WGC COMMERCIAL

GREENHOUSES • DESIGN • BUILD • SERVICE



EVERGREEN SERIES

RANGER 2000

INSTRUCTION MANUAL

AMERILUX INTERNATIONAL
CELEBRATING 20 YEARS

J&D Manufacturing

PLYCO

CONLEY'S
GREENHOUSE MANUFACTURING & SALES

- Greenhouse Frames by WGC/Conley's Manufacturing - Glazing by Amerilux International - Doors by Plyco Corp - Equipment by J&D Manufacturing - Distributed by Wisconsin Greenhouse Company (Equipment Subject to change)

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INTRODUCTION

SHOULD YOU HAVE ANY QUESTIONS CONCERNING THESE INSTRUCTION, COMPONENTS ETC..., PLEASE CONTACT US DIRECTLY. WE WELL BE GLAD TO ANSWER ANY QUESTIONS CONCERNING OUR MANUFACTURED PRODUCT.

INCLUDED IN THIS PACKAGE ARE INSTRUCTIONS AND DETAILED DRAWINGS PERTAINING TO YOUR WGC/ CONLEY'S GREENHOUSE SYSTEM. STUDY THE INSTRUCTIONS BEFORE BEGINNING CONSTRUCTION TO BECOME FAMILIAR WITH OUR PRODUCT AND HOW IT IS ASSEMBLED.

STORE ALL MATERIALS OFF THE GROUND ON WOOD BLOCKS. PROTECT ALL YOUR MATERIALS FROM THEFT AND/OR DAMAGE. YOU MAY WISH TO DISCUSS BUILDERS RISK INSURANCE WITH YOUR INSURANCE AGENT.

DISCLAIMER

THE FOLLOWING INSTRUCTIONS ARE GIVEN AS SUGGESTED GUIDELINES FOR GENERAL INSTRUCTIONS. WGC/CONLEY'S MANUFACTURING AND SALES OR ANY OF THEIR EMPLOYEES SHALL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM PURCHASERS IMPLEMENTATION OF THESE INSTRUCTIONS. PURCHASERS ALONE SHALL BE RESPONSIBLE FOR CONFORMANCE WITH ALL APPLICABLE LAWS, ORDINANCES, AND SAFETY STANDARDS IN CONSTRUCTING THIS GREENHOUSE AND ALL EQUIPMENT INSTALLED THEREIN.

NOTICE TO WGC/CONLEY'S CUSTOMERS PROTECT YOURSELF FROM ADDED COSTS

ALL PRODUCTS ARE SOLD F.O.B. SHIPPING POINT, AND THE ATTACHED MEMORANDUM COPY OF BILL OF LADING THAT INDICATES THAT MATERIAL SHIPPED HAS NOW, BY LAW, BECOME YOUR PROPERTY AND IS AN ACKNOWLEDGMENT BY THE TRANSPORTATION COMPANY OF THE RECEIPT OF THE MATERIALS IN GOOD CONDITION.

SAFE DELIVERY OF THIS SHIPMENT IS NOW THE RESPONSIBILITY OF THE CARRIER WHO ACTS AS YOUR AGENT. WE WILL BE GLAD TO RENDER ASSISTANCE TO TRACE AND RECOVER LOST GOODS.

EXAMINE THE SHIPMENT CAREFULLY BEFORE SIGNING THE FREIGHT BILL. IF ANY DAMAGE IS NOTED, OR OF THE NUMBER OF PIECES DOES NOT AGREE WITH THE BILL OF LADING, INSIST THAT SHORTAGE OR DAMAGE BE NOTED ON THE FREIGHT BILL BY THE CARRIERS AGENT. FAILURE TO DO SO MAY JEOPARDIZE YOUR RECOVERY.

DO NOT REFUSE SHIPMENT AS THIS IS YOUR PROPERTY AND REFUSAL CAUSES UNNECESSARY DELAYS AND SHORTAGE EXPENSES. ARRANGE WITH CARRIER WITHIN 15 DAYS TO INSPECT AND MAKE REFERENCE THERE TO ON THE FREIGHT BILL. CONSULT YOUR CARRIER FOR DISPOSITION OF DAMAGED ARTICLES.

MAKE YOUR CLAIM PROMPTLY, THE TRANSPORTATION COMPANY WILL NOT CONSIDER A CLAIM UNLESS IT IS PRESENTED WITHIN (9) MONTHS FROM THE DATE OF SHIPMENT. CARRIERS AGENT WILL ASSIST YOU IN PREPARING A CLAIM.

CLAIMS FOR LOSS OR DAMAGE AND TRANSPORTATION CHARGES RESULTING FROM SHIPPING, MUST NOT BE DEDUCTED FROM THE INVOICE, NOR PATENT INVOICES WITH HELD AWAITING ADJUSTMENT OF SUCH CLAIMS, SINCE IT IS THE FUNCTION OF THE CARRIER TO GUARANTEE SAFE DELIVERY.

CHECK THE ITEMS RECEIVED WITH THE INVOICE. OF THERE IS ANY DISCREPANCY CONTACT US IMMEDIATELY GIVING FULL PARTICULARS. CLAIMS FOR SHORTAGE ATTRIBUTED TO OUR COUNT IN PACKAGE MUST BE MADE WITHIN 10 DATES FORM THE SHIPMENT IS RECEIVED.

NO MERCHANDISE MAY BE RETURNED FOR CREDIT WITHOUT A RETURN GOODS TAG AND SHIPPING INSTRUCTIONS FROM THE FACTORY.

WARRANTY

WGC/CONLEY'S MANUFACTURING AND SALES, THEIR EMPLOYEES OR REPRESENTATIVES, WILL NOT BE RESPONSIBLE FOR ANY DAMAGES TO GREENHOUSE COVERINGS, STRUCTURES, CROPS OR EQUIPMENT WHEN USED IN CONDUCTION WITH OUR TUBE - LOCK, OR ANY OTHER LOCKING DEVICE MANUFACTURED BY WGC/CONLEY'S MANUFACTURING AND SALES OR OTHERS.

GRADE AND PREPARE THE BUILDING SITE

1. REMOVE THE GRASS AND DEBRIS DOWN TO SOLID SOIL.

2. LOCATE THE BUILDING CORNERS AND SET THE GRADING STAKES 5' BEYOND THE CORNERS.

3. A TRANSIT LEVEL IS NEEDED TO SURVEY THE AREA OF THE BUILDING. IN ORDER TO INSURE PROPER DRAINAGE AND EVEN HEATING, THE WIDTH SHOULD BE SET LEVEL AND THE LENGTH SHOULD BE SET LEVEL WITHIN APPROXIMATELY 1%.

4. CUT AND FILL THE SITE UNTIL IT IS AT THE RECOMMENDED GRADE.

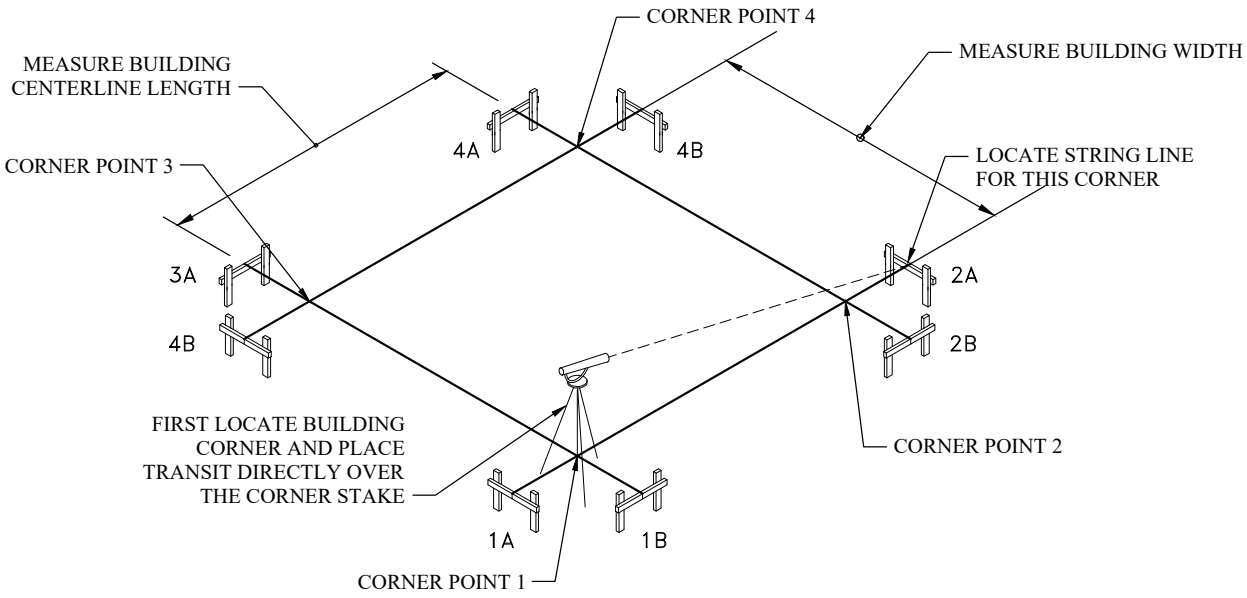
LAYOUT AND SQUARE THE FOUNDATION

1. ROUGHLY LOCATE THE CORNERS OF THE BUILDING AND DRIVE IN THE CORNER STAKES.

2. SET BATTER BOARDS APPROXIMATELY 6' (OR ADEQUATE DISTANCE FROM AUGER CLEARANCE) BACK FROM THE CORNERS IN EACH DIRECTION. SET INTERMEDIATE BATTER BOARDS OF THE BUILDING IS LONGER THAN 50 FEET TO KEEP THE LINES FROM SAGGING OR BLOWING IN THE WIND.

3. LOCATE THE FIRST BUILDING CORNER POINT AND MARK IT WITH A STAKE OR NAIL HEAD.

4. MEASURE FROM CORNER POINT 1, THE SPECIFIED DIMENSION OF THE BUILDING, TO LOCATE CORNER POINT 2. PULL A TIGHT LINE BETWEEN BATTER BOARD "1A" AND BATTER BOARD "2A", MAKING SURE THE LINE PASSES OVER CORNER POINT 1 AND CORNER POINT 2. FASTEN THE LINE THE BATTER BOARDS AND CHECK IT WITH TRANSIT. MAKE SURE THE BATTER BOARDS AND LINES ARE LEVEL (SEE FIG. 1). VARIATIONS IN THIS WILL ULTIMATELY AFFECT THE EAVE HEIGHT.



SEE PAGE 7 FOR GUTTER CONNECTED HOUSES

FIGURE 1 - LOCATING CORNER POINT 2

5. TO LOCATE THE THIRD CORNER POINT (FIG 2), YOU MAY USE ONE OF TWO METHODS, THE DIAGONAL METHOD OR THE TRIANGLE METHOD.

THE DIAGONAL METHOD - RUN A LINE DIAGONALLY ACROSS FROM CORNER TO CORNER AND ADJUST THE LINES UNTIL THE DIAGONAL DIMENSIONS ARE EQUAL. (SEE FIGURE 3).

THE TRIANGLE METHOD - CREATE A 90ø ANGLE FROM THE FIRST LINE USING CORNER POINT 1 AS A VERTEX. THIS ANGLE MAY BE ACCOMPLISHED BY USING TWO TAPE MEASURES AND THE CHART LISTED BELOW (SEE FIGURE 4) (USE THIS METHOD FRO LARGER BUILDINGS WHERE THE LENGTH OF THE DIAGONAL EXCEEDS THE 100 FOOT TAPE MEASURE). WHEN YOU'VE LOCATED CORNER POINT 3, PULL YOUR SECOND LINE BETWEEN BATTER BOARD "1B" AND BATTER BOARD "3B" MAKING SURE IT PASSES OVER CORNER POINT 1 AND CORNER POINT 3. CHECK WITH TRANSIT MAKING SURE THAT BATTER BOARDS AND LINES ARE LEVEL (SEE FIG. 2.)

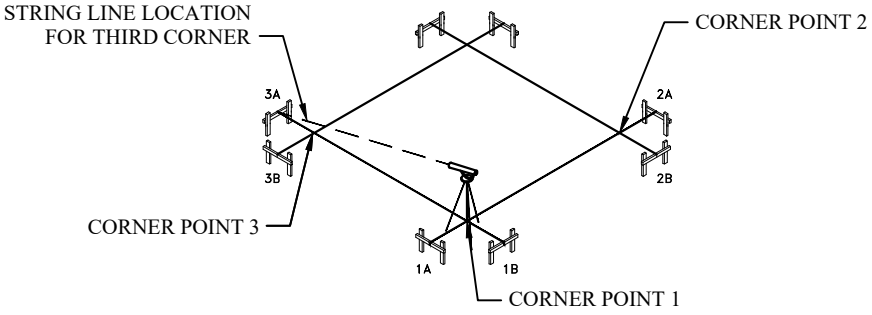


FIGURE 2 - LOCATING CORNER POINT 3

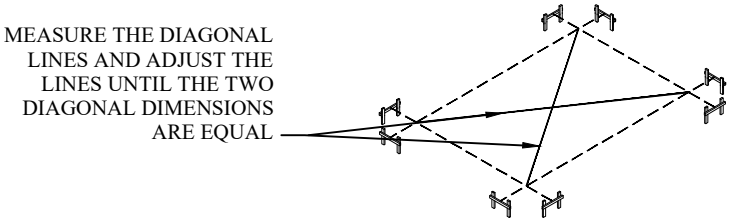


FIGURE 3 - DIAGONAL METHOD

$\sqrt{\quad}$

DIMENSION A^2 + DIMENSION B^2 + DIMENSION C^2		
20'	15'	25'
24'	18'	30'
28'	21'	35'
32'	24'	40'
36'	27'	45'
40'	30'	50'

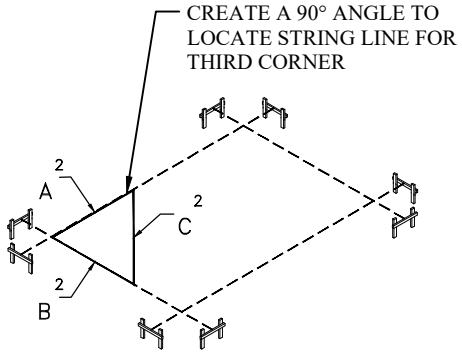


FIGURE 4 - TRIANGLE METHOD

6. TO LOCATE THE FOURTH CORNER POINT (FIGURE 5), USING TWO TAPE MEASURES, FROM CORNER POINT 3 AND CORNER POINT 2, THE SPECIFIED LENGTH AND WIDTH. THE POINT AT WHICH THESE LINES INTERSECT WILL BE CORNER POINT 4.

7. NOW YOU MAY PULL YOUR LAST TWO LINES AND FASTEN THEM TO THE APPROPRIATE BATTER BOARDS. BE SURE TO CHECK THE LEVEL OF YOUR LINES (FIGURE 5).

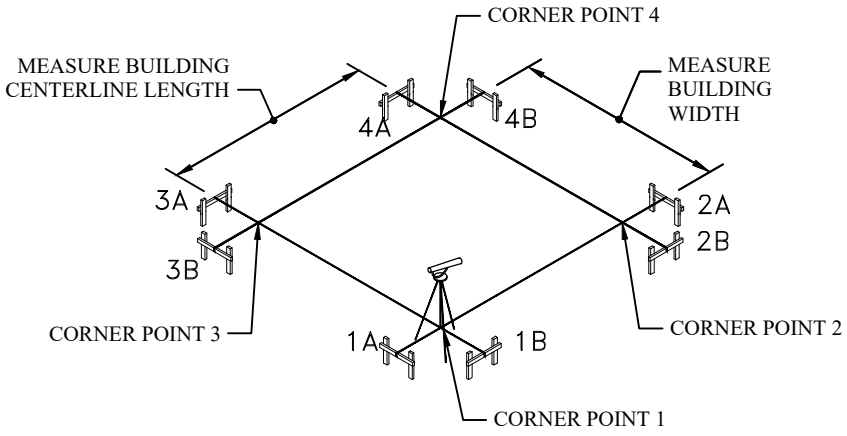


FIGURE 5 - LOCATING CORNER POINT 4

FIND COLUMN CENTERS

1. MARK THE CORNER POINTS ON THE LINES, AND USE A 100 FOOT TAPE MEASURE TO MARK THE INTERMEDIATE HOLE CENTERS ON THE LINES.

2. USING A LEVEL FOR VERTICAL ACCURACY, MARK THE HOLE CENTERS ON THE GROUND WITH NAILS. PAINT THE NAIL HEADS WITH FLUORESCENT PAINT.

3. MEASURE DOWN THE WIDTH OF THE LINES AND MARK THE END WALL UPRIGHT CENTERS IN THE SAME MANNER.

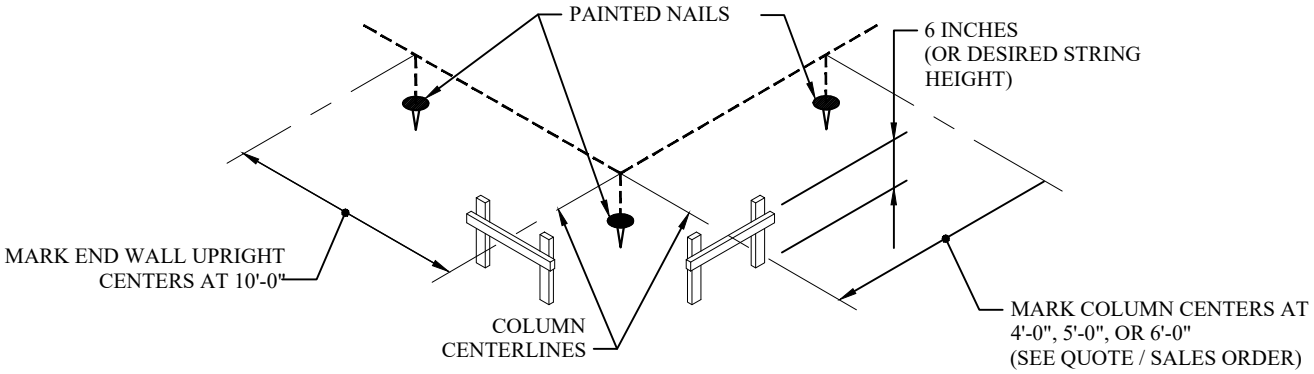


FIGURE 6 - LOCATING COLUMN CENTERS

AUGER COLUMN HOLES

1. AT THE POINT THAT THE LINES MEET THE BATTER BOARDS, CLEARLY AND ACCURATELY MARK THE PLACEMENT OF THE LINES. MAKE SURE ALL THE BATTER BOARDS ARE MARKED.

2. REMOVE THE LINES.

3. AUGER HOLES TO REQUIRED DIMENSIONS.

4. AFTER DIGGING THE HOLES FOR END WALL UP RIGHTS, REFILL LOOSELY WITH DIRT, UNTIL READY FOR USE, (SEE FIGURE 9-PAGE 7).

CAUTION

BE SURE THERE ARE NO UNDERGROUND OR OVERHEAD ELECTRICAL WIRES, WATER PIPES, GAS LINES, ETC...ON OR NEAR THE JOB SITE.

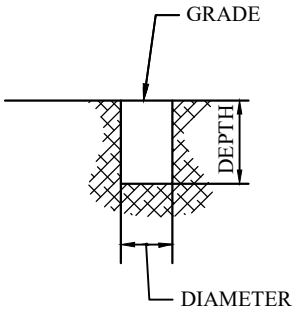


FIGURE 7 - AUGER HOLE

OFFSETTING THE LINES

1. OFFSETTING OF THE LINES SHOULD BE DONE THE DAY THE CONCRETE IS POURED AND NOT LEFT OVERNIGHT TO PREVENT STRETCHING OR KNOCKING DOWN LINES.

