

READ THESE INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION



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1. IMPORTANT – SAFETY INSTRUCTIONS

Compliance with safety standards, including OSHA and other federal, state and local codes or regulations, is the responsibility of the user of the conveyor installation. Placement of guards and other safety equipment in accordance with safety standards is dependent upon the area and use of the system. A safety study should be made of the conveyor application and guards should be installed wherever appropriate.

Safety Standards for Conveyors and Related Equipment ANSI B20.1 is a guide for safe construction, installation, operation and maintenance of conveyors and related equipment.

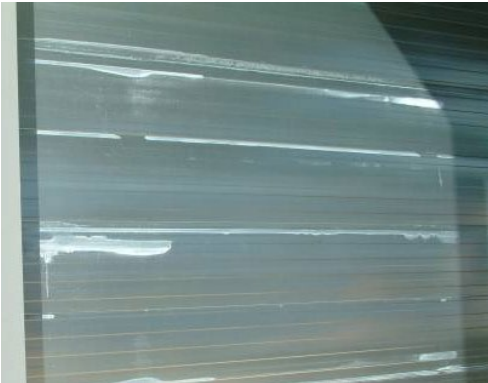
The stated purpose of ANSI Standard B20.1 is to present certain guidelines and safety practices that will assist in establishing a safe work place.

The broad scope of ASME/ANSI Standard B20.1 precludes its inclusion in this manual. However, it is highly recommended that those responsible for assuring safety in the installation, operation and maintenance of belt conveyors and equipment, acquire and use Standard B20.1 as a reference and guide.

2. STORAGE AND PREPARATION

At the time of shipment from the factory, PPI Galvanized Conveyor Covers are free from moisture and stain. They may become wet in transit or storage due to rain, condensation or other causes and develop "wet storage stain". To help control this problem, the following suggestions are offered.

PPI Galvanized Conveyor Covers provide excellent service life under normal weather conditions. Time may darken them slightly, but the sheets will still present an attractive appearance. However, galvanized sheets are subject to possible localized discoloration or stain when the zinc coating is exposed to water trapped between closely fitted surfaces. This can happen either in shipment or in storage, when piles of sheets or nested formed items become wet from rain, condensation or other causes of moisture. This discoloration is known as "wet storage stain".



The stain is usually superficial, and has essentially no effect on the service life of the galvanized sheets. If, however, the trapped moisture is permitted to remain on the sheets, the attack may become severe, reducing the effective service life of the sheet.

Recommendations to control and prevent wet storage stain:

1. Inspect for moisture upon receipt. If present, dry the Covers immediately.
2. Storage should be indoors if possible, preferably in a clean and dry area.
3. Store at an even temperature above the dew point, since changes in temperature may cause condensation.
4. Do not store covered with plastics.
5. Always stack on metal or wood skids to keep them from direct contact with the ground.
6. Stand the Covers on end to allow moisture to drain off and air to circulate.
7. If Covers cannot be kept inside, erect a simple scaffolding around them and cover them with a waterproof sheet or tarpaulin. Leave space between the tarpaulin and Covers to allow air to circulate.
8. Store off the ground and on a slope so that any rain or moisture penetrating the cover will drain away.
9. Inspect the storage site regularly to ensure that, despite these precautions, the Covers have not become wet.

Wet storage stain or white rust is a complex, hydrated zinc carbonate/zinc hydroxide. It is a corrosion product of zinc formed under certain specific conditions of exposure.

*Wet storage stain or white rust frequently gives the misleading impression of extensive corrosion. However, in the vast majority of cases, white rust does not indicate serious degradation of the zinc coating nor does it necessarily imply any likely reduction in the expected life of the product. Superficial white rusting can be safely ignored, unless overpainting at a later time. In most cases, when exposed to natural, acceptable environmental conditions, superficial deposits of white rust will gradually 'tone-in' and eventually disappear. However, heavy deposits, especially when combined with other corrosion phenomena, should be regarded with caution. (*Referenced from TATA STEEL technical information about White Rust.)

3. PRE-INSTALLATION

This manual has been written around standard galvanized 4 foot long Conveyor Cover sections for Full and 3/4 coverage. However, the instructions are also appropriate for longer and shorter length sections of covers. If you require assistance for special covers contact PPI or your local PPI Distributor.

PPI Conveyor Covers are shipped unassembled. Using the following component lists, check that you have received the proper quantity of Support Bands, Covers, Foot Support Brackets, Retaining Brackets, Eyebolts and fasteners. Also check for any damage that may have been caused in shipping.

There are 4 different component lists.

Figure 1 Layout D Cover Section Full 4 ft with Hardware

Figure 2 Layout E Cover Section Full 4 ft with Hardware

Figure 3 Layout D Cover Section 3/4 4 ft with Hardware

Figure 4 Layout E Cover Section 3/4 4 ft with Hardware

When you have verified you received the correct items proceed to Section 4 or 5 for instructions about assembling the Support Bands.

Figure 1: D FULL COVER 4 FOOT SECTION WITH HARDWARE

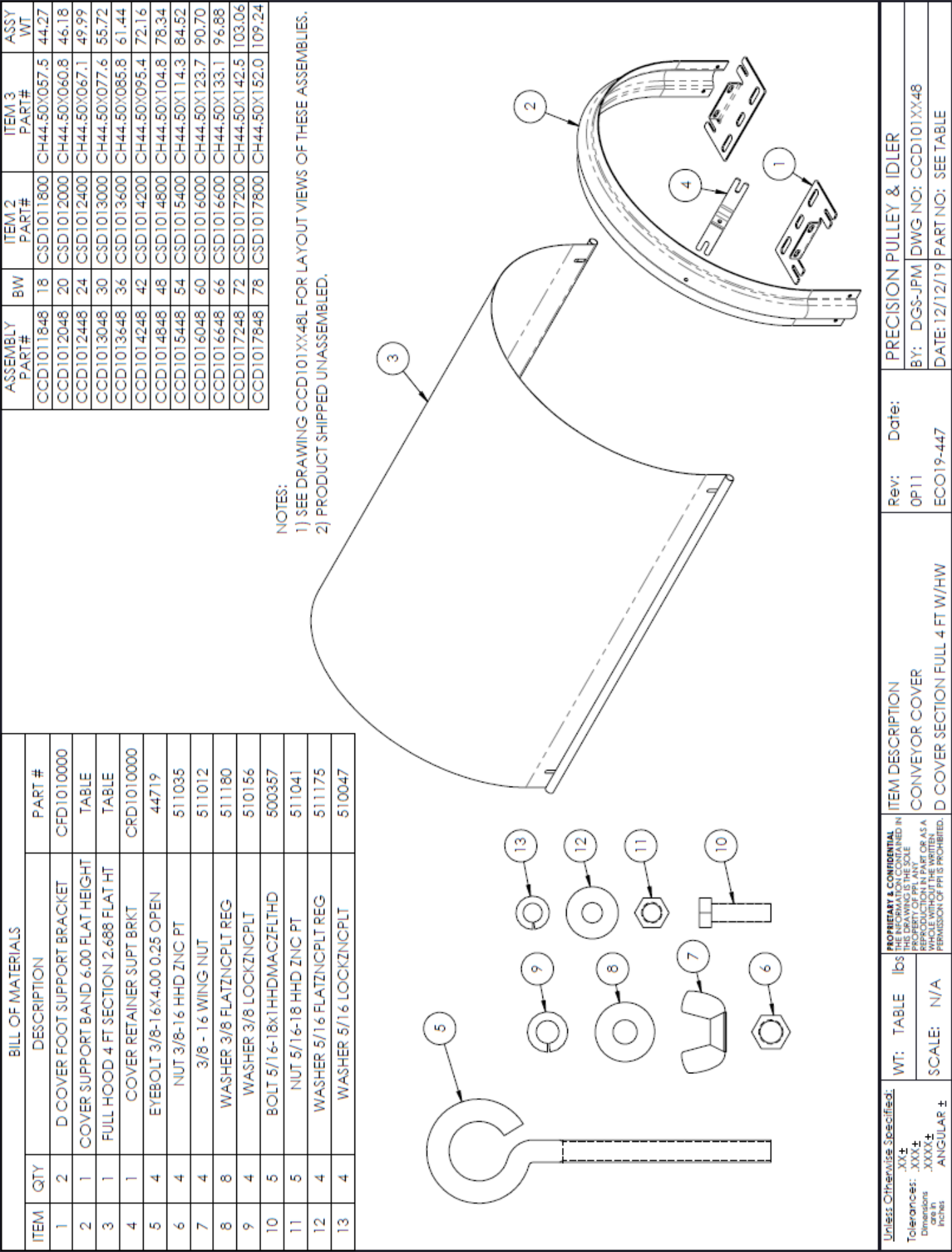


Figure 2: E FULL COVER 4 FOOT SECTION WITH HARDWARE

