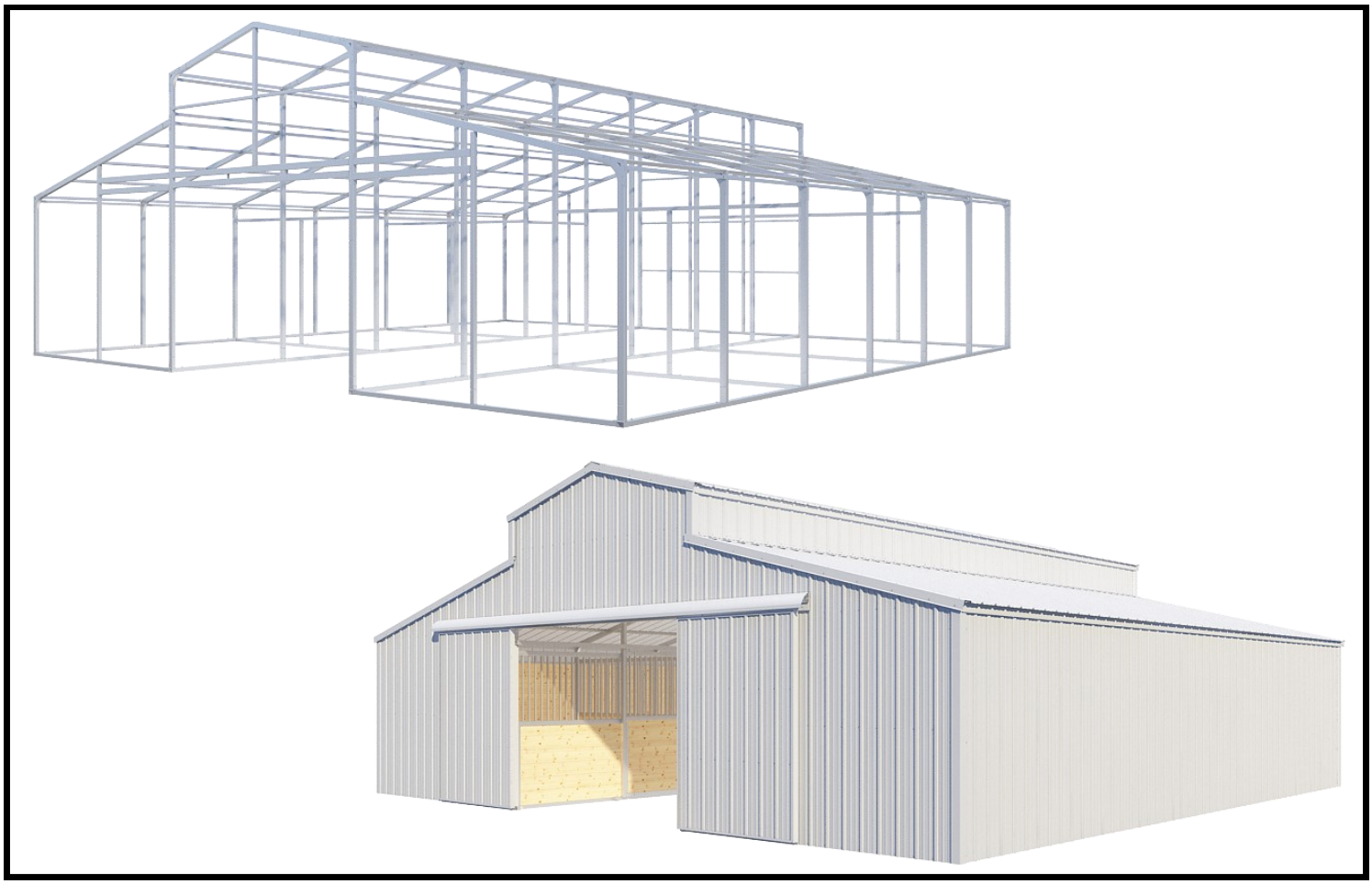
INSTALLATION INSTRUCTIONS FOR 36’2”W HORSE BARNS

8’/13’ SIDE WALL HEIGHT, 6’ ON CENTER



Our unique assembly process quickly transforms the individual pieces into a finished structure that will give you a lifetime of service. Great care has been taken to ensure complete satisfaction with your purchase. In the unlikely event that there are any missing or damaged parts, or if you simply need technical assistance, please call our Toll Free Hotline at 1-800-900-7222 and your questions will be addressed promptly. Thank you for choosing the VersaTube Building System.

PLEASE SEE E-MAILED CARE PACKAGE FOR STRUCTURAL DRAWINGS, BUILDING MATERIAL LISTS (BOM), AND SHEET METAL TAKE-OFF FOR YOUR SPECIFIC BUILDING DETAILS AND ASSEMBLY.

ZINST-HB

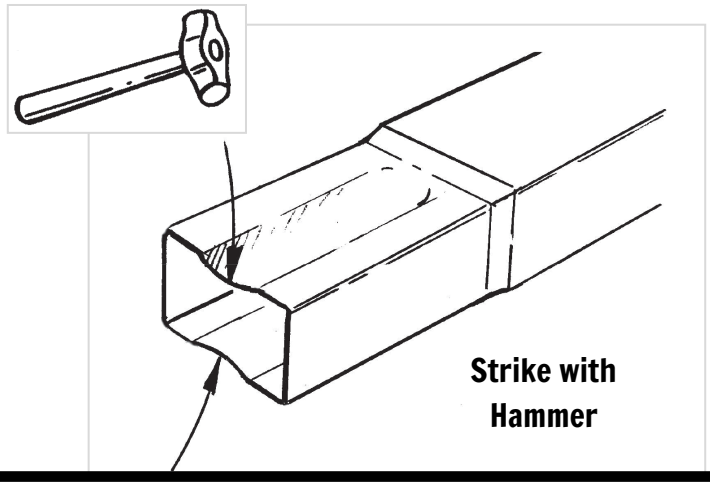
Safety, Hazard, and Maintenance Instructions

CAUTION	Read the following safety warnings and all instructions in their entirety prior to installation. If you have questions, contact Mid-South Metal Products, Inc. (DBA, VersaTube Building Systems) Customer Service at 1-800-900-7222 before proceeding.
CAUTION	VersaTube Building Systems designs and manufactures framing products to meet minimum load requirements in most areas. It is the buyer's sole responsibility to determine the specific building code requirements applicable in the city and/or county of the state in which this product is being erected, and to ensure the product is installed with sufficient materials and in such a manner as to comply with the codes.
WARNING	Metal parts may get hot when exposed to high heat or direct sunlight. Avoid contact with skin and wear protective gloves and clothing to prevent the possibility of burns.
WARNING	Standing or walking on the structure could cause damage to the sheet metal panels. If you must walk on the roof, step within 1' of a major frame member. The structure must be properly braced to support human weight. Collapse of the structure may cause serious injury do to weight of components.
WARNING	Avoid installation on windy days as wind may create hazards during the installation process. Wind may blow material or cause partially installed components to collapse prior to being secured or fully installed. The weight of the components or structure may cause serious injury if it should collapse.
WARNING	Metal conducts electricity and electrical shock hazards exist since the structure is made of metal. During installation or storage, keep the structure and all components away from electrical sources. Make sure that your selected location is away from power lines, underground cables, and any other source of electrical power. Serious injury or even death may occur if contact is made with electrical current.
WARNING	In the event that your structure is fully enclosed, be sure to provide proper and adequate ventilation and egress and ingress. Hazardous, poisonous or noxious substances should not be stored in the structures absent proper ventilation. Follow all warnings and instructions of the manufacturer of any substance stored in your building. Also, proper ingress and egress should be provided to prevent persons or children from being trapped inside the structure.
WARNING	If metal panels are selected to cover all or a portion of your structure, be careful of the sharp edges which may cause cuts or lacerations. Wear protective work gloves and suitable clothing for protection and always take care when handling metal parts.
NOTE	The VersaTube Building System is an all domestically produced galvanized tubular steel framing system. Maintenance is required twice annually on particular areas of the framing system i.e. ‘'weld seams" and "cut or raw ends". This maintenance is performed by applying any "Zinc coated" silver spray paint found at local mass merchant or paint store to these areas twice annually or every six (6) months.
NOTE	All sheet metal cladding applied to the VersaTube frame are attached with self drilling screws with a rubber washer. These screws produce small shavings when drilling through the cladding. If the shavings are allowed to sit on the sheet metal for an extended period, rust spots will form and promote deterioration. Metal shavings must be brushed after installation of the sheet metal. Claims reported against rust spots will not be honored by Menards.

ATTENTION:

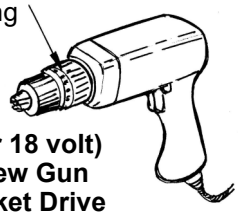
IT IS IMPORTANT THAT YOU READ THE FOLLOWING NOTE BEFORE STARTING THE ASSEMBLY OF YOUR SHELTER

NOTE: If during the installation process you have difficulty fitting frame components together, use an adjustable wrench to open the end of the receiving tube as shown below. Close wrench down around bent portion of tube and bend wall outward. It may also be helpful to hit the center of the swage at the end of the tube to create more of a lead.



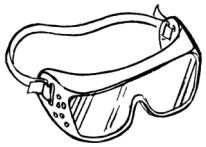
What you'll need

Torque Setting

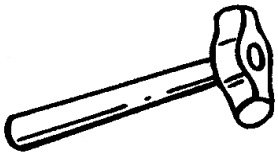


Cordless (14 or 18 volt) Or Electric Screw Gun With 5/16" Socket Drive

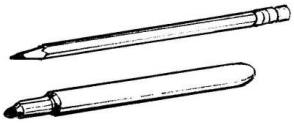
Safety Goggles Or glasses



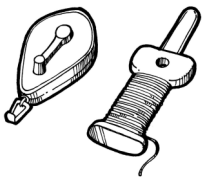
Hammer



Pencil/Marker and Felt Marker



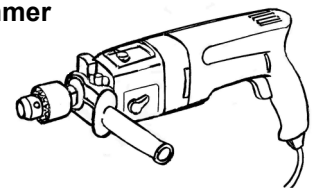
Chalk Line and Mason Line or Nylon String



#12 x 2 3/4" Wood-to-Metal Self-Drilling Screws
(if installing sliding doors)

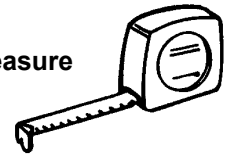
Masonry Drill Bit 1/2" x 8" Drill depth

Hammer Drill



Adjustable wrench

Tape Measure



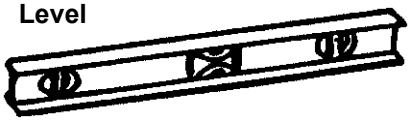
***NO lumber is provided by VersaTube Building Systems. Any lumber is the responsibility of the barn owner.**

2 Step Ladders

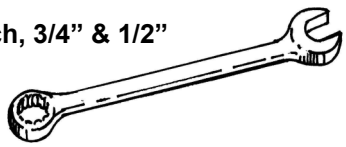
One must be at least 10' tall.
An Extension ladder can also be helpful when installing sheet metal.

Work Gloves

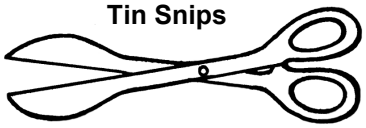
Level



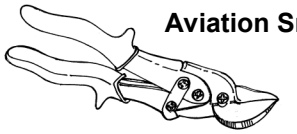
Wrench, 3/4" & 1/2"



Tin Snips



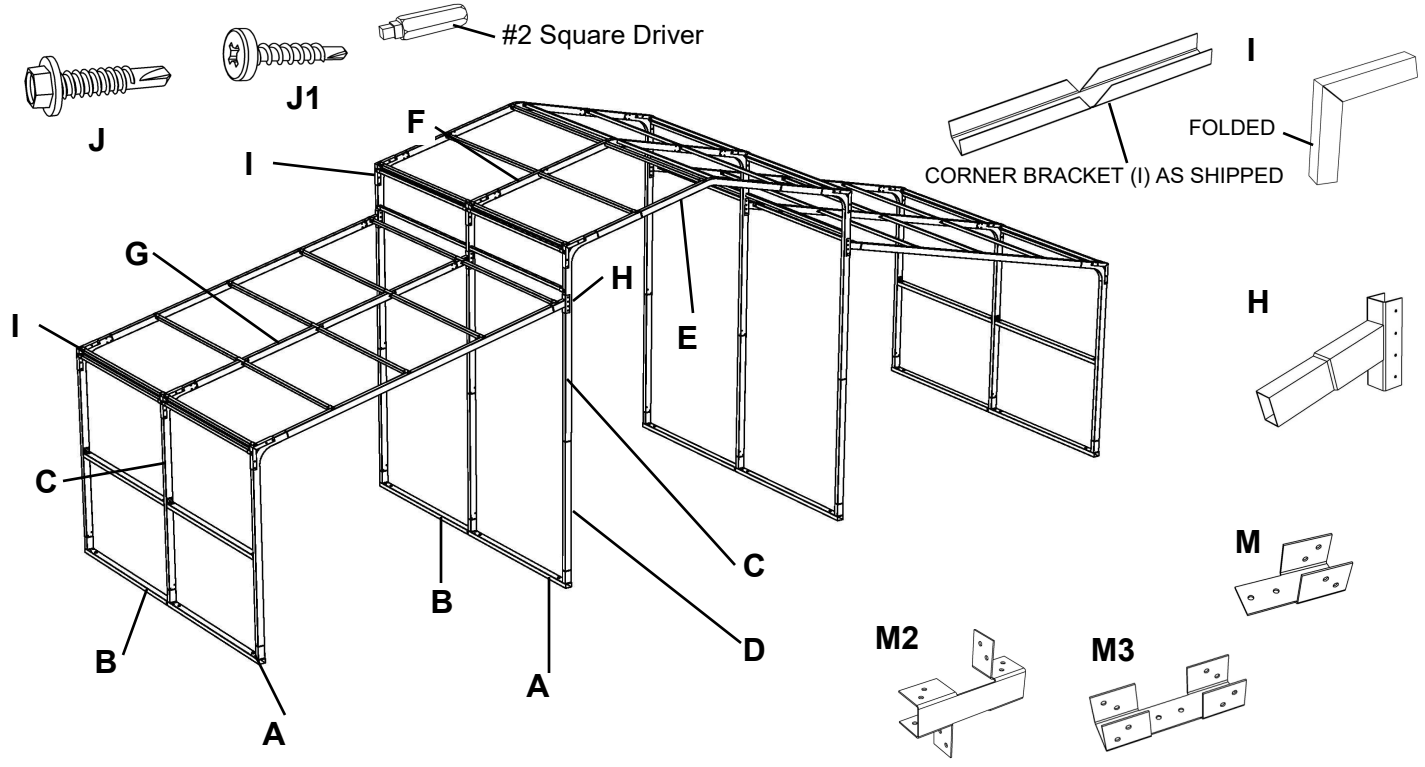
Aviation Snips



PARTS LIST FOR MAIN FRAME SECTION (HB-3612-M) OR (HB2-3612-M) AND PURLIN / GIRT KIT (HB-36-M-PG)

NOTE: THE PURLIN AND GIRT KIT (HB2-36-M-PG) FOR (HB2-3612-M) <u>BARN WITH STALLS</u> WILL NOT HAVE LOWER GIRTS (K) OR ANGLE BRACKETS (N)

QTY.	PART DESCRIPTION	PART #	LETTER
4	STARTER BASE RAIL (2 PINS, NO SWAGED END)	71-4602	A
4	6’ LENGTH EXTENSION BASE RAIL (1 PIN)	71-7040	B
12	SIDE POST	71-5008	C
6	5’ HEIGHT EXTENSION	HE-5	D
3	PEAK	71-6000	E
6	RAFTER	71-2000	F
6	LEAN-TO RAFTER	71-8500	G
6	LEAN-TO BRACKETS	BK-50	H
12	CORNER BRACKETS	BK-40	I
8	3/4” SELF-DRILLING SCREWS (HEX HEAD) 70 PACK	71-9999	J
104	PAN HEAD, SQUARE DRIVE, SELF-DRILLING SCREWS	71-9999-PAN	J1
4	LOWER GIRT 2 X 3 X 69 3/4”	7100-6975	K
44	UPPER SIDE GIRT / ROOF PURLIN 1 1/2” SQUARE X 69 3/4”	7500-06975	L
8	ANGLE BRACKET	BK-10	N
44	SINGLE PURLIN BRACKET	BK-30	M
14	DOUBLE PURLIN BRACKET	BK-31	M2
8	DOUBLE PURLIN BRACKET (WIDE)	BK-31W	M3



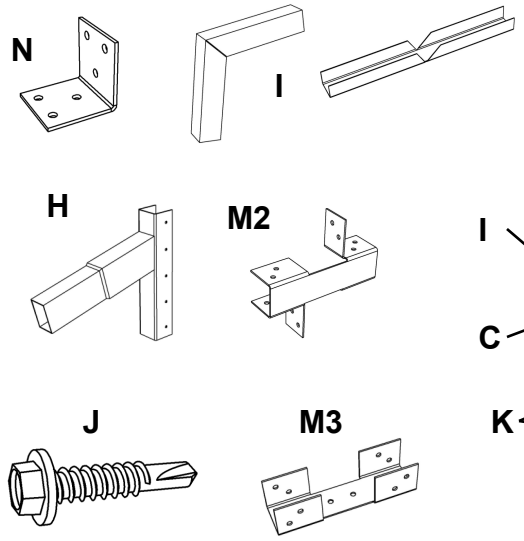
PARTS LIST FOR 12’ BARN EXTENSION (HB-3612-E) & (HB-36-E-PG)

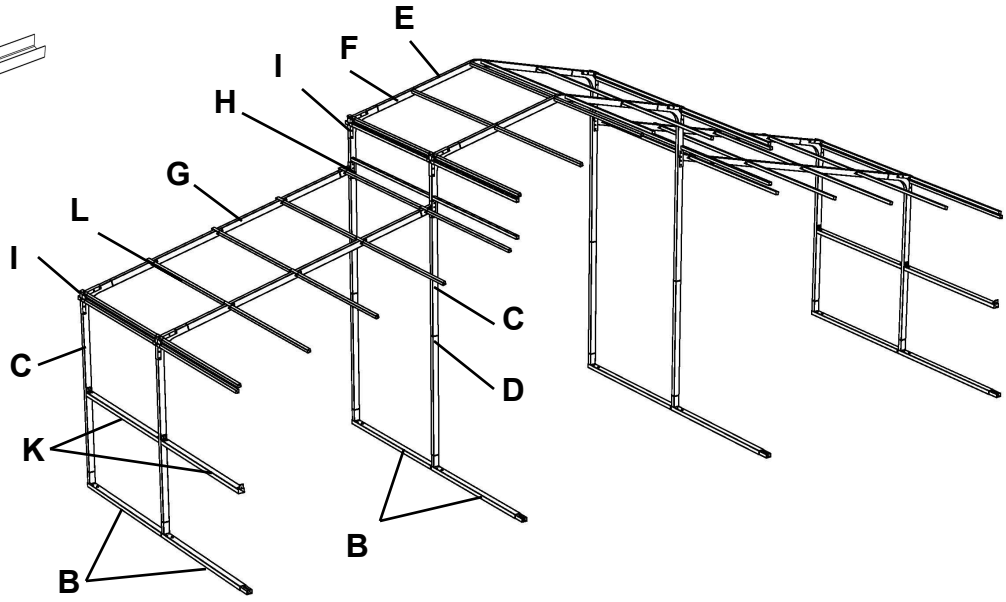
THIS LIST INCLUDES THE PARTS YOU WILL NEED TO EXTEND THE MAIN FRAME 12’. THE PURLIN/GIRT KIT(HB2-36-E-PG) FOR THE (HB2-3612-M) BARN WITH STALLS DOES NOT INCLUDE THE FOLLOWING PARTS: (K) & (N)

NOTE: BARN EXTENSIONS ARE 12’ IN LENGTH. THE MAIN (STARTER) SECTION IS 12’-2” LONG. STALLS FIT A 12’ SECTION. THE LENGTH OF YOUR BARN WILL BE DETERMINED BY THE NUMBER OF 12’ LENGTH EXTENSIONS THAT YOU ADD. (YOU WILL NEED PURLINS AND GIRTS FOR EACH SECTION)
NOTE: THE (HB2-LE-PG) FOR BARNS WITH VERSATUBE STALLS WILL NOT HAVE LOWER GIRTS (K) OR ANGLE BRACKETS (N).

QTY.	PART DESCRIPTION	PART #	LETTER
8	6’ LENGTH EXTENSION BASE RAIL (1 PIN)	71-7040	B
2	PEAK	71-6000	E
4	RAFTER	71-2000	F
4	LEAN-TO RAFTER	71-8500	G
8	SIDE POST	71-5008	C
4	5’ HEIGHT EXTENSION	HE-5	D
4	LEAN-TO BRACKET	BK-50	H
8	CORNER BRACKET	BK-40	I
7	3/4” SELF-DRILLING SCREW (HEX HEAD) 70 PC.	71-9999	J
32	PAN HEAD, SQUARE DRIVE, SELF-DRILLING SCREWS	71-9999-PAN	J1
4	LOWER GIRT 2 X 3 X 69 3/4”	7100-6975	K
44	UPPER SIDE GIRT / ROOF PURLIN 1 1/2” SQUARE X 69 3/4”	7500-06975	L
8	ANGLE BRACKET	BK-10	N
28	DOUBLE PURLIN BRACKET	BK-31	M2
16	DOUBLE PURLIN BRACKET, (WIDE)	BK-31W	M3

NOTE: IF THE BARN FRAME THAT YOU HAVE PURCHASED DOSE NOT INCLUDE THE VERSATUBE STALL SYSTEM, YOU WILL BE INSTALLING LOWER AND UPPER GIRTS ON THE SIDES OF THE BARN. IF YOU HAVE PURCHASED THE VERSATUBE STALL SYSTEM, NO LOWER GIRTS ARE NECESSARY ON THE BARN SIDES WHERE STALLS ARE INSTALLED.

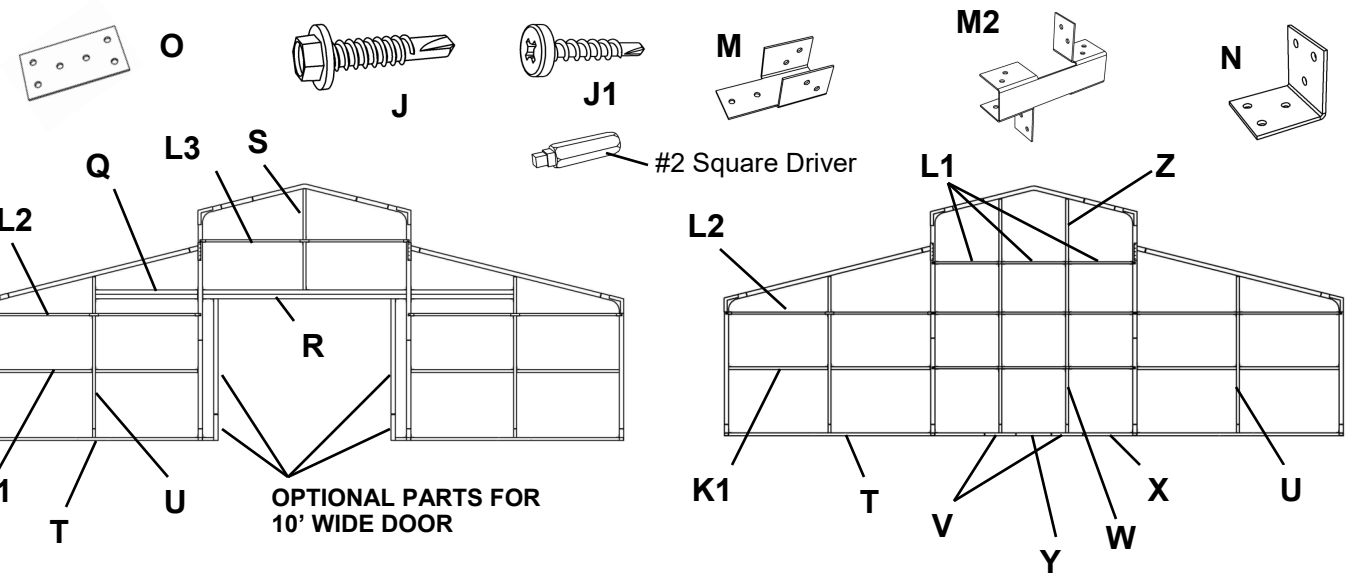




PARTS LIST FOR FRONT AND BACK ENCLOSURES WITH GIRTS (HB-36-FE)(HB-36-BE) (HB-36-FE-PG) (HB-36-BE-PG)

NOTE: IF YOU PURCHASED THE BARN (HB2-3612-M) WITH THE VERSATUBE STALLS, (HB2-36-FE) (HB2-36-BE) (HB-36-FE-PG) (HB-36-BE-PG) YOU WILL NOT HAVE THE FOLLOWING PARTS: (K1) (L2) & 8 OF (N)

QTY.	PART DESCRIPTION	PART #	LETTER
4	DOOR TRACK BACKERS 2 X 3 X 69 3/4”	7100-6975	Q
2	DOOR HEADERS 2 X 3 X 137 7/8”	7100-1378	R
1	DOOR HEADER BRACE 2 X 2 X 68 1/2”	7400-6850	S
4	FRONT AND BACK BASE RAIL 2” SQ., 1 PIN	74-4601	T
4	FRONT AND BACK LEAN-TO VERTICALS 2” SQ. X 103”	7400-10300	U
2	T-CONNECTOR	71-BE-T	V
2	BACK, CENTER UPRIGHT 2 X 2 X 81 3/4” SWAGED ONE END	74-8175	W
2	BASE RAILS 2 X 2 X 34 1/2”	7400-3450	X
1	BASE RAIL 2 X 2 X 24 1/2”	7400-2450	Y
2	BACK UPRIGHT EXTENSION 2 X 2 X 79 5/8”	7400-7962	Z
9	BACK CENTER GIRTS 1 1/2” SQUARE X 44 3/8”	7500-04437	L1
8	LOWER GIRT (BACK & FRONT LEAN-TO SEC.) 2 X 2 X 69 3/4”	7400-6975	K1
8	UPPER GIRT (BACK & FRONT LEAN-TO SEC) 1 1/2 SQ. X 69 3/4”	7500-06975	L2
2	ABOVE DOOR GIRTS 1 1/2 SQ. X 67 3/4”	7500-06775	L3
16	SINGLE PURLIN BRACKET	BK-30	M
11	DOUBLE PURLIN BRACKET	BK-31	M2
20	FLAT BRACKET	BK-20	O
39	ANGLE BRACKETS	BK-10	N
10	3/4” SELF-DRILLING SCREWS (HEX HEAD) 70 PACK	71-9999	J
50	PAN HEAD, SQUARE DRIVE, SELF-DRILLING SCREWS	71-9999-PAN	J1



<u>IMPORTANT</u> NOTE BEFORE YOU START ASSEMBLY OF THE BARN:

(1)-HAVE YOU TALKED TO YOUR LOCAL BUILDING INSPECTOR? WE SUGGEST YOU CHECK WITH YOUR LOCAL BUILDING OFFICIAL REGARDING SITE LOCATION, PERMIT PROCEDURES, SAFETY REGULATIONS AND SPECIFICATIONS OF MATERIALS USED TO CONSTRUCT YOUR NEW BARN.

(2)– IF YOU PURCHASED A BARN WITH STALLS, NOTE THAT THE WOOD THAT YOU USE TO CREATE YOUR STALLS MAY BE WET. WOOD WILL SHRINK AS IT DRIES. THIS STALL SYSTEM IS DESIGNED TO USE 2 X 8 DIMENSIONAL LUMBER. A DRY 2 X 8 WILL SHRINK IN WIDTH TO 7 1/8"-7 3/16" WIDE. THE LENGTH WILL SHRINK ONLY ABOUT 1/16".
FOR THIS REASON IT IS IMPORTANT THAT THE WOOD BE DRY OR IF INSTALLED WET IT SHOULD BE ALLOWED TO DRY IN PLACE FOR ABOUT 5 DAYS BEFORE THE FRAMING ABOVE THE GRILLS OR SOLID WALLS IS FULLY ANCHORED IN PLACE. IF THE BARN IS TO BE COVERED IN SHEET METAL, NO SCREWS SHOULD BE INSTALLED IN THE WOOD OR TOP CHANNEL BEFORE THE WOOD HAS DRIED PROPERLY.

(3)- IF SHEET METAL PANELS ARE NOT BEING USED IMMEDIATELY, STORE THEM IN A DRY AREA OUT OF THE SUN.

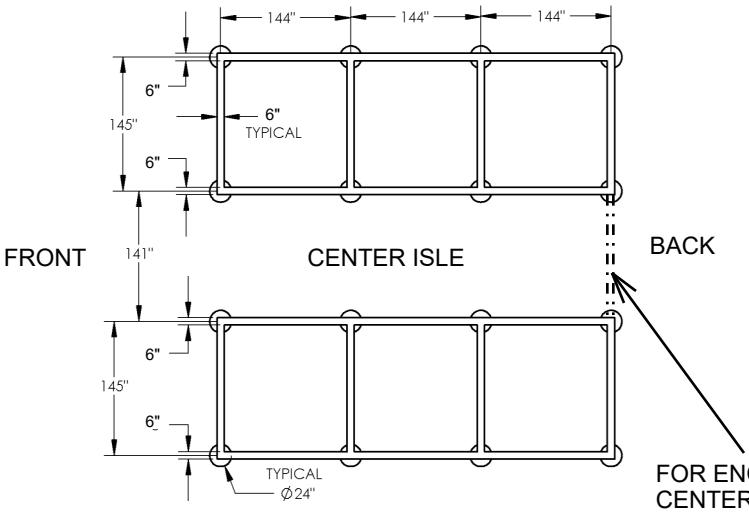
(4)- BEFORE THE BUILDING IS DELIVERED MAKE SURE THAT YOUR SITE IS CLEAR. PREPARE THE SITE SO IT IS LEVEL 6' BEYOND THE BUILDING ON ALL SIDES. REMEMBER TO MAKE SURE THERE IS ENOUGH ROOM FOR THE DELIVERY TRUCK TO MOVE AROUND YOUR SITE. THE BIGGER THE BUILDING ,THE BIGGER THE TRUCK DELIVERING THE BUILDING WILL BE.

ASSEMBLY INSTRUCTIONS

STEP 1: PREPARING THE FOUNDATION

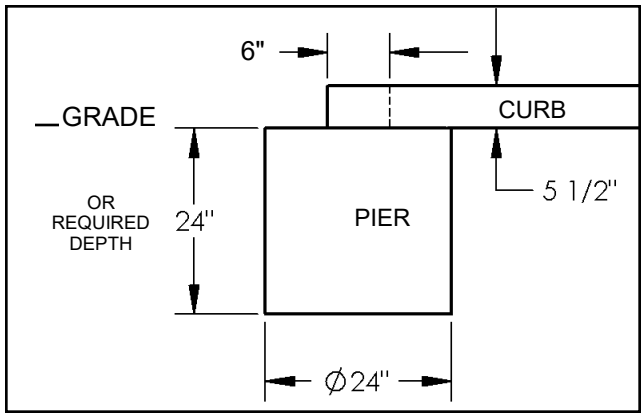
After you have chosen a site for your barn, carefully prepare the site so it is level 6' beyond the building on all sides. The barn may be anchored in several ways: It may be placed on a concrete slab. It may be anchored on a concrete curb, or it may be anchored directly on the level ground with ground anchors set in concrete.