2. TO FIND THE COLUMN SET LINES, YOU MUST RESTRING THE FOUNDATION LAYOUT. FROM THE CENTER LINE MARKS ON THE BATTER BOARDS, MEASURE 1/2 THE SIZE OF THE COLUMN AND MOVE THE LINES TO THAT MARK. (ALWAYS MOVE THE LINES IN THE SAME DIRECTION TO PREVENT CONFUSION AND MISPLACEMENT OF COLUMNS (SEE FIGURE 8).

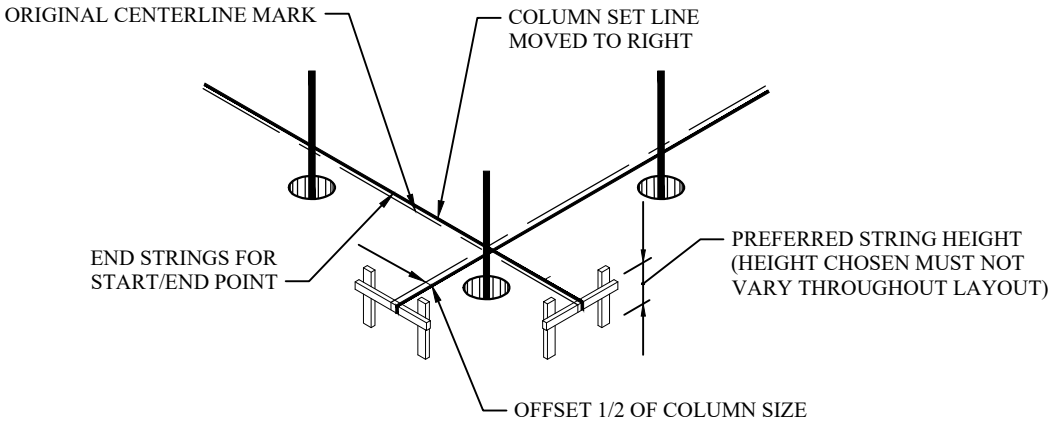
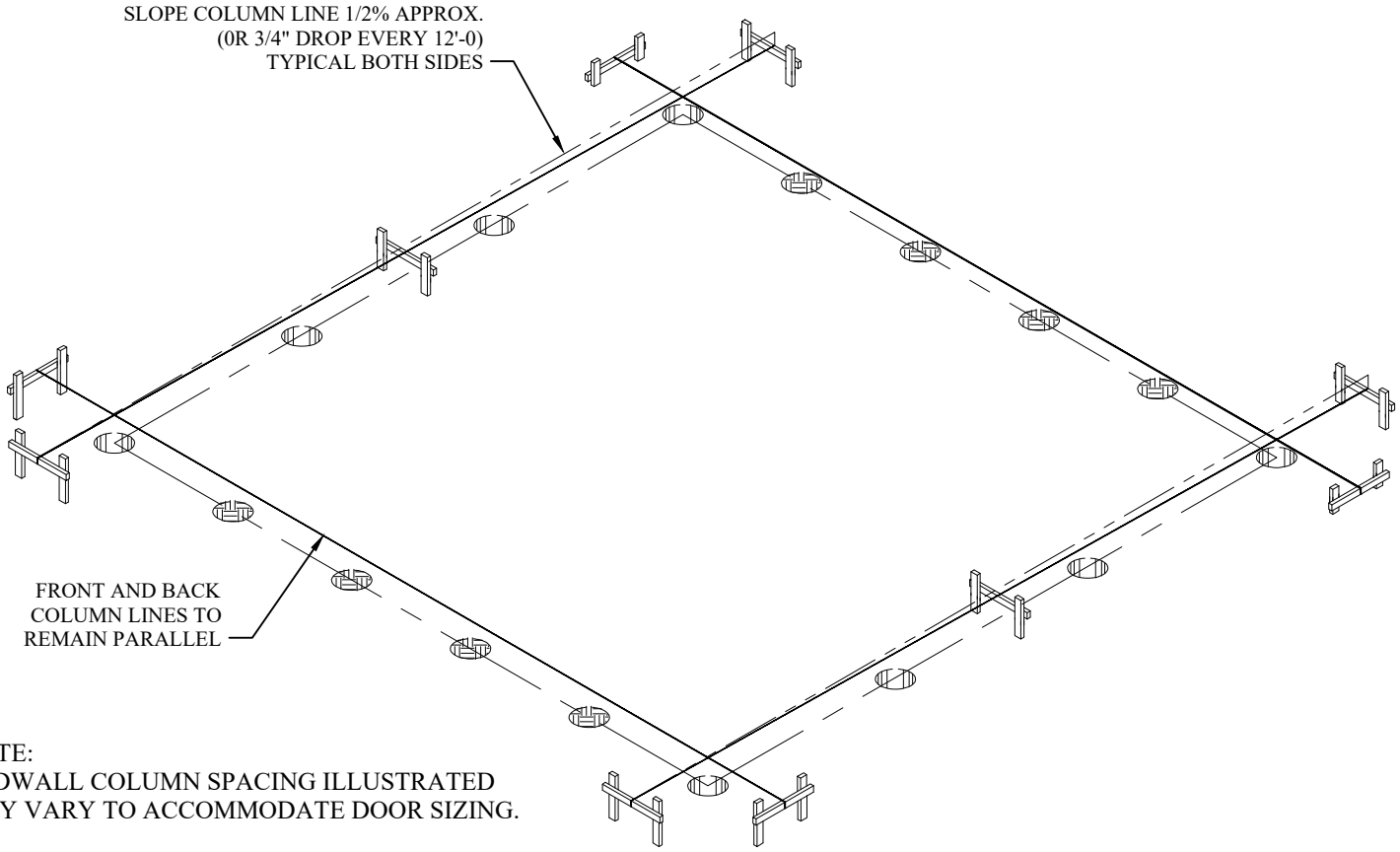


FIGURE 8 - OFFSETTING OF THE COLUMN SET LINES

SLOPE LINES

1. SLOPE THE COLUMN LINES ALONG THE LENGTH OF THE FOUNDATION KEEPING THE FRONT AND BACK COLUMN LINES PARALLEL. THIS WILL INSURE PROPER DRAINAGE.

NOTE OPTION:
IF YOU HAVE DOOR JAMB YOU COULD SET YOUR DOOR JAMB IN THE GROUND THE SAME TIME AS YOUR COLUMNS OR WAIT UNTIL YOUR READY TO SET YOUR DOOR. SEE PAGE 20 DETAIL 1.



NOTE:
ENDWALL COLUMN SPACING ILLUSTRATED
MAY VARY TO ACCOMMODATE DOOR SIZING.

FIGURE 9 - SLOPING COLUMN LINES

MARK CENTERS ON COLUMNS

1. FROM THE CENTER LINE, MARK ON THE BATTER BOARDS (NOT THE COLUMN SET MARK) THE LENGTH OF LINES, AND MARK THE INTERMEDIATE CENTERS.

2. MARK THE END WALL UPRIGHTS IN THE SAME MANNER. PLEASE NOTE THAT THE OFFSETS FOR END WALL INTERMEDIATE COLUMNS MAY BE DIFFERENT THAN THE OFFSET OF THE SIDE WALL COLUMNS DUE TO THE DIFFERENCE IN COLUMN SIZE. THE CENTER LINES OF COLUMNS MUST BE THE CENTER LINE END WALL COLUMNS.

MARK COLUMNS

1. TO FIND THE ABOVE GROUND COLUMN HEIGHT, MEASURE FROM THE TOP OF THE COLUMN (REFERENCE HOLE SHOWN BELOW), THIS DISTANCE, AND SUBTRACT THE STRING HEIGHT. MARK THE COLUMN AT THIS POINT WITH A FELT TIP MARKER. CONTINUE WITH REMAINING COLUMNS. (SEE FIGURE 11).

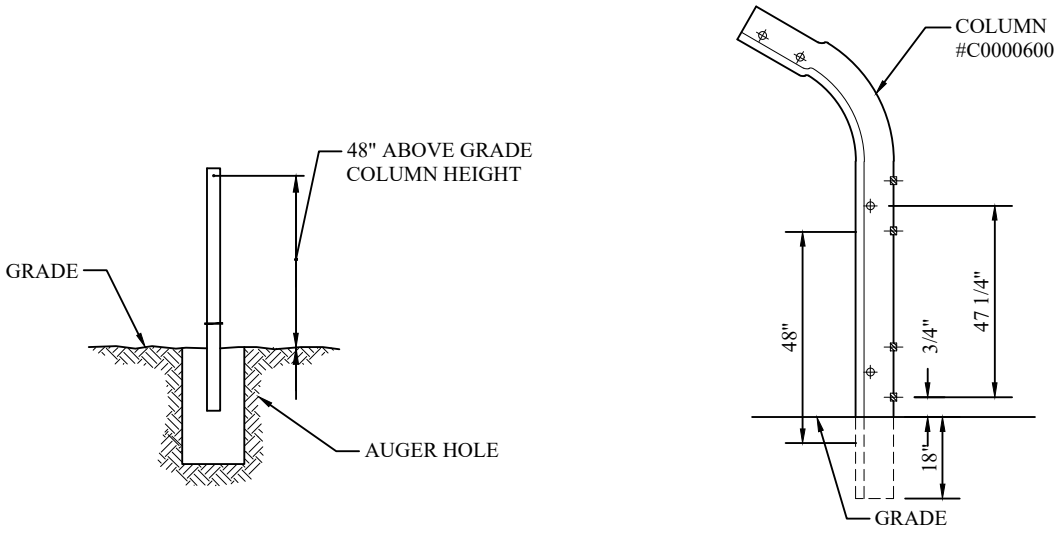


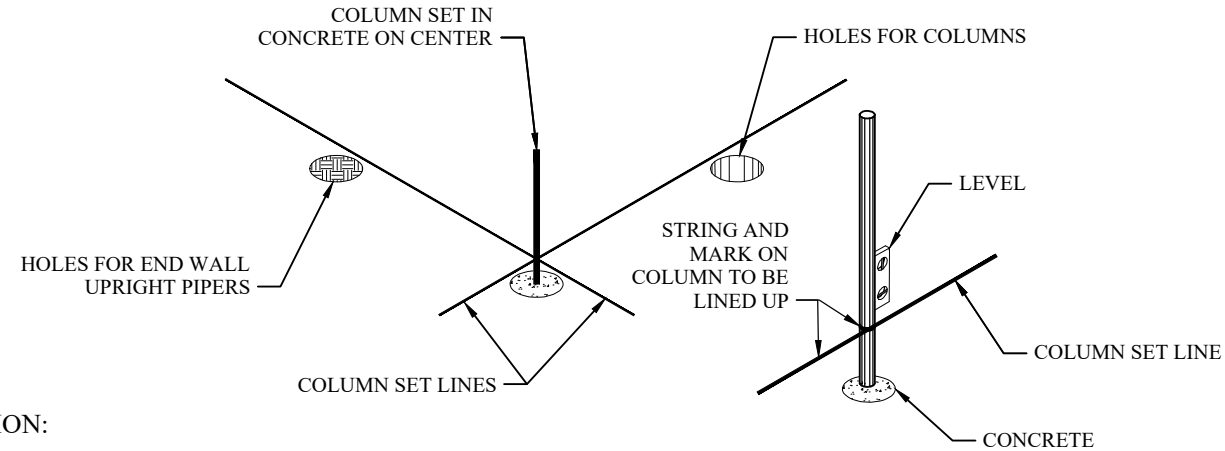
FIGURE 10 - (MARKING COLUMNS)

SET COLUMNS

1. POUR CONCRETE INTO THE FIRST HOLE. 2 1/2" SLUMP IS THE MOST POPULAR MIX TO SUPPORT COLUMNS.

2. PUSH THE COLUMN INTO THE CONCRETE AT THE CENTER MARK ON THE STRING (BE SURE THE COLUMN ISN'T ACTUALLY TOUCHING STRING) UNTIL THE MARK ON COLUMN LINES UP WITH THE STRING. THE COLUMN MUST BE PLUMB IN BOTH DIRECTIONS BEFORE MOVING ON TO THE NEXT COLUMN.

3. MOVE ON TO THE NEXT COLUMN, POUR CONCRETE THEN SET THE COLUMN. NEVER POUR ALL THE CONCRETE FIRST THEN GO BACK AND SET COLUMNS, AS THE CONCRETE SETS UP TOO FAST.



CAUTION:

1. PLACE THE FIRST THREE ARCHES INTO THE FIRST THREE AUGURED HOLES. (SEE PAGE 6 FOR HOLE AUGURING).

FIGURE 11 - (SETTING THE COLUMNS)

ARCH ASSEMBLY

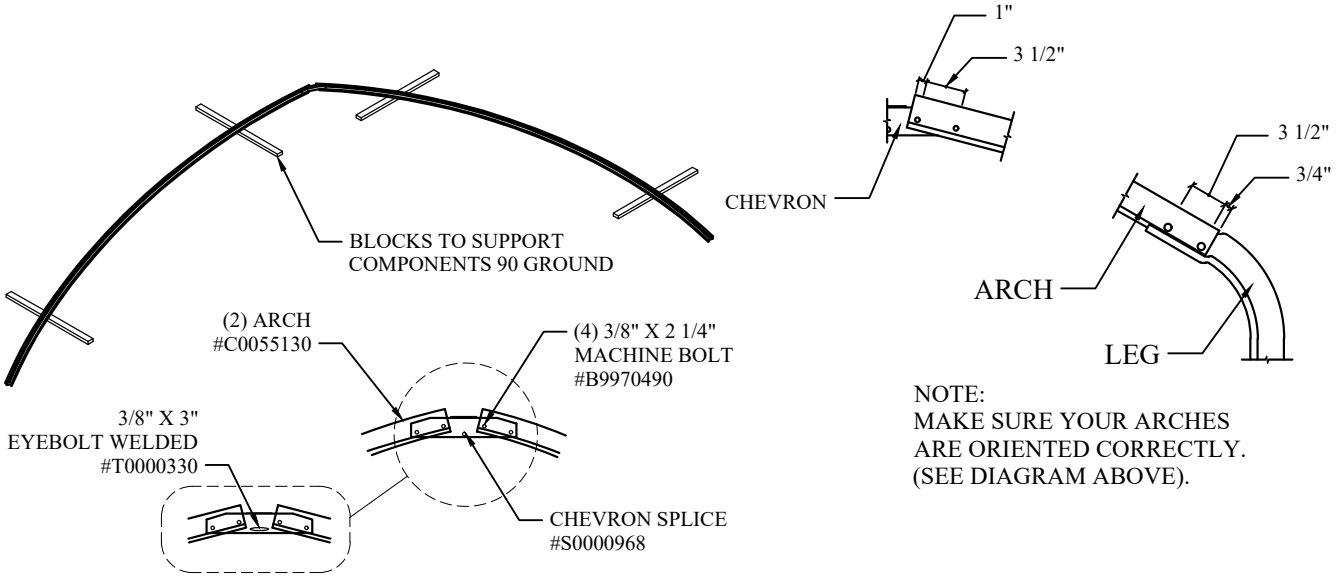


FIGURE 12 - ARCH ASSEMBLY

1. ASSEMBLE THE ARCHES ON THE GROUND USING BLOCKS UNDER EACH ARCH. (SEE FIG. 12 ABOVE).

2. BOLT EACH ARCH TOGETHER WITH A CHEVRON SPLICE AND (4) 3/8" X 2 1/4" MACHINE BOLTS.

3. ON THE THIRD ARCH FROM EACH END, INSTALL A 3/8" X 3" MACHINE BOLT AT THE CENTER HOLE IN THE CHEVRON SPLICE WITH THE EYE FACING OUT.

