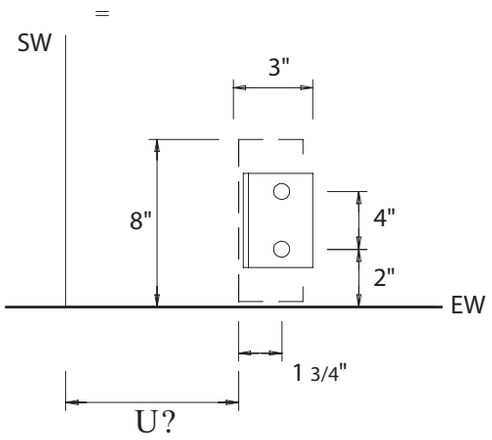
ASSEMBLY PART #	MANUFACTURER PART #	PART MARK	QUANTITY	LENGTH
PURLIN20	Z82516R	G-3 (SIDE GIRT)	8	14' 7.25"
				
PURLIN34	C82516R	DH-1 (END HEADER)	1	9' 11.5"
				
PURLIN5	B4216R	L4X2 (SIDE BASE)	4	14' 7.25"
PURLIN8	B4216R	L4X2 (END BASE)	2	11' 11.5"
				
PURLIN10	B4216R	L4X2 (END BASE)	4	5 ' 7.5"
				
PURLIN39	B4216R	Base Angle Purlin	4	0' 7"
Note: Pieces may be perforated and should be field separated.				
				
PURLIN40	B4216R	Extra Angle	4	9' 11.5"
				
PURLIN41	B4216R	L4X2 (RAKE ANGLE)	4	12' 1.1875"
				



ANCHOR BOLT PLAN

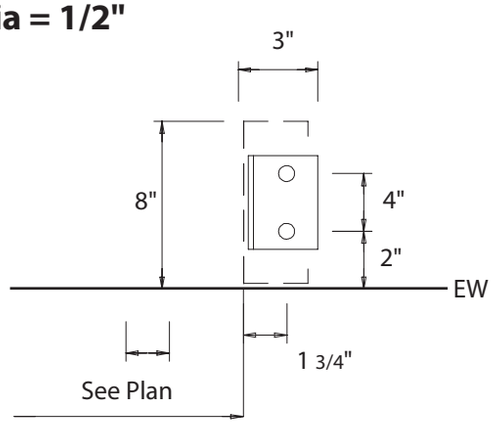
NOTE: All Base Plates at 100'-0" (U.N.)

Dia = 1/2"



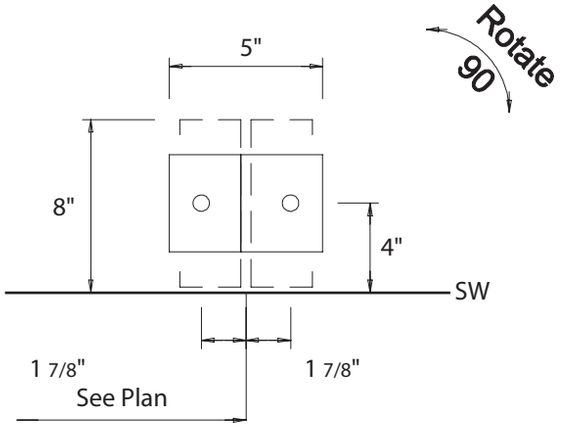
Detail A

Dia = 1/2"

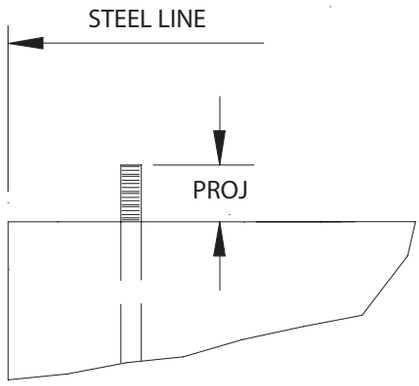


Detail B

Dia = 1/2"



Detail C

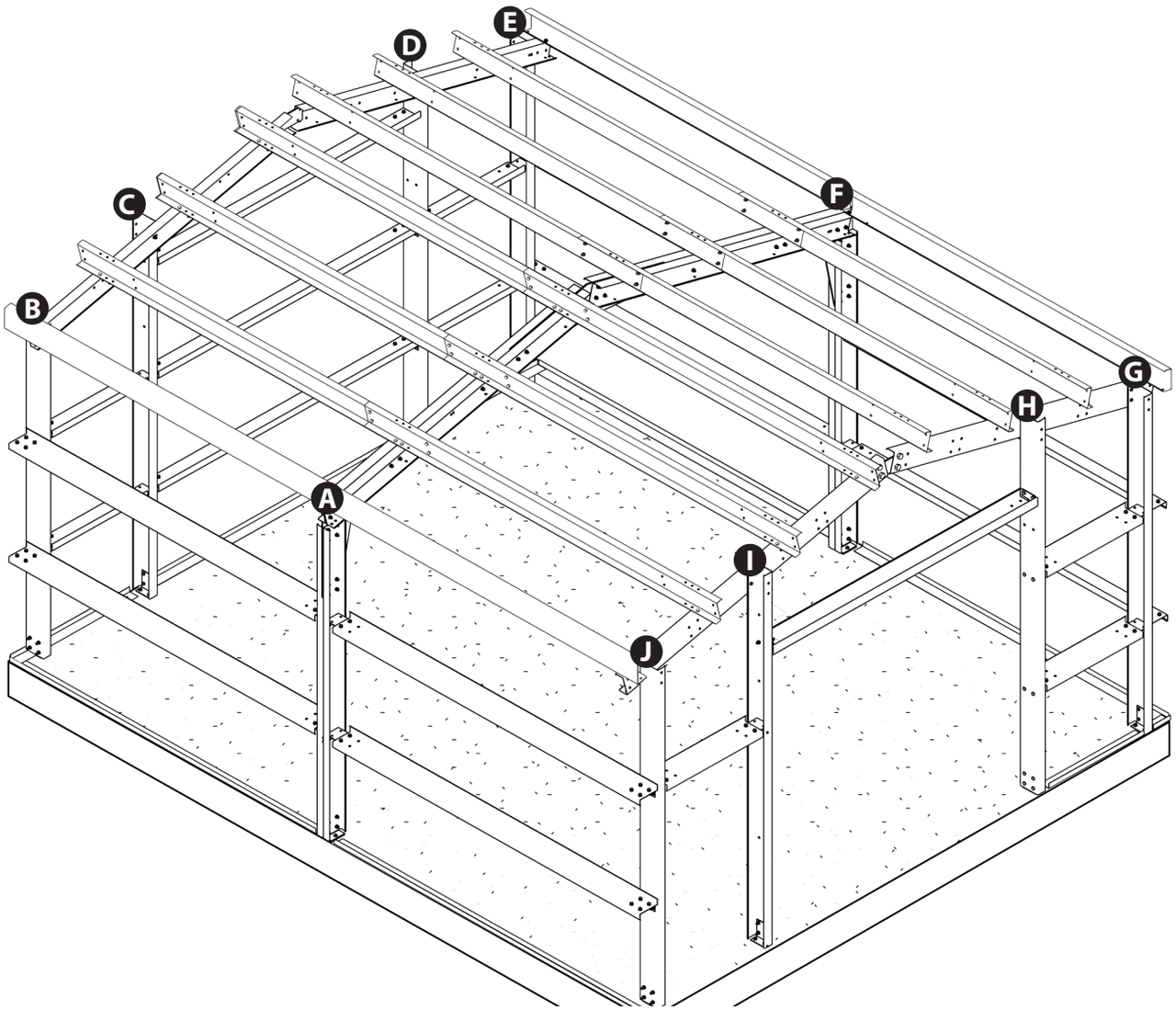


ANCHOR BOLT PROJECTION

1. The metal building manufacturer is responsible for the design of the anchor bolt diameter only to permit the transfer of forces between the base plate and the anchor bolt in shear, bearing and tension, but is not responsible for the anchor bolt embedment for transfer of forces to the foundation. The metal building manufacturer does not design and is not responsible for the design, material and construction of the foundation embedments. The end use customer should assure himself that adequate provisions are made in the foundation design for loads imposed by column reactions of the building, other imposed loads, and bearing capacity of the soil and other conditions of the building site. It is recommended that the anchorage and foundation of the professional engineer experienced in the design of such structures, (section a3 mbma 2006 metal building systems manual).
2. Bottom of all base plate are at the same elevation. (Unless noted)

CENTRA™ SERIES
BOLT-UP STEEL BUILDINGS

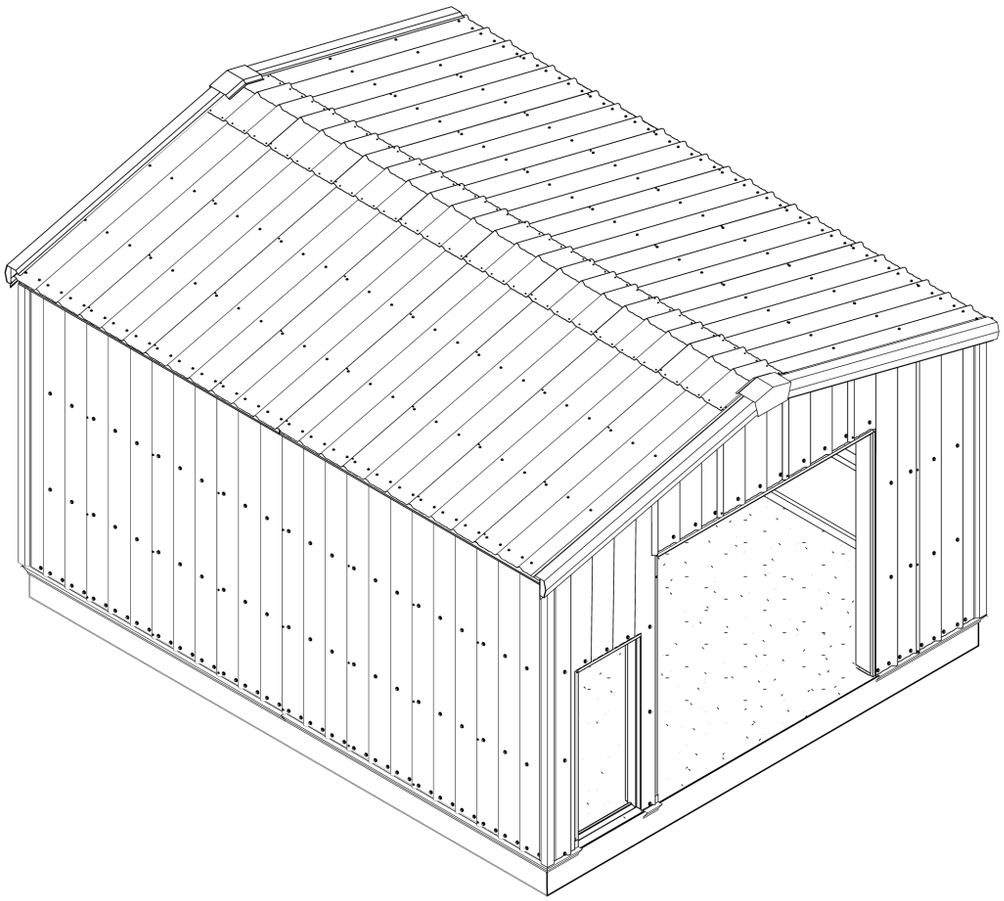
PROJECT OVERVIEW



Completed Frame Structure

The above drawing shows the completed frame structure and columns labeled. The columns will be called out periodically throughout the instructions.

PROJECT OVERVIEW



Completed Structure

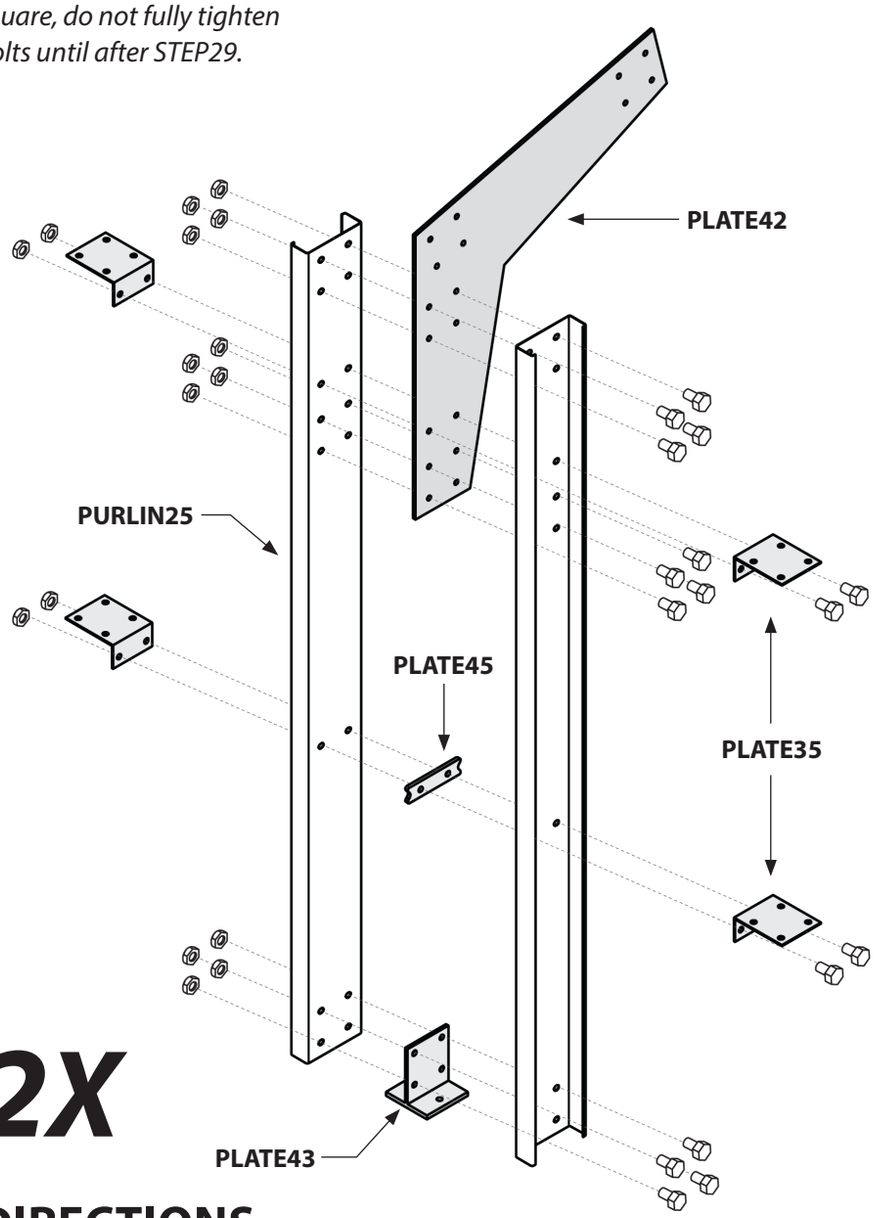
The following instructions are to assemble the building as shown above. There will be optional variations to the buildings layout called out on certain pages. Follow those instructions as they pertain to your needs.

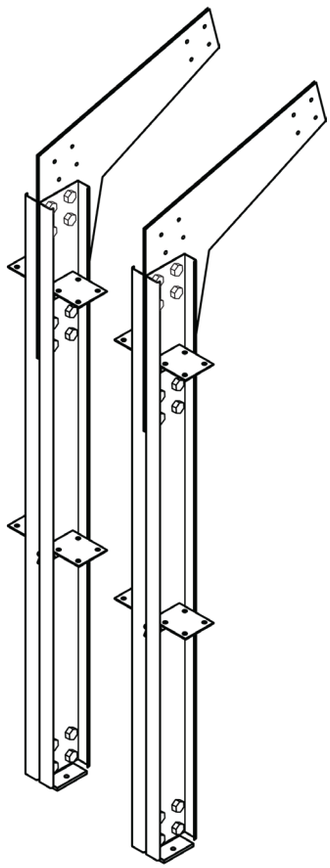
STEP 1

Note: To ensure building is square, do not fully tighten bolts until after STEP29.

REQUIRED PARTS

(4) PURLIN25
(2) PLATE43
(2) PLATE45
(2) PLATE42
(8) PLATE35
FAST54





2X

DIRECTIONS

Assemble Columns A and F

Note: Place level on all girt clips throughout installation to ensure level girts.

1. Layout (2) PURLIN25 sidewall columns for column A.
2. Attach (1) PLATE43 using FAST54.
3. Attach (2) PLATE35 with PLATE45 between columns as shown using FAST54.
4. Attach (1) PLATE42 with (2) PLATE35 using FAST54 as shown.
5. Repeat these steps for Column F.
6 Set assembled columns aside for later use.

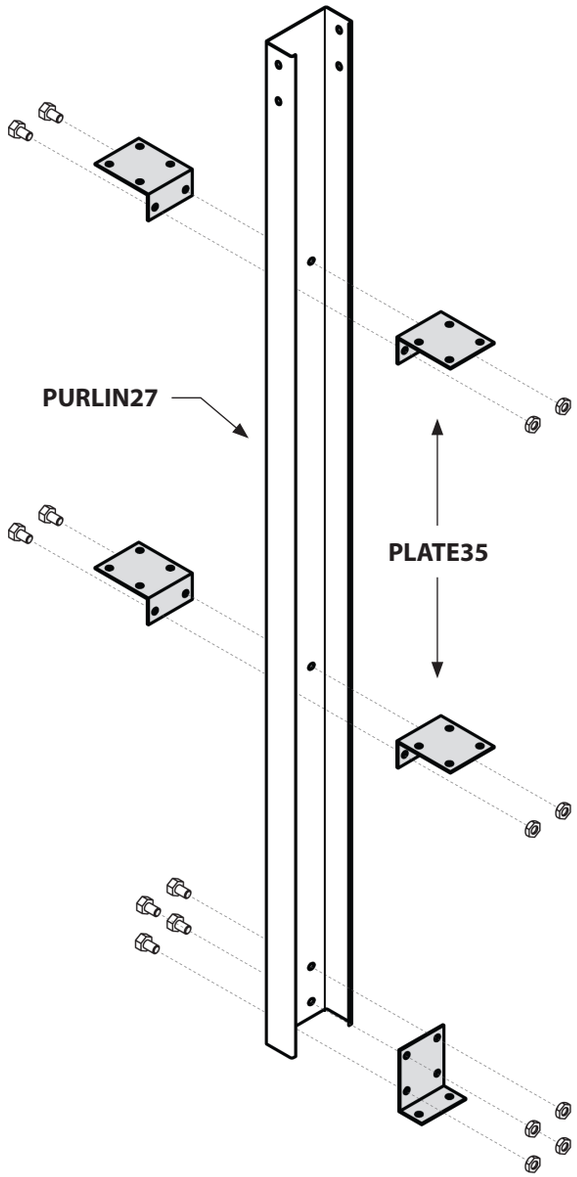
STEP 2

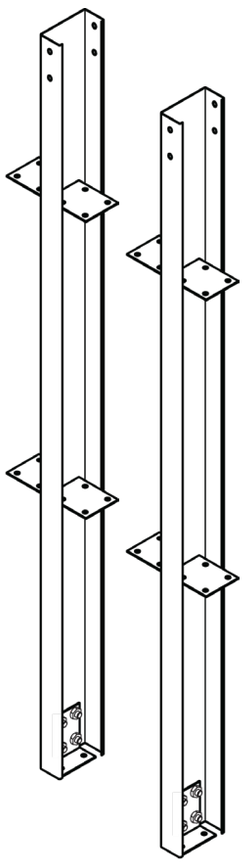
REQUIRED PARTS

(2) PURLIN27

(10) PLATE35

FAST54





2X

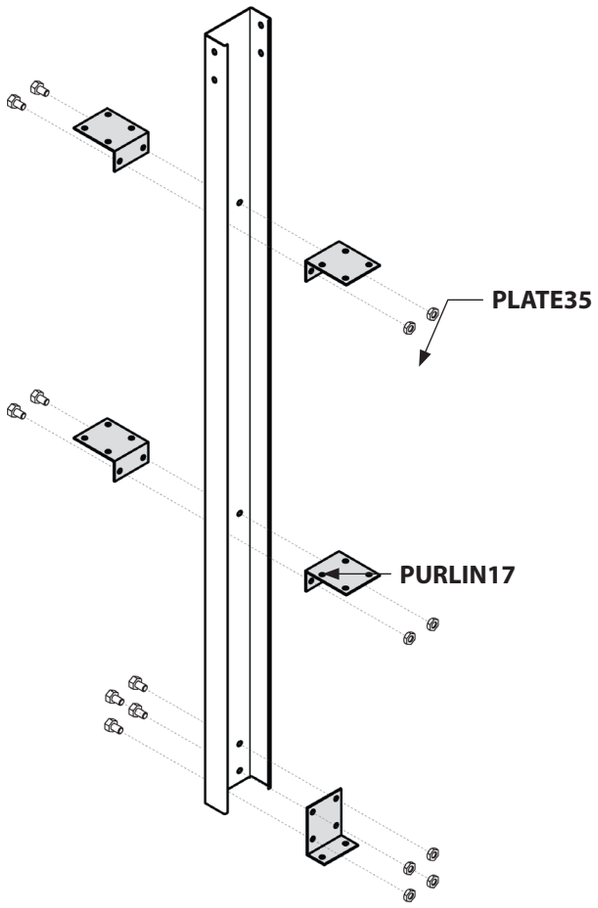
DIRECTIONS

Assemble Columns B and E

1. Layout (1) PURLIN27 corner column for column B.
2. Attach (1) PLATE35 at bottom using FAST54.
3. Attach (2) PLATE35 at 3'6" using FAST54.
4. Attach (2) PLATE35 at 7'4" using FAST54.
5. Repeat these steps for column E.
6. Set assembled columns aside for later use.

STEP 3

If you are adding a framed opening to the endwall.
Refer to page 69 for assembly instructions.

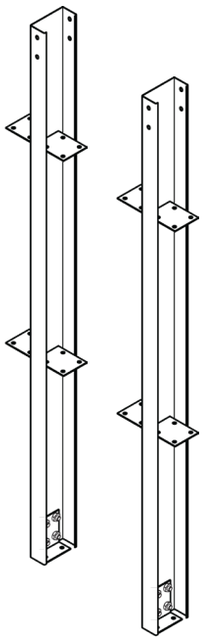


REQUIRED PARTS

(2) PURLIN17

(10) PLATE35

FAST54



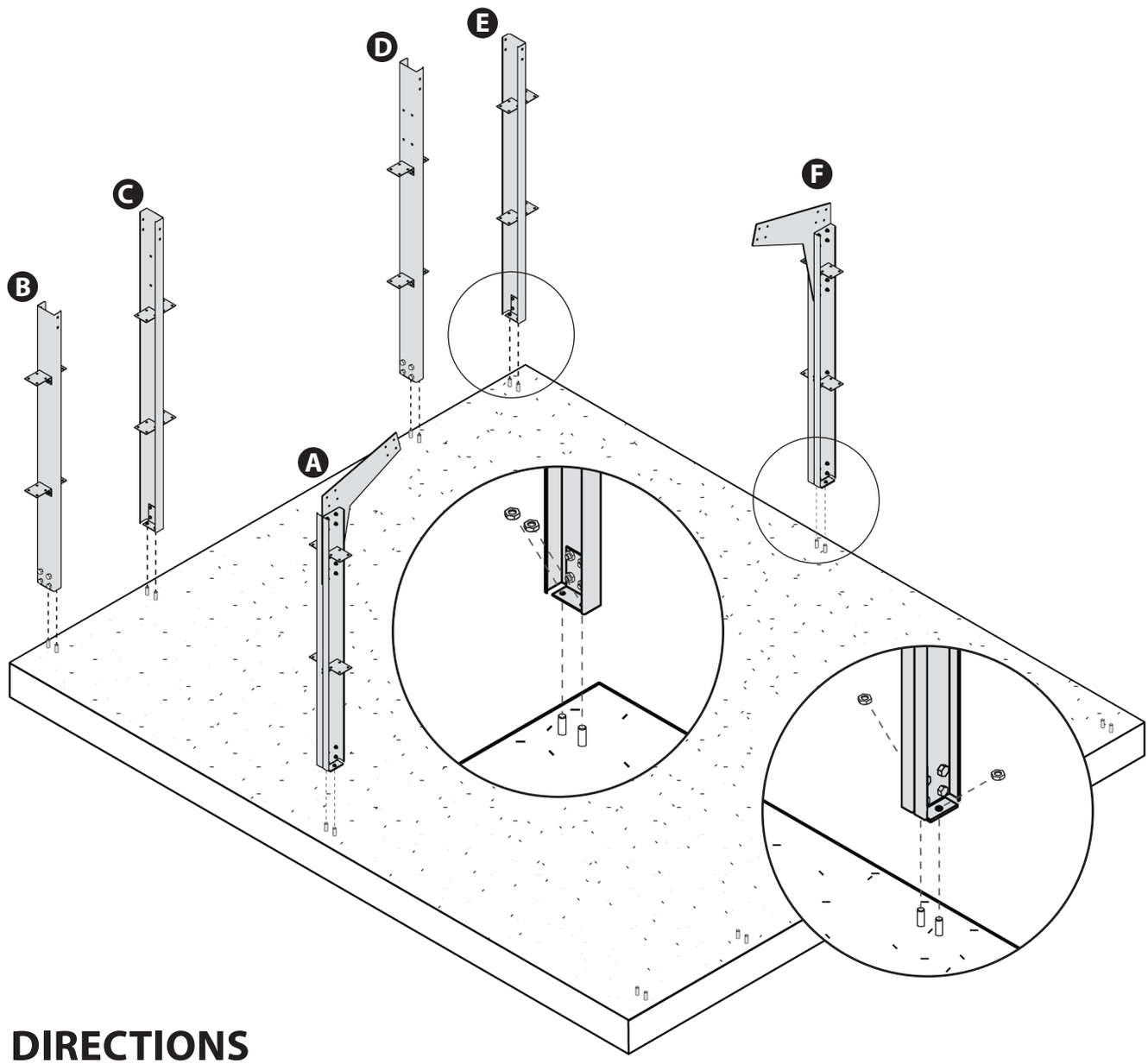
2X

DIRECTIONS

Assemble Columns C and D

1. Layout (1) PURLIN17 corner column for column C.
2. Attach (1) PLATE35 at bottom using FAST54.
3. Attach (2) PLATE35 at 3'6" from bottom using FAST54.
4. Attach (2) PLATE35 at 7'4" from bottom using FAST54.
5. Repeat these steps for column D.

STEP 4

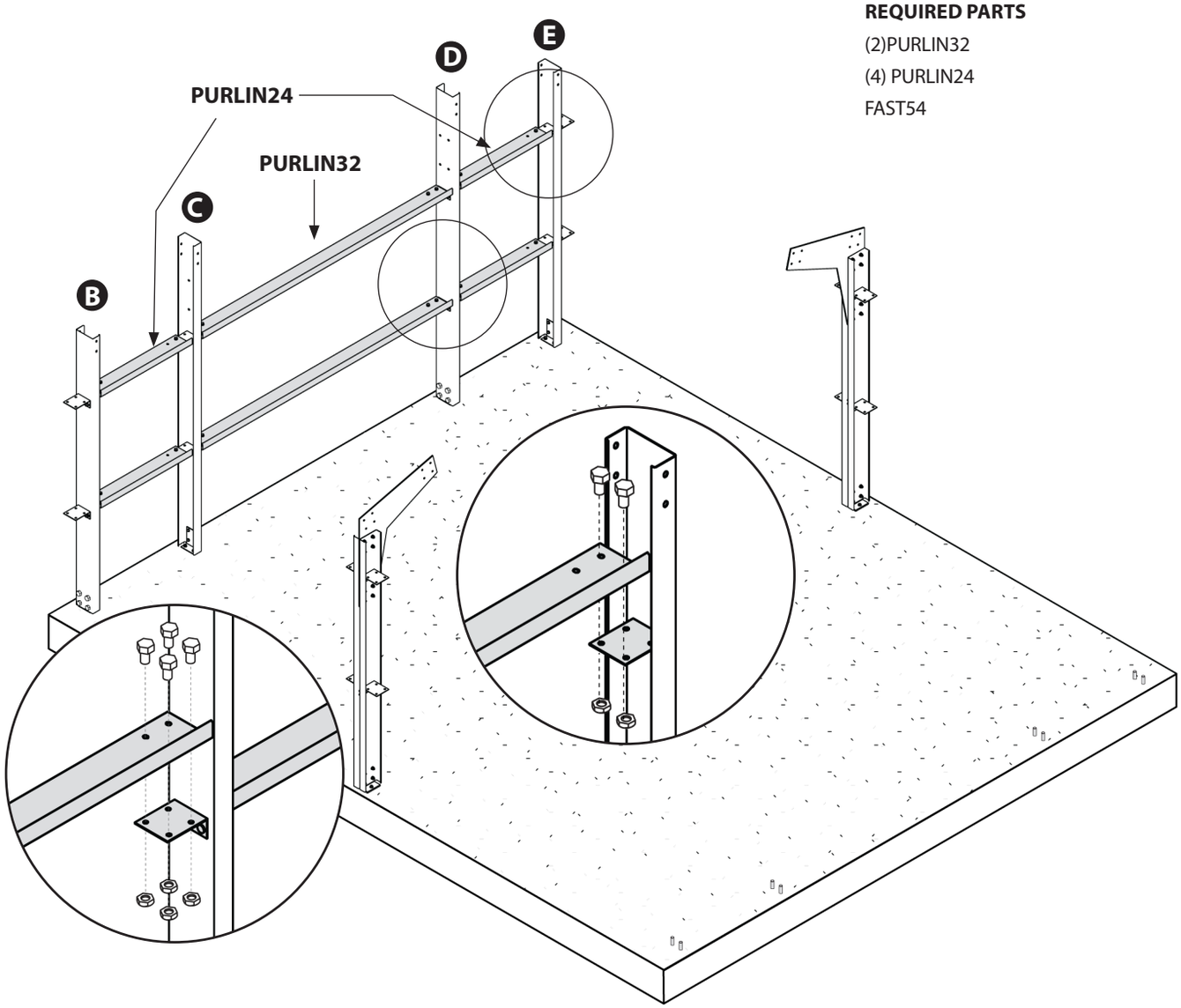


DIRECTIONS

Stand and Anchor Columns A, B, C, D,E and F

Note: Anchor bolts and nuts are not included in building package. Anchor bolts are placed by your foundation specialist when laying foundation and corresponding nuts will be provided by your foundation specialist.

STEP 5



REQUIRED PARTS

(2)PURLIN32

(4) PURLIN24

FAST54

DIRECTIONS

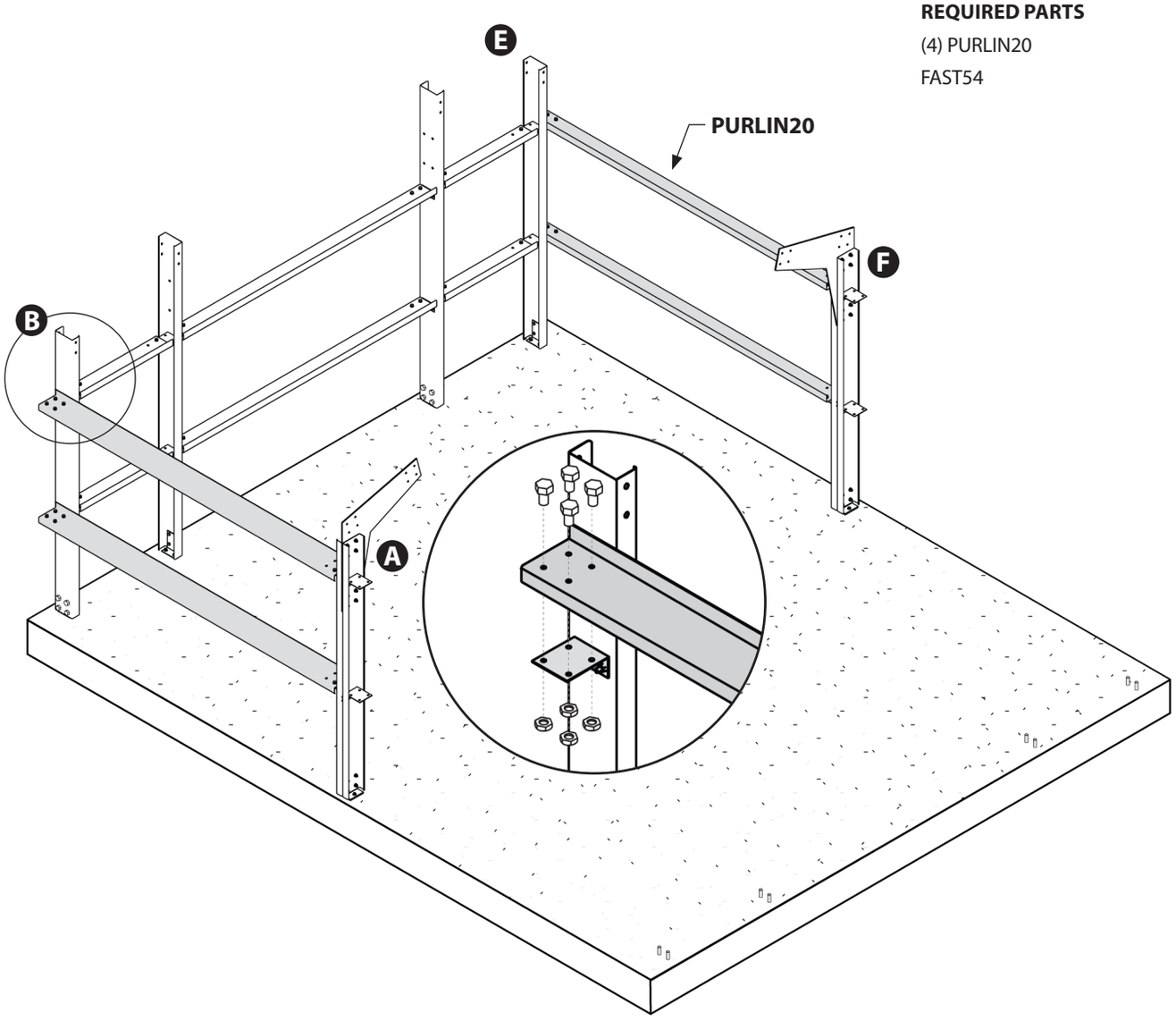
Attaching Zee Girts

Note: Do not overtighten bolts on wall girts until columns are vertically level. Then tighten bolts. This applies throughout installation.

1. Attach PURLIN24 between columns B & C and D & E using FAST54 as shown.
2. Attach PURLIN32 between columns C and D using FAST54 as shown.

STEP 6

REQUIRED PARTS
(4) PURLIN20
FAST54



DIRECTIONS

Attaching Zee Girts

1. Attach PURLIN20 between columns B and A and between columns E and F using FAST54 as shown.

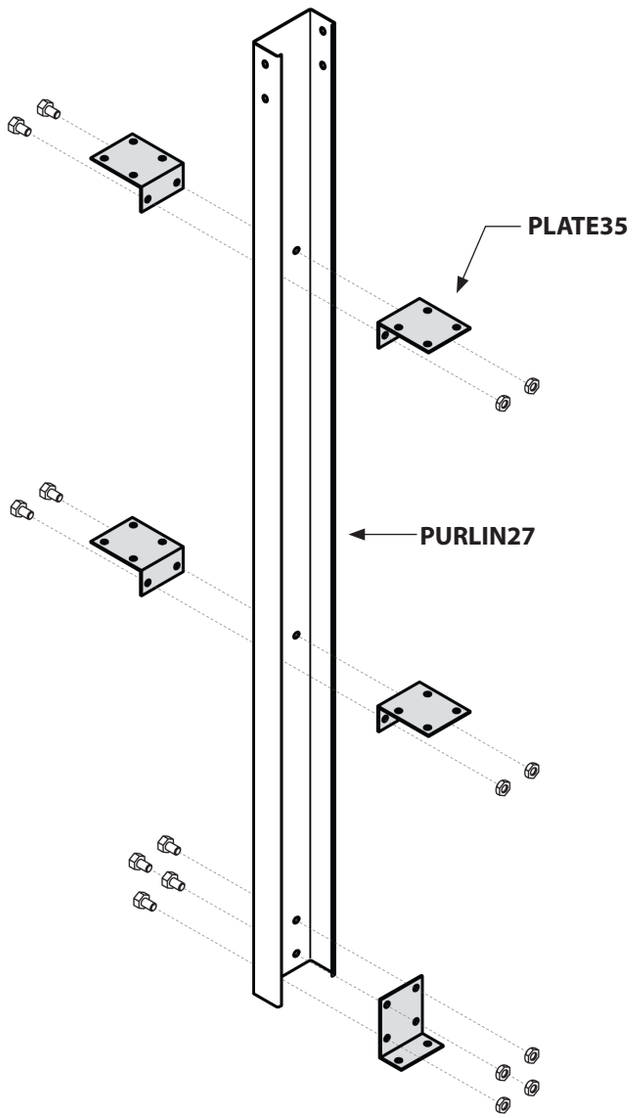
STEP 7

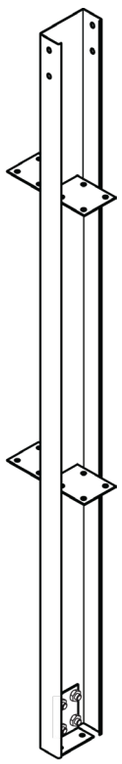
REQUIRED PARTS

(1) PURLIN27

(5) PLATE35

FAST54





DIRECTIONS

Assemble Column G

1. Layout (1) PURLIN27 column for column G.
2. Attach (1) PLATE35 at bottom using FAST54.
3. Attach (2) PLATE35 at 3'6" from bottom using FAST54.
4. Attach (2) PLATE35 at 7'4" from bottom using FAST54.
5. Set assembled column aside for later use.

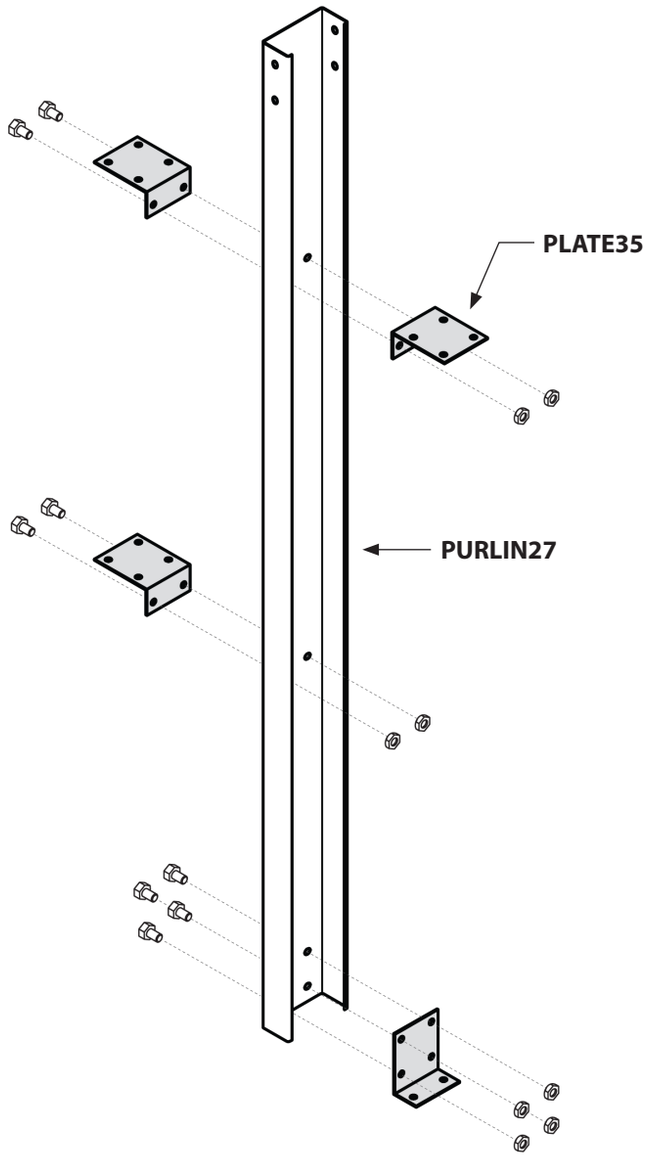
STEP 8

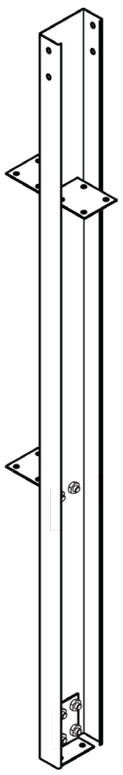
REQUIRED PARTS

(1) PURLIN27

(4) PLATE35

FAST54





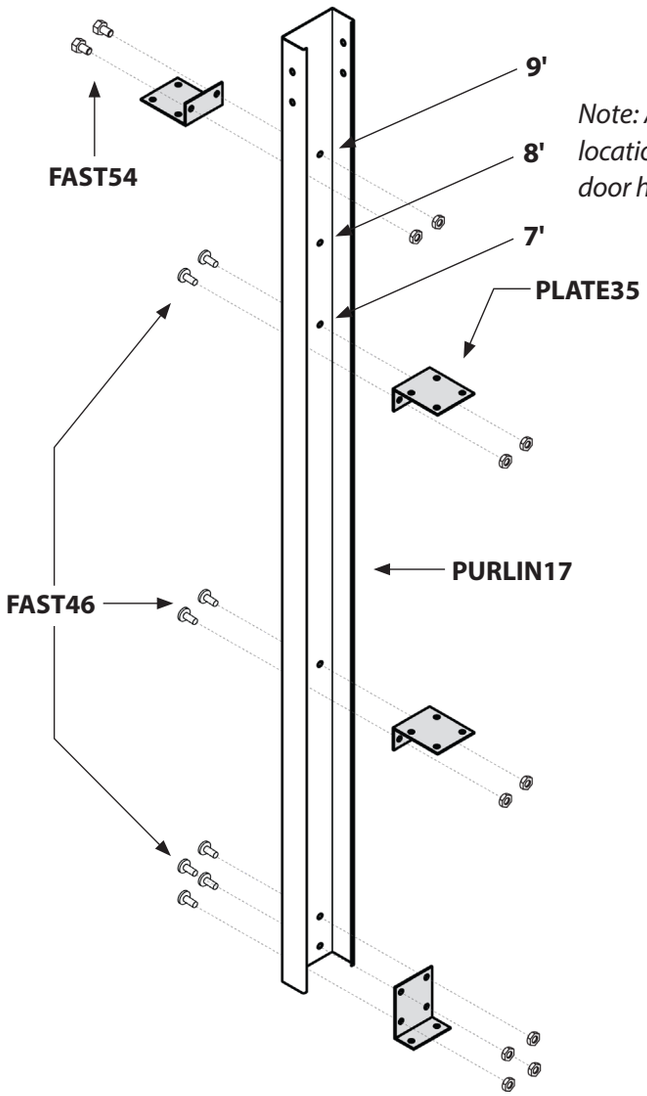
DIRECTIONS

Assemble Column J

1. Layout (1) PURLIN27 column for column J.
2. Attach (1) PLATE35 at bottom using FAST54.
3. Attach (1) PLATE35 at 3'6" from bottom using FAST54.
4. Attach (2) PLATE35 at 7'4" from bottom using FAST54.
5. Set assembled column aside for later use.

STEP 9

If you are removing standard framed opening.
Refer to page 68 for assembly instructions.



Note: Adjust the top PLATE35 location to accommodate the door height.

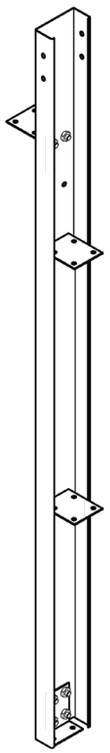
REQUIRED PARTS

(1) PURLIN17

(4) PLATE35

FAST54

FAST46



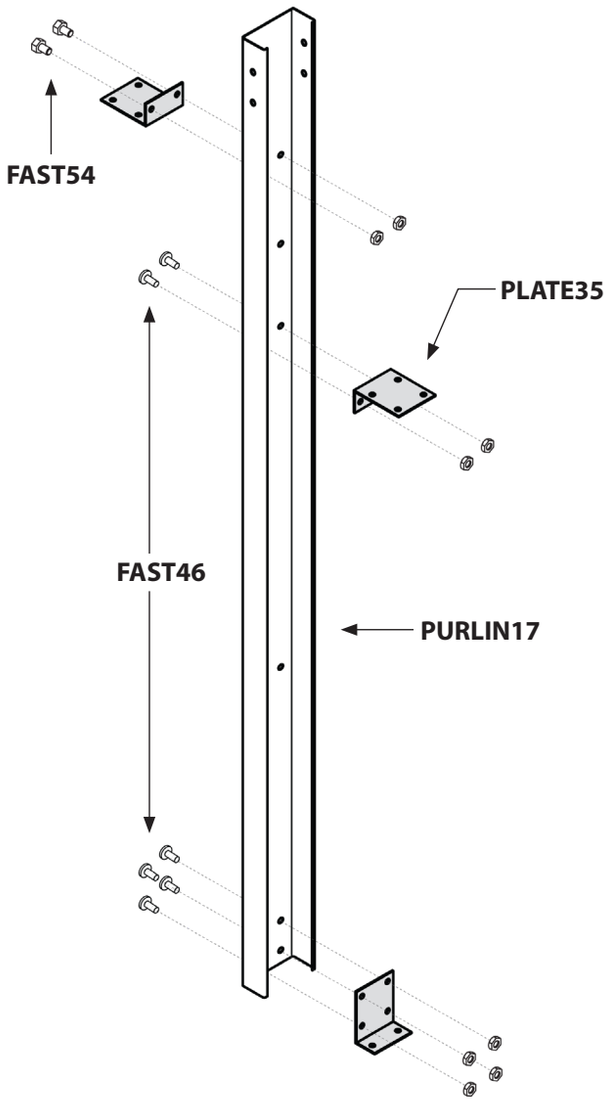
DIRECTIONS

Assemble Columns H

Note: Adjust the top PLATE35 location to accommodate the door height.

1. Layout (1) PURLIN17 column for column G.
2. Attach (1) PLATE35 at bottom using FAST46.
3. Attach (1) PLATE35 at 3'6" from bottom using FAST46.
4. Attach (1) PLATE35 at 7'4" from bottom using FAST46.
5. Attach (1) PLATE35 at desired door height using FAST54. (9' is shown above)
6. Set assembled column aside for later use.

STEP 10



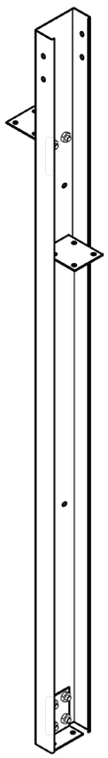
REQUIRED PARTS

(1) PURLIN17

(3) PLATE35

FAST54

FAST46



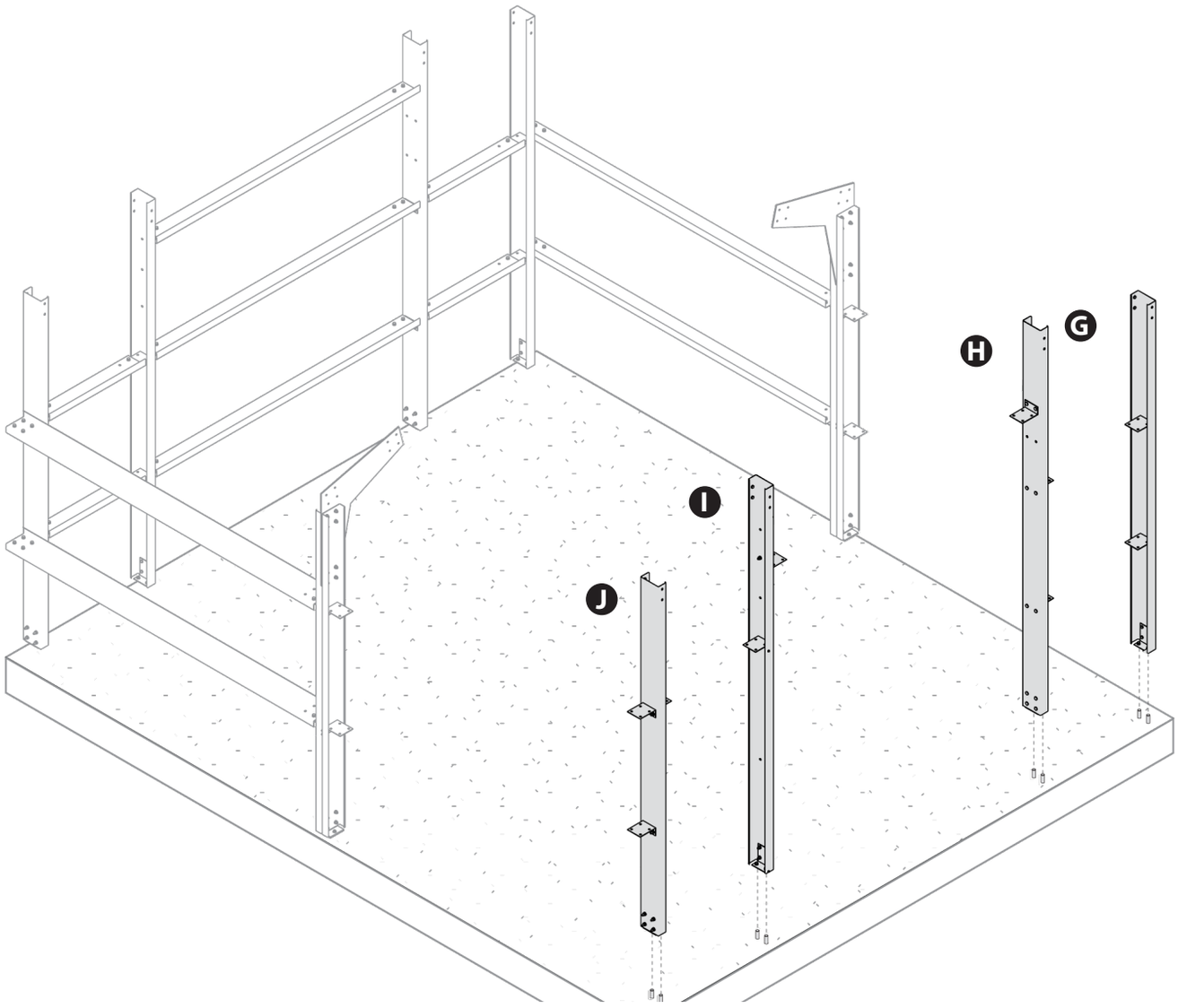
DIRECTIONS

Assemble Columns I

Note: Adjust the TOP GIRTCLIP location to accommodate the door height.

1. Layout (1) PURLIN17 column for column I.
2. Attach (1) PLATE35 at bottom using FAST46.
3. Attach (1) PLATE35 at 7'4" from bottom using FAST46.
4. Attach (1) PLATE35 at matching height as previous step using FAST54.

STEP 11



DIRECTIONS

Stand and Anchor Columns G, H, I, and J

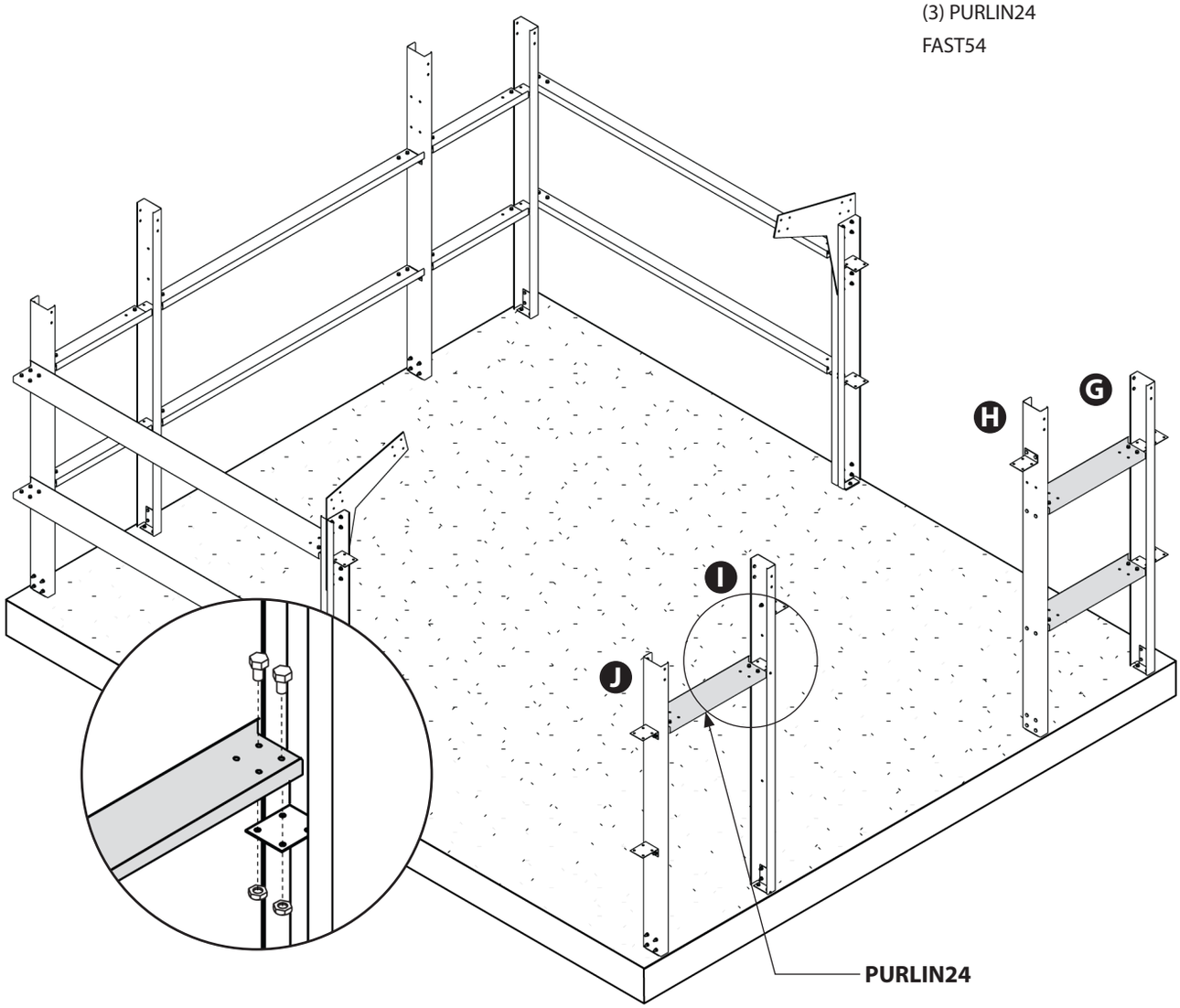
Note: Anchor bolts and nuts are not included in building package. Anchor bolts are placed by your foundation specialist when laying foundation and corresponding nuts will be provided by foundation specialist.

STEP 12

REQUIRED PARTS

(3) PURLIN24

FAST54

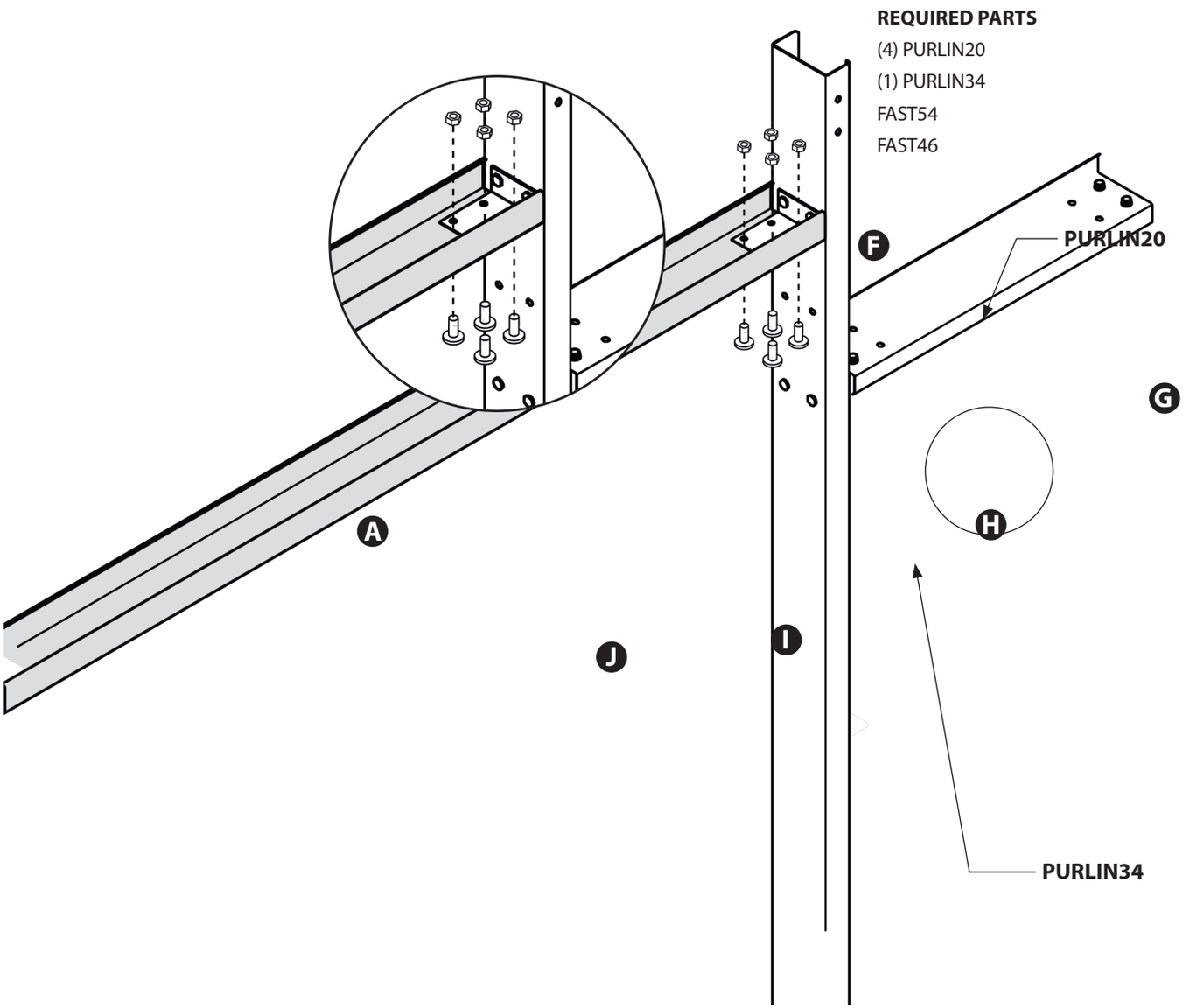


DIRECTIONS

Attaching Zee Girts

1. At 3'6" and 7'4" from bottom of column, attach PURLIN24 between columns G and H using FAST54 as shown.
2. At 7'4" from bottom of column. Attach PURLIN24 between columns I and J using FAST54 as shown.

STEP 13



DIRECTIONS

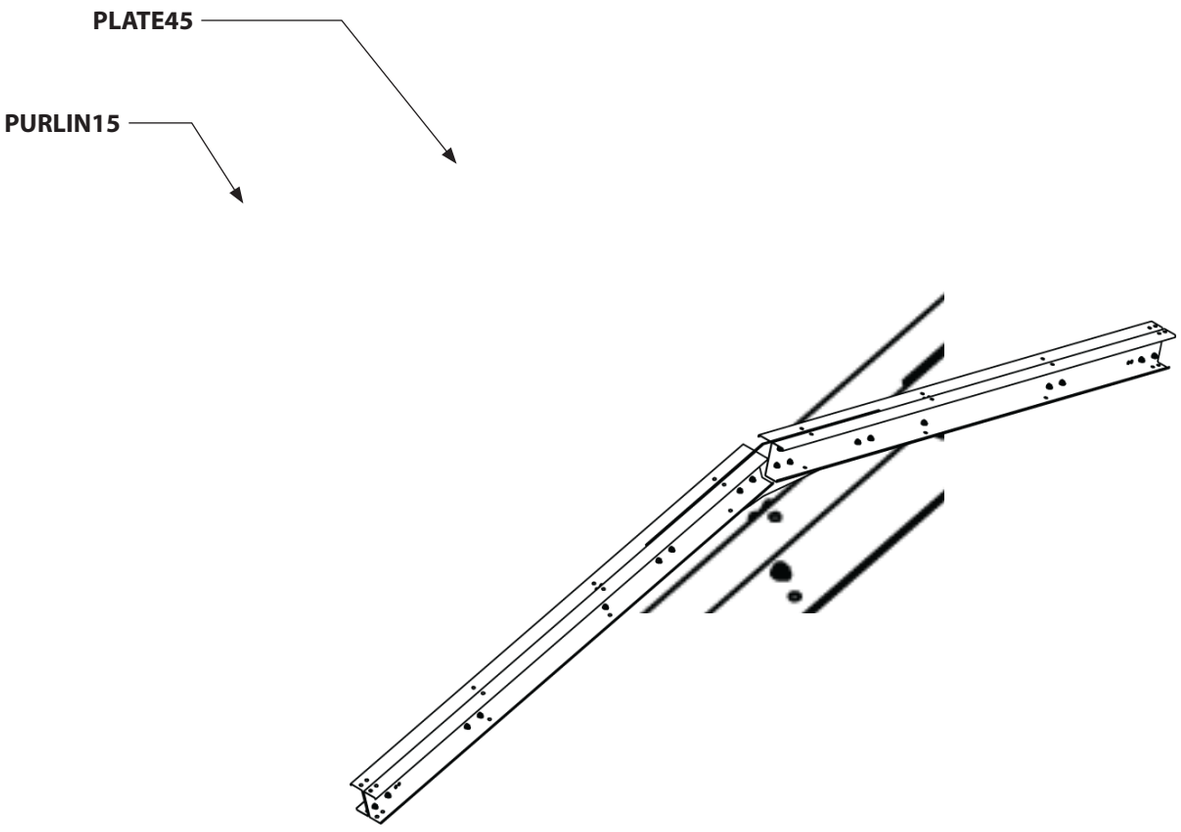
Attaching Zee Girts

1. Attach PURLIN20 between columns A, J, F, and G as shown. Use FAST54 to fasten to girt clips.
2. Attach PURLIN34 between columns H and I. PURLIN34 can be placed at 7', 8' or 9' depending on the height on the door. Adjust the top GIRTCLIP location on column I & H to accommodate the door. Example shown above is at 9'. This height was set in previous step. Use FAST46 to fasten to girt clips.

STEP 14

DIY Alternate Method:
If lifting machinery is not being used, assemble center rafters, but do not attach PLATE41 until STEP 15.

REQUIRED PARTS
(4) PURLIN15
(1) PLATE41
(2) PLATE45
FAST54



DIRECTIONS

Assemble Center Rafters

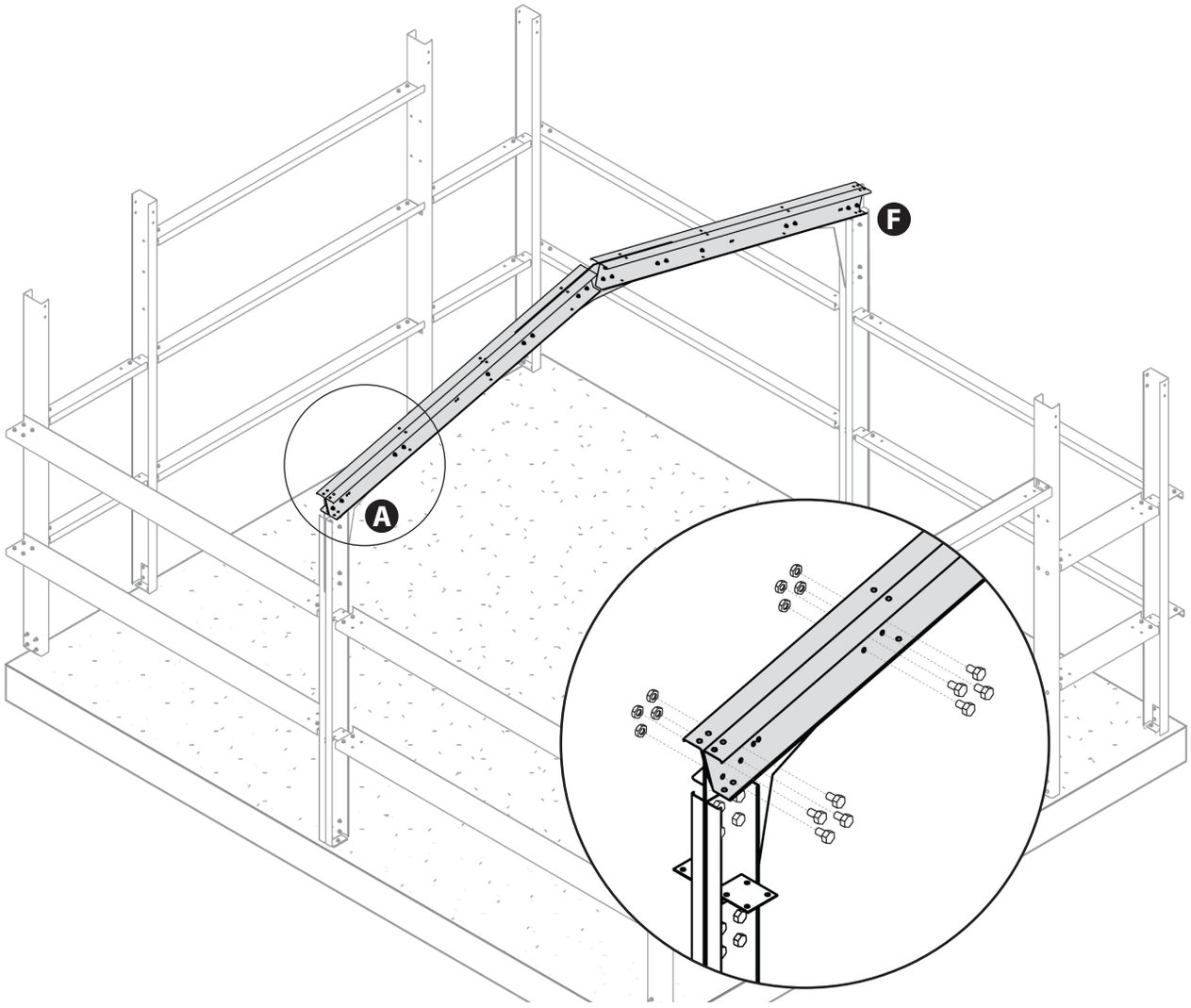
1. Layout (2) PURLIN15 rafters.
2. Attach (1) PLATE41 peak plate using FAST54.
3. Attach (1) PLATE45 between columns using FAST54.
4. Repeat steps 2 and 3 to opposite side of PLATE41 to complete center rafter assembly.

Note: Each rafter assembly weighs approximately 275-300lbs.

STEP 15

DIY Alternate Method:
If lifting machinery is not being used, stand center rafters and hold in place with 2x4 bracing. Then lift and install PLATE41. See instructional video for visualization.

REQUIRED PARTS
FAST54



DIRECTIONS

Stand and Install Center Rafter

Note: This step will require lifting machinery due to height and weight of components. Follow OSHA safety requirements for your area.

1. Lift full rafter assembly from the previous step over columns A and F.
2. Bolt center rafter to PLATE42 at top of columns A and F using FAST54.

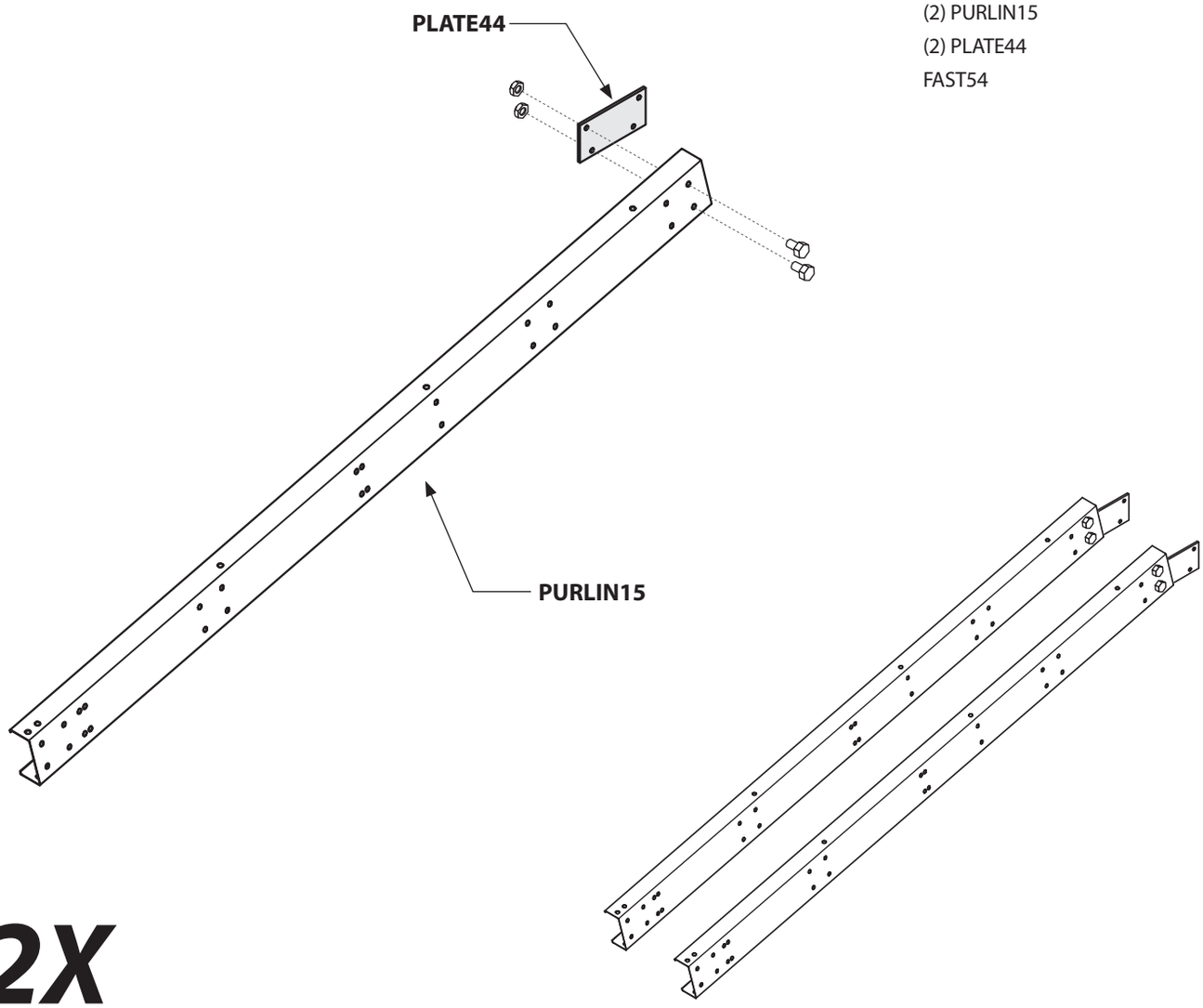
STEP 16

REQUIRED PARTS

(2) PURLIN15

(2) PLATE44

FAST54



2X

DIRECTIONS

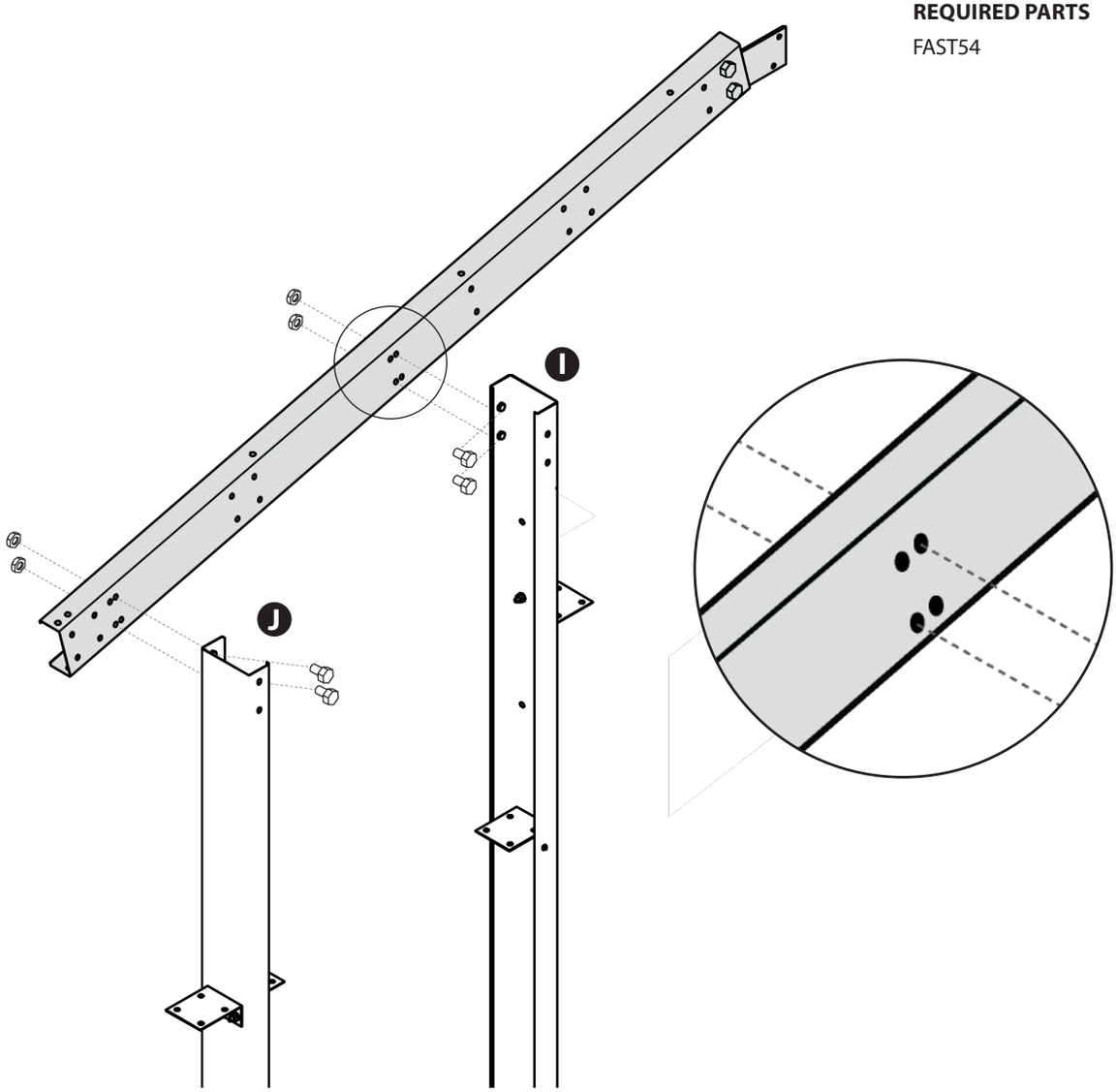
Assemble Endwall Rafters

1. Attach (1) PLATE44 to (1) PURLIN15 using FAST54.
2. Repeat for 2nd endwall rafter.

STEP 17

REQUIRED PARTS

FAST54



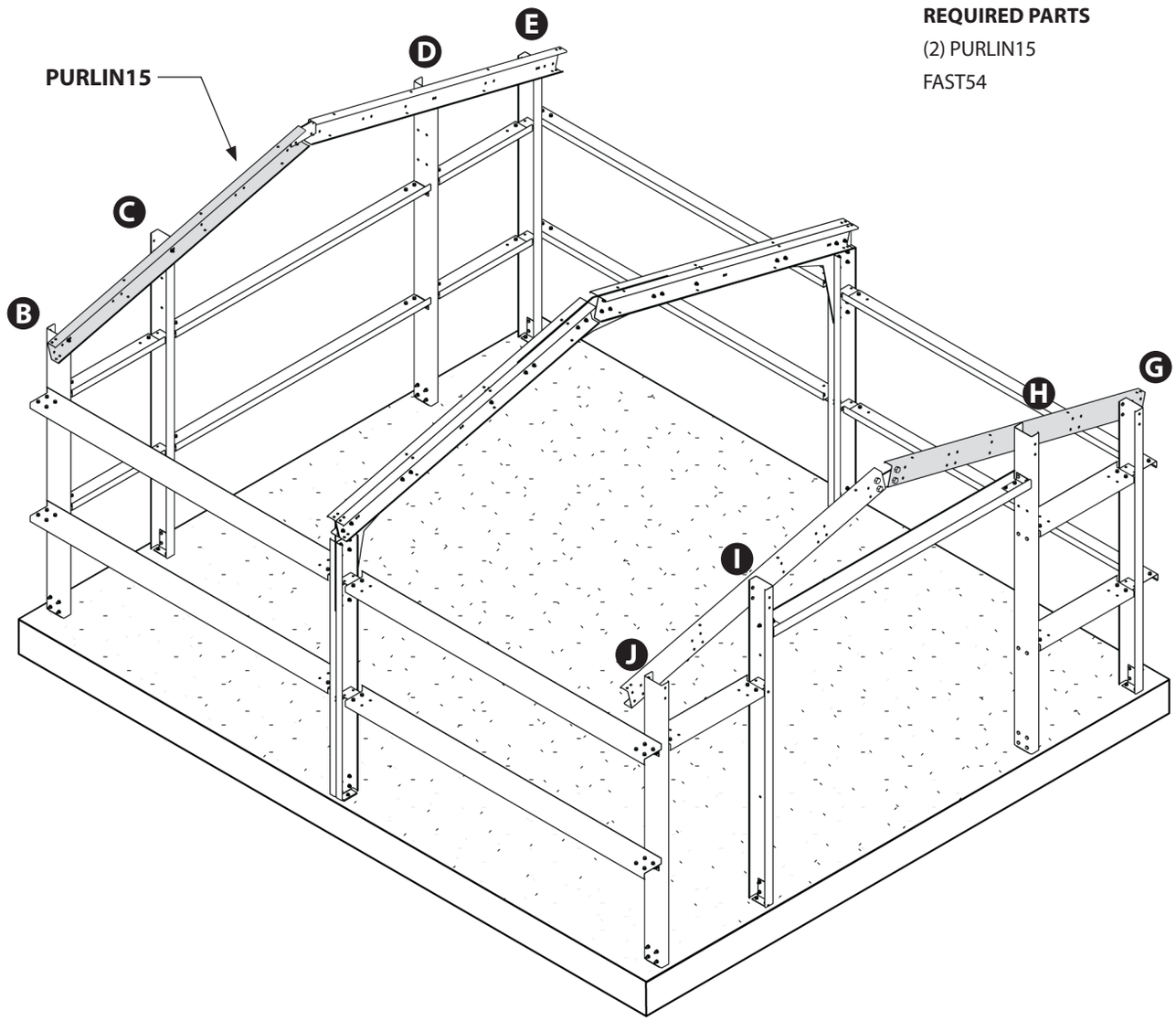
DIRECTIONS

Assemble and Install Endwall Rafters

Note: Keep PLATE44 facing interior of building.

1. Attach assembly from previous step to the top of columns J and I using FAST54.
2. Repeat this installation over columns D and E.

STEP 18



REQUIRED PARTS
(2) PURLIN15
FAST54

DIRECTIONS

Assemble and Install Endwall Rafters

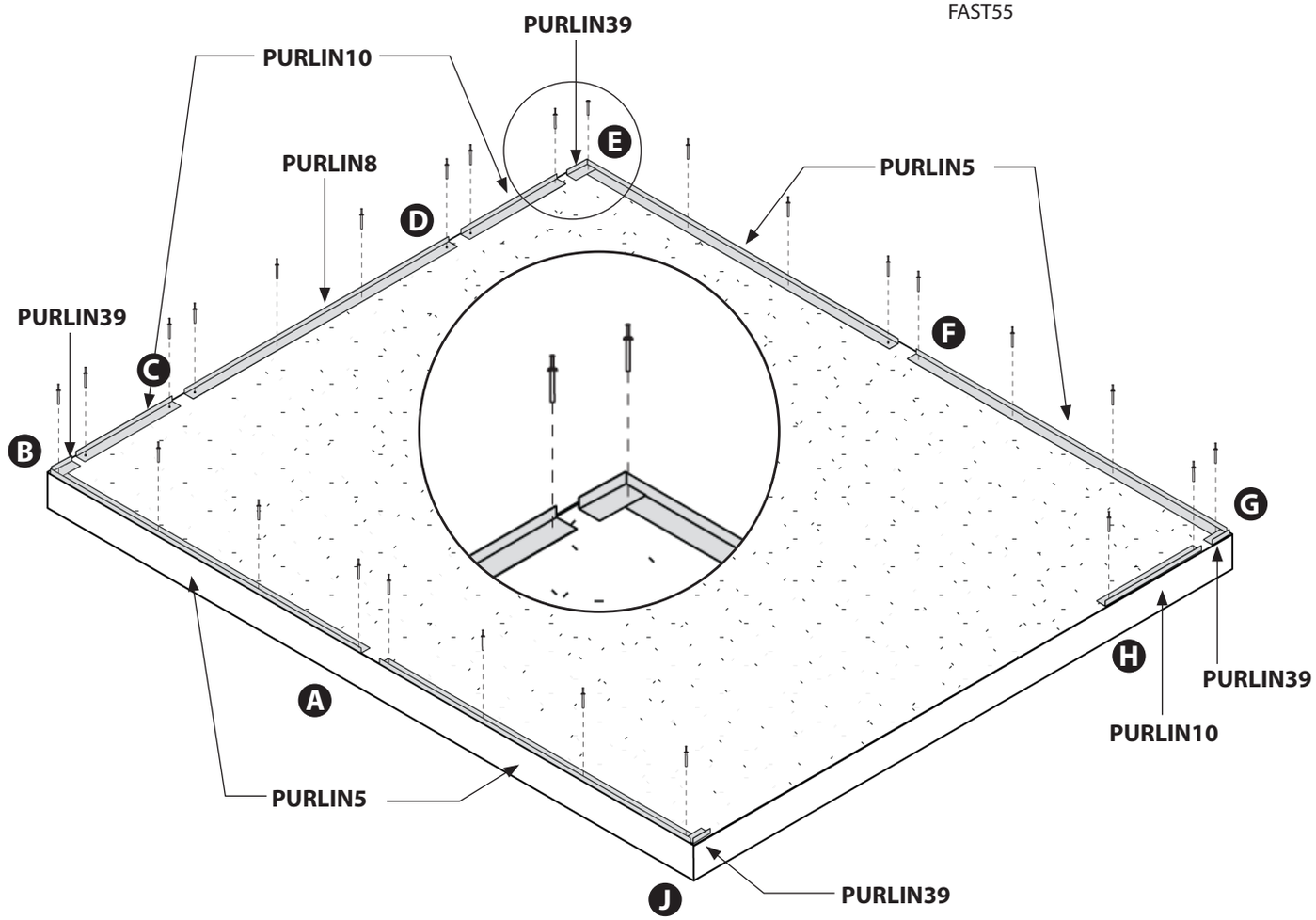
1. Attach (1) PURLIN15 to the top of columns B and C and attach to installed PLATE44 using FAST54.
2. Repeat this installation over columns H and G.

STEP 19

Note: Base angle is installed to protect the panel edge from concrete corrosion.

REQUIRED PARTS

(4) PURLIN5
(1) PURLIN8
(3) PURLIN10
(4) PURLIN39
FAST55



DIRECTIONS

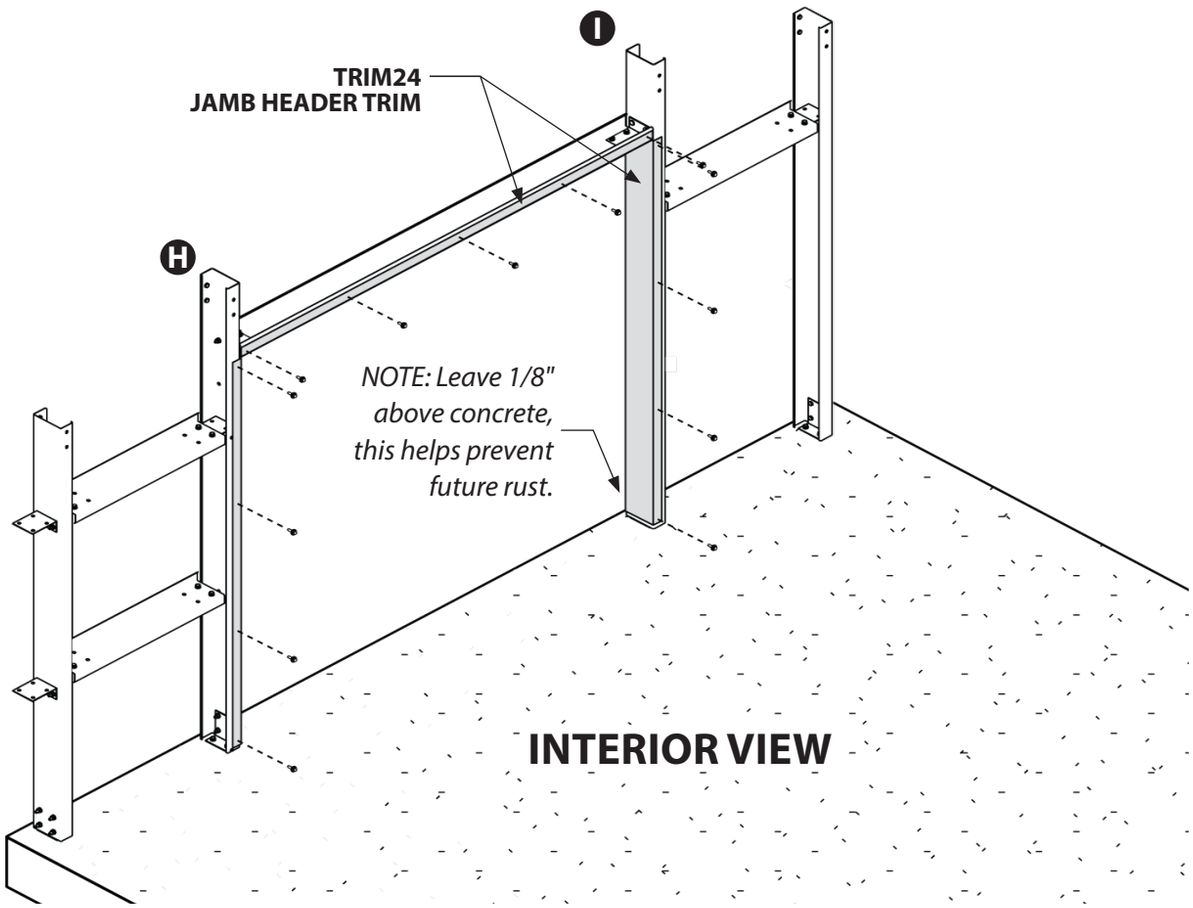
Install Base Angle

Note: When using the FAST55, you will need to predrill 1.25" holes in concrete, and then tap in the FAST55 to secure the base angle. When tapping in the FAST55, do not hit the pin at the top until the fastener is all the way in the hole. The pin expands the fastener to hold it in place, so this needs to be hit when the fastener is completely in the hole.

1. Install PURLIN5 between columns E & G and B & J using FAST55.
2. Install PURLIN8 between columns C & D using FAST55.
3. Install PURLIN10 between columns B & C, D & E, and G & H.
4. Install PURLIN39 to the outside columns B, E, G, and J. This will give support when fastening trim.

STEP 20

REQUIRED PARTS
(3) TRIM24
FAST13

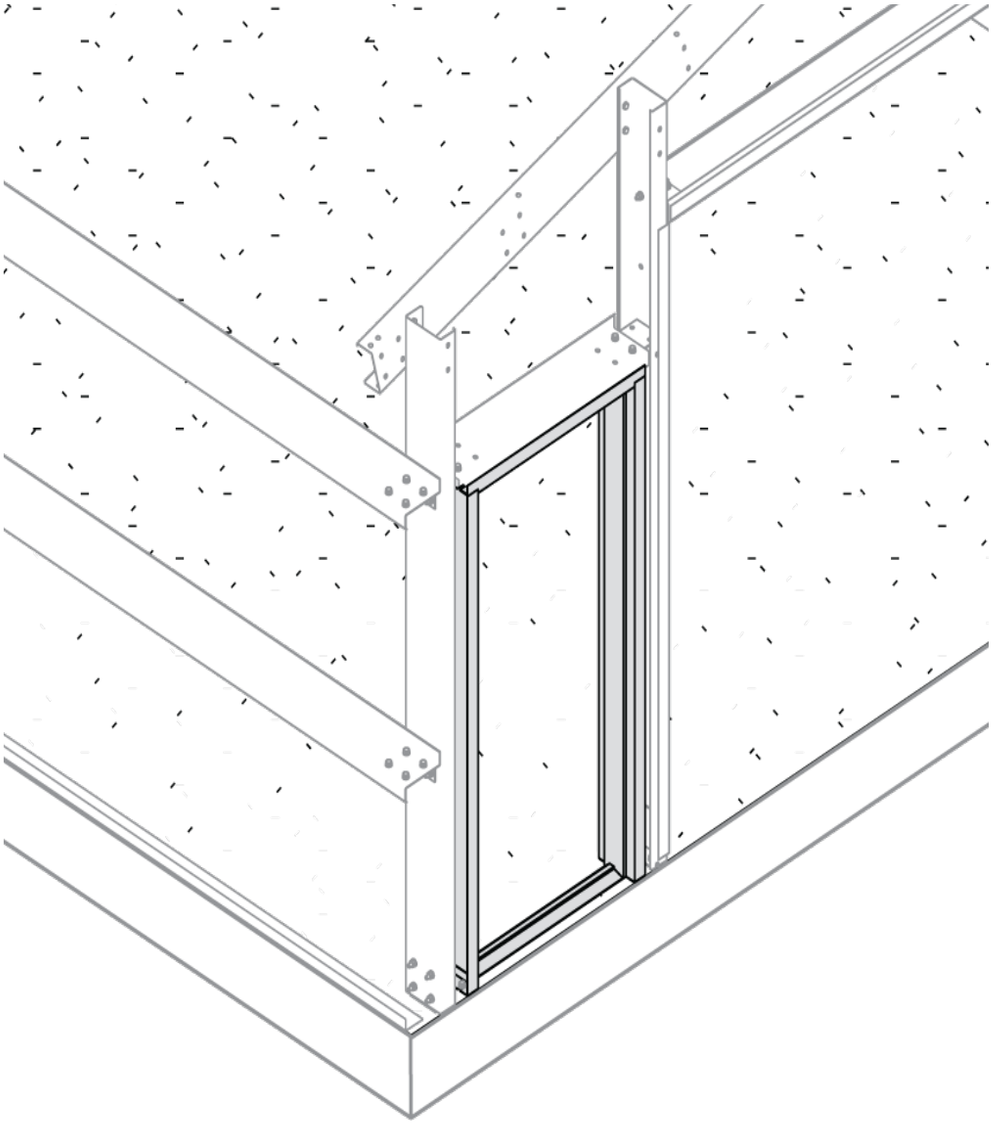


DIRECTIONS

Trim Framed Opening

1. Install TRIM24 along columns I and H. Cut length to fit between floor and wall girt at top of framed opening. Fasten to column with FAST13 every 24". Fasten along inside edge facing the interior of building. The other edge will be fastened in later steps.
2. Install TRIM24 along the wall girt between Columns I and H. This is the top of your framed opening. Fasten to header with FAST13 every 24". Fasten along inside edge facing the interior of building. The other edge will be fastened in later steps.
3. If necessary, miter the corners of the trim to create a finished look where pieces meet in the corner.

STEP 21



REQUIRED PARTS

(1) DOOR47

(1) DOOR48

FAST12

FAST55

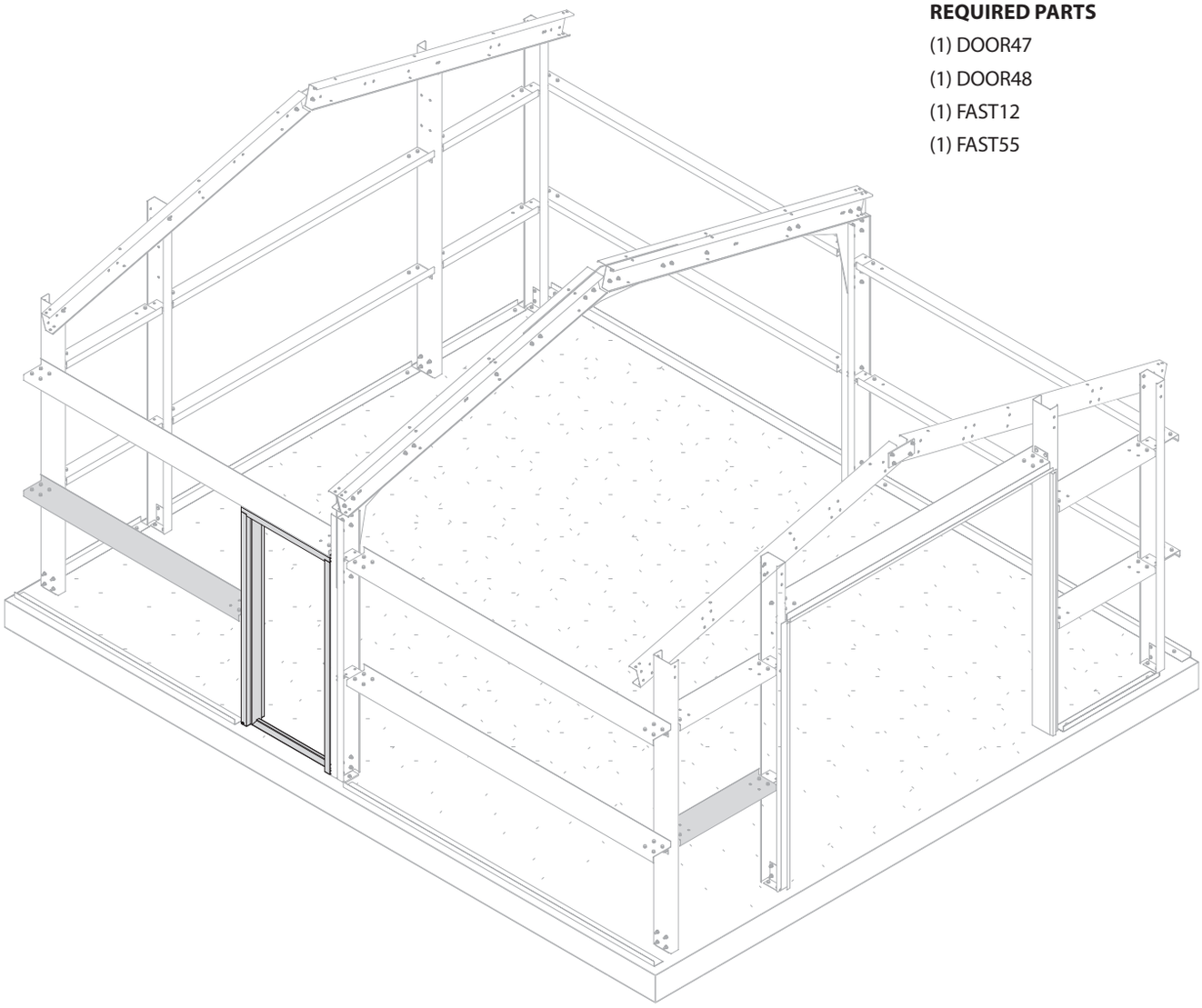
DIRECTIONS

Option 1: Installing walk door in location shown above

Note: Determine where you would like to install your walk door. Illustration above shows walk door between columns J and I, but door can be located in any location.

1. Assemble DOOR47 and DOOR 48 as describes in manufacturer's instructions included with product.
2. Stand DOOR48 into position and secure using FAST12 to zee girt at 7'4" height. Install between columns J and I.
3. Use FAST55 to fasten bottom of DOOR48 to concrete.
4. Install DOOR47 into DOOR48 using manufacturer's instructions included with product.

STEP 21 CONT.



REQUIRED PARTS

(1) DOOR47

(1) DOOR48

(1) FAST12

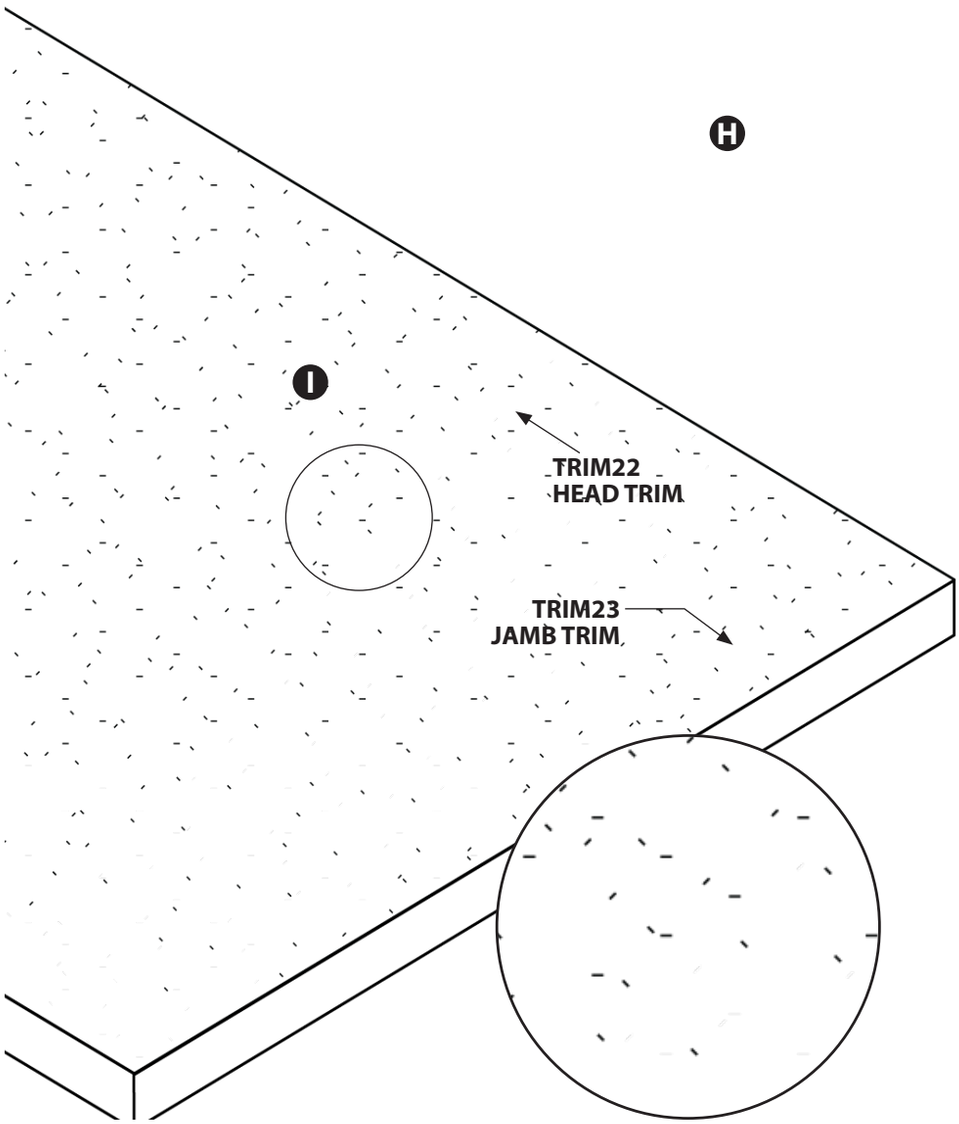
(1) FAST55

DIRECTIONS

Option 2: Installing door into a alternate location

1. Remove the zee at 3'6" height previously installed in the bay you wish to install your walk door.
2. Install a PURLIN24 between columns J & I.
3. Follow STEPS 1-4 listed in Option 1.
4. Measure the distance from between the DOOR48 and column. Cut the removed zee girt from step 1 in Option 2 to fit between the column and DOOR48.
   (You are basically cutting a gap into the wall girt to allow for the walk door.)
5. Install the newly-cut zee girt between the column and DOOR48 using FAST12.
   Do this on both sides of DOOR48 if necessary.

STEP 22



REQUIRED PARTS

(1) TRIM26

(2) TRIM27

(2) TRIM23

(1) TRIM22

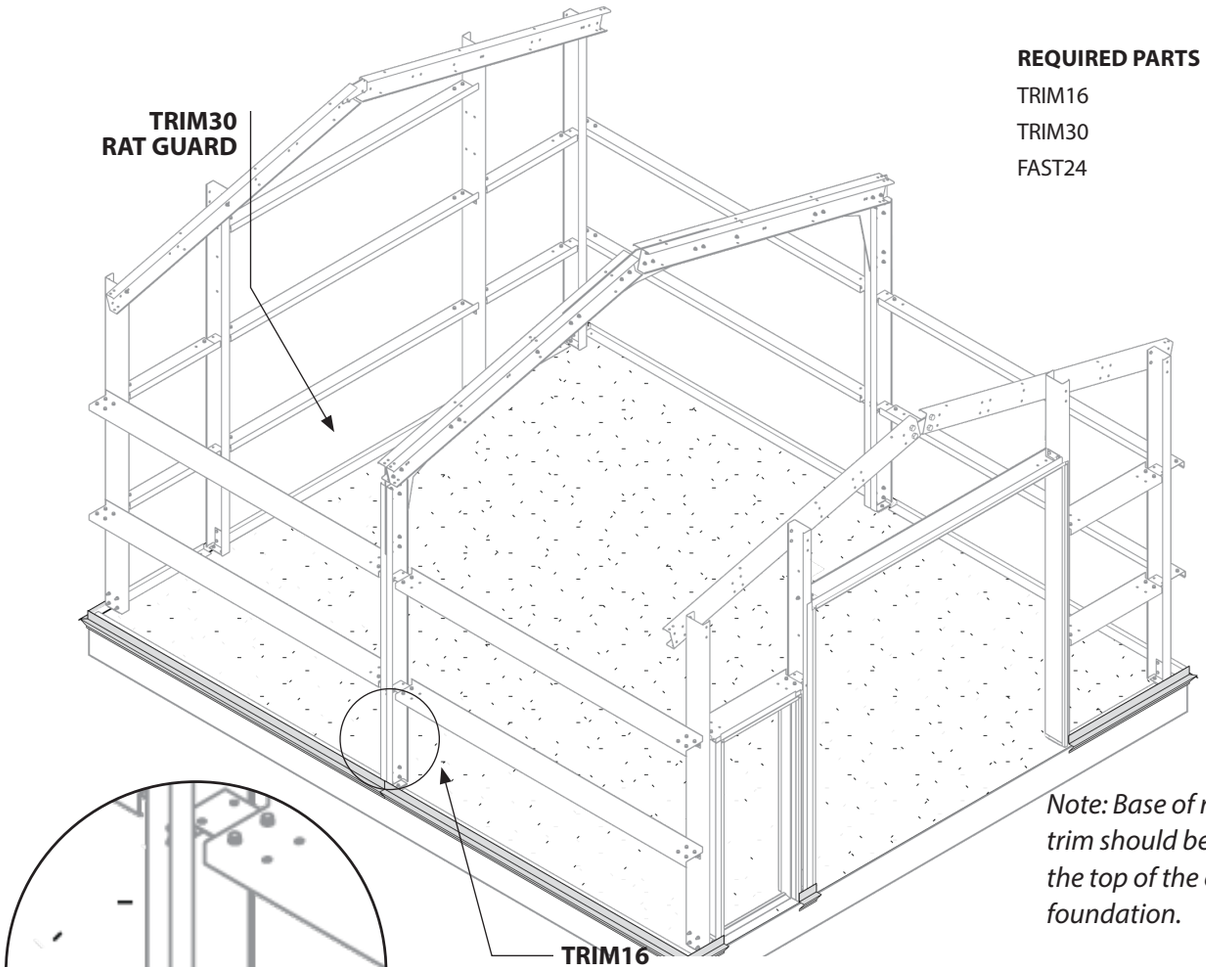
FAST24

DIRECTIONS

Trim Framed Opening

1. Install TRIM23 along columns I and H, with the mouth of trim facing outward as shown. Fasten to exterior side of the building with FAST24 every 24". FAST24 will go through TRIM23 and TRIM24 to fasten both to purlin.
2. Install TRIM22 along wall girt between column H & I, with the mouth of trim facing upward as shown. Fasten to exterior side of building with FAST24 every 24". FAST24 will go through TRIM22 and TRIM24 to fasten both.
3. Repeat previous steps for the walk door with TRIM26 and TRIM27.

STEP 23



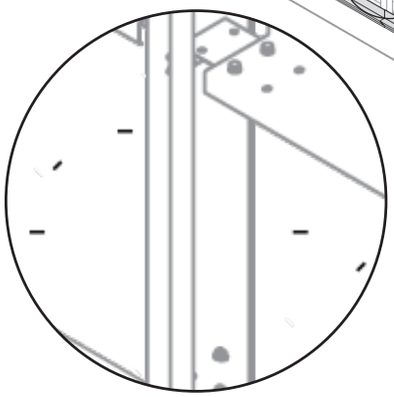
REQUIRED PARTS

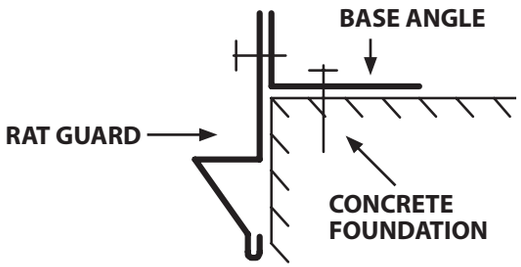
TRIM16

TRIM30

FAST24

Note: Base of rat guard trim should be below the top of the concrete foundation.





DIRECTIONS

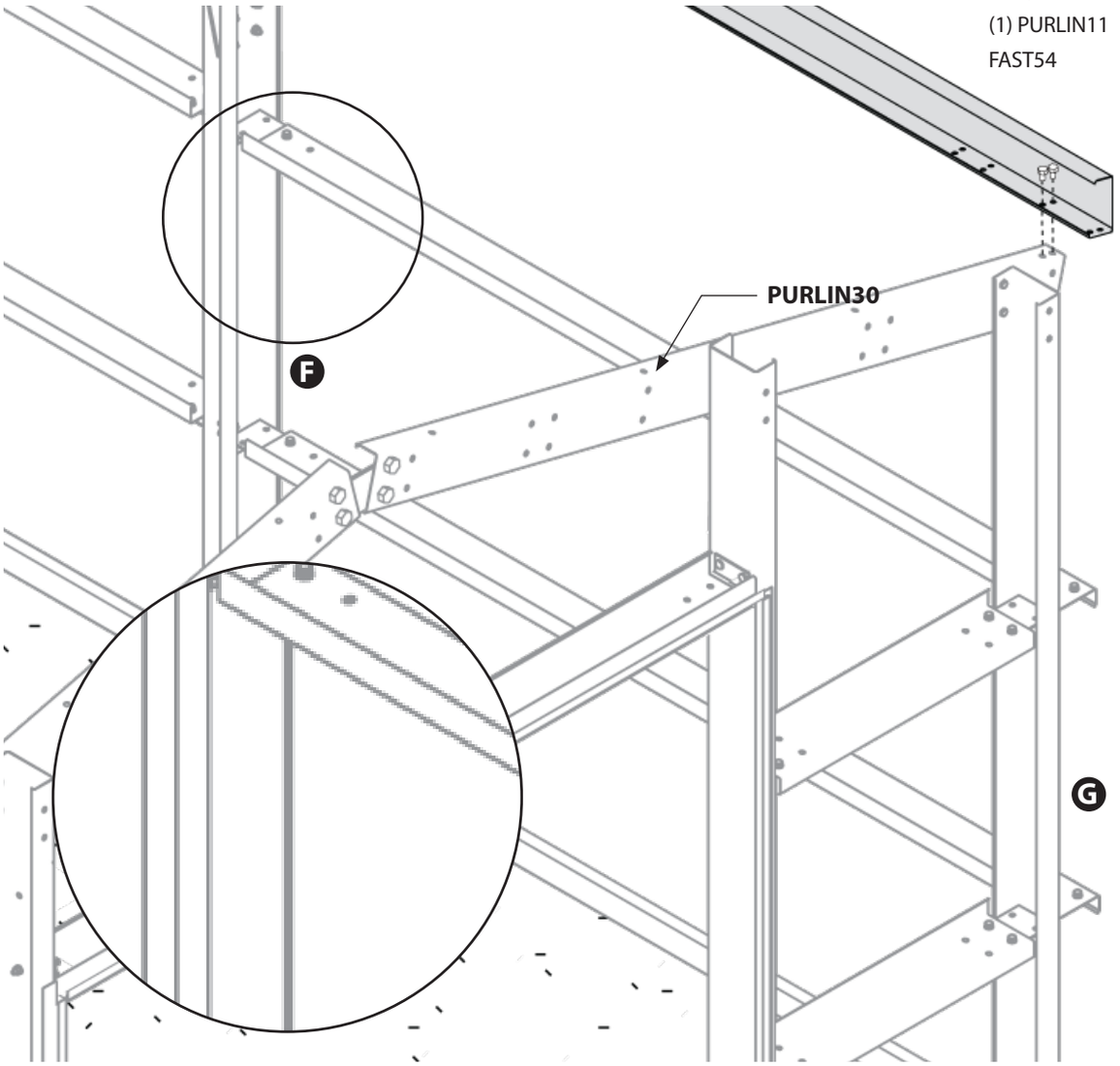
Install Ratguard Trim

Note: In this step, you will be installing the trim along the bottom of the building. This trim is available in lengths of 14'2" (TRIM16) and 12'2" (TRIM30). These pieces will be cut as needed to fit around the building. They will not be installed where any opening or doors are located. (overlap as necessary)

1. Cut TRIM16 and install as shown, fastening to base angle (PURLIN5-40) with FAST24 as needed.
2. Repeat this step around the base of the building, except in spaces for framed openings and walk doors.

STEP 24

REQUIRED PARTS
(1) PURLIN11
FAST54



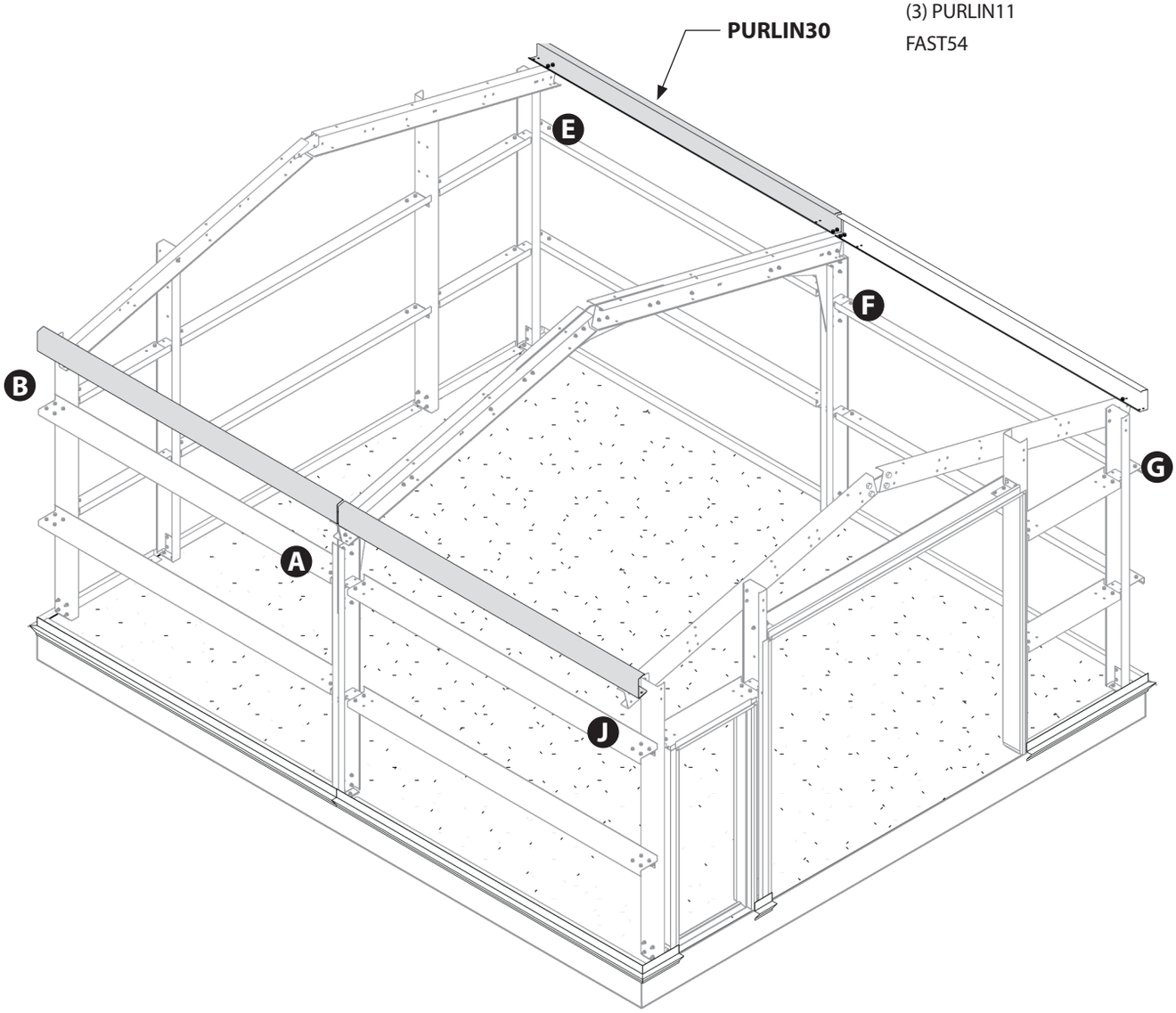
DIRECTIONS

Install Eavestruts

Bolt PURLIN11 on top of column F and G using FAST54 as shown above.

STEP 25

REQUIRED PARTS
(3) PURLIN11
FAST54



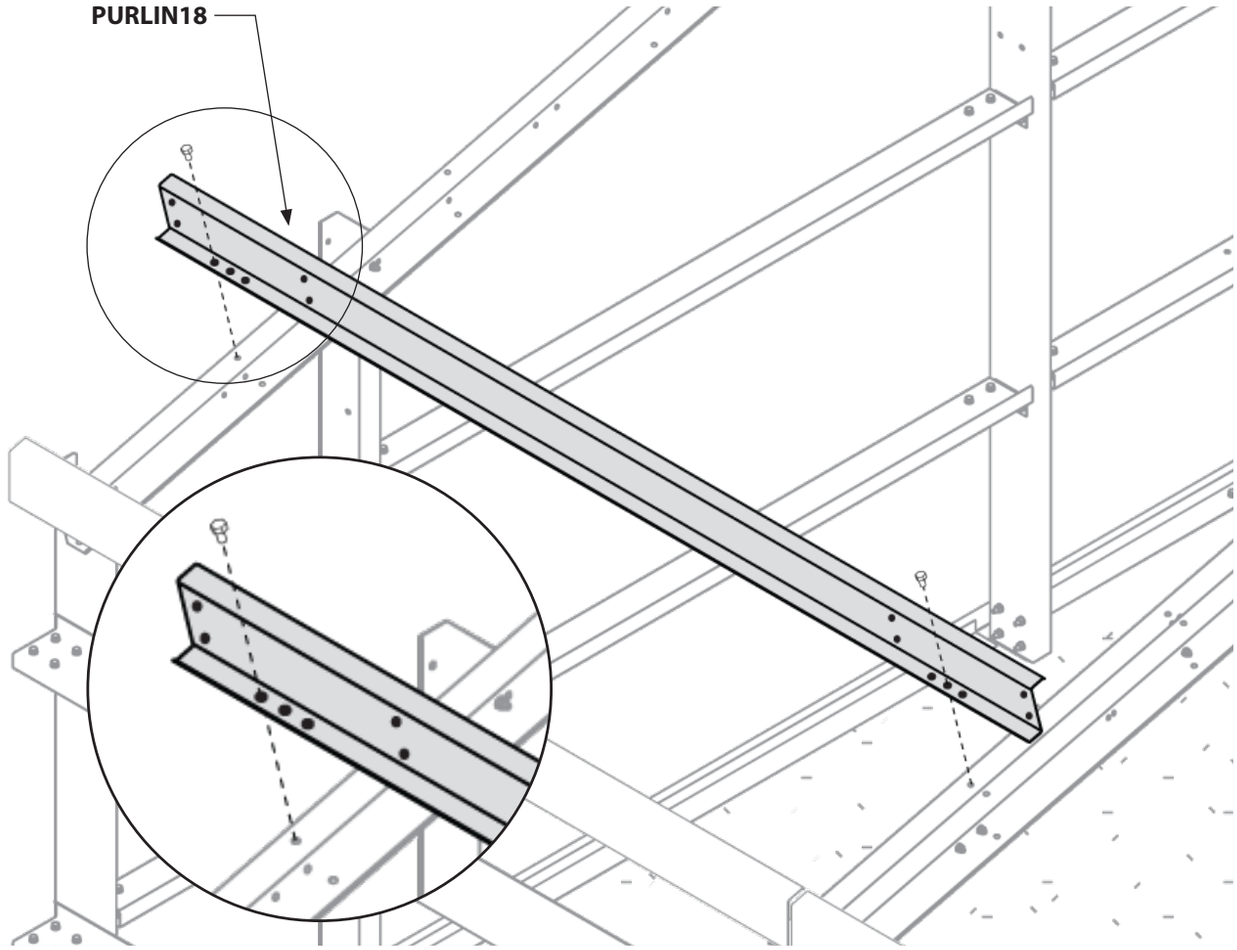
DIRECTIONS

Install Eavestruts

Repeat previous step between Column B & A, Column A & J, and Column E & F.

STEP 26

REQUIRED PARTS
(1) PURLIN18
FAST54



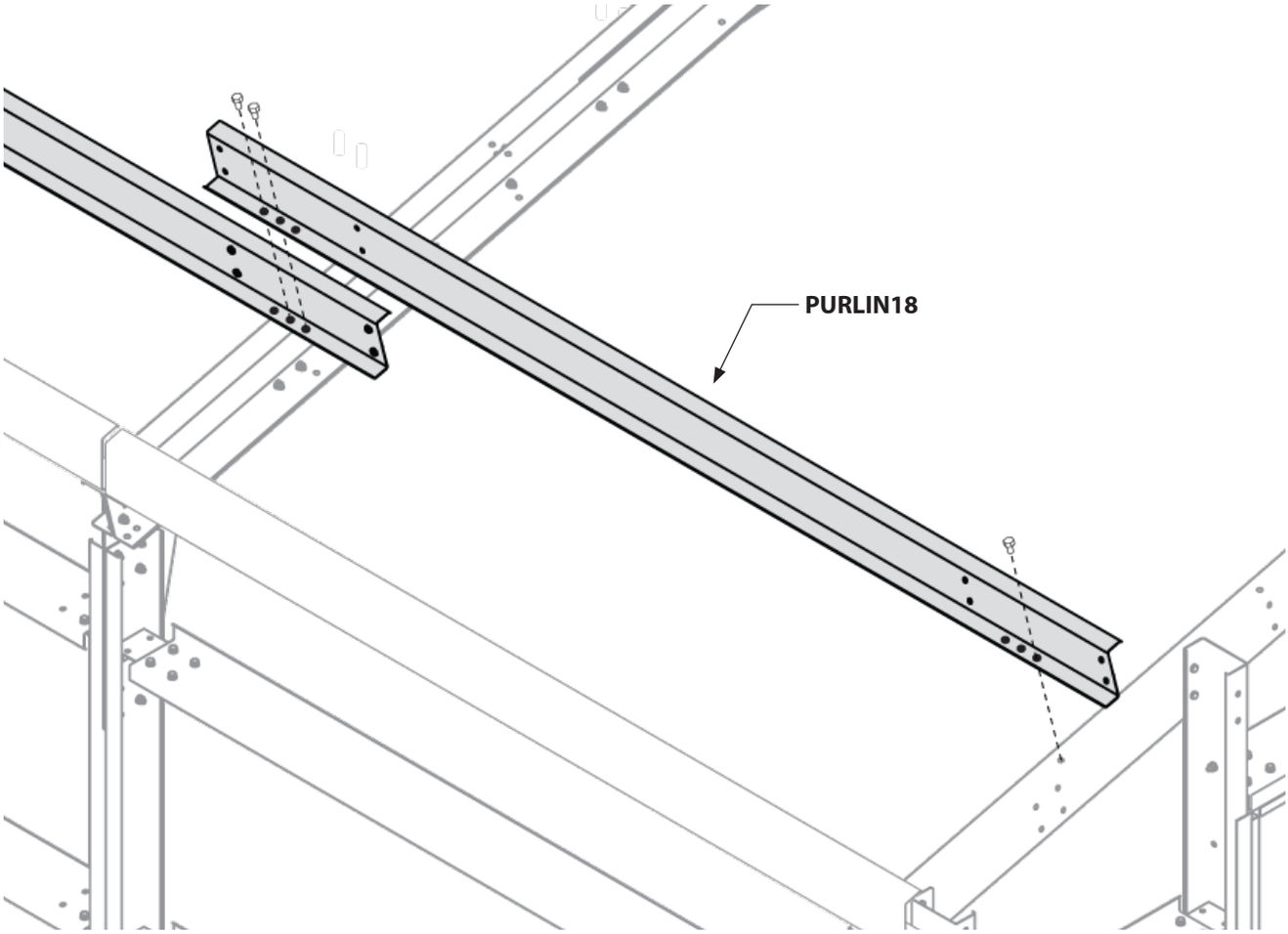
DIRECTIONS

Install Roof Purlins

Note: The bolt along the center rafter is temporary.(Do not over tighten)
Install PURLIN18 between endwall rafter and center using FAST54 as shown above.

STEP 27

REQUIRED PARTS
(1) PURLIN18
FAST54



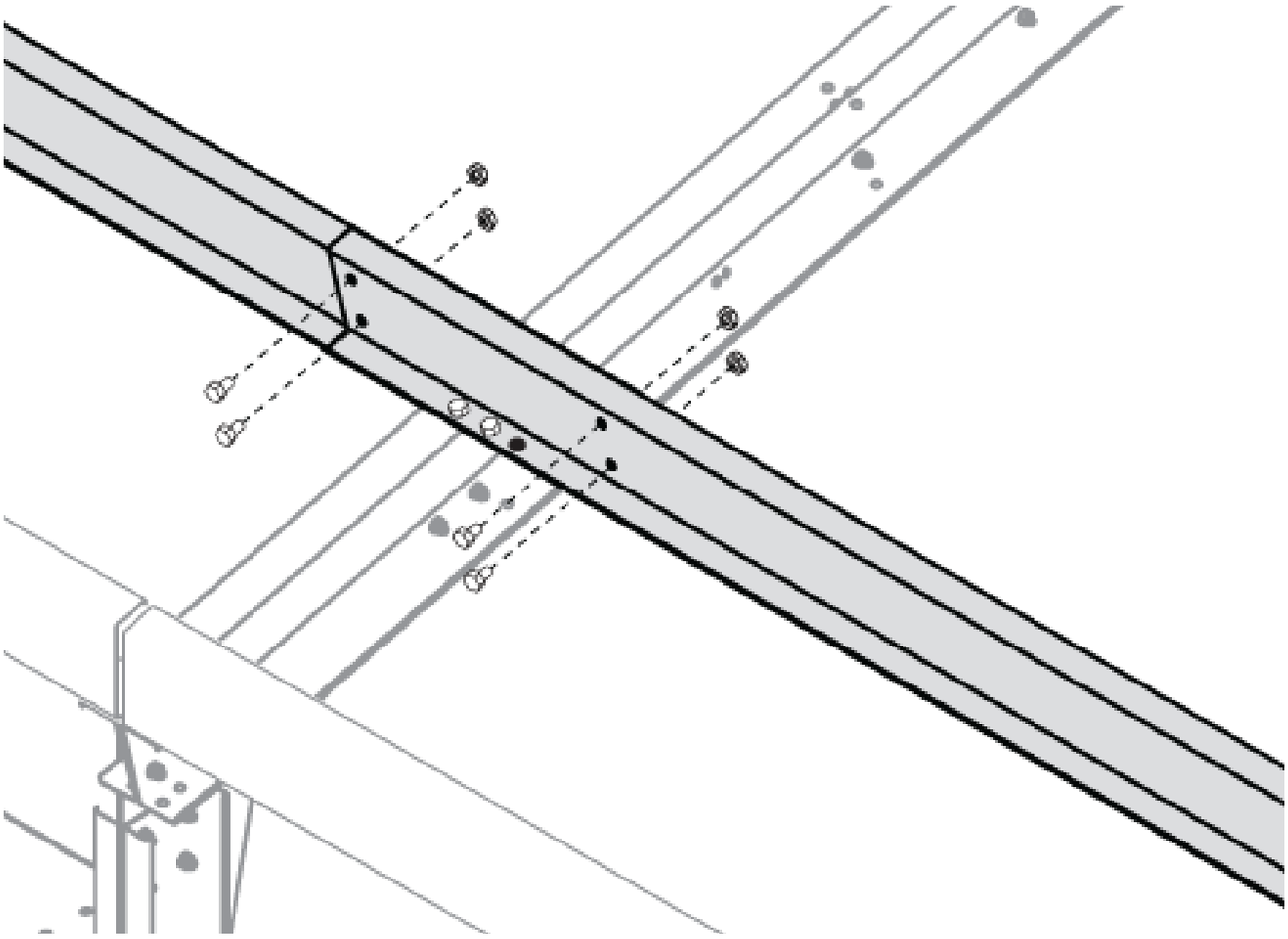
DIRECTIONS

Install Roof Purlins

Note: Remove the bolt from the center rafter before installing PURLIN18.
Install PURLIN18 over center rafter as shown above.

STEP 28

REQUIRED PARTS
FAST54



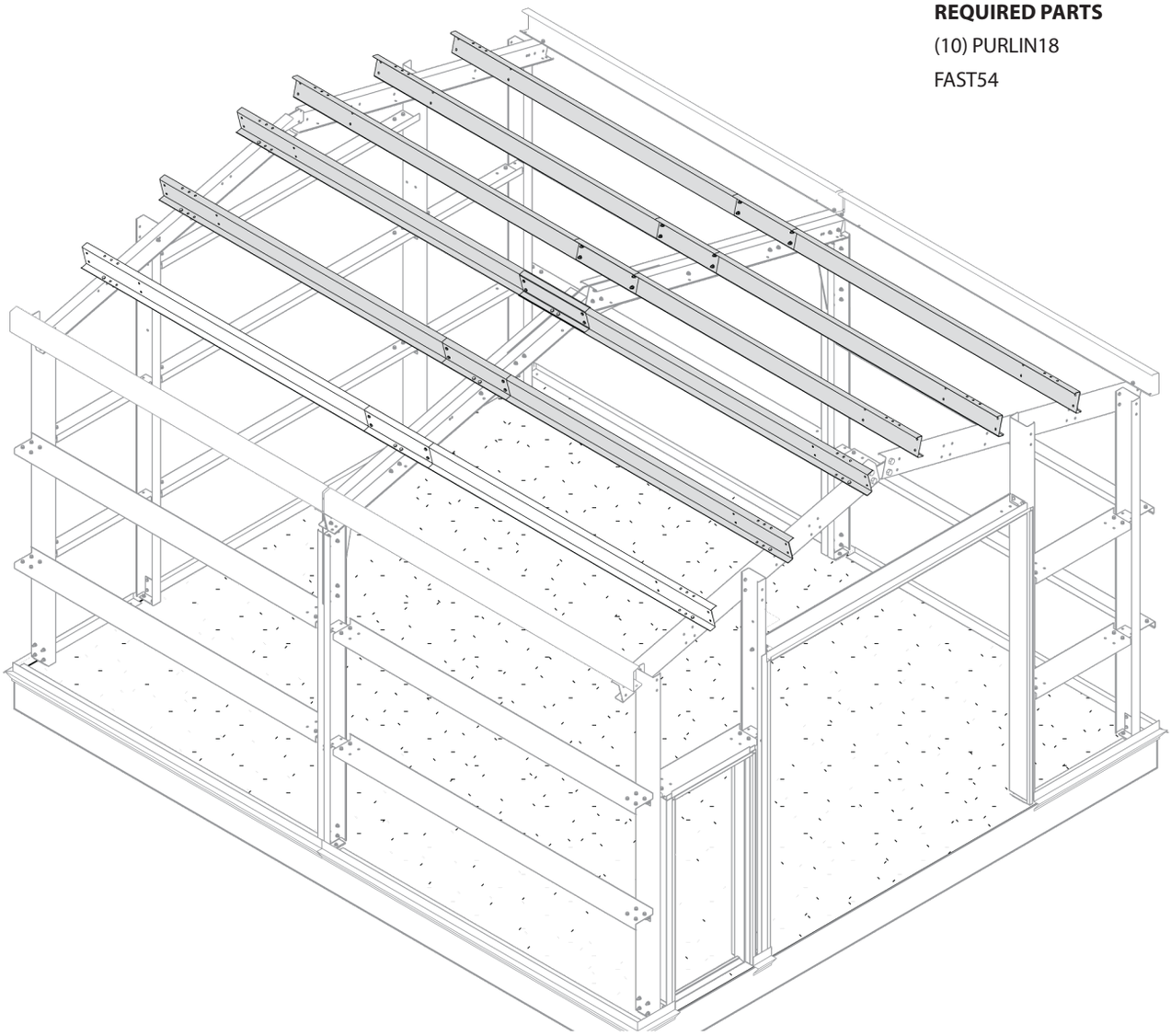
DIRECTIONS

Install Roof Purlins

Use FAST54 to reinforce overlapped PURLIN18 through the web.

STEP 29

REQUIRED PARTS
(10) PURLIN18
FAST54



DIRECTIONS

Install Roof PURLINS

Repeat steps 26-28 to install the remaining roof PURLINS.

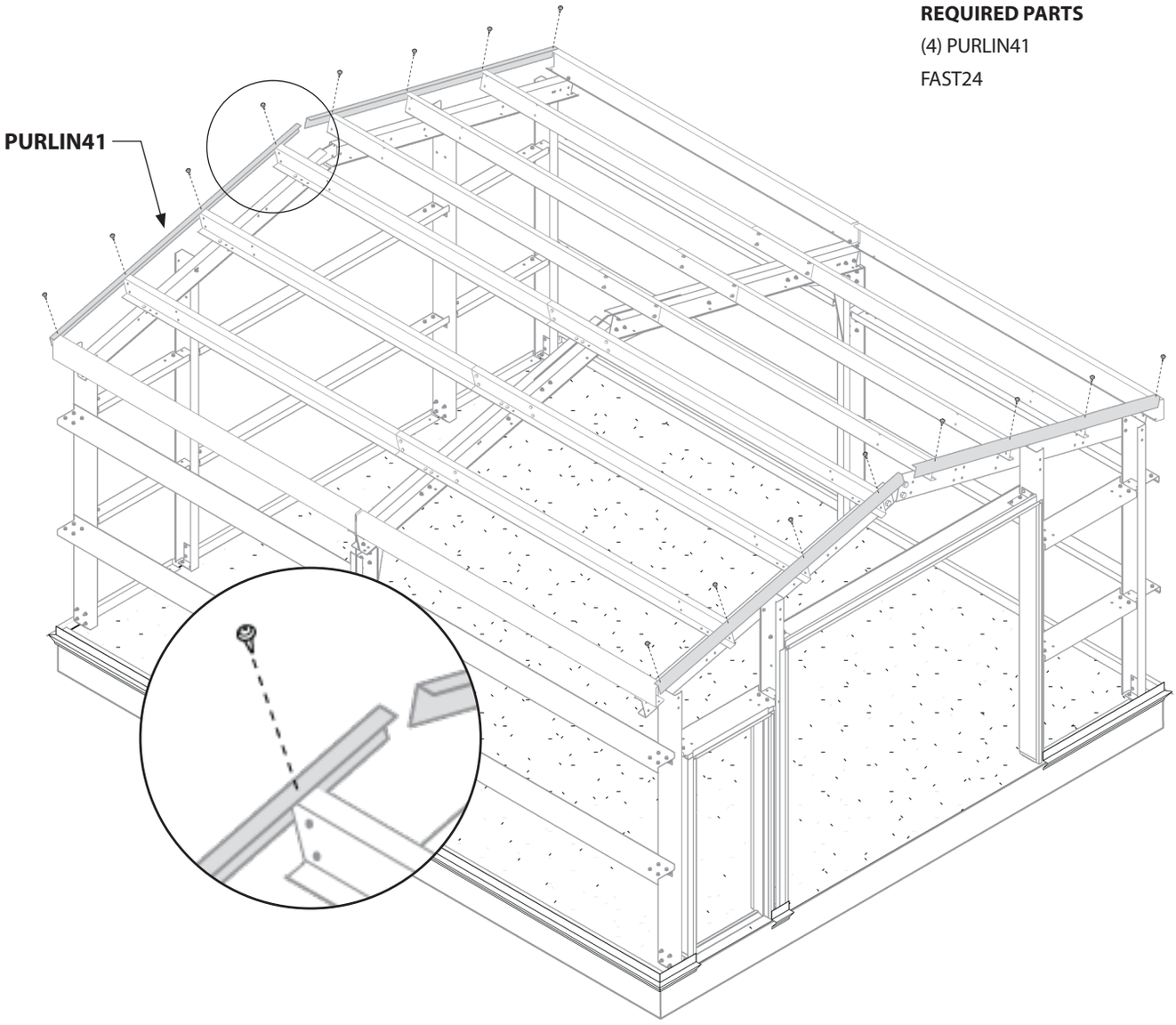
NOTE: After completing STEP29, ensure that building is square by placing a strap on each corner and ratcheting corner columns until they are level. Then tighten all bolts on building while strapping is still in place. Remove strapping after bolts are properly tightened.

STEP 30

REQUIRED PARTS

(4) PURLIN41

FAST24



DIRECTIONS

Install Rake Angle

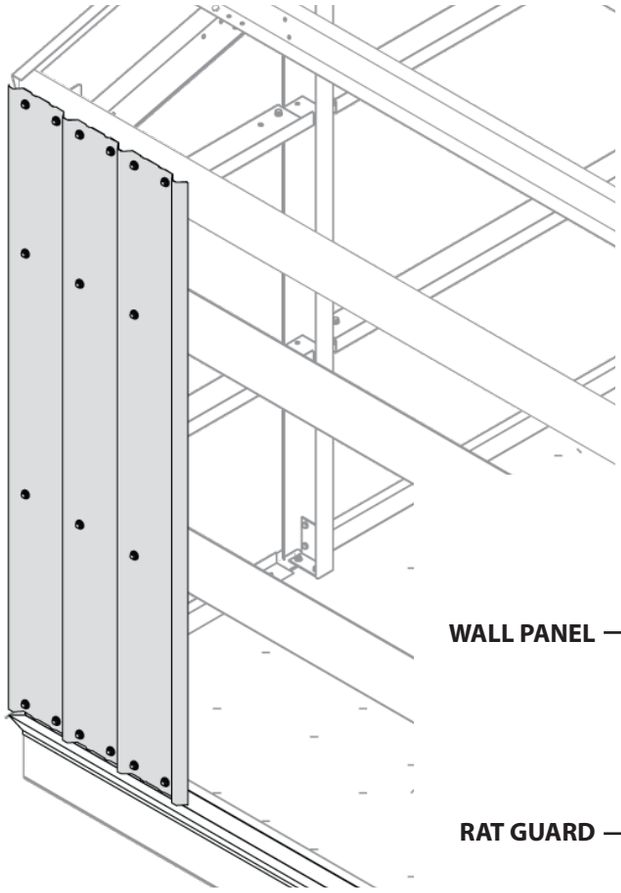
Install PURLIN41 above endwall rafter using FAST24 as shown above.

If you have the wainscot option,
please refer to page 64 for assembly instructions.

STEP 31

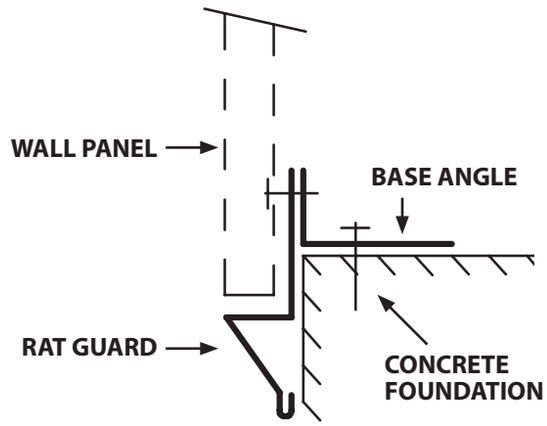
REQUIRED PARTS
(1) PANEL11
FAST12

Note: Install Top & Bottom fastener line first before securing middle of panel.



CAUTION

To prevent rust, leave a 1/8" gap where the panel meets the rat guard trim.



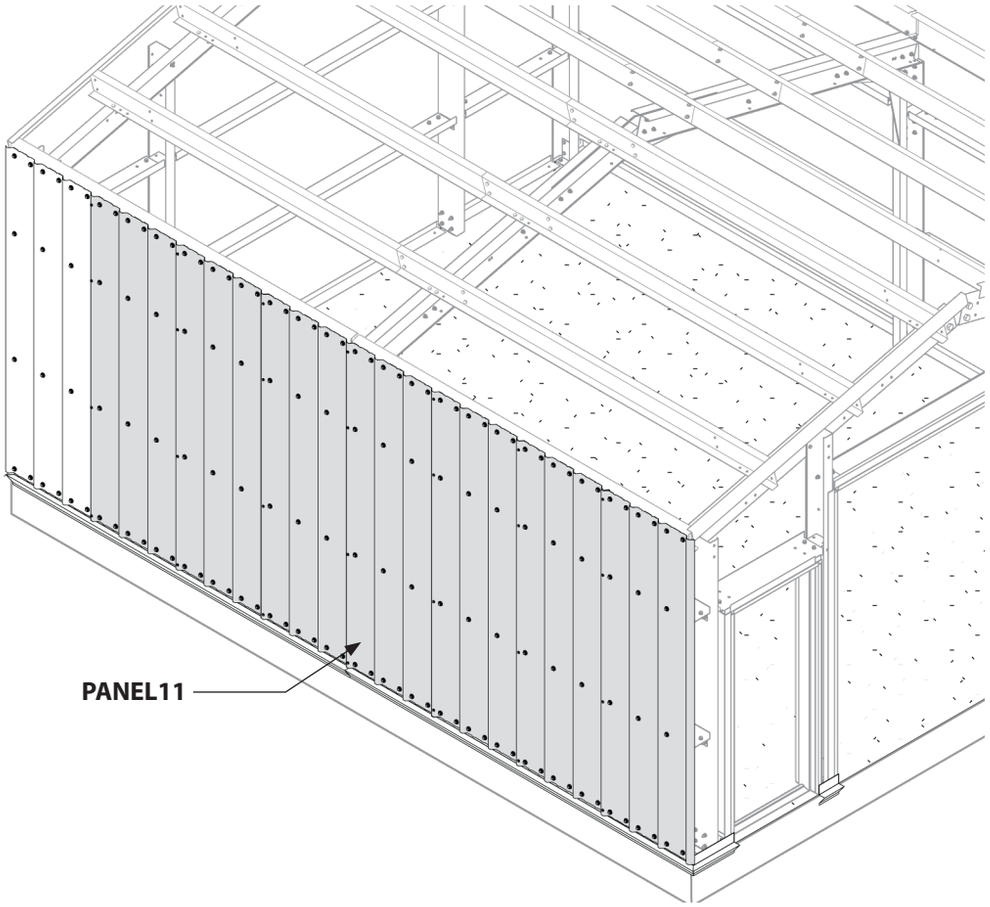
DIRECTIONS

Install Wall Sheeting

Note: Before installing, take note to which direction the prevailing winds come from at your location. You will want to begin installing panels on the end that is farthest away from the prevailing wind direction. This will allow the panel overlaps to not be exposed to the highest wind. (For example, if the strongest wind typically comes from the West, begin installing panels on the East end of your wall. Begin on the sidewall with the least amount of framed openings.)

1. Install one sheet of PANEL11 at the edge of your sidewall. Fasten PANEL11 to the wall girts using FAST12. Be careful to note the under lap and the overlap side of the panel.
2. Follow the diagram for fastener pattern at bottom and top of panel.
3. Follow the diagram for fastener pattern at 3'6" and 7'4" wall girt.

STEP 32



REQUIRED PARTS

(7) PANEL11

FAST12

FAST13

Note: Use FAST12 to attach the panels to the girts. Use FAST13 when the panels overlap.

DIRECTIONS

Install Wall Sheeting

Also, some panels may be overlapped more than 1 rib to avoid cutting. If necessary, panel may be cut long ways at ending edge of sidewall.

1. Repeat STEP 31 for the 7 remaining panels of the sidewall, overlapping panels as shown in the diagram.
2. Use FAST12 to secure the panels to the purlins. Use FAST13 when securing the panels together.
3. If necessary, measure and cut panels to allow for framed openings and walkdoors.

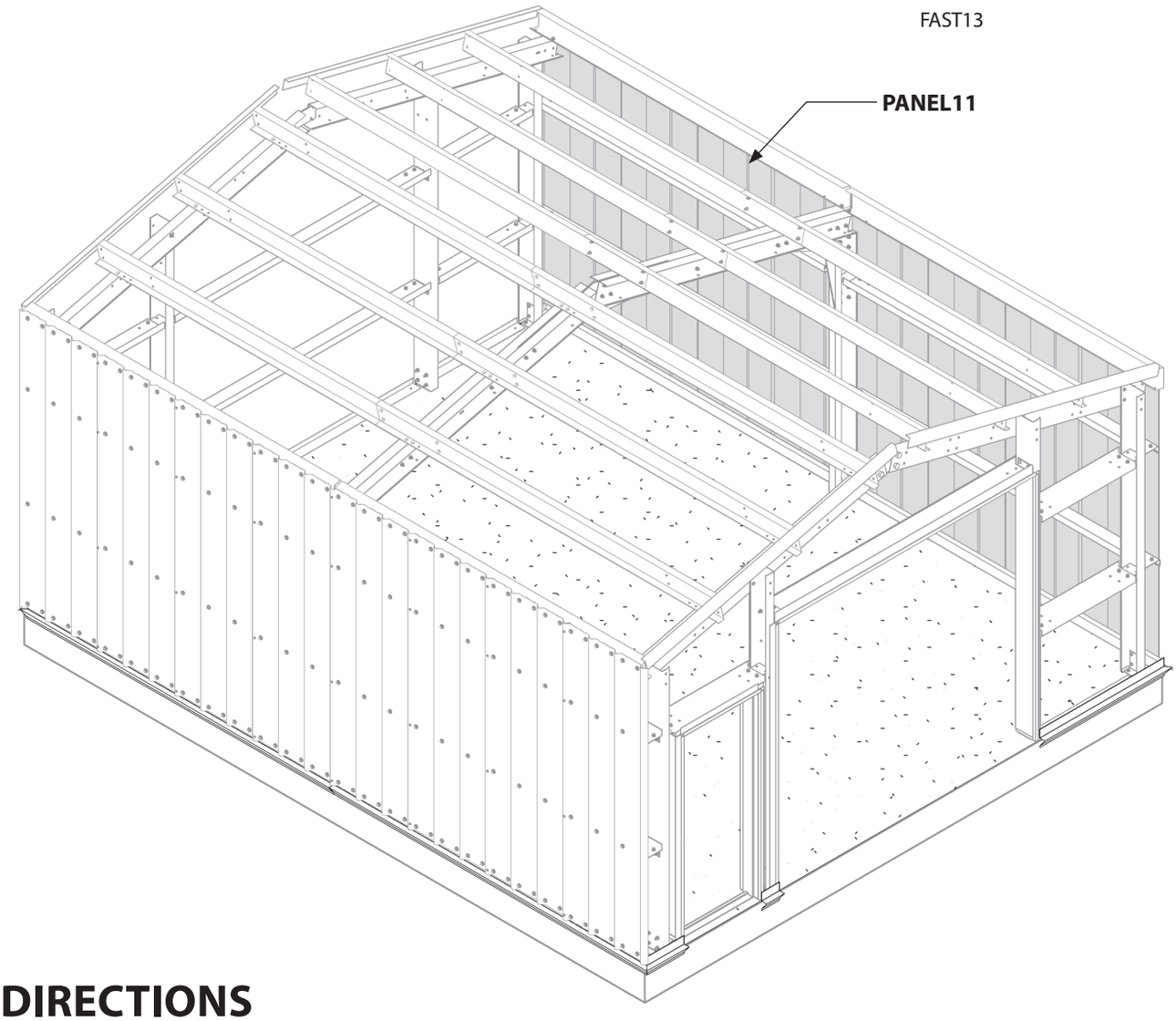
STEP 33

REQUIRED PARTS

(8) PANEL11

FAST12

FAST13



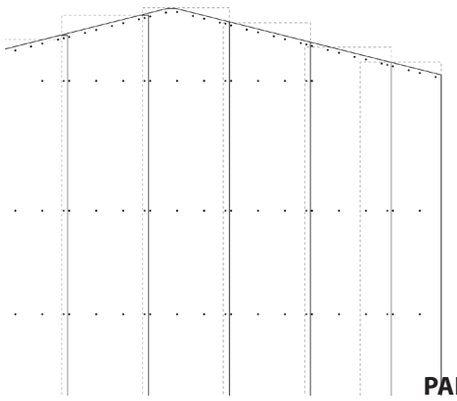
DIRECTIONS

Install Wall Sheeting

Also, some panels may be overlapped more than 1 rib to avoid cutting. If necessary, panel may be cut long ways at ending edge of sidewall.

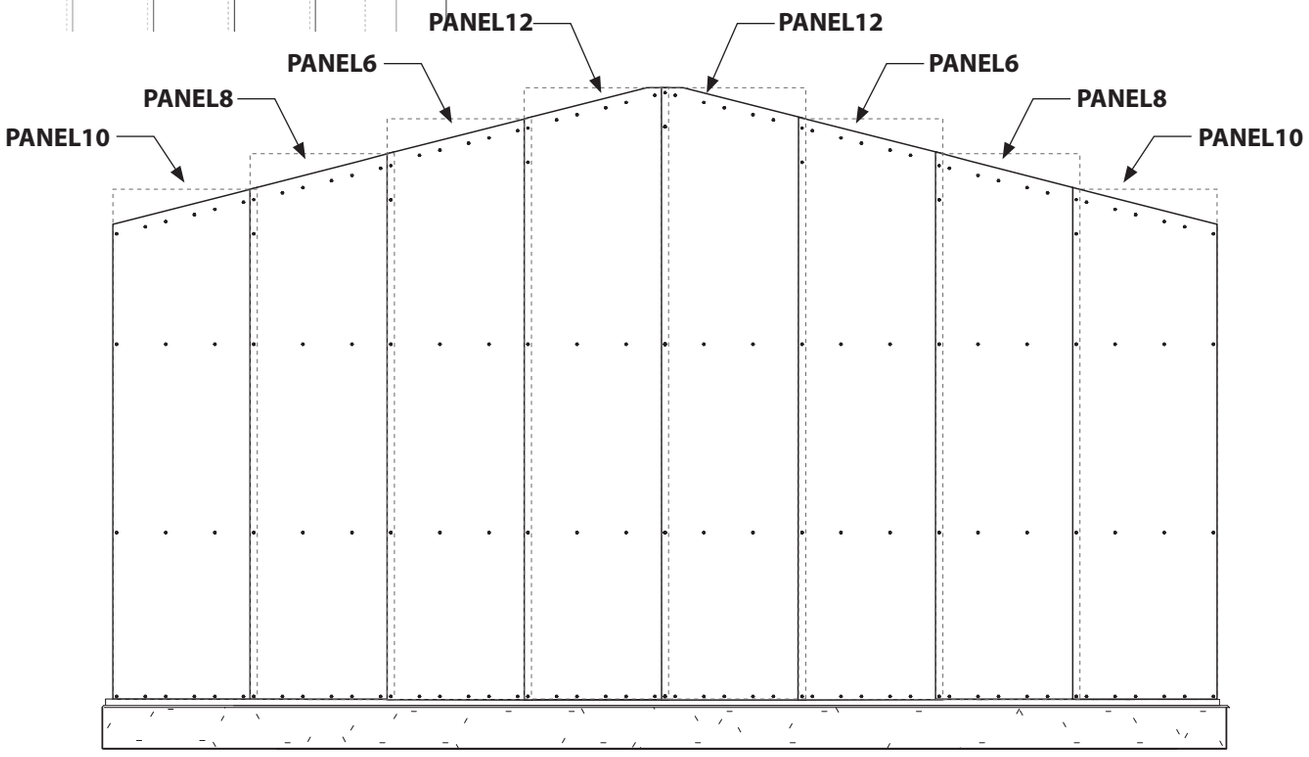
1. Repeat STEP 31 and 32 for the other sidewall.
2. If necessary, measure and cut panels to allow for framed openings and walkdoors.

STEP 34



REQUIRED PARTS

(2) PANEL6
(2) PANEL8
(2) PANEL10
(2) PANEL12
FAST12
FAST13



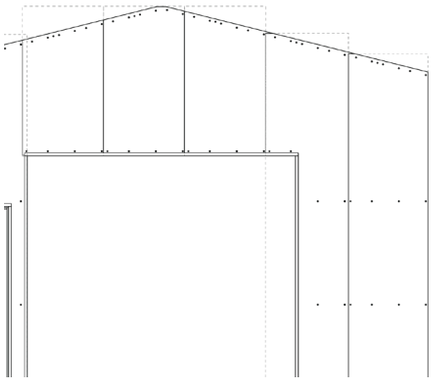
DIRECTIONS

Install Wall Sheeting

Also, some panels may be overlapped more than 1 rib to avoid cutting. If necessary, panel may be cut long ways at ending edge of sidewall.

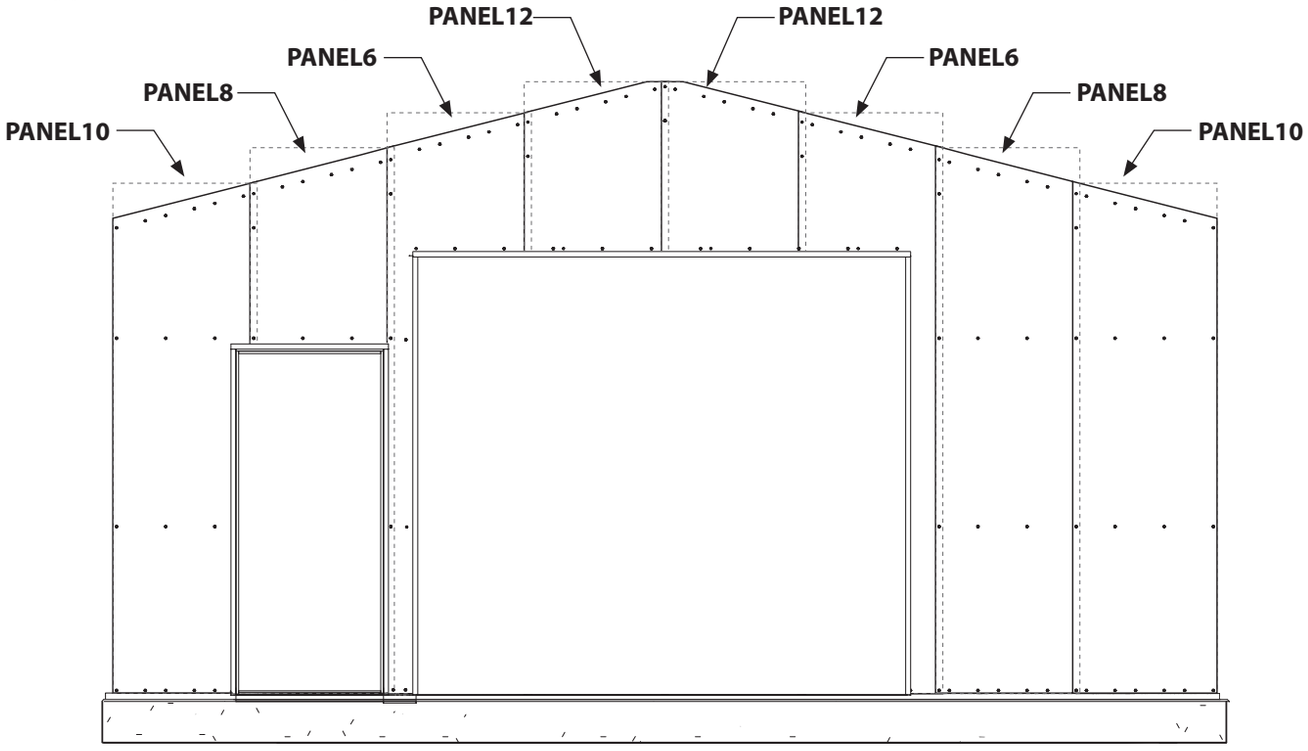
1. Assemble the panels shown above for the end wall. Cut panels to follow roof line.
2. Use the diagram on page 51 for the screw placement. Follow diagram A for fastener pattern at bottom and top of panel. Follow diagram B for fastener pattern at 3'6" and 7'4" wall girt.
3. If necessary, measure and cut panels to allow for framed openings and walkdoors.

STEP 35



REQUIRED PARTS

(2) PANEL6
(2) PANEL8
(2) PANEL10
(2) PANEL12
FAST12
FAST13



DIRECTIONS

Install Remaining Wall Panels

Also, some panels may be overlapped more than 1 rib to avoid cutting. If necessary, panel may be cut long ways at ending edge of sidewall.

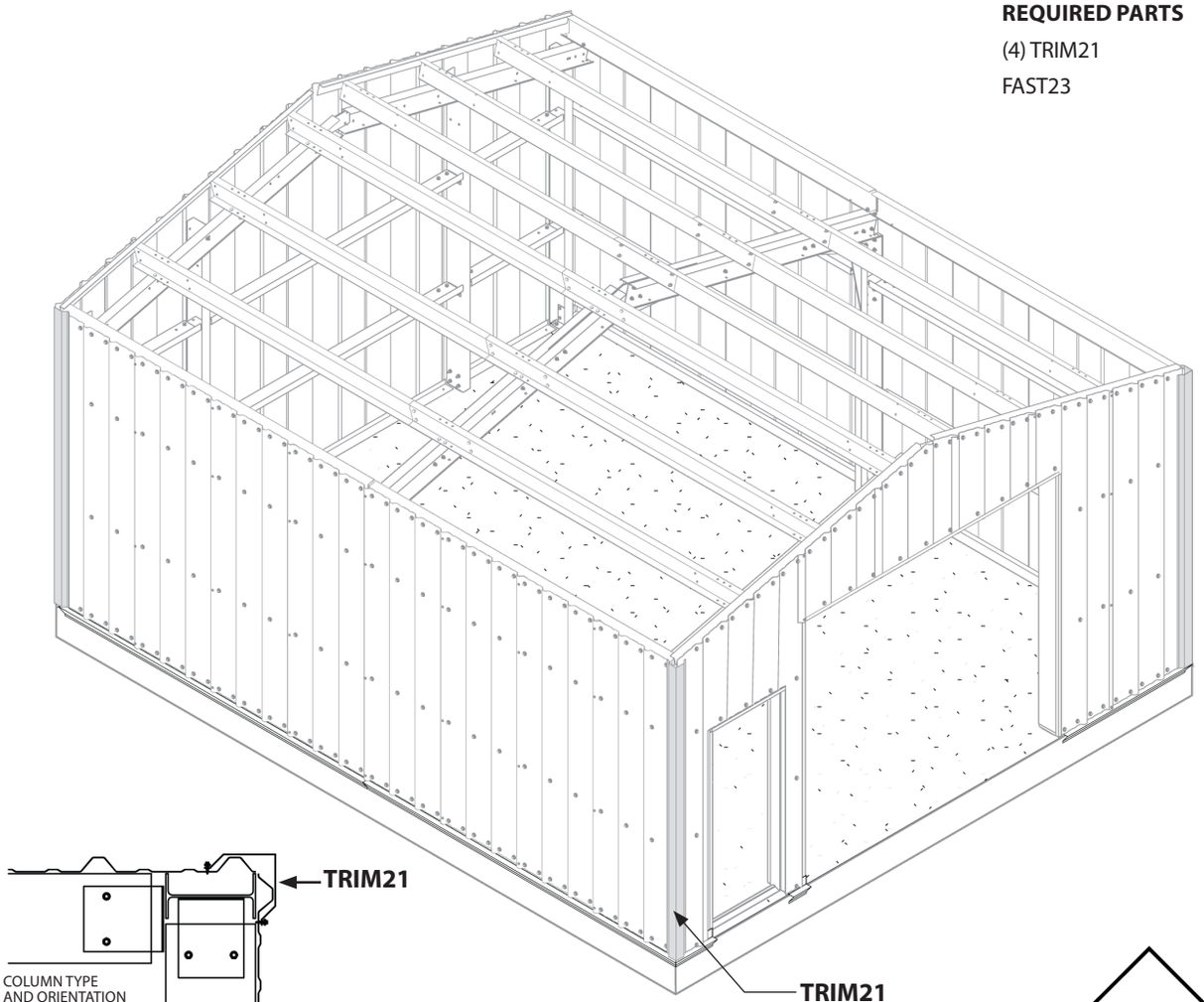
1. Assemble the panels shown above for the front wall. Cut panel tops to follow roof line.
2. Use the diagram on page 53 for the screw placement. Follow diagram A for fastener pattern at bottom and top of panel. Follow diagram B for fastener pattern at 3'6" and 7'4" wall girt.
2. If necessary, measure and cut panels to allow for framed openings and walkdoors.

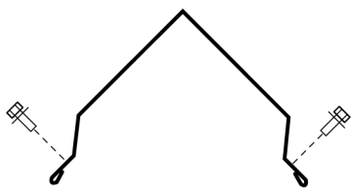
STEP 36

REQUIRED PARTS

(4) TRIM21

FAST23





DIRECTIONS

Install TRIM21

Install all 4 TRIM21 with FAST23 along the corners of the wall panels. Place fasteners to match fastener line on wall panels (do not overtighten). The above diagram shows the fastener placement location.

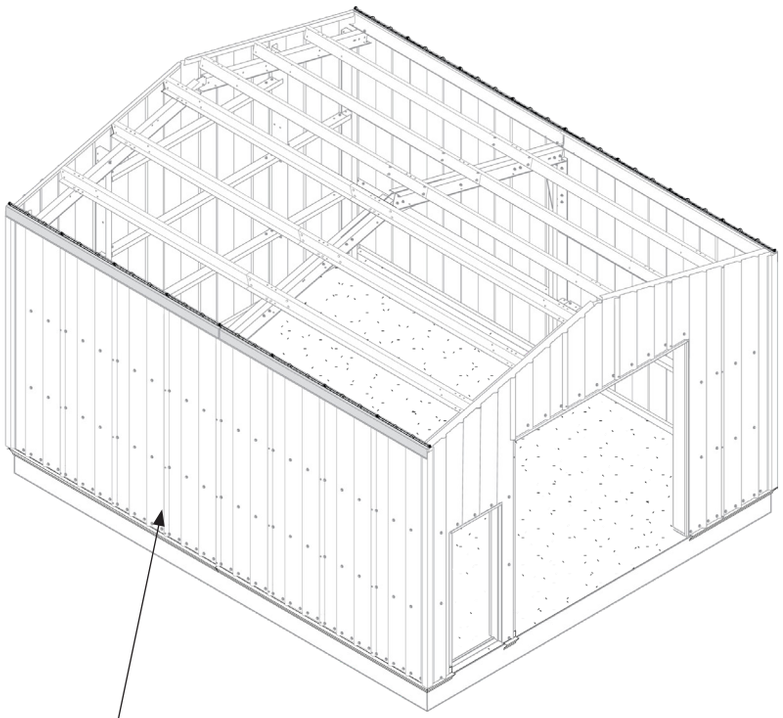
STEP 37

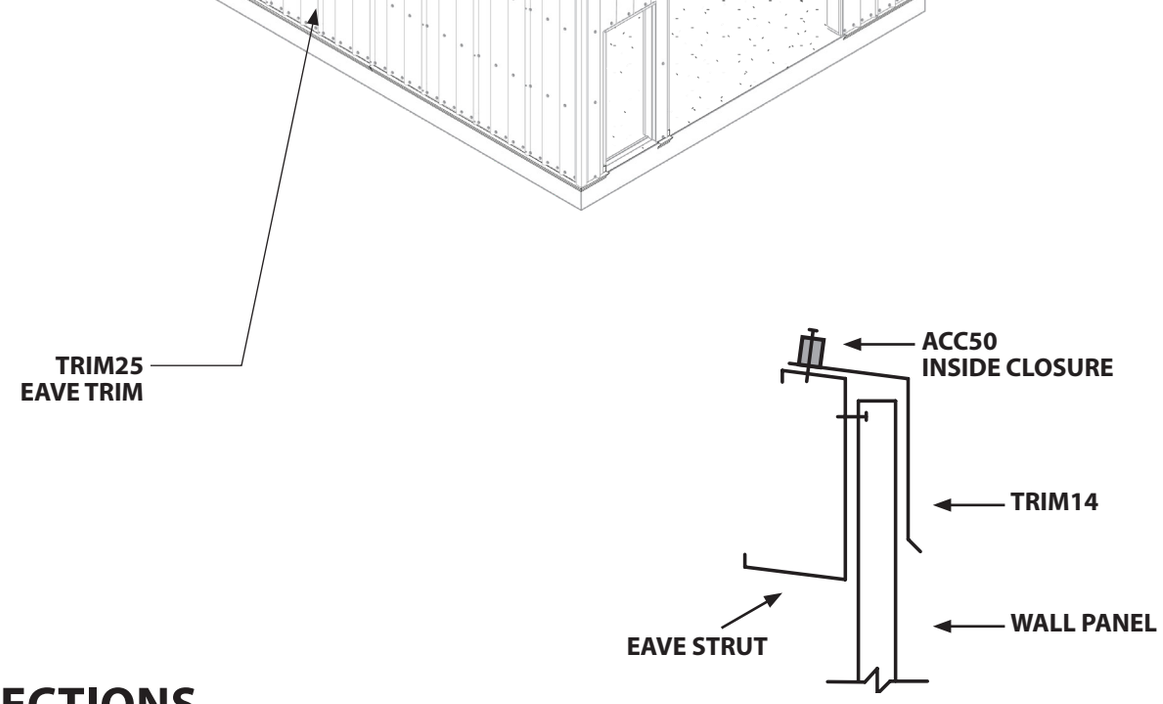
REQUIRED PARTS

(4) TRIM25

FAST12

ACC50





DIRECTIONS

Install TRIM25

1. Place ACC50 on top of TRIM25 before installing. Line up rib profile of closure with wall panel rib profile. Place on edge of top leg of trim.
2. Install TRIM25 above the eavestrut (PURLIN11) as shown above using FAST12. Use only enough screws to temporarily hold in place. These screws will be removed when installing roof panels.
3. Repeat on both sidewalls.

STEP 38

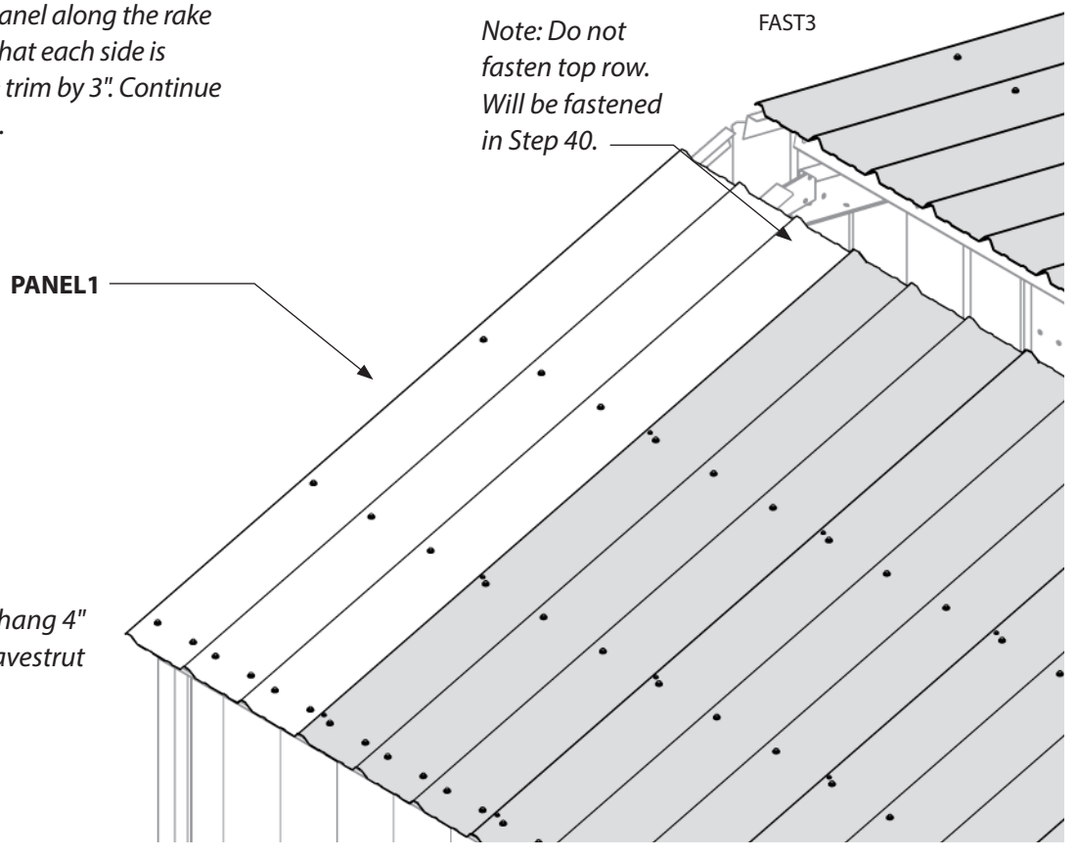
If you are installing gutters, please go to page 70 before proceeding.

Tip: Squareness is key on this first panel. Start by aligning the panel along the rake angle. Then measure that each side is hanging over the eave trim by 3". Continue this down the roof line.

REQUIRED PARTS

(4) PANEL1

FAST3



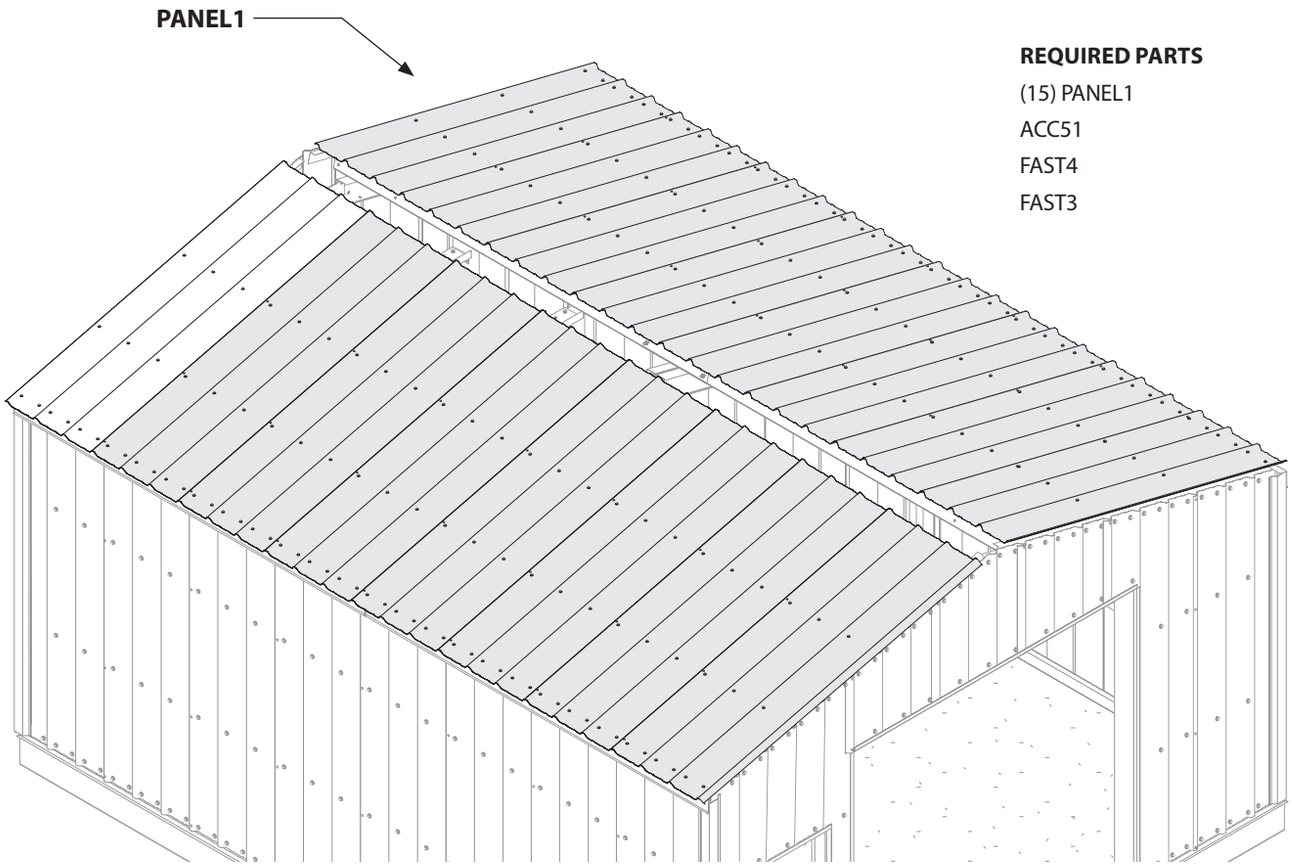
DIRECTIONS

Begin Sheeting the Roof

Note: Before sheeting the roof take note of the direction the prevailing winds come from. Start with the end that is opposite from your prevailing wind direction.

1. Use the above diagram for the fastener patterns when installing panels using FAST3.
2. Let the panel hang 3" over TRIM14.
3. Do not fasten at the ridge. This will be fastened when installing the ridgecap.

STEP 39



REQUIRED PARTS

(15) PANEL1

ACC51

FAST4

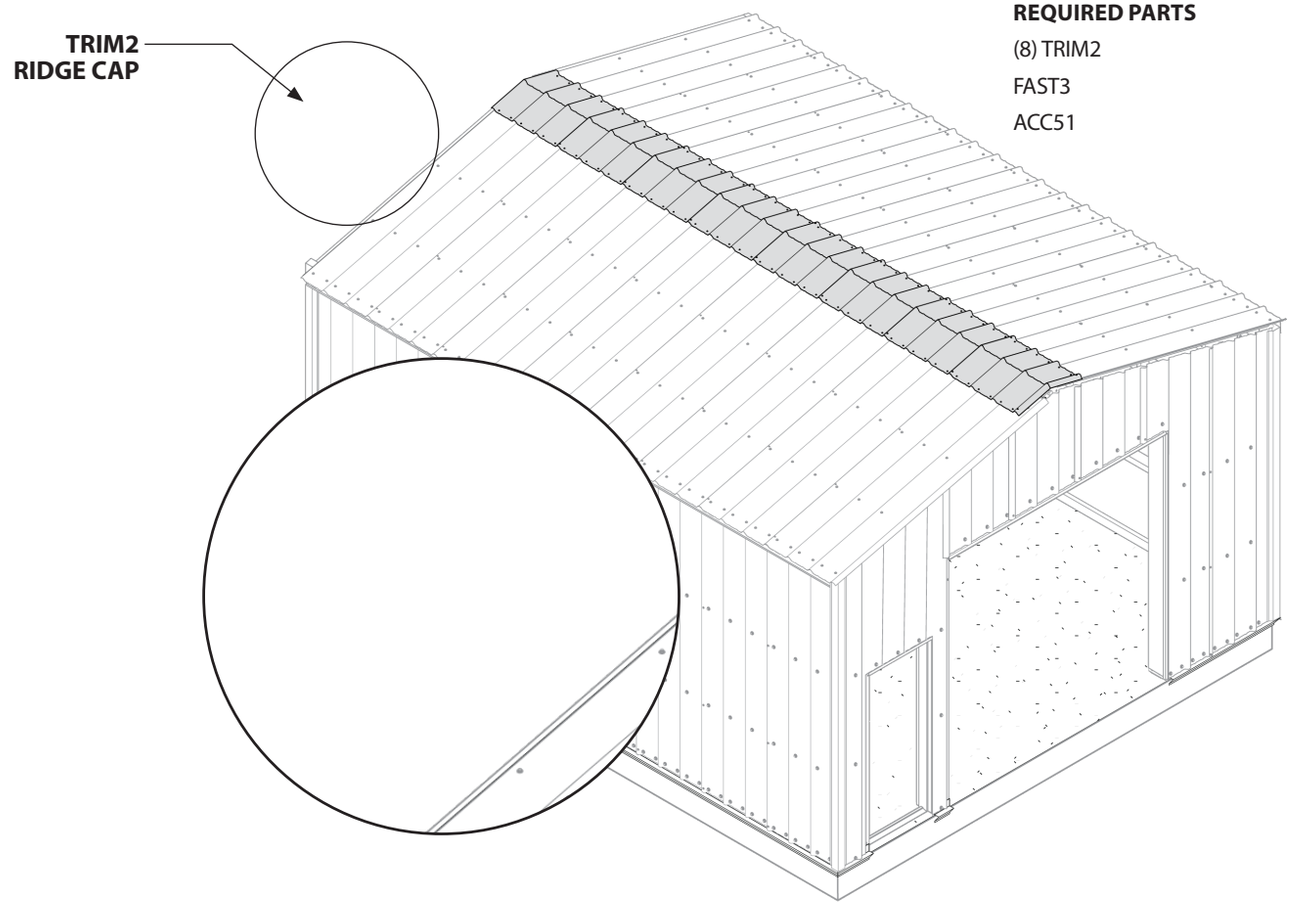
FAST3

DIRECTIONS

Finish Sheeting the Roof

1. Use FAST3 to secure panels to the purlins. Use FAST4 when securing the panels together.
2. Do not overlap roof panel more than one rib, if the length of your building is not divisible by 3 then your last panel will need the excess cut off.
3. Install all of one side then in the same direction, install the opposite side. Ensure every panel installed on the opposite side is directly across from an equal rib. This will allow the formed ridge cap to be easily installed.
4. Prior to taking the panel to the roof, install a single run of ACC51 to the underside of the what will become the overlap rib; leaving one side of the wax paper installed that will be removed once the panel is placed into position on the roof. (removing wax paper before in position or not applying before taking the panel to the roof may be more difficult, as the butyl tape will adhere to any metal it comes in contact with)

STEP 40

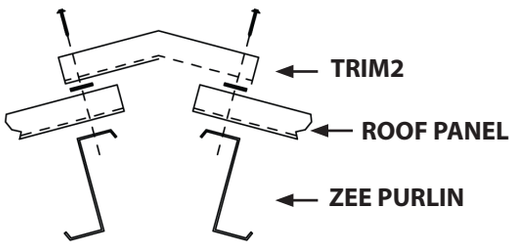


REQUIRED PARTS

(8) TRIM2

FAST3

ACC51



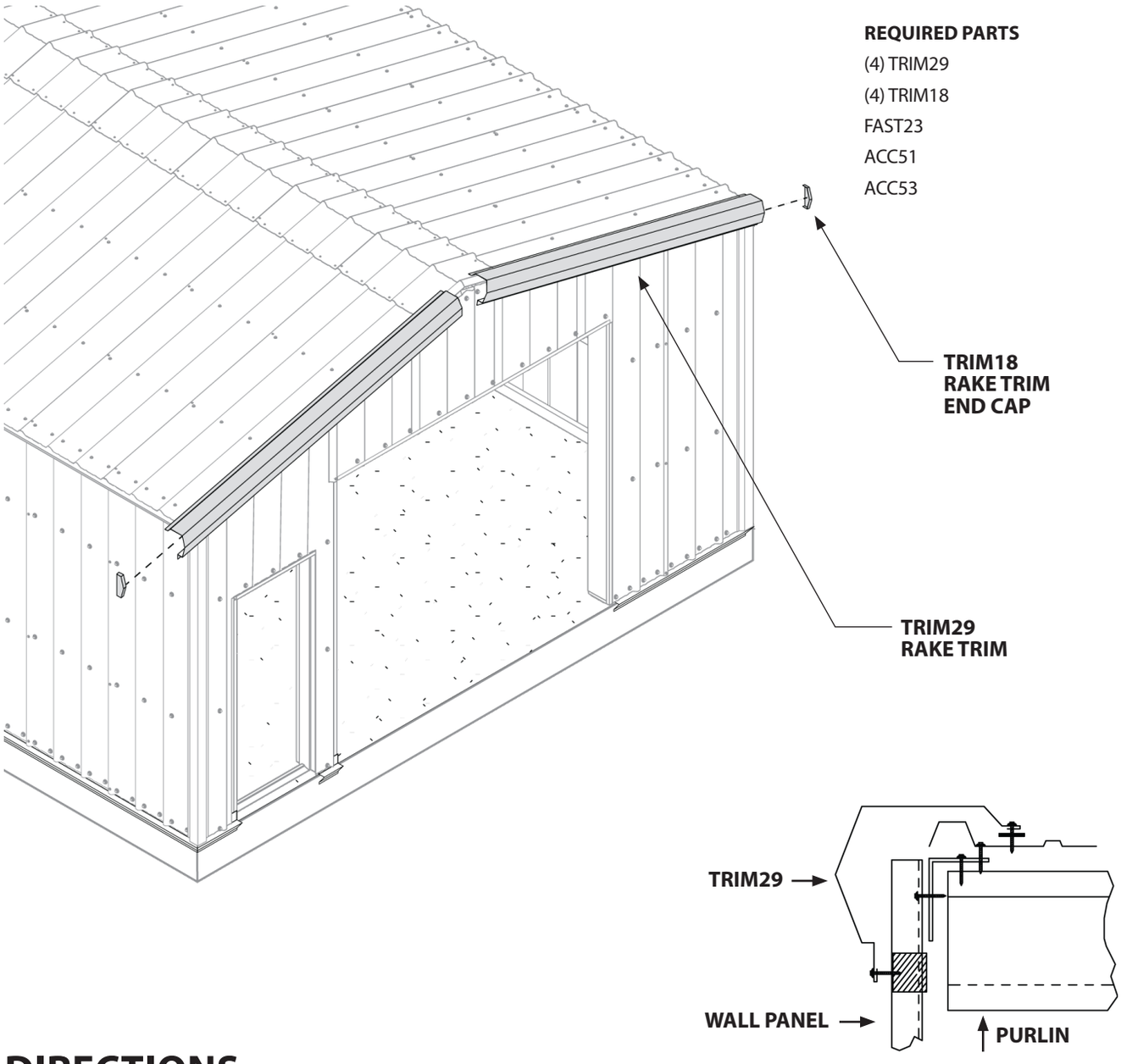
Tip: To locate the center of ridge on building, use two levels to meet in the middle to determine apex.

DIRECTIONS

Install the Ridge Cap

1. Once all of the roof panels are installed with an inside closure above the eave trim at the low eave, and butyl tape at every lap then you may begin installing your roof formed ridge caps.
2. While on the ground, run ACC51 around three sides of your ridge cap.
   a. The bottom of your overlap rib.
   b. The full 3' length on the bottom of both sides, 2" from the edge.
   c. Leave wax paper installed until the ridge cap is in position then pull the paper off and secure ridge cap to roof panels and into the roof ZEE purlin. (DO NOT OVERLAP MORE THAN 1 RIB)
3. Fasten TRIM2 to roof panels and purlins using FAST3. Be sure your fasteners are to the interior of ACC57 so the ACC57 prevents water going through Fastener holes.

STEP 41

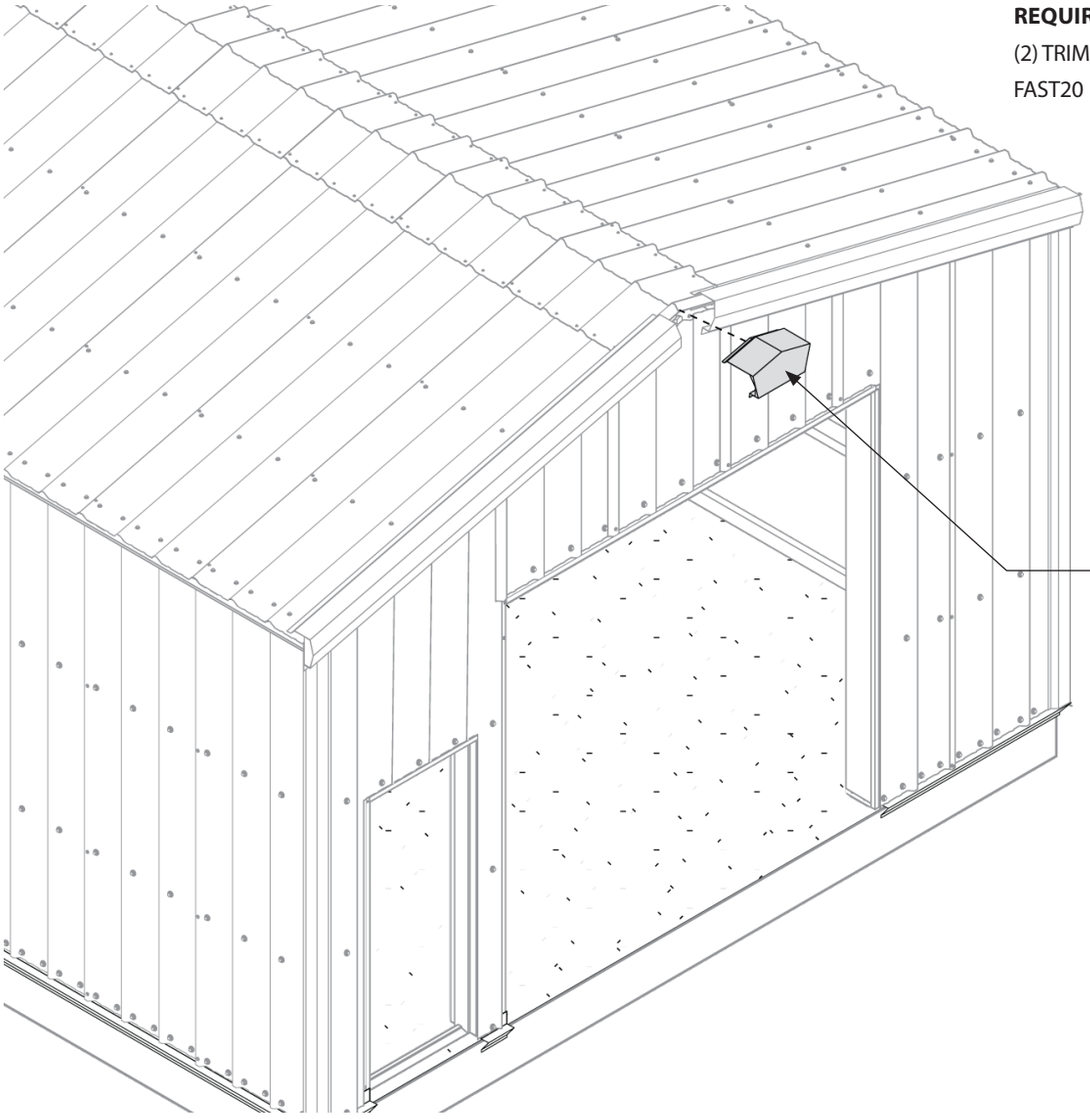


DIRECTIONS

Install Rake Trims

1. Install the TRIM29 with TRIM18. TRIM29 may need to be cut to match panel length. Hide cut edge at top of ridge.
   a. Begin by applying ACC51 to the bottom of the rake trim's hemmed edge that will rest on the roof panels; leaving the wax paper on until the trim is in place.
   b. Apply the grayflex closures to the rake trim's hemmed edge that will be fastened to the endwall panels.
   c. Attach rake then remove any excess paper; giving you a mastic connection to the roof panels and expandable closures at the wall panels. Use FAST23 to fasten through trim and ACC51 & ACC53.
2. Attach TRIM18 to end of rake(TRIM29) using FAST20.
3. Repeat for the other endwall.

STEP 42



REQUIRED PARTS

(2) TRIM19

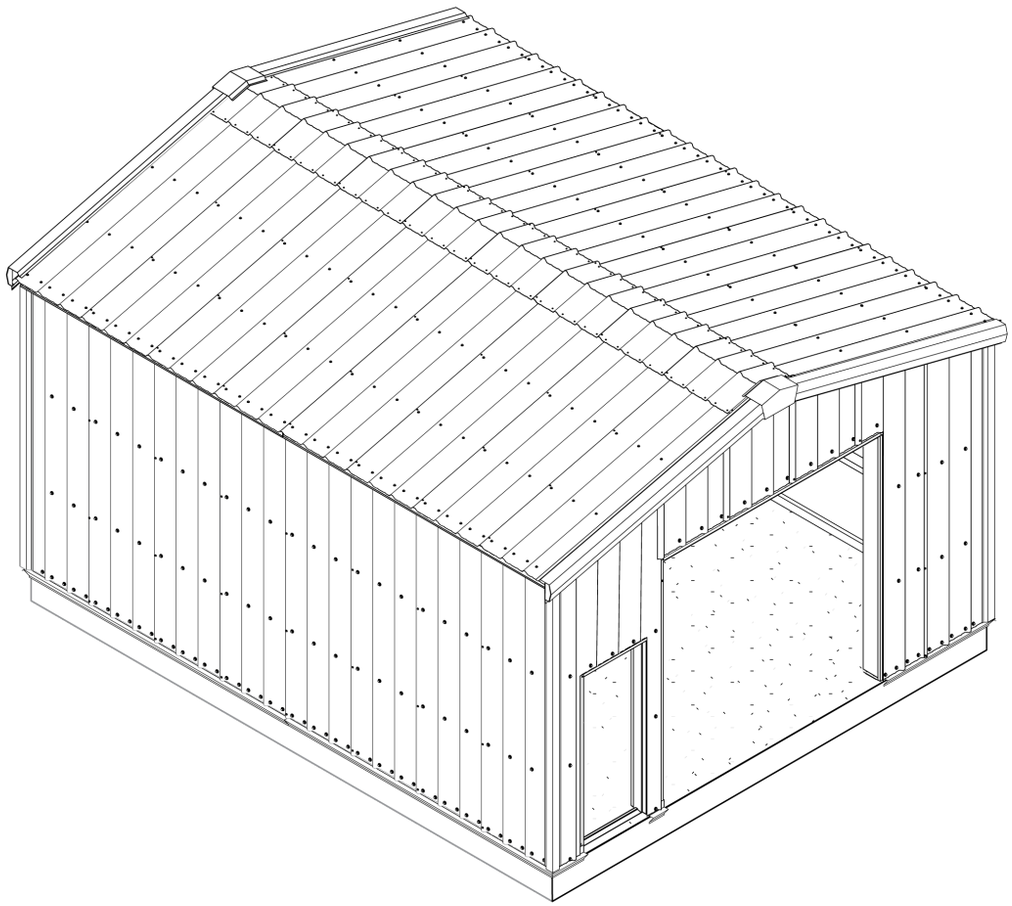
FAST20

DIRECTIONS

Installing the Peak Box

1. Install each TRIM19 with pop rivets or lap fasteners into the rake trim. (do not overtighten)
2. Remove any excess shaving from the roof panels to ensure shavings are not left behind that might create rust.

STEP 43



ENJOY YOUR COMPLETED BUILDING

Your building is finished. Take a break, relax, and find a way to payback the friends who helped.

PARTS LIST OPTIONS

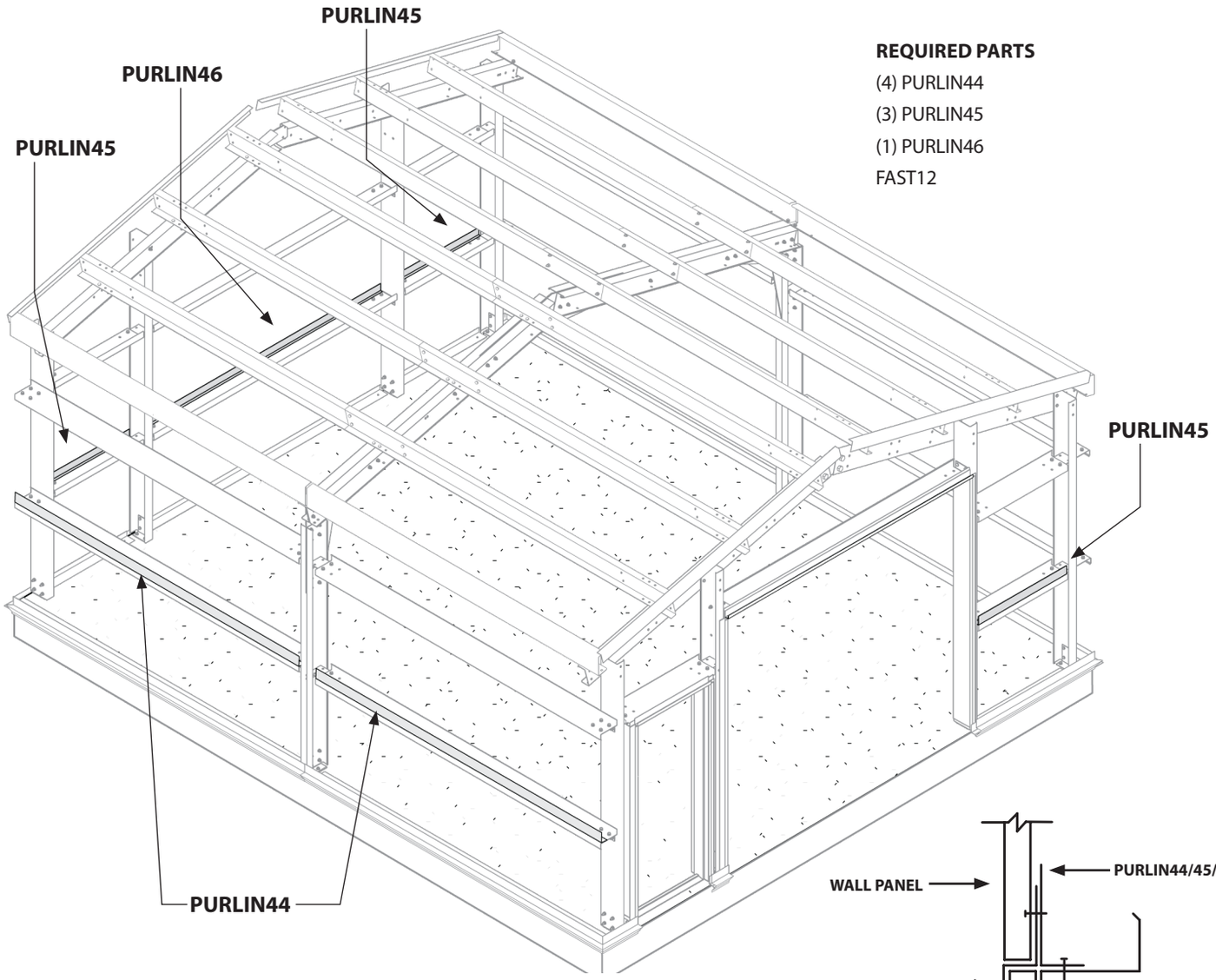
Most options both remove and add parts. The following tables list the parts adjustments that are made with each option. Please refer to images at front of assembly instructions if necessary.

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
Wainscot Option				
The following items are removed				
PANEL6	HRL	Wall Panels	-4	12' 2.5"
PANEL8	HRL	Wall Panels	-4	11' 5.5"
PANEL10	HRL	Wall Panels	-4	10' 8.5"
PANEL11	HRL	Wall Panels	-20	9' 11.5"
PANEL12	HRL	Wall Panels	-5	12' 11.5"
FAST13	78LAP	Lap Screws for Wall	-250	
FAST12	114MM	Metal to Metal Screws for Walls	-750	
The following items are added				
PANEL13	HRL	Upper Wall Panels	20	6' 5"
PANEL14	HRL	Upper Wall Panels	4	7' 2"
PANEL16	HRL	Upper Wall Panels	4	7' 11"
PANEL18	HRL	Upper Wall Panels	4	8' 8"
PANEL20	HRL	Lower Wall Panels	37	3' 6"
FAST13	78LAP	Lap Screws for Upper Walls	500	
FAST13	78LAP	Lap Screws for Lower Walls	250	
FAST12	114MM	Metal to Metal Screws	250	
FAST12	114MM	Metal to Metal Screws	500	
PURLIN44	B4216	Base Angle Purlin for Wainscot	4	14' 7.25"
PURLIN45	B4216	Base Angle Purlin for Wainscot	2	11' 11.5"
PURLIN46	B4216	Base Angle Purlin for Wainscot	4	5' 7.5"
TRIM31	WA122	Wainscot Trim	4	12' 2"
TRIM32	WA142	Wainscot Trim	4	14' 2"
TRIM39	WA162	Wainscot Trim	4	16' 2"

PARTS LIST OPTIONS

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
Gutter Option				
The following items are added				
TRIM40	GU162	Gutters	4	16' 2"
TRIM34	DK102	Downspouts	4	10' 2"
TRIM35	GS9	Gutter Straps	32	-
TRIM36	DSS2	Downspout Strap	8	-
TRIM37	GEN	Gutter End Cap	4	-
TRIM38	OCB	Outside Corner Box	4	-
Remove Endwall Framed Opening Option				
The following items are removed				
TRIM22	HE	Head Trim	-1	10' 3"
TRIM24	JH	Jamb Header Trim	-3	10' 2"
TRIM23	JA	Jamb Trim	-2	10' 2"
PLATE35	GIRTCLIP	Girtclip	-2	
The following items are added				
PURLIN32	Z82516R	Zee Purlin	4	9' 11.5"
Add Sidewall Framed Opening				
The following items are removed				
PURLIN20	Z82516R	Zee Purlin	-2	11' 7.25"
The following items are added				
TRIM22	HE	Head Trim	1	10' 3"
TRIM24	JH	Jamb Header Trim	3	10' 2"
TRIM23	JA	Jamb Trim	2	10' 2"
PURLIN47	Z82516R	Zee Purlin	4	0'23.3125"
PURLIN42	C83516R	Cee Purlin	2	9' 3"
PURLIN43	C82516R	Cee Purlin	1	9' 11.5"
PLATE35	GIRTCLIP	Girtclip	8	
PLATE46	DJCOLD30	Eavestrut Connector	2	
FAST46	114FINNNECK	.5" X 1.25" Fin Neck Bolt w/nuts	25	

WAINSCOT OPTION



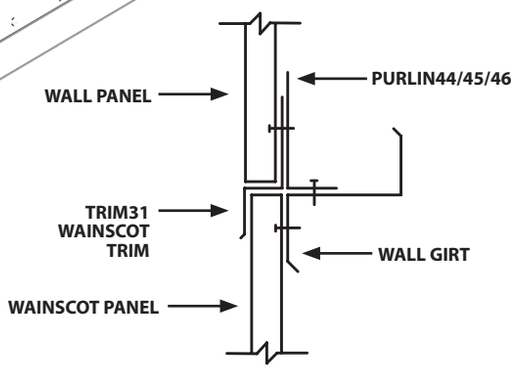
REQUIRED PARTS

(4) PURLIN44

(3) PURLIN45

(1) PURLIN46

FAST12

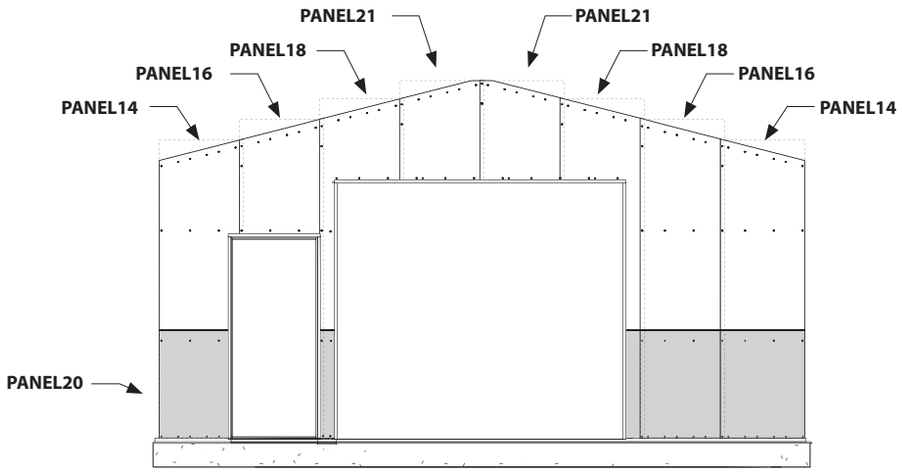


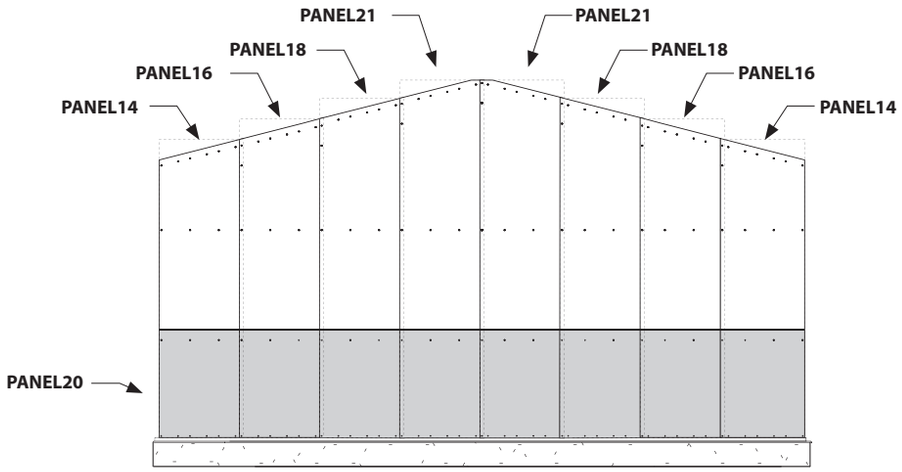
DIRECTIONS

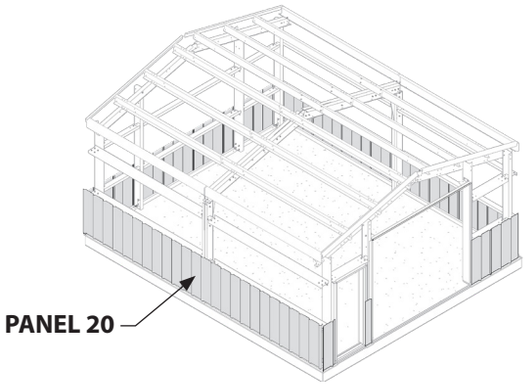
Install the PURLINs

1. Install PURLIN44 on the sidwalls.
2. Install PURLIN46 and PURLIN45 on the endwalls.
3. Use FAST12 through the 2" side of the angle and aligning the 4" side (pointed up) with the outside steel line of the wall ZEE girt. this will extend the ZEE girts existing 2.5" downward leg by adding 4" upward; allowing for a 6.5" surface area to attach wainscot trim, lower wall sheets, and upper wall sheets.

WAINSCOT OPTION







DIRECTIONS

Install the Wainscot Lower Panels

Follow the diagram Step 32 through step 35 from standard instructions to install PANEL20 onto the lower section of wall panels. Fasten top of PANEL20 into PURLIN44/45/46.

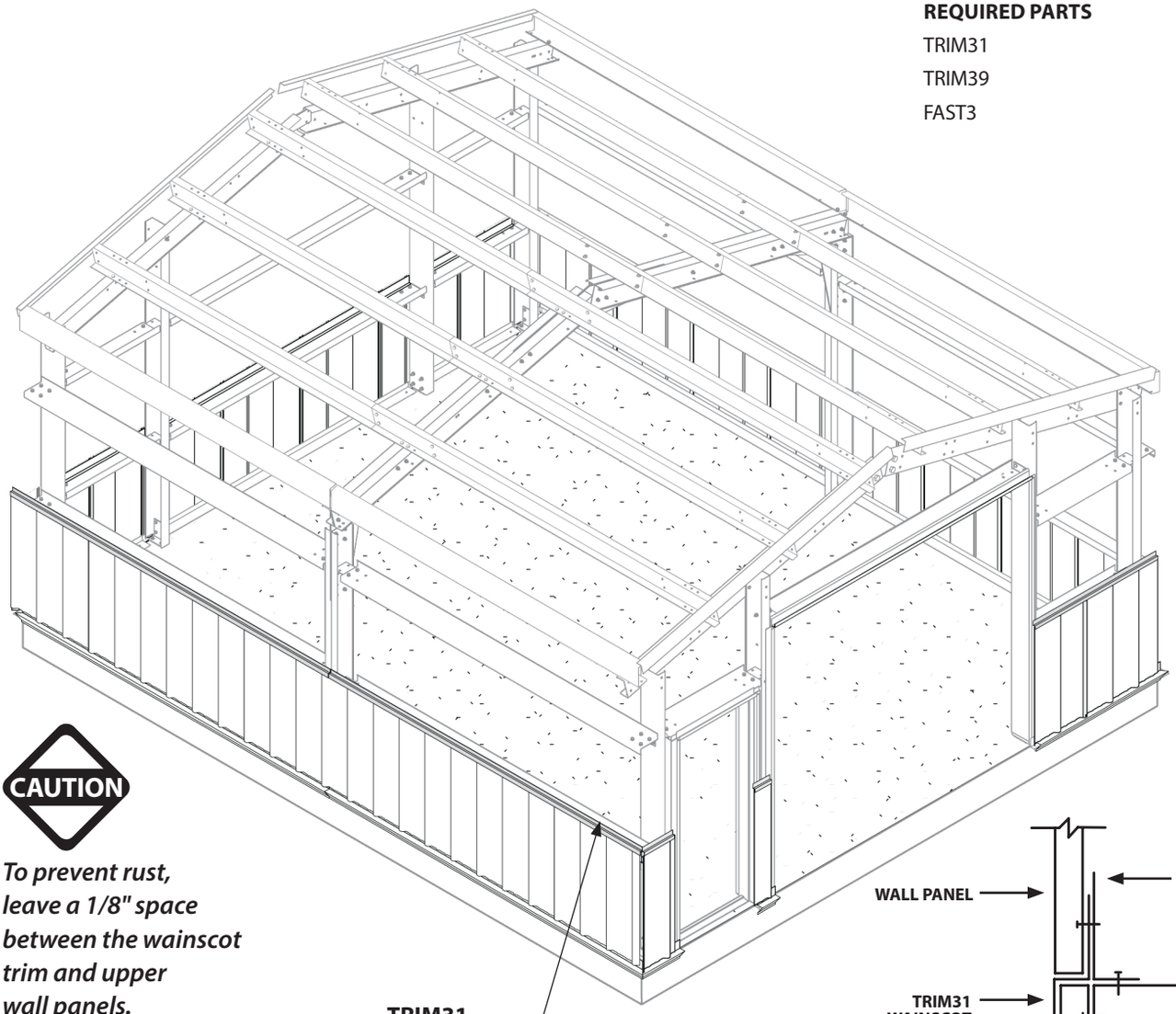
WAINSCOT OPTION

REQUIRED PARTS

TRIM31

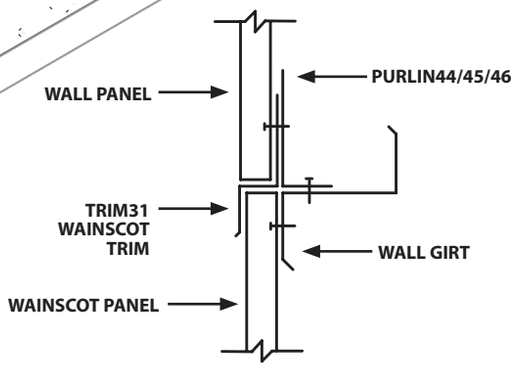
TRIM39

FAST3



CAUTION

To prevent rust, leave a 1/8" space between the wainscot trim and upper wall panels.

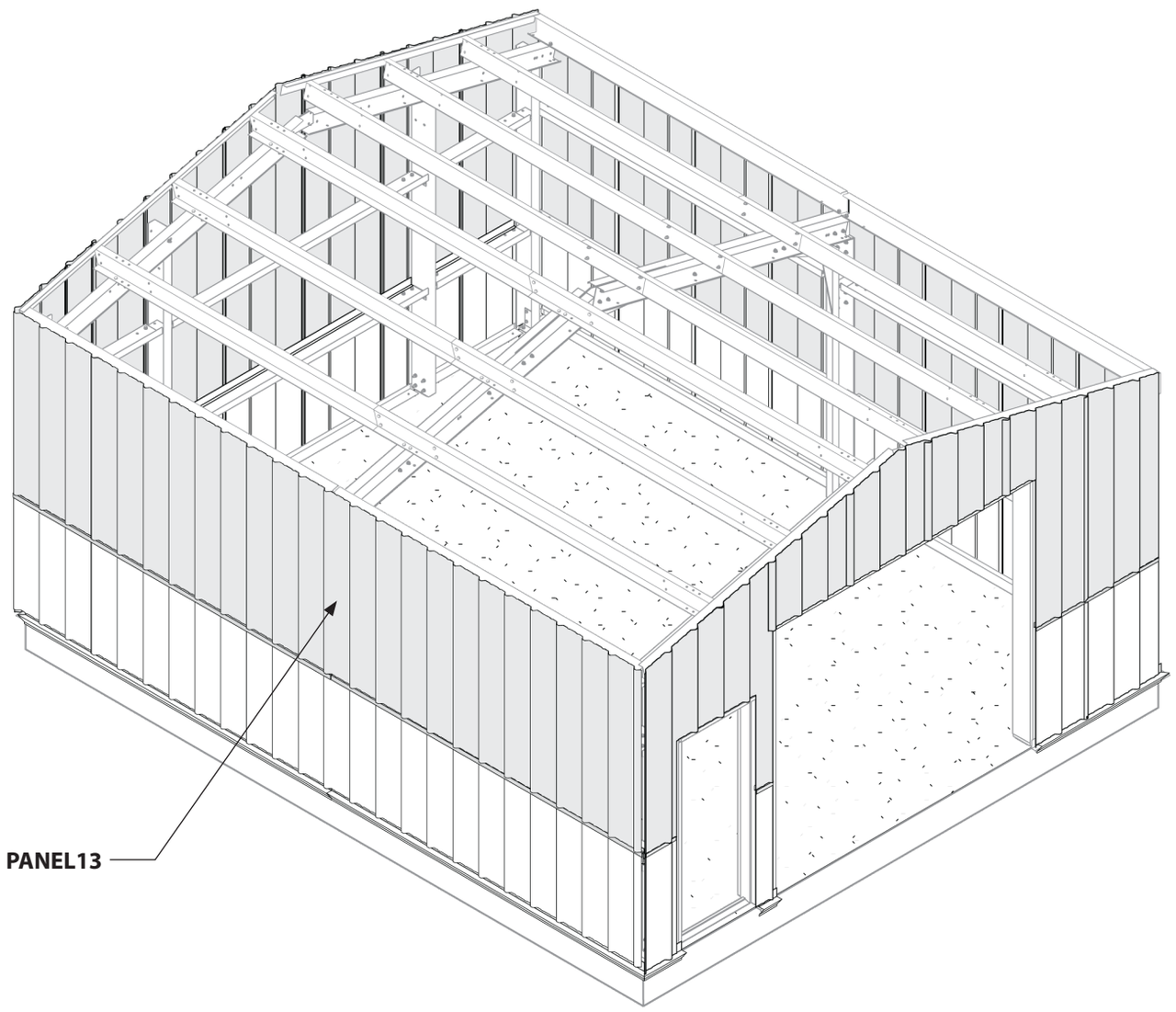


DIRECTIONS

Install the Wainscot Trim

Install the TRIM31 and TRIM39 wainscot trim on to the 3'6" girt, allowing the trim horizontal flat surface to rest on top of the lower panels installed. This horizontal line should be level at 3'6". TRIM31 and TRIM39 are interchangeable. Cut, overlap, and install as needed around building.

WAINSCOT OPTION

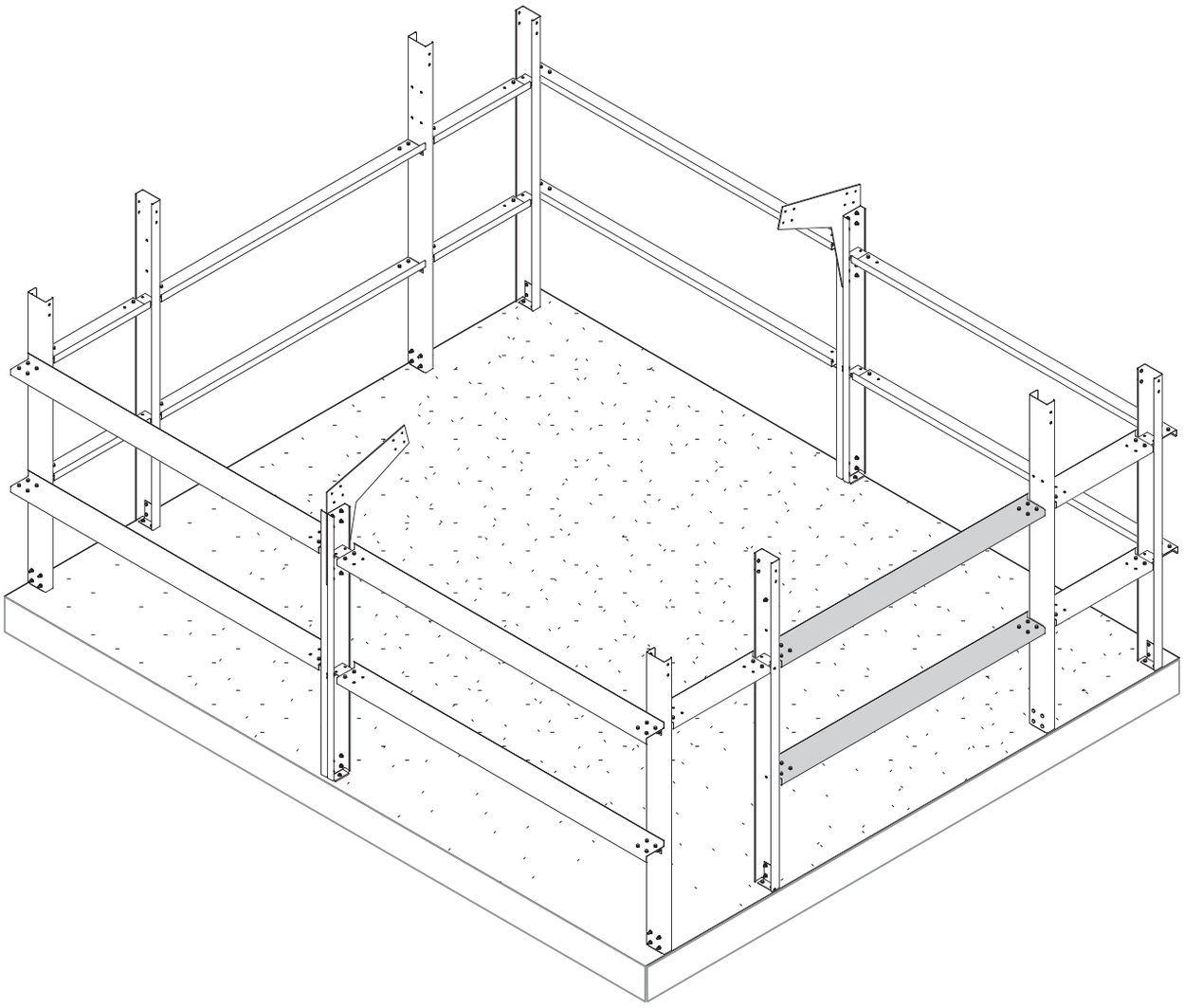


DIRECTIONS

Install Wainscot Upper Wall Panels

1. Follow Step 32 through step 35 to install wall panels on to the upper section of wall. Fasten bottom of panel to PURLIN44/45/46. Follow diagram on page 65. Be sure to leave 1/8" space between wainscot trim and upper wall panels to prevent rusting & discoloration.

REMOVE ENDWALL OPTION

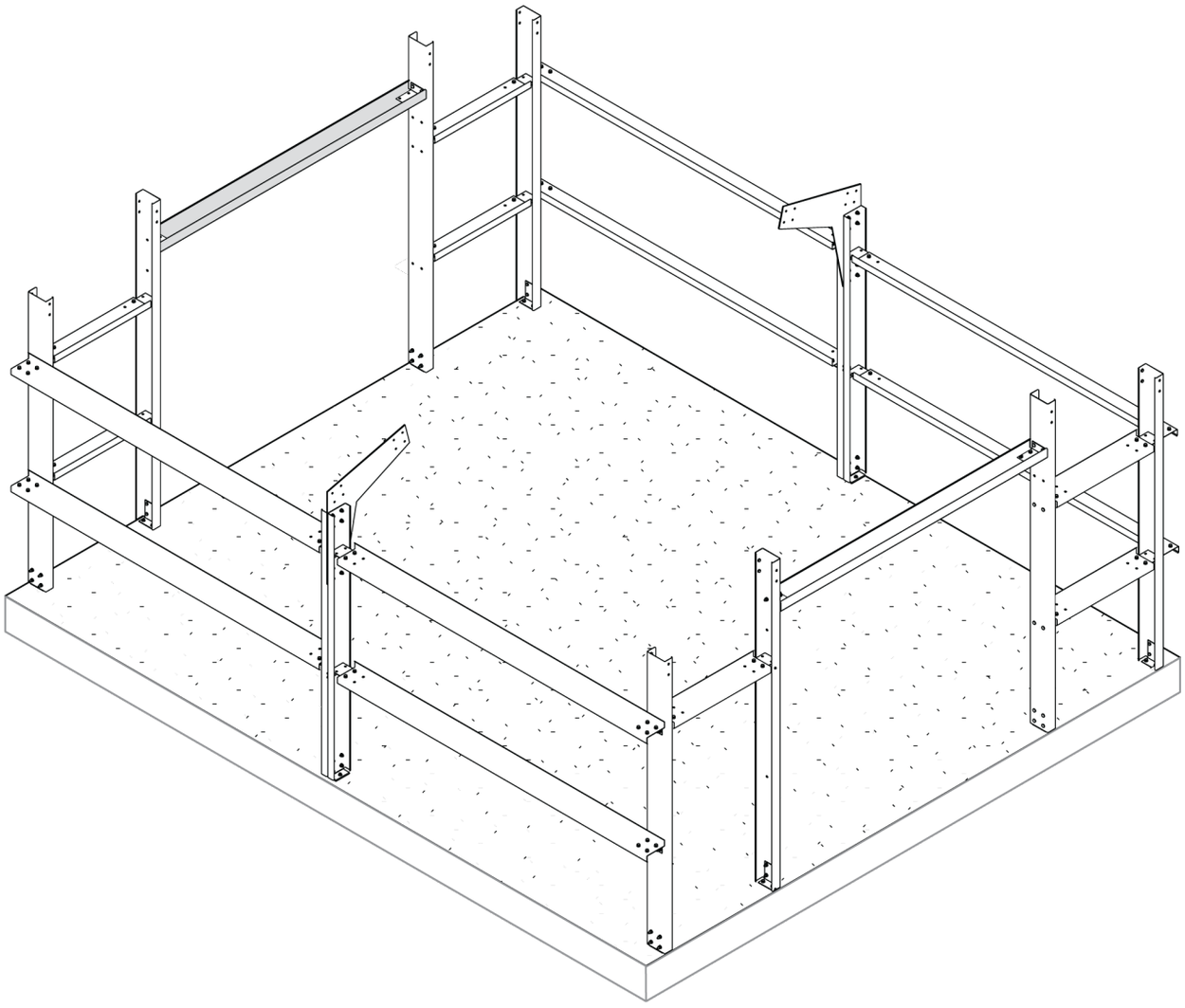


DIRECTIONS

Remove Framed Opening in Endwall Option

1. When assembling columns H and I in step 11 and 12, use all FAST54, rather than a mixture of FAST54 and FAST46.
2. Repeat steps 6-8 to install wall girts similar to other endwall erected in steps 6-8.

ADD ENDWALL OPENING OPTION

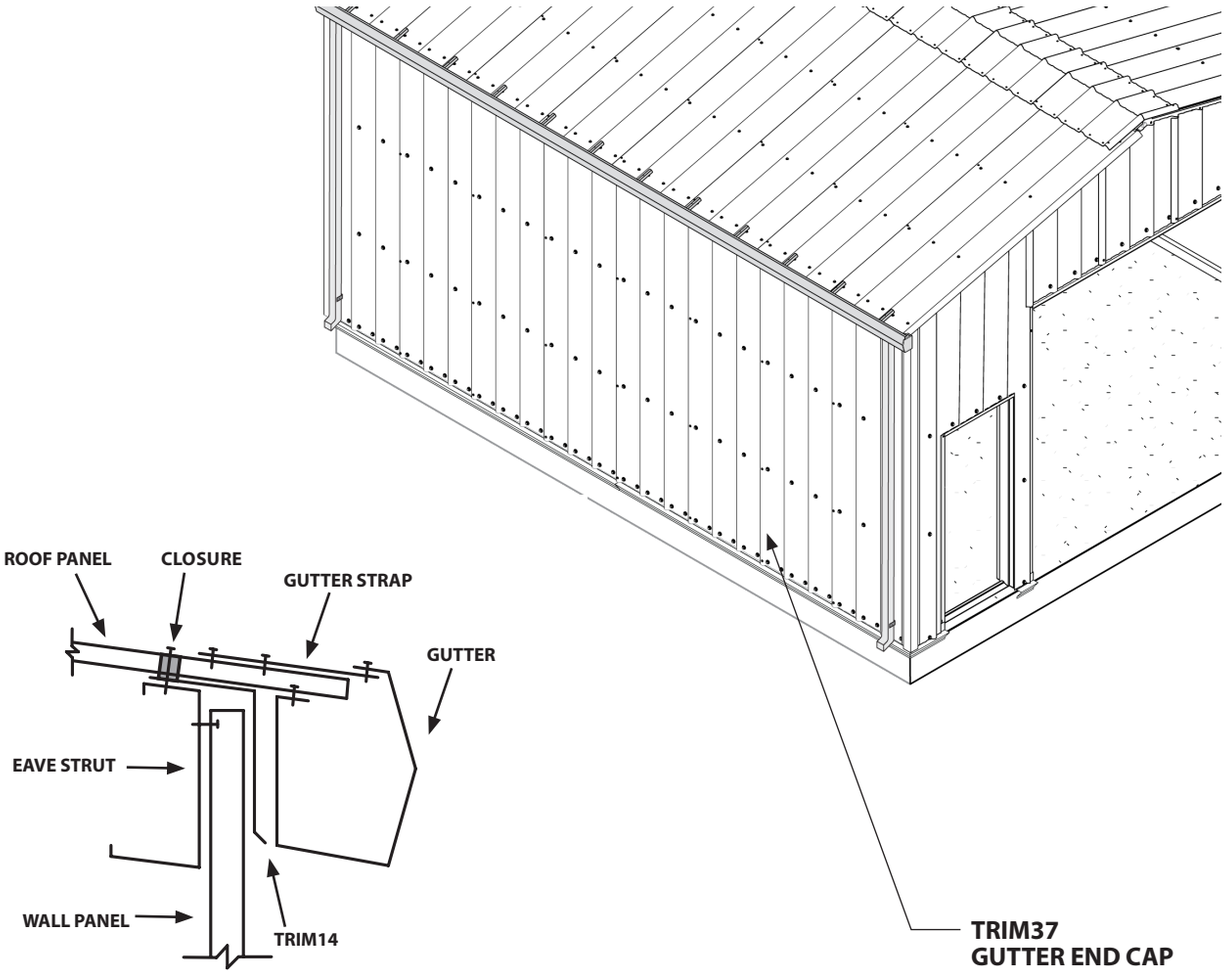


DIRECTIONS

Endwall Framed Opening Add Option

1. Assemble columns C and D using steps 11 and 12. Do not follow Step 3.
2. Install PURLIN34 between columns C & D using step 14.

GUTTERS OPTION

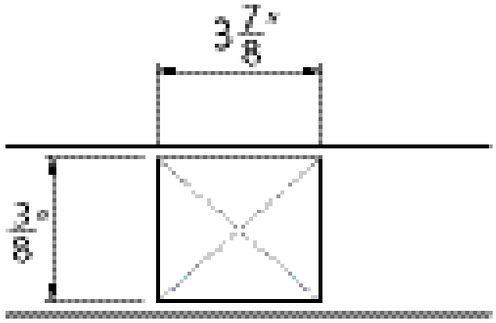


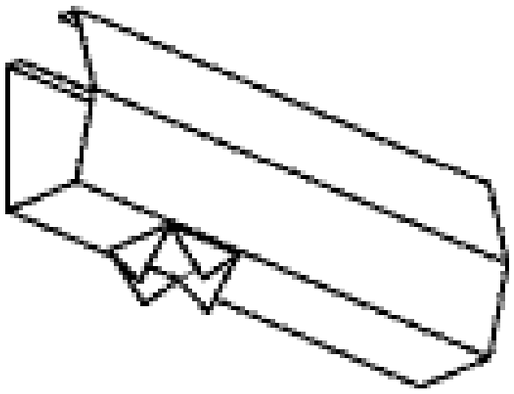
Tip: If multiple gutter sections are required to meet the building's length, then sequential gutter(s) will nest inside of the previous gutter's end approximately 4" with a small bead of sealant (ACC52). Fasten the sequential gutter to the previous gutter using FAST20 or FAST23 fasteners then continue until you have fully covered the length of your building, trimming any excess gutter to allow the final gutter end to align with the endwall steel line.

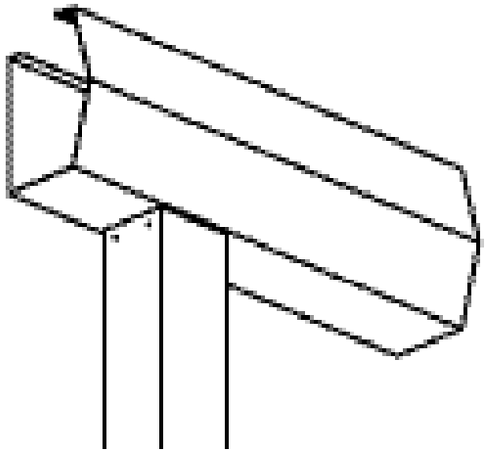
DIRECTIONS

Installing gutters

1. Starting on either end, attach the gutters to the bottom of the roof panel. Allow the gutter to hang in front of the eave trim and fasten with FAST18, beginning at the endwall steel line. Fasten every 1'.
2. Reinforce the gutter with TRIM35. Fasten TRIM35 to the top of every other rib (2') in roof panel and fasten to lip of gutter using FAST23.
3. Using POP or 78LAP fasteners, attach each TRIM37 by nesting the endcap into the gutter's end approximately 2" with a small bead of clear caulking supplied.
4. Repeat this on the opposite sidewall.







DIRECTIONS

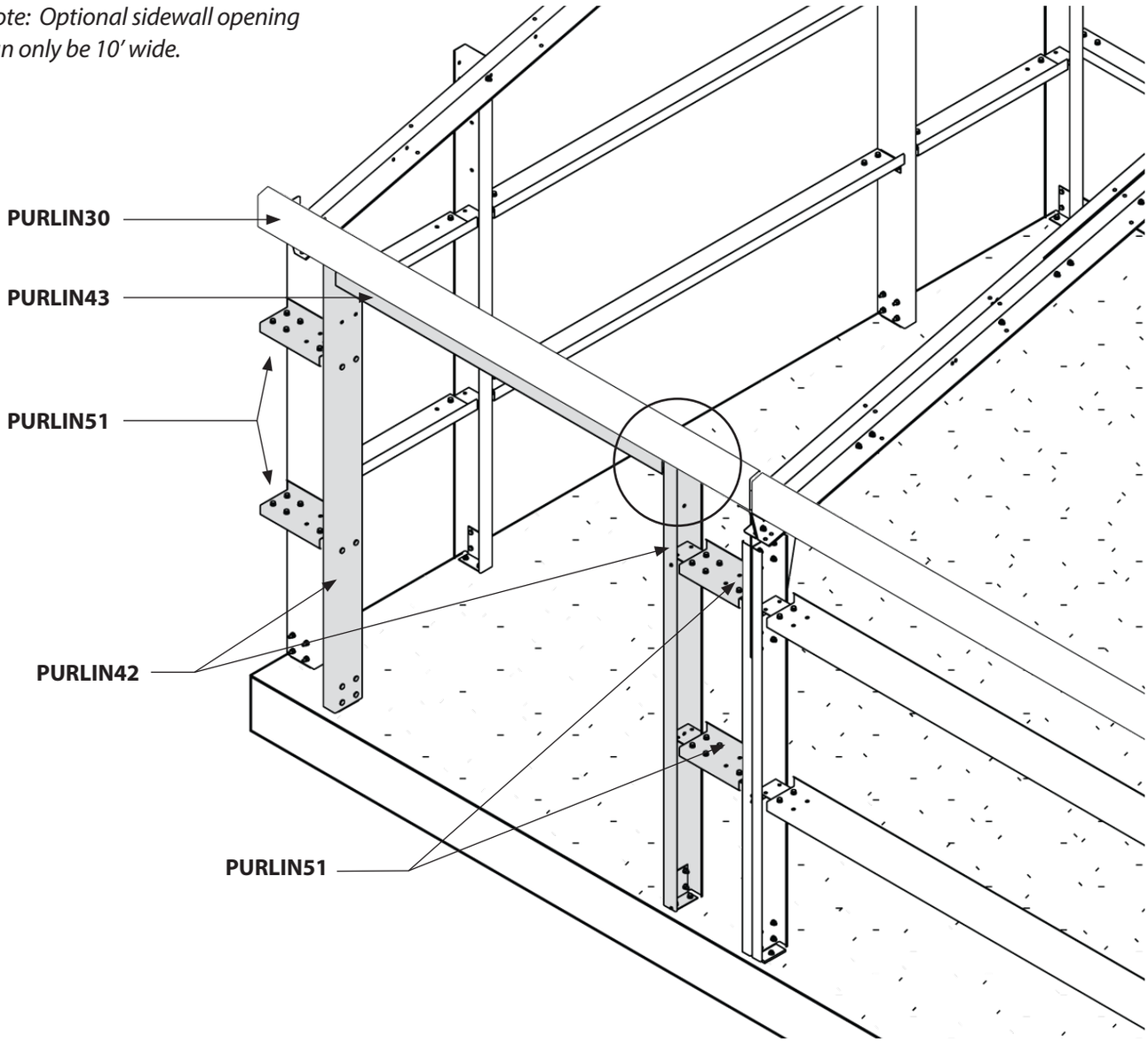
Installing gutters

Note: TRIM38 will be need to be installed after Rake trim (TRIM28) is installed in future steps.

5. With gutters now hung, identify the location of downspouts. Downspouts will typically be placed on each end of the building's gutter. The exact location can very (6"-14", but is recommended to position the downspout directly centered over a wall rib, which will allow for a vertical and level downspout once installed.
6. Once you have identified your downspout location, mark an "X" at bottom of the gutter to the center of where your downspout will be placed. Each leg of the "X" should extend 2" from center of "X". Using a drill bit to create a hole, and metal snips, cut along the "X". Fold the flaps of the "X" down. This is where you will attach your downspout.
7. Attach TRIM36 approximately 4' from the concrete. Attach to the wall rib directly below the "X" created in step above. Additional TRIM36 are provided if desired.
8. Attach TRIM34 over the"X" flaps and fasten with FAST23. Place downspout in TRIM36. Check that downspout is level and fasten to TRIM36 using FAST23.
9. Apply a bead of ACC52 to the "X" opening in gutter to seal.
10. Repeat steps 4-9 for the other downspouts.
11. Cover transition from rake to gutter with TRIM28. Pop rivet TRIM28 in place.

ADD SIDEWALL OPENING OPTION

Note: Optional sidewall opening can only be 10' wide.



Sidewall Framed Opening add Option

You will have flexibility to install this opening in any sidewall bay that suits your needs for every sidewall framed opening section. Once you have determined which bay to place your framed opening in, you will notice that this bay's 2 girts will be replaced with 4 shorter girts and include 2 jambs, 1 header, 2 DJCOLD30 clips, and your framed opening trims and fasteners. One bay must remain sheeted per sidewall-for diaphragm and panel shear bracing of your building, any sidewall bay can contain a framed opening (walk doors are exempt) but one bay must always remain sheeted for engineering requirements.

SIDEWALL OPENING OPTION

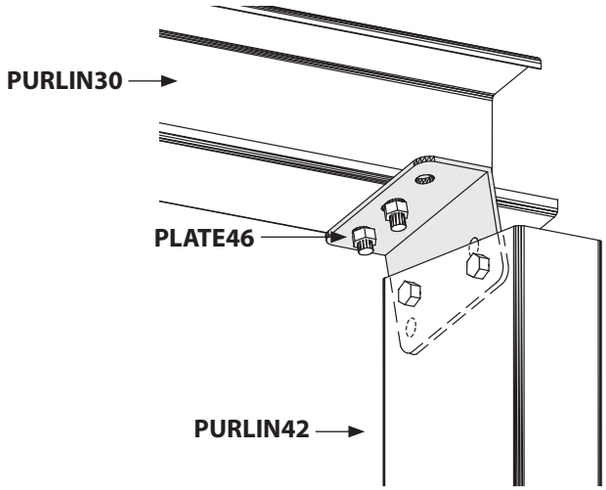


Figure 1 - for 7' and 8' door height

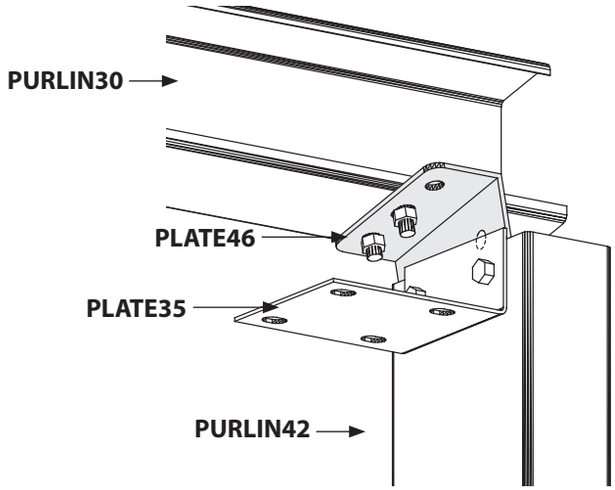


Figure 2 - for 9' door height

DIRECTIONS

Note: At this point the bases of your jambs are not attached to the concrete. This is fine, as the next step will ensure every connection has been done correctly for your framed opening.

For 7' and 8' door height refer to Figure 1

1. Using FAST46 attach girt clips (PLATE35) to PURLIN42 at 3'6" from bottom of column.
2. Using FAST54 attach the top girt clips (PLATE35) to PURLIN42 at either the 7', 8' location. Continue to step 3.

For 9' door height refer to Figure 2

1. Using FAST46 attach girt clips (PLATE35) to PURLIN42 at 3'6" from bottom of column.
2. Using FAST54 attach the top girt clips (PLATE35) to PURLIN42 at either the 7', 8' location. Continue to step 3.

3. Stand each jamb up one at a time and attach top PLATE46 clip to the bottom aligning holes of the Eavestrut (PURLIN30) using FAST54.
4. Attach PURLIN51 to assembled jamb (PURLIN42) as shown using FAST54.
5. Install PURLIN43 at your installed girt clip location for your framed opening header.
   Note: At this point, you should have the sidewall framed opening completely installed with the exception of the base connection to the concrete of the two jambs.
6. Using a level, level each jamb and drill through the concrete where PLATE35 at bottom jamb will be attached. Use 1/2" wedge anchors or similar concrete fastener to connect to concrete (not included).
7. Repeat steps above for every sidewall framed opening selected.
8. Use steps 21 & 23 to trim this framed opening.

NOTES

CENTRAL® STATES
MANUFACTURING, INC.
METAL BUILDING COMPONENTS

Right.
On Time.
Every Time.®

centralstatesco.com

Copyright © 2024, Central States Manufacturing, Inc., All Rights Reserved.