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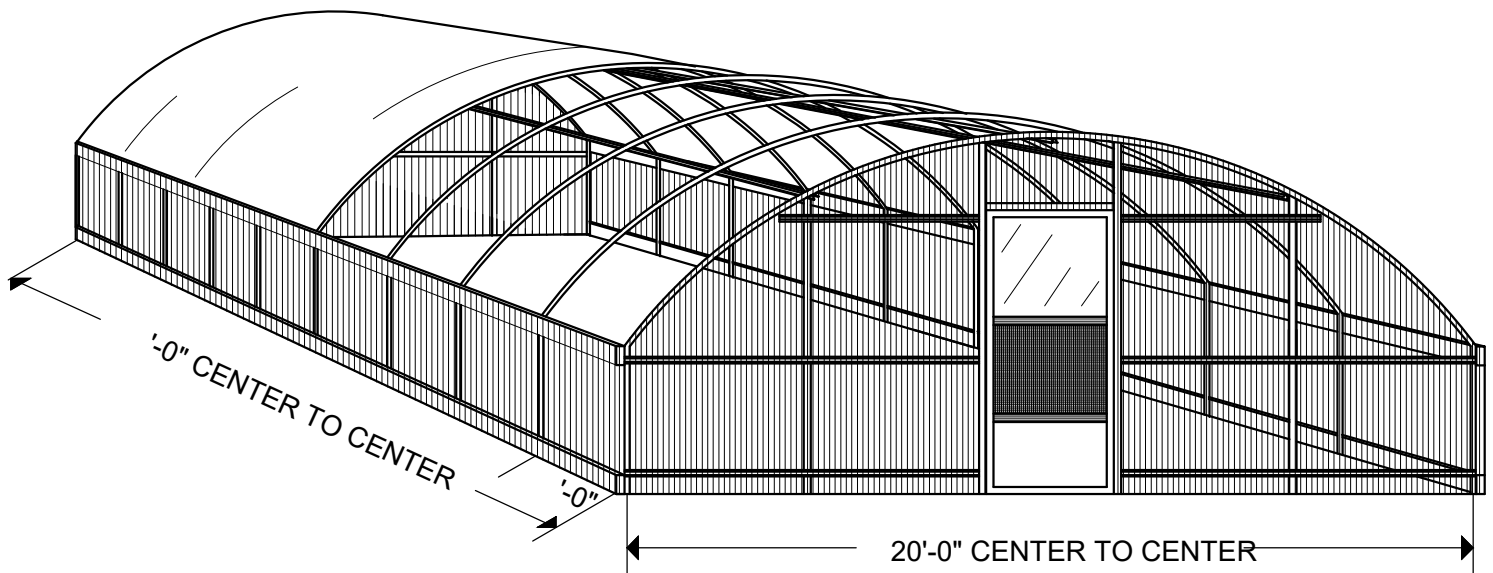
A DIVISION OF JOHN L. CONLEY, INC.

GENERAL CONTRACTORS LICENSE NO. 323391-B

## COLD FRAME SERIES 1100 GREEN HOUSE SYSTEM

**IMPORTANT!!!!**

NON - CODE COLD FRAMES REPRESENT A NON - CODE- NON ENGINEERED DESIGN WITH CERTIFICATION UNAVAILABLE. IT IS NOT RECOMMENDED THAT THIS HOUSE BE UTILIZED IN REGIONAL AREAS REPRESENTING SNOW OR HIGH WIND FACTORS.



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

### 20'-0" WIDE WITH LEGS INSTRUCTION MANUAL

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# INTRODUCTION

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

INCLUDED IN THIS PACKAGE ARE INSTRUCTIONS AND DETAILED DRAWINGS PERTAINING TO YOUR 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 BUILDER'S RISK INSURANCE WITH YOUR INSURANCE AGENT.

## DISCLAIMER

THE FOLLOWING INSTRUCTIONS ARE GIVEN AS SUGGESTED GUIDELINES FOR GENERAL INSTRUCTIONS. CONLEY'S MANUFACTURING AND SALES OR ANY OF THEIR EMPLOYEES SHALL NOT BE RESPONSIBLE RESULTING FROM PURCHASER'S 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 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 IF 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 CARRIER'S 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 THERETO 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 NINE (9) MONTHS FROM THE DATE OF SHIPMENT. CARRIER'S 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 WITHHELD 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 DAYS FROM THE SHIPMENT IS RECEIVED.

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

## WARRANTY

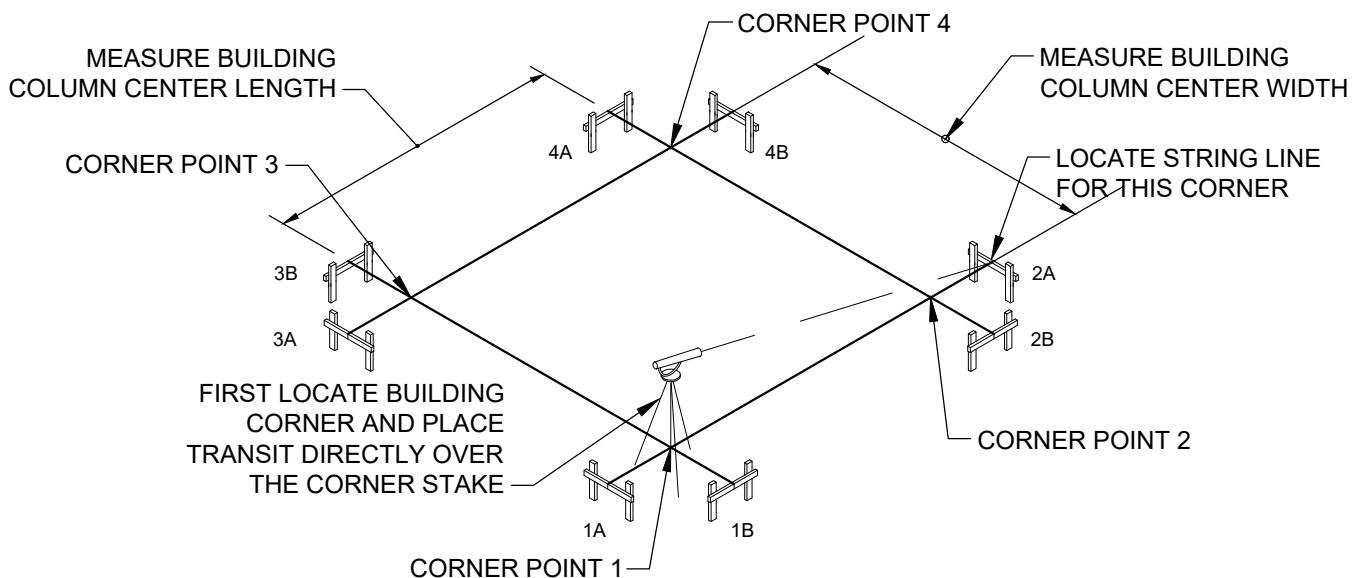
CONLEY'S MANUFACTURING AND SALES, THEIR EMPLOYEES OR REPRESENTATIVES, WILL NOT BE RESPONSIBLE FOR ANY DAMAGES TO GREENHOUSE COVERINGS, STRUCTURES, CROPS OR EQUIPMENT WHEN USED IN CONDUCTION WITH OUR TUBE - LOCK, OR ANY OTHER LOCKING DEVICE MANUFACTURED BY CONLEY'S MANUFACTURING AND SALES OR OTHERS.

# 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%. WITH A LEVEL GRADE, THE COLUMNS WILL NEED TO BE SET AT DIFFERENT HEIGHTS TO ACHIEVE A SLOPE FOR THE GUTTERS TO DRAIN (BUILDINGS WITH GUTTERS ONLY, SEE FIG 9). THE GRADE COULD ALSO BE PREPARED AT A 1/2 % SLOPE, FOR GUTTER BUILDINGS AND THE COLUMNS CAN ALL BE SET AT THE SAME HEIGHT (SEE SHT 7 FOR OPTIONS)
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' 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 ONTO 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 FIG. 3).

THE TRIANGLE METHOD - CREATE A 90° 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 FIG. 4) (USE THIS METHOD FOR LARGER BUILDINGS WHERE THE LENGTH OF THE DIAGONAL EXCEEDS THE 100 FOOT TAPE MEASURE). WHEN YOU HAVE 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).

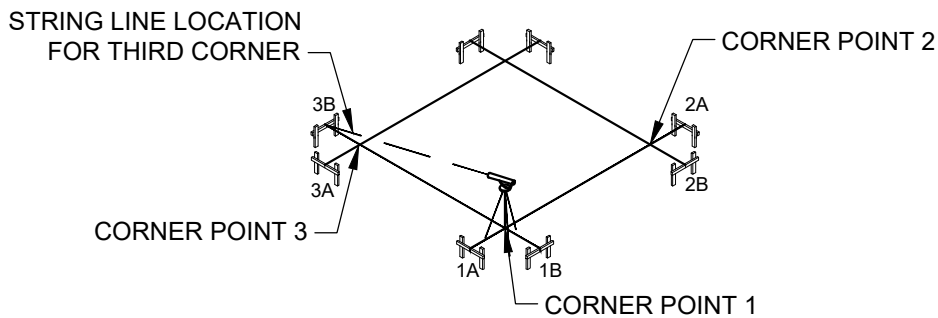


FIGURE 2 - LOCATING CORNER POINT 3

MEASURE THE DIAGONAL LINES AND ADJUST THE LINES UNTIL THE TWO DIAGONAL DIMENSIONS ARE EQUAL

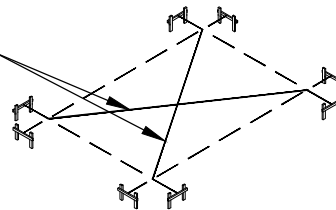


FIGURE 3 - DIAGONAL METHOD

$\sqrt{\text{DIMENSION A}^2 + \text{DIMENSION B}^2} = \text{DIMENSION C}^2$		
20'	15'	25'
24'	18'	30'
28'	21'	35'
32'	24'	40'
36'	27'	45'
40'	30'	50'

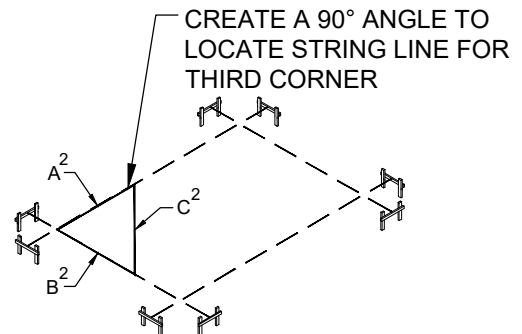


FIGURE 4 - TRIANGLE METHOD

6. TO LOCATE THE FOURTH CORNER POINT (FIG. 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 (FIG. 5).

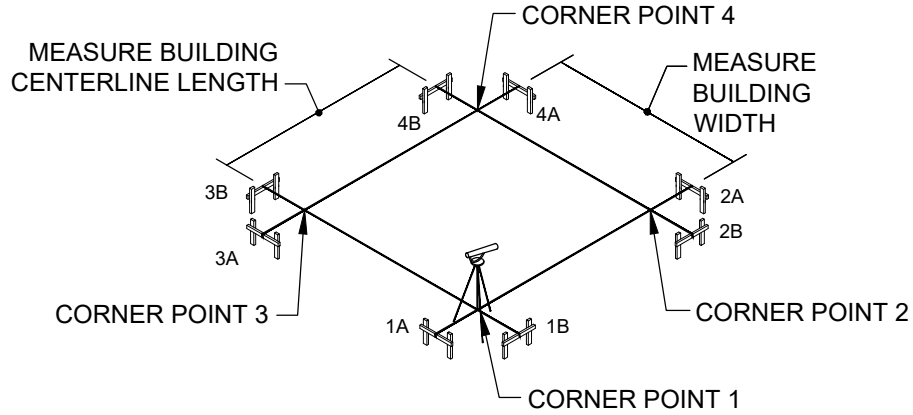


FIGURE 5 - LOCATING CORNER POINT 4

## FIND COLUMN CENTERS

1. MARK THE CORNER POINTS ON THE LINES, AND USE A 10' 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.

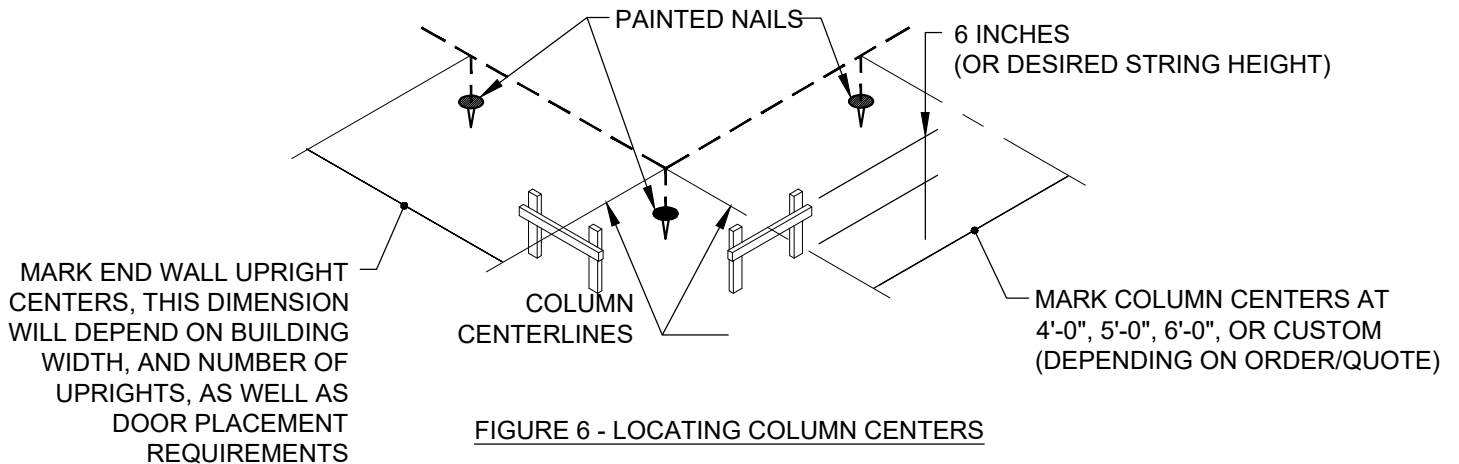


FIGURE 6 - LOCATING COLUMN CENTERS

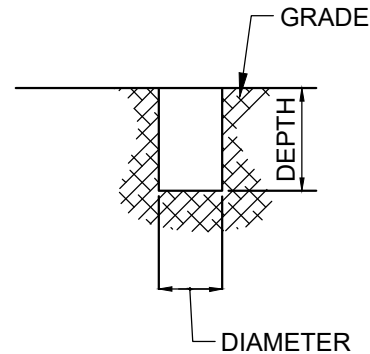
# AUGER COLUMN HOLES

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 THE HOLES DIAMETER AND DEPTH (SEE ENGINEERING DRAWINGS OR CONSULT YOUR LOCAL BUILDING DEPARTMENT FOR HOLE DIMENSIONS).
4. AFTER DIGGING THE HOLES FOR END WALL UPRIGHTS, REFILL LOOSELY WITH DIRT, UNTIL READY FOR USE (SEE FIG. 9).

## 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 RE-STRING 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 FIG. 8).