20 LBS. AND 30 LBS. ARCH ASSEMBLY OPTION

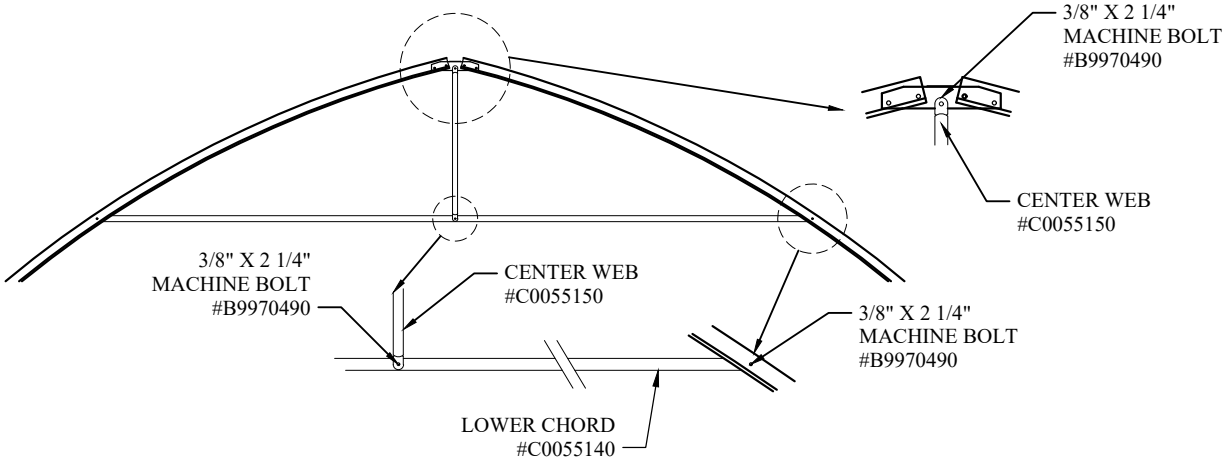


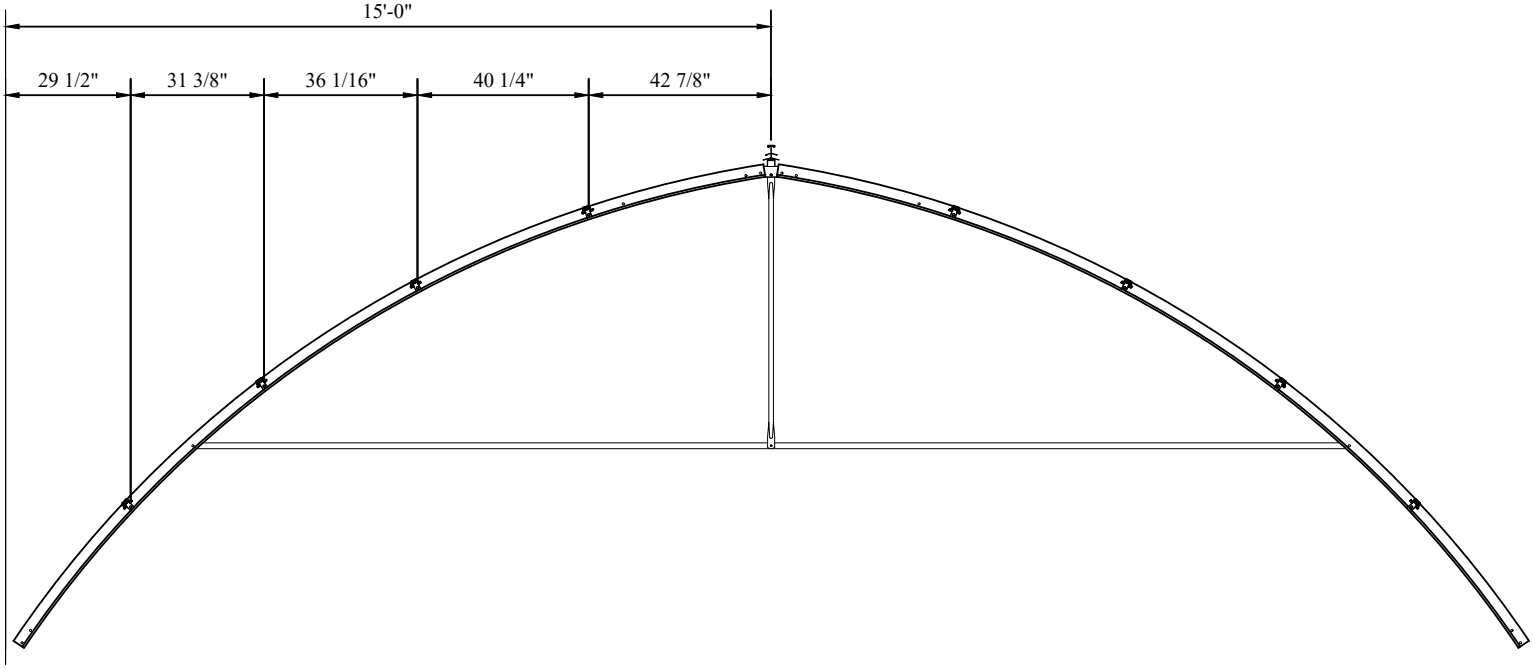
FIGURE 13 - 20 LBS. & 30 LBS. BUILDINGS

1. ASSEMBLE THE ARCH PER STEP 1 - 3 ABOVE.

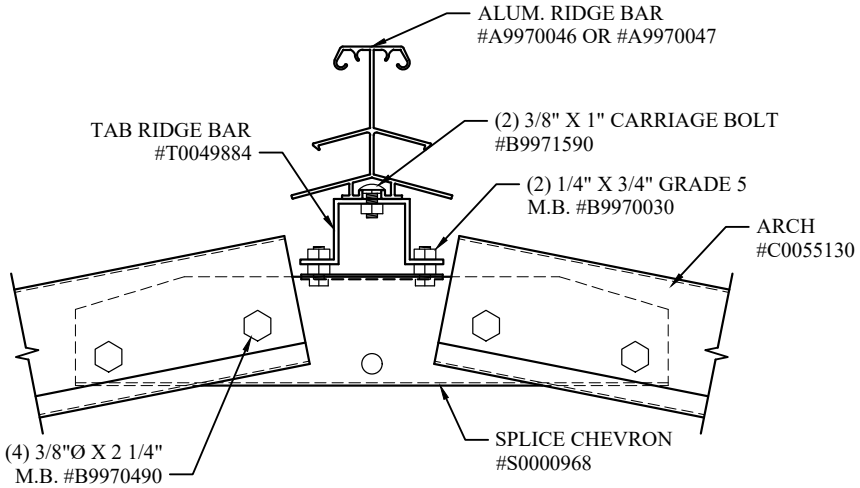
2. ATTACH THE LOWER CHORD, 1 5/8" TUBE, WITH (2) 3/8" X 2 1/4" MACHINE BOLT.

3. BOLT THE 1 5/8" CENTER FILLED TUBE, WITH (2) 3/8" X 2 1/4" MACHINE BOLT TO THE CHEVRON SPLICE AND LOWER CHORD.

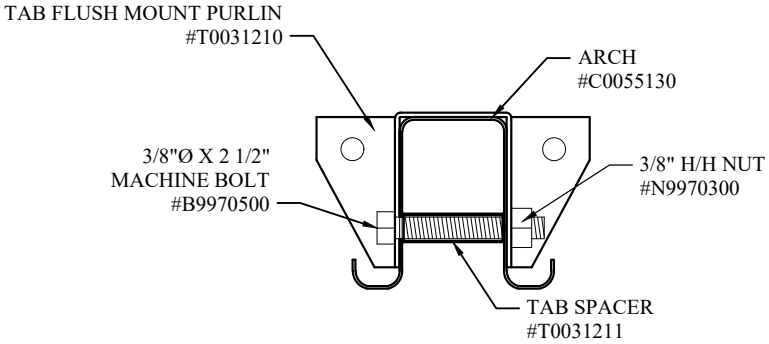
INSTALL ROOF AND EAVE PURLIN



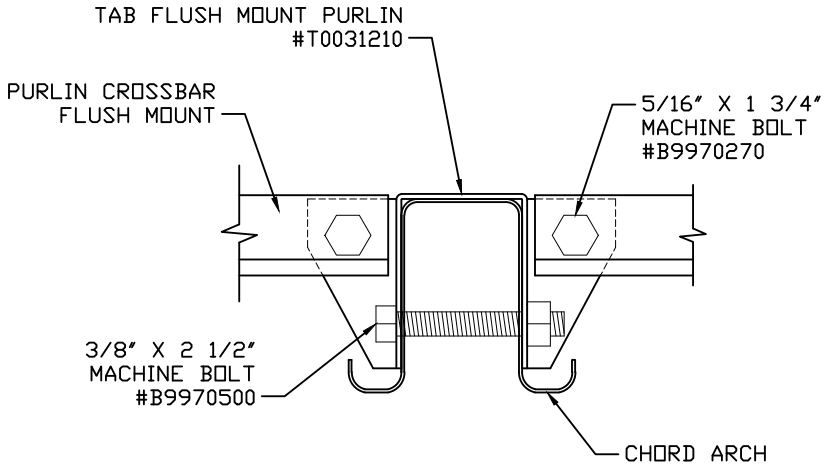
1. ATTACH THE TAB RIDGE BAR TO EVERY TRUSS AT THE CHEVRON WITH THE EXISTING (2) 1/4" BOLTS.



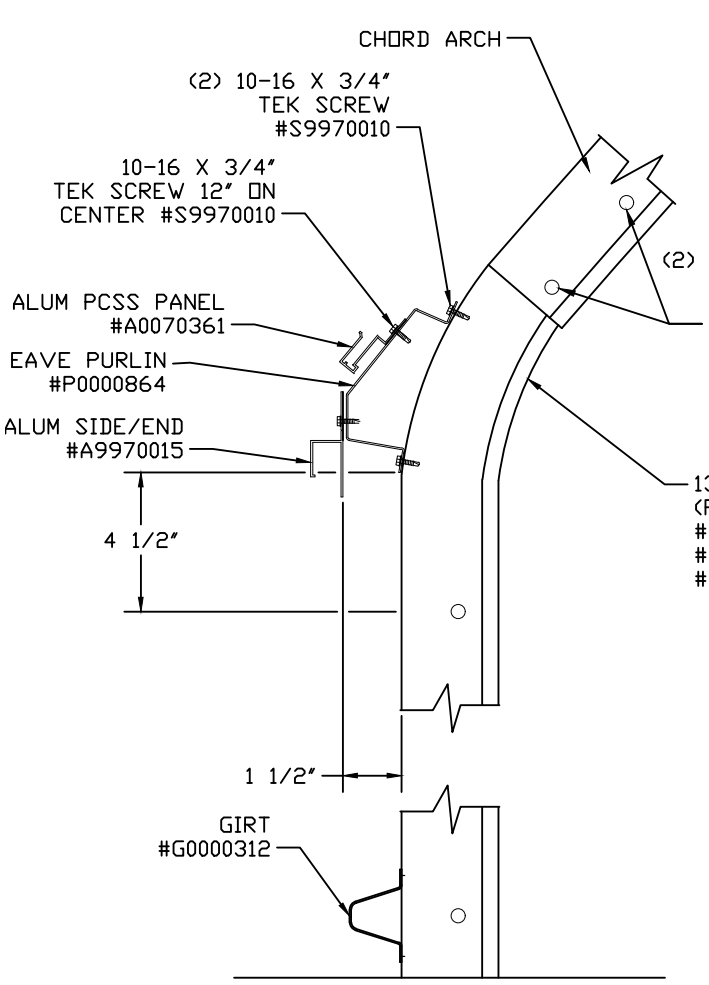
2. ATTACH 8 PURLIN TABS TO EACH ARCH ASSEMBLY WITH (1) 3/8" X 2 1/2" MACHINE BOLT AND A TAB SPACER.



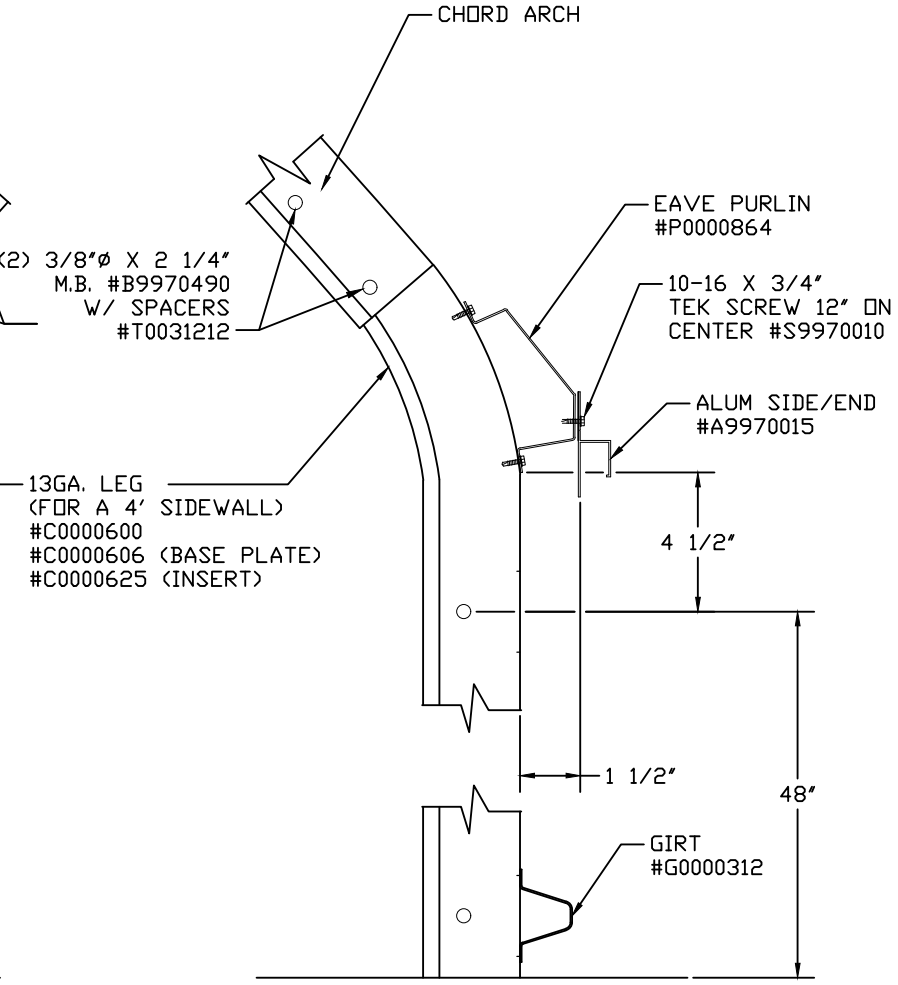
3. ATTACH THE PURLINS TO THE PURLIN TAB WITH (2) 5/16" X 1 3/4" MACHINE BOLT PER PURLIN END.



4. ATTACH THE EAVE PURLIN TO THE LEGS WITH (2) 10-16 X 3/4" TEK SCREWS PER LEG. MAKE SURE THE BOTTOM OF THE EAVE PURLIN IS 4-1/2" FROM THE EAVE HOLE ON THE LEG.



NOTE: TWINWALL ROOF AND SIDE



NOTE: CORRGATED ROOF AND SIDE

5. INSTALL REMAINING ARCHES AND PURLINS.

SET ARCHES

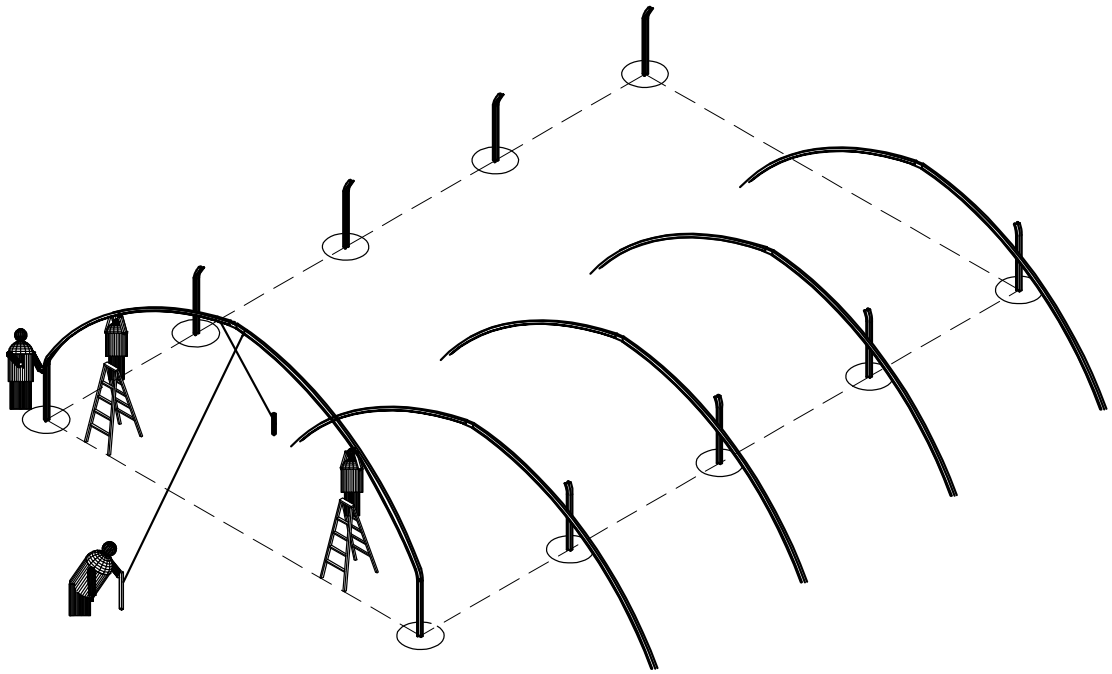


FIGURE 14 - ARCH INSTALLATION

1. USING 12' LADDERS, LIFT THE ARCHES ONTO THE FORMED COLUMNS STARTING AT THE END OF THE BUILDING. ALIGN THE (2) 7/16" HOLES AND PLACE (2) 1/2" SPACER TABS INSIDE OF THE COLUMN. BOLT THE ARCHES AND COLUMNS TOGETHER WITH (2) 3/8" X 2 1/4" MACHINE BOLT. BRACE THE FIRST ARCH WITH ROPES, CABLES OR LUMBER WHILE ASSEMBLING THE REMAINING ARCHES.

2. REPEAT STEP 1 AND INSTALL (2) MORE ARCHES. INSTALL THE RIDGE PURLIN WITH (2) 1/4" X 3/4" MACHINE BOLT. (NOTE: ONLY BOLT THE PURLINS TO THE FIRST TWO ARCHES).