A– If you will be poring a <u>concrete slab</u>, check local building codes for depth, etc. The outside dimensions of the barn: The main barn unit is 36'-2" wide and 12'-2 1/2" long from outside of base rail to outside of base rail. Extensions to the main section are 12' long. Base rails will be anchored to the concrete slab with 1/2" x 5 1/2" or 6" concrete anchor bolts. (If you will be installing the VersaTube stalls, you should use anchor bolts that will mount close to flush with the top of the base rails).
B– If you will be anchoring your barn to concrete curbs, see the layout below. <u>Check your local building codes for the required depth of piers at each 12' interval (post location).</u> Use 2 x 6 lumber to create forms for curbs. Dig 2' diameter holes as deep as required to create piers at corners on 12' centers as shown. Poor concrete in forms and piers at the same time. (NOTE: if you are in a freeze area install (2) #4 rebar rods down the length of each curb. (See detail on next page) Do not place the rebar in the center of the curb where concrete anchor bolts will be installed. When concrete sets and forms are removed, backfill dirt to within 2" of the top of the curbs on the outside of the building and to within 3 to 4" of the top of the curb in the stalls. Note: the layout below is for a 36"-2" x 36'-2" barn frame. Add or subtract sections in 12' increments.



LAYOUT SHOWN IS FOR 36"-2" X 36'-2" BARN

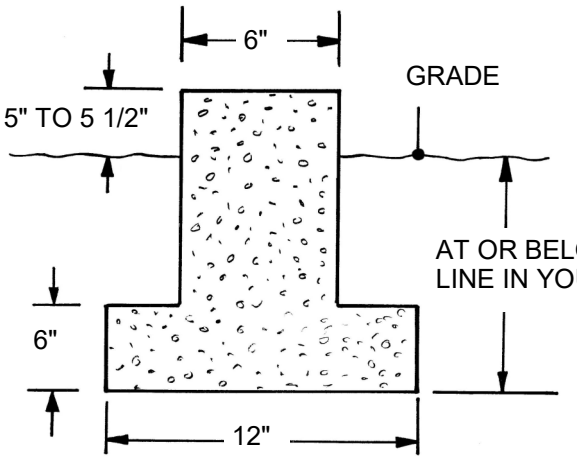
DETAIL OF CURB AND PIER



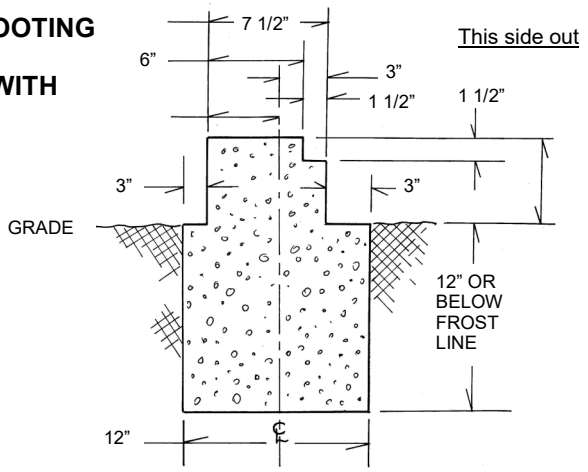
FOR ENCLOSED BACK CENTER ISLE, EXTEND CURB ACROSS THIS SPACE

C- If you choose to poor **<u>concrete footings</u>** for the exterior walls and down the center isle, see the drawings below for the footing layout and section. NOTE: The depth of the footing will very according to the frost line in your area of the country. Check with your local building official for the required depth of the footing in your area.
The divider walls can sit on concrete curbs 6” wide and 5” to 5 1/2” deep. If you are in a freeze area it is a good idea to install two pieces of #4 rebar down the length of each curb. (The rebar must not be placed in the center of the curb where concrete anchor bolts will be installed.)
When concrete is set and forms are removed, backfill dirt to within 2” of the top of the footing on the outside of the building and to within 3” to 4” of the top of the footing/curb in the stalls.

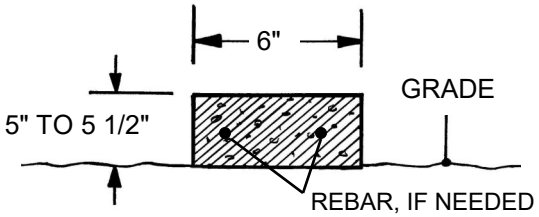
FOOTING SECTION FOR CENTER ISLE OR OUTSIDE WALL



ALTERNATIVE FOOTING SECTION FOR OUTSIDE WALL WITH SHEETING EDGE

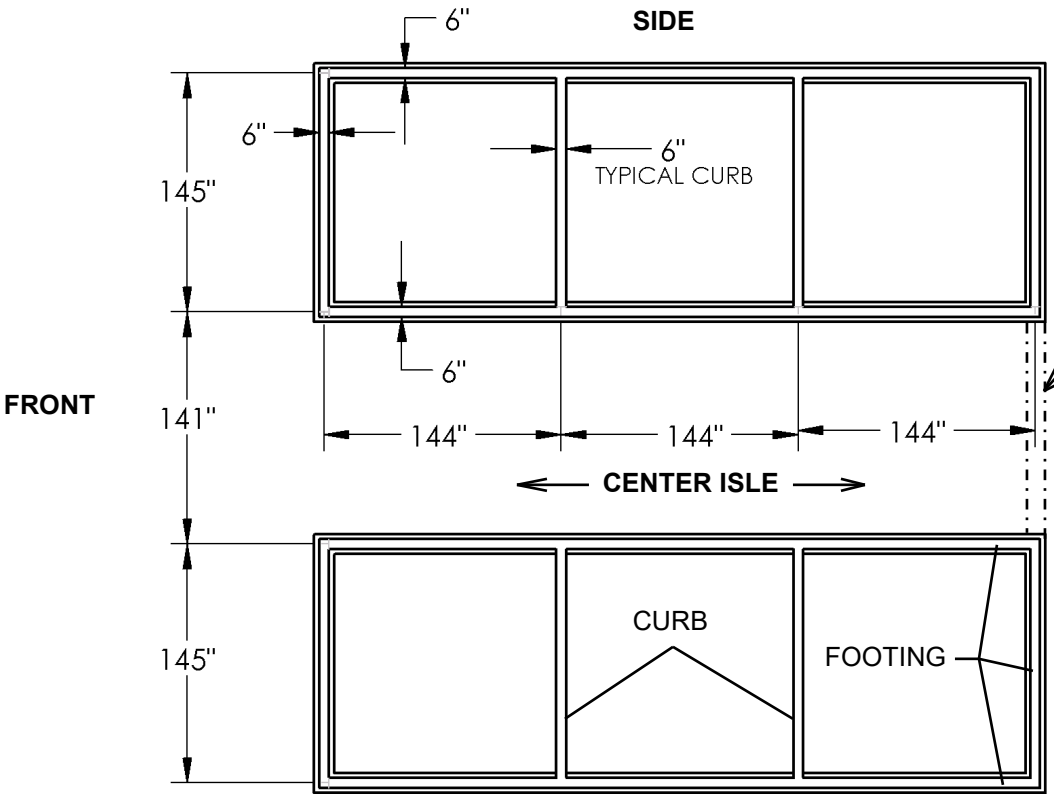


CURB SECTION



FOOTING AND CURB LAYOUT

CURBS RUN FROM CENTER ISLE
FOOTER TO FOOTER AT OUTSIDE OF BUILDING. THE CURBS PROVIDE A SUPPORT AND ANCHOR POINT FOR STALL DEVIDER WALLS.



IF YOU WILL BE ENCLOSING THE BACK OF THE CENTER ISLE, EXTEND THE FOOTER ACROSS THIS SPACE.

NOTE: ALL DIMENSIONS EXCEPT 6” CURB WITH ARE CENTER LINE DIMENSIONS

STEP 2: ASSEMBLING BASE RAILS

Find the Base Rails with 2 pins welded to them. These are the starter Base Rails (A). Place these base rails at the front of the building. Every additional Base Rail will be a 6’ Length Extension Base Rail (B). Base Rails (B) will have a swaged end.
Place the 4 Starter Base Rails (B) at the front of the building. The center isle base rails will be 12’ outside to outside. The lean-to section base rails at the outside of the building will be 145” from the outside of the center section base rails to the outside of the lean-to base rails. The outside dimension of the barn is 36’-2”.

Now, insert the 6’ Extension Base Rails (B) into the Starter Base Rails (A). The number of base rails inserted will determine the length of the building. Example: a 36’-2” long building will have 1 starter base rail and 5 extension base rails from the front to the back of the building. The illustration below shows a 36’-2” x 36’-2” building.

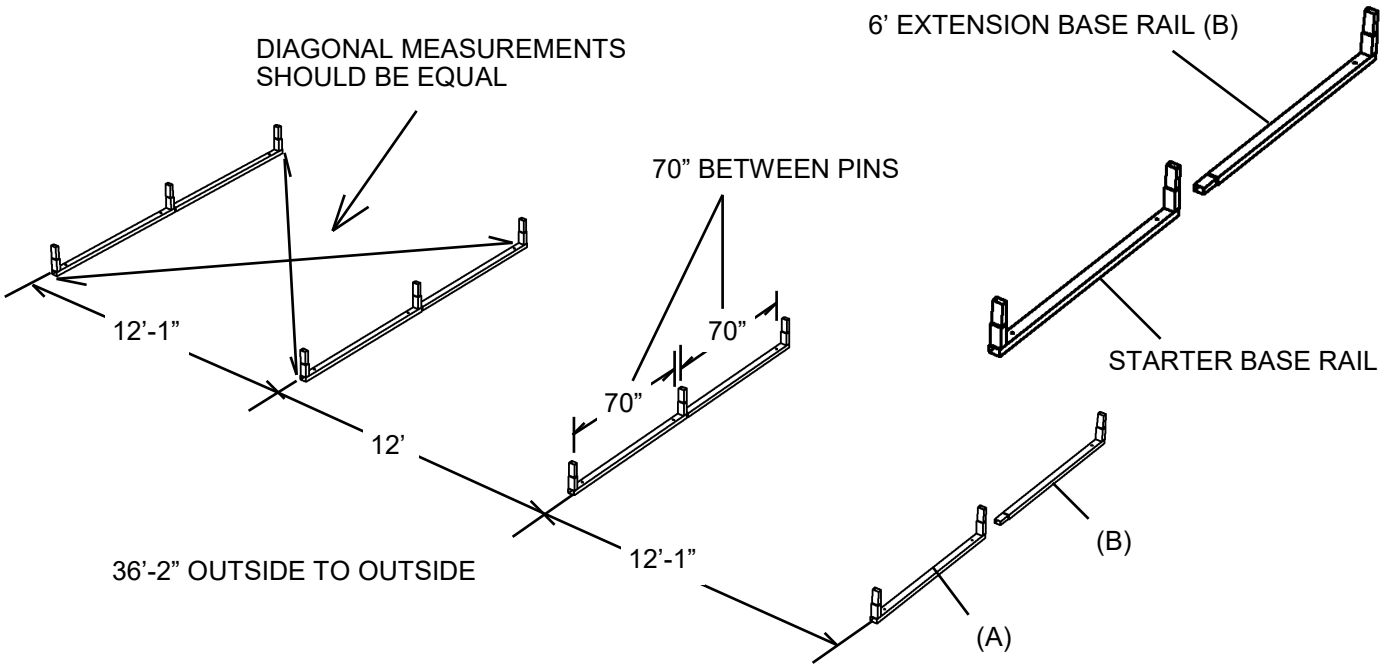
Note: the pins on the base rails are on 6’ centers. The distance from one pin to the next must be carefully set at 70”.

Measure and set the base rails to the dimensions shown below. Take a diagonal measurement on each 12’ section to be sure the base rails are square. The diagonal measurements should be equal.

HINT: It may be helpful to snap chalk lines to use as a guide to keep base rails square and straight.

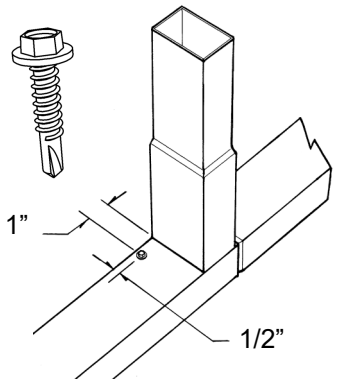
Fasten the base rails together with (1) 3/4” self– drilling screws (J) on the inside, top edge of each joint.
Anchor each base with concrete anchor bolts or 30” concrete ground anchors depending on your foundation.

BASE RAIL ASSEMBLY



SCREW LOCATION DETAIL

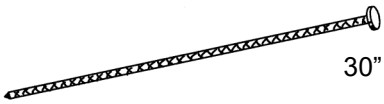
Place one self-drilling screw 1” from the pin and 1/2” from the inside edge of the base rail. Screws must be placed away from the outside edge of the barn and stalls because stall channels and boards will the outside 2” of the base rail.



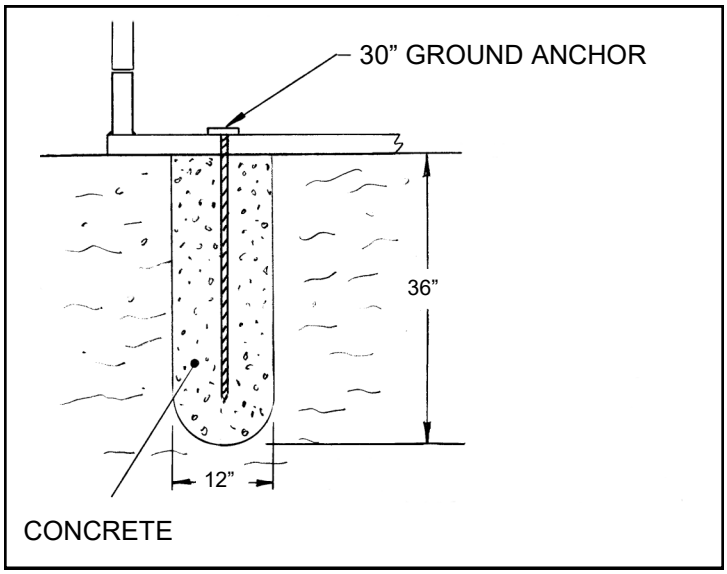
STEP 3: ANCHORING THE BASE RAILS

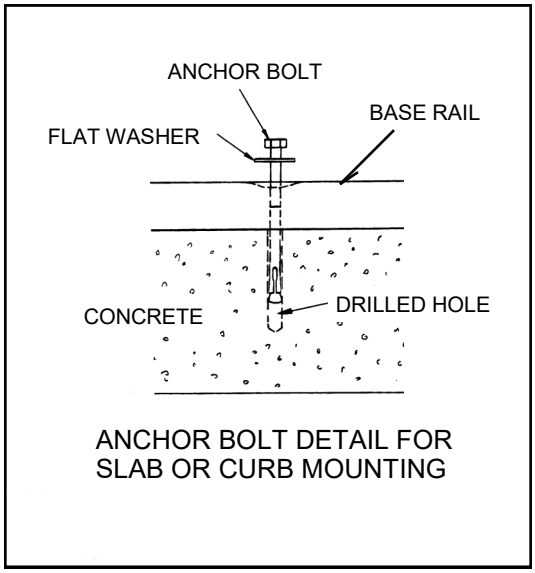
If you will be anchoring the base rails to the ground, you will need to layout the base rails for the center isle and lean-to sections, mark on the ground the locations of the anchor holes, slide the base rails to one side and dig 1' wide x 3' deep holes at each anchor location. Now, reposition the base rails over the holes, recheck all dimensions and drop a 30" ground anchor through each anchor hole in the base rails. Now, poor concrete in each anchor hole up to grade. Recheck all dimensions wile the concrete is still soft. Let the concrete set before attaching frame sections.

If you are anchoring the base rails to a concrete slab or curbs, place base rails on slab, square and set dimensions as shown above and anchor base rails to concrete with 5 1/2" or 6" x 1/2" concrete anchor bolts and flat washers. (If you are using the VersaTube stall system, chose bolts that will be close to flush with the top of the base rail when tightened. Stall boards will set down on top of the base rails. Also, bolts should not stick up in stall doorways.). See bolt manufacturers instructions for installing anchor bolts.



30" GROUND ANCHOR

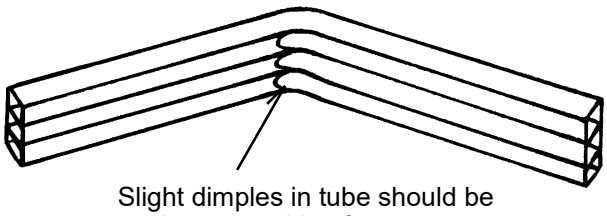




ANCHOR BOLT DETAIL FOR
SLAB OR CURB MOUNTING

STEP 4: ASSEMBLING THE CENTER ISLE ROOF/WALL SECTIONS

HELPFUL HINT:
Prior to starting step 4, it is helpful to align each peak so the slight dimple in the bend is to the same side. This will make the inside roof framing appear straight and even.

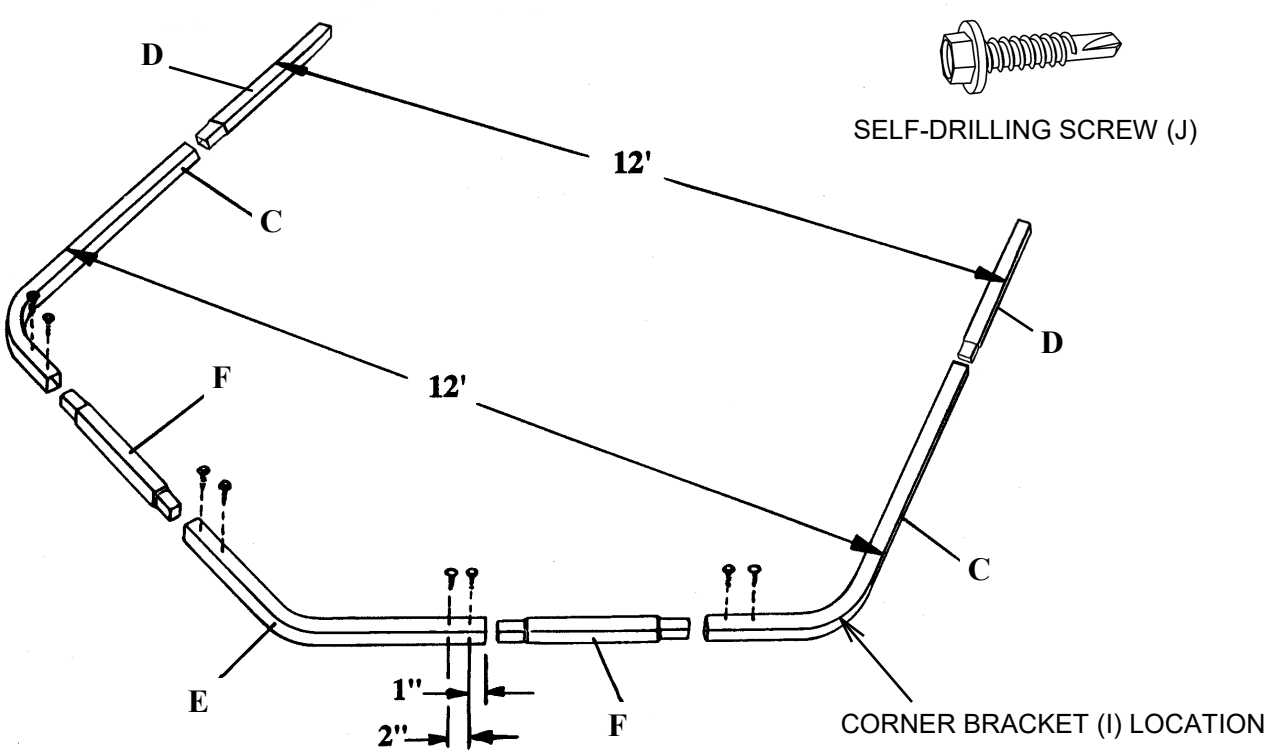


Slight dimples in tube should be
on the same side of structure

ROOF/WALL SECTION ASSEMBLY

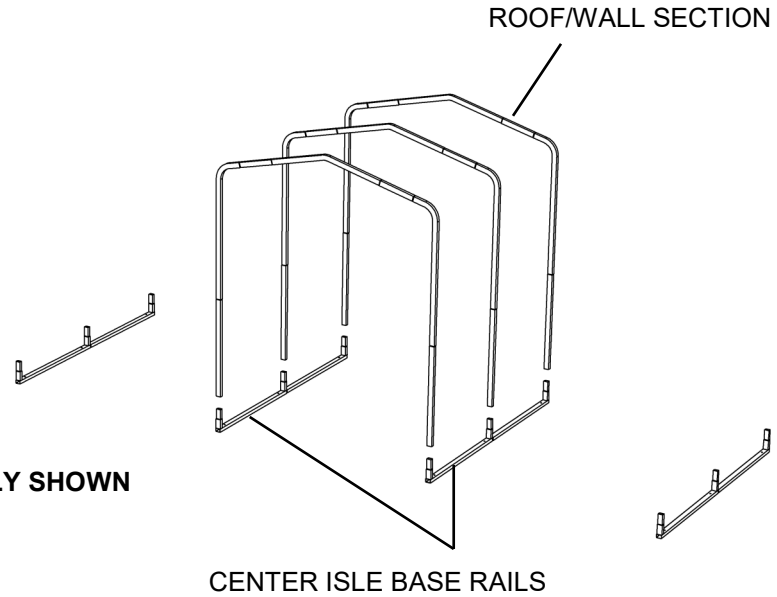
Take one Side Post (C) and insert one Height Extension (D) on bottom and one rafter (F) on top as shown below. Repeat this assembly with another Side Post , Height Extension and Rafter. Now, Connect the two assemblies with one Peak (E). Measure 12 feet across the assembly from outside to outside toward the top and bottom of the Assembly. Try to keep the joint spacing equal on both sides of the assembly. Recheck the 12 foot outside dimensions and fasten each joint with two #12 x 3/4" Self-Drilling Screws (J). (See illustration below for screw locations.)

Place the Roof/Wall section assembly on the Base Rail assembly (center isle rails) to check the fit. Make any necessary adjustments. (this may require reattaching of joints on the Roof/Wall section assembly). Make equal adjustments on both sides of the assembly. When the assembly fits properly, lay it back on the ground and use it as a template or guide for assembling the remaining Roof/Wall sections.



STEP 6: ATTACHING ROOF/WALL SECTIONS TO BASE RAILS

NOTE: this step will take two people to complete safely and easily. Lift and place the legs of each assembly on the base rail pins. **If you will be installing the VersaTube Stall System**, do not fasten the joints with screws at this time. When the channels of the stall system are installed you will install 2 screws in each joint through the channels. **If you are not planning to install the VersaTube Stall System**, fasten each joint with 2 self-drilling screws (J). Do not place the screws on the outside of the building where sheet metal will be attached.



12' SECTION ONLY SHOWN

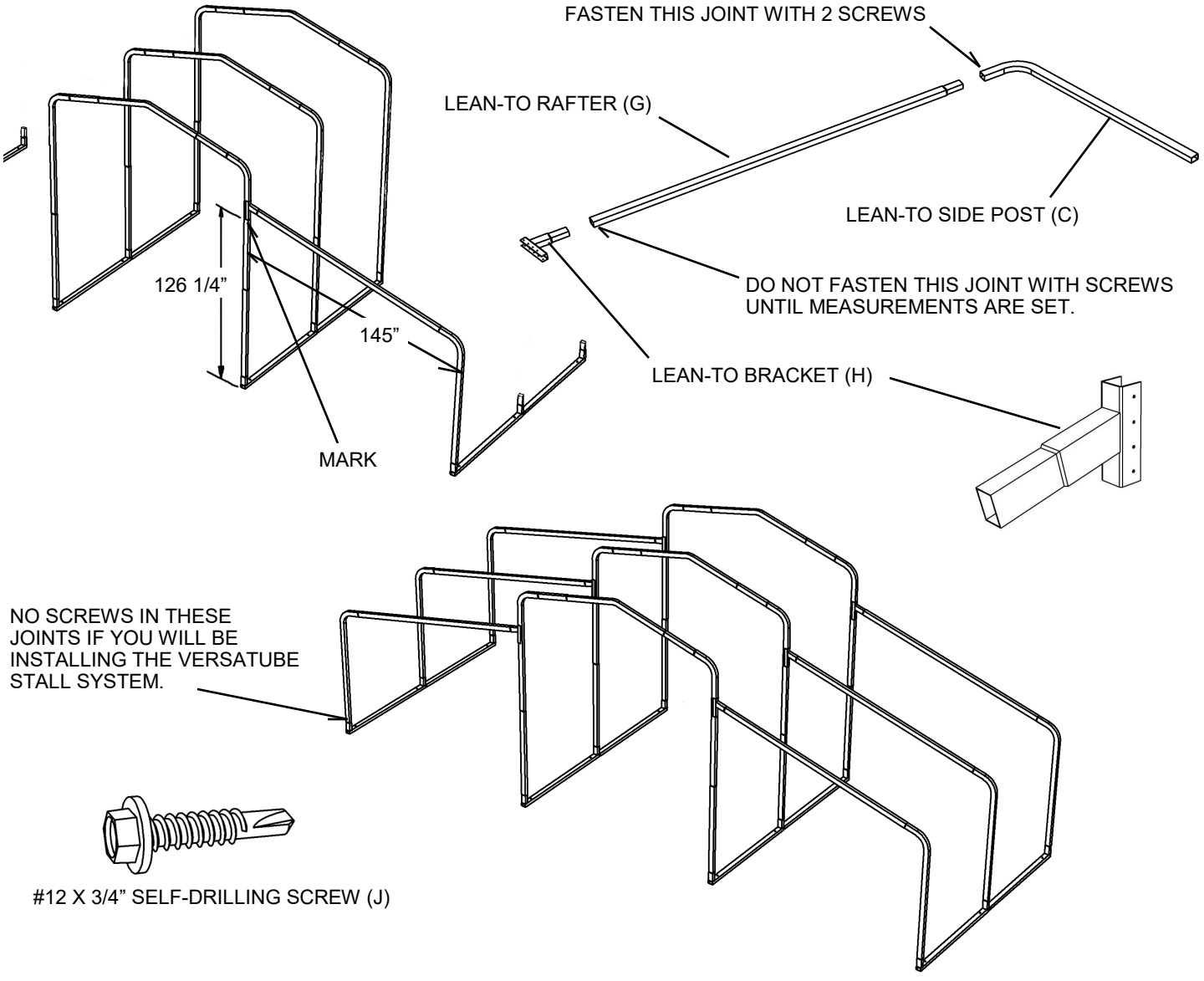
STEP 6: ASSEMBLY OF LEAN-TO SECTIONS

Connect one Side Post (C) with one Lean-to Rafter (G) and one Lean-to Bracket (H). Do not fasten the Lean-to Bracket joint at this time. Fasten the connecting joint of the side post and rafter with two 3/4" Self-Drilling screws.

Put a mark on all side posts of the center section frame 126 1/4" up from the bottom of the base rail. This will be the location of the bottom of the Lean-to Bracket when you attach the Lean-to assembly to the center frame.

Now, put the assembly in place on the barn as shown with the side post (C) on the first pin of the (lean-to) base rail (A) and the Lean-to Bracket (H) on the center isle frame side post. The bottom of the Lean-to Bracket should match up with the line you marked on the center isle frame side post. (Note that the joint of the lean-to rafter and the lean-to bracket are is not yet fastened) Clamp or install one screw in the lean-to bracket to attach it to the center isle frame. Measure the distance from the outside of the center isle frame to the outside of the lean-to section side post at the top and set the dimension at 145". Fasten the joint of the lean-to bracket (H) and the Lean-to rafter (G) with the dimension set at 145", with two 3/4" self-drilling screws (J). **This assembly should be plumb. Check the center isle frame for plumb and the lean-to section for plumb. Make any adjustments necessary to make all components plumb.**

Now, remove the screw or clamp used to fasten the lean-to bracket to the center isle frame. Remove the assembly from the base rail and use the assembly as a template for the remaining lean-to section assemblies. Assemble the remaining lean-to sections and install them to the barn. If you will be installing the VersaTube Stall system, do not place any screws in the joint of the lean-to side post to the base rail pin at this time. If you will not be installing the VersaTube Stall System, fasten each joint with two 3/4" self-drilling screws at this time. (do not place the screws on the outside of the building where sheet metal panels will be installed.)

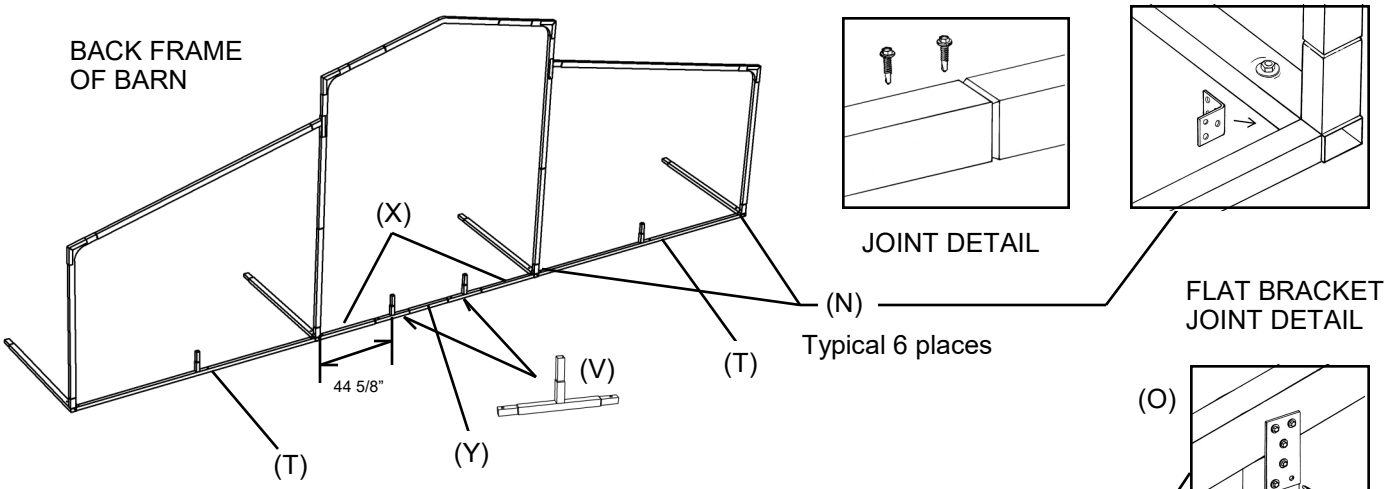


STEP 7: BACK ENCLOSURE ASSEMBLY, HB-36-BE & HB2-36-BE

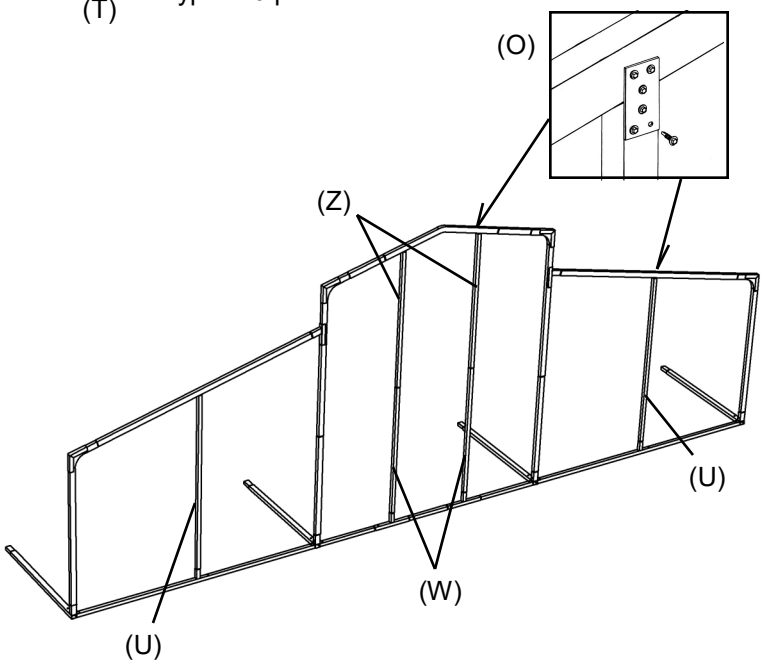
THESE ASSEMBLY INSTRUCTIONS ARE FOR BOTH THE (HB-36-12, BARN WITHOUT STALL SYSTEM) AND THE (HB2-3612, BARN WITH STALL SYSTEM). IF YOU WILL NOT BE INSTALLING THE VERSATUBE STALL SYSTEM, YOU WILL INSTALL UPPER AND LOWER GIRTS IN THE LEAN-TO SECTIONS OF THE BARN. IF YOU WILL BE INSTALLING THE VERSATUBE STALL SYSTEM, NO UPPER OR LOWER GIRTS WILL BE INSTALLED IN THE LEAN -TO SECTIONS.

SEE PAGE 6 FOR PARTS LIST FOR FRONT AND BACK ENCLOSURES.

BASE RAIL ASSEMBLY: In the Lean-to sections of the barn, (back wall), place 1 Front/Back Base Rail (T) 2" square, 142" long with 1 pin welded in the center. Fasten the Base Rail at both ends to the barn outside base rail and to the center isle base rail with Angle Brackets (N) and 3/4" self-drilling screws (J). Anchor the center of the Base Rail with a concrete anchor bolt as you did the other base rails. Now, if you will not be installing a door at the back of the barn, assemble 2 T-Sections (V), 1 Center Base Rail (Y), and 2 Base Rails (X) as shown between the center isle base rails at the back of the barn (do not fasten the joints with screws at this time. If the base rails are not being anchored to a concrete slab or curb mark the location of the T-Section holes on the ground, remove the base rail assembly and dig anchor holes as you did for the other base rails. Replace the base rail assembly and attach the end base rails (X) to the center isle base rails with Angle Brackets (N) and Self-Drilling Screws (J). Measure and set the distance from the center isle base rail (inside) to the outside of the T-Section vertical pin at 44 5/8". Do this for both T– Sections (V). Center the center base rail (Y) and fasten all the joints with two 3/4" Self-Drilling Screws (J) at this time. (Place the screws on the top of the base rails.) Now, anchor the T-Sections (V) to the curb, slab, or ground as you did the other base rails. (Make sure the base rail assembly is straight before anchoring.)



INSTALLING BACK VERTICALS:
In the lean-to sections of the barn install Back Vertical Tubes (U) 2 x 2 x 103" long, on the base rail pins. Make sure that the verticals are plumb and fasten them on the inside of the rafter with a Flat Bracket (O) and 3/4" Self-Drilling Screws (J). If you are not installing the VersaTube Stall System, attach the verticals at the bottom with 3/4" Self-Drilling Screws (J) at this time. Place the screws on the side of the tube joint. If you are going to install the VersaTube Stall System, the joint will be fastened when you install the vertical channels. In the center/back section of the barn you will install an assembled back vertical in two places on the T-Section pins. To create the back center vertical join one Back Center Upright (W) and one Back Upright Extension (Z). Plumb the verticals and fasten to the rafters on the inside of the building with Flat Brackets (O) and 3/4" self-drilling screws (J).



See parts list on page 6 for part description

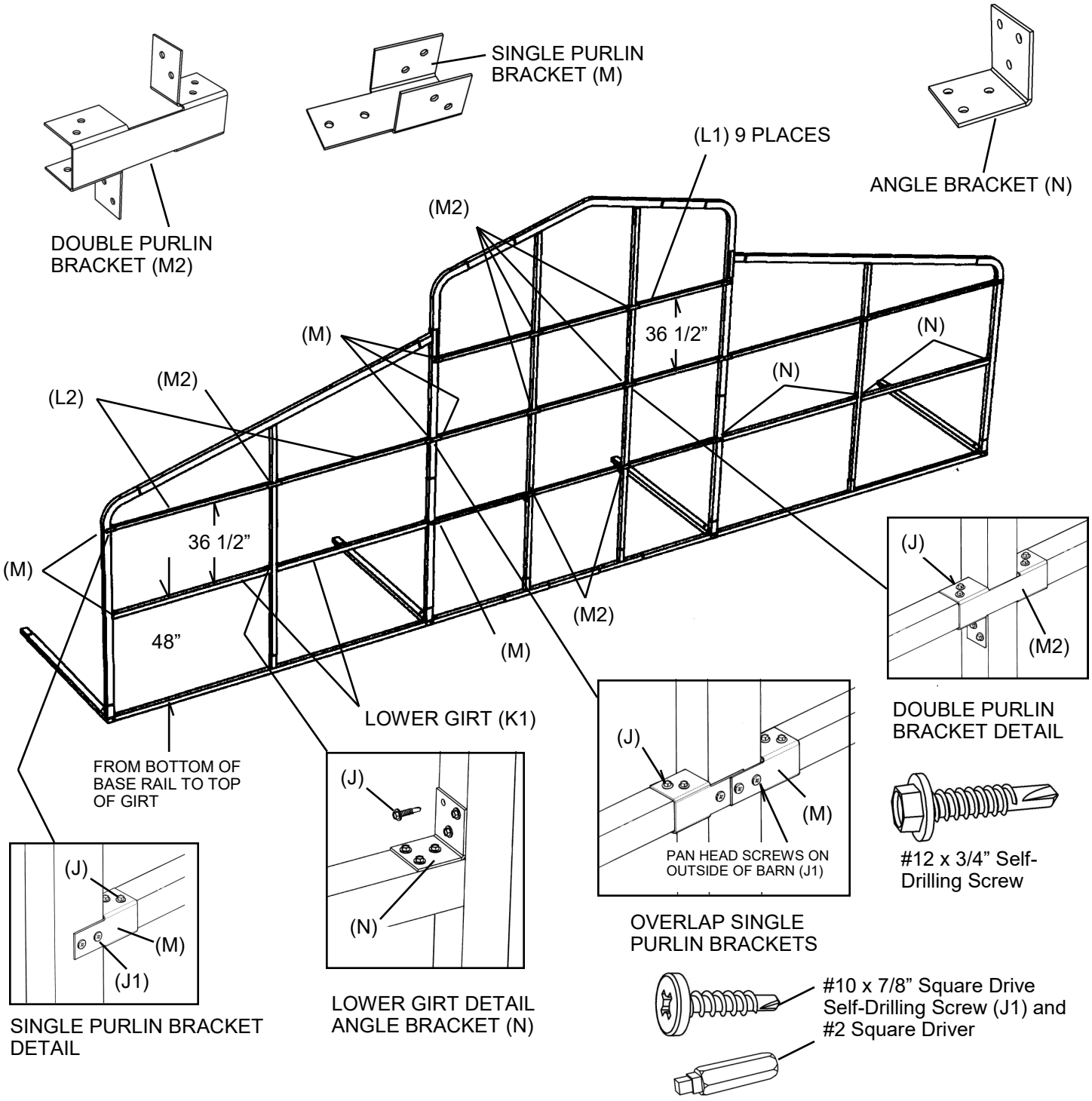
STEP 8: INSTALLING BACK GIRTS

IMPORTANT: Check the frame for plumb before you attach girts to brackets. Keep checking frame for plumb as you go along.

NOTE: If you <u>will</u> be installing the VersaTube Stall System, you will not install upper or lower girts in the lean-to sections.

Install the 9 girts in the center isle section first. These girts are 1 1/2" square tube 44 3/8" long (L1). Install the girts as shown below at the heights specified and with the purlin brackets indicated in the illustration below.

If you <u>will not</u> be installing the Versatube Stall System, install Upper girts (L2) and Lower Girts (K1) in lean-to sections as shown below. Use Angle Brackets (N) to attach lower girts in lean-to sections.

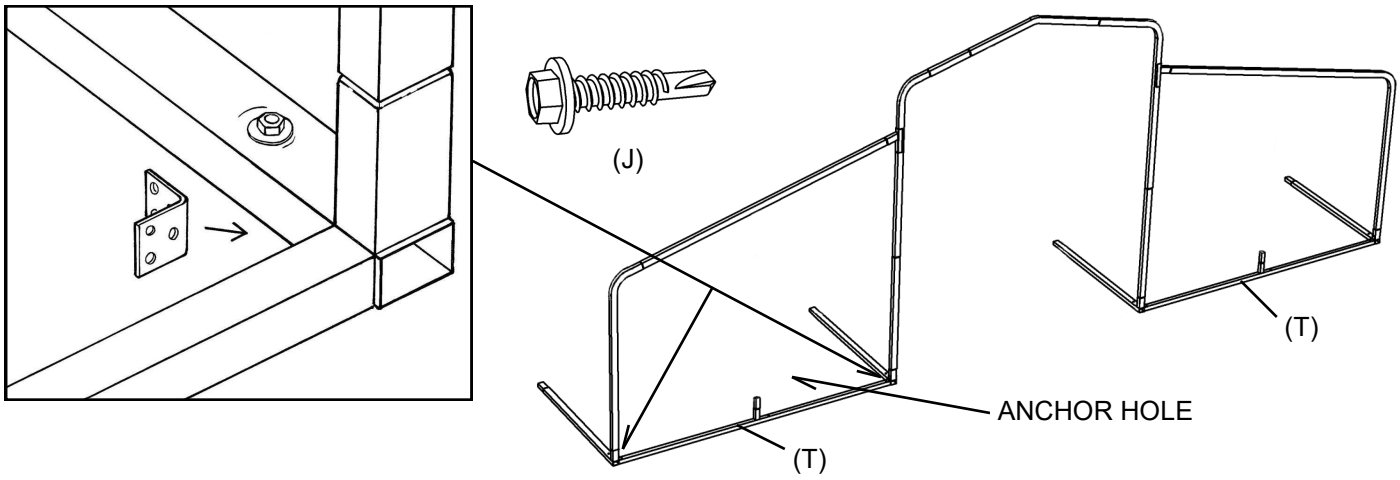


STEP 9: FRONT ENCLOSURE ASSEMBLY

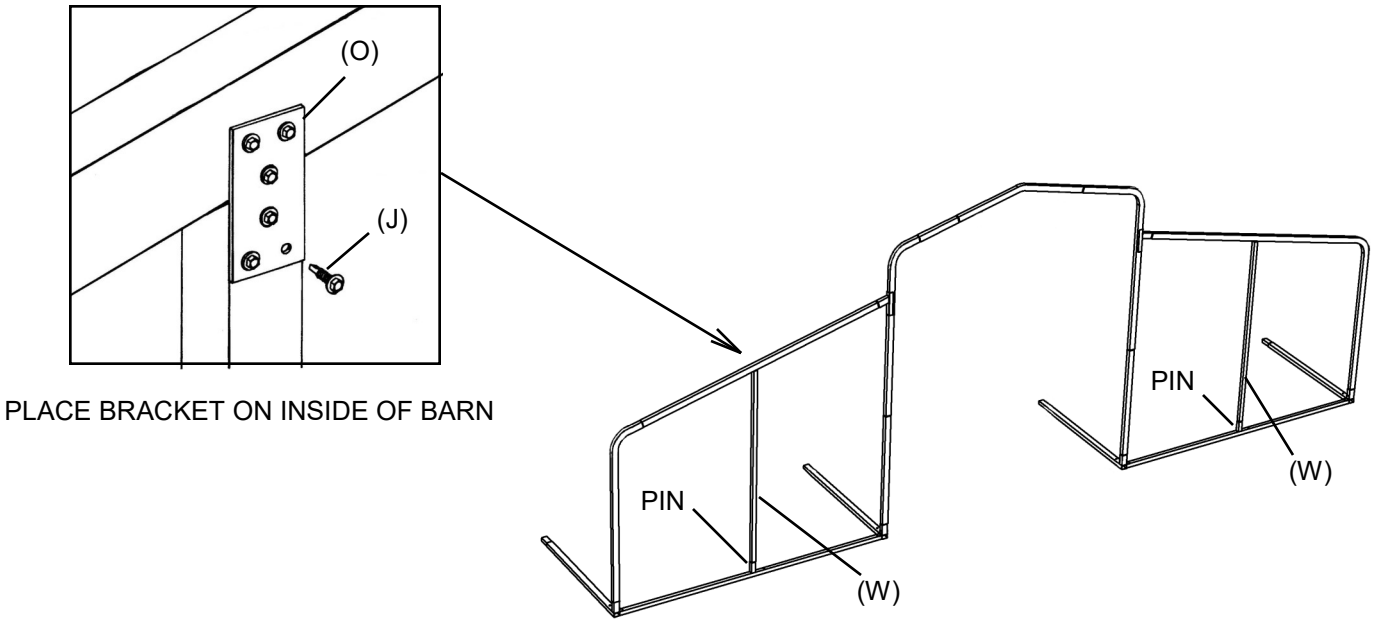
INSTALLING THE LEAN-TO SECTION BASE RAILS.

Place a Front/Back Base Rail (T) between the center isle and outside base rails in both lean-to sections at the front of the barn (2 places). Fasten both ends of the base rails (T) to the center isle and outside base rails with Angle Brackets (N) and 3/4" Self-Drilling Screws (J).
Note: If you will be installing the VersaTube Stall System, the angle brackets must be installed on the inside corners so they do not interfere with the installation of Stall Panel Vertical Channels on the side posts. (See detail below) If you will not be installing the VersaTube Stall System, you can mount the angle brackets on the top of the base rail.

Anchor the base rail through the hole near the pin as you did the other base rails. (Ground Anchor or Concrete anchor bolt)

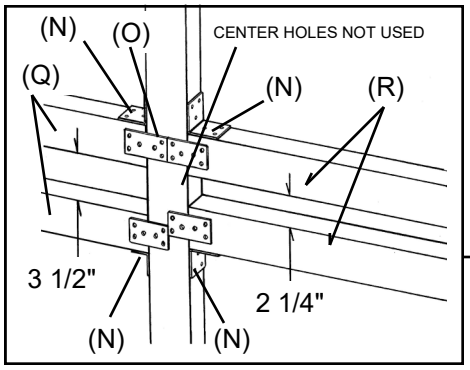


Now, install the Center Uprights (W). Place the uprights on the base rail pins, plumb the uprights, and fasten them to the rafter above with a Flat Bracket (O) and Self-drilling screws (J) on the inside of the barn. (See detail)

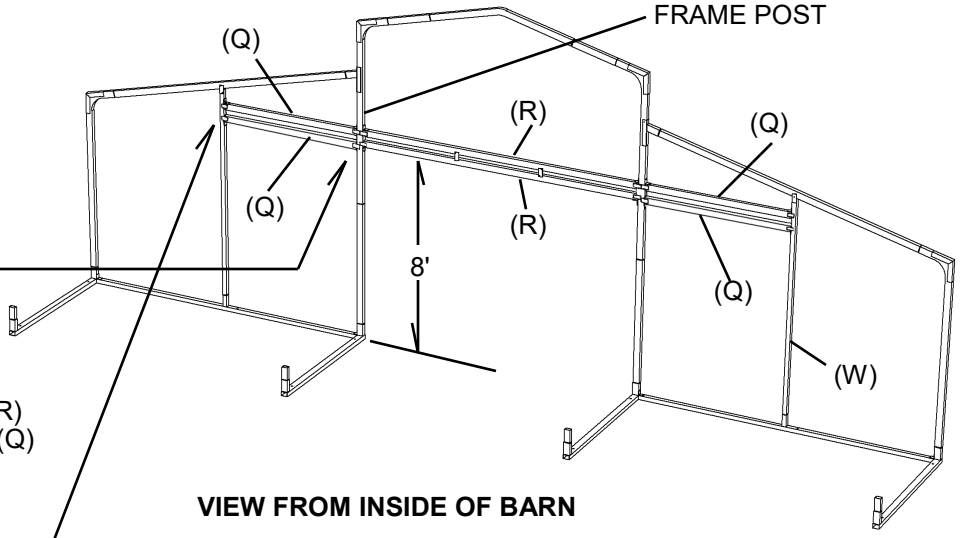


INSTALLATION OF FRONT ENCLOSURE CONTINUED

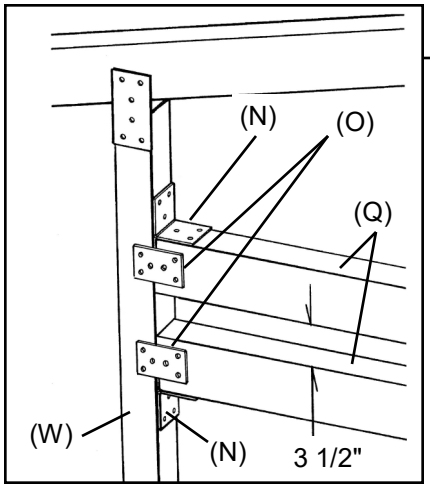
INSTALLING THE DOOR HEADER TUBES AND DOOR TRACK BACKER TUBES:
Install the 1 Door Header Tube (R) at a height of 8'. Fasten the header tube to the barn frame with angle brackets (N) on the bottom side. (Make sure that the header is level and that the 3" surface faces forward) Now, place another Header Tube (R) 2 1/4" above the first header tube and fasten it on top at both ends with Angle Brackets (N). On the back of the header tubes attach 2 Flat brackets (O) to tie the header tubes together 45" from the ends. (See detail) Fasten an additional Flat Bracket (O) at both ends of both header tubes. (See detail).
Now, attach the Door Track Backer Tubes (Q) in the lean-to sections. Lined up the top Backer tube flush with the Top Header Tube and the bottom Backer Tube 1 1/4" below the bottom Header tube. (there should be a 3 1/2" space between the top and bottom backer tubes) Fasten these tubes at both ends as you did the header tubes. (No center brackets are required)



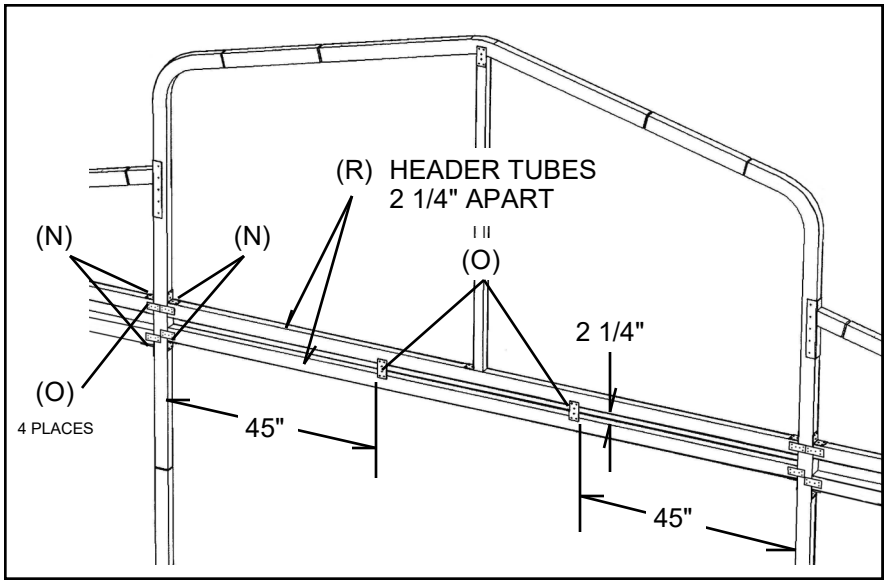
DETAIL OF JOINT, HEADER TUBES (R) AND DOOR TRACK BACKER TUBES (Q) TO FRAME POST



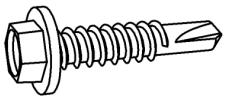
VIEW FROM INSIDE OF BARN



DETAIL OF DOOR TRACK BACKER TUBES (Q) TO LEAN-TO VERTICAL (W)



DETAIL OF HEADER ASSEMBLY FROM INSIDE BARN



USE SELF-DRILLING SCREWS (J) TO ATTACH ALL BRACKETS

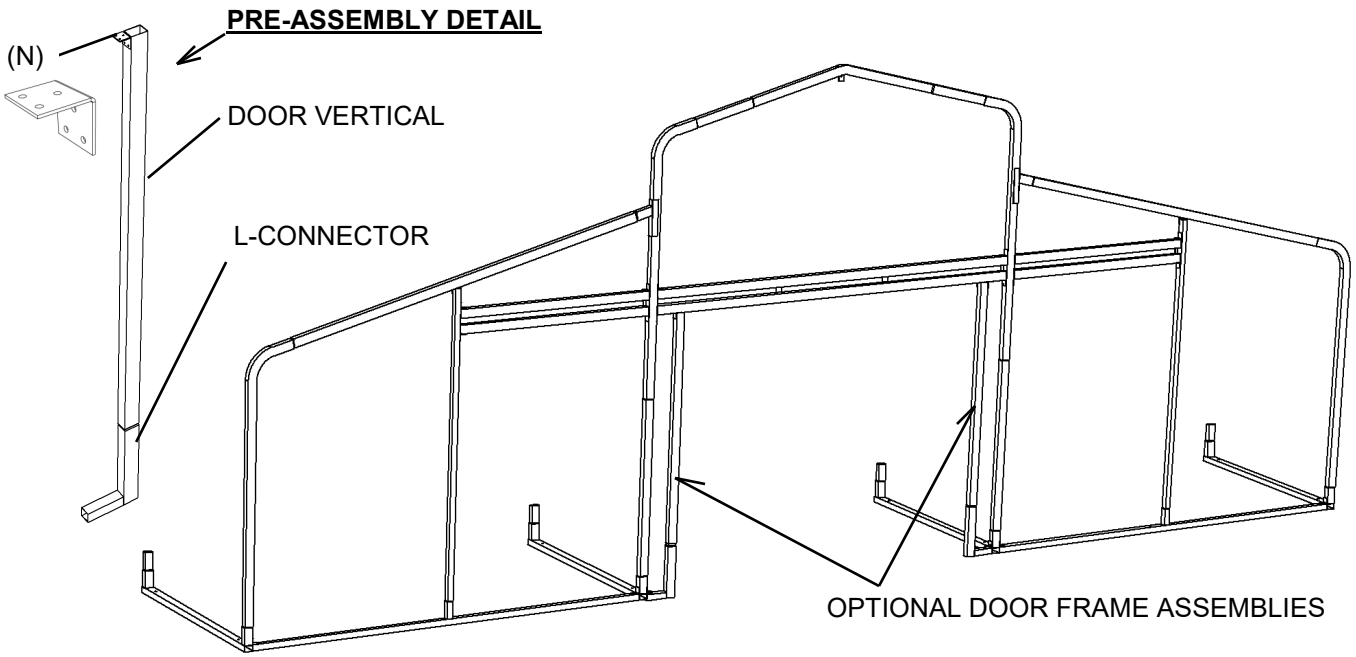
INSTALLATION OF OPTIONAL FRAME FOR 10' WIDE DOOR

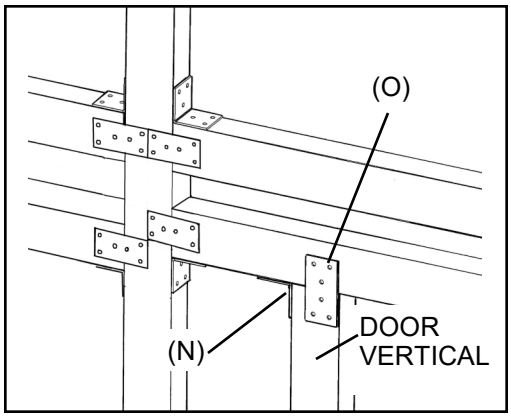
PARTS:

(2) DOOR VERTICALS 2” X 3” X 78” Part no. 7100-7800
(2) L-CONNECTORS Part no. 71-HB-L

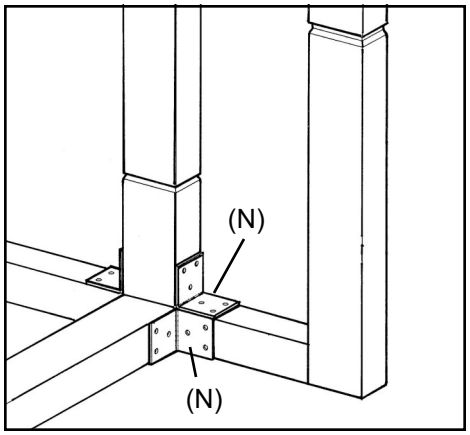
Join a Door vertical and a L-connector and attach an angle bracket (N) flush with the top inside edge of the door vertical as shown in detail. Place the assembly as shown in one corner of the barn door opening.
Attach the lower 2” x 2” base portion of the L-connector to the barn frame as shown using two Angle Brackets (N) and Self-Drilling Screws (J).
Plumb the Door Vertical and raise it up until it touches the Door Header (R) . Fasten the Door Vertical to the Door Header, on the inside of the barn, with a Flat Bracket (O) and Self-drilling Screws (J). Attach the Angle Bracket (N) to the under side of the door header with Self-drilling Screws (J). (See illustration)

Now, repeat for remaining Door Vertical and L-connector on the other side of the door.



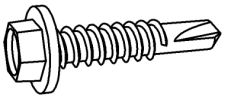


DETAIL OF TOP JOINT, INSIDE OF BARN



DETAIL OF BOTTOM JOINT, INSIDE OF BARN

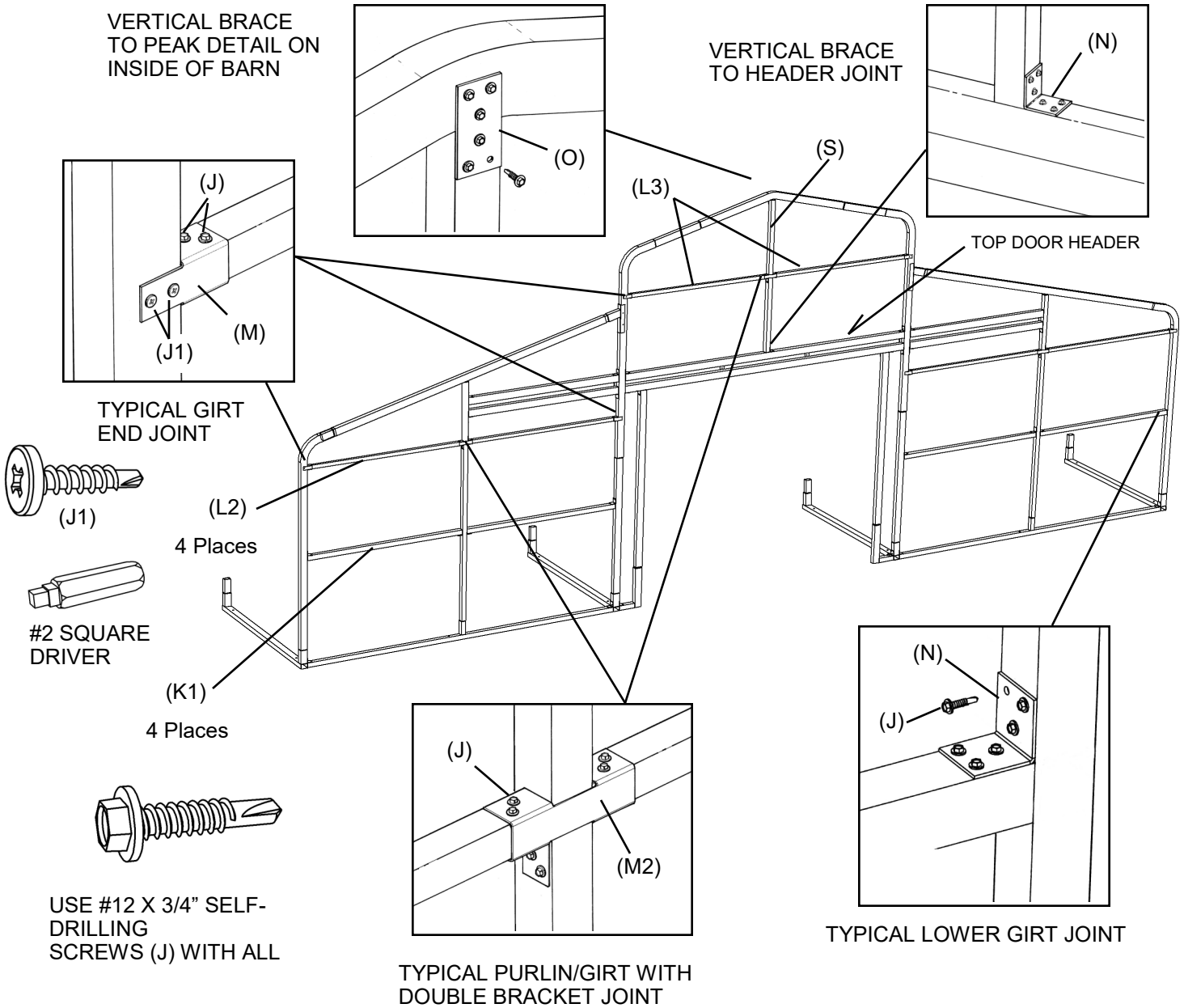
USE SELF-DRILLING SCREWS (J)
TO ATTACH ALL BRACKETS



INSTALLATION OF DOOR HEADER VERTICAL BRACE AND FRONT GIRTS

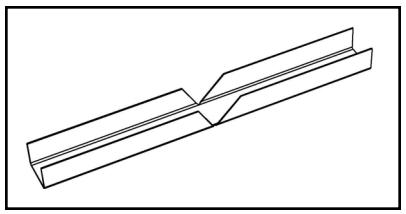
DOOR HEADER VERTICAL BRACE: Note: the Vertical Header Brace (S) comes from the factory 68 1/2" long to allow for different header assemblies. You will need to cut the Vertical Header Brace to 66 1/4" long for the assembly shown. (This assembly is for a rounded barn door track with flush mount brackets.)
Place a Door Header Vertical Brace (S) on top of the top Door Header (R) centered in the frame center isle space. Fasten the bottom of the Door Header brace to the Door Header with a Angle Bracket (N) and Self-Drilling Screws (J). Fasten the top of the Door Header Brace to the Peak (E) with a Flat Bracket (O) and Self-Drilling screws (J) on the inside of the barn. (See illustrations)
INSTALLING GIRTS:
NOTE: If you will be installing the VersaTube Stall System, you will not install any girts in the Lean-to sections of the barn.

Install the Above Door Girts (L3) as shown using Single Purlin Brackets (M) on the outside corners and a Double Purlin Bracket (M2) in the center. (See illustration for location dimension) Use Hex head screws (J) except on the outside surface of the barn in Single Purlin brackets (M). Use Pan head, square drive screws (J1) on outside of building. A square drive bit is provided with screws. (See detail.)
Now, install the Upper Girts (L2) and the Lower Girts (K1) in the lean-to sections as shown. On the top girts use Single Purlin Brackets (M) on the outside ends and a Double Purlin Bracket (M2) in the center.
Fasten the Lower Girts (K1) to the frame with Angle brackets (N) on the top or bottom side. (See detail)

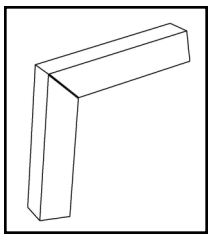


STEP 10: INSTALLING CORNER BRACKETS

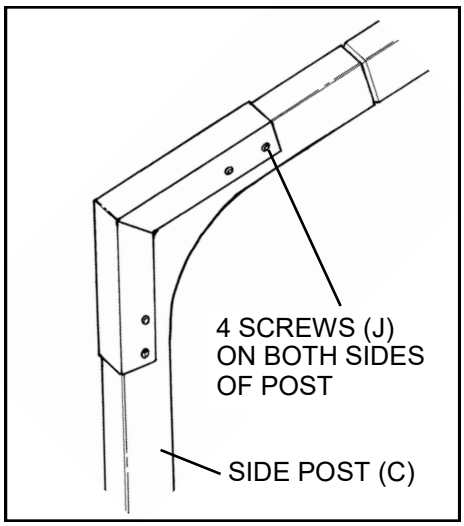
Corner Brackets (I) are shipped to you unfolded. You must first fold all of the corner brackets as shown to fit the corners of the lean-to and center isle side posts. Place the corner brackets on each side post bent corner, square them with the flat roof and side portions of the side post and attach them with 8 Self-

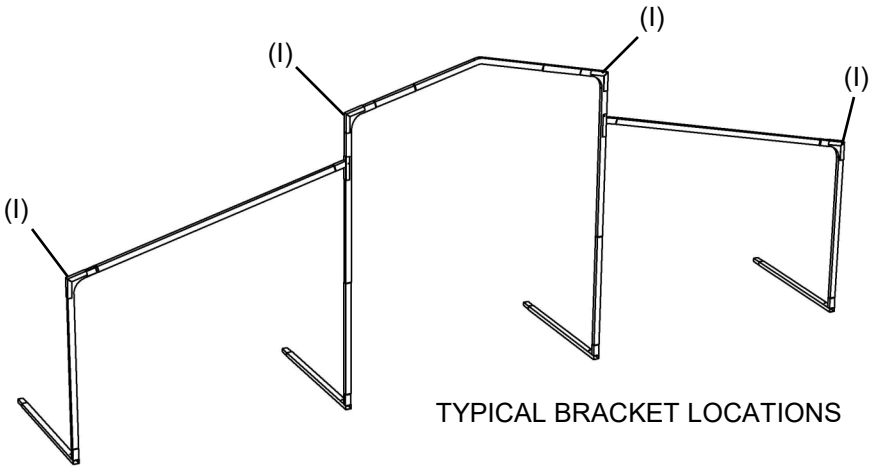


CORNER BRACKET (I)
UNFOLDED

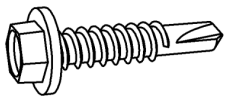


FOLDED





TYPICAL BRACKET LOCATIONS



(J)

STEP 11: INSTALLING ROOF PURLINS AND SIDE GIRTS

NOTE: If you will be installing the VersaTube Stall system you will not be installing the lower side girts.

The roof purlins and the upper side girts are the same part. (L) 1 1/2” square x 69 3/4” long.
The purlin/girts will be attached to the frame with purlin brackets. Single Purlin Bracket (M), Double Purlin Bracket (M2), and Double Purlin Bracket WIDE (M3).

Use Single Purlin Brackets (M) at the ends of the building (front and back). Fasten with Self-drilling screws (J) to the purlin and use Pan head Self-drilling screws (J1) to fasten the tongue to the building frame (see detail).

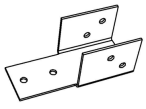
Use Double Purlin Brackets (M3) when joining two purlin/girts over a Corner Bracket (I). (see detail)

Use Double Purlin Brackets (M) at all other double purlin/girt joints. (see detail)

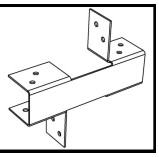
Use Angle Brackets (N) to fasten Lower Girts (K) to frame. (No lower girts with VersaTube Stall system)

See the Purlin/Girt layout drawing for purlin and girt location and measurements.

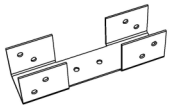
SINGLE PURLIN BRACKET (M)



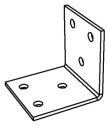
DOUBLE PURLIN BRACKET (M2)



DOUBLE PURLIN BRACKET WIDE (M3)



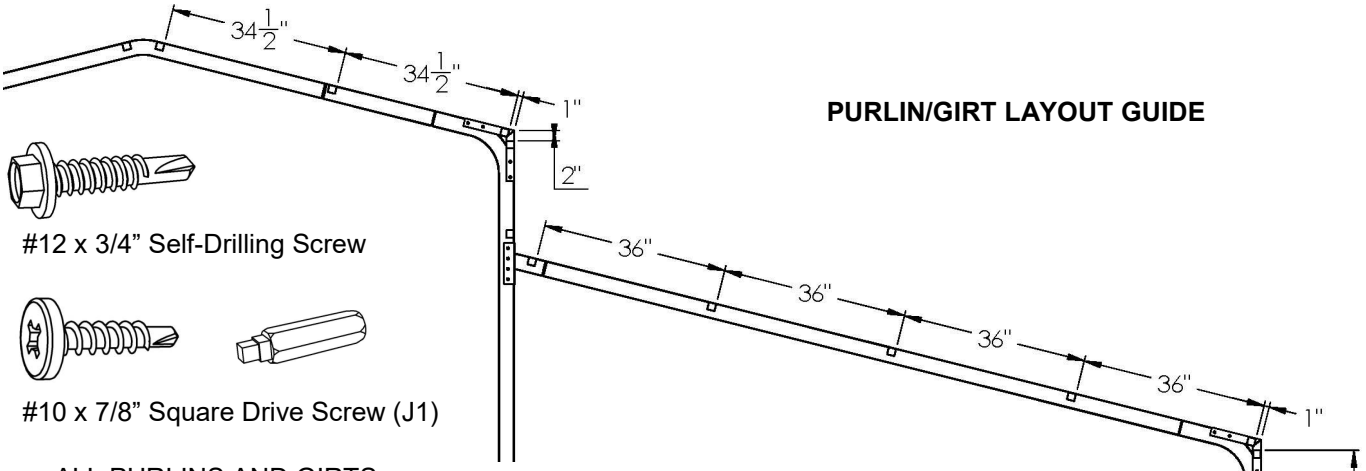
ANGLE BRACKET (N)



Attach the girts on the sides of the barn first.
The frame sections should be 72” on center or 70” between posts. Plumb the frame sections and continue to check the measurement between posts as you install the purlins and girts.

Hint: If you mark the bracket locations on the frame sections at both ends of the barn first, you can use a mason line or chalk line to mark all the bracket locations in the center of the building. This method will keep all of your purlins and girts looking straight and assure that the screws used to fasten the roof panels will always hit the purlins properly.

The details below will show you the correct brackets to use at each purlin/frame joint.

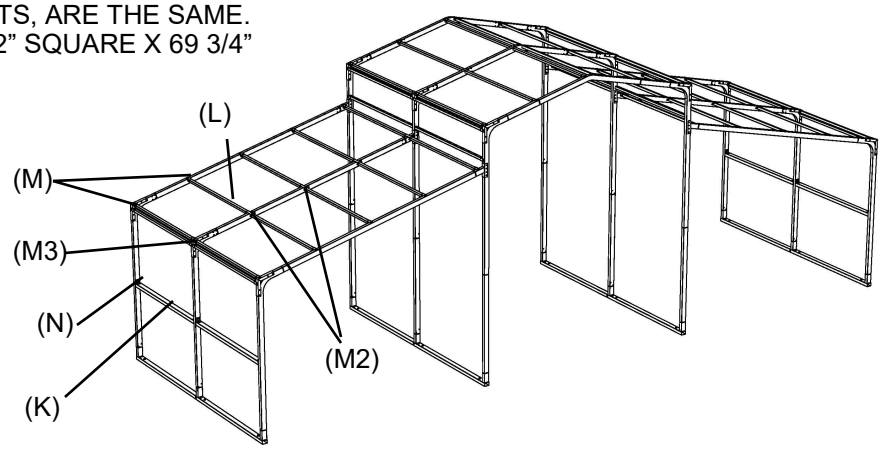


PURLIN/GIRT LAYOUT GUIDE

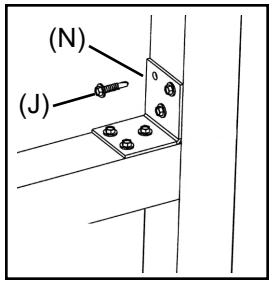
#12 x 3/4” Self-Drilling Screw

#10 x 7/8” Square Drive Screw (J1)

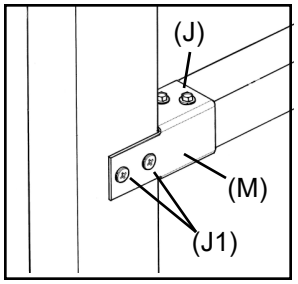
ALL PURLINS AND GIRTS, EXCEPT THE LOWER SIDE GIRTS, ARE THE SAME.
1 1/2” SQUARE X 69 3/4”



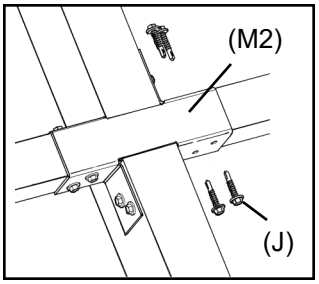
NOTE: NO
LOWER SIDE GIRTS USED WITH VERSATUBE STALL SYSTEM.



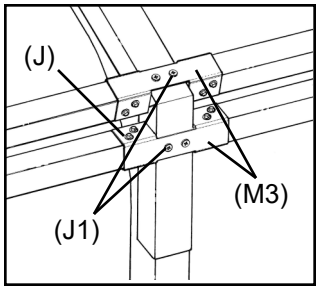
TYPICAL JOINT FOR LOWER SIDE GIRTS. USE ANGLE BRACKET (N)



TYPICAL SINGLE PURLIN JOINT AT THE FRONT AND BACK OF THE BARN. USE SINGLE PURLIN BRACKET (M)



TYPICAL DOUBLE PURLIN JOINT. USE DOUBLE PURLIN BRACKET (M2)



TYPICAL CORNER JOINT USE DOUBLE PURLIN BRACKET (WIDE) (M3)

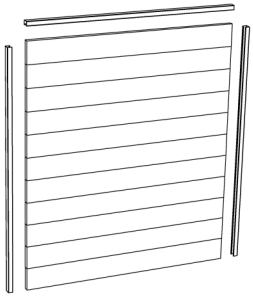
INSTALLATION OF THE VERSATUBE STALL SYSTEM

The VersaTube Stall System is a simple system to understand and easy to install. The stall system is based on 70” wide panels. (70” is the space between the vertical frame posts of your barn). VersaTube does not provide the lumber needed to finish each panel.

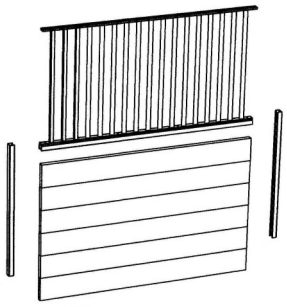
Panel Options:
Option 1) Solid Panel (2 channels 78”, 1 top channel 69 7/8” and screws)
Option 2) Grill Panel (1 grill, 2 channels 42”, 1 top rail 2” x 2” x 70”, 2 angle brackets and screws)
Option 3) Boredom Grill Panel (1 boredom grill, 2 lower channels 42”, 2 upper channels 18 3/4”, 1 top channel 69 7/8” and screws.
Option 4) Grill Panel with grill feeder door (1 feeder grill, 1 grill door, 2 channels 42”, 1 top rail 2” x 2’ x 70”, 2 angle brackets, 2 hinges 2 1/2”, 1 door latch pin, 1 door stop and screws.

Divider Walls:
To create a Divider Wall, you will need a Divider Wall Frame. This consists of 2 Divider Rails, 1 vertical tube, 4 Angle Brackets and screws. The panel options above can be used in divider walls. (2 panels per divider wall.)

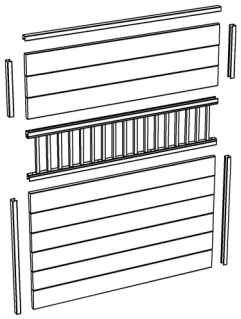
Stall Door:
To create a stall door you will need a Versatube door frame. This frame assembles to make a 6’ wide door and comes with a 12’ door track, 3 mounting brackets, 2 trucks, 1 door guide, 2 door stops, 1 pin latch and mounting hardware. You will also need a Stall Door Grill Panel (1 grill, 2 channels 41”, and screws)



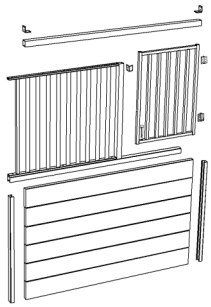
SOLID PANEL



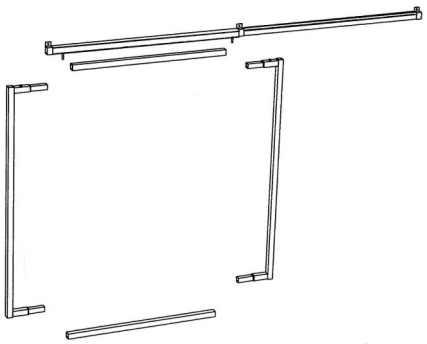
GRILL PANEL



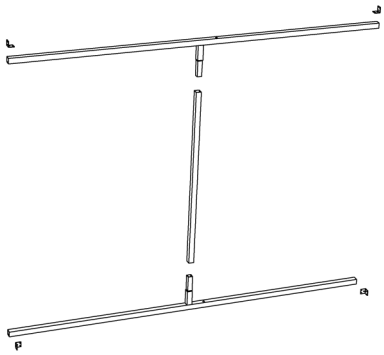
BOREDOM GRILL PANEL



FEEDER GRILL PANEL WITH GRILL DOOR



DOOR FRAME



DIVIDER WALL FRAME

PANEL INSTALLATION ON OUTSIDE OF BARN AND STALL FRONT:

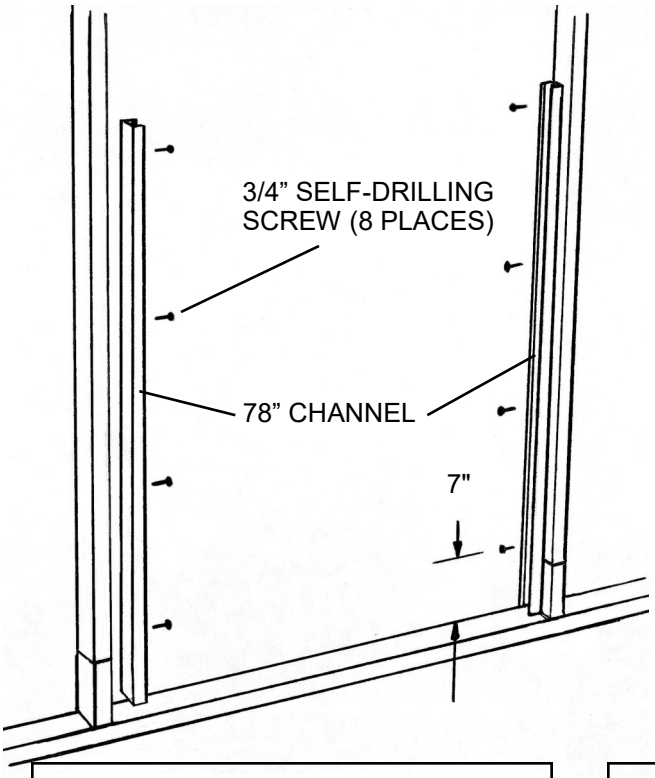
SOLID WALL PANEL:

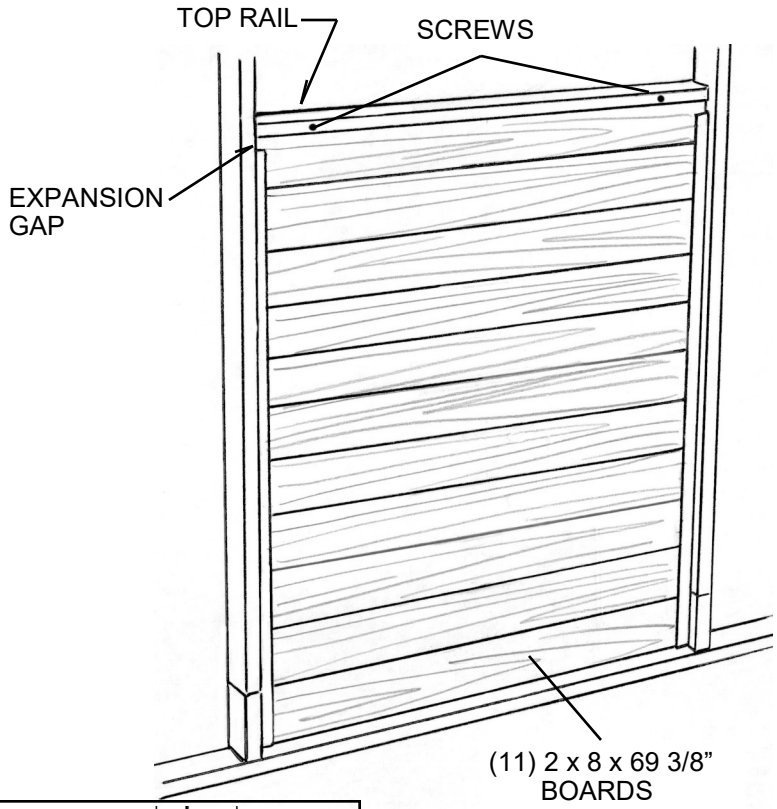
A Solid Wall Panel can be installed in any of the 70” openings around the barn: Outside walls, end walls, stall front wall, or stall divider walls.
The solid wall panel has two side channels 78” long and one top channel 69 7/8” long. You will need (11) 2 x 8 x 69 3/8” boards to fill the channels and create the solid wall.

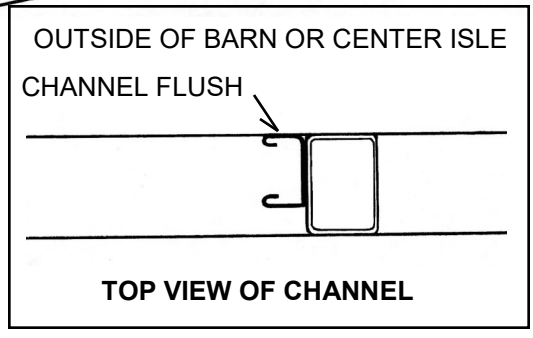
NOTE: INSTALL THE PANELS ON THE OUTSIDE OF THE BARN FIRST.

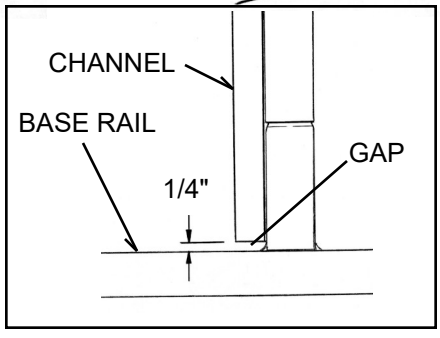
STEP 1:
Install the 78” Side Channels as shown in the illustration using 4 # 12 x 3/4” Self-Drilling Screws per channel. Note that the side of the channel should be flesh with the outside of the building, or the front of the barn center isle frame, or centered in a divider wall frame. Position the channels 1/4” off the base rail. (This will keep the bottom of the channel off the weld.)

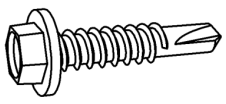
STEP 2:
Slide (11) 2 x 8 x 69 3/8” boards into the Side Channels and cap the top board with the 69 7/8” Top Channel.
Screw (2) #12 x 3/4” Self-drilling Screws in the front of the Channel, about 6” in from ether side to hold the Top Channel in place. NOTE: Unless the boards that you are installing are very dry you will have a gap between the top of the Side Channels and the bottom edge of the Top Channel. This is an expansion gap. Wet boards will shrink to a final dry dimension of 7 1/8” wide. The gap will close as this occurs.











#12 X 3/4” SELF-DRILLING
SCREW

PANEL INSTALLATION ON OUTSIDE OF BARN AND STALL FRONT CONTINUED:

GRILL PANEL:

A Grill Panel can be installed in any of the 70” openings around the barn: Outside walls, end walls, stall front wall, or stall divider walls.
The Grill panel has (2) channels 42” long, (1) Top Rail 2 x 2 x 69 7/8” long (not in Divider Wall), (1) Grill and Self-Drilling Screws. You will need (6) 2 x 8 x 69 3/8” boards to fill the channels and create the bottom portion of the panel.

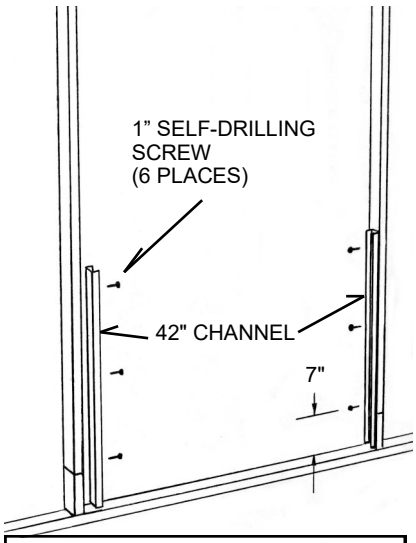
NOTE: INSTALL THE PANELS ON THE OUTSIDE OF THE BARN FIRST.

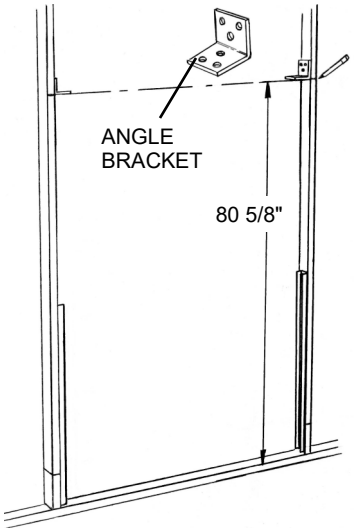
STEP 1: INSTALLING CHANNELS
Install the 42” Side Channels as shown in the illustration using (3) # 12 x 3/4” Self-Drilling Screws per channel. Note that the side of the channel should be flesh with the outside of the building, or the front of the barn center isle frame, or centered in a divider wall frame. Position the channels 1/4” off the base rail. (This will keep the bottom of the channel off the weld.)

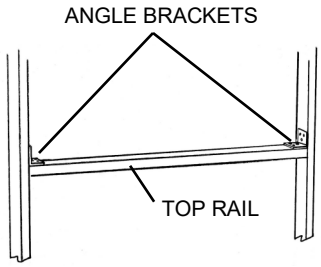
STEP 2: INSTALLING THE TOP RAIL
Measure up 80 5/8” on the frame tubes from the top of the base rail and put a mark. Install an Angle Bracket on both frame tubes with #12 x 3/4” Self-Drilling screws as shown. The bottom of the Angle Bracket should line up with your mark.
Now, place a Top Rail (2 x 2 x 70”) under the Angle Brackets and fasten it to the brackets with #12 x 3/4” Self-Drilling screws.

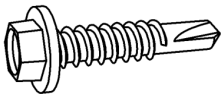
STEP 3: INSTALLING BOARDS
Slide (6) 2 x 8 x 69 3/8” boards into the Side Channels.

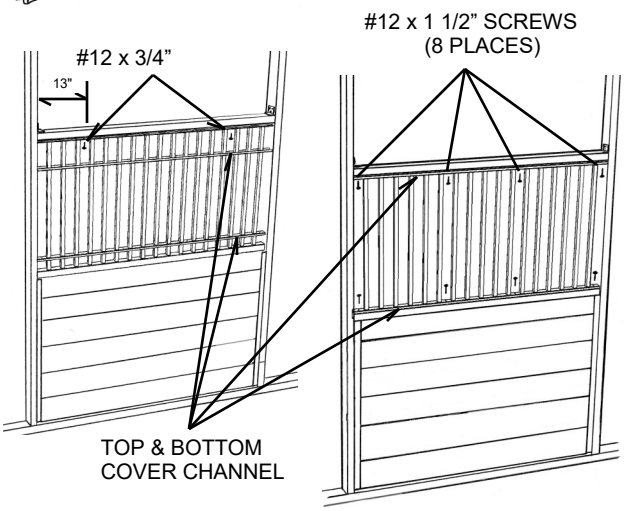
STEP 4:
Place a Grill, (channel side down) on top of the top board and fasten it to the Top Rail with (2) # 12 x 1” Self-drilling screws 13” in from each end. (holes are provided) . Now, Slide the Cover Channel to the top and fasten it to the Top Rail with (4) #12 x 1 1/2” Self-drilling Screws. (holes are provided) Do not fasten the bottom Cover Channel with screws at this time unless your boards are dry. When boards have had time to dry fasten the bottom Cover Channel with #12 x 1 1/2” Self-Drilling screws. (If you chose to install the screws at this time, you will need to come back when the boards dry and remove and re-install the screws.)

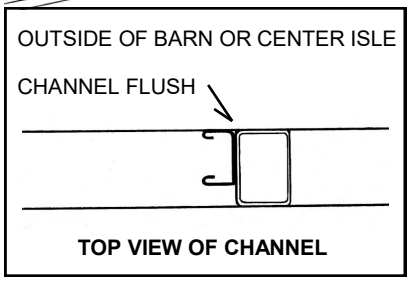


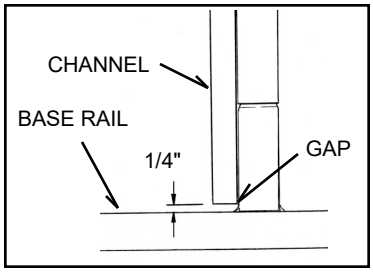








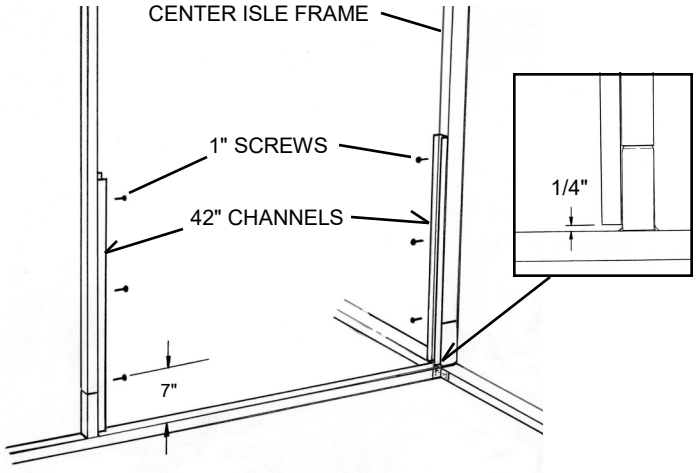


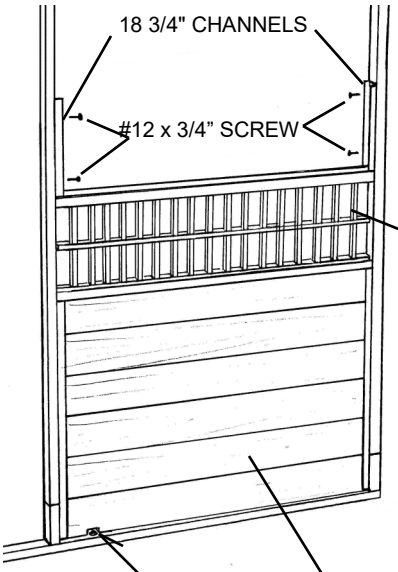


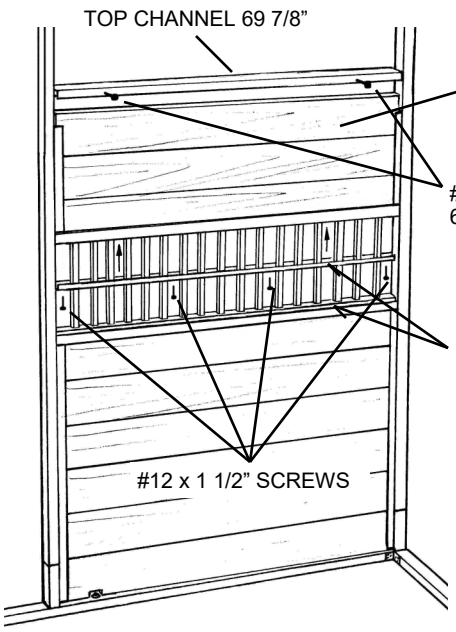
PANEL INSTALLATION ON OUTSIDE OF BARN AND STALL FRONT CONTINUED:

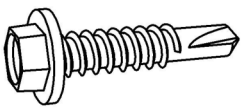
BOREDOM GRILL:

STEP 1:
Place (2) 42” channels in the frame as shown and fasten them to the frame with 3 Self-Drilling Screws in each channel. Note that the channels are positioned 1/4” off the base rail to clear the weld.
STEP 2:
Load (6) 2 x 4 x 69 3/8” boards into the channels as shown. If the anchor bolt that you used to anchor the Divider Wall Rail interferes with the bottom board you may have to notch the board or drill a 1” hole in the bottom of the board to clear the bolt.
STEP 3:
Place a Boredom Grill (channel side down) on the top board. Clamp the grill in place and attach (2) 18 3/4” channels to the frame posts at both ends of the grill as shown with (2) #12 x 3/4” Self-Drilling Screws per Channel. Note that the top screw into the divider wall vertical tube must be 11” down from the top of the channel. This will allow the swaged end of the top Divider Wall Rail pin to insert into the Divider Wall Vertical Tube.
STEP 4:
Load (3) additional boards into the 18 3/4” channels. The bottom board will also insert into the top channel of the boredom grill. Now place a Top Channel, 69 7/8” long on the top board and fasten it to the board with (2) #12 x 3/4” Self-Drilling Screws 6” from the ends of the channel.

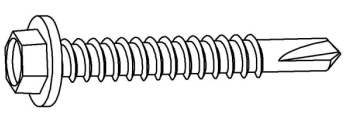








#12 x 3/4” SELF-DRILLING SCREW



#12 x 1 1/2”SELF-DRILLING SCREW

PANEL INSTALLATION ON OUTSIDE OF BARN AND STALL FRONT CONTINUED:

FEEDER GRILL PANEL:

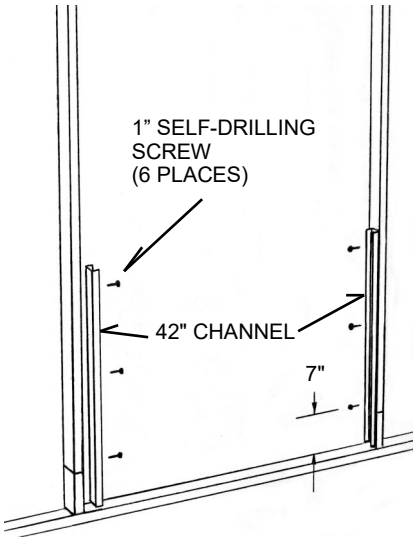
The Feeder Grill panel has (2) channels 42” long, (1) Top Rail 2 x 2 x 69 7/8” long, (1) Feeder Grill, (1) Grill Door or (1) Solid Door Frame, Door Hardware and Self-Drilling Screws. You will need (6) 2 x 8 x 69 3/8” boards to fill the channels and create the bottom portion of the panel. If you selected a Solid Door, you will need (2) Door Side Channels 35 1/2” long, (2) Door Top/Bottom Channels 22” long, and (5) Boards 2 x 8 x 24 7/8” long.

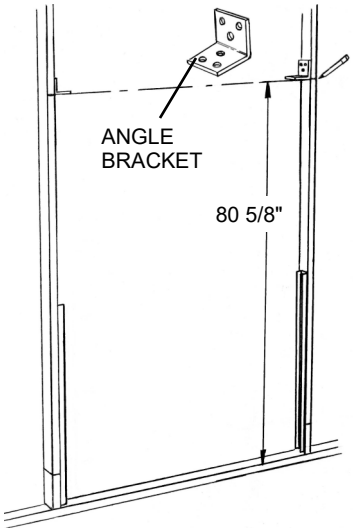
STEP 1: INSTALLING CHANNELS
Install the 42” Side Channels as shown in the illustration using (3) # 12 x 1” Self-Drilling Screws per channel. Note that the side of the channel should be flesh with the outside of the building, or the front of the barn center isle frame. Position the channels 1/4” off the base rail. (This will keep the bottom of the channel off the weld.)

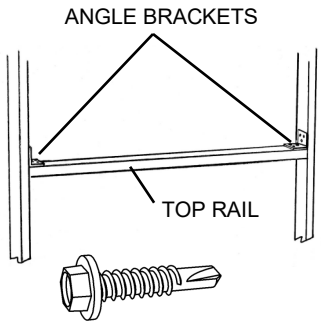
STEP 2: INSTALLING THE TOP RAIL
Measure up 80 5/8” on the frame tubes from the top of the base rail and put a mark. Install an Angle Bracket on both frame tubes with #12 x 3/4” Self-Drilling screws as shown. The bottom of the Angle Bracket should line up with your mark.
Now, place a Top Rail (2 x 2 x 70”) under the Angle Brackets and fasten it to the brackets with #12 x 3/4” Self-Drilling screws.

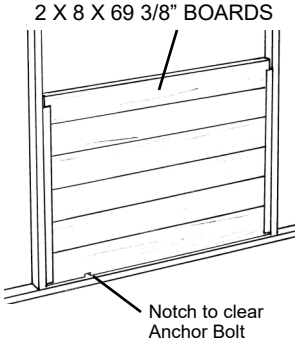
STEP 3: INSTALLING BOARDS
Slide (6) 2 x 8 x 69 3/8” boards into the Side Channels. You may need to notch the bottom board to fit over anchor bolt.

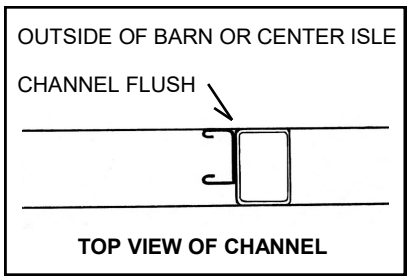
STEP 4:
Place a Feeder Grill, (channel side down) on top of the top board and fasten it to the Top Rail with (2) # 12 x 1” Self-drilling screws 13” in from each end. (holes are provided) . Now, Slide the Cover Channel to the top and fasten it to the Top Rail with (3) #12 x 1 1/2” Self-drilling Screws. (holes are provided) Do not fasten the bottom Cover Channel with screws at this time unless your boards are dry. When boards have had time to dry fasten the bottom Cover Channel with #12 x 1 1/2” Self-Drilling screws. (If you chose to install the screws at this time, you will need to come back when the boards dry and remove and re-install the screws.)

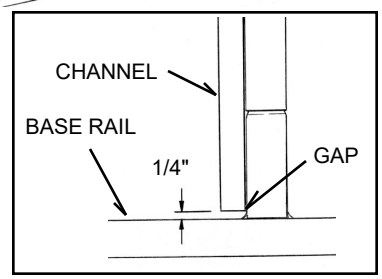


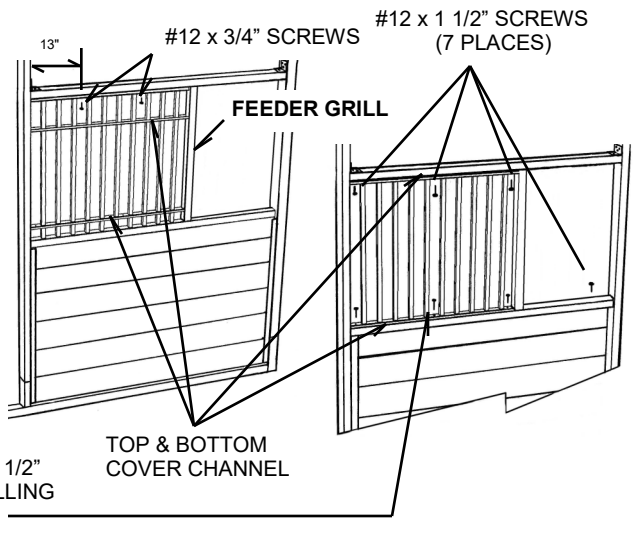


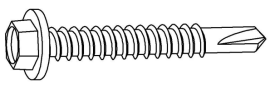










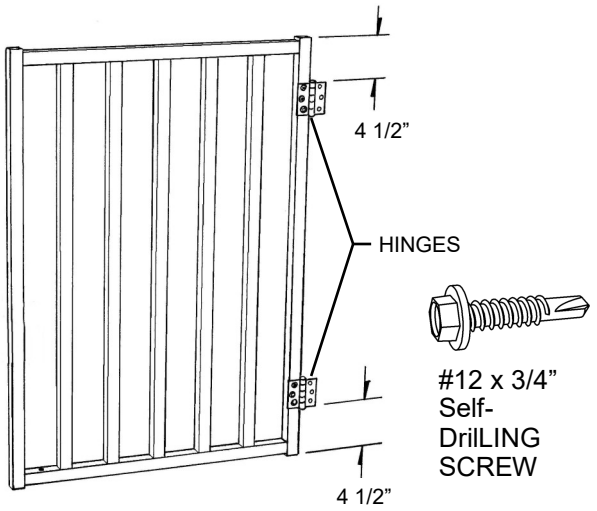


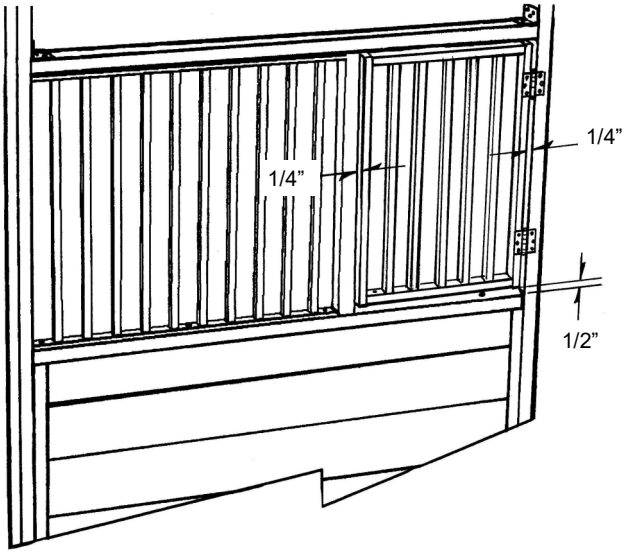
FEEDER DOOR ASSEMBLY AND INSTALLATION: GRILL DOOR & SOLID DOOR

GRILL DOOR ASSEMBLY:

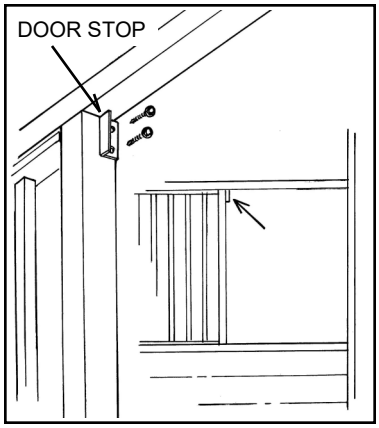
PARTS: (1) Grill Door, (1) Door Handle, (2) 2 1/2” Hinges, (1) 2 1/2” Barrel Latch, (20) #12 x 3/4” Self-Drilling screws.

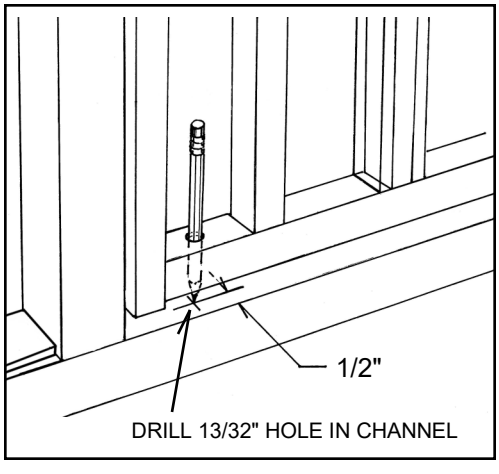
STEP 1:
Mount Hinges and Door Handle as shown in illustration with #12 x 3/4” Self-Drilling Screws. Use the dimensions shown in the illustration to locate the Hinges and Handle on the Grill Door.
STEP 2:
Place the Grill Door in the Feeder Grill door opening. (The bottom of the door side vertical tubes should be 1/2” above the Feeder Grill Channel. It might be helpful to place a 1/2” scrap of wood or some other 1/2” item under the Grill Door bottom corners to hold it in position while you fasten the hinges to the frame.) Leave a 1/4” space on both sides of the Grill Door. (See illustration) Fasten the Hinges to the frame with #12 x 3/4” Self-Drilling Screws.

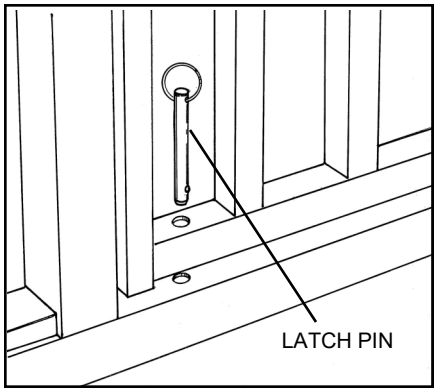




STEP 3:
Open the Grill Door and attach the Grill Door Stop in the top, left, back corner of the door opening as shown with #12 x 3/4” Self-Drilling screws. The back edge of the stop should be flush with the back of the Grill door frame.
STEP 4:
Close the door against the stop, insert a pencil through the latch pin hole and mark a point on the grill channel below. Open the Grill Door and drill a 13/32” hole in the channel, about 1” deep. You will also be drilling into the top board.
IMPORTANT: DO NOT drill through the hole in the bottom rail of the door. That is, and must remain a 25/64” hole.
STEP 5:
Install the Latch Pin by pressing it through the latch pin hole in the bottom rail of the door and into the hole in the channel. If the pin dose not drop freely into the hole in the channel, open the hole up slightly with the next size drill.







INSTALLATION OF DIVIDER WALL FRAME:

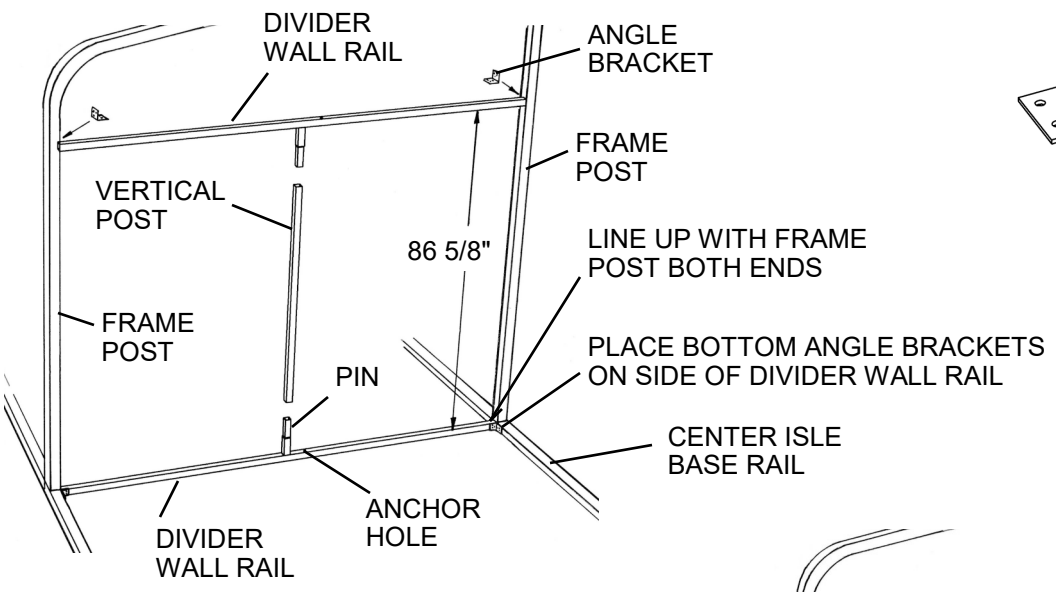
The Divider Wall Frame is made up of (2) Divider Wall Rails 2” x 2” x 142” with one Vertical Pin welded in the center, (1) Vertical tube 2” x 2” x 68 1/2” and (4) Angle Brackets.

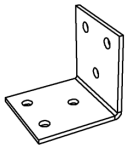
If you will be installing **Grill Panels** in the divider wall you will need to pre-assemble the divider wall Frame before the Grill Panels are installed.

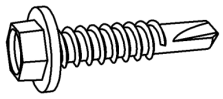
If you will be installing a **Solid Wall Panel** or a **Boredom Grill Panel** you will attach and anchor the bottom rail and attach the vertical tube to the pin. The Channels, boards and Boredom Grill will be installed before the Top Rail.

DIVIDER WALL ASSEMBLY (FOR 2 GRILL PANELS)

STEP 1:
Place one Divider Wall Rail on the ground or divider wall curb running from the side wall of the barn to the center isle. (From the front or back of the barn, the divider walls will fall every 12’.) Line the Divider Wall Rail up with the vertical frame posts as shown. The welded pin should be vertical. Now, attach the rail at both ends to the base rails with Angle Brackets and #12 x 3/4” Self-Drilling Screws. Anchor the Rail to the curb or ground through the anchor hole provided as you did the other base rails. (concrete bolt or ground anchor) Measure up from the top of the Divider Wall Rail on the frame posts at both ends and put a mark at 86 5/8”. This will mark the bottom of the top Divider Wall Rail.
STEP 2:
Place the Vertical Tube (2” x 2” x 68 1/2”) on the Divider Wall pin. Now, Place another Divider Wall Rail on top of the Vertical Tube as shown. Line the bottom of the Rail ends up with the marks that you put on the frame posts and attach the Divider Wall Rail to the frame post at both ends with Angle Brackets on the top side of the Rail.

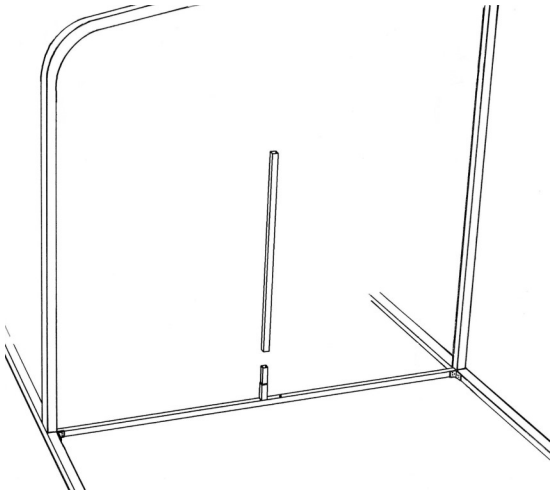






If you are installing a Boredom Grill Panel or a Solid Wall Panel, assemble only the bottom Divider Rail and the Vertical Tube. The top Divider Wall Rail will be installed after the channels, wood and grill have been installed. It will sit on top of the wall panel assembly.

See panel installation in divider walls on the next page.



INSTALLATION OF PANELS IN DIVIDER WALL FRAME:

GRILL PANEL:

The Grill Panel consists of (1) Grill, (2) Channels 42” long, and Self-Drilling Screws.

STEP 1:

Place the 42” channels in the frame as shown and fasten them to the frame with 3 Self-Drilling Screws in each channel. Note that the channels are positioned 1/4” off the base rail to clear the weld.

STEP 2:

Load (6) 2 x 4 x 69 3/8” boards into the channels as shown. If the anchor bolt that you used to anchor the Divider Wall Rail interferes with the bottom board you may have to notch the board or drill a 1” hole in the bottom of the board to clear the bolt.

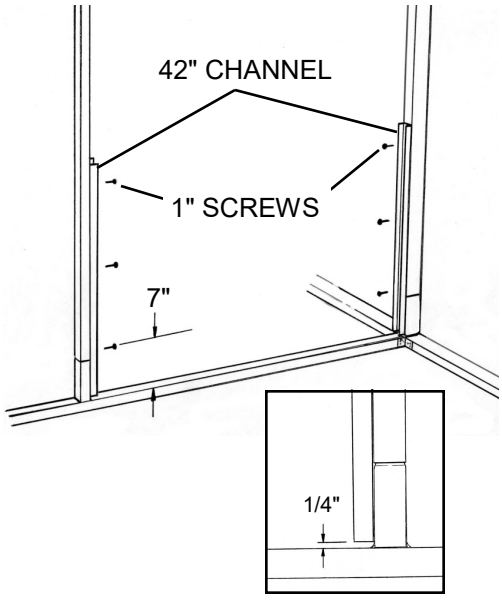
STEP 3:

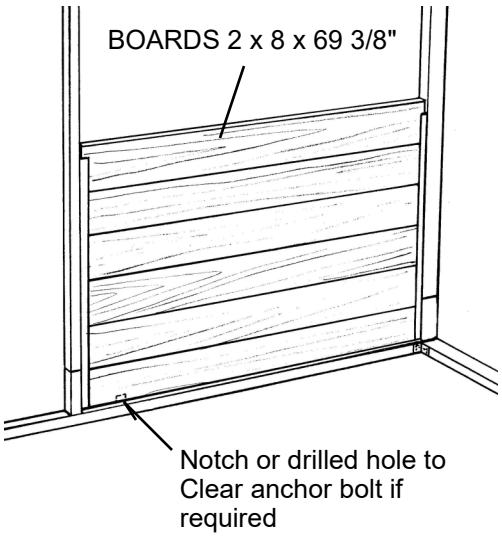
Place the Grill on the top board (channel side down). Center the top of the grill under the Divider Wall Top Rail and attach it to the Divider Wall Rail with (2) #12 x 3/4” Self-Drilling Screws through the holes in the grill top bar 13” from each end.

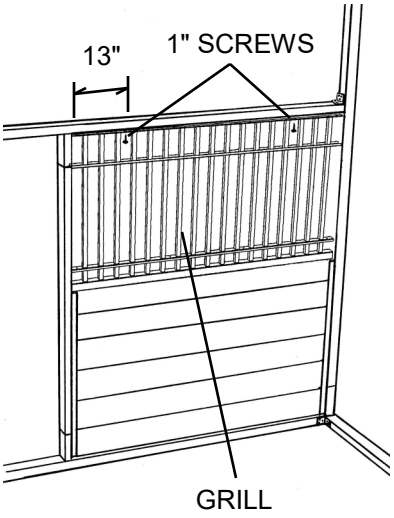
STEP 4:

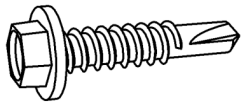
Now, slide the cover channel to the top and attach it to the Divider Wall Rail with (4) #12 x 1 1/2” Self-Drilling Screws as shown. Holes are provided.

If the boards the you installed are not completely dry, do not install the (4) #12 x 1 1/2” Self-Drilling screws in the bottom Cover Channel at this time. Allow the boards to dry out before you install these screws. (Another option would be to install the screws at this time, allow the boards to dry, remove the screws and re-install them allowing the top board to drop down into position.)

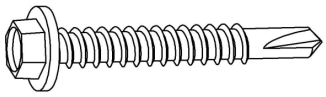




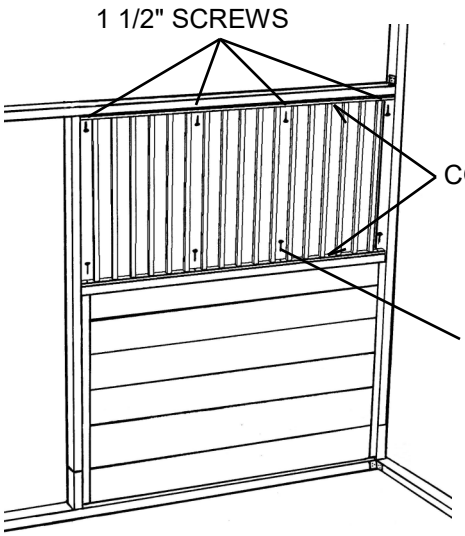




1" SELF-DRILLING SCREW



1 1/2" SELF-DRILLING SCREW



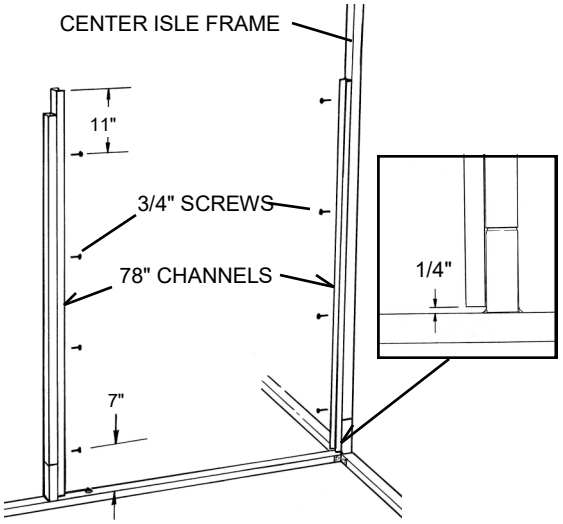
INSTALLATION OF PANELS IN DIVIDER WALL FRAME CONTINUED:

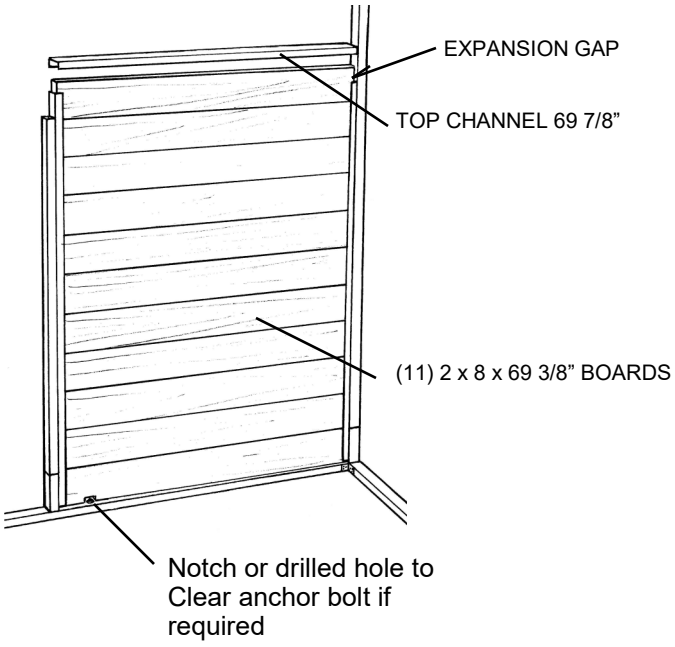
SOLID PANEL:

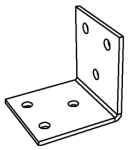
STEP 1:
Install (2) Channels 78” long into one section of Divider Wall Frame as shown. Leave a 1/4” space under each channel to clear the welds. Use #12 x 3/4” Self-Drilling screws to fasten the channels to the frame. (4 per channel) place the bottom screw 7” from the top of the base rail. This screw will also fasten the lower frame joint.

STEP 2:
Load (11) 2 x 8 x 69 3/8” boards into the channels as shown and place a top channel on the top board. Fasten the top channel to the top board with (2) #12 x 3/4” Self-Drilling screws 6” from each end. (NOTE: You may need to notch or drill a 1” hole in the bottom board to provide clearance for the anchor bolt.)

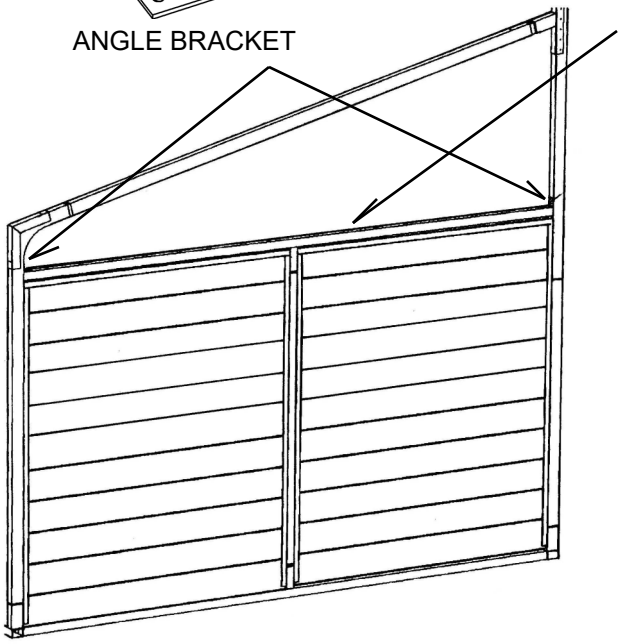
NOTE: Unless the boards that you are installing are very dry you will have a gap between the top of the Side Channels and the bottom edge of the Top Channel. This is an expansion gap. Wet boards will shrink to a final dry dimension of 7 1/8” wide. The gap will close as boards dry and shrink.



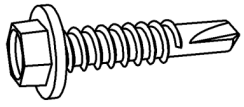




ANGLE BRACKET



STEP 3:
When both sides of the Divider Wall Frame are loaded with boards and the top channels are installed, assemble a Divider Wall Rail (same as bottom rail) on top of the wall. Insert the center pin into the Vertical Tube and fasten the Divider Wall Rail at both ends with Angle Brackets and #12 x 3/4” Self-Drilling

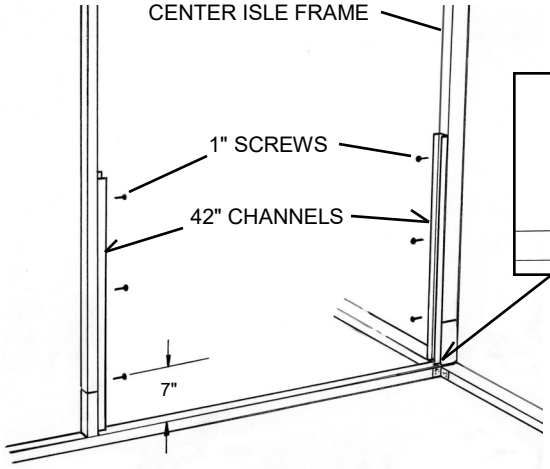


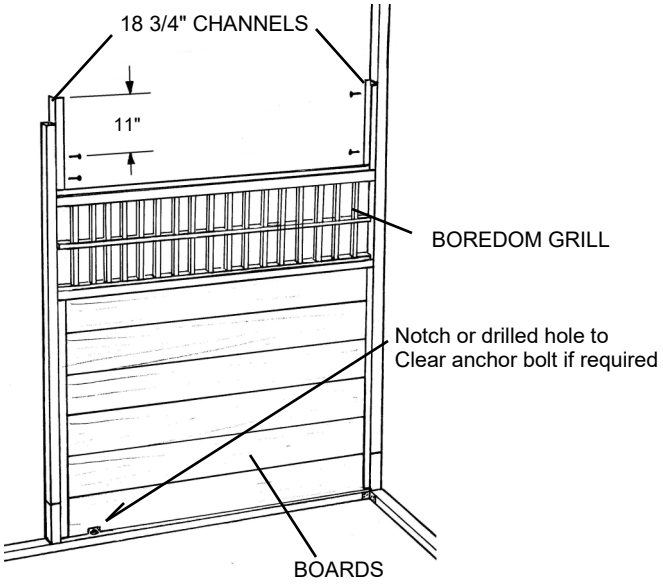
1" SELF-DRILLING SCREW

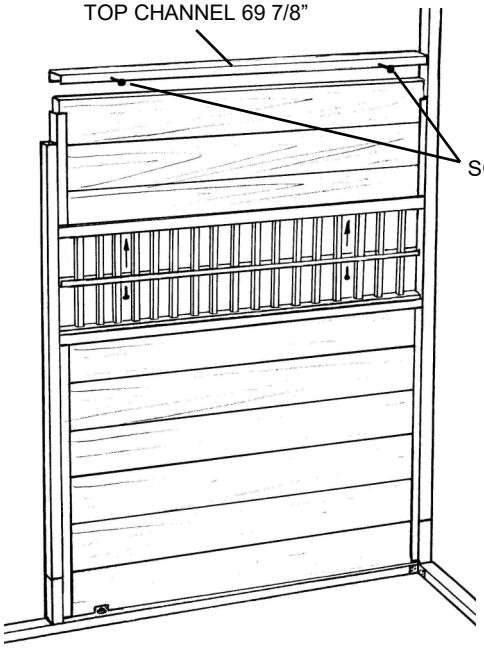
INSTALLATION OF PANELS IN DIVIDER WALL FRAME CONTINUED:

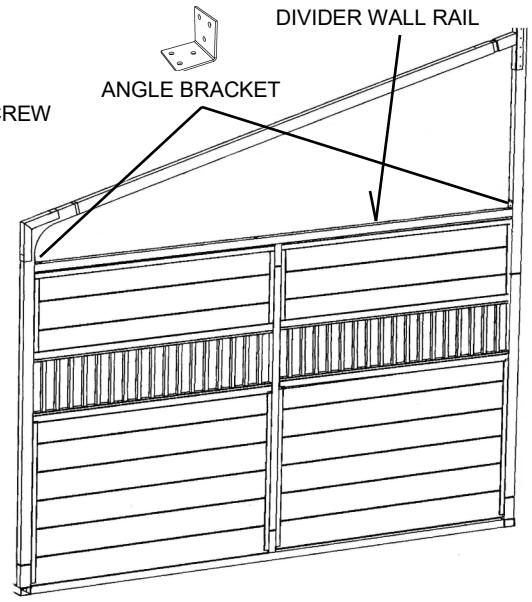
BOREDOM GRILL:

STEP 1:
Place (2) 42” channels in the frame as shown and fasten them to the frame with 3 Self-Drilling Screws in each channel. Note that the channels are positioned 1/4” off the base rail to clear the weld.
STEP 2:
Load (6) 2 x 8 x 69 3/8” boards into the channels as shown. If the anchor bolt that you used to anchor the Divider Wall Rail interferes with the bottom board you may have to notch the board or drill a 1” hole in the bottom of the board to clear the bolt.
STEP 3:
Place a Boredom Grill (channel side down) on the top board. Clamp the grill in place and attach (2) 18 3/4” channels to the frame posts at both ends of the grill as shown with (2) #12 x 3/4” Self-Drilling Screws per Channel. Note that the top screw into the divider wall vertical tube must be 11” down from the top of the channel. This will allow the swaged end of the top Divider Wall Rail pin to insert into the Divider Wall Vertical Tube.
STEP 4:
Load (3) additional boards into the 18 3/4” channels. The bottom board will also insert into the top channel of the boredom grill. Now place a Top Channel, 69 7/8” long on the top board and fasten it to the board with (2) #12 x 3/4” Self-Drilling Screws 6” from the ends of the channel.









STEP 5:
When both sides of the Divider Wall Frame are loaded with boards and the top channels are installed, assemble a Divider Wall Rail (same as bottom rail) on top of the wall. Insert the center pin into the Vertical Tube and fasten the Divider Wall Rail at both ends with Angle Brackets and #12 x 3/4” Self-Drilling screws.

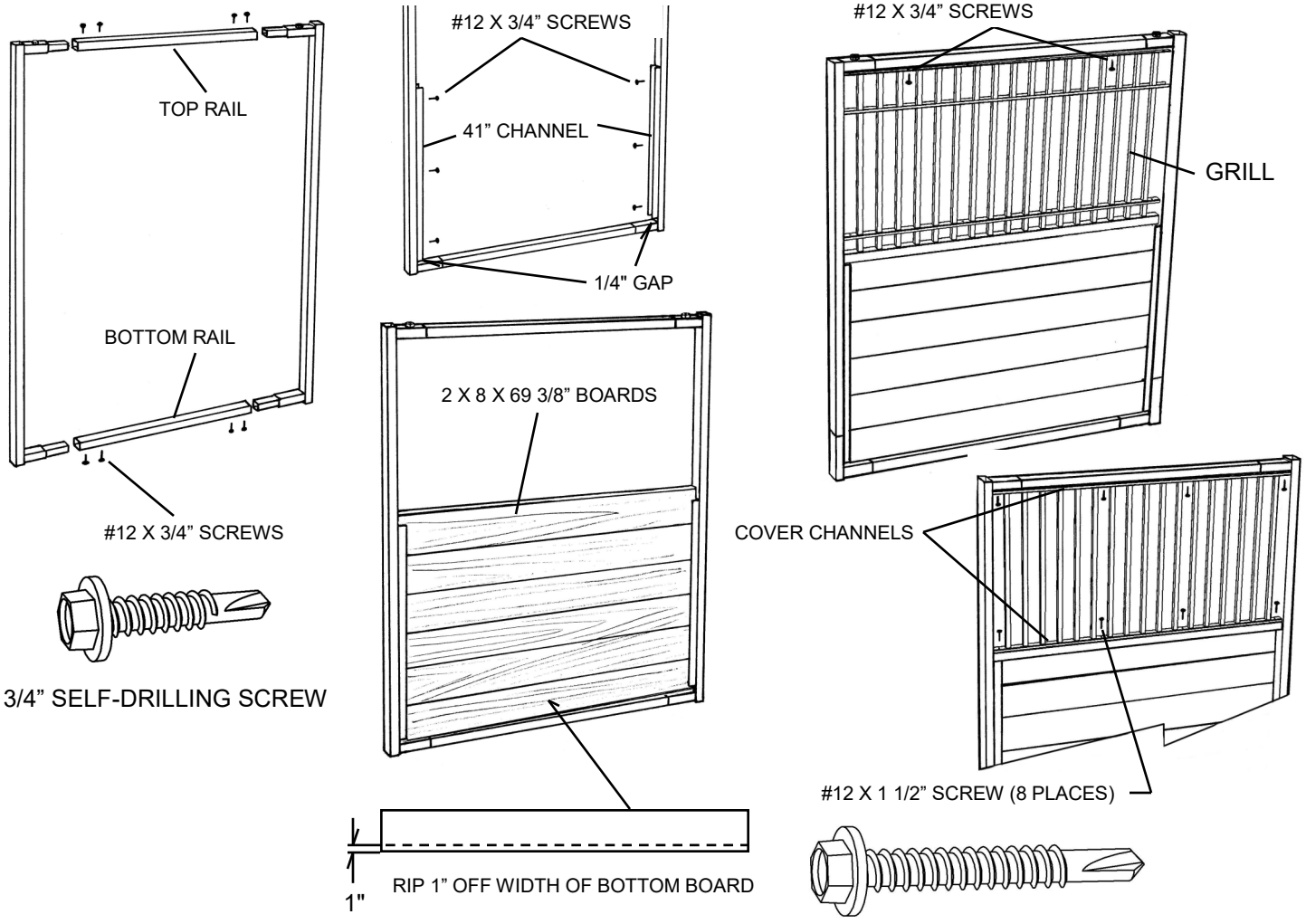
STALL DOOR ASSEMBLY:

ASSEMBLY OF FRAME, CHANNELS, BOARDS AND GRILL

PARTS:

2– Stall Door Side Rails: 2” x 2” x 84 3/4” with two welded pins, one at each end. The top pin has a 1/2” welded on hex nut to fasten trucks to later.
(2)– Stall Door Top/Bottom Rail: 2” x 2” x 58”, (2)– Channels 41” long, (6)– 2 x 8 x 69 3/8” boards, (1)– Grill
(16)- #12 x 3/4” Self-Drilling screws, (8)- #12 x 1 1/2” self-drilling screws

STEP 1:
Assemble Stall Door Side Rails and Stall Door Top/Bottom Rails as shown. Fasten the joints with (2) #12 x 3/4” Self-Drilling screws. NOTE: The Side Rail pins with the welded on nuts go at the top of the door.
STEP 2:
Attach two 42” Channels to the frame as shown with (3) # 12 x 1” Self-Drilling Screws per channel. Leave a 1/4” gap between the top of the bottom rail and the bottom of the channels. (This will clear the welds)
STEP 3:
Cut 2 x 8 boards to 69 3/8” long and rip 1” of material off one of the boards. This will reduce the width of that board to 6 3/8” wide. Place the 6 3/8” wide board into the channels first (it will be the bottom board). Now, load the remaining 5 boards into the channels.
STEP 4:
Place a Grill on the top board (channel side down). Fasten the top bar of the grill to the top door frame rail with (2) #12 x 3/4” Self-Drilling Screws 13” in from each end. (holes are provided)
STEP 5:
Slide The Cover Channels to the top and bottom of the Grill and fasten the top Cover Channel to the Top Door frame Rail with (4) #12 x 1 1/2” Self-Drilling screws. (holes are provided) Do not fasten the bottom Cover Channel at this time unless the wood that you are using is completely dry. 2 x 8 boards will shrink in width to about 7 1/8” wide. Install the 1 1/2” screws when the wood has had time to dry. If you install the screws with the wood wet you will have to come back later, remove and re-install the screws.



INSTALLATION OF STALL DOORS:

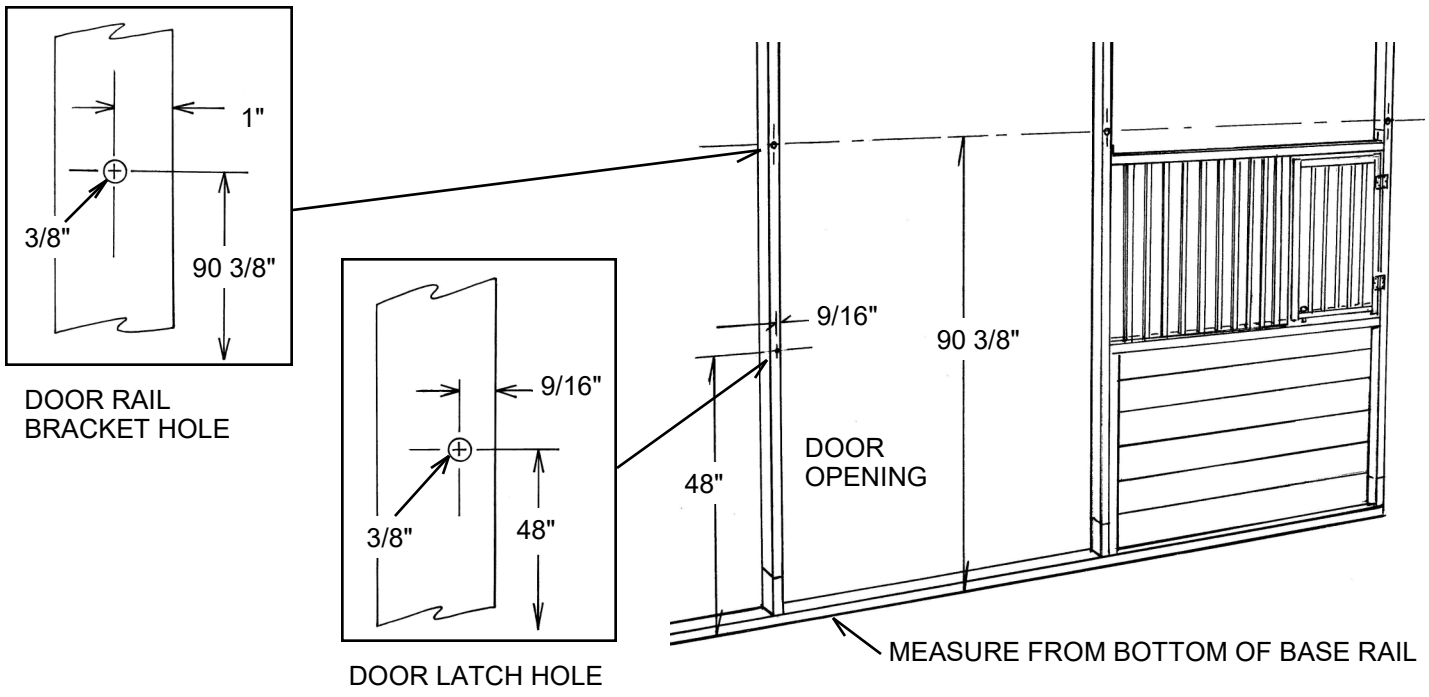
INSTALLING DOOR TRACKS:

NOTE: Stall doors will be hung on the left side of the stall fronts, down the center isle of the barn.

STEP 1: LOCATING AND DRILLING MOUNTING HOLES FOR DOOR TRACK BRACKETS AND STALL DOOR LATCH

Measure up from the bottom of each frame post where door tracks will be hung 90 3/8” and mark the location in the center of the post. (Note that Door Tracks are 12’ long and will typically but end to end down the entire length of the building.) Now, drill a 3/8” hole straight through each post at the mark. (If you do not have a 3/8” drill bit that will drill all the way through the 3” depth of the post, you can measure up an equal distance on the back side of the post or use a square to transfer the front marked dimension around the post to the back side. Drill the front wall hole from the front and the back side hole from the back.) This will be the mounting hole for the Track Brackets.

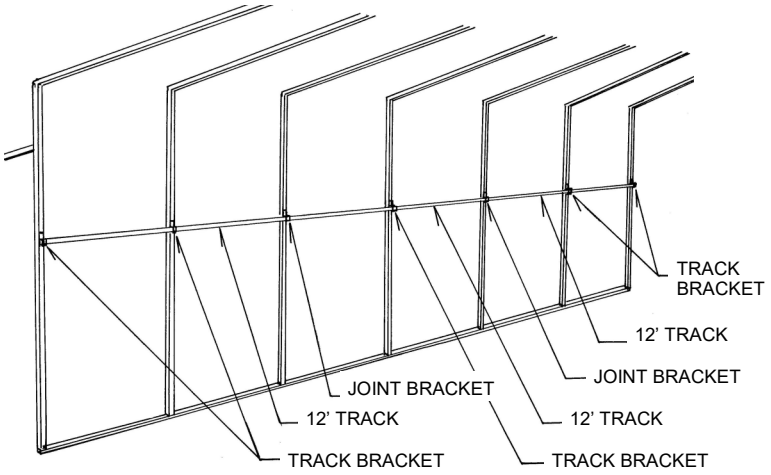
Holes for the Stall door Latch are also 3/8” . The Stall Doors will be located on the left side of each stall. The stalls are 12’ wide and the Stall Doors are 6’ wide. The hole for the Stall Door Latch should be located on the frame post at the left of each stall. Start with the first frame post on the left side of the center isle (ether side of the isle). Measure up from the bottom of the frame base rail 48” and in from the right side of the post 5/8” and make a mark. This is the location of the Door Latch Hole. Drill hole through 1 wall only. (If you choose, you can drill the door latch holes after the doors are hung.) (The Door Latch is a barrel bolt type latch which you will attach to the stall door after the door is hung.)



STEP 2: MOUNTING TRACK BRACKETS

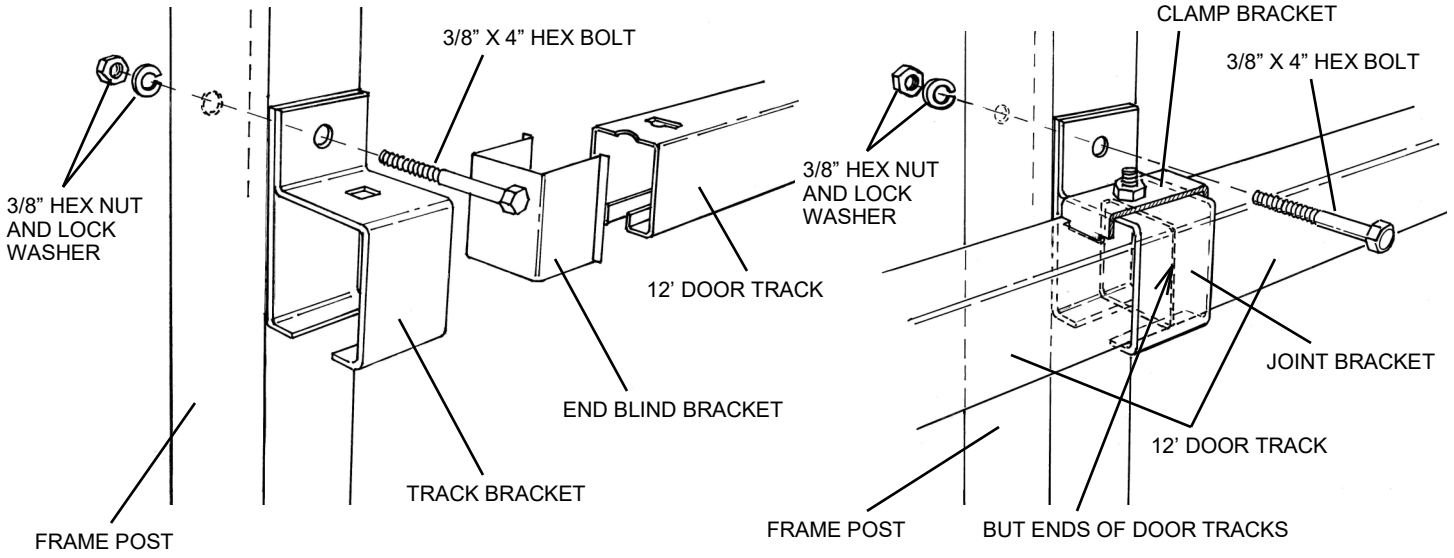
See the illustration at right to determine the track bracket type you should use at each location. You will use a Joint Bracket at the point where two 12’ track ends come together. (The Joint Bracket has a clamp strap on the top with a center bolt to tighten the strap against the tracks.) All other support points will use a Track Bracket. Note: at the ends of the building (ether end of the track run) you will install a End Blind Bracket to close off the ends of the Door Track. The End Blind Bracket must be inserted into the end Track Bracket before the track is installed.

(See next page for bracket illustrations)



INSTALLATION OF STALL DOORS CONTINUED:
INSTALLING DOOR TRACK BRACKETS:

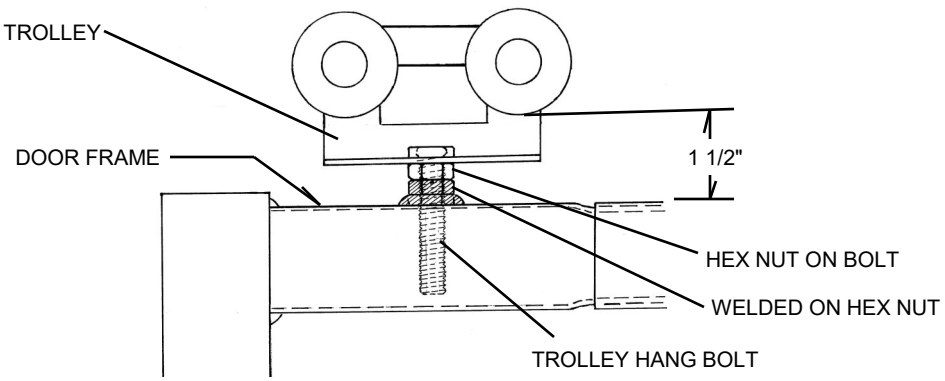
Start at one end of the building. Install a Track Bracket to the hole you drilled in the frame post with a 3/8" x 4" Hex Bolt, Lock Washer, and Hex Nut. Insert an End Blind Bracket into the Track Bracket. Now, insert one end of a 12' Door Track. Slide another Track Bracket onto the Door Track from the open end and attach it to the next frame post. Slide a Joint Bracket on the end of the Door Track (the Clamp Bracket on the top should be loose enough to slide the bracket into place.) Insert the next Door Track into the Joint Bracket. Slide another Track Bracket onto the Door Track and Attach it to the next frame post. With the second track inserted, go back to the Joint Bracket, center the joint between the two Door Tracks and tighten the Clamp Strap to hold the door tracks in place. (note that the Clamp Bracket may have tabs that fit into slots in the Door Track (all track assemblies do not) if yours has the tabs, make sure they fit into the corresponding slots before you tighten down the Clamp straps.
Continue down the length of the barn repeating the assembly method described above for all but the last track section. **Leave the last track section open to allow installation of the Stall Doors. When all of the Doors have been inserted into the tracks (including the door that will be hanging from the last track section) complete the installation of the last track section.** Remember to install a End Blind Bracket into the last Track Bracket before it is placed on the end of the last Door Track. (Note: the ends of the Door Tracks at the ends of the building will be only half way inserted into the end Track Brackets.)



INSTALLING DOOR TROLLEYS TO STALL DOOR:

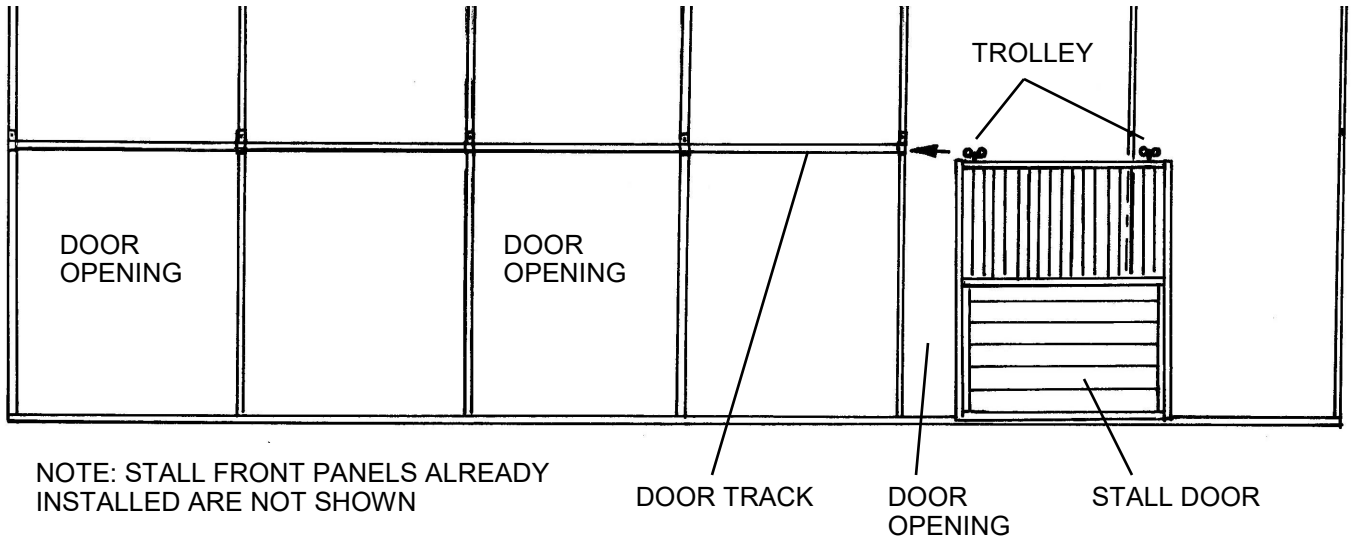
NOTE: The trolleys that you get in your door kit may be different from the one illustrated, but the assembly will be essentially the same. The Trolley will have a 1/2" hang bolt projecting down from the center portion of the trolley assembly. This bolt will have one or 2 nuts threaded onto the bolt. Remove one of the nuts at this time. You will need only one nut to complete the assembly. You will assemble two Trolleys per Stall Door.

Screw the trolley hang bolt into one of the hex nuts welded on top of the Stall Door until the space between the door frame and the bottom of the trolley wheels is 1 1/2" and the trolley is in line with the door frame. Now, tighten the hex nut that was threaded onto the hanger bolt down against the hex nut on the door frame. Repeat this procedure for all of the remaining trolleys.



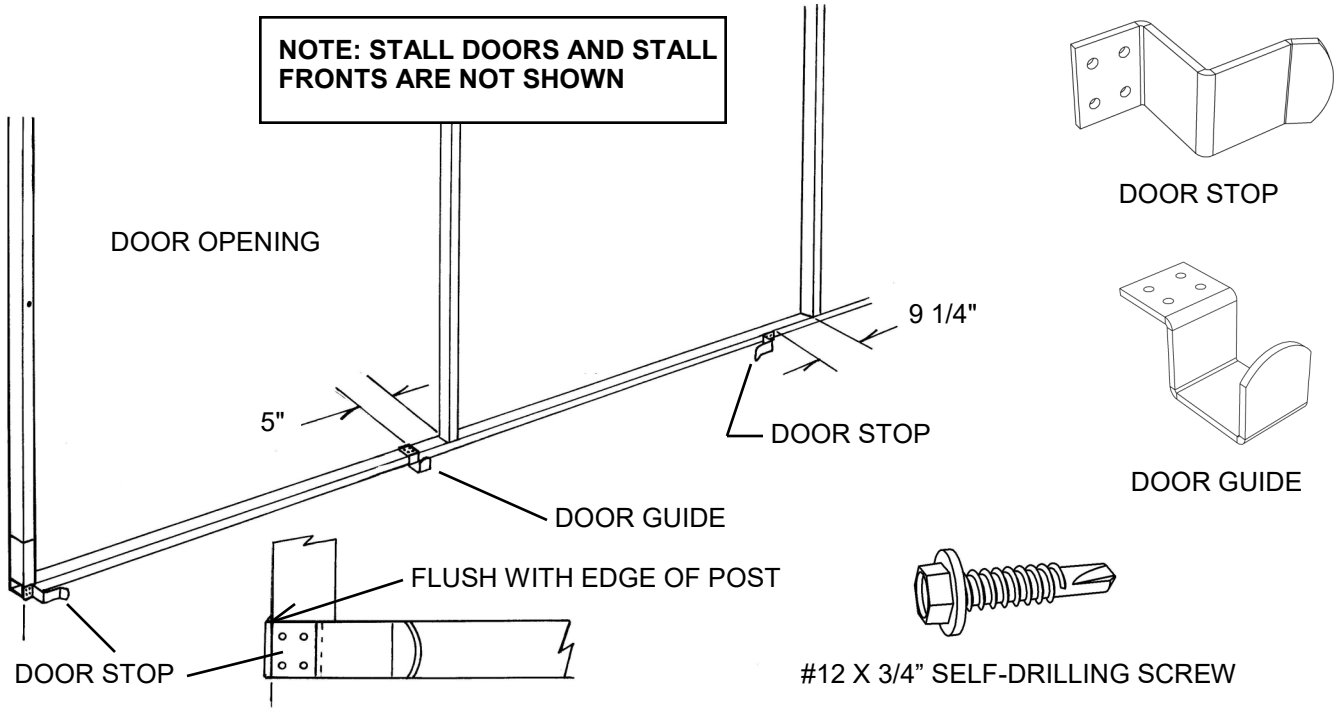
INSTALLATION OF STALL DOORS CONTINUED:
HANGING DOORS IN TRACK

NOTE: The last track section on both sides of the center isle should still be uninstalled. This will provide a point to insert all the Stall Doors.
Lift the Stall Doors one by one and insert the Door trolleys into the open end of the Door Track. Roll each door down the length of the building until it is close to its final position in the stall opening. Also insert the door that will hang from the last door track section and push it to the left of the door opening. **Now, install the last Door Track section and slide the last door back into position in front of the door opening.**



INSTALLING STALL DOOR STOPS AND GUIDES

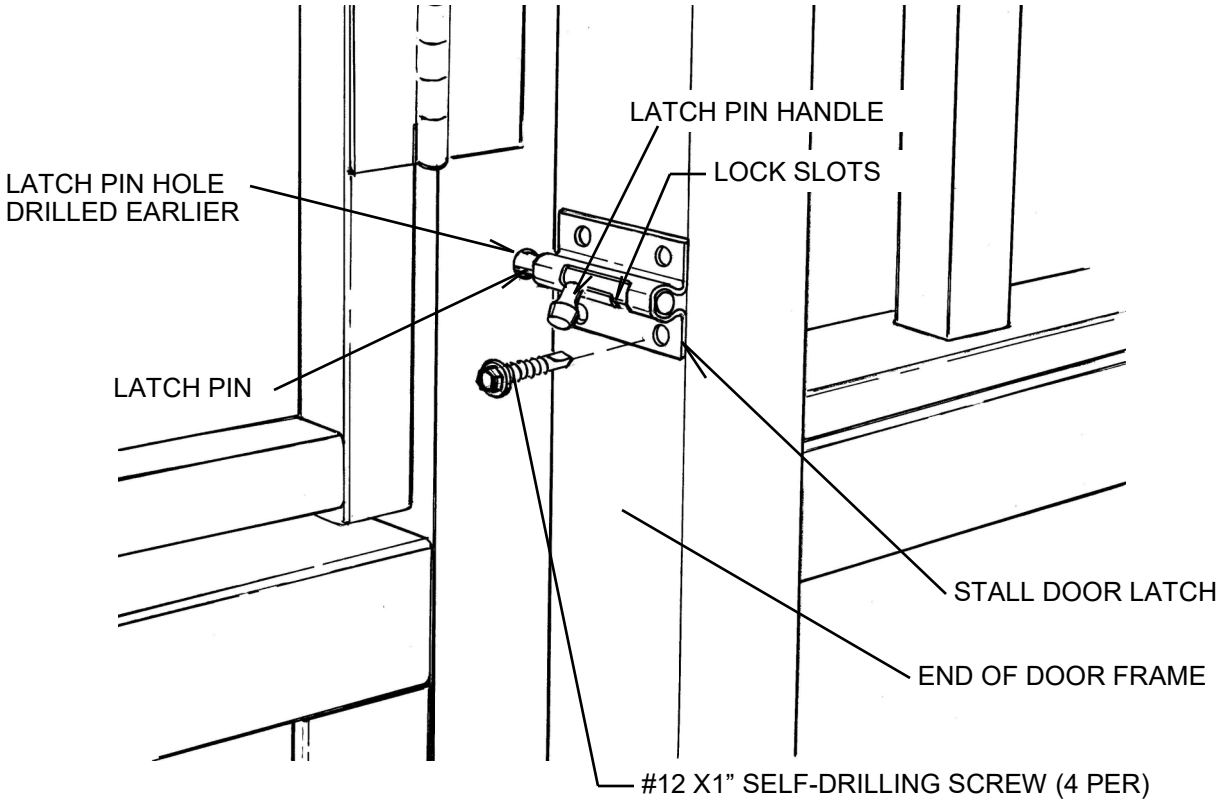
Each Stall Door will have two stops. One to stop the door in the closed position and one to stop the door travel as it is opened. Each door will also have a door guide.
Use #12 x 3/4” Self-Drilling screws to mount the Door Stops and the Door Guides. See the illustration for location of stops and guides.



INSTALLING STALL DOOR LATCH

The Stall Door Latch is a 2 1/2” barrel type latch. The latch will be located on the end of the stall door frame.

Pull the Stall Door to the closed position and position the Door Latch on the end of the door frame with the latch pin inserted and centered in the latch pin hole that you drilled earlier. The latch must be positioned so that the pin handle will drop into the locking slots. (the slots must be on the lower side of the latch)
Fasten the latch to the door frame with #12 x 3/4” Self-Drilling screws. (See illustration)

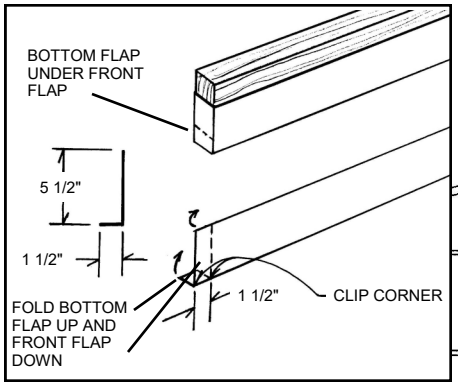


INSTALLATION OF BARN DOOR TRACK AND TRACK COVER

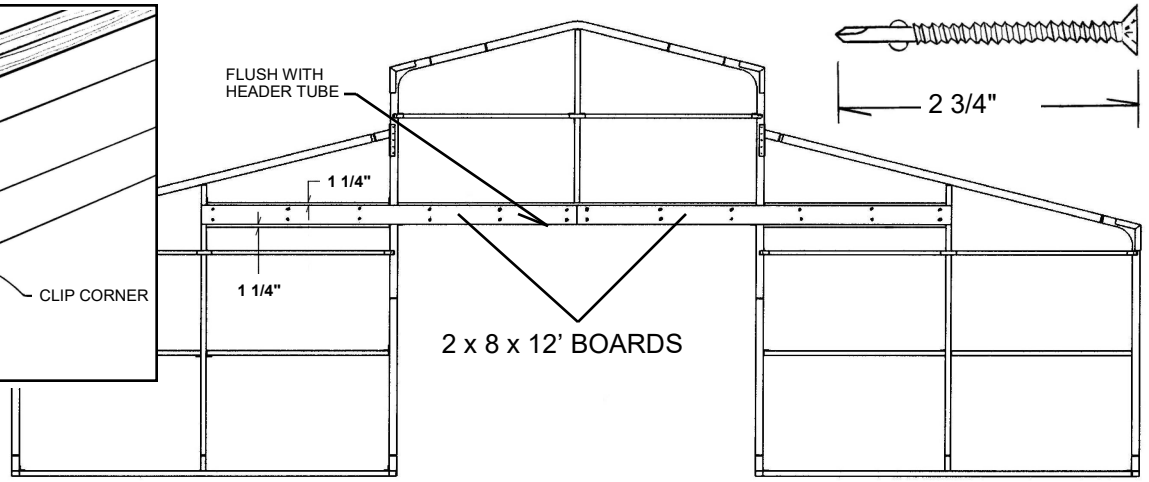
ITEMS REQUIRED:

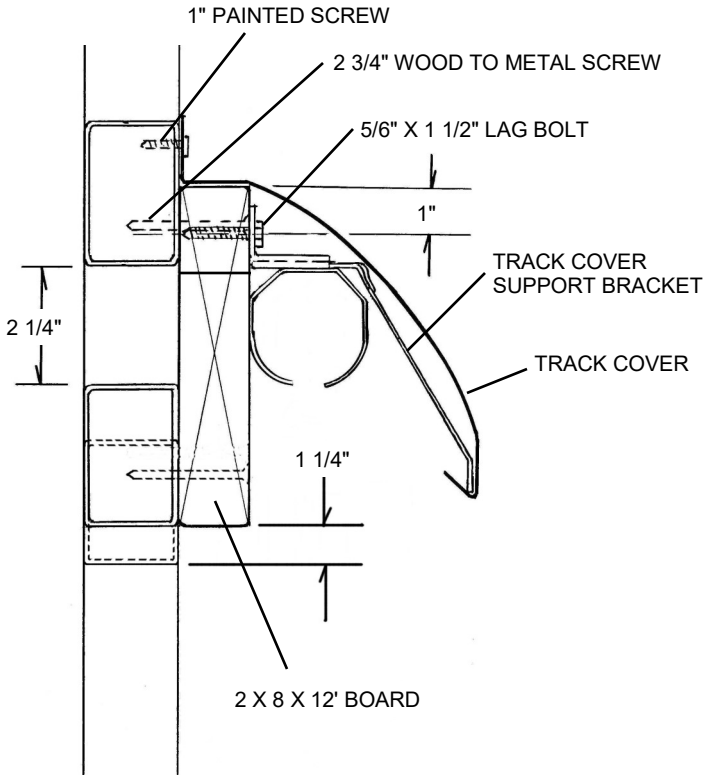
(2) 12’ Round Style Door Track with flush mount brackets
(3) 10’ lengths of Round Track Cover
(2) 2 x 8 x 12’ boards (pressure treated) *To be provided by the Customer*
(24) #12 x 2 3/4” Wood to Metal Self-Drilling Screws, Flat head, Phillips Drive *To be provided by the Customer*
At least 25’ of Door Post Trim 1 1/2” x 5 1/2” L shaped trim

STEP 1:
Fasten (2) 2 x 8 x 12’ Boards to Header Tubes and Track Backer Tubes with #12 x 2 3/4” Wood to Metal Self-Drilling Screws (NOT INCLUDED). The ends of the boards should be centered in the barn door and the bottom edge of the boards should be flush with the bottom edge of the Door Header Tube and 1 1/4” above the bottom of the bottom Backer tubes.
STEP 2:
Trim out the Track Backer Boards with Door Post Trim as Shown in detail. Overlap trim as necessary. Use 1” painted screws to fasten trim to Track Boards. (Trim 5 1/2” x 1 1/2” (L) shaped)



TRIM DETAIL





STEP 3:
Fasten the Door Track Bracket to the Track Board with 5/16 x 1 1/2” Lag Bolts. (pre drill pilot holes for bolts) The center of the bolt should be 1” down from the top edge of the track board.
STEP 4:
Hammer Track Cover Support Brackets into each Track Mounting Bracket. (some models will clip in).
STEP 5:
Hook the bottom edge of the Track Cover under the front edge of the Track Cover Support Bracket, bend the top portion back toward the top header tube and fasten it to the top header tube with painted screws. (the cover should sit on top of the track board)
Do not hang the door at this time.
The end of the track will be covered after the sheet metal and doors are hung. (You can make your own or most door track suppliers have one to fit.)

INSTALLATION OF SHEET METAL AND TRIM:

PARTS LIST:

We recommend R-Panel 26 Gauge for metal siding and roof. Dimensions in these instructions provide for R-Panel. You will have to adapt for other sheet metal sizes.

Side Panels, 94" long if you will be installing a bottom trim, 95" long with no bottom trim, and 96 1/2" long if your side metal will drop below the base rails into a sheeting edge in a concrete footer. (8) panels for every 12' of barn length.

Raised Center Isle short Side Panels, 22" long, (8) panels for every 12' of barn length.

Lean-to Roof Panels, 153", (8) panels for every 12' of barn length. (Note: 152 1/2" provides a 2" overhang.)

Center Isle Roof Panels, 77" long, (8) panels for every 12' of barn length. (Note: 76 1/2" provides a 2" overhang and a 2" ventilation gap at the peak.)

Back Panels: (2) 8'-11", (2) 9'-8", (2) 10'-5", (2) 11'-2", (2) 13'-10", and (2) 14'-7".

Front Panels: (2) 8'-11', (2) 9'-8", (2) 10-5", (2) 11'-2", (2) 5'-1", and (2) 5'-10". **Door Panels:** (4) 8'

TRIM:

Note: Trim will vary from supplier to supplier. These instructions suggest one way to trim and finish the barn.

Post Trim for the Track Board, 5 1/2" x 1 1/2" (L) shaped trim. (3) 10' pieces.

Door Jamb Trim, custom bent, (See drawing detail). (2) 10' pieces.

Corner Trim, Used on outside corners and on gable ends. (4) 10' pieces.

Gable Trim, (6) 14' pieces. Note: Trim length may vary, may also be 10'2" or 10'6". Multi-purpose use 2 3/4"x 2 3/8", for R-Panel use 3 1/4"x 3 1/2".

Eave Trim, Used on top of side metal. (4) 12'-3" pieces for every 12' of barn length.

End Wall flashing, 4" x 5.5" Used where lean-to roof slopes away from vertical wall. (2) 12'-3" pieces for every 12' of barn length.

Ridge Cap, Used to finish the peak of the roof. (1) 12'-3" piece for every 12' of barn length.

Barn Door Trim listed in door assembly section.

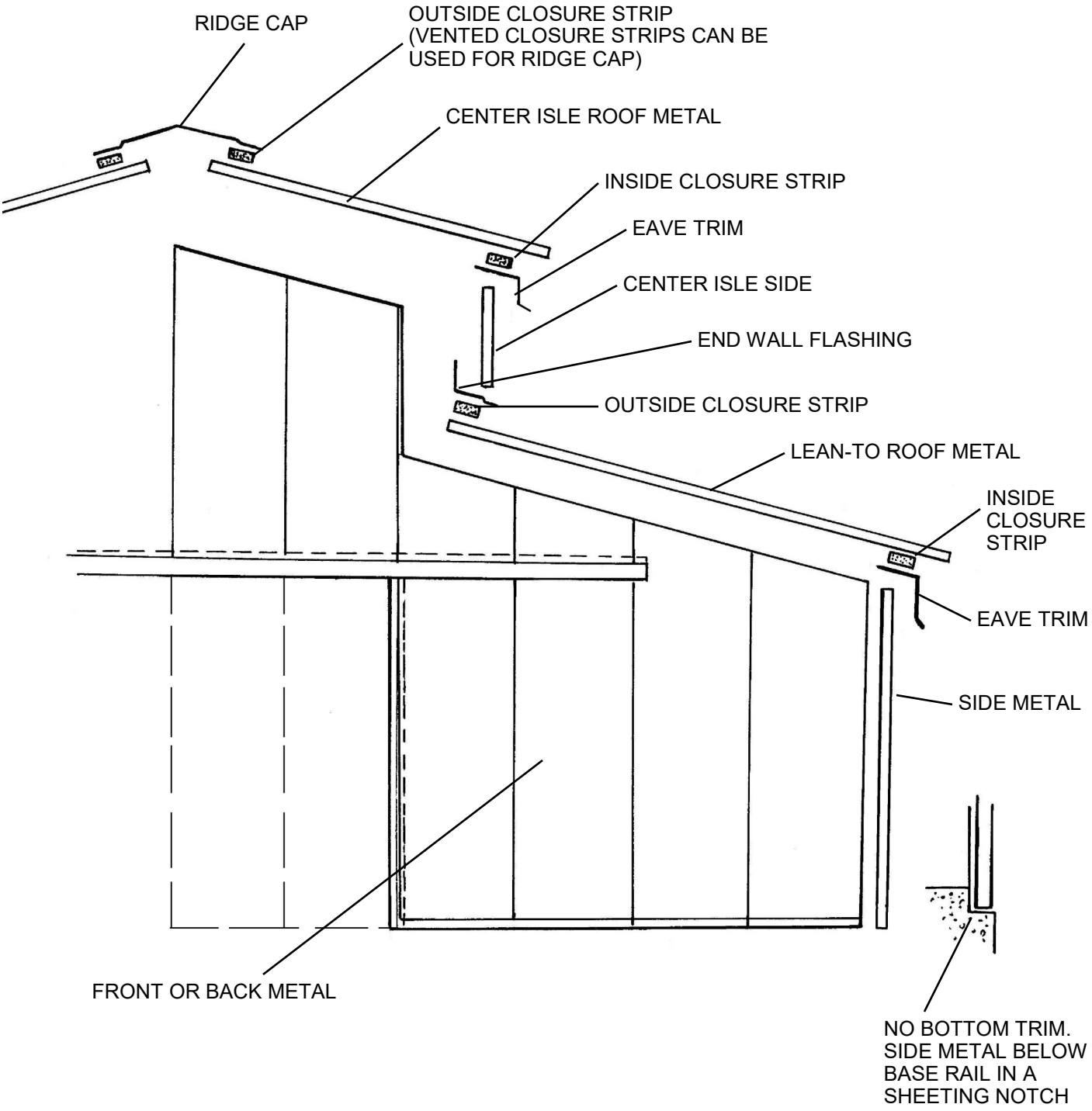
Foam Closures: Inside Closure Strips are used under the panel and Outside Closure strips are used on top of the panel.
You will need: (24) Inside closure Strips for every 12' of barn length.
You will need: (32) Outside Closure Strips for every 12' of barn length.

Screws:

#12-14 x 1" Self-Drilling Screws with rubber washers (painted roof/side wall color) You will need (700) screws for the front and back Sheet metal and trim **plus** (576) screws for every 12' of barn length.

NOTE: YOU SHOULD INSTALL ALL WINDOW TRIM AND SOME TYPES OF DOOR TRIM BEFORE HANGING SHEET METAL.

THE DRAWING BELOW IS AN END VIEW OF THE BARN . ONLY HALF OF THE BARN END IS SHOWN. THIS DRAWING SHOWS THE GENERAL LAYOUT OF ALL THE SHEET METAL AND TRIM ON THE BARN. CORNER, DOOR JAMB, AND GABLE TRIM ARE NOT SHOWN. INSTALLATION OF EACH SECTION OF SHEET METAL AND TRIM WILL FOLLOW.



NOTE: YOU SHOULD INSTALL ALL WINDOW TRIM AND SOME TYPES OF DOOR TRIM BEFORE HANGING SHEET METAL.

INSTALLING SHEET METAL SIDES AND ROOF:

NOTE:
All sheet metal cladding applied to the VersaTube frame are attached with self drilling screws with a rubber washer. These screws produce small shavings when drilling through the cladding. If the shavings are allowed to sit on the sheet metal for an extended period, rust spots will form and promote deterioration. Metal shavings must be brushed after installation of the sheet metal. Claims reported against rust spots will not be honored by VersaTube Building Systems.

SUGGESTED ORDER FOR INSTALLING SHEET METAL:
1) SIDE METAL, 2) BACK METAL, 3) FRONT METAL, 4) LEAN-TO ROOF METAL, 5) CENTER ISLE SIDE METAL, 6) CENTER ISLE ROOF METAL.

SIDE METAL:
Note: If you will be installing the side metal flush with the bottom of the base rails, the metal should be 95” long. If you will be setting the Side metal 1 1/2” below the base rail on a sheeting edge in a footer the side metal should be 96 1/2” long.

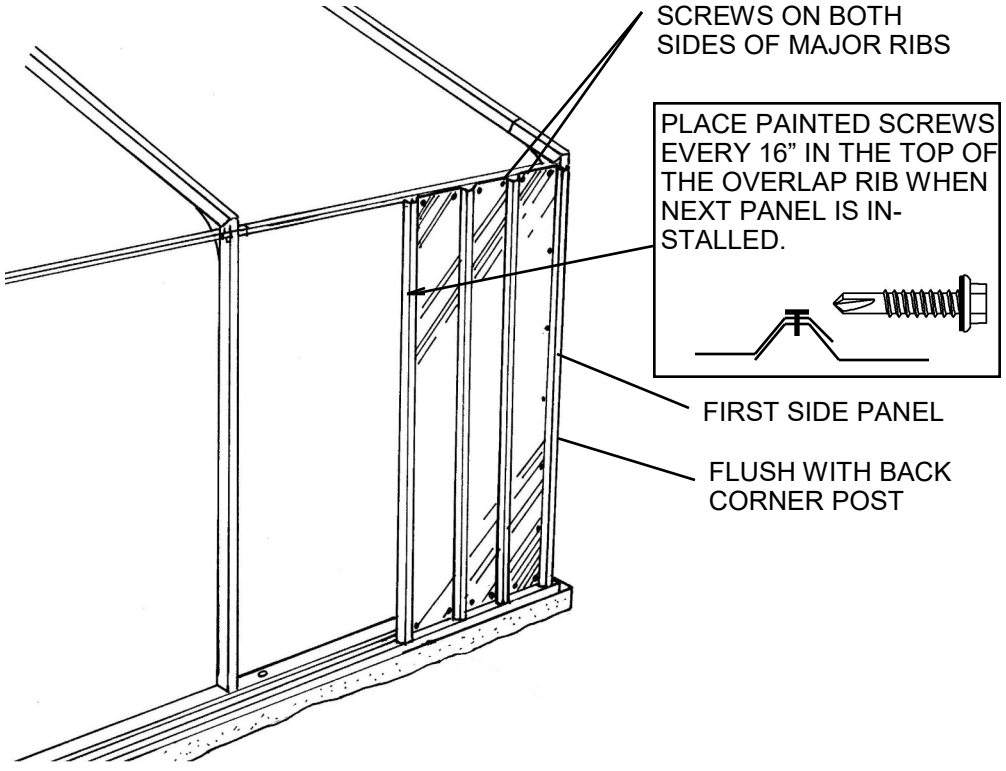
You will be installing 4 panels for every 12’ section of barn length. The outside major ribs are on 36” centers.

INSTALLING SIDE PANELS:
Start at the back of the barn and place the first sheet metal panel. Square the edge of the panel with the corner frame post. (you may also have to adjust the barn frame if the post is not plumb.) It is important that the first sheet of metal is square.

Fasten the metal at the bottom to the base rail and at the top to the girt. Place (1) # 12-14 x 1” Self-Drilling Screw with Rubber washer on both sides of each major rib. You should also install several screws up the length of the corner post.
Lap the edge of the next panel over the end rib of the first panel and fasten the second panel with screws at the top and bottom. Install #12-14 x 1” painted screws every 16” in the top of the panel overlap rib.

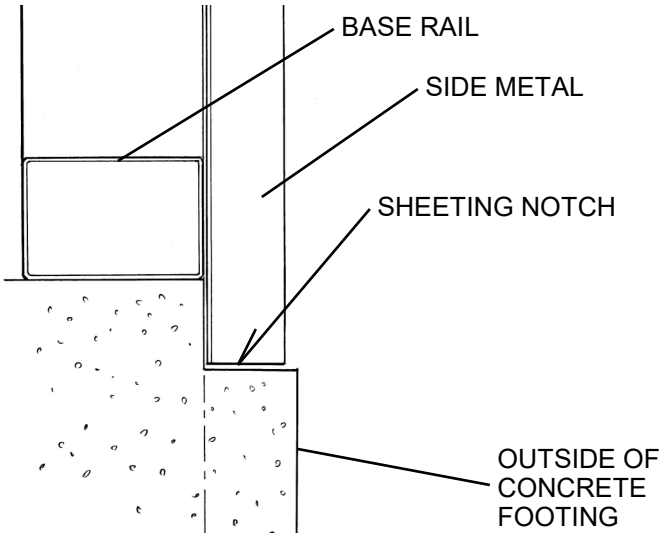
IMPORTANT: YOU SHOULD MARK YOUR FRAME EVERY 36” OR TAKE A MEASUREMENT WHEN YOU INSTALL EACH PANEL TO BE SURE THAT YOU DO NOT STRETCH OR COMPRESS THE PANELS AS YOU GO DOWN THE SIDE OF THE BARN. THE LAST PANEL INSTALLED SHOULD COME OUT EVEN WITH THE FRONT EDGE OF THE BARN FRAME. THE MAJOR RIBS ARE 36” ON CENTER.

Continue installation of side panels down the barn. The last panel should be flush with the front corner post.
Repeat on other side of barn.



INSTALLATION OF SIDE METAL CONTINUED:

If you will be setting the bottom edge of the sheet metal in a sheeting notch in the concrete footing you will be using side metal 96 1/2" long. See detail below of sheeting notch.

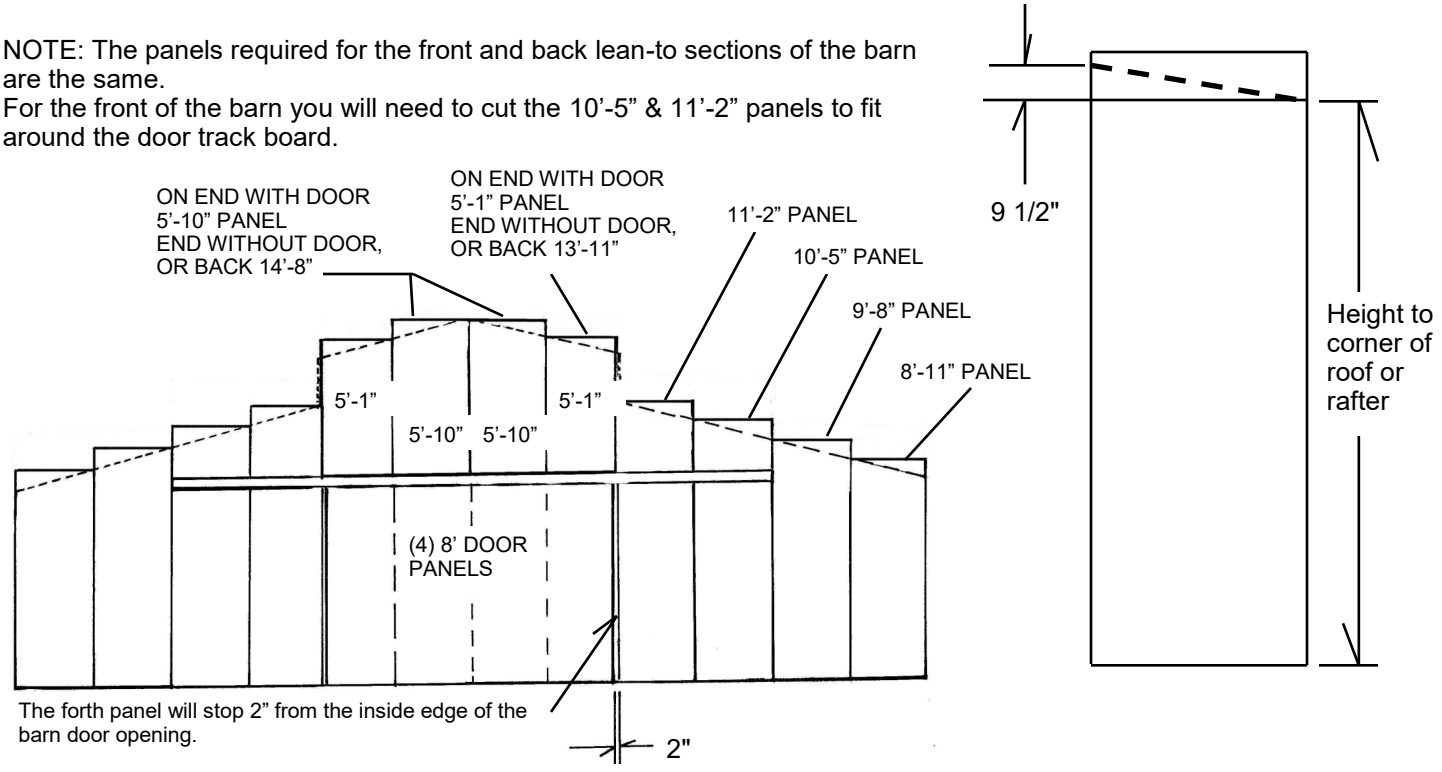


INSTALLING BACK AND FRONT SHEET METAL:

Sheet metal required for the back of the barn: (2) 8'-11", (2) 9'-8", (2) 10'-5", (2) 11'-2", (2) 13'-11", and (2) 14'-8" panels. **For the front of the barn:** (2) 8'-11", (2) 9'-8", (2) 10'-5", (2) 11'-2", (2) 5'-1", and (2) 5'-10" panels. **Door panels:** (4) 8' panels. There will be 12 panels across the barn. The roof pitch is 3-12.

CUTTING THE METAL:
Start with the panel at one end of the barn. Measure the height that you need to reach the top of the frame. Mark that dimension on the corner panel on the edge that will match up with the outside of the corner frame post. Now, measure up the other edge of the panel and put a mark 9 1/2" longer. This will give you the 3-12 pitch angle. (the actual angle is 14.04°) Use this method for all angle cuts.

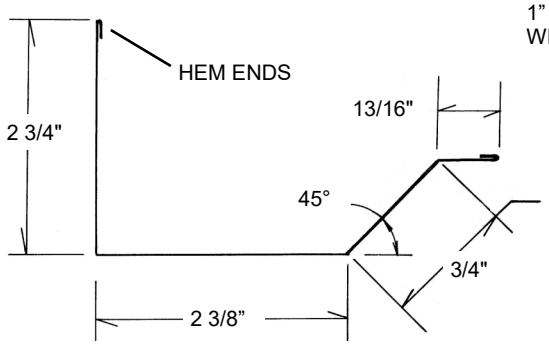
NOTE: The panels required for the front and back lean-to sections of the barn are the same.
For the front of the barn you will need to cut the 10'-5" & 11'-2" panels to fit around the door track board.



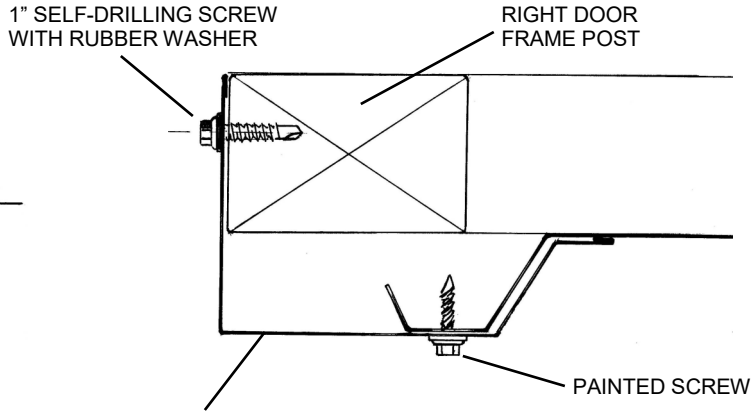
INSTALLING THE BARN DOOR JAMB TRIM:

Barn Door Jamb Trim
We are recommending custom bent door jamb trim. See drawing below for trim dimensions.
Install an 8’ piece of Door Jamb Trim on each barn door post as shown with #12-14 x 1” Self-drilling screws with Rubber washers.

NOTE: There are many ways to trim out the door jamb. This is only one suggestion. Note that if you start the R-Panel metal at the outside corner of the barn and do not stretch the panels, the edge of the fourth panel in will and up 2” short of the inside edge of the door frame.



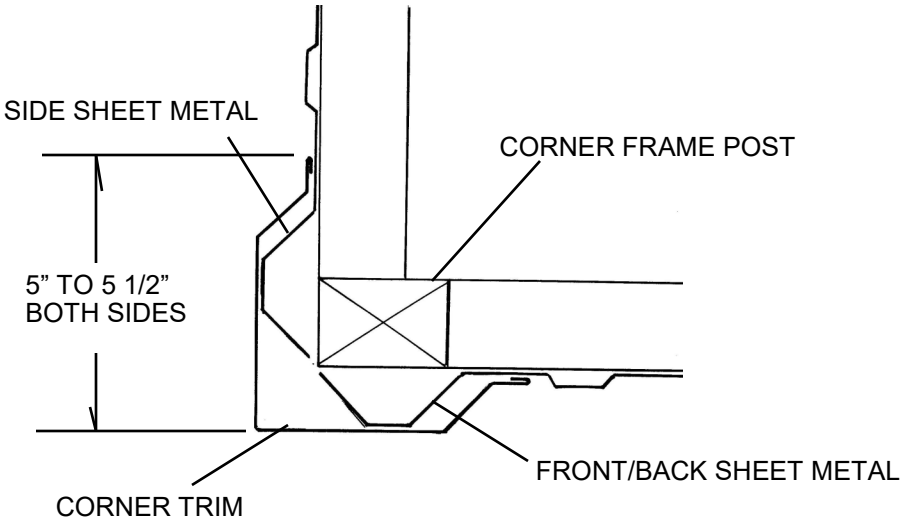
CUSTOM DOOR JAMB TRIM

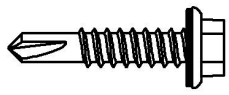


DOOR JAMB TRIM

INSTALLING CORNER TRIM:

Cut a piece of corner trim the same height as your side steel. Place the trim over the corner of the building and attach it to the front /back and side metal with #12-14 x 1” painted screws with rubber washers.



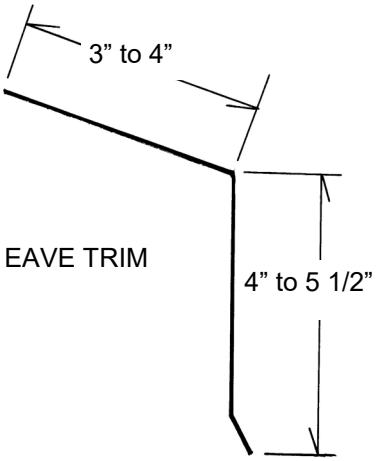


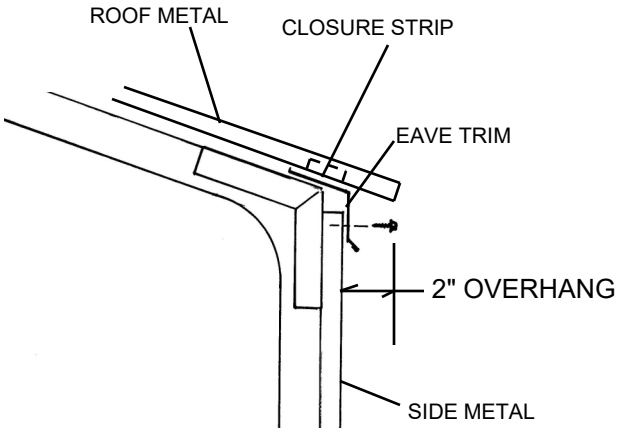
1” PAINTED SCREW
WITH RUBBER WASHER

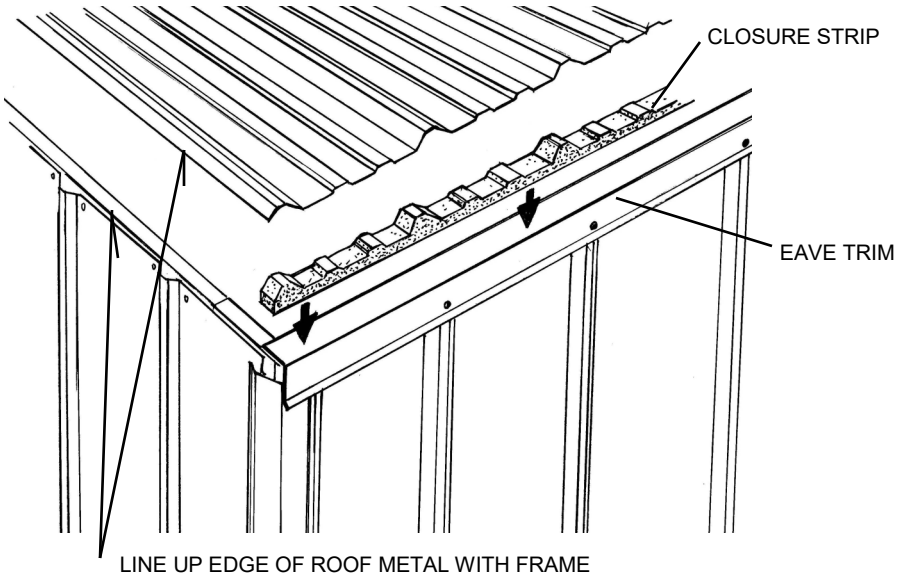
INSTALLING ROOF METAL, EAVE TRIM AND FOAM CLOSURE STRIPS:

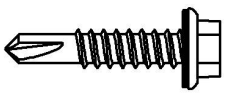
STEP 1:
Place first piece of roof metal on the lean-to roof at the front or back corner of the barn. Carefully square the first panel with the front or back roof frame. Let the roof metal extend 2" beyond the side metal. Now, fasten the roof metal to the Purlins with #12-14 x 1" Painted, Self-Drilling Screws with rubber washers. Place 1 screw on both sides of each major rib. **Do Not place any screws in the lower purlin at this time. You will come back and install eave trim and closure strips after the roof metal is installed.**
Continue to check the 2" overhang dimension as you go down the building. (NOTE: It may be helpful to clamp a board to the other end of the building and run a mason line down the length of the building to use as a guide for starting you metal panels.)
NOTE: when installing the roof panels, it is easy to stretch the panels. Be careful not to stretch the roof panels as you go down the building. Check the center to center dimension of the outside major ribs as you install them. The dimension should be 36".

STEP 2:
Installing the Eave Trim and Foam Closure Strips.
Starting at one end of the building, slide the upper edge of a piece of Eave Trim under the bottom edge of the roof metal. Insert Outside Foam Closure Strips between the Eave Trim and the Roof Metal. (Make sure that the Closure Strip contours match the Roof Metal contours. Now, push the Eave Trim up until the foam fills the roof metal gaps and fasten the Eave trim to the side metal with #12-14 x 1" painted screws through the top of each major rib. Lap the next piece of Eave Trim 3" over the previous piece and continue to insert Closure Strips. (If you had already installed the lower roof metal screws, you must remove them to install the Eave Trim.) When the eave trim and closure strips are all in place install the bottom screws in the roof panels. These screws should also catch the eave trim. Repeat this procedure on the other side of the barn.





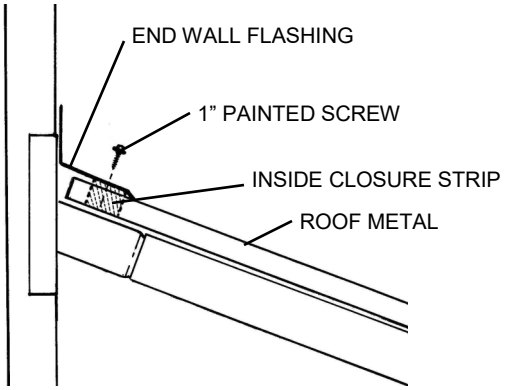


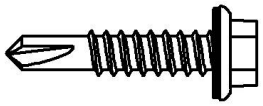


1" SELF-DRILLING SCREW PAINTED WITH RUBBER WASHER
Use when attaching trim or metal panels to frame.

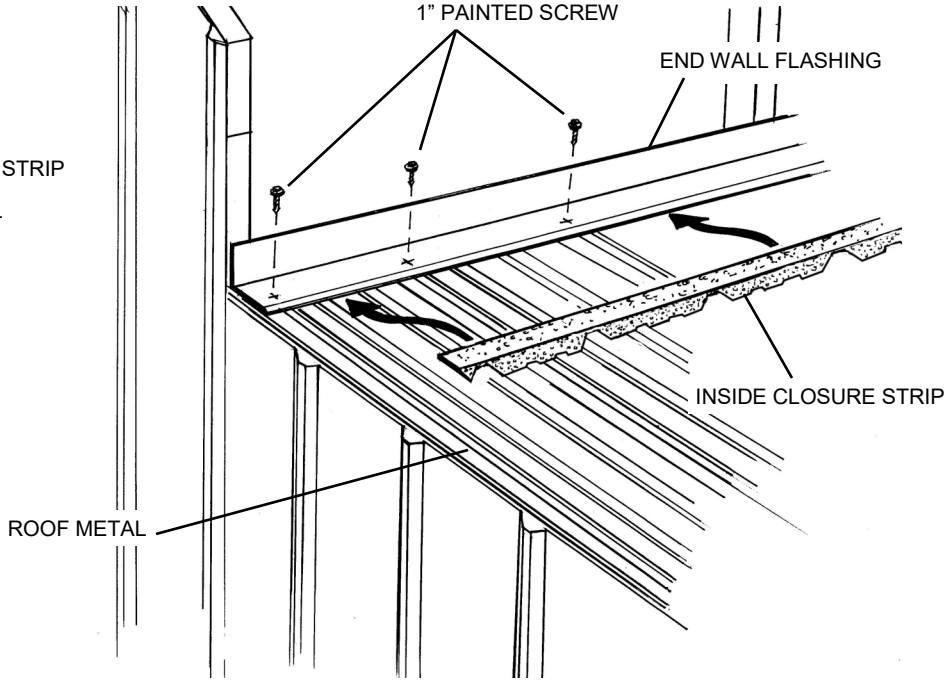
INSTALLING END WALL FLASHING:

Starting at one end of the barn at the top of the lean-to roof metal, place a piece of End Wall Flashing on top of the lean-to roof metal. Slide Inside Foam Closure Strips under the edge of the End Wall Flashing and fasten the flashing to lean-to roof metal with 1” painted screws in the center of each major rib. Slide the next piece of End Wall Flashing 3” under the proceeding piece before installing the last screw in each piece of Flashing. Continue down the entire length of the barn repeating this assembly. Trim the last piece of flashing to length as needed. Repeat this assembly on the other side of the barn.





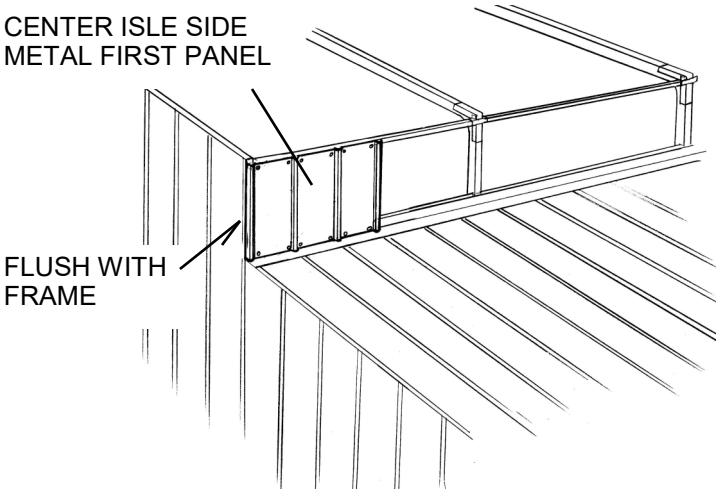
1" SELF-DRILLING SCREW
WITH RUBBER WASHER

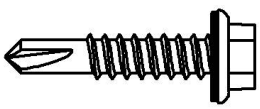


INSTALLATION OF CENTER ISLE SIDE METAL:

The center isle short side panels are 1’- 10” long. You will need (4) panels for every 12’ section.

Starting at one end of the barn, place a short side panel flush with the frame at the end of the barn frame. The bottom of the panel should rest on top of the End Wall Flashing that you just installed. Fasten the panel to the center isle girts at the top and bottom of the panel with #12-14 x 1” painted, Self-drilling Screws with rubber washers. Place the screws on both sides of each major rib. Lap the end rib of the next short side panel over the end rib of the first panel and fasten it in the same manner. Repeat this procedure down the length of the barn and on the other side of the barn.



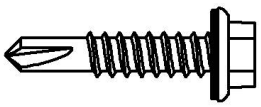


1" SELF-DRILLING SCREW
WITH RUBBER WASHER

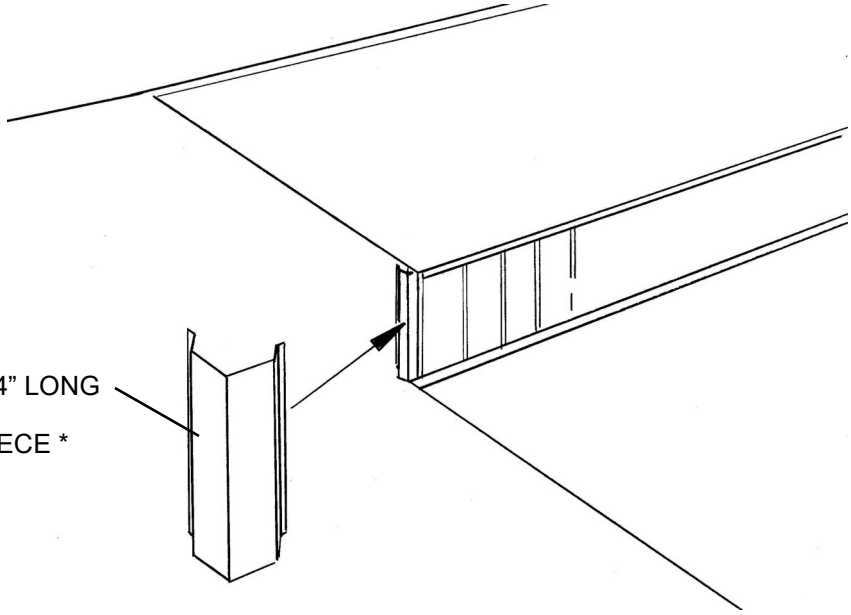
INSTALLATION OF CENTER ISLE CORNER TRIM:

The Corner Trim used on the center isle corners is the same trim that you installed on the lean-to corners below.

Cut (4) pieces of trim 21 3/4” long and install them on the four corners of the raised center isle of the barn. Use 1” painted screws with rubber washers.



1" SELF-DRILLING SCREW
WITH RUBBER WASHER



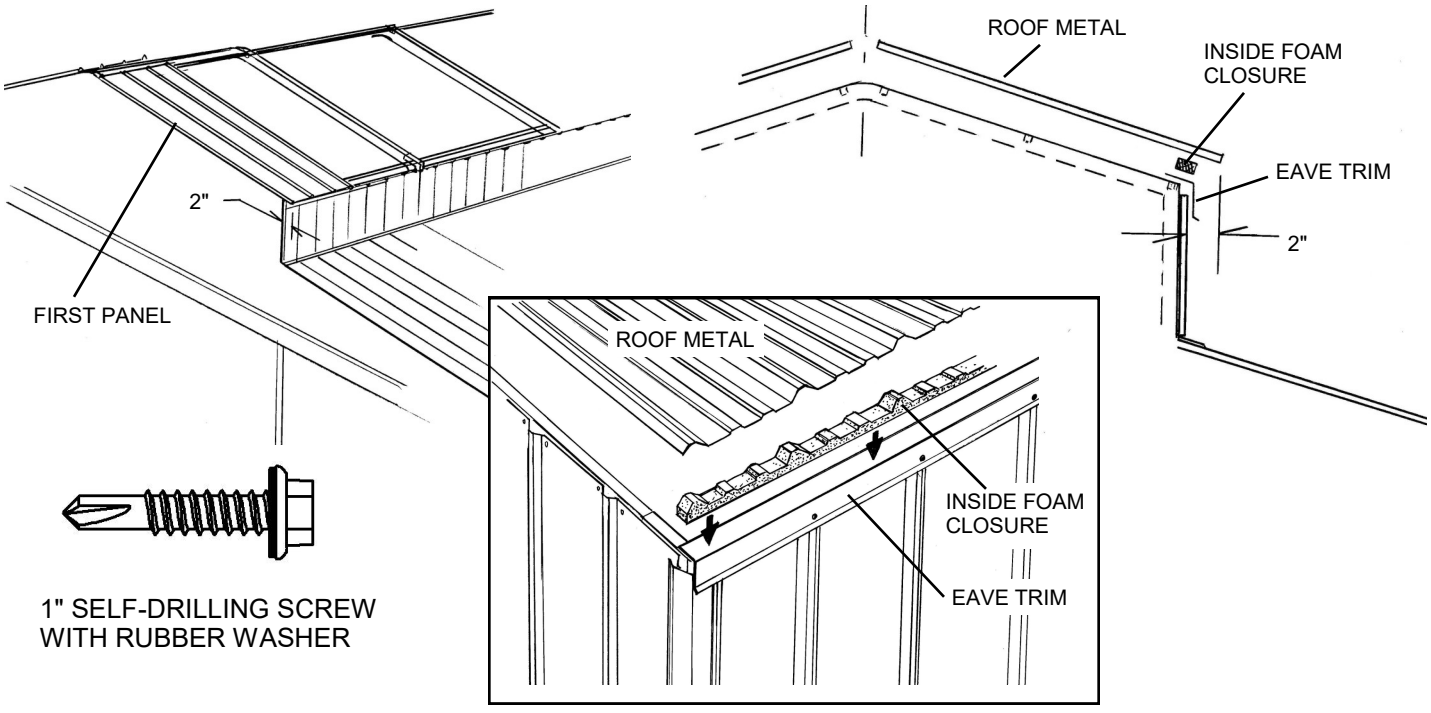
INSTALLATION OF CENTER ISLE ROOF METAL, EAVE TRIM AND CLOSURE STRIPS:

The center isle roof metal is 77” long. There will be 4 panels for every 12’ long section.

Install the center isle roof steel as you did the lean-to roof steel with a 2” overhang on the side of the roof.

Remember to leave the bottom screws out until you have installed the Eave Trim and Inside Closure Strips.

Use the same Eave Trim and Closure Strips that you installed on the lean-to roof.



1" SELF-DRILLING SCREW
WITH RUBBER WASHER

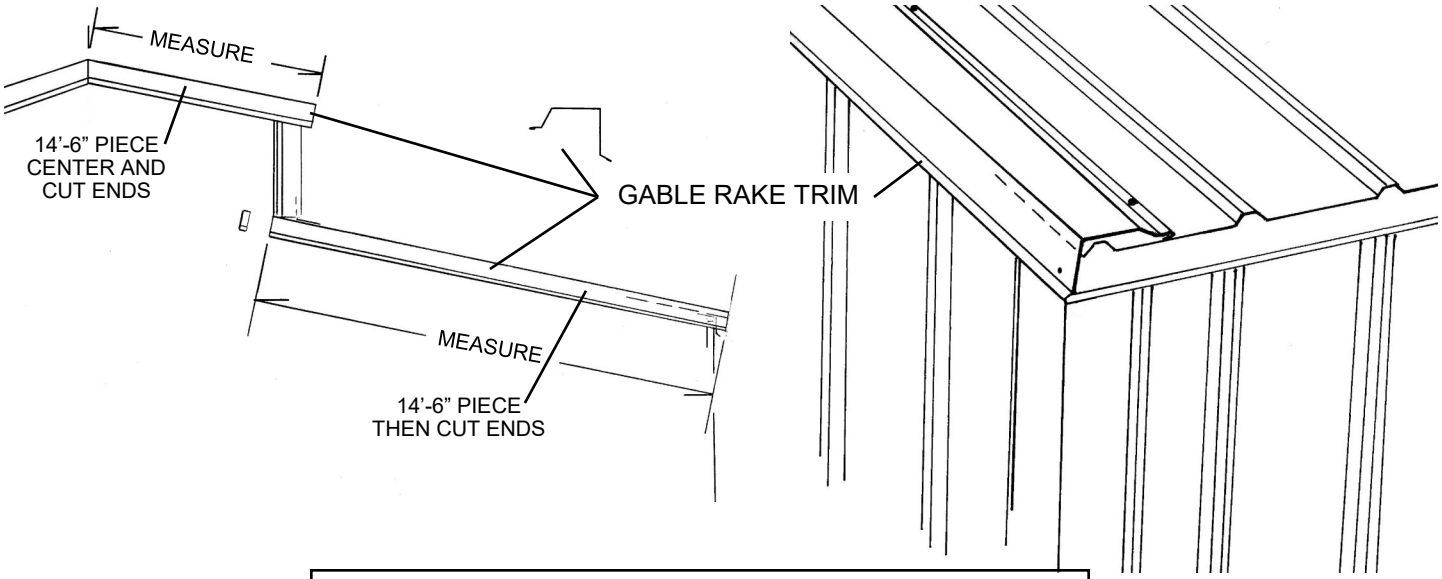
INSTALLATION OF GABLE RAKE TRIM:

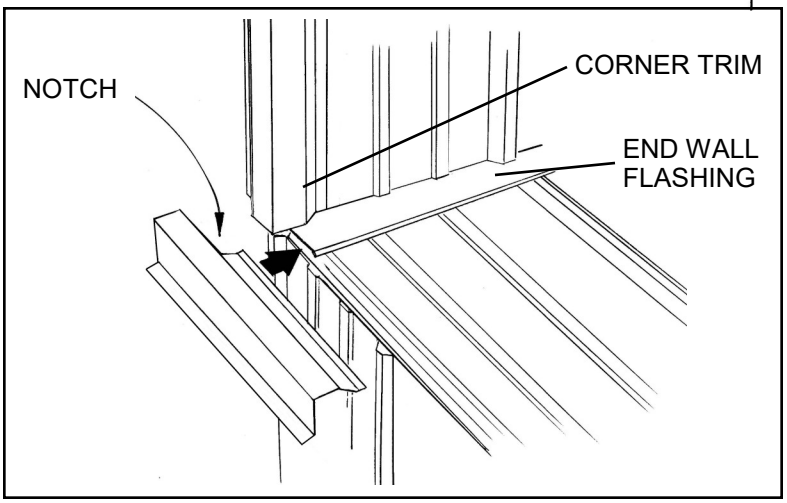
Measure and cut 4 pieces of Gable Rake Trim to reach from the bottom edge of the lean-to roof to the inside edge of the center isle corner trim.
Notch the upper end of the Gable Rake Trim to fit under the End Wall Flashing and flush with the outside of the Corner Trim as shown.
NOTE: there are many types and shapes of gable trim. The one shown may be different from yours.

Now, measure and cut (4) pieces of Gable Rake Trim to fit the center isle roof section. The trim will run from the bottom edge of the roof metal until the upper corners of the trim touch. One side will be cut the square; the other side will need to be cut on an angle (shown below).

INSTALLING THE TRIM: Slide the notched end of the trim that you cut for the lean-to roof gable under the End Wall Flashing at the top of the lean-to roof. (If you have installed a screw that prevents you from sliding the Gable Rake Trim under the flashing, You should remove the screw and reinstall it when the trim has been inserted.) Attach the trim to the tops of the major wall and roof ribs with 1" painted screws.

Line up the center isle Gable Rake Trim with the bottom edge of the center isle roof and fasten it with 1" painted screws into the top of the major ribs in the roof or wall. NOTE: The top corners of the trim should come close to touching (or touch) at the peak of the building.



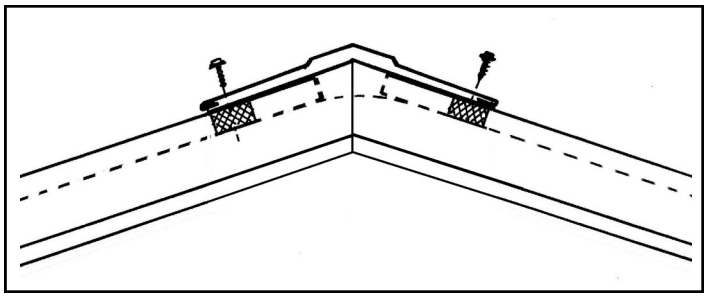


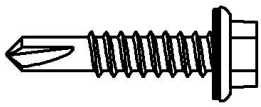
NOTE: There are many ways to trim and detail the end of your barn. If you have questions please contact your metal supplier.

INSTALLATION OF THE RIDGE CAP: RIDGE CAP COMES IN 10' LENGTHS.

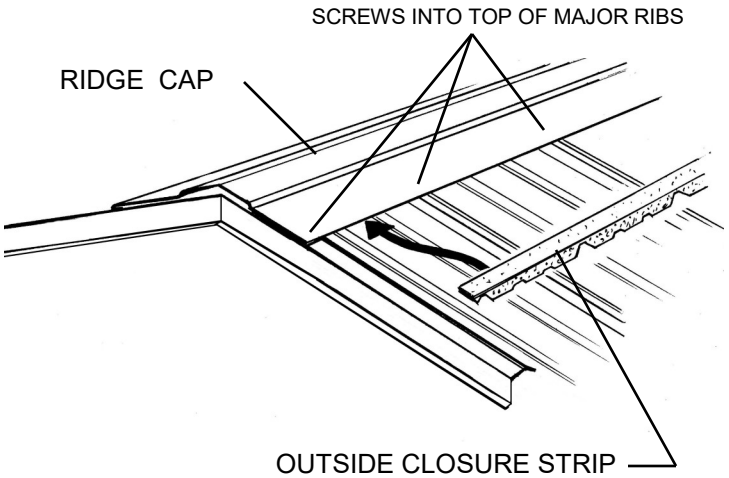
OUTSIDE FOAM CLOSURE STRIPS WILL BE INSTALLED UNDER BOTH SIDES OF THE RIDGE CAP.

Starting at one end of the roof place a piece of Ridge Cap on the peak of the roof, flush with the end of the building. Install Outside Closure strips under the edges of the Ridge Cap and fasten the Ridge Cap to the tops of the major roof metal ribs with 1” painted screws. NOTE: The next length of Ridge Cap should overlap the previous length about 3”. Do not install the screws in the joint until the next piece is in place. Continue this assembly down the entire length of the barn. Trim the last piece to be flush with the other end of the barn.





1" SELF-DRILLING SCREW
WITH RUBBER WASHER



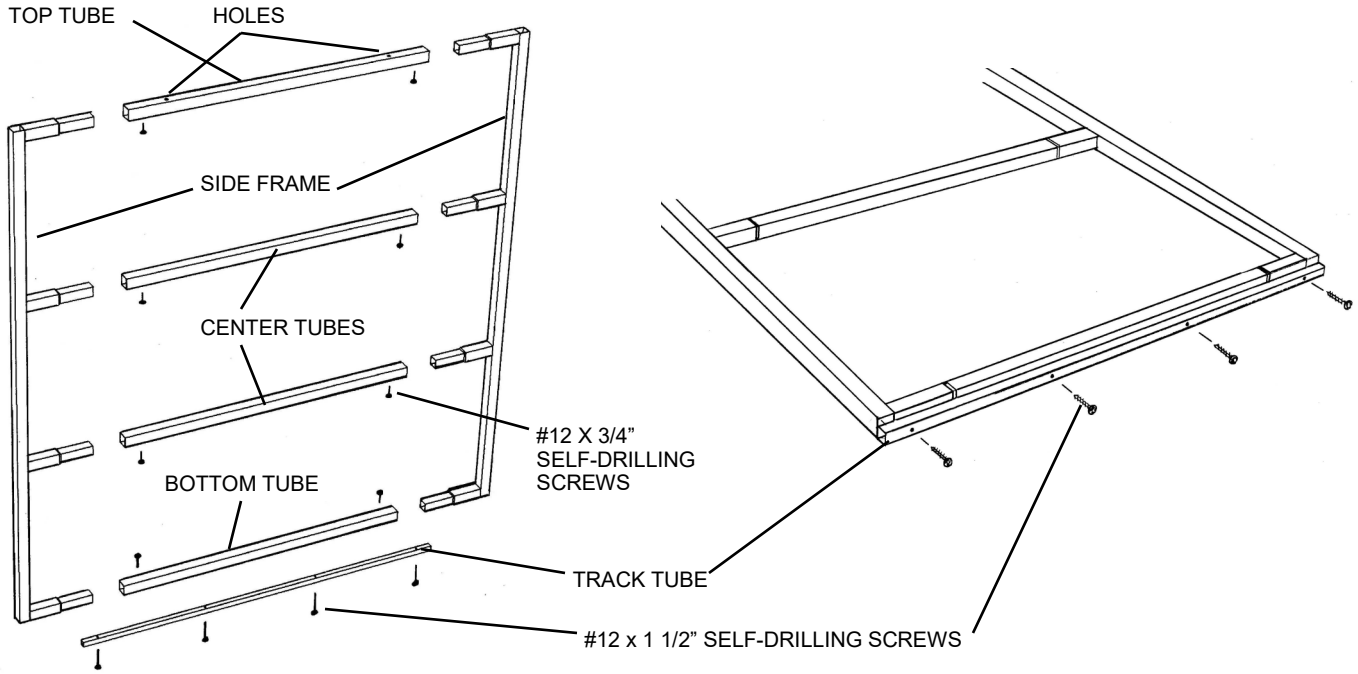
ASSEMBLY OF THE BARN DOOR FRAMES: These assembly instructions show the assembly of the VersaTube 6’ x 8’ barn door frame. The Sheet metal application is one way to cover the door. Your metal supplier may chose to cover and trim the doors in a different manner.

PARTS: Horse Barn Door Frame 2 frames (part no. HBD-268)
(4) Side Frames, 2 x 2 x 96” long with 4 welded on pins
(2) Top Frame Tube, 2 x 2 x 56” long with two holes
(6) Horizontal Frame Tubes, 2 x 2 x 56”
(2) Bag of #12 x 3/4” Hex Head, Self-Drilling Screws (40 per bag)
(8) #12 x 1 1/2” Hex Head, Self-Drilling Screws
(2) Barn Door Track Tube, 1” x 1” x 71 3/4” long with 4 holes.
(4) Trolleys
(1) Left Door Guide
(1) Right Door Guide

DOOR FRAME ASSEMBLY:

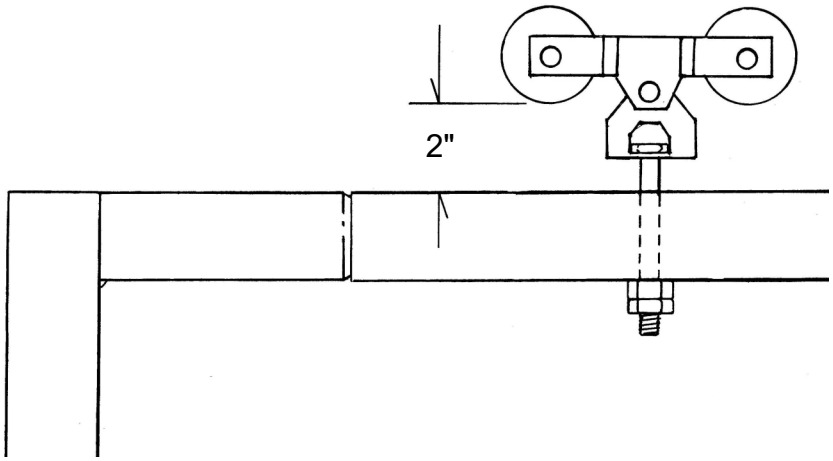
Join the door frame components as illustrated below and fasten with #12 x 3/4” Self-Drilling screws (1 screw per joint). The Top Tube and the two center horizontal tubes should have the screw on the under side of the tube joint. The bottom tube should have the screw on the top side of the tube. **Note: The top tube has 2 holes which should be vertical. These are the mounting holes for the trolleys.**

Now attach the track tube on the bottom of the frame with (4) #12 x 1 1/2” Self-Drilling screws. See detail. Note: the side of the door frame that is flush with the track tube will be the inside of the door.



INSTALLING TROLLEYS:

Remove both nuts from the trolley bolts if they are on the bolts.
Insert the trolley bolt through the holes in the top tube on each barn door frame. Screw one nut on to the bolt until the distance from the top of the frame to the bottom of the trolley wheels is 2”. Now, Screw the second nut on the trolley bolt a snug it up to the first nut. Repeat this assembly for all 4 trolleys.

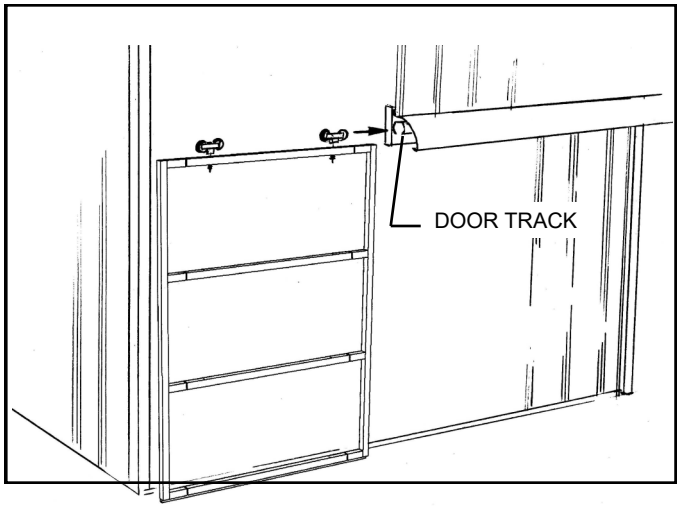


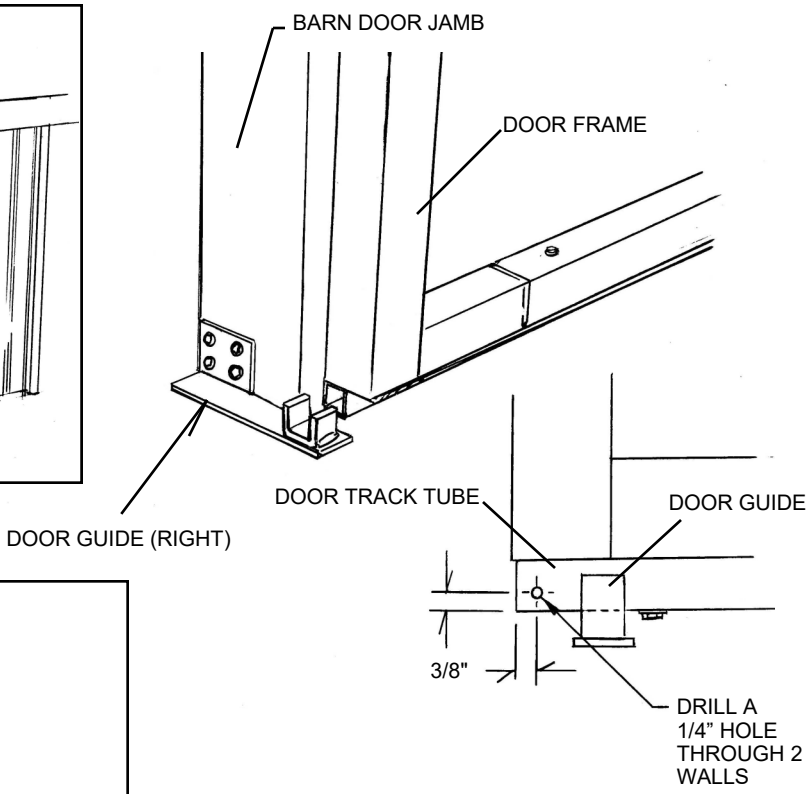
HANGING THE BARN DOOR FRAMES:

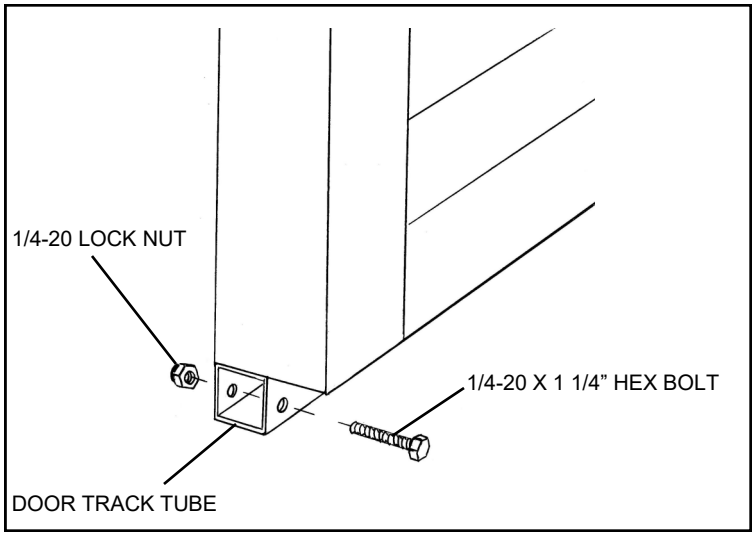
Lift the doors and slide the door trolleys into the door track on the barn.

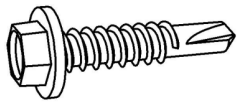
The Ends of the Door Track can be covered with a Track End Plug. See Detail below.

If you are provided the VersaTube left and right Door Guides, line the guides up with the track tube on the bottom of the door in the “U” shaped section of the door guide. Adjust the guide in or out until the door hangs plum and fasten the Door Guide to the barn door Jamb with #12 x 3/4” Self-Drilling screws.
You can create a stop by drilling a 1/4” hole 3/8” up and 3/8” in from the bottom corner of the guide tube on the bottom of the door. Insert a 1/4-20 x 1 1/4” hex bolt through the hole and put a 1/4-20 lock nut on the other side.
Door Track Cover consists of (1) 16’ long & (1) 10’6” long, trim excess.

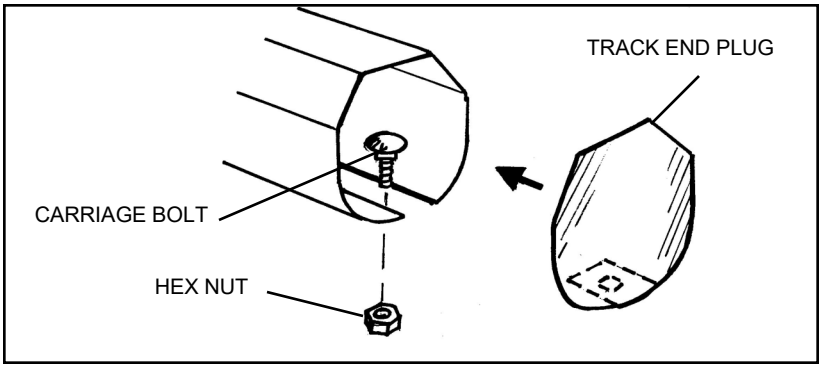








#12 X 3/4” SELF-DRILLING



INSTALLING SHEET METAL AND TRIM ON BARN DOORS:

STEP 1: CUTTING AND FASTENING SHEET METAL TO THE DOOR

You will start the assembly of the metal on the door frame at the outside edge of the door. (That is the edges nearest the sides of the barn. The right side for the right door and the left side for the left door.

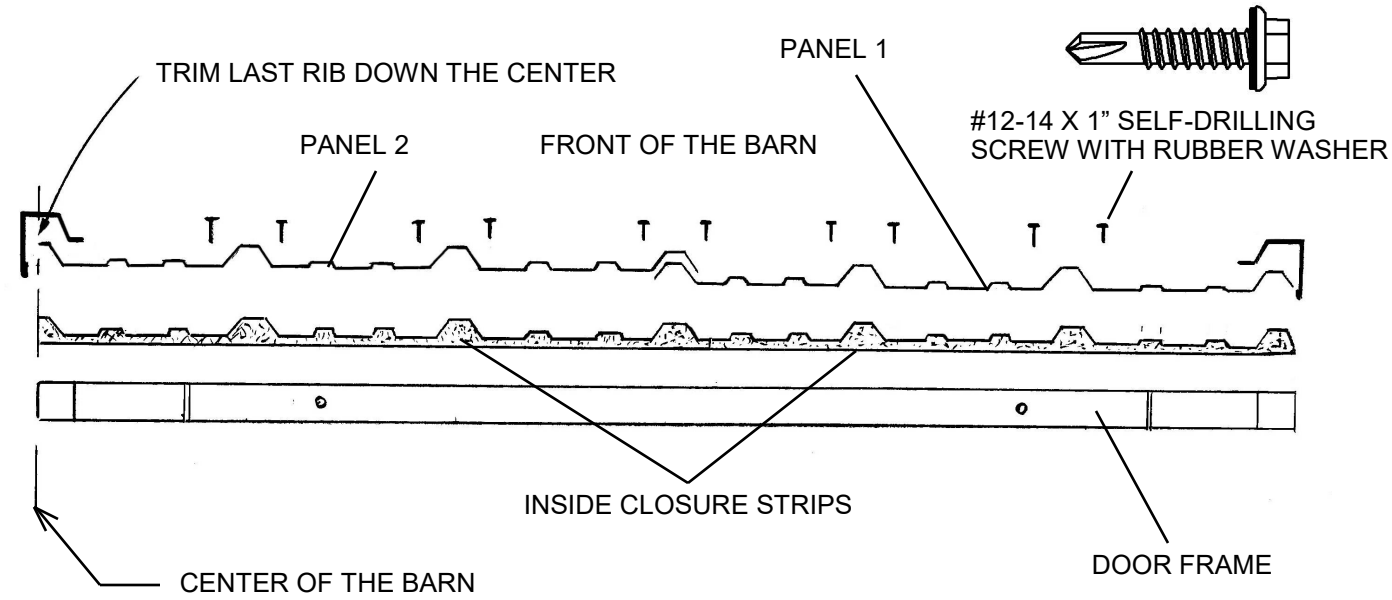
Fasten the first panel to the door frame with the edge of the panel flush with the outside edge of the door frame. Use #12-14 x 1" self-drilling screws with rubber washers. Place an inside closure strip under each panel at the top and bottom of the door.

Now, Trim the next panel down the center of the last major rib. This will make the panel fit the door frame and all ribs should line up with the ribs of the barn above the door.

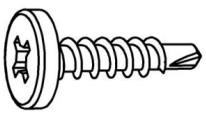
STEP 2: CUTTING AND ATTACHING DOOR SIDE TRIM.

We recommend a custom piece of trim for the barn doors. You will find a drawing of the trim profile below.

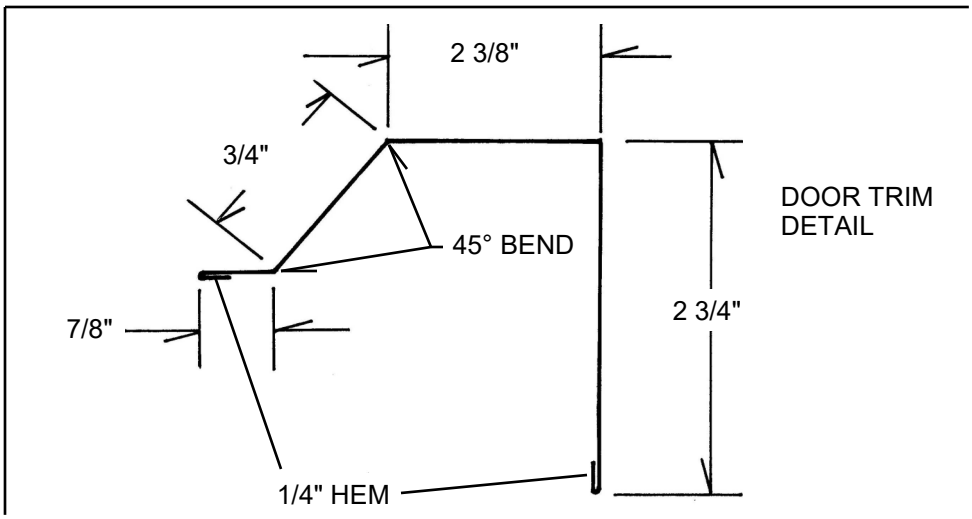
Cut 4 pieces of the custom trim for the sides of the doors. Fasten the trim to the door with flat head (pan head screws) on the edge of the door frame and with #12-14 x 1" painted screws into the sheet metal.



TOP VIEW OF DOOR. THE LEFT DOOR AS YOU LOOK AT THE BARN IS SHOWN



#10 PAN HEAD SCREW



DOOR TRIM DETAIL