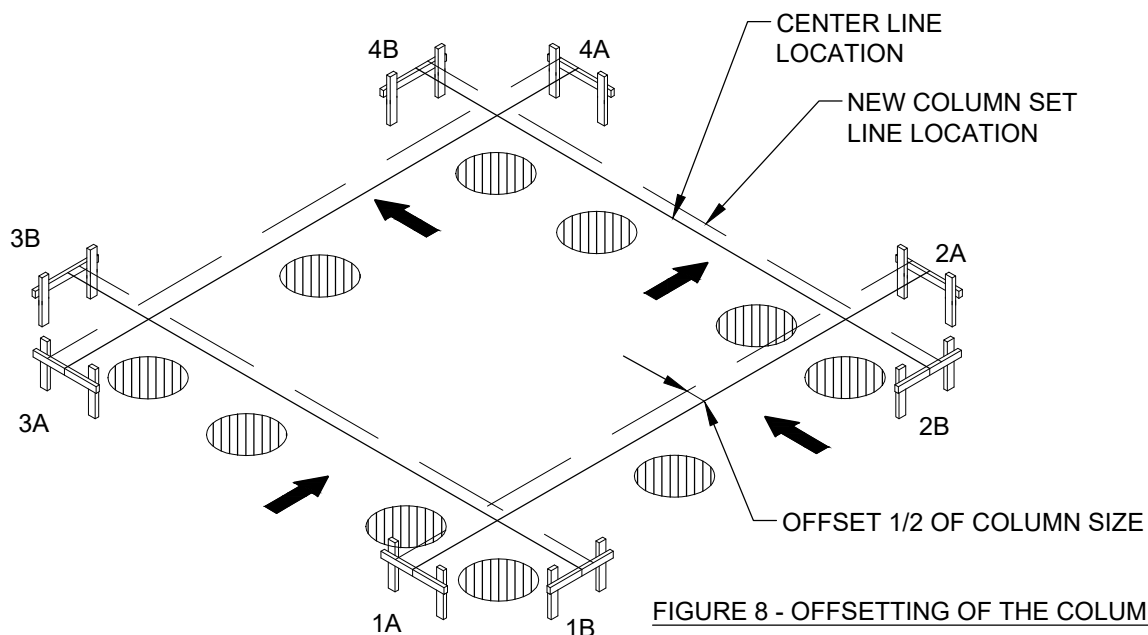


FIGURE 8 - OFFSETTING OF THE COLUMN SET LINES



# SLOPING "GUTTER BUILDINGS" FOR PROPER WATER DRAINAGE

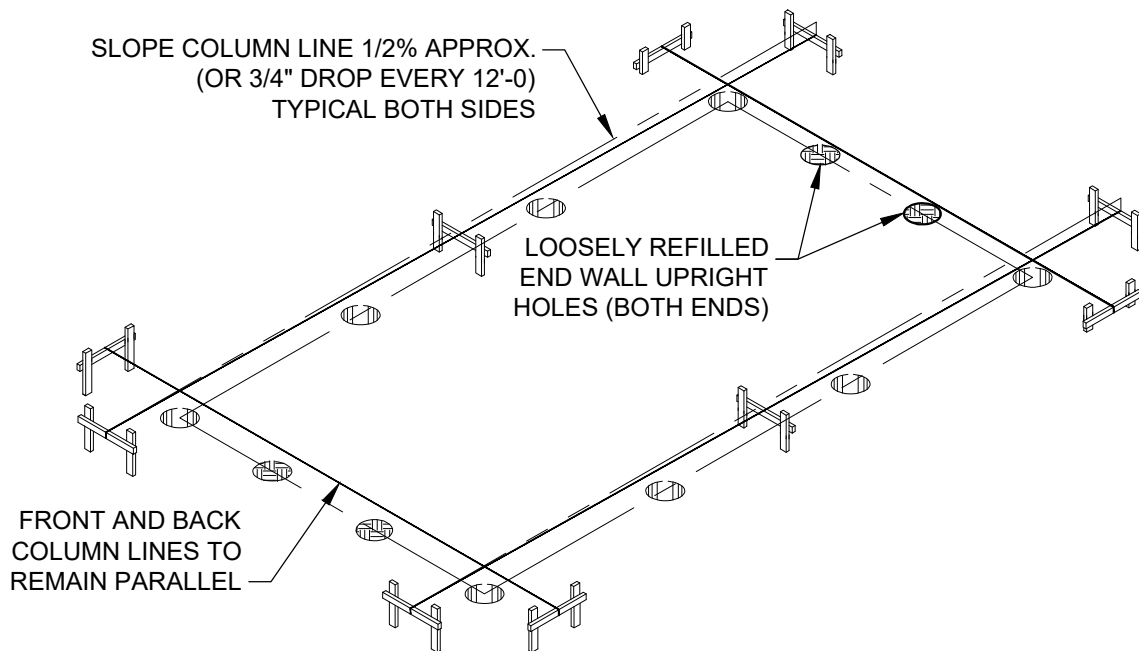
NOTE: ONLY **GUTTER CONNECTED COLD FRAMES** NEED TO APPLY SOME SLOPING FOR WATER DRAINAGE. IF YOU HAVE A SINGLE COLD FRAME, YOU **DO NOT** NEED TO APPLY ANY KIND OF SLOPING.

1. IT IS PREFERRED TO SLOPE THE GRADE FOR WATER DRAINING (GUTTERED) GREENHOUSES. SLOPE THE GRADE ALONG THE LENGTH OF THE FOUNDATION KEEPING THE FRONT AND BACK COLUMN LINES PARALLEL. A SLOPE OF 3/4" EVERY 12'-0" (APPROXIMATELY 1/2 % SLOPE) WILL INSURE PROPER DRAINAGE AT THE GUTTERS. IF THIS OPTION IS CHOSEN, THEN ALL COLUMNS CAN BE SET TO THE SAME HEIGHT, AND BE ABLE TO ACHIEVE A CONSTANT BUILDING HEIGHT. IF THE BUILDING IS VERY LONG (OVER 300' LONG), IT IS ADVISABLE TO HAVE THE PEAK AT THE CENTER OF THE BUILDING, AND HAVE (2) OUTLETS, (1) AT EACH THE END WALL. THIS DETERMINATION WILL NORMALLY BE TAKEN CARE OF BY THE DESIGN TEAM AT CONLEY'S.

## SLOPE LINES

1. IF SLOPING THE GRADE IS NOT DESIRED, THE THE SLOPE CAN BE ACHIEVED BY SETTING THE COLUMNS AT SPECIFIC HEIGHTS ALONG THE LENGTH OF THE BUILDING. PLEASE NOTE THAT THE UNDER GUTTER (UG) HEIGHT OF THE BUILDING IS MEANT TO BE FOR THE HIGH SIDE OF THE BUILDING (THE PEAK UG HEIGHT AT THE CENTER OF THE BUILDING FOR LONGER THAN 300' BUILDINGS).

SLOPE THE COLUMN LINES ALONG THE LENGTH OF THE FOUNDATION KEEPING THE FRONT AND BACK COLUMN LINES PARALLEL. THIS WILL INSURE PROPER DRAINAGE (SEE FIG. 9).



NOTE: THIS TECHNIQUE TO BE USED WITH GUTTER HOUSES ONLY

FIGURE 9 - SLOPING COLUMN LINES

## MARK CENTERS ON COLUMNS

1. MARK THE INTERMEDIATE COLUMN CENTER LOCATIONS ALONG THE LENGTH OF THE BUILDING ON THE NEW COLUMN SET LINES.
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, THIS DISTANCE, AND SUBTRACT THE STRING HEIGHT. MARK THE COLUMN AT THIS POINT WITH A FELT TIP MARKER. CONTINUE WITH REMAINING COLUMNS (SEE FIG. 10).

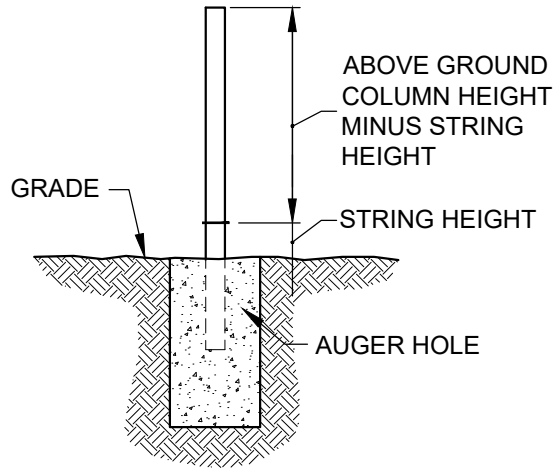
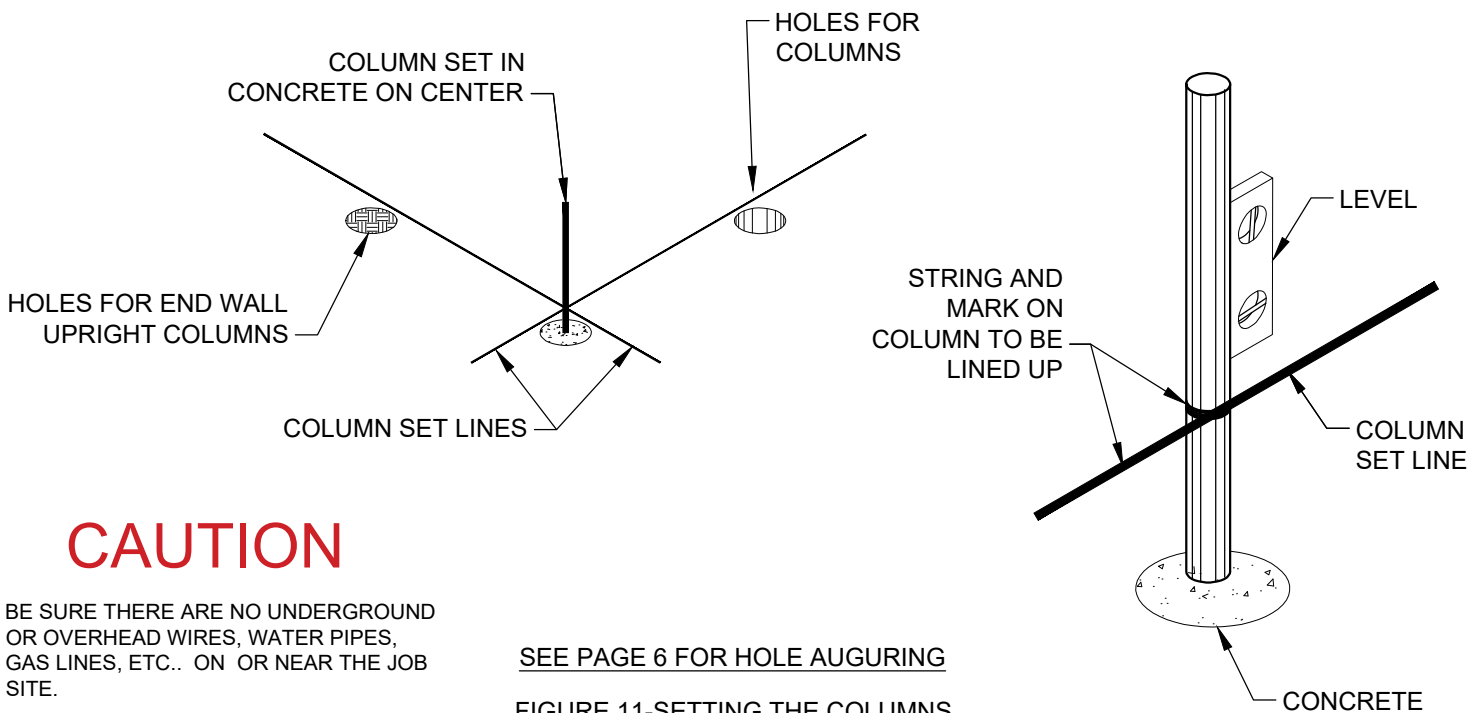


FIGURE 10-MARKING COLUMNS

# SET COLUMNS

1. POUR CONCRETE INTO THE FIRST HOLE. 2" SLUMP, 5 SACK MIX, AND 3/4" ROCK 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 IS NOT 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

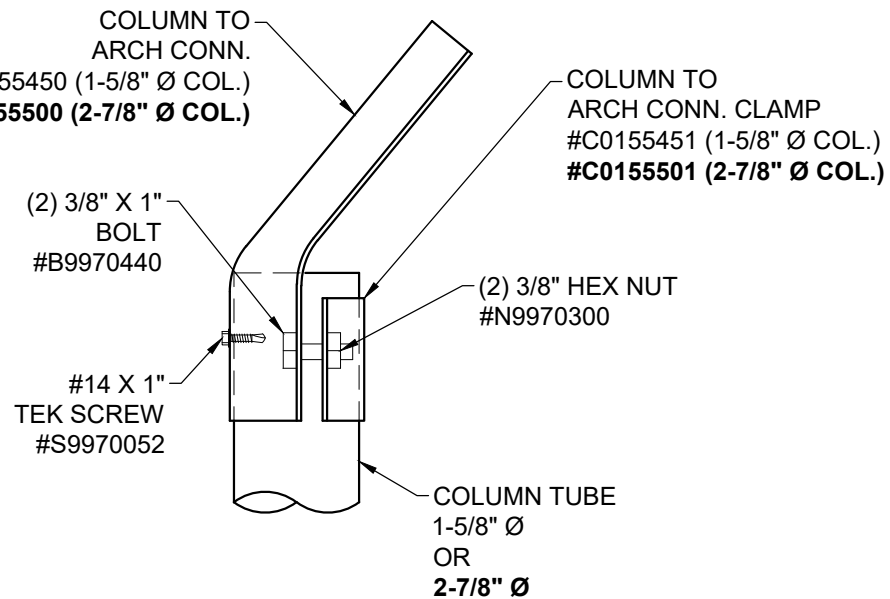
BE SURE THERE ARE NO UNDERGROUND OR OVERHEAD WIRES, WATER PIPES, GAS LINES, ETC.. ON OR NEAR THE JOB SITE.

SEE PAGE 6 FOR HOLE AUGURING

FIGURE 11-SETTING THE COLUMNS

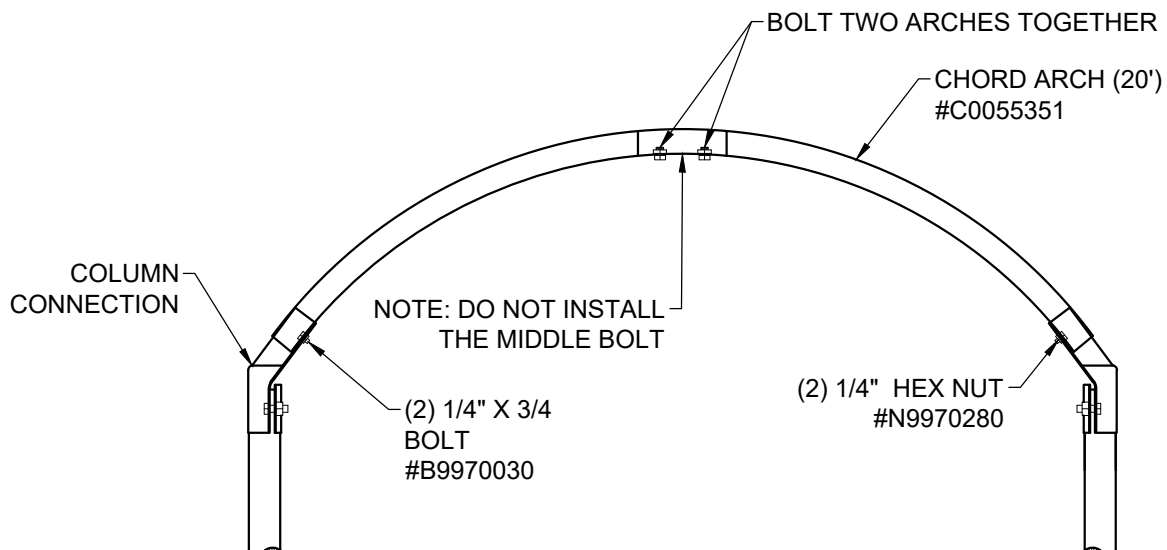
# COLUMN TO ARCH CONNECTOR

1. ATTACH THE CONNECTOR TO THE COLUMNS USING 1 CLAMP AND (2) 3/8" X 1" MACHINE BOLTS PER CONNECTOR.



# INSTALLATION OF ARCHES

1. ATTACH THE FIRST ARCH TO THE CONNECTORS USING (4) 1/4" X 3/4" MACHINE BOLTS.  
NOTE: DO NOT INSTALL THE MIDDLE BOLT.



# PURLIN INSTALLATION

1. TIE OFF THE ARCH USING ROPES OR CABLES TO MAKE THE ARCH PLUMB AND SQUARE.  
(MATERIALS FOR SECURING THE COLUMNS, ROPE / CABLE, IS NOT SUPPLIED BY CONLEY'S MANUFACTURING & SALES).

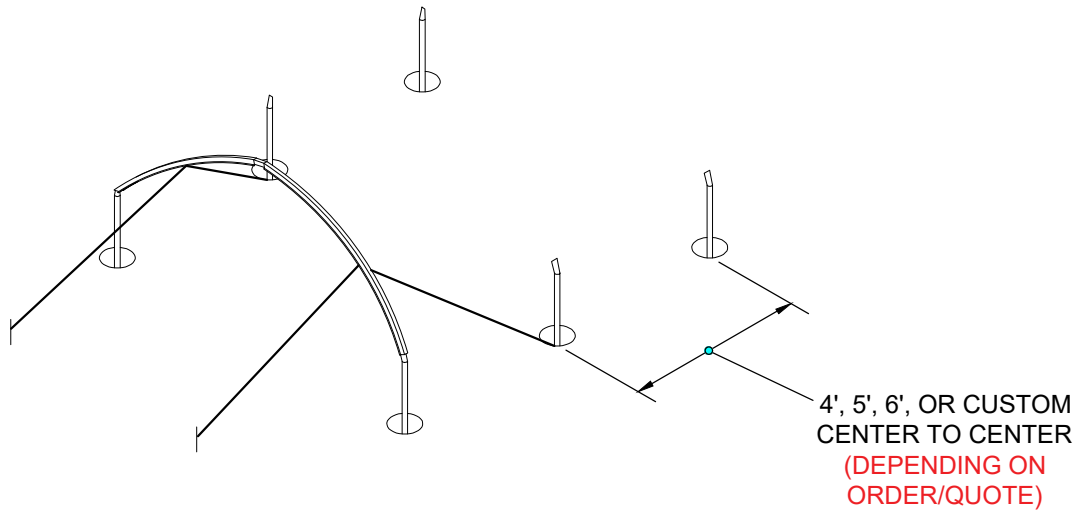


FIGURE 12 - (ARCH ASSEMBLY)

2. BOLT TWO MORE ARCHES TO THE COLUMNS USING (4) 1/4" X 3/4" MACHINE BOLTS PER ARCH.

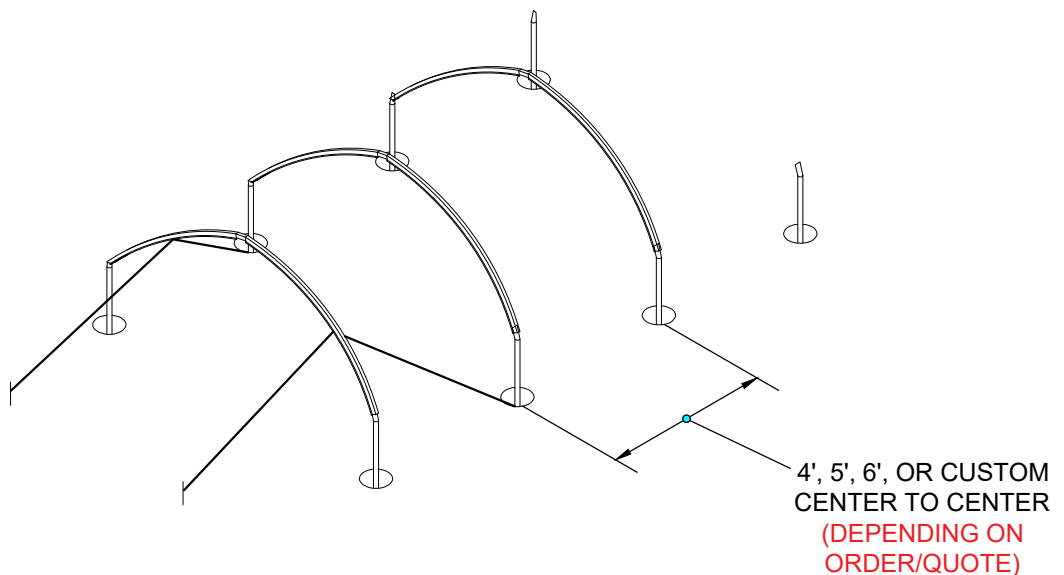
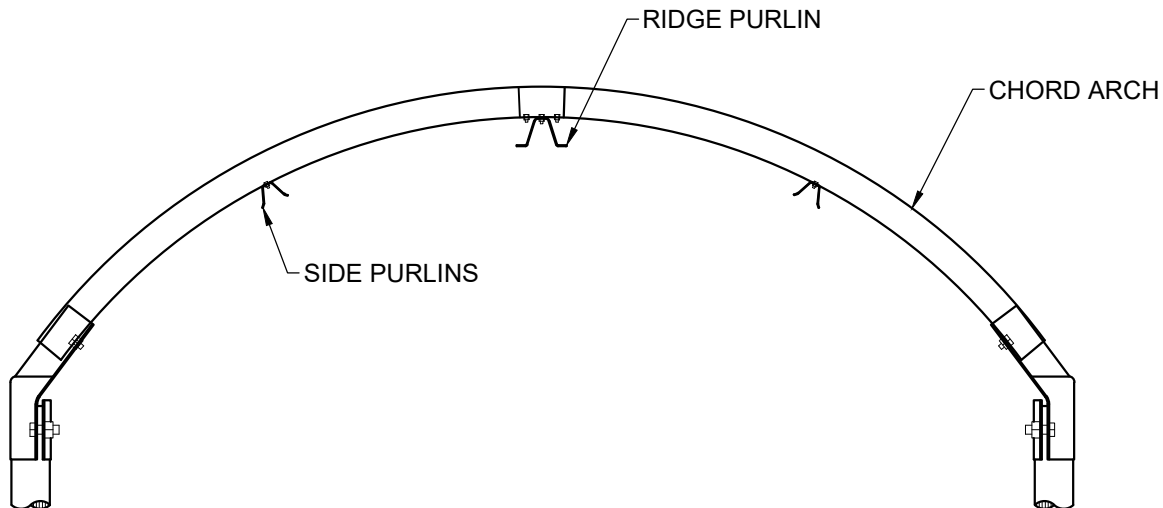
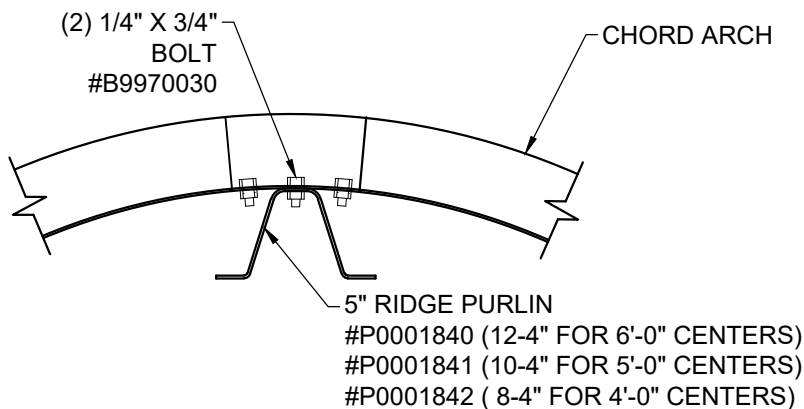


FIGURE 13 - (ARCH ASSEMBLY)

3. BOLT THE RIDGE PURLIN TO THE UNDERSIDE OF THE FIRST AND SECOND ARCHES USING (2) 1/4" X 3/4" MACHINE BOLTS PER ARCH.

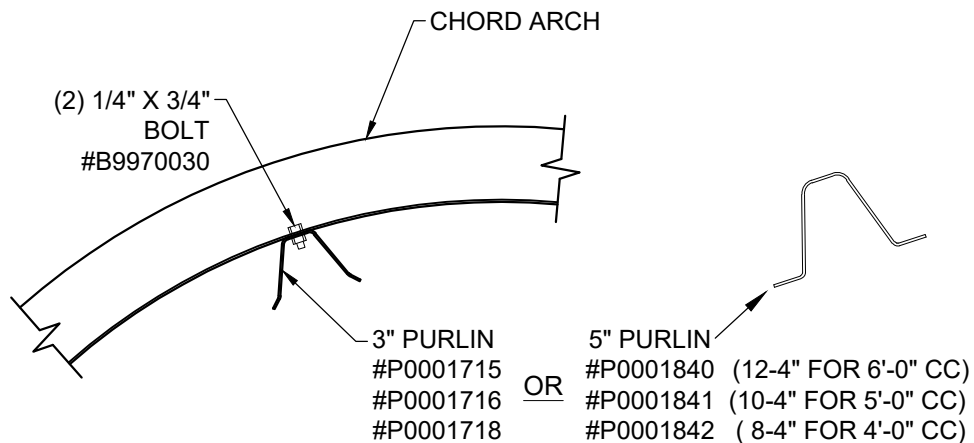


4. BOLT ON THE QUARTER POINT PURLINS TO THE FIRST AND SECOND ARCHES USING (2) 1/4" X 3/4" MACHINE BOLTS PER ARCH.



5. ATTACH TWO MORE ARCHES. OVERLAP THE RIDGE PURLIN AT THE THIRD ARCH AND BOLT IT TO THE THIRD AND FOURTH ARCHES WITH (2) 1/4" X 3/4" MACHINE BOLTS PER ARCH.

6. OVERLAP THE QUARTER POINT PURLINS AT THE THIRD ARCH AND BOLT THEM TO THE THIRD AND FOURTH ARCHES.



# INSTALL REMAINING ARCHES AND PURLINS

1. INSTALL THE REMAINING ARCHES, TWO AT A TIME, UNTIL THE FULL LENGTH OF THE BUILDING IS COMPLETE.

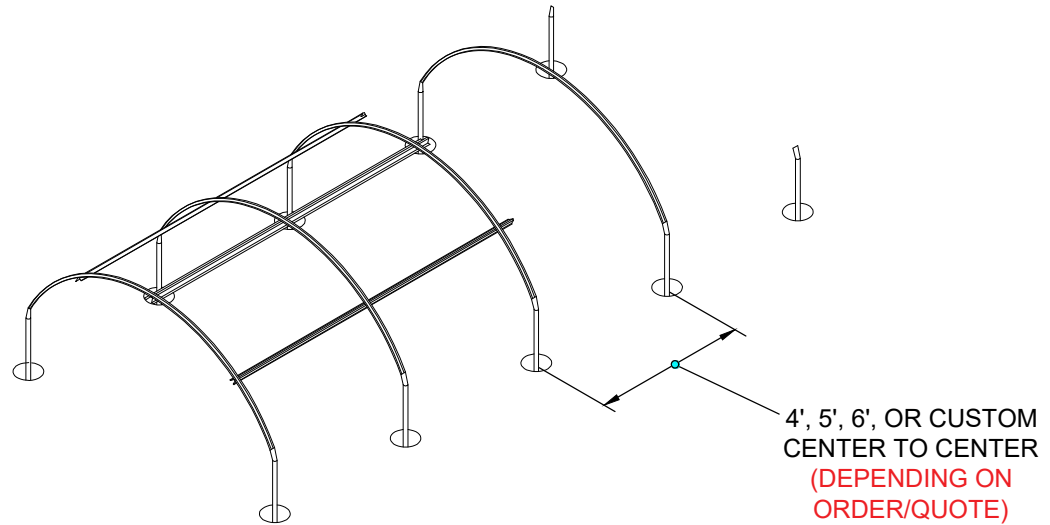


FIGURE 14 - (INSTALLING THE REMAINING PURLINS)

## INSTALL "X" BRACING

1. BRACE STRAPS ARE INSTALLED AT EACH END OF THE BUILDING IN THE SECOND BAY. ADJUST THE ARCHES UNTIL THEY ARE PLUMB AND SQUARE.
2. TRIM IF NEEDED.

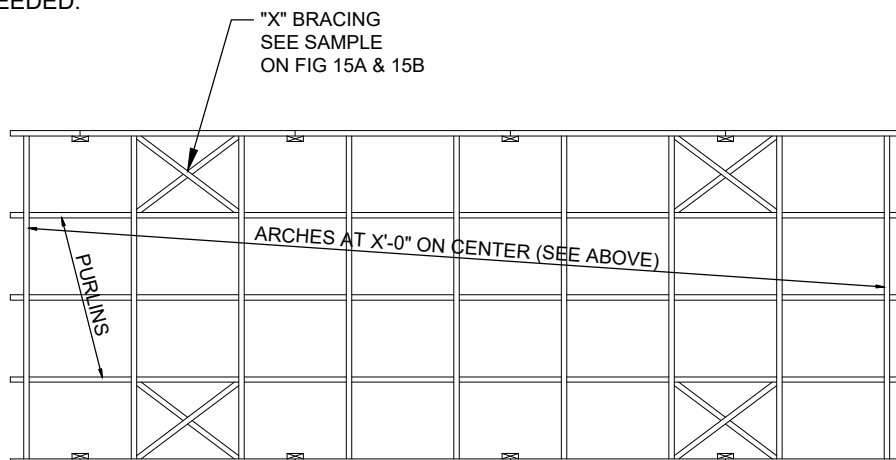


FIGURE 15 - ("X" BRACING)

3. USING A #10 X 3/4" SCREW AT EACH END OF THE BRACE STRAP, SCREW ONE END AT THE END OF THE SECOND ARCH AND THE OPPOSITE END TO THE UNDERSIDE OF THE THIRD ARCH BELOW THE QUARTER POINT PURLIN.
4. SCREW ON THE SECOND STRAP THE SAME WAY AS THE FIRST SO THAT THE STRAPS FORM AN "X". REPEAT THIS AT THE REMAINING THREE LOCATIONS IN BUILDING.

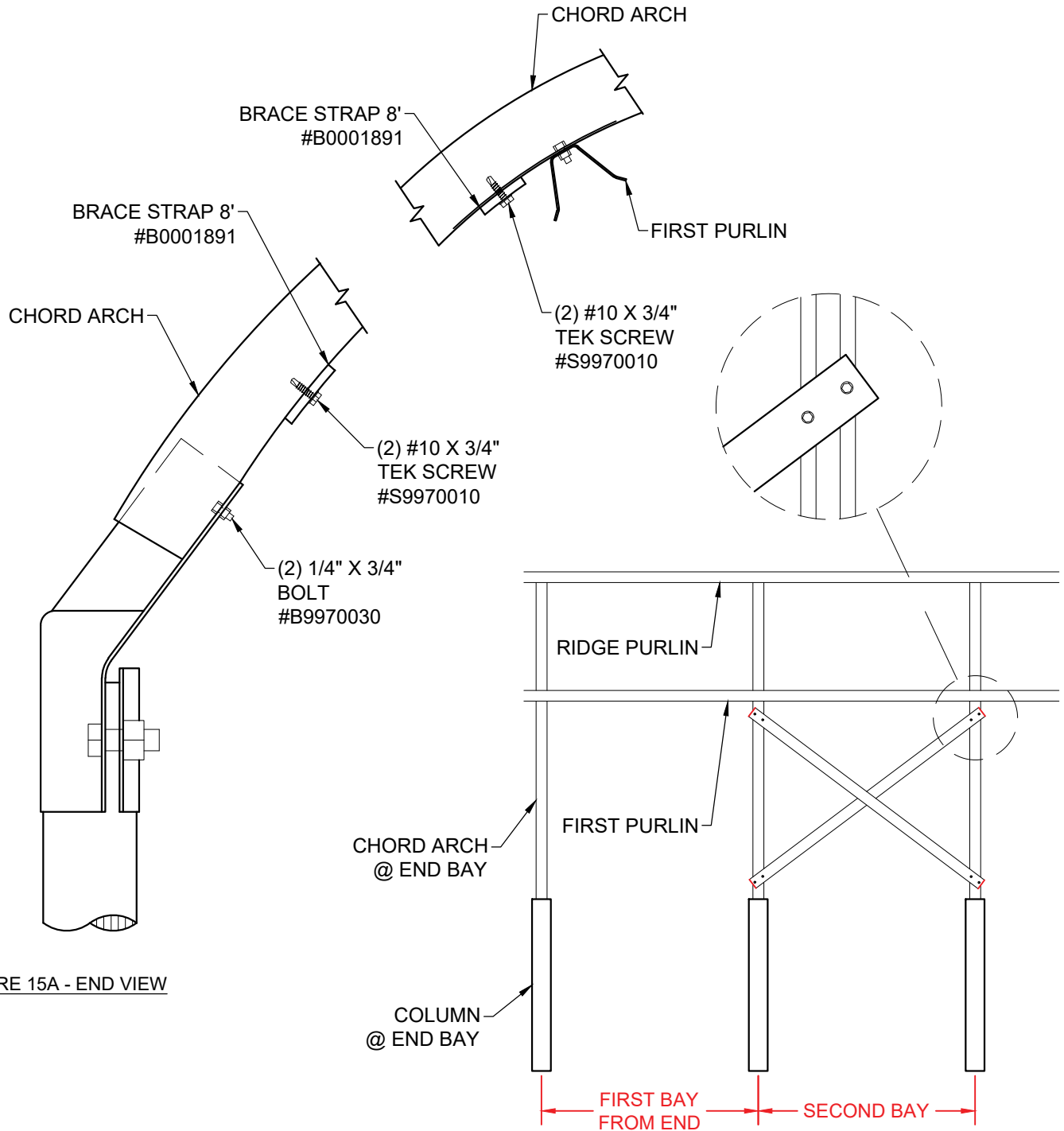


FIGURE 15A - END VIEW

FIGURE 15B - SIDE VIEW FROM INSIDE BUILDING

# GIRT INSTALLATION

## WOOD GIRT OPTION

1. ATTACH THE 2 X 4 (OPTIONALLY A 2 X 6) GIRT TO THE COLUMN AND 2 X 4 SPLICE AS SHOWN BELOW.

NOTE: CONLEY'S MFG. DOES NOT SUPPLY ANY LUMBER - THE CUSTOMER MUST PURCHASE ALL LUMBER AND NAILS.

2. IF YOU HAVE PURCHASED THE PIPE CLAMP AND HARDWARE FROM CONLEY'S MFG., THEN YOU NEED TO DRILL A 5/16" HOLE FOR A 1/4" X 2" CARRIAGE BOLT 2 1/2" FROM THE END OF THE GIRT FOR A 2 7/8" COLUMN OR 1 1/2" FROM THE END FOR A 1 5/8" COLUMN.

**NOTE:**

THIS DRAWING IS FOR REFERENCE ONLY!!! CONLEY'S MFG. ONLY SUPPLIES THE CLAMP ASSEMBLY WHEN ORDERED BY THE CUSTOMER. ALL OTHER MATERIAL MUST BE SUPPLIED BY THE CUSTOMER.

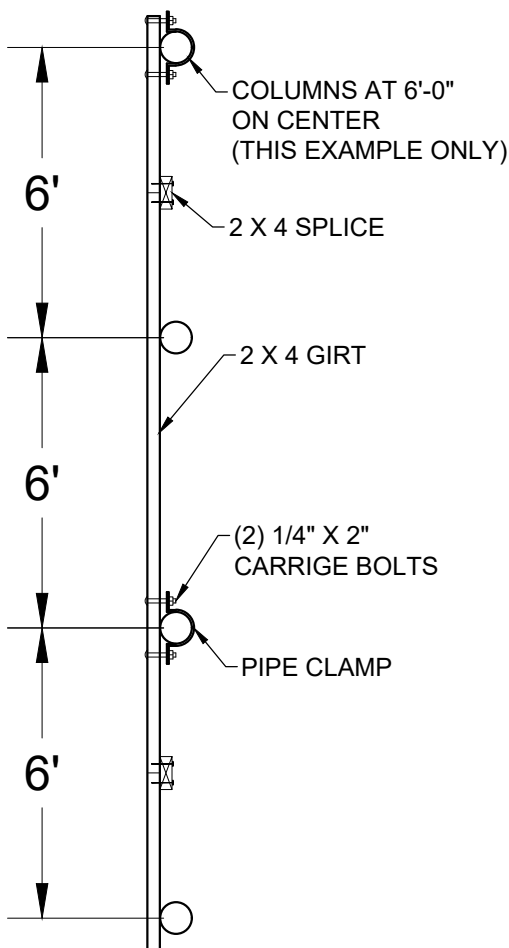
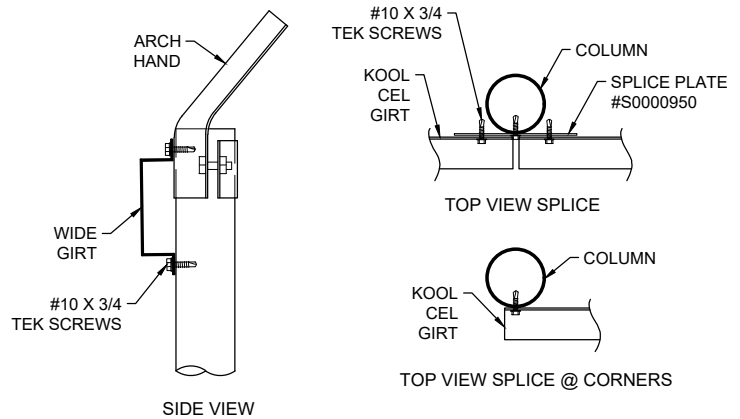


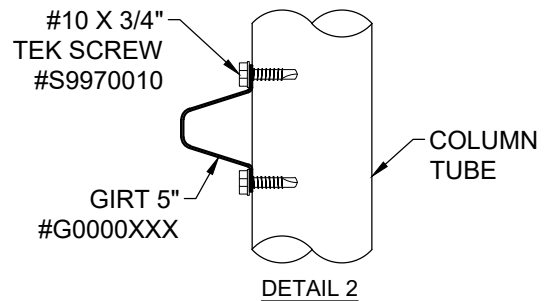
FIGURE 16 - (WOOD GIRT INSTALLATION)

## STEEL GIRT OPTION

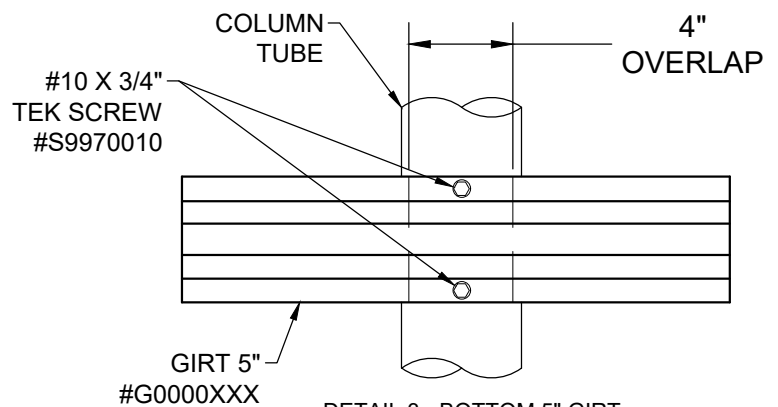
1. MARK THE COLUMNS WITH THE GIRT LOCATIONS.
2. CLAMP THE GIRTS TO THE COLUMN AND ADJUST TO MAKE THEM LEVEL.
3. SECURE THE GIRTS TO THE COLUMNS WITH (2) #14 X 1" TEK SCREWS PER COLUMN.
4. SPICE THE GIRTS BY OVERLAPPING THEM AND SECURING BOTH GIRTS TO THE COLUMN WITH (2) #14 X 1" TEK SCREW PER COLUMN.



DETAIL 1 - TOP WIDE GIRT (KC GIRT)



DETAIL 2



DETAIL 3 - BOTTOM 5" GIRT

FIGURE 16A - (METAL GIRT INSTALLATION)

NOTE: IF THE KOOL CEL DISTRIBUTION SYSTEM IS BEING INSTALLED, CHECK THE KOOL CEL INSTRUCTION MANUAL FOR PROPER SLOPE AND DISTANCE TO INSTALL END WALL OR SIDE WALL GIRTS.



# DOOR END WALL WITH METAL GIRTS

1. DIG HOLES AT THE CENTER LINE OF JAMBS. THE DISTANCE BETWEEN THE JAMBS IS DETERMINED BY THE DOORS WIDTH.

2. DOOR JAMBS DOESN'T HAVE TO GO ALL THE WAY UP TO THE ARCH. ENDWALL GIRTS MAY VARY ON YOUR SIDEWALL HEIGHT.

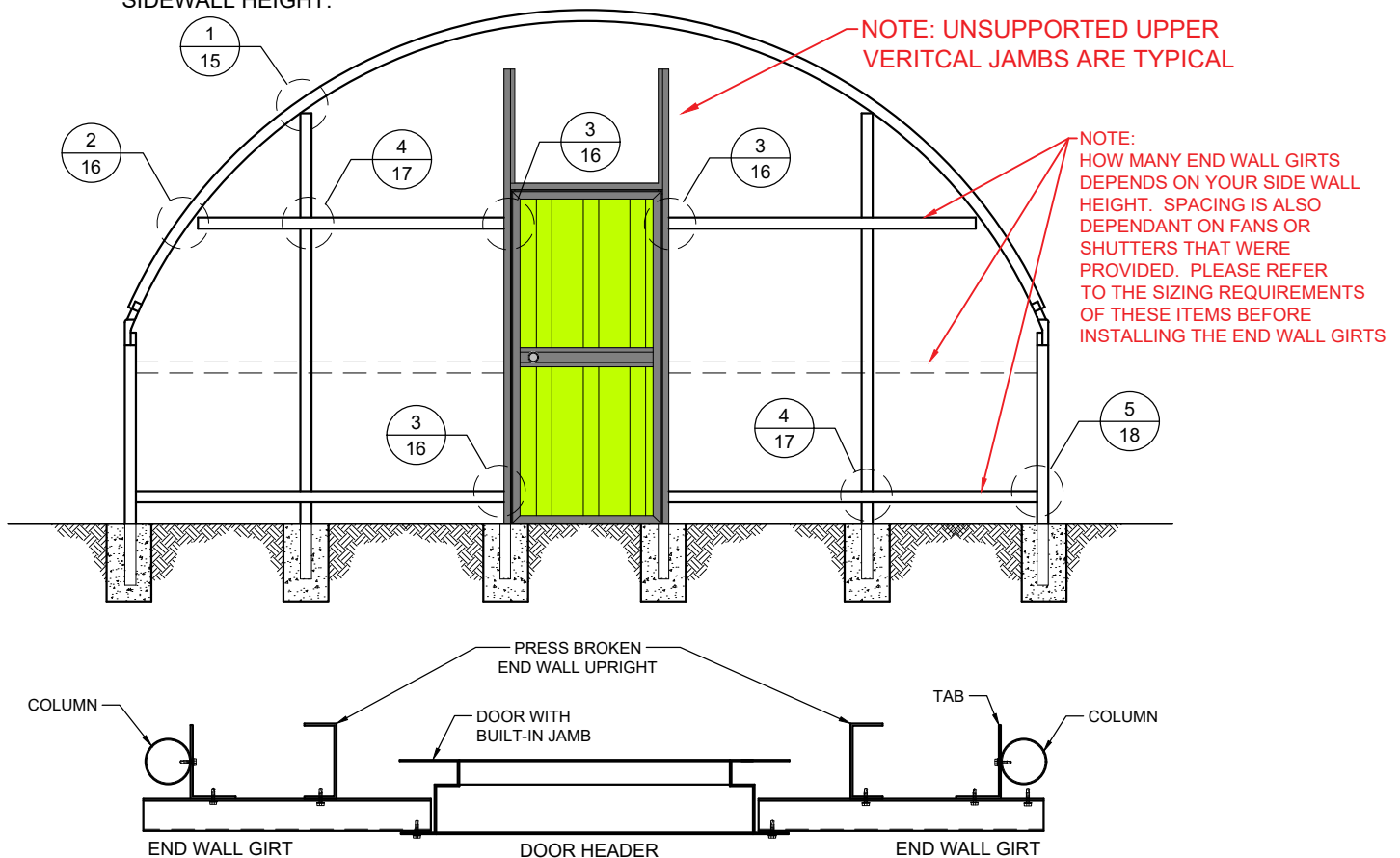
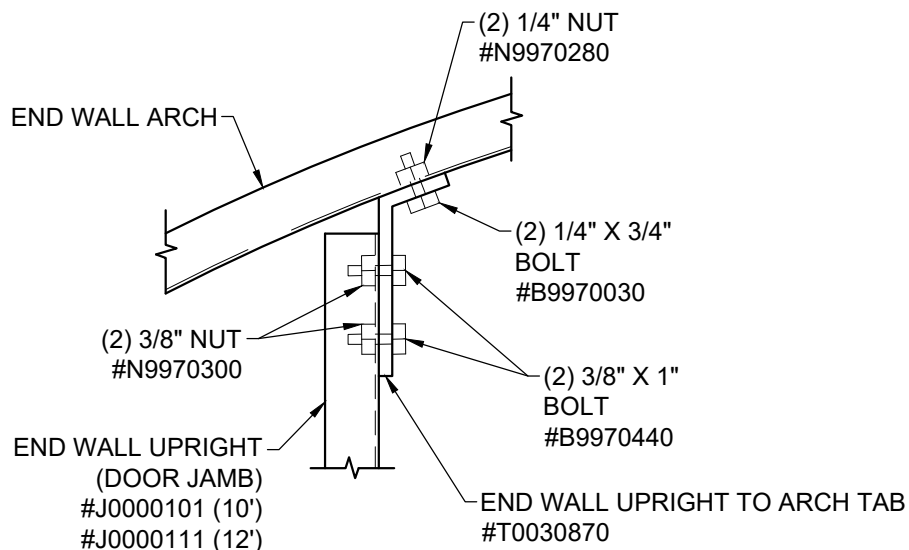


FIGURE 17 - (END WALL DOOR FRAME)

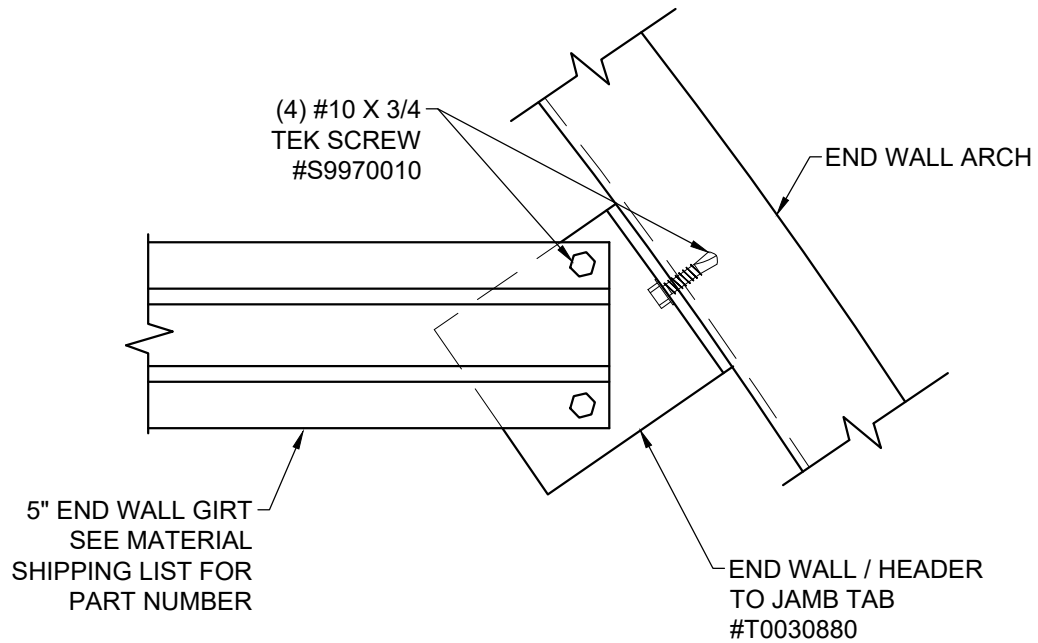
2. ATTACH THE END WALL UPRIGHTS TO THE ARCH TAB WITH (2) 1/4" X 3/4" MACHINE BOLTS.

3. STAND THE DOOR JAMBS IN THE HOLES AND ATTACH IT TO THE TOP OF THE JAMB AND TO THE PREVIOUSLY INSTALLED TAB. ALIGN THE JAMB FLUSH WITH THE OUTSIDE EDGE OF THE ARCH AND CONNECT IT TO THE TAB WITH (2) 3/8" X 1" MACHINE BOLT.

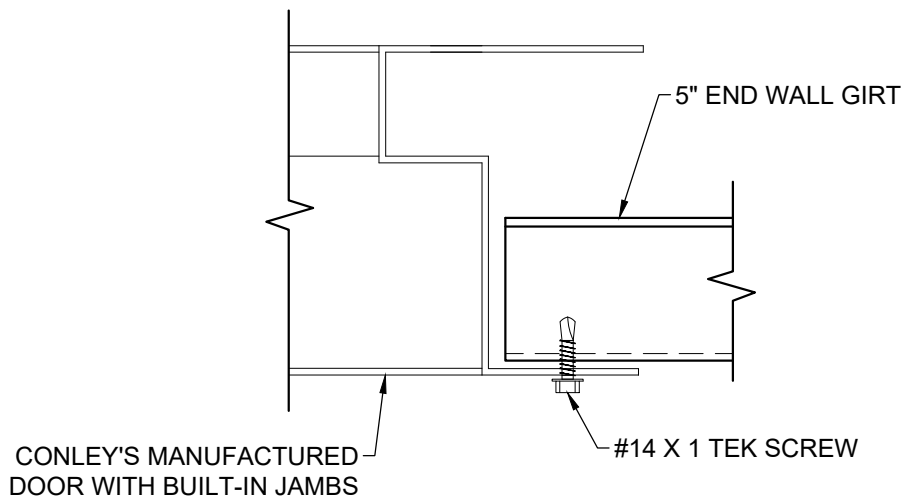


DETAIL 1

4. PLUMB JAMBS IN BOTH DIRECTIONS AND CEMENTS THE HOLES OR FILL THEM WITH CRUSHED ROCK DEPENDING ON YOUR BUILDING. (SEE PAGE 15 FOR INFORMATION).
5. DRILL SCREW THE END WALL / HEADER JAMB TAB TO THE END WALL ARCH, JAMBS, AND AT THE HEADER WITH (2) #14 X 1" TEK SCREWS. (SEE PAGE 15 FOR TAB / GIRT / HEADER LOCATIONS).
6. LEVEL AND DRILL SCREW THE END GIRTS TO THE TABS AND INSIDE OF DOOR JAMBS WITH (2) #14 X 1" TEK SCREWS AT TAB JAMBS.



DETAIL 2



DETAIL 3

# SOLID END WALL WITH METAL GIRTS

1. FOLLOW DIRECTIONS 1, 2, 4, AND 5 ON PAGES 15, 16, 17 AND 18 FOR END WALL INSTALLATION.

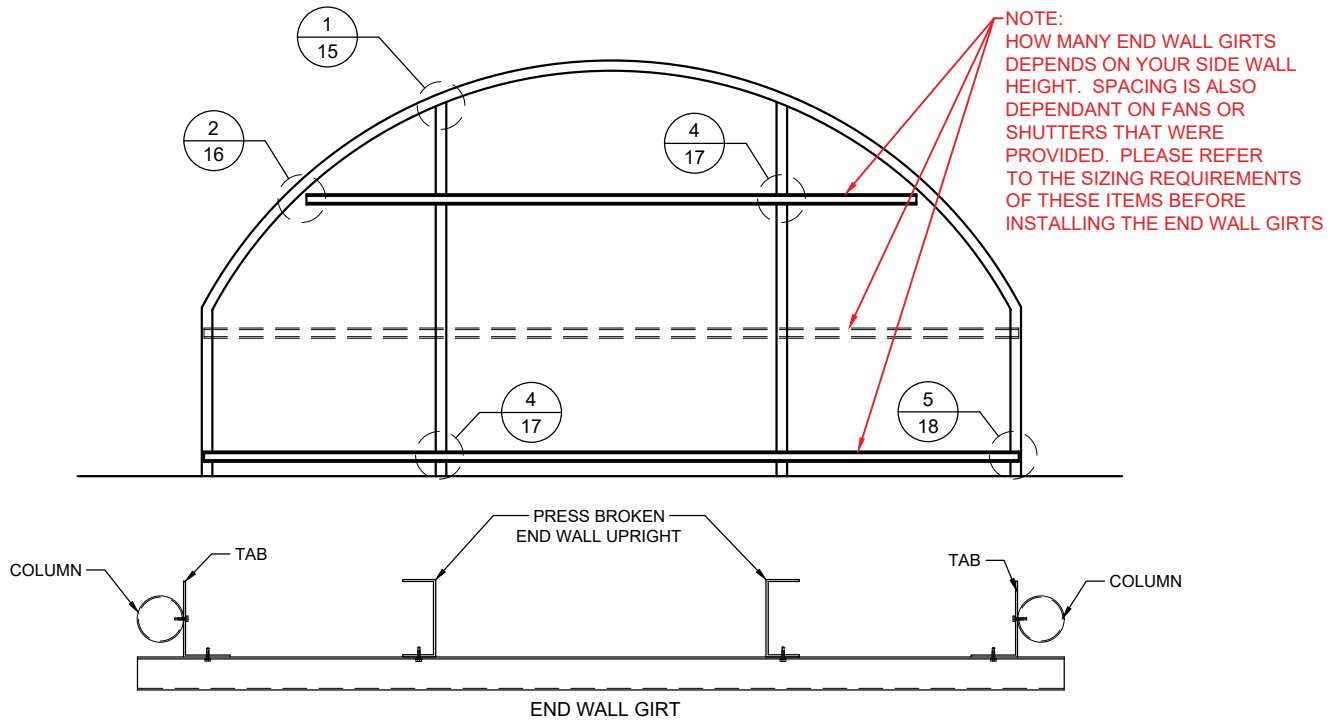
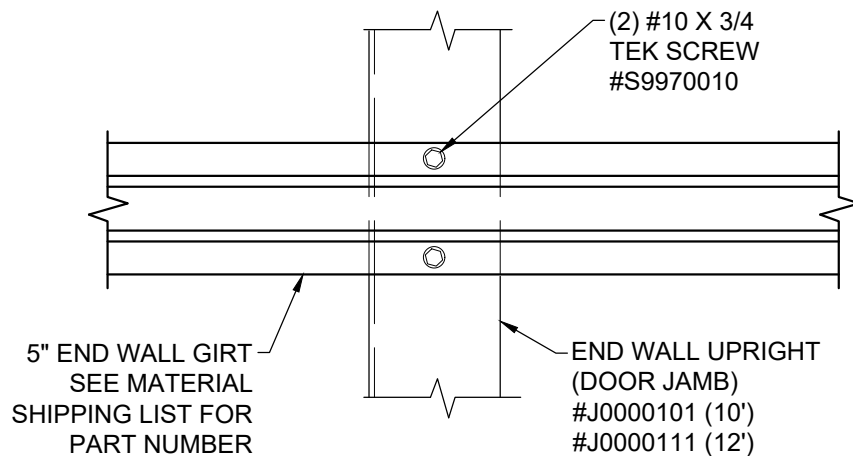
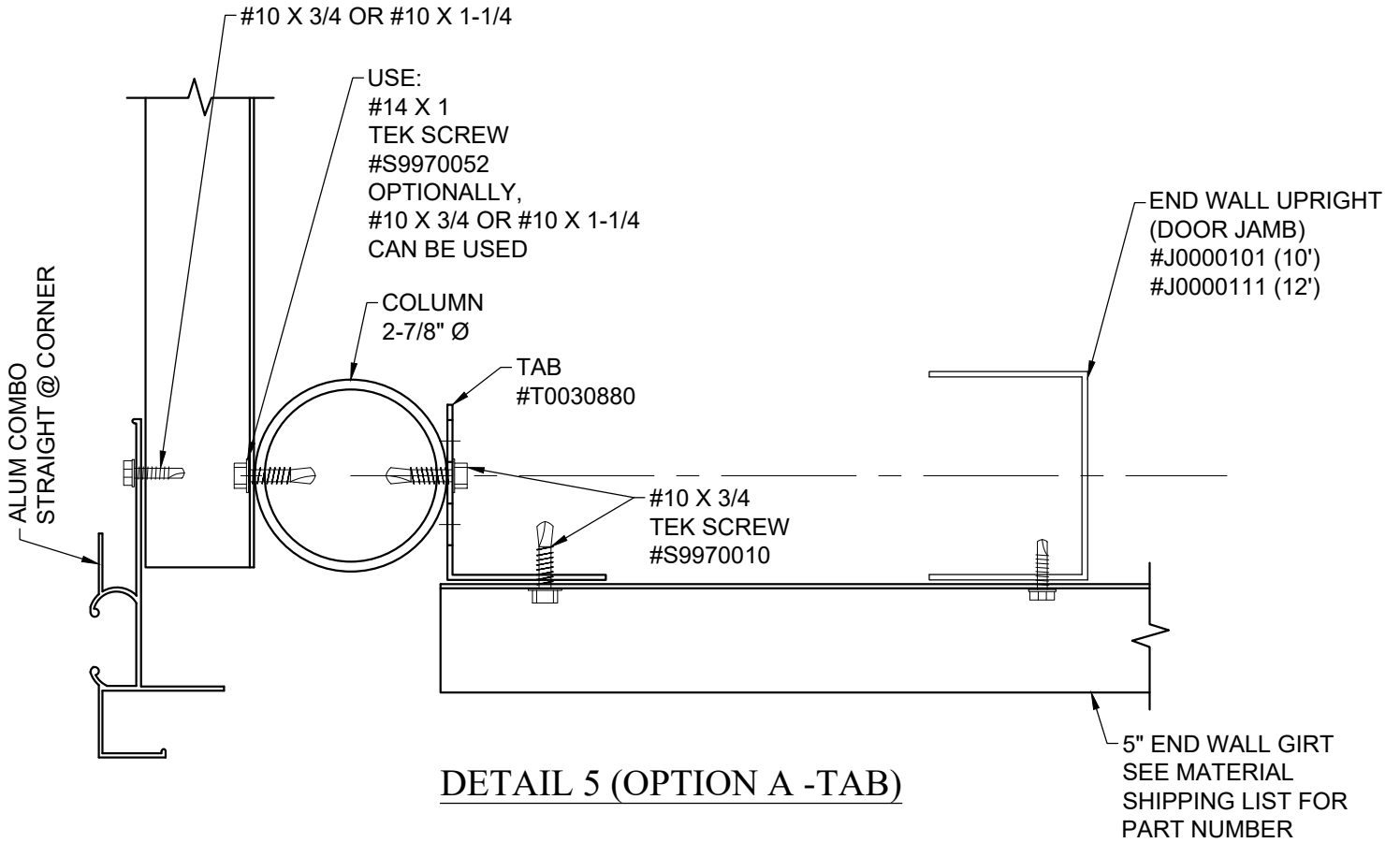


FIGURE 18 - (SOLID END WALL)

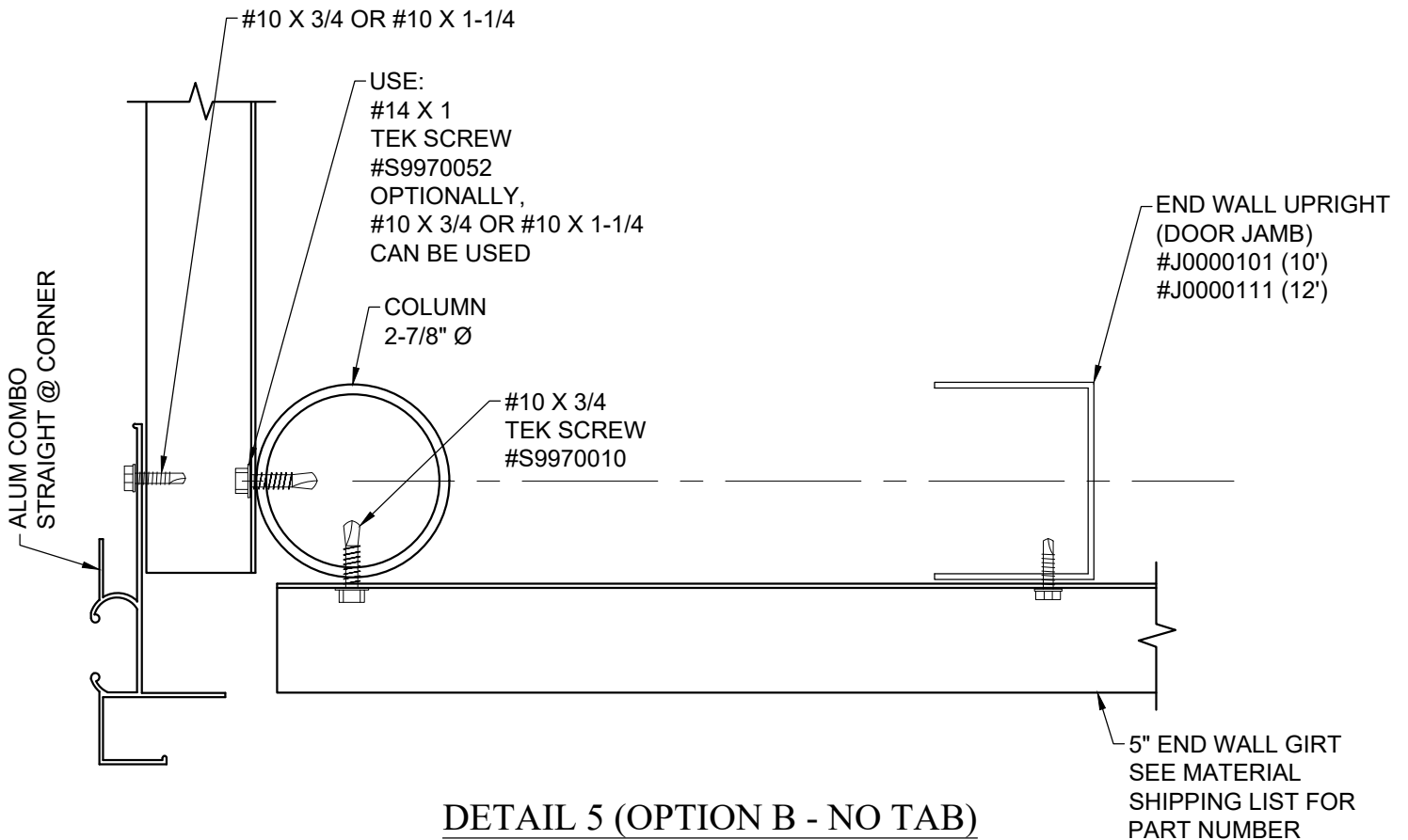
2. LEVEL AND DRILL SCREW THE END GIRTS TO THE TABS WITH (2) #14 X 1" TEK SCREWS AT EACH TAB. REFER TO PAGE 20 AND 23 FOR GIRT AND END WALL UPRIGHT LOCATIONS.
3. SECURE THE END GIRTS TO THE END WALL UPRIGHTS WITH (2) #14 X 1" TEK SCREWS. (SEE DETAIL 4 BELOW).



DETAIL 4



DETAIL 5 (OPTION A - TAB)



DETAIL 5 (OPTION B - NO TAB)

# 20'-0" COLD FRAME WITH LEGS ARCH PARTS LIST

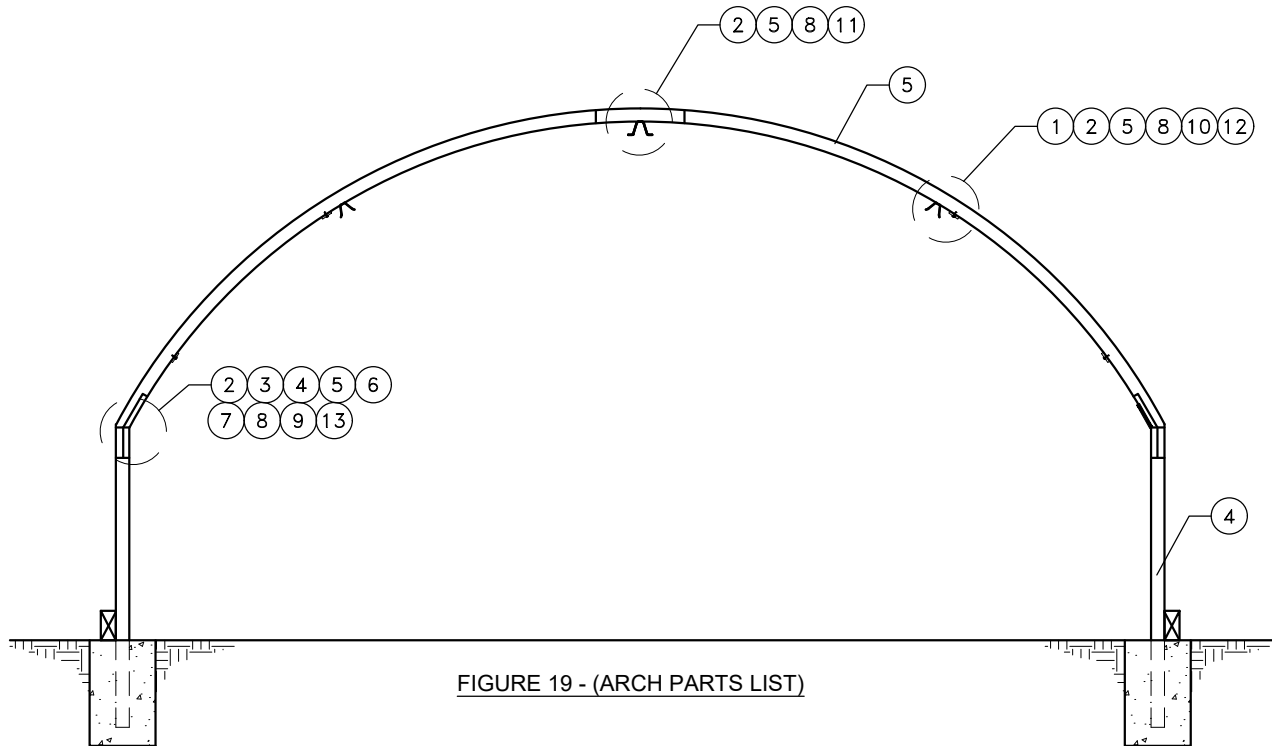


FIGURE 19 - (ARCH PARTS LIST)

### 1 5/8 COLUMN (PARTS LIST)

ITEM	QTY	PART No.	DESCRIPTION
1	4	B0001891	BRACE STRAP 8'-0"
2	14	B9970030	BOLT / HH 1/4" X 3/4" GRADE 5
3	4	B9970440	BOLT / HH 3/8" X 1"
4	2	-	COLUMN TUBE T-44 1 5/8"
5	2	C0055351	CHORD ARCH 154" RAD
6	2	C0155450	CONN COLUMN TO ARCH HAND 1-5/8
7	2	C0155451	CONN. COLUMN TO ARCH CLAMP
8	14	N9970280	NUT HEX PLTD COARSE 1/4"
9	4	N9970300	NUT HEX PLTD COARSE 3/8"
10	2	P0001715	PURLIN 3" X 12'-4" SIDES
11	1	P0001840	PURLIN 5" X 12'-4" UNDER RIDGE
12	8	S9970010	#10 X 3/4" TEK SCREW
13	2	S9970052	#14 X 1" TEK SCREW

### 2 7/8 COLUMN (PARTS LIST)

ITEM	QTY	PART No.	DESCRIPTION
1	4	B0001891	BRACE STRAP 8'-0"
2	14	B9970030	BOLT / HH 1/4" X 3/4" GRADE 5
3	4	B9970440	BOLT / HH 3/8" X 1"
4	2	-	COLUMN TUBE T-22 2 7/8"
5	2	C0055351	CHORD ARCH 154" RAD
6	2	C0155500	CONN COLUMN TO ARCH HAND 2-7/8
7	2	C0155501	CONN. COLUMN TO ARCH CLAMP
8	14	N9970280	NUT HEX PLTD COARSE 1/4"
9	4	N9970300	NUT HEX PLTD COARSE 3/8"
10	2	P0001715	PURLIN 3" X 12'-4" SIDES
11	1	P0001840	PURLIN 5" X 12'-4" UNDER RIDGE
12	2	S9970010	#10 X 3/4" TEK SCREW
13	2	S9970052	#14 X 1" TEK SCREW

# 20'-0" COLD FRAME WITH LEGS END WALL PARTS LIST

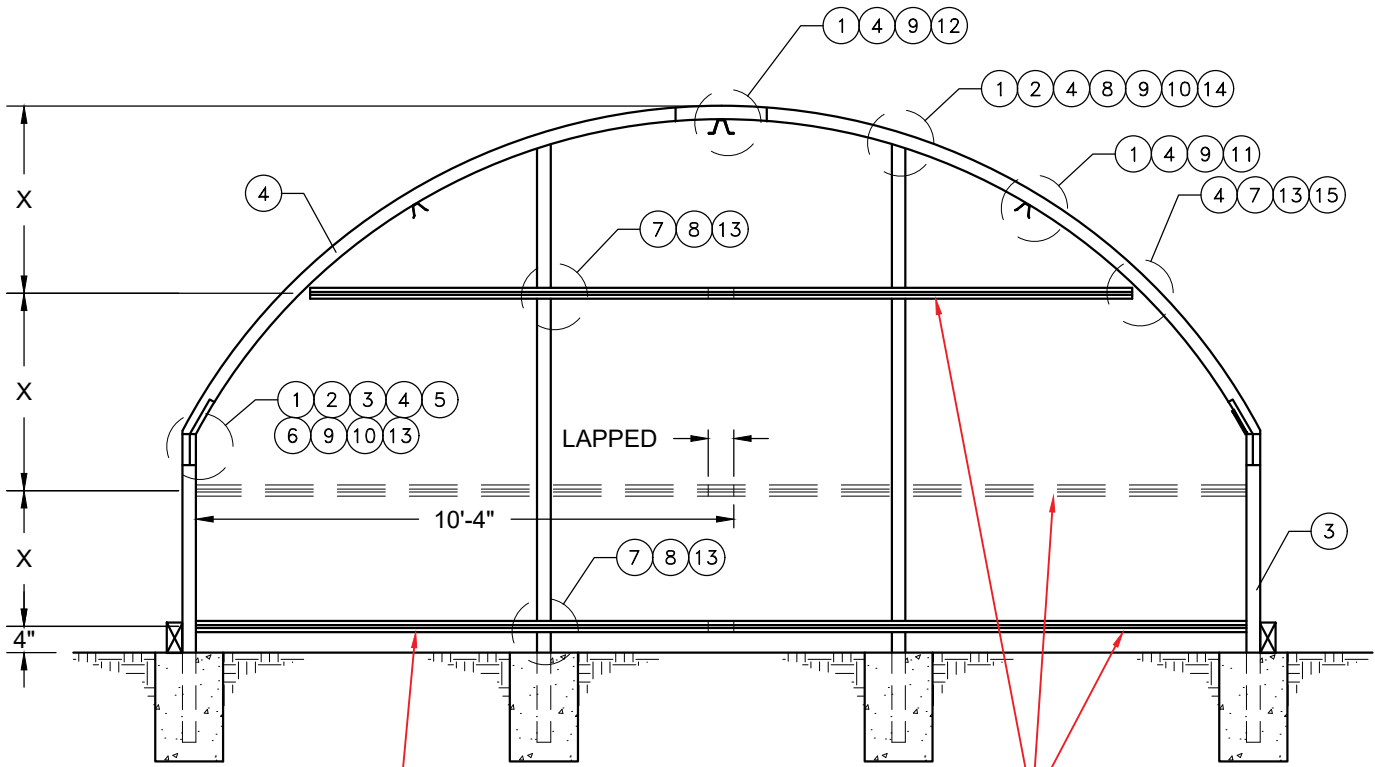


FIGURE 20 - (END WALL PARTS LIST)

**EVENLY SPACE END WALL GIRTS**  
**FOR 3'-6" SIDE WALL VERSION**  
 (4) 10'-4" GIRTS EVENLY SPACED  
 #G0000282  
**FOR 6" SIDE WALL VERSION**  
 (6) 10'-4" GIRTS EVENLY SPACED  
 #G0000282

**NOTE:**  
 HOW MANY END WALL GIRTS  
 DEPENDS ON YOUR SIDE WALL  
 HEIGHT. SPACING IS ALSO  
 DEPENDANT ON FANS OR  
 SHUTTERS THAT WERE  
 PROVIDED. PLEASE REFER  
 TO THE SIZING REQUIREMENTS  
 OF THESE ITEMS BEFORE  
 INSTALLING THE END WALL GIRTS

1 5/8 COLUMN - (END WALL PARTS LIST)

2 7/8 COLUMN - (END WALL PARTS LIST)

ITEM	QTY	PART No.	DESCRIPTION
1	16	B9970030	BOLT / HH 1/4" X 3/4" GRADE 5
2	8	B9970440	BOLT / HH 3/8" X 1"
3	2	-	COLUMN TUBE T-44 1 5/8"
4	2	C0055351	CHORD ARCH 154" RAD
5	2	C0155450	CONN COLUMN TO ARCH HAND
6	2	C0155451	CONN. COLUMN TO ARCH CLAMP 1-5/8
7	4/6	G0000282	GIRT 5" X 10'-4"
8	2	J0000101	SLIDING DOOR JAMB 10'-0"
8A	2	J0000111	SLIDING DOOR JAMB 12'-0"
9	16	N9970280	NUT HEX PLTD COARSE 1/4"
10	8	N9970300	NUT HEX PLTD COARSE 3/8"
11	2	P0001715	PURLIN 3" X 12'-4" SIDES
12	1	P0001840	PURLIN 5" X 12'-4" UNDER RIDGE
13	24	S9970010	10-16 X 3/4" TEK SCREW
14	2	T0030870	TAB END WALL UPRIGHT
15	4	T0030880	TAB END WALL / HEADER TO JAMB

ITEM	QTY	PART No.	DESCRIPTION
1	16	B9970030	BOLT / HH 1/4" X 3/4" GRADE 5
2	8	B9970440	BOLT / HH 3/8" X 1"
3	2	-	COLUMN TUBE T-22 2 7/8"
4	2	C0055351	CHORD ARCH 154" RAD
5	2	C0155500	CONN COLUMN TO ARCH HAND 2-7/8
6	2	C0155501	CONN. COLUMN TO ARCH CLAMP
7	4/6	G0000282	GIRT 5" X 10'-4"
8	2	J0000101	SLIDING DOOR JAMB 10'-0"
8A	2	J0000111	SLIDING DOOR JAMB 12'-0"
9	16	N9970280	NUT HEX PLTD COARSE 1/4"
10	8	N9970300	NUT HEX PLTD COARSE 3/8"
11	2	P0001715	PURLIN 3" X 12'-4" SIDES
12	1	P0001840	PURLIN 5" X 12'-4" UNDER RIDGE
13	24	S9970010	10-16 X 3/4" TEK SCREW
14	2	T0030870	TAB END WALL UPRIGHT
15	4	T0030880	TAB END WALL / HEADER TO JAMB

# COVERING TRIM INSTALLATION

TUBE LOCK II - **OPTION I**  
 SPLICE BOW - **OPTION II**  
 END COMBO - **OPTION III**

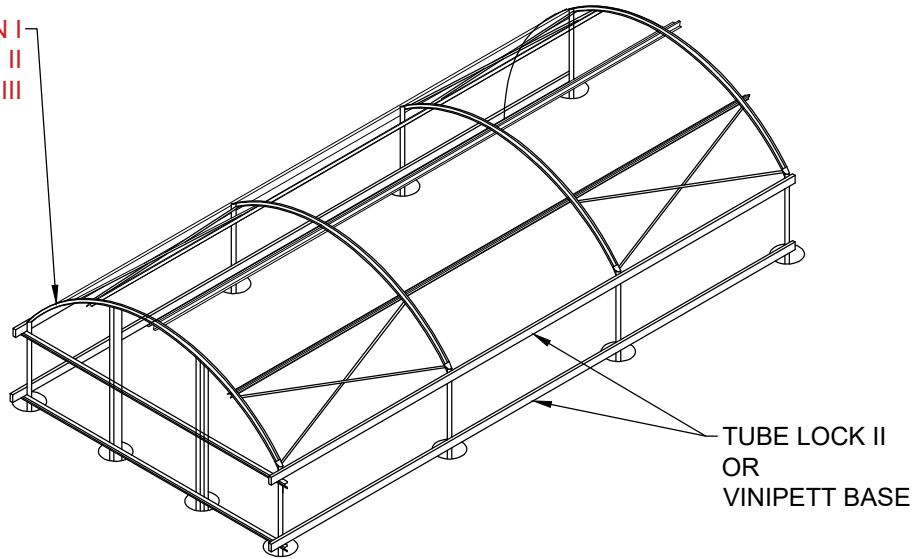
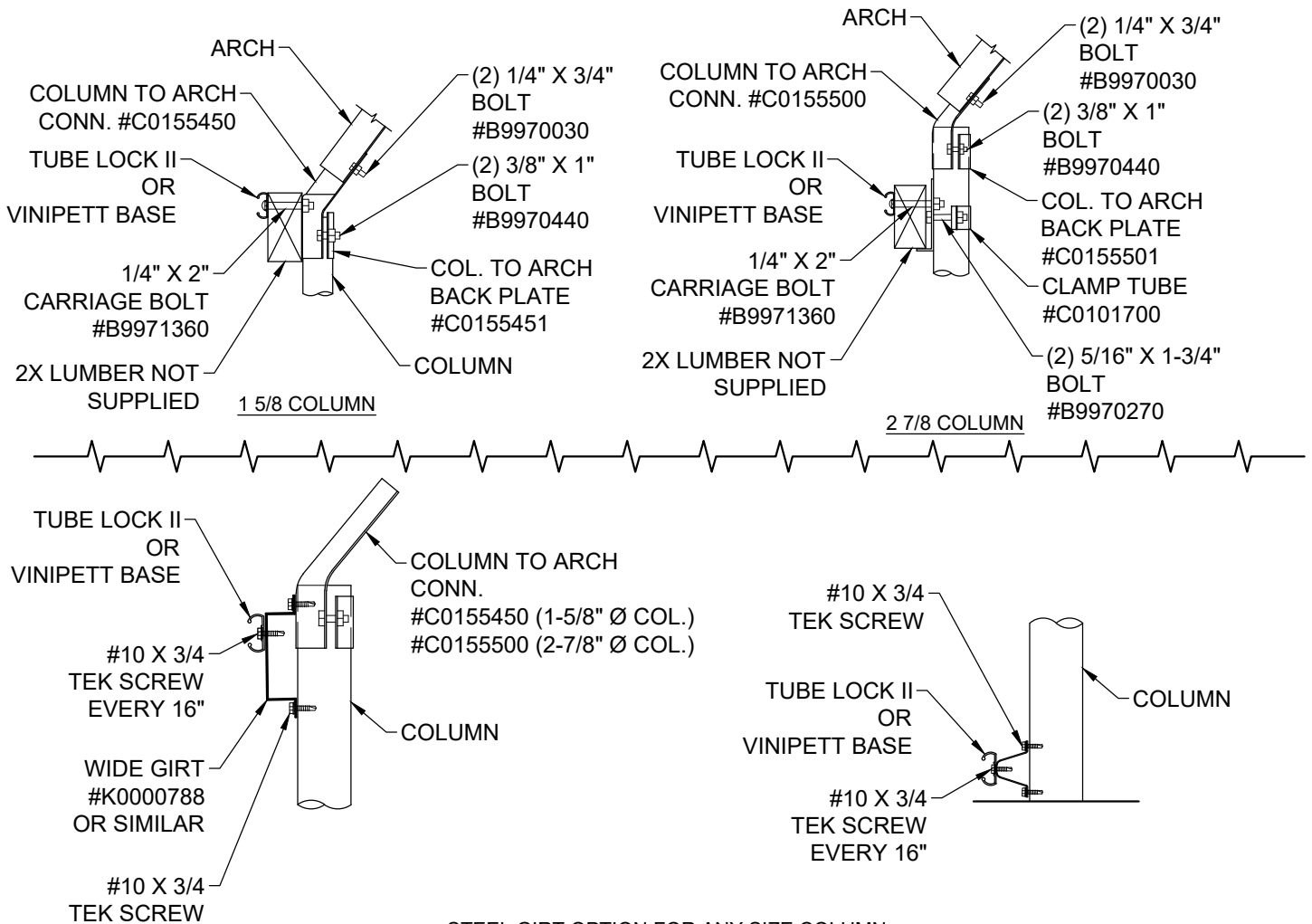


FIGURE 25 - (COVERING TRIM INSTALLATION)

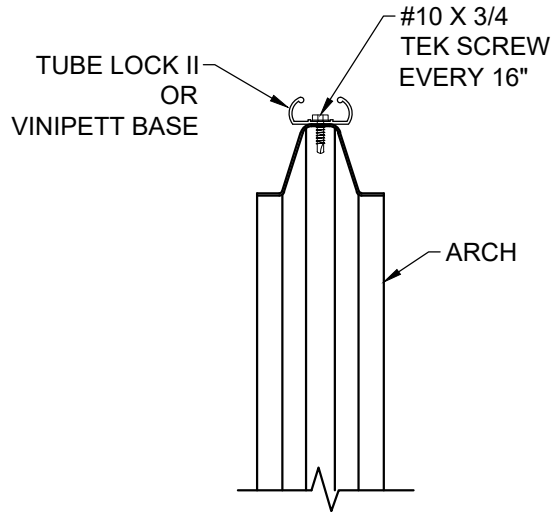
1. SECURE THE TUBE LOCK AND 2X LUMBER TO THE COLUMN CONNECTION WITH VICE GRIPS. MAKE SURE THAT THEY ARE PLUMB AND LEVEL. DRILL A 5/16" HOLE THROUGH THE TUBE LOCK AND 2X LUMBER.
2. BOLT THE TUBE LOCK AND 2X LUMBER TO THE COLUMN CONNECTION WITH A 1/4" X 2" CARRIAGE BOLT.



STEEL GIRT OPTION FOR ANY SIZE COLUMN

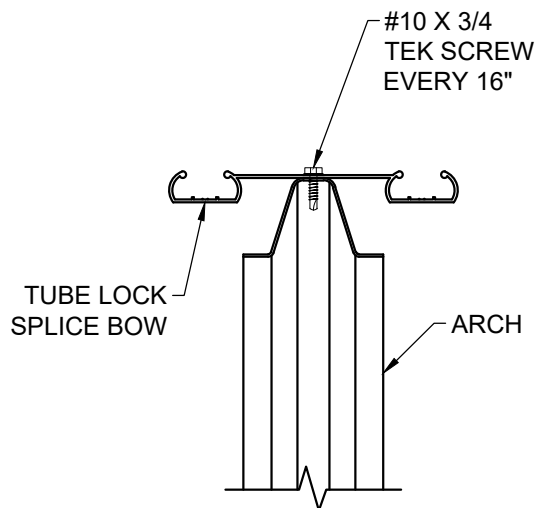
# COVERING TRIM INSTALLATION OPTIONS

1. **OPTION 1** - TUBE LOCK II - INSTALL THE TUBE LOCK TO THE END ARCH WITH A #10 X 3/4" TEK SCREWS AT 16" ON CENTER TYPICAL. SEE THE MATERIALS LIST FOR TUBE LOCK OR VINIPETT BASE PART NUMBERS.



DETAIL 1 - OPTION 1

2. **OPTION 2** - TUBE LOCK SPLICE- IF YOUR BUILDING IS LONGER THAN THE POLY SHEETS SUPPLIED, YOU WILL HAVE A SPLICE BOW. IT WILL BE PLACED ON THE ARCH JUST BEFORE THE POLY SHEETS END. ATTACH IT TO THE ARCH WITH #10 X 3/4" TEK SCREW AT 16" ON CENTER SOME BUILDINGS WILL HAVE THE SPLICER BOW AT THE ENDWALLS OF THE BUILDING, FOR FASTENING THE ROOF POLY AND ENDWALL POLY ON SEPARATE CHANNELS.

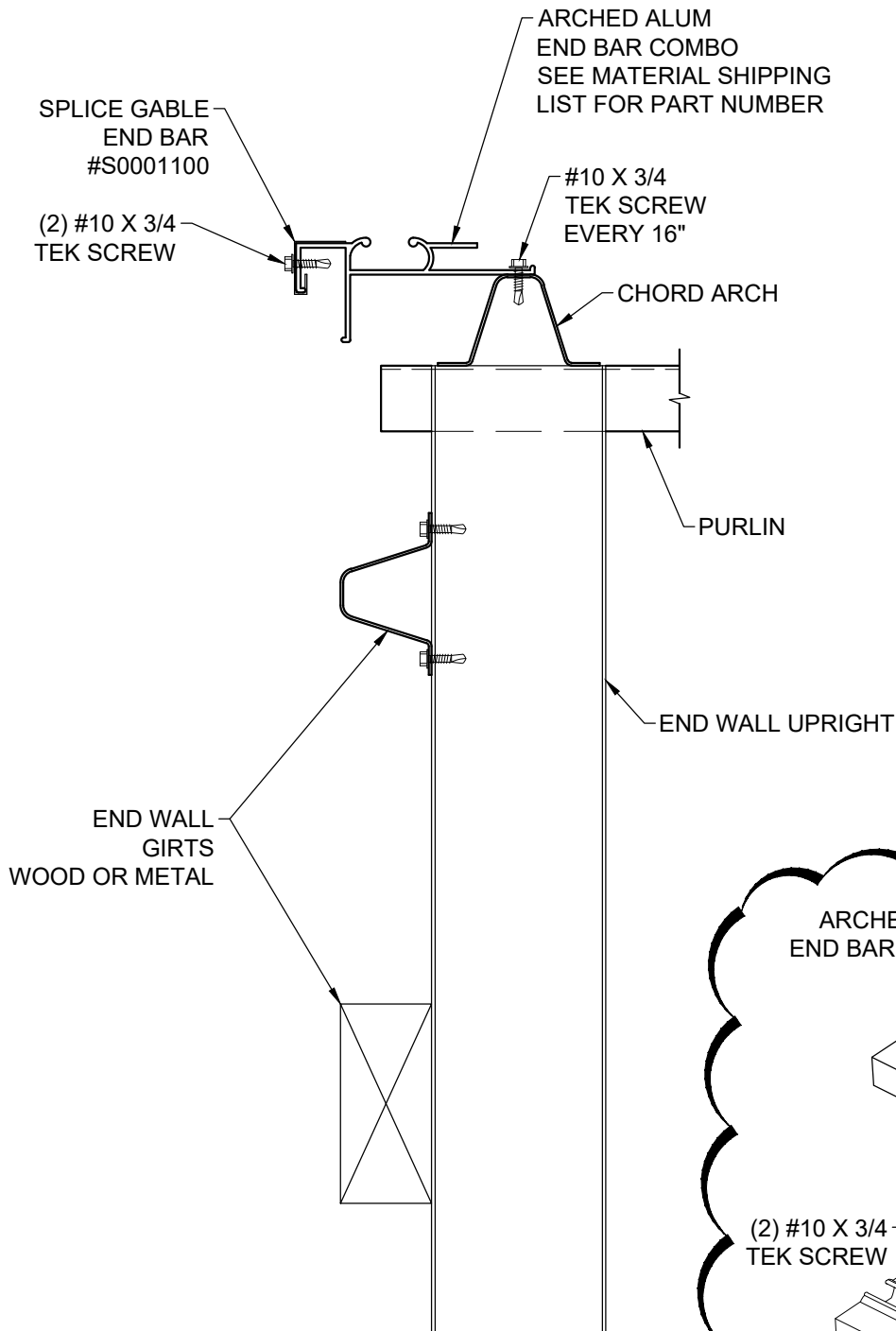


DETAIL 2 - OPTION 2

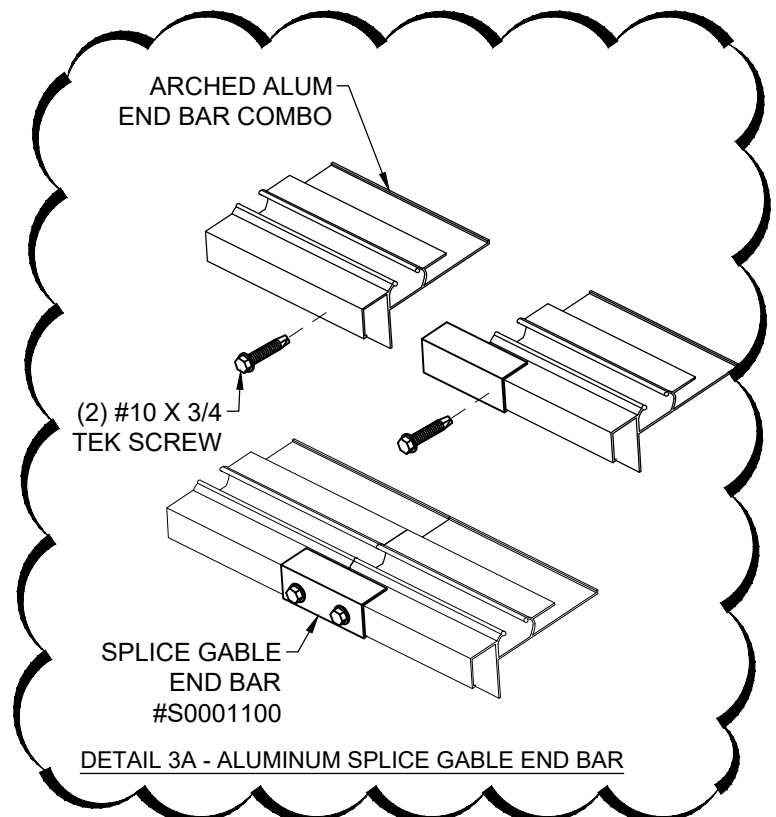


# GABLE END BAR OPTION

1. **OPTION 3** - ARCH END COMBO FOR A FIBERGLASS END WALL COVERING, USE AN ALUMINUM ARCH END COMBO. ATTACH IT TO THE END WALL ARCH WITH 10-16 X 3/4" TEK SCREWS.

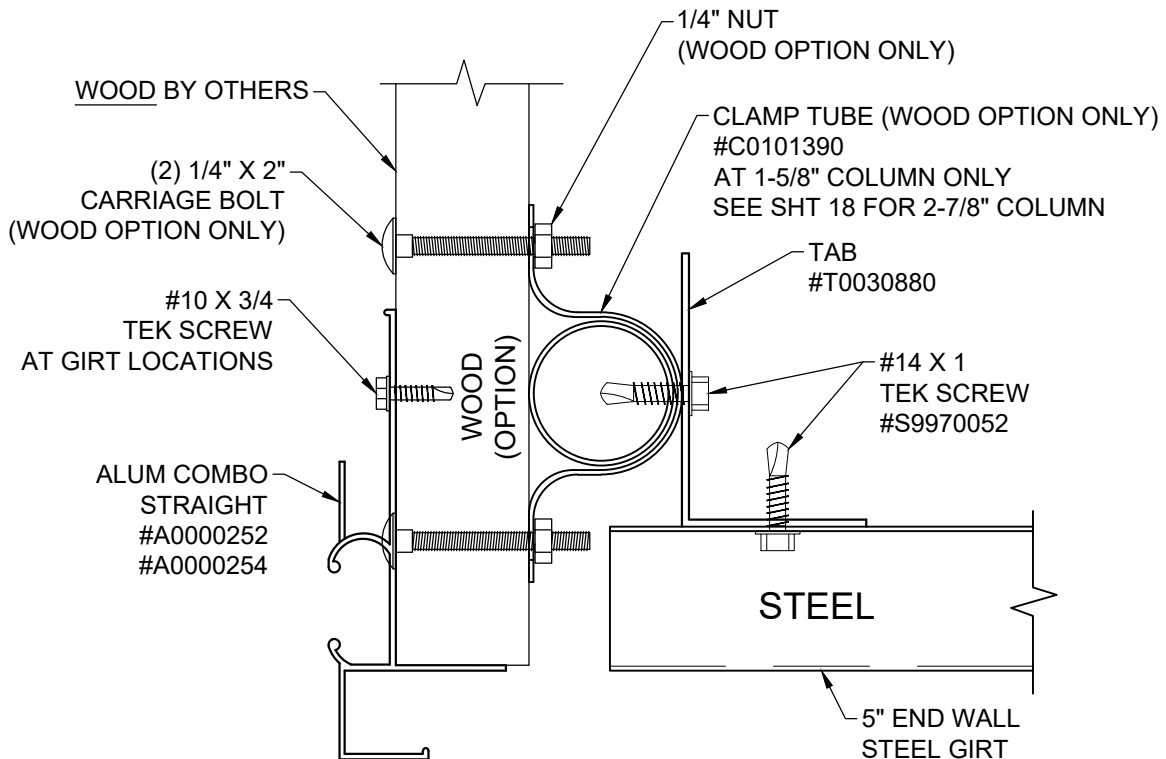
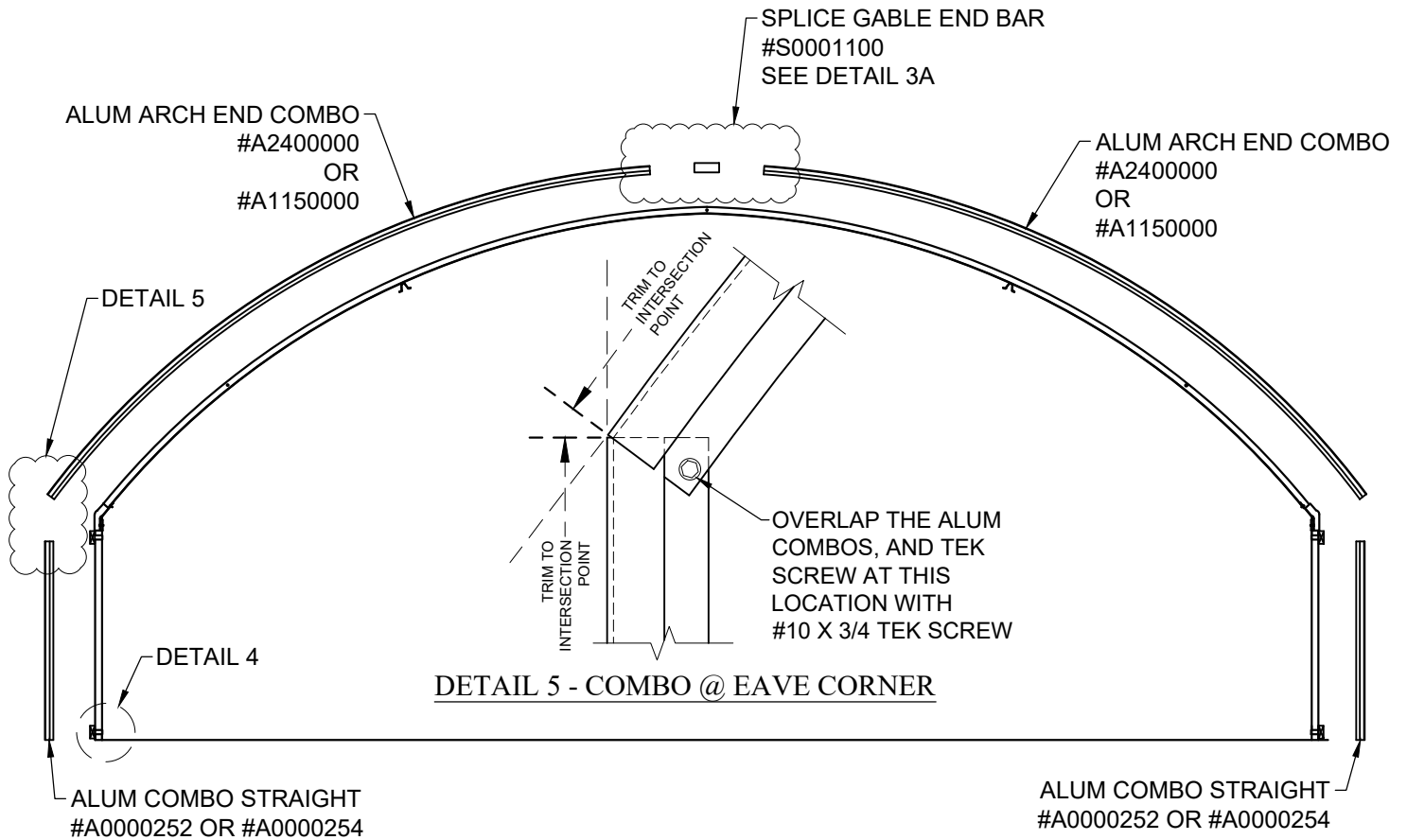


DETAIL 3 - OPTION 3



DETAIL 3A - ALUMINUM SPLICE GABLE END BAR

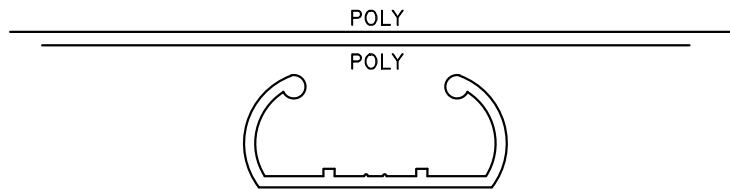
# GABLE END BAR OPTION



DETAIL 4 (WOOD SIDEWALL GIRT OPTION SHOWN)

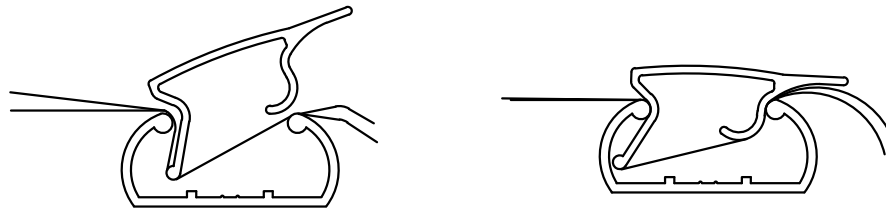
# INSTALLATION OF POLY COVERING WITH TUBE LOCK

1. APPLY THE POLY FILM (ONE OR MORE LAYERS) OVER THE PREVIOUSLY INSTALLED TUBE LOCK.



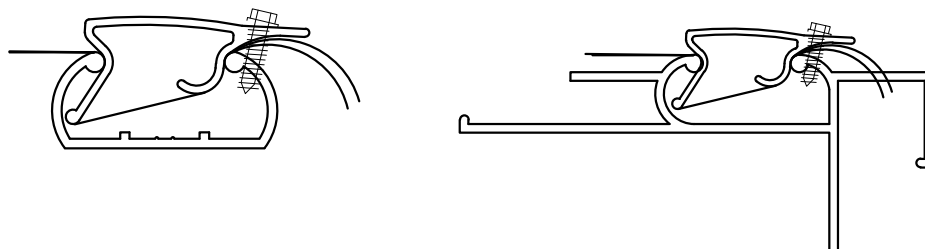
DETAIL 1

2. INSERT THE LONG LEG OF THE CAP FIRST. KEEP IT NEXT TO THE INFLATED SIDE OF THE COVERING.



DETAIL 2

3. TEK SCREW THE TUBE LOCK CAP TO THE BASE OR ARCH END COMBO WITH A 10-16 X 3/4" TEK SCREWS AT EACH END. TO INSTALL STRAIGHT 6' TUBE LOCK CAPS ON ARCH SEGMENTS, FIRST SCREW IN ONE END AND WITH THE USE OF A MALLET, WORK YOUR WAY AROUND THE ARCH TO ACHIEVE THE REQUIRED CURVATURE.

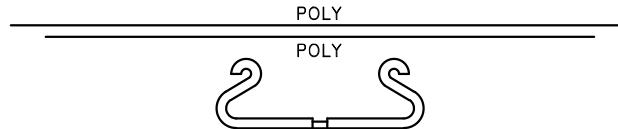


DETAIL 3

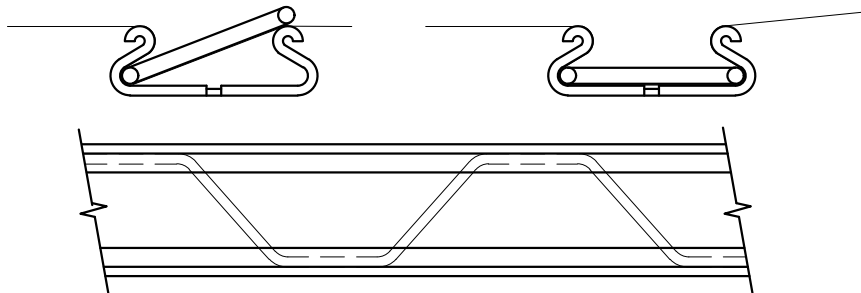
# INSTALLATION OF POLY COVERING WITH VINNIPET SPRING

NOTE: TEK SCREW ALL VINNIPET BASE AT A MINIMUM OF 16" ON CENTER

1. APPLY POLY FILM (ONE OR MORE LAYERS) OVER PREVIOUSLY INSTALLED VINNIPET BASE.

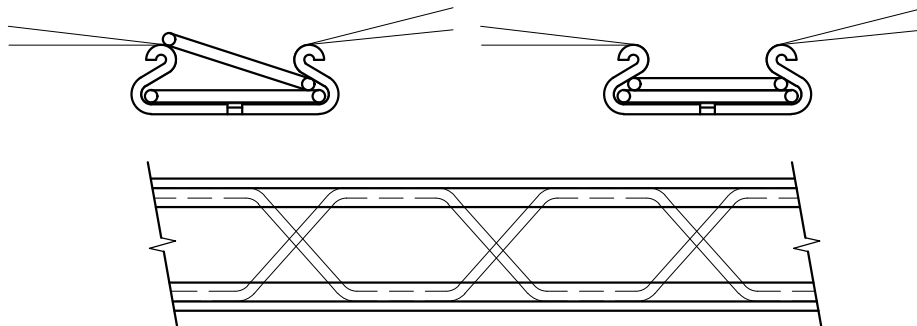


2. INSERT ONE EDGE OF THE VINNIPET SPRING INTO THE VINNIPET BASE. KEEPING POLY TIGHT WEAVE THE VINNIPET SPRING INTO THE BASE SECURING THE POLY.



USE DOUBLE CLIPS WHEN INSTALLING 32' OR WIDER POLY, DOUBLE POLY, AND/OR BUILDING IS LOCATED IN HIGH WIND AREA.

3. INSERT ONE EDGE OF THE SECOND VINNIPET SPRING INTO THE VINNIPET BASE. KEEPING POLY TIGHT WEAVE THE SECOND VINNIPET SPRING INTO THE BASE SECURING THE POLY.



WARRANTY CONLEY'S MFG. AND SALES, THEIR EMPLOYEES OR REPRESENTATIVES, WILL NOT BE RESPONSIBLE FOR ANY DAMAGE TO GREENHOUSE COVERING, STRUCTURES, CROPS OR EQUIPMENT WHEN USED IN CONJUNCTION WITH OUR TUBE - LOCK, OR ANY OTHER LOCKING DEVICE MFG,D BY C.M.S. OR OTHERS.

# INSTALLATION OF POLY COVERING ON ARCHED BUILDINGS

1. ON SINGLE BUILDINGS, ROLL OUT THE POLY LENGTHWISE NEXT TO BUILDING.
2. WAD UP THE POLY (APPROX. EVERY 20') AND TIE IT WITH ROPES ON THE SIDE OF THE POLY FURTHEST FROM THE BUILDING.
3. THROW ROPES OVER THE BUILDING AND PULL THE POLY ONTO THE BUILDING. REPEAT THIS PROCEDURE FOR MULTIPLE LAYERS OF POLY.
4. INSTALLING POLY REQUIRES A MINIMUM OF FOUR PEOPLE, TWO PEOPLE TO HOLD THE POLY IN PLACE AT THE END OF THE BUILDING, ONE ON EACH SIDE. THE OTHER TWO PEOPLE STARTING AT THE OPPOSITE END OF BUILDING TO INSTALL THE TUBE LOCK CAP SIMULTANEOUSLY, ON EACH SIDE OF BUILDING. (SEE PAGE 27 FOR POLY LOCKING INSTRUCTIONS).
5. SECURE THE TUBE LOCK CAP WITH TEK SCREWS AT EACH END.

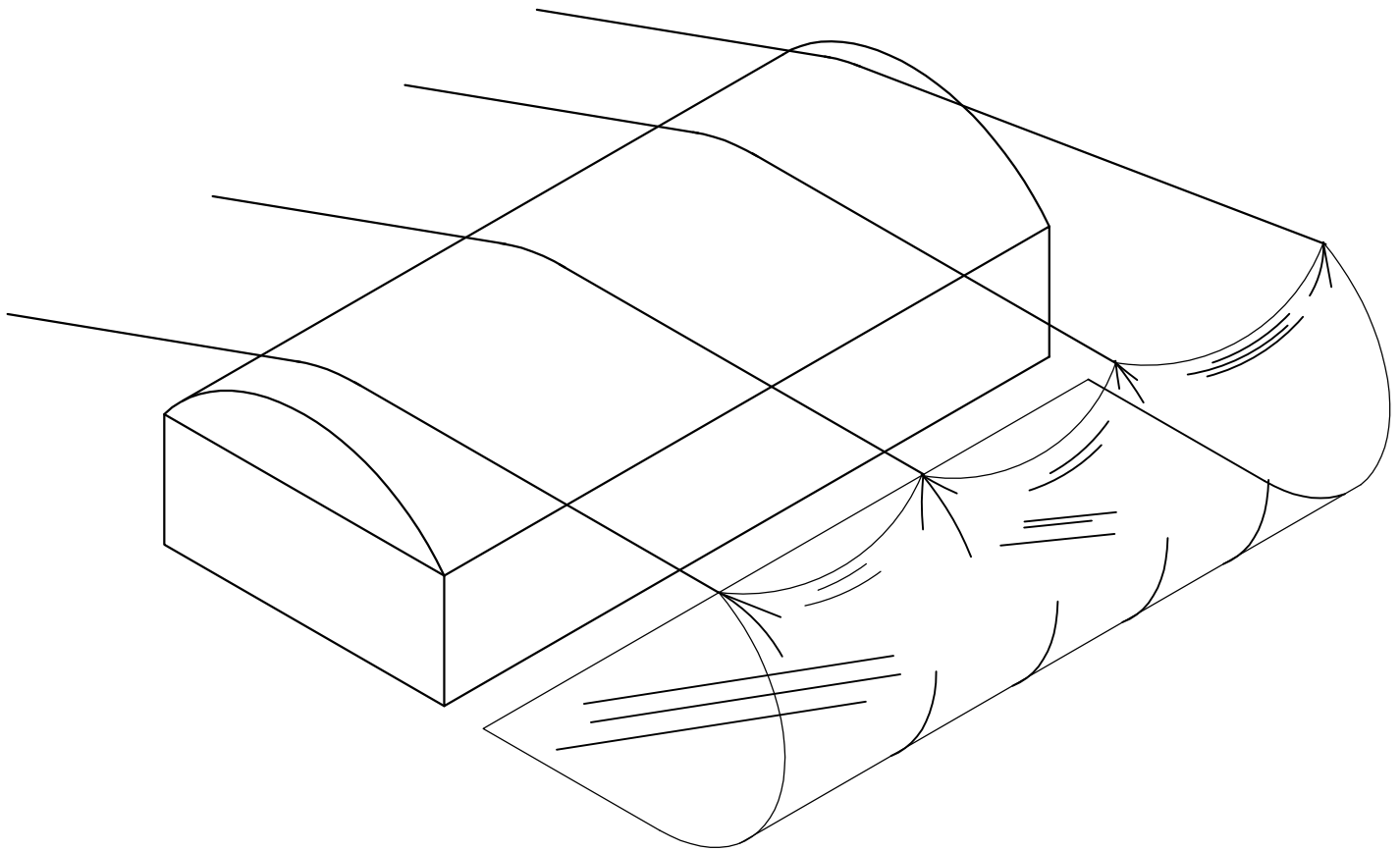


FIGURE 26 - (POLY INSTALLATION)

# INSTALLATION OF INFLATOR FAN

## (FOR DOUBLE POLY COVERING OPTION)

1. ATTACH THE INFLATOR FAN HANGER TO THE END WALL UPRIGHT.

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

2. CLAMP THE INFLATOR FAN HOSE TO THE INFLATOR FAN (CLAMPS SUPPLIED WITH FAN).
3. ATTACH THE MOUNTING PLATE WITH THE FAN TO THE INFLATOR FAN HANGER WITH (2) 1/4" X 3/4" MACHINE BOLTS AND (2) 1/4" HEX NUTS.
4. TO CUT THE POLY, PUT YOUR HAND BETWEEN THE 2 LAYERS OF POLY AND CUT A 3" "X" SLIGHTLY SMALLER THAN THE SMALL END OF THE INFLATOR COUPLING IN THE BOTTOM LAYER OF THE POLY, ABOVE THE INFLATOR FAN.



(BE CAREFUL TO KEEP THE CIRCLE CONTINUOUS SO THAT WHEN POLY IS INFLATED THE WALL WILL NOT RIP.)

5. SLIP ONE RUBBER WASHER OVER THE INFLATOR COUPLING. SLIDE THE COUPLING BETWEEN THE TWO LAYERS OF POLY AND PUSH THE SMALL END THROUGH THE HOLE MADE IN STEP 4.
6. SLIP THE SECOND RUBBER WASHER OVER THE SMALL END OF THE COUPLING AND SCREW ON THE NUT, SANDWICHING THE BOTTOM LAYER OF POLY BETWEEN THE TWO RUBBER WASHERS.
7. CLAMP THE INFLATOR HOSE TO THE INFLATOR COUPLING.
8. SECURE THE POLY WITH THE TUBE LOCK OR VINIPETT BASE. (SEE PAGES 25-26).
9. WIRE THE INFLATOR FAN TO 110 VOLT ELECTRICAL OUTLET.

(OPTIONAL)

10. CLAMP THE INTAKE TO THE INFLATOR FAN.
11. CUT A HOLE IN THE SIDE WALL COVERINGS SO THE EXTERIOR VENT CAN SLIDE THROUGH.
12. SLIDE THE VENT THROUGH THE SIDE WALL AND CLAMP THE INTAKE HOSE TO IT.

# INFLATOR FAN ASSEMBLY

(FOR DOUBLE POLY COVERING OPTION)

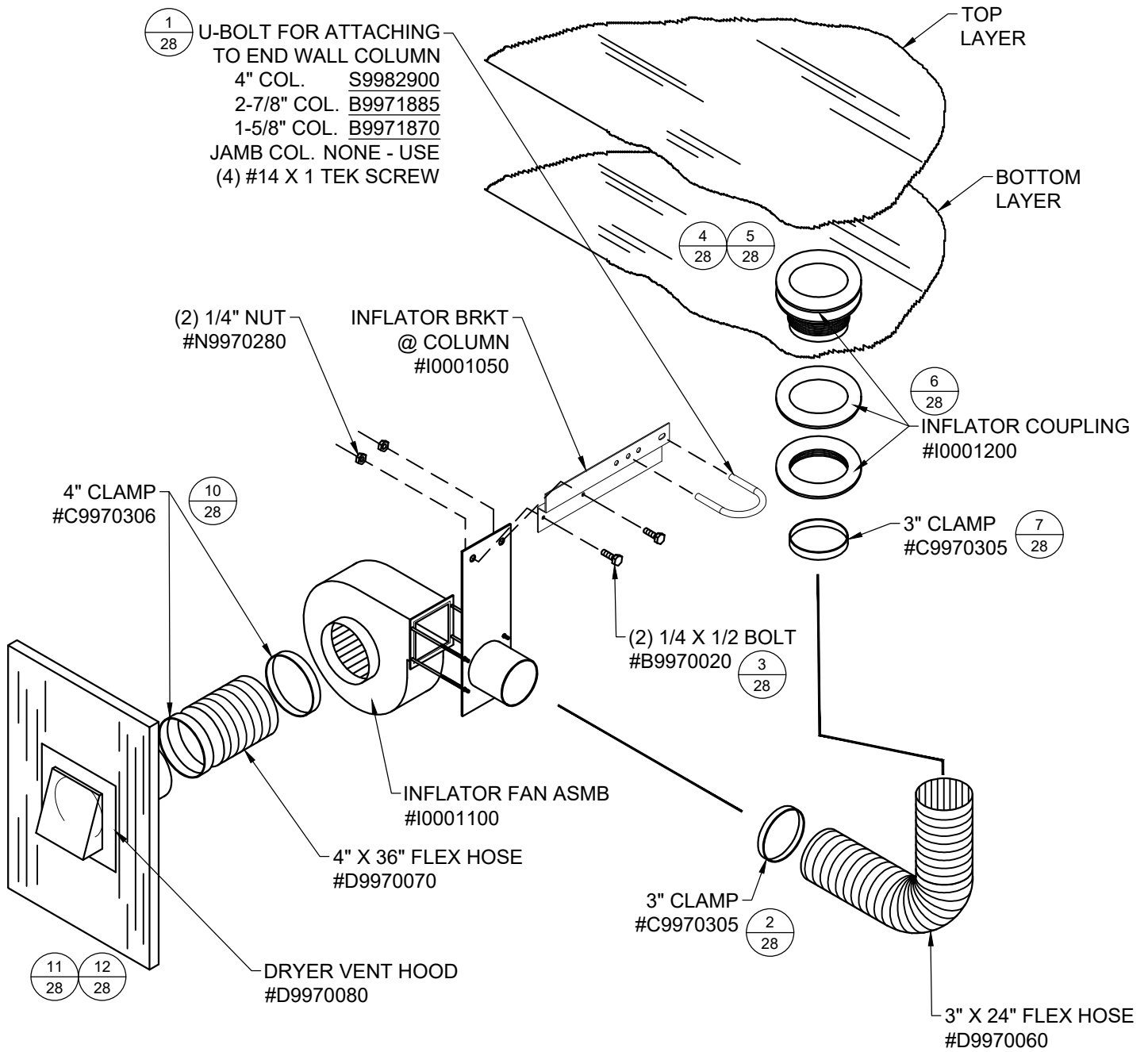


FIGURE 31 - (INFLATOR FAN ASSEMBLY)