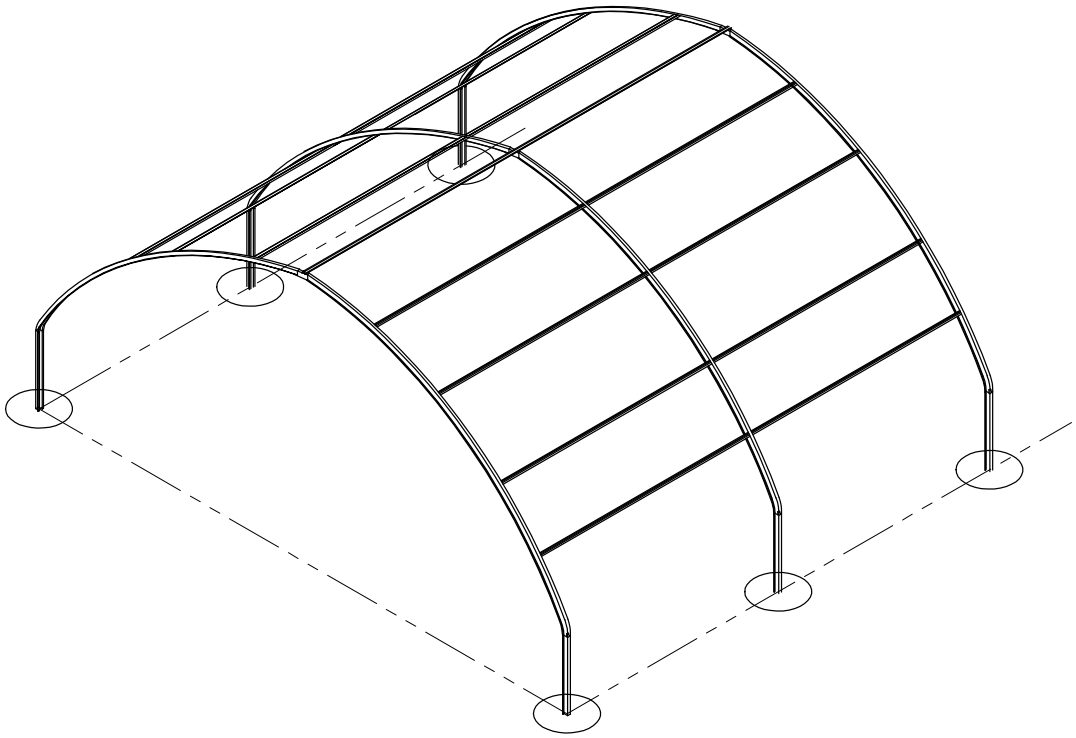


FIGURE 15 - PURLIN INSTALLATION

COLUMN BRACE INSTALLATION

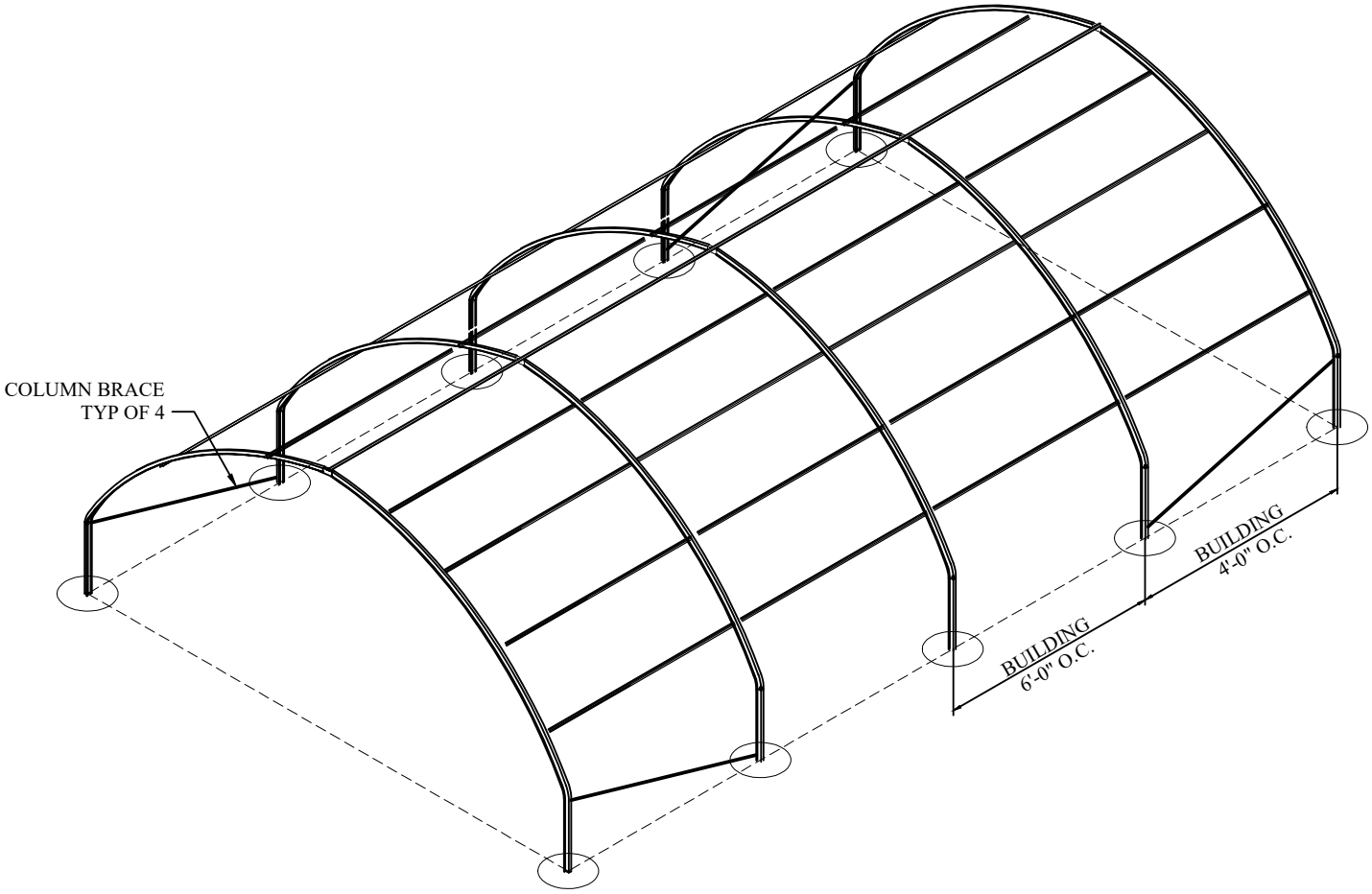
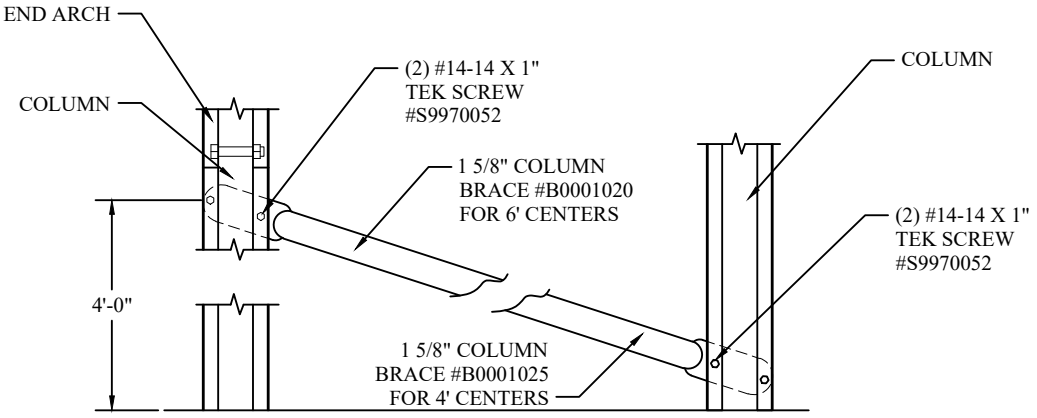


FIGURE 16 - COLUMN BRACING INSTALLATION

1. INSTALL THE 1 5/8" COLUMN BRACE TUBE IN THE FIRST AND LAST BAYS WITH (2) 14-14 X 1" TEK SCREWS TO THE INSIDE OF EACH COLUMN. ATTACH THE BRACE TO THE FIRST AND LAST COLUMNS 4' ABOVE FINISH GRADE.



BRACE CABLE INSTALLATION

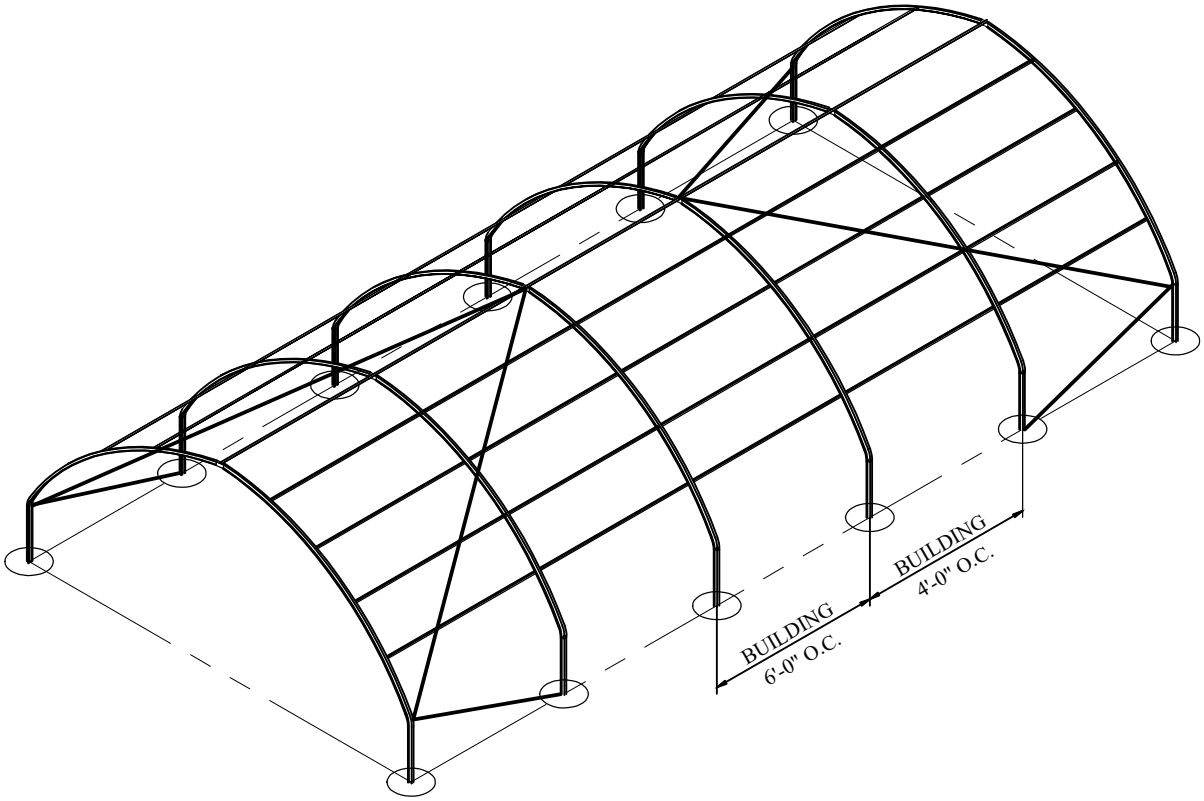


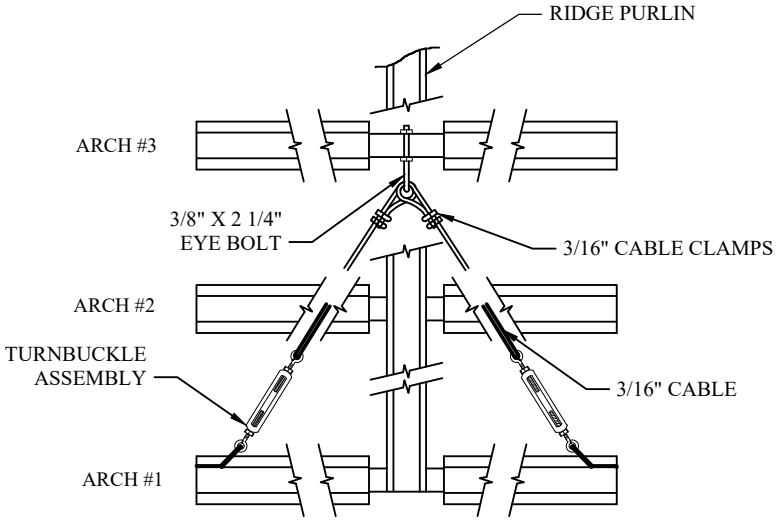
FIGURE 17 - CABLE BRACING

1. REMOVE THE LOWER 3/8" X 2 1/4" MACHINE BOLT AT THE COLUMN TO ARCH CONNECTION ON THE FIRST ARCH AND INSTALL TURNBUCKLE ASSEMBLY AT EACH COLUMN.

2. ATTACH A CABLE FROM EACH TURNBUCKLE TO THE EYEBOLT PREVIOUSLY INSTALLED ON THE THIRD ARCH USING 2 CABLE CLAMPS, PER CONNECTION'S PAGE 9, FIGURE 12, NOTE 3.

3. ADJUST THE CABLES AND PLUMB THE ARCH.

4. REPEAT STEPS 1-3 FOR THE OPPOSITE END OF THE BUILDING.

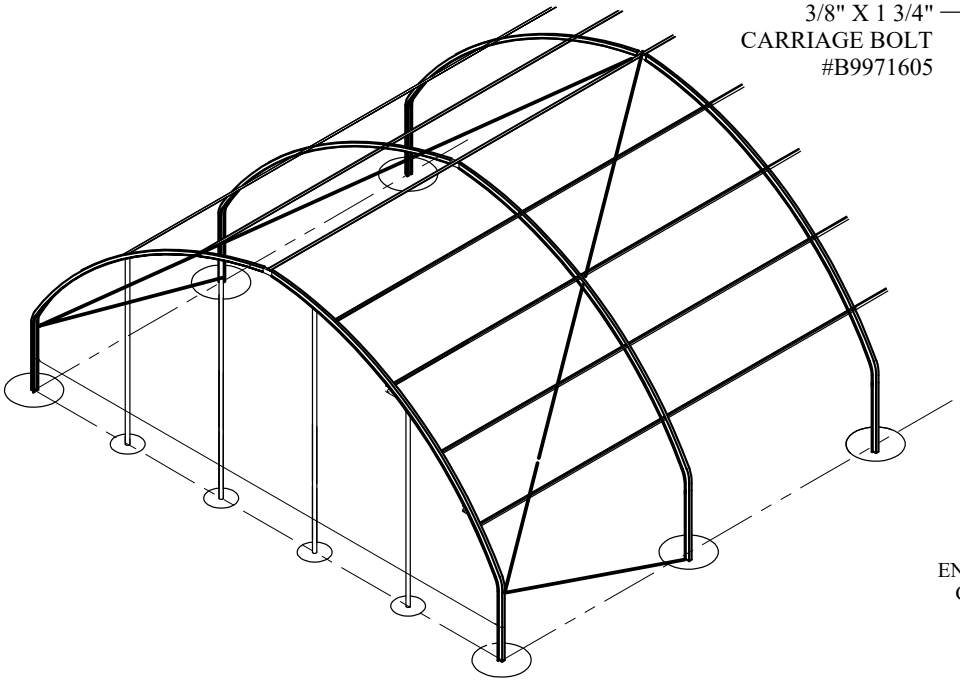


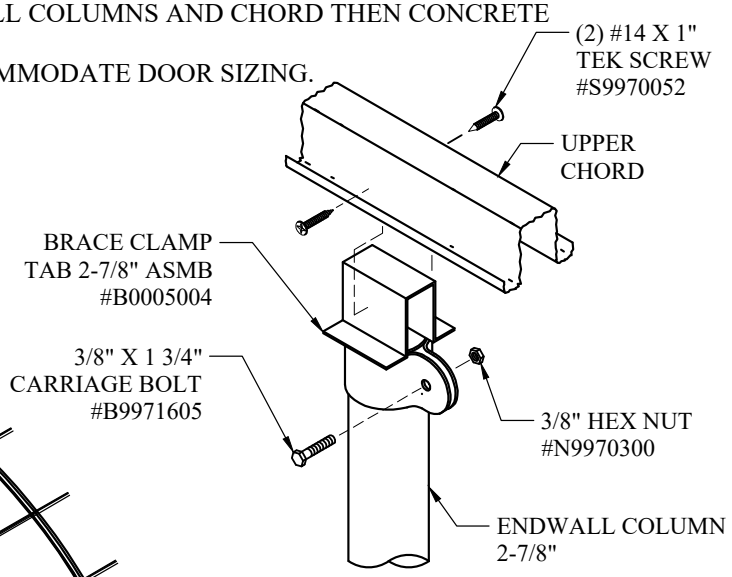
END WALL UPRIGHT INSTALLATION

1. BEFORE INSTALLING END WALL COLUMN TUBES, REMOVE SOIL FROM PREVIOUSLY DUG END WALL AUGER HOLES. (REFER TO PAGE 6, NOTE 4, FIGURE 7).
2. (4" COLUMN) SEE NEXT PAGE.
   (2-7/8" COLUMN) ATTACH THE BRACE CLAMP TAB ASSEMBLY TO THE COLUMN USING A 3/8" X 1 3/4" CARRIAGE BOLT. (SEE DETAIL 1A)
   (1-7/8" COLUMN) NO TABS REQUIRED, COLUMN WILL SLIP INTO THE UPPER CHORD. (SEE DETAIL 1B)
3. TIE A GUIDE STRING 1' ABOVE THE GROUND ON THE FACE OF THE COLUMNS. (SEE FIGURE 18)
4. PLACE THE END WALL COLUMNS IN AUGURED HOLES AND ATTACH TO THE CHORD WITH A 14-14 X 1" TEK SCREW PER SIDE. REPEAT THIS FOR THE REMAINING END WALL COLUMNS. (SEE 1A & 1B BELOW).
5. MAKE SURE THE COLUMNS ARE LOCATED THE APPROPRIATE MEASUREMENT FROM THE STRING AS SHOWN BELOW. PLUMB AND SQUARE THE END WALL COLUMNS AND CHORD THEN CONCRETE THE COLUMNS.
6. ENDWALL COLUMNS SPACING MAY CHANGE TO ACCOMMODATE DOOR SIZING.

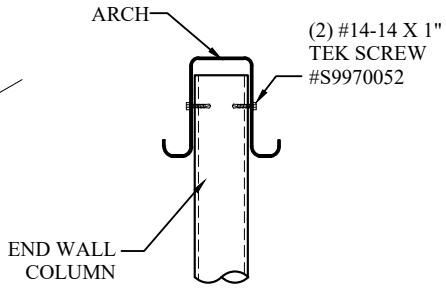
IMPORTANT

BE SURE TO ASSEMBLE END WALL COLUMN TUBES TO ARCHES BEFORE POURING CEMENT.





DETAIL 1A - 2-7/8" COLUMN

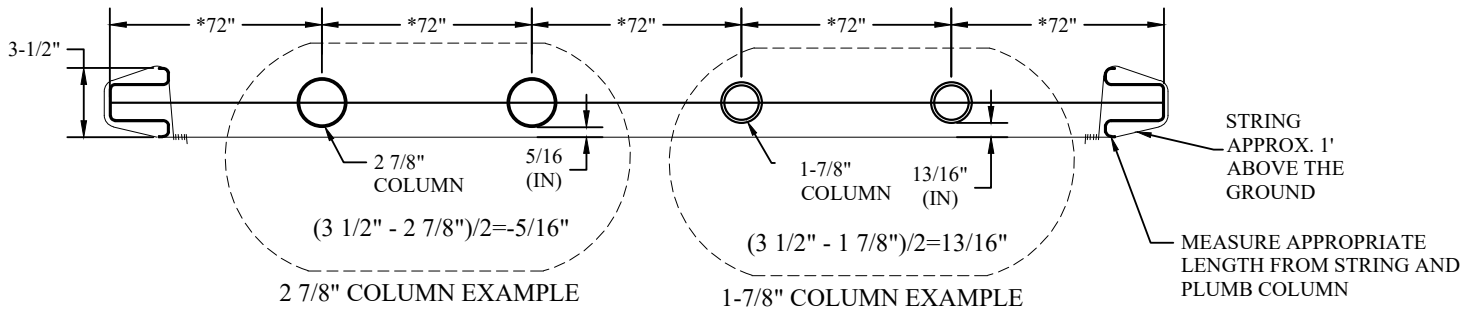


DETAIL 1B - 1-7/8" COLUMN

FIGURE 18 - END WALL INSTALLATION

ENDWALL COLUMNS TO BE IN-LINE WITH BUILDING COLUMNS AS SHOWN BELOW

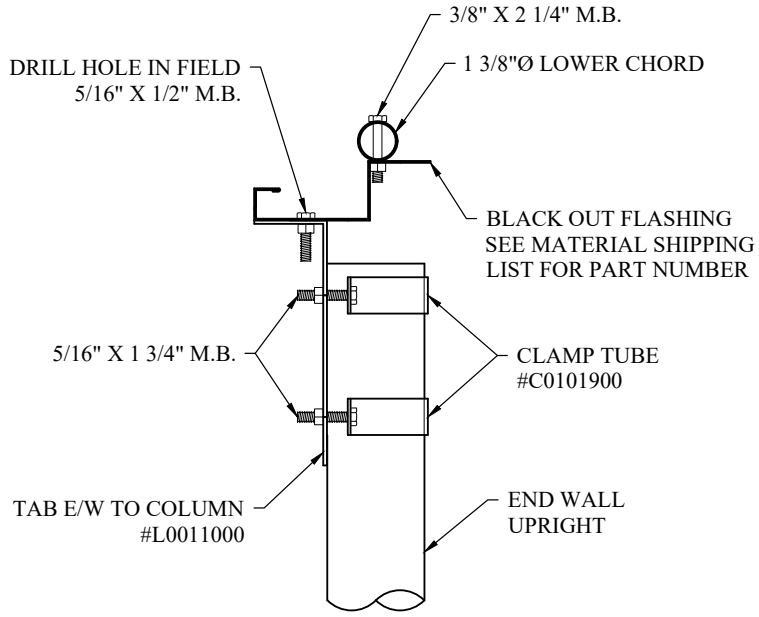
* BE AWARE THAT SPACING MAY VARY WITH LARGER DOOR SIZES



END WALL UPRIGHT INSTALLATION
(OPTION FOR LIGHT DEP BUILDINGS ONLY [4" COLUMNS])

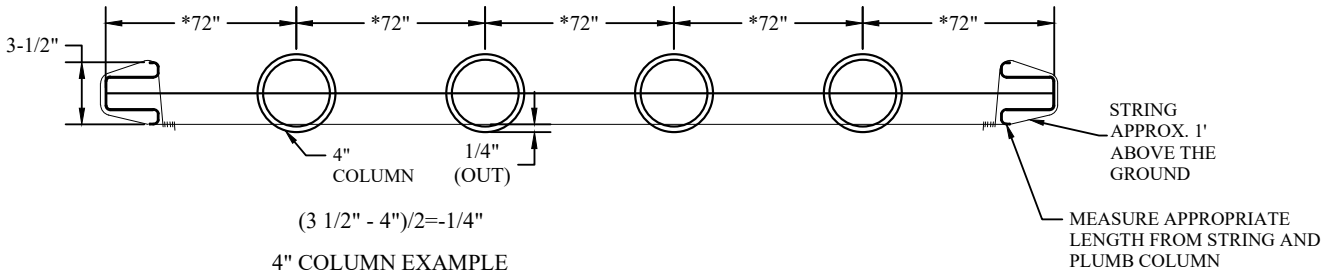
1. PUT THE BOTTOM OF THE END WALL UPRIGHT INTO THE AUGURED FOOTING HOLE.

2. SLIP THE TOP END OF THE END WALL UPRIGHT WITH THE 'TAB E/W COLUMN TO FLASHING' AND SECURE USING (2) 4" CLAMP TUBES WITH (4) 5/16" X 1 3/4" HEX BOLT AT EACH COLUMN.



ENDWALL COLUMNS TO BE IN-LINE WITH BUILDING COLUMNS AS SHOWN BELOW

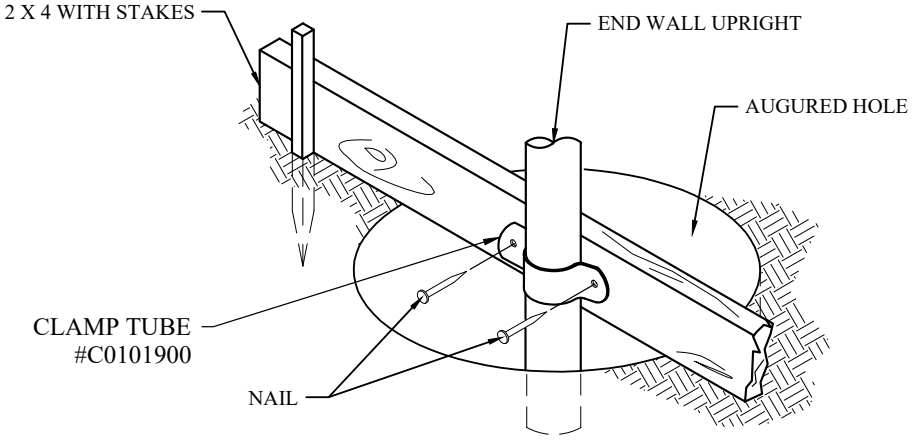
* BE AWARE THAT SPACING MAY VARY WITH LARGER DOOR SIZES



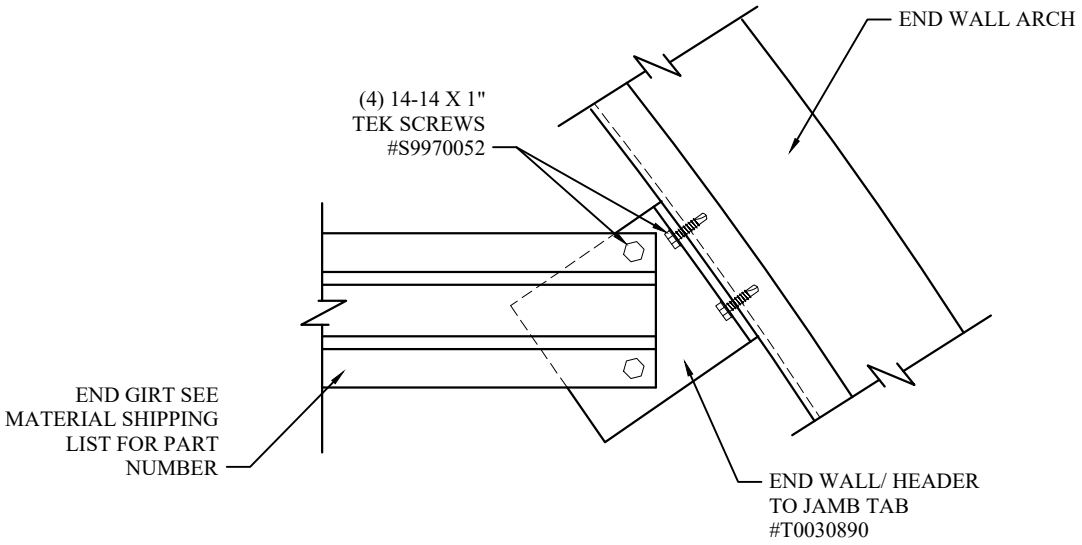
(3 1/2" - 4")/2=-1/4"

4" COLUMN EXAMPLE

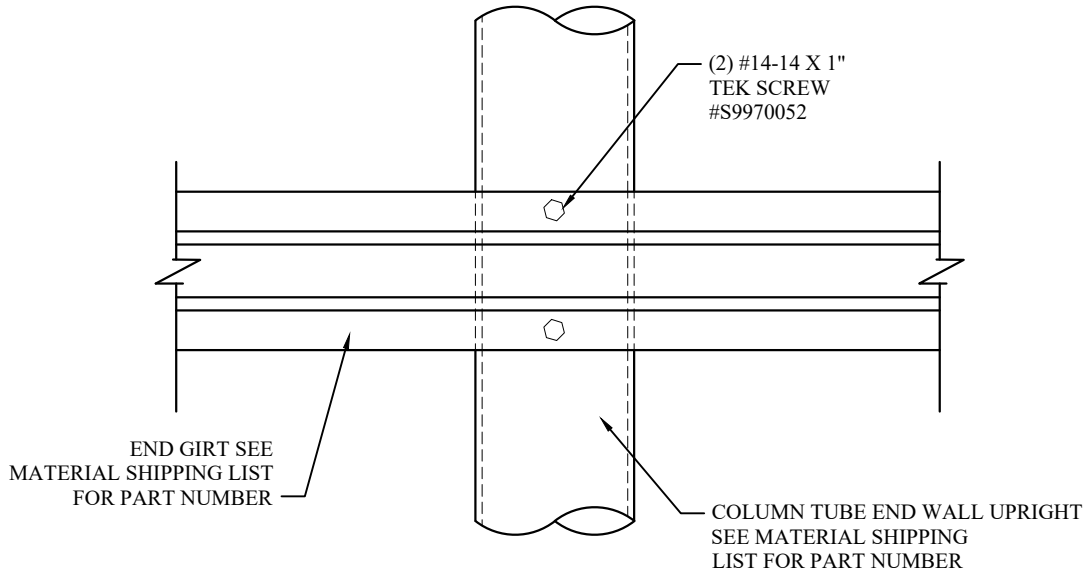
3. BEFORE POURING THE CEMENT, SLIP (1 OR 2) 4" CLAMP TUBE ON EACH END WALL COLUMN TUBE. STAKE 2 X 4'S IN PLACE KEEPING THE COLUMNS PLUMB IN BOTH DIRECTIONS AND TEMPORARILY NAIL THE CLAMP TUBE LEG BRACES TO THE 2 X 4'S (SEE DETAIL 2 BELOW). THIS IS DONE TO HELP SUPPORT THE WEIGHT OF THE COLUMN WHILE THE CEMENT IS CURING. WAIT A MINIMUM OF 24 HOURS BEFORE REMOVING 2 X 4'S.



DETAIL 2



DETAIL 2



DETAIL 3

END WALL KOOL CEL GIRT INSTALLATION OPTIONS

1. KOOL CEL GIRTS MUST BE INSTALLED PRIOR TO THE END WALL GIRTS.

2. LOCATE THE POSITION OF THE KOOL CEL GIRTS (REFER TO THE KOOL CEL DISTRIBUTION INSTRUCTIONS MANUAL) USING A LEVEL STRING TO MARK THE END WALL UPRIGHTS WITH THE LOCATIONS.

3. CENTER AND ATTACH THE KOOL CEL GIRTS TO THE END WALL UPRIGHTS WITH (2) #14-14 X 1" TEK SCREWS PER UPRIGHT.

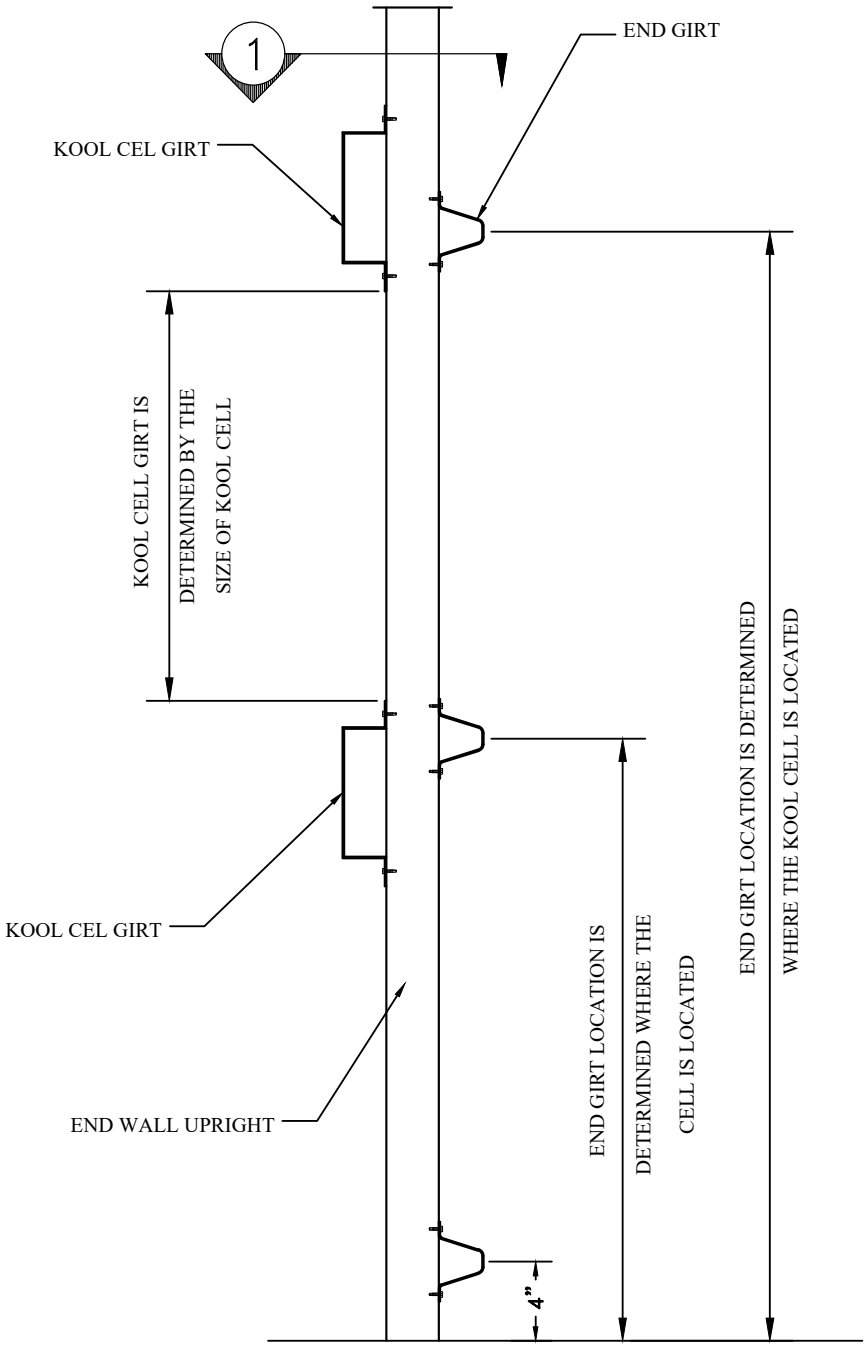
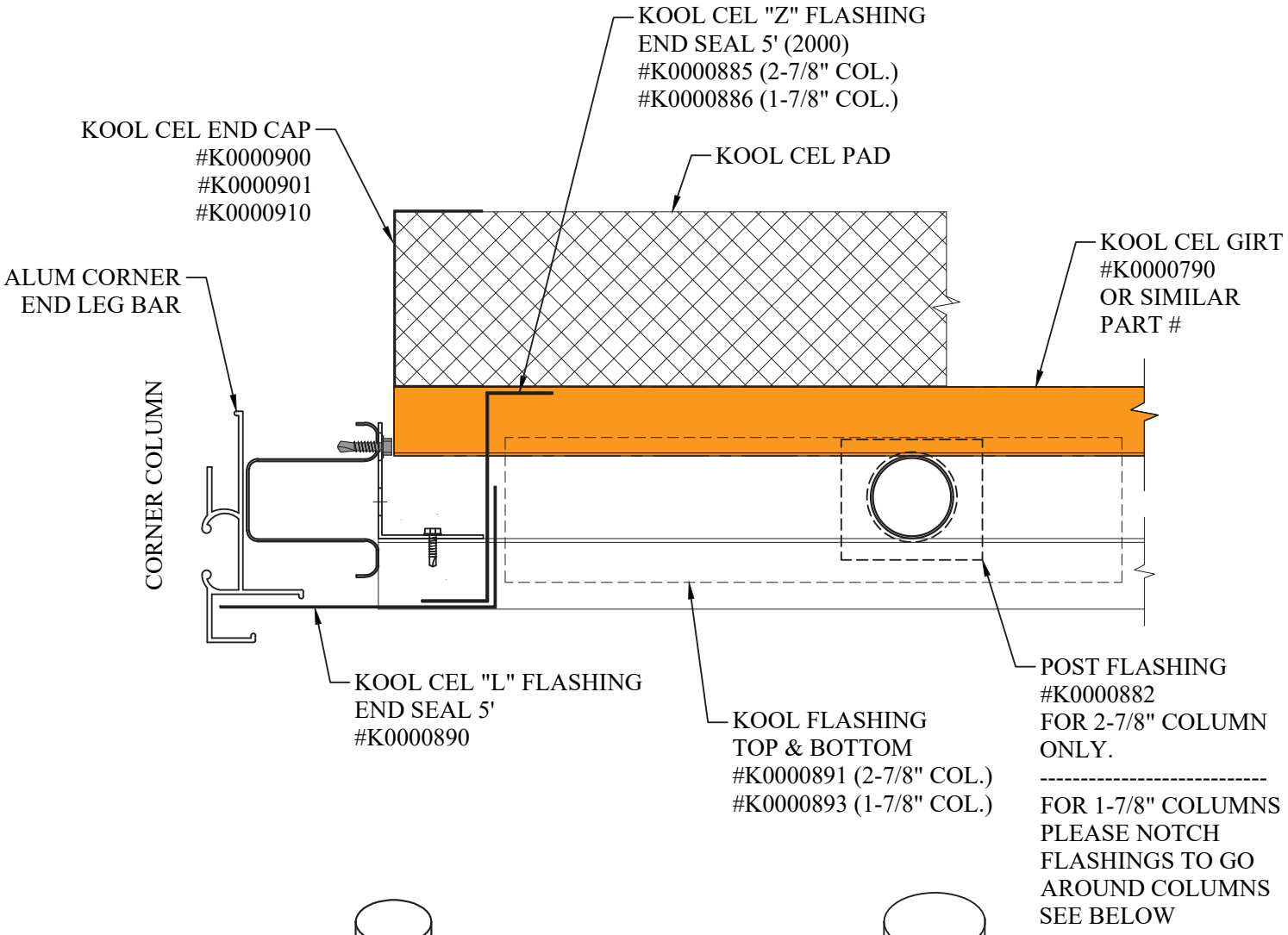
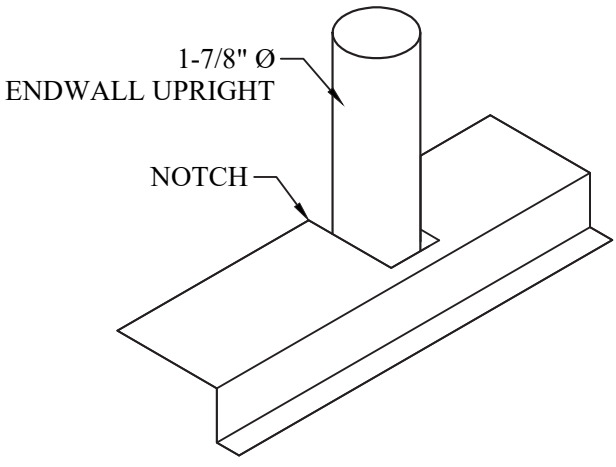
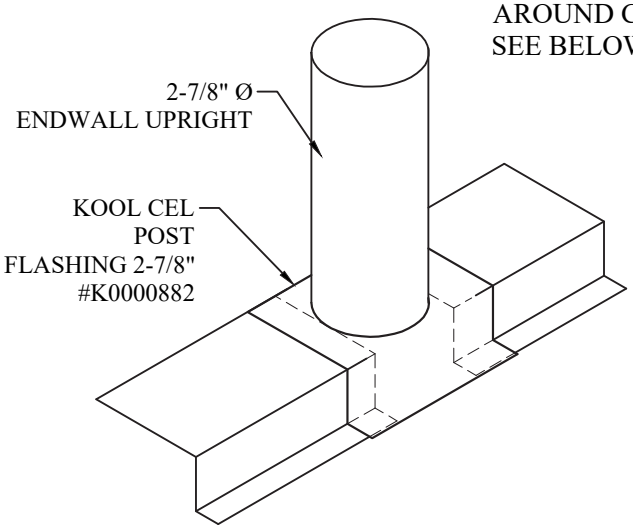


FIGURE 20 - KOOL CEL GIRT OPTION

4. AT THE END OF THE KOOL CEL GIRT, INSTALL THE KOOL CEL END CAP AS WELL AS THE KOOL CEL END SEAL FLASHINGS, IN BETWEEN THE KOOL CEL GIRTS. SECURE IT WITH #10 X 3/4" TEK SCREWS, AS NEEDED.



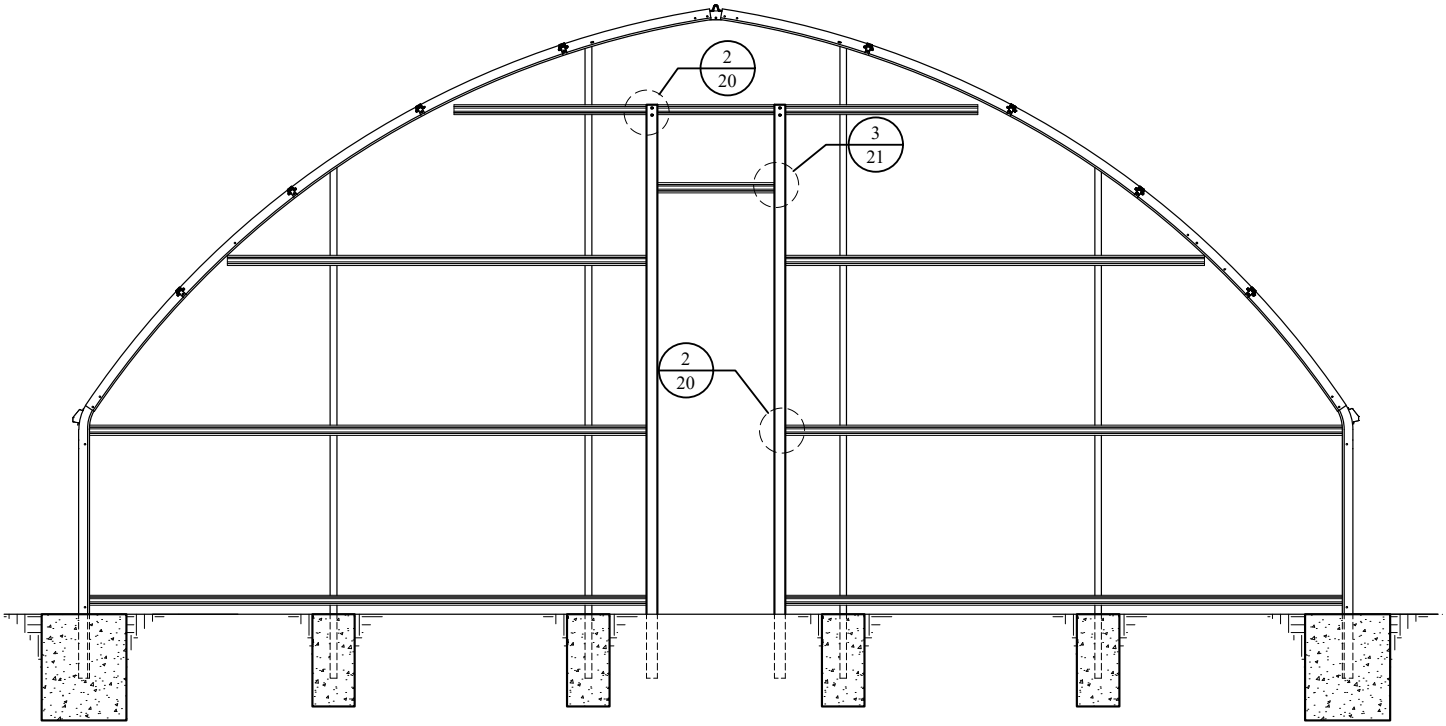




DETAIL 1

END WALL DOOR FRAME OPTION

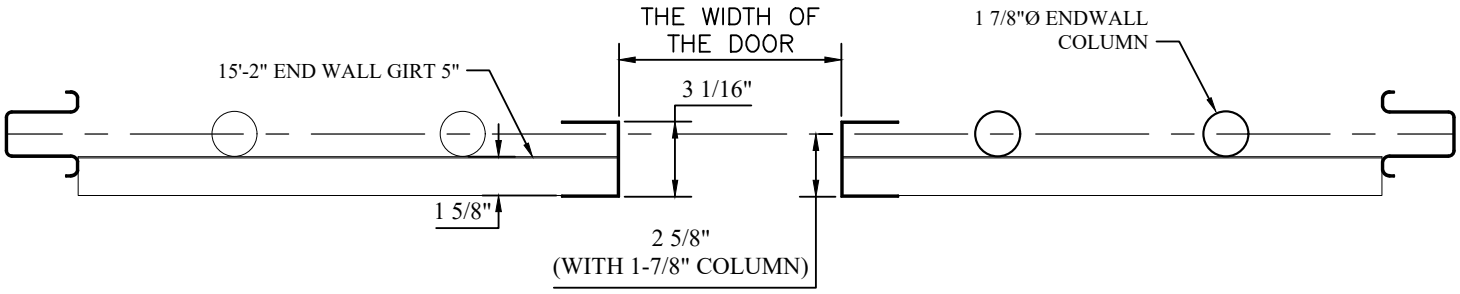
THIS OPTION IS TYPICALLY FOR 'STORM DOORS', 'SWING DOORS' WILL HAVE JAMBS BUILT-IN



NOTE: BEFORE CUTTING ANY GIRTS, CHECK YOUR DOOR SIZE.

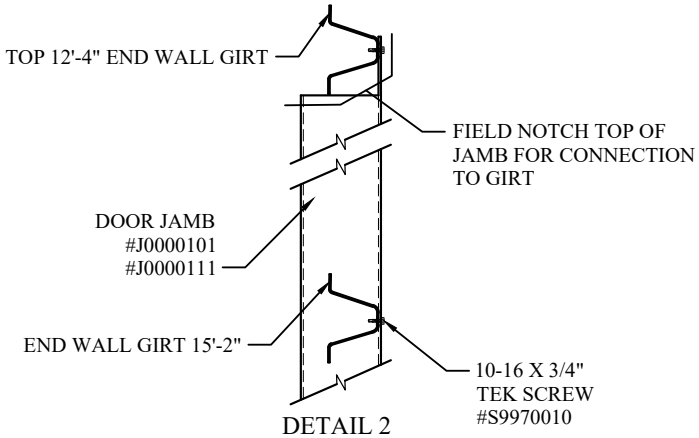
FIGURE 20 - END WALL DOOR FRAME

1. TRIM THE 15'-2" GIRTS TO FIT INSIDE OF YOUR DOOR JAMBS.



DEATIL 1

2. CUT AND NOTCH THE DOOR JAMBS SO THE SIDE OF THE JAMB EXTENDS PAST THE FACE OF THE 12'-4" GIRT. ATTACH THE JAMBS TO THE END WALL GIRTS WITH A 10-16 X 3/4" TEK SCREWS PER GIRT.

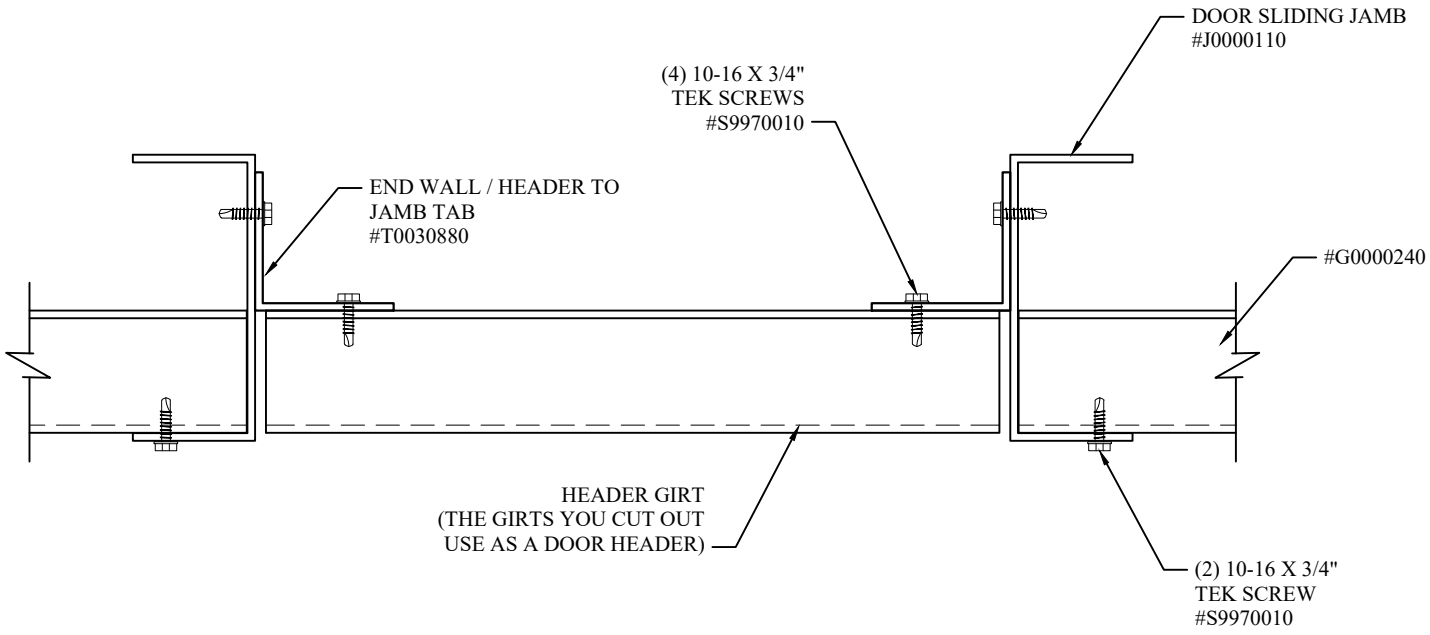


DETAIL 2

3. USING A LEVEL STRING, MARK THE DOOR JAMBS FOR THE HEADER.

4. ATTACH (2) TABS TO THE INSIDE OF THE DOOR JAMB AT THE PREVIOUSLY MARKED LINES WITH (2) 10-16 X 3/4" TEK SCREWS. (ONE TAB PER DOOR JAMB)

5. ATTACH A PIECE OF THE PREVIOUSLY CUT GIRT TO THE 2 TABS WITH (2) 10-16 X 3/4" TEK SCREW PER TAB.



DETAIL 3

THIS OPTION IS TYPICALLY FOR 'STORM DOORS', 'SWING DOORS' WILL HAVE JAMBS BUILT-IN

WOOD SIDE GIRT INSTALLATION OPTION

1. MEASURE 4' FROM GRADE LEVEL AND MARK THE END COLUMNS.

2. TIE A STRING TO EACH MARK ON THE END COLUMNS, MAKING SURE IT IS TIGHT AGAINST EACH COLUMN. MARK EACH COLUMN AT THE STRING LEVEL AND REMOVE THE STRING.

3. USING VICE GRIPS, PLACE THE BOTTOM 2 X 4 SIDE GIRT AT GRADE LEVEL AND THE UPPER GIRT ON THE PREVIOUSLY MADE MARKS ON THE COLUMNS. DRILL (2) 1/4" HOLES THROUGH THE COLUMN AND GIRT AT EACH INTERSECTION. INSTALL (2) 1/4" X 2 3/4" CARRIAGE BOLTS THROUGH THE COLUMNS AND GIRTS.

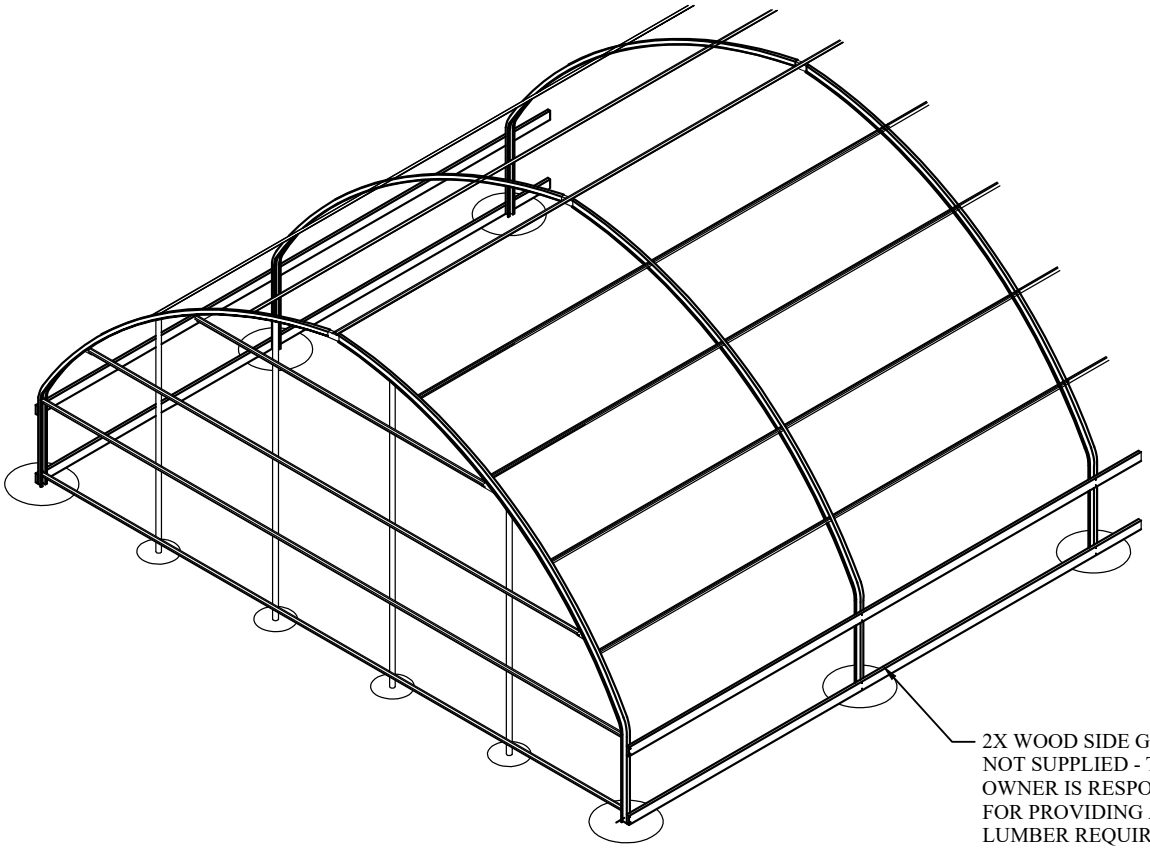
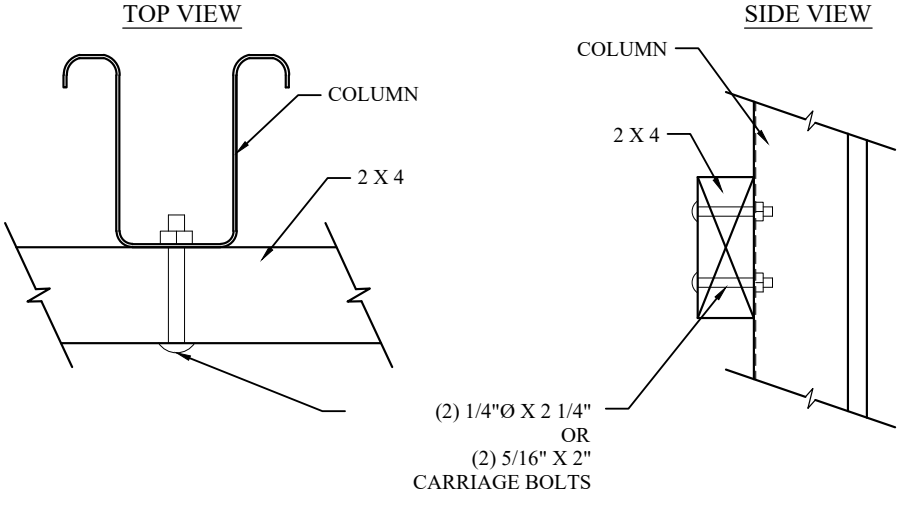


FIGURE 21 - WOOD SIDE WALL



STEEL SIDE GIRT INSTALLATION OPTION

1. MEASURE 3 1/2" AND 4'-0" FROM GRADE LEVEL AND MARK THE END COLUMNS. TIE A STRING TO EACH MARK SO STRING IS TIGHT AGAINST ALL OF THE COLUMNS AND MARK EACH COLUMN.

2. USING VICE GRIPS, CLAMP THE BOTTOM AND TOP SIDE OF GIRTS ON THE PREVIOUSLY MADE MARKS. TEK SCREWS GIRT TO COLUMN WITH 10-16 X 3/4" SCREWS.

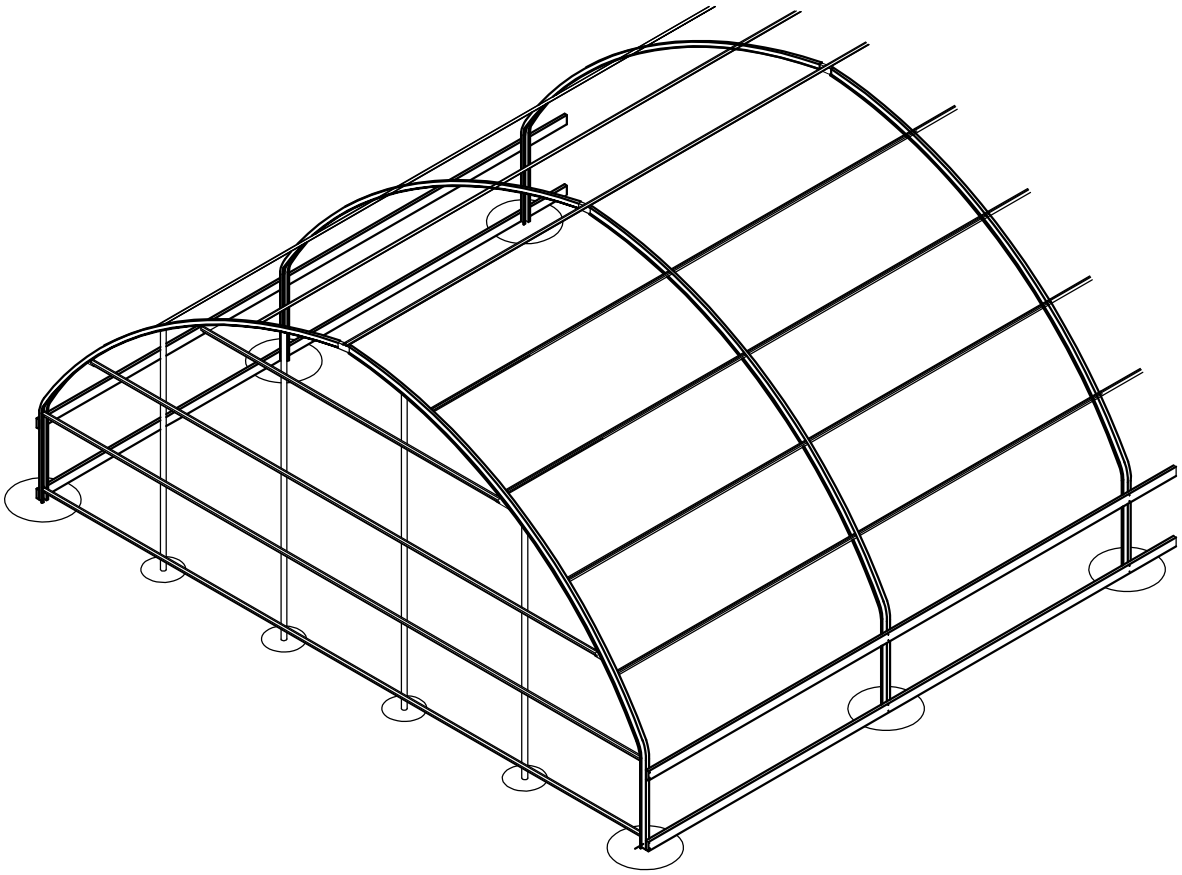
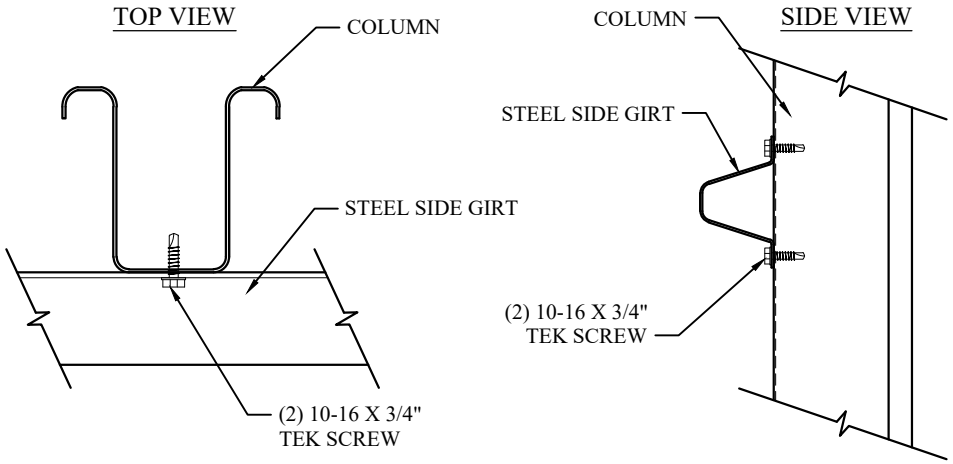


FIGURE 22 - STEEL SIDE WALL



WOOD SIDE INSTALLATION FLUSH MOUNT OPTION

1. LOCATE 7/16" HOLES 2" AND 4' FROM GRADE LEVEL ON THE COLUMNS. ATTACH THE SIDE GIRT TABS ON EACH SIDE OF THE COLUMNS AT THE HOLES WITH A 3/8" X 2 1/4" MACHINE BOLT AND TIGHTEN.

2. FIELD CUT 2 X LUMBER (NOT SUPPLIED BY WGC/CONLEY'S MFG. AND SALES) TO THE REQUIRED LENGTH AND ATTACH IT TO THE PREVIOUSLY INSTALLED TABS WITH (2) 1/4" X 2 3/4" CARRIAGE BOLTS. MAKE SURE THAT THE 2 X GRITS ARE LEVEL BEFORE TIGHTENING THEM.

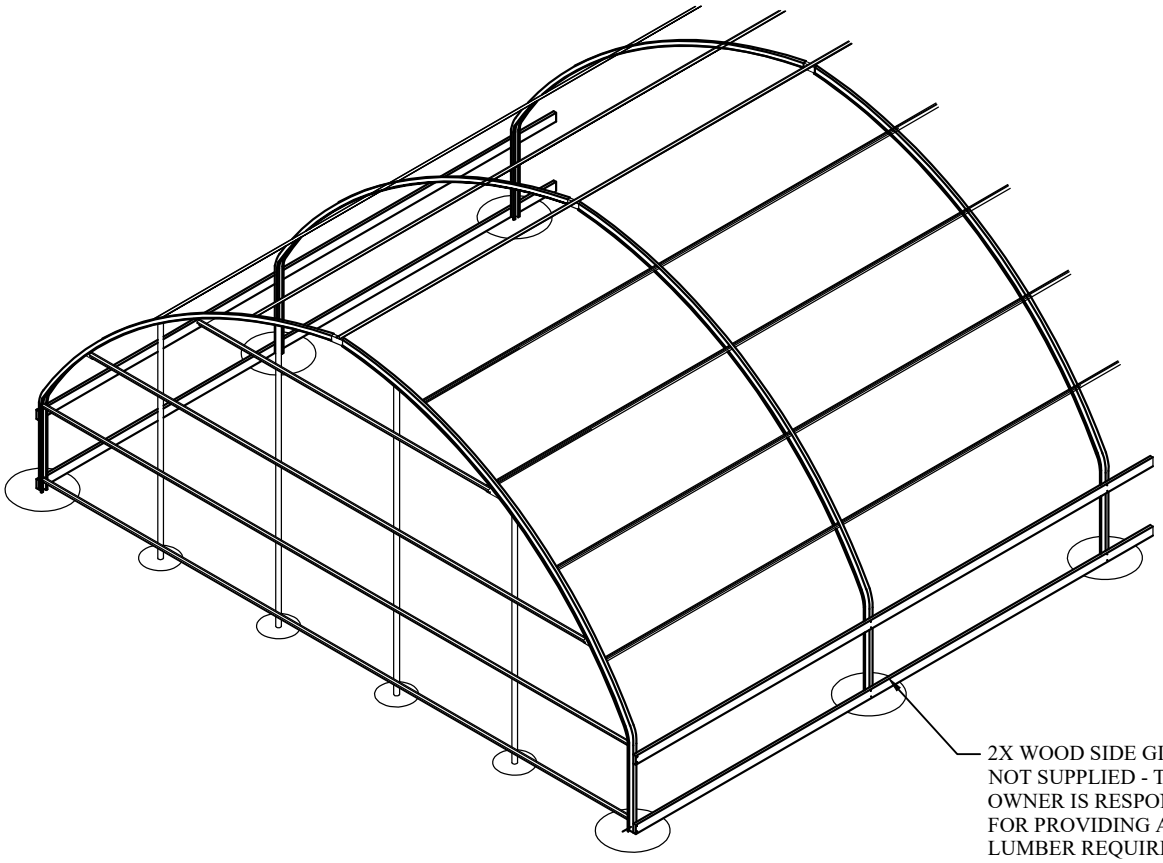
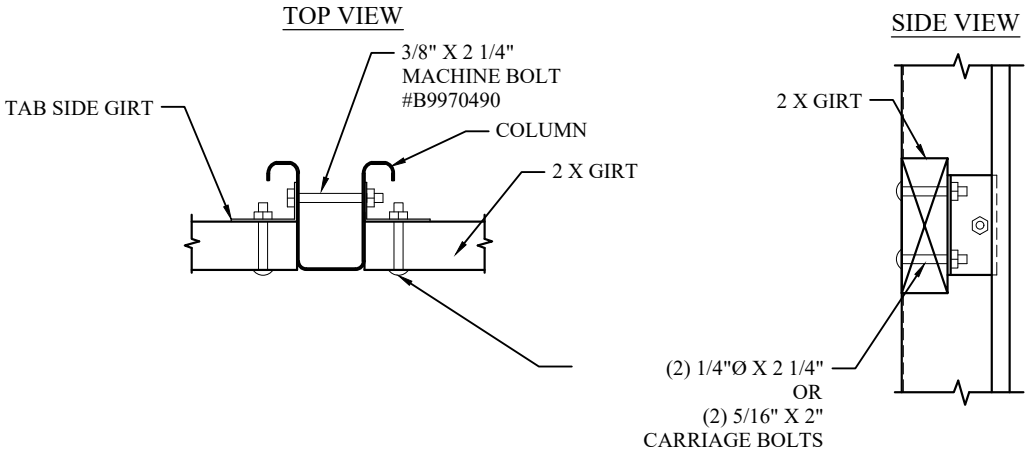


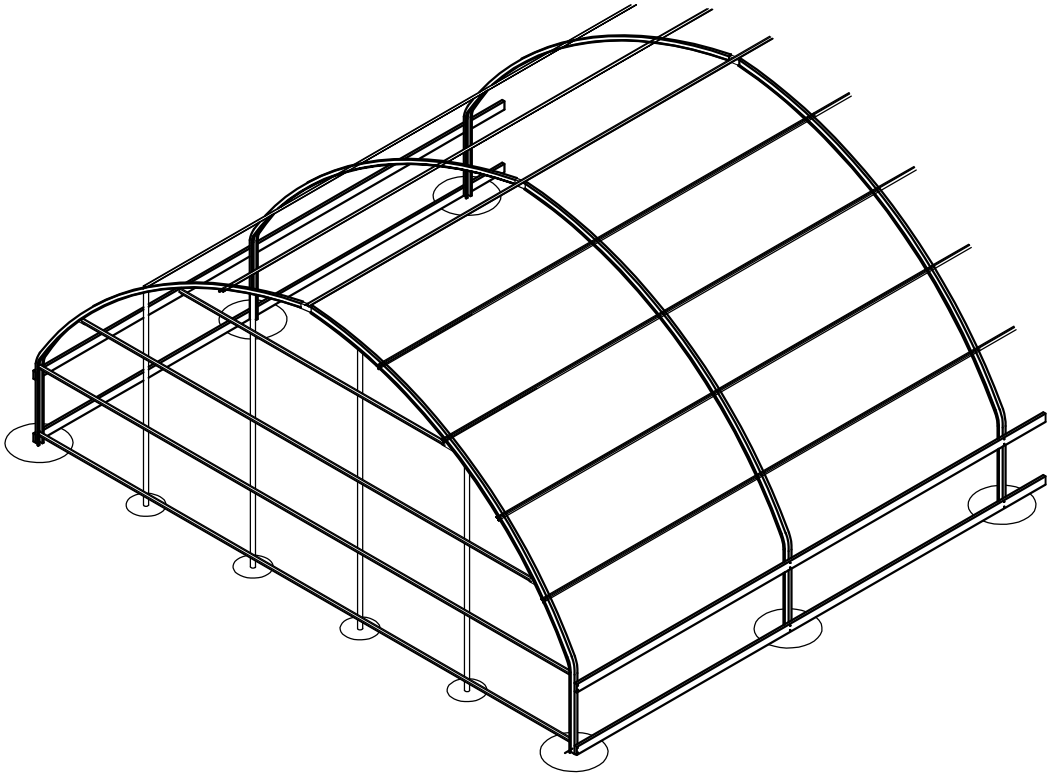
FIGURE 23 - WOOD FLUSH SIDE WALL



STEEL SIDE GIRT INSTALLATION
FLUSH MOUNT OPTION

1. LOCATE 7/16" HOLES 2" AND 4' FROM GRADE LEVEL ON THE COLUMNS. ATTACH THE SIDE GIRT TABS ON EACH SIDE OF THE COLUMNS AT THE HOLES WITH A 3/8" X 2 1/4" MACHINE BOLT AND TIGHTEN.

2. FIELD CUT THE STEEL GIRTS TO THE REQUIRED LENGTH AND ATTACH THEM TO THE PREVIOUSLY INSTALLED TABS WITH (2) 10-16 X 3/4" TEK SCREWS. MAKE SURE THAT THE GIRTS ARE LEVEL BEFORE TIGHTENING THEM.



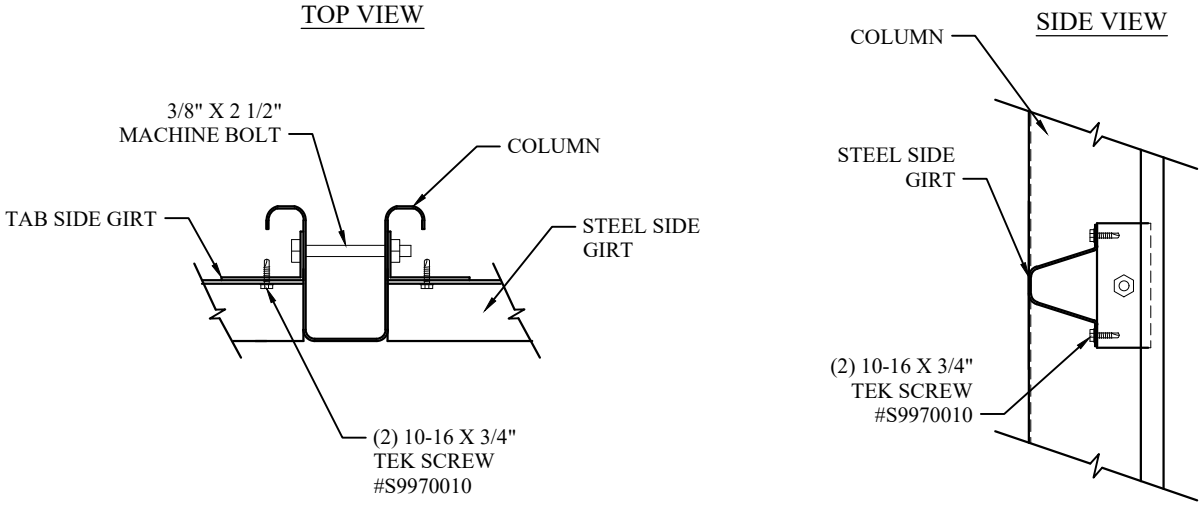
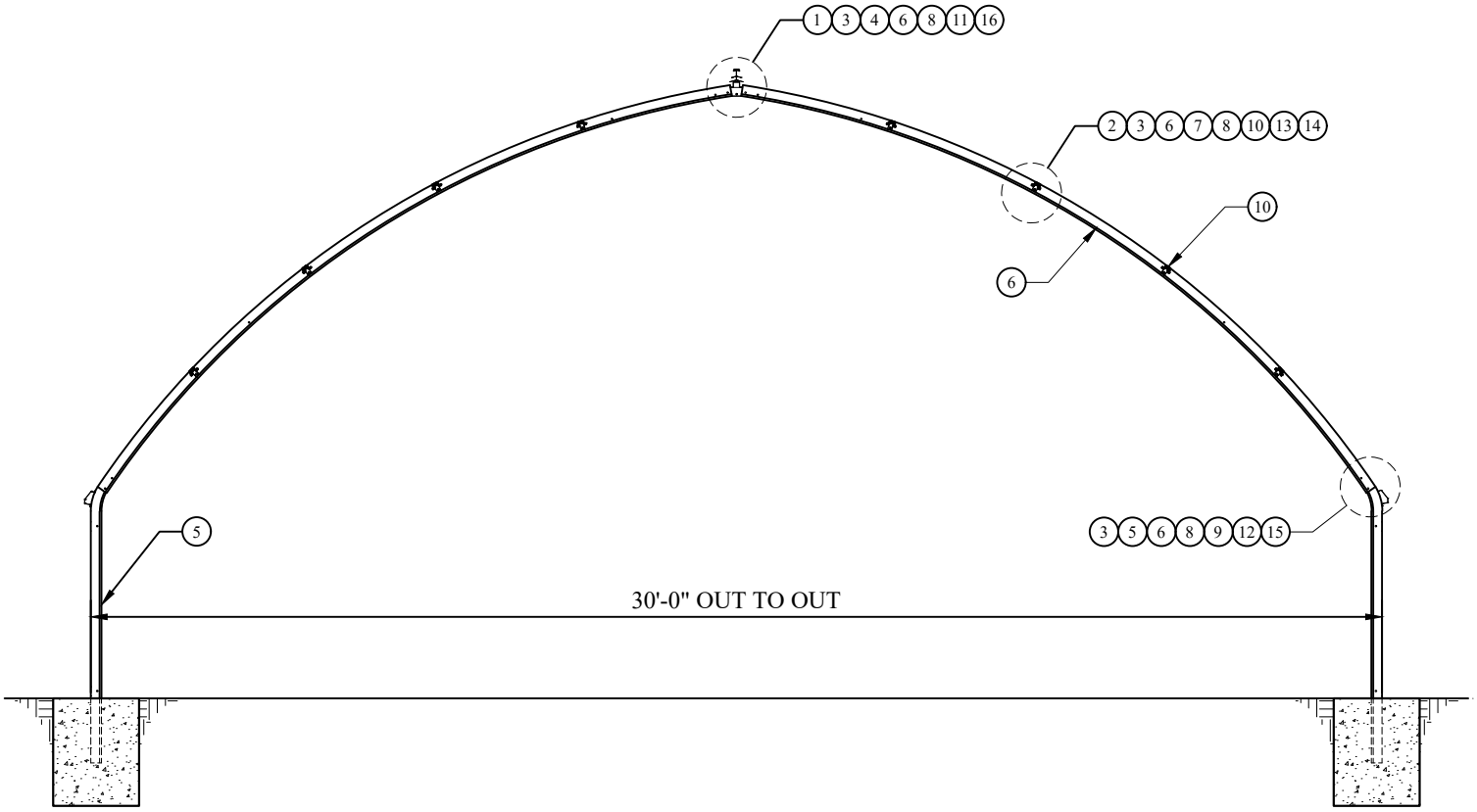


FIGURE 24 - STEEL FLUSH SIDE WALL

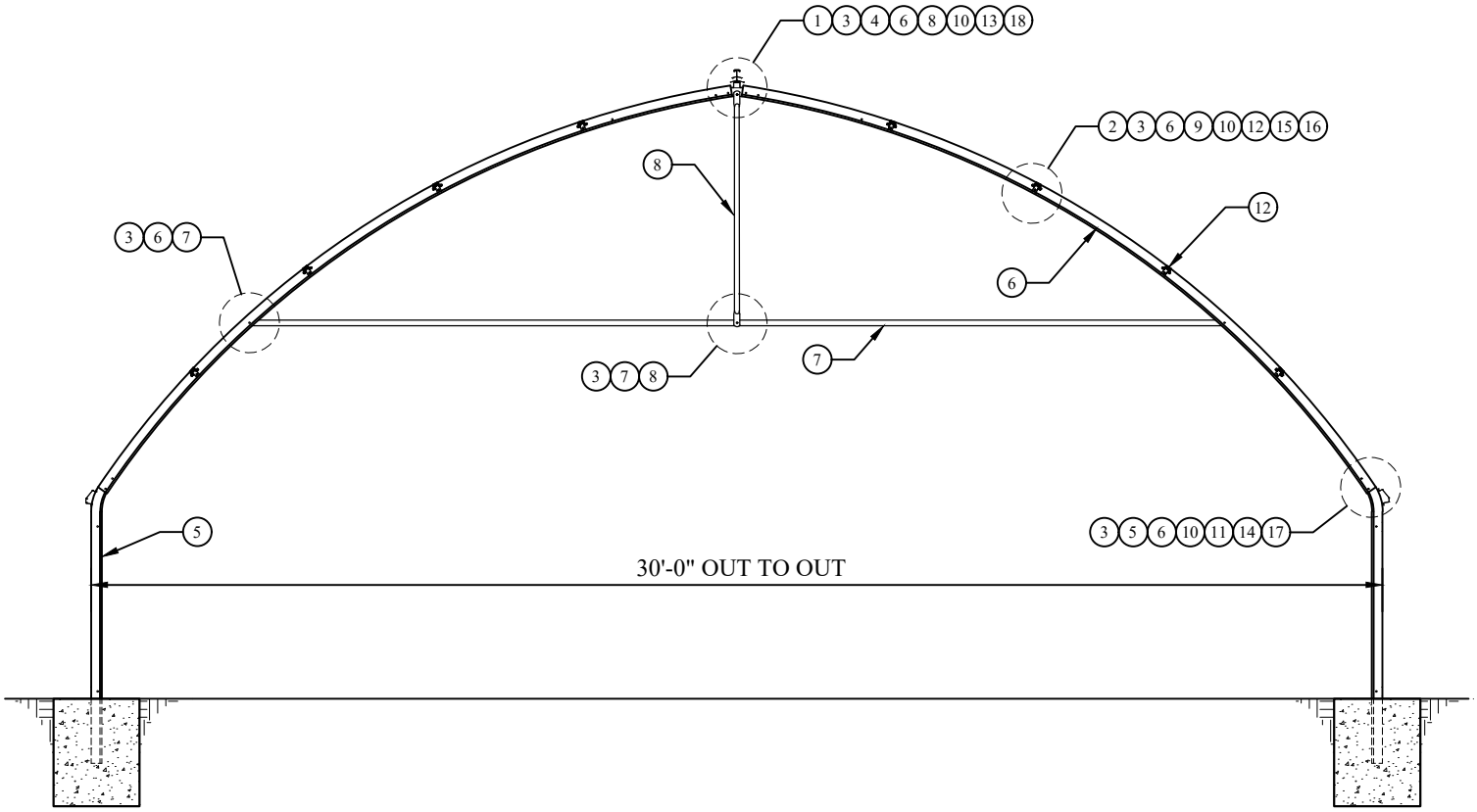
TRUSS PARTS LIST 10 LBS. BUILDING



ITEM	QTY	PART No.	DESCRIPTION
1	1	A9970047	ALUM RIDGE BAR 3/12 24'-7"
2	16	B9970270	BOLT / HH 5/16" X 1 3/4"
3	14	B9970490	BOLT / HH 3/8" X 2 1/4"
4	2	B9971605	CARRIAGE BOLT 3/8" X 1 3/4"
5	2	C0000600	COLUMN 9 1/2" 13GA.
6	2	C0055130	CHORD ARCH 2 PIECE 258" RAD
7	16	N9970290	5/16" COARSE HEX NUT PLTD.
8	16	N9970300	3/8" COARSE HEX NUT PLTD.
9	2	P0000864	9 1/2" X 12'-0" EAVE PURLIN
10	8	P0001600	5" X 69 3/4" PURLIN
11	1	S0000968	CHEVRON SPLICE ASSEMBLY
12	4	S9970010	10-16 X 3/4" TEK SCREW
13	8	T0031210	TAB CROSSBAR PURLIN TO 9 1/2"
14	8	T0031211	TAB 9 1/2" SPACER
15	4	T0031212	TAB SPACER
16	1	T0049884	TAB RIDGE BAR STAND HARD COVER

FIGURE 26 - TRUSS PARTS LIST

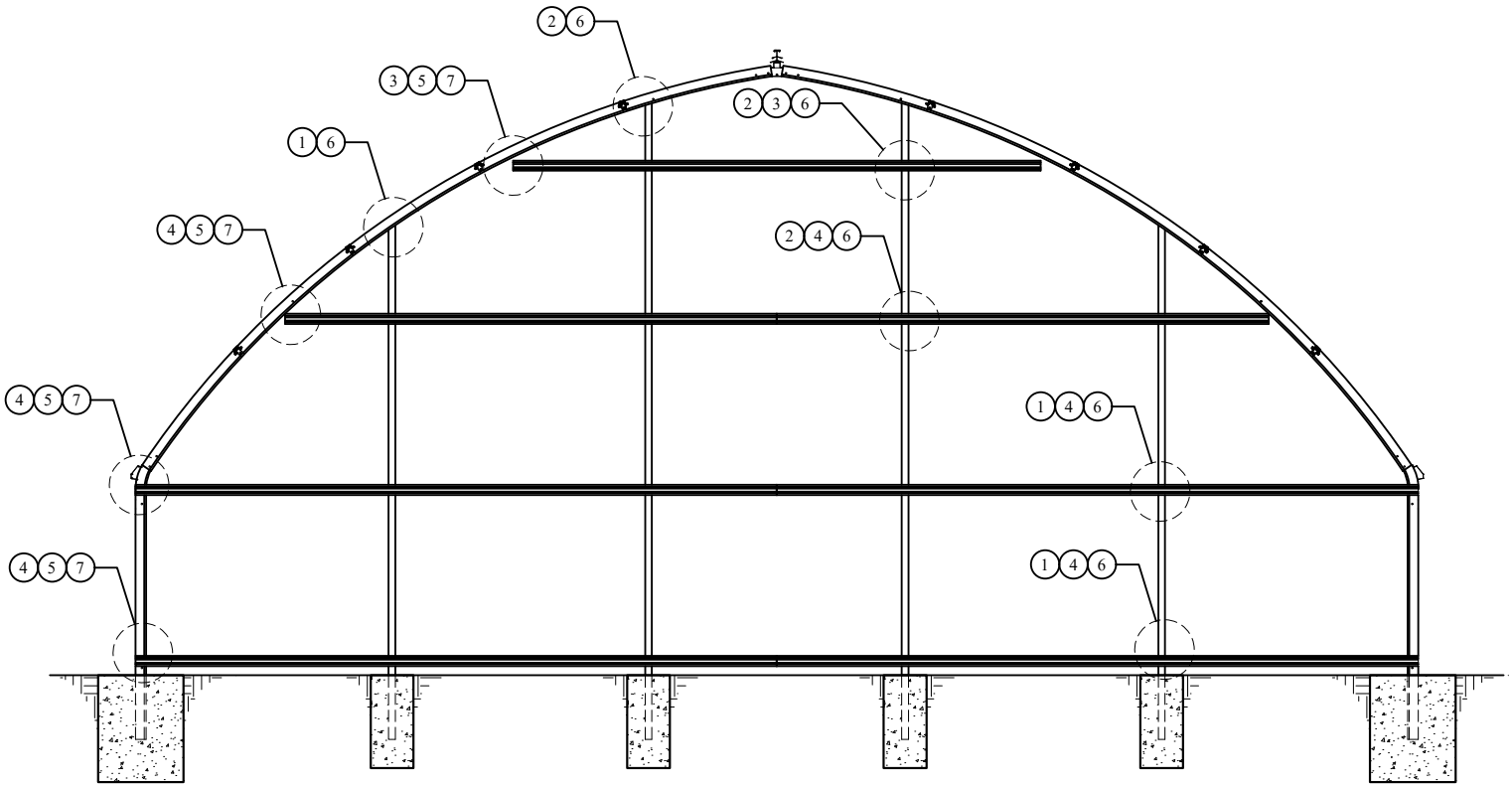
TRUSS PARTS LIST 20& 30 LBS. BUILDING



ITEM	QTY	PART No.	DESCRIPTION
1	1	A9970047	ALUM RIDGE BAR 3/12 24'-7"
2	16	B9970270	BOLT / HH 5/16" X 1 3/4"
3	17	B9970490	BOLT / HH 3/8" X 2 1/4"
4	2	B9971605	CARRIAGE BOLT 3/8" X 1 3/4"
5	2	C0000600	COLUMN 9 1/2" 13GA.
6	2	C0055130	CHORD ARCH 2 PIECE 258" RAD
7	1	C0055140	CHORD TUBE CROSS .065W
8	1	C0055150	CHORD SUPPORT TUBE .065W
9	16	N9970290	5/16" COARSE HEX NUT PLTD.
10	16	N9970300	3/8" COARSE HEX NUT PLTD.
11	2	P0000864	9 1/2" X 12'-0" EAVE PURLIN
12	8	P0001600	5" X 69 3/4" PURLIN
13	1	S0000968	CHEVRON SPLICE ASSEMBLY
14	4	S9970010	10-16 X 3/4" TEK SCREW
15	8	T0031210	TAB CROSSBAR PURLIN TO 9 1/2"
16	8	T0031211	TAB 9 1/2" SPACER
17	4	T0031212	TAB SPACER
18	1	T0049884	TAB RIDGE BAR STAND HARD COVER

FIGURE 27 - TRUSS PARTS LIST

ENDWALL PARTS LIST



ITEM	QTY	PART No.	DESCRIPTION
1	2	C0003262	1 7/8" X .090W X 12' ENDWALL COLUMN
2	2	C0003265	1 7/8" X .090W X 15' ENDWALL COLUMN.
3	1	G0000312	GIRT 5" X 12'-4"
4	6	G0000240	GIRT 5" X 15'-2"
5	32	S9970010	10-16 X 3/4" TEK SCREWS
6	36	S9970052	14-14 X 1" TEK SCREWS
7	8	T0030890	TAB END GIRT

NOTE:
REFER TO THE ARCH PARTS LIST ON PAGE 26 & 27 FOR ENDWALL ARCH, LEGS, AND CONNECTION PART NUMBERS.

FIGURE 28 - END WALL PARTS LIST

INSTALLATION OF TRIM FOR COVERING ATTACHMENT

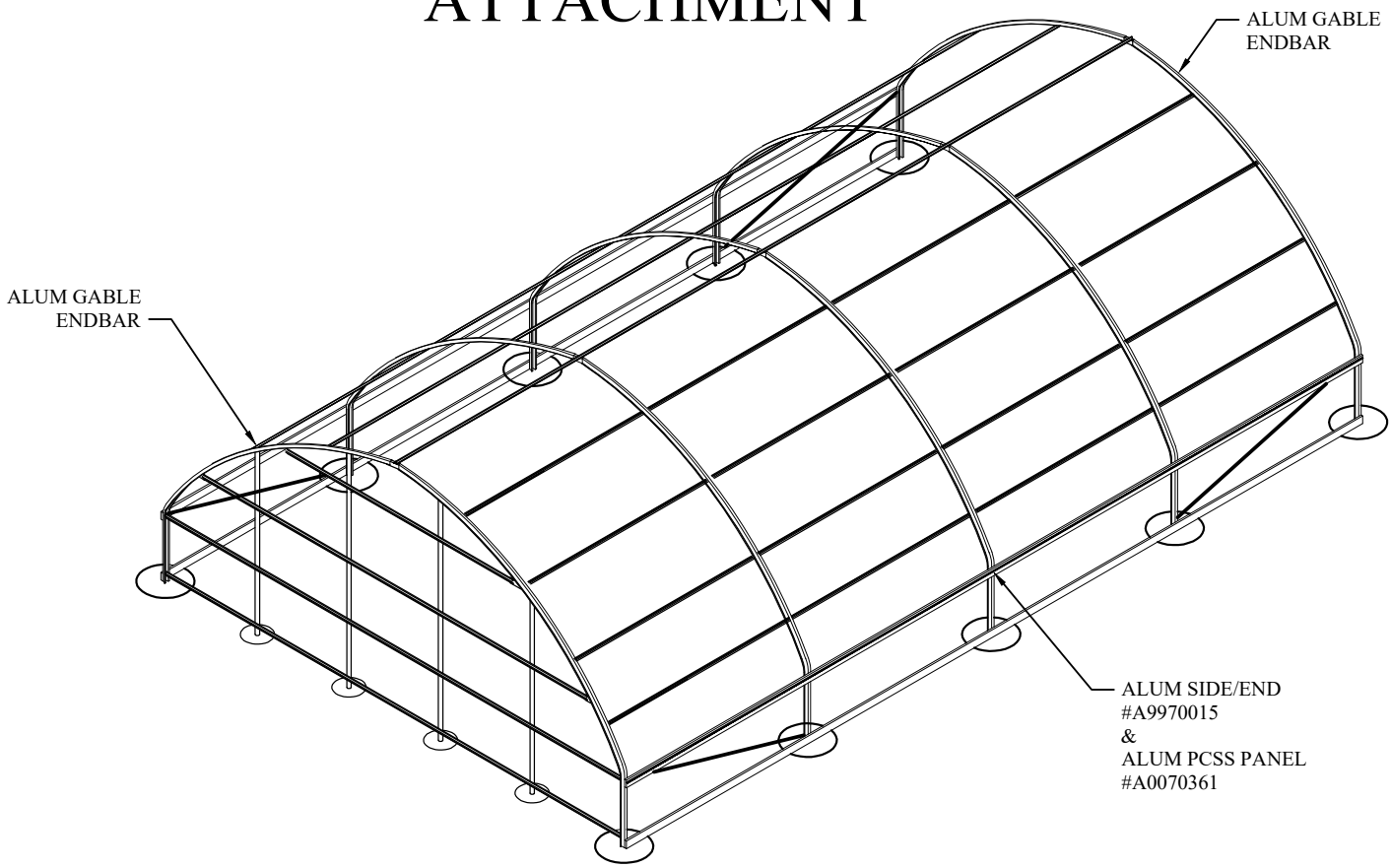
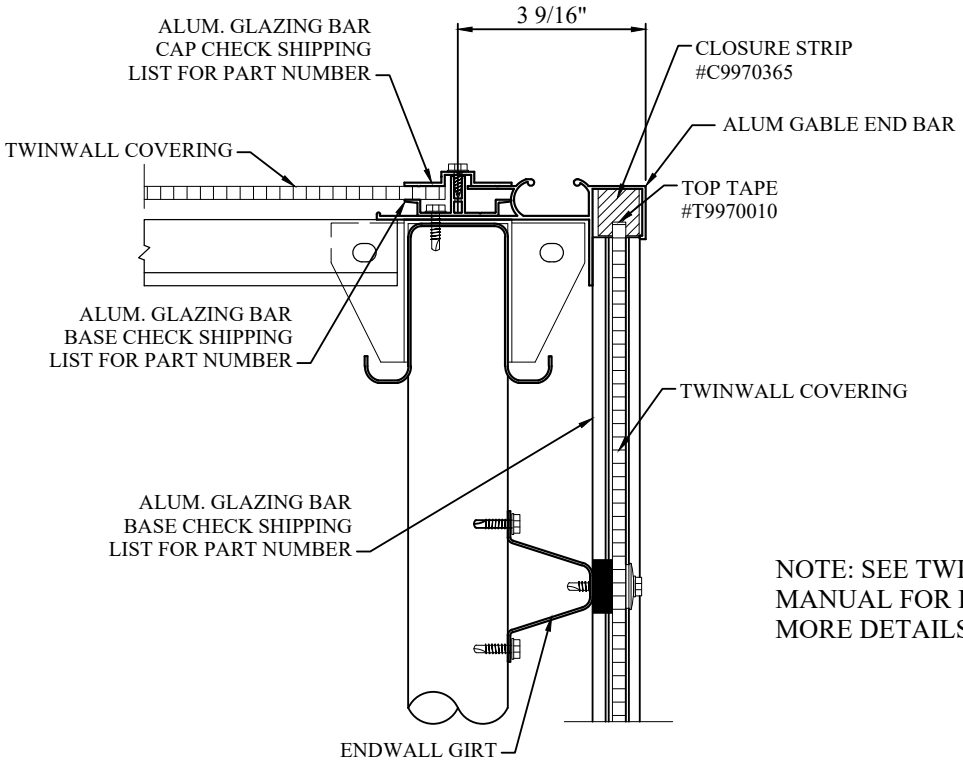


FIGURE 29 - COVERING ATTACHMENT

1. DRILL SCREW THE ALUM SIDE/END AND ALUM PCSS PANEL AT 12" ON CENTER.



NOTE: SEE TWINWALL COVERING MANUAL FOR RANGER 2000 FOR MORE DETAILS.

INSTALLATION OF TRIM FOR COVERING ATTACHMENT

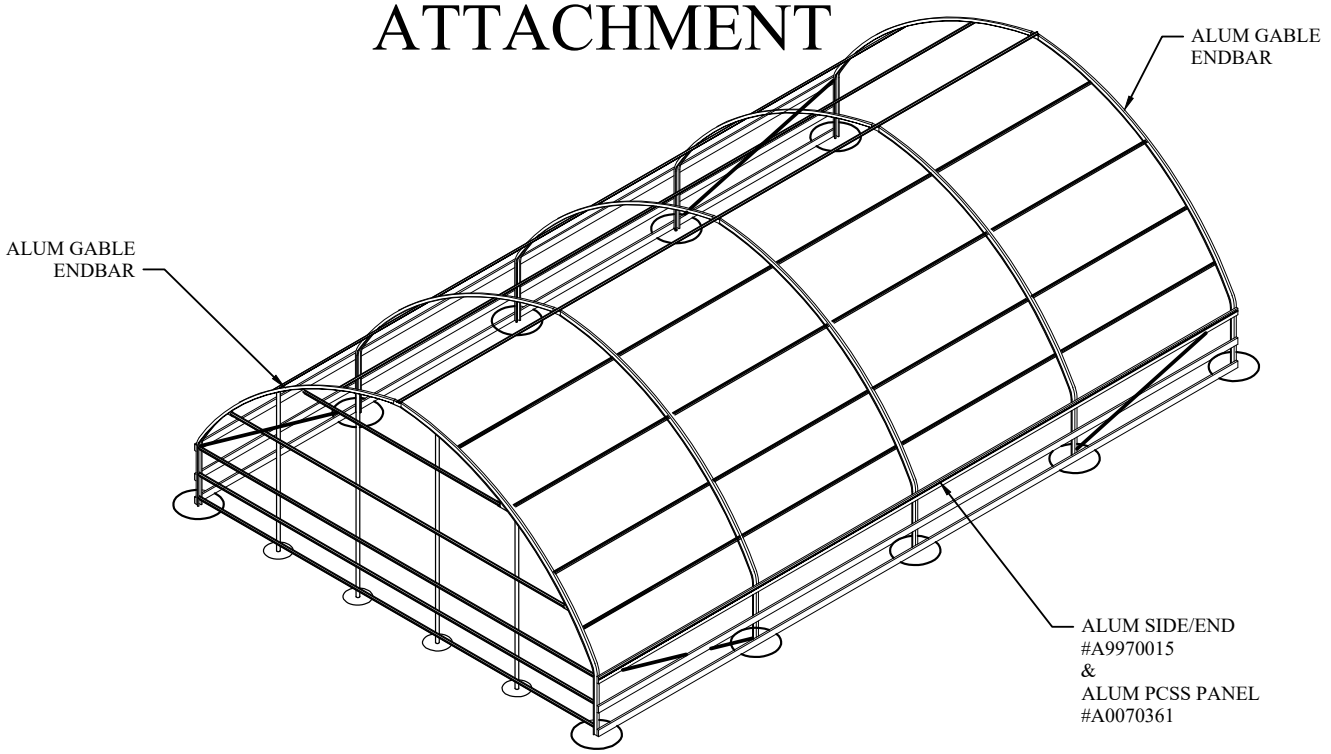
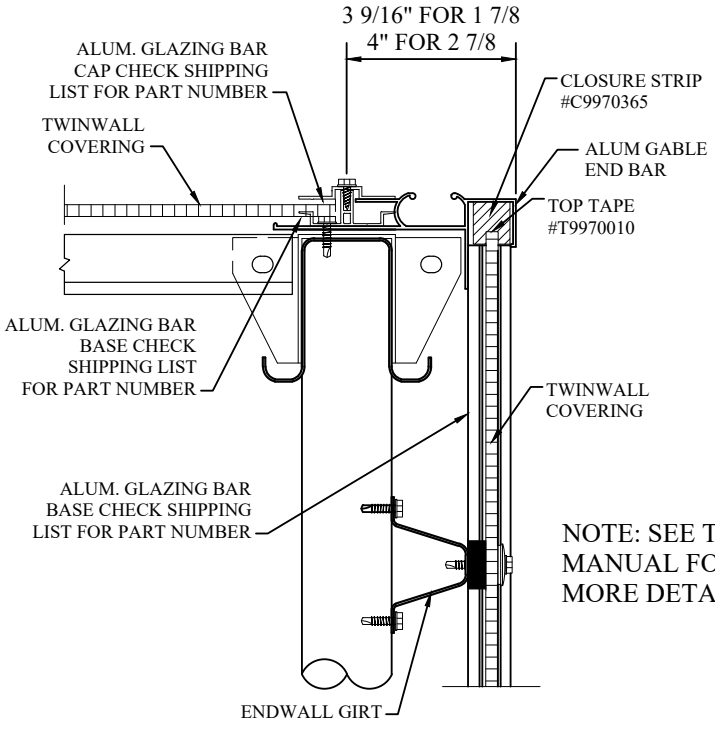


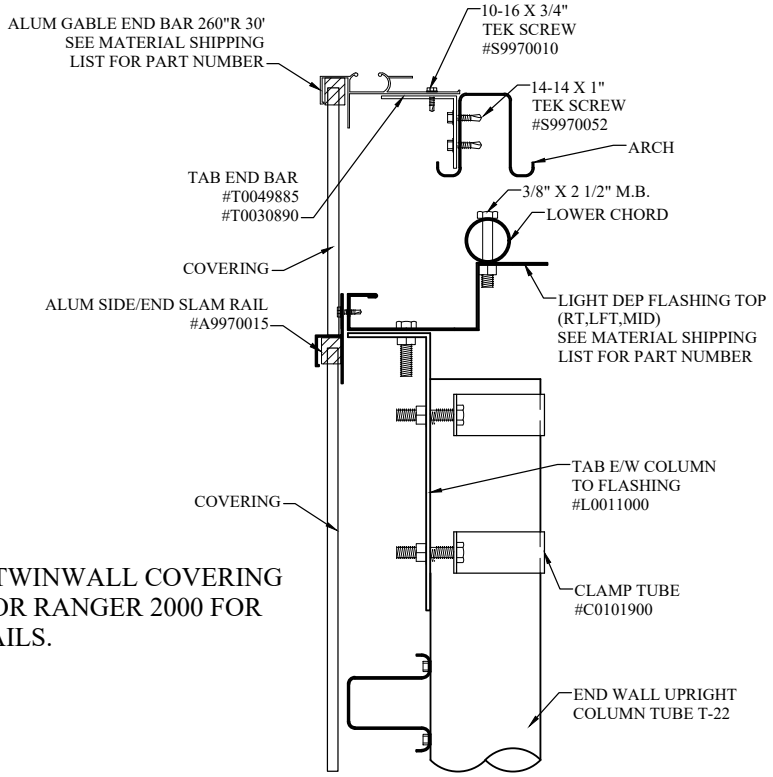
FIGURE 29 - COVERING ATTACHMENT

1. DRILL SCREW THE ALUM SIDE/END AND ALUM PCSS PANEL AT 12" ON CENTER.



TYPICAL ENDWALL & ROOF COVERING

2. DRILL SCREW THE ALUM GABLE ENDBAR TO ENDWALL ARCH (TAB ENDBARS) WITH 10-16 X 3/4" TEK SCREWS SPACED OUT EVENLY.



NOTE: SEE TWINWALL COVERING MANUAL FOR RANGER 2000 FOR MORE DETAILS.

ENDWALL COVERING
FOR LIGHT DEP BUILDINGS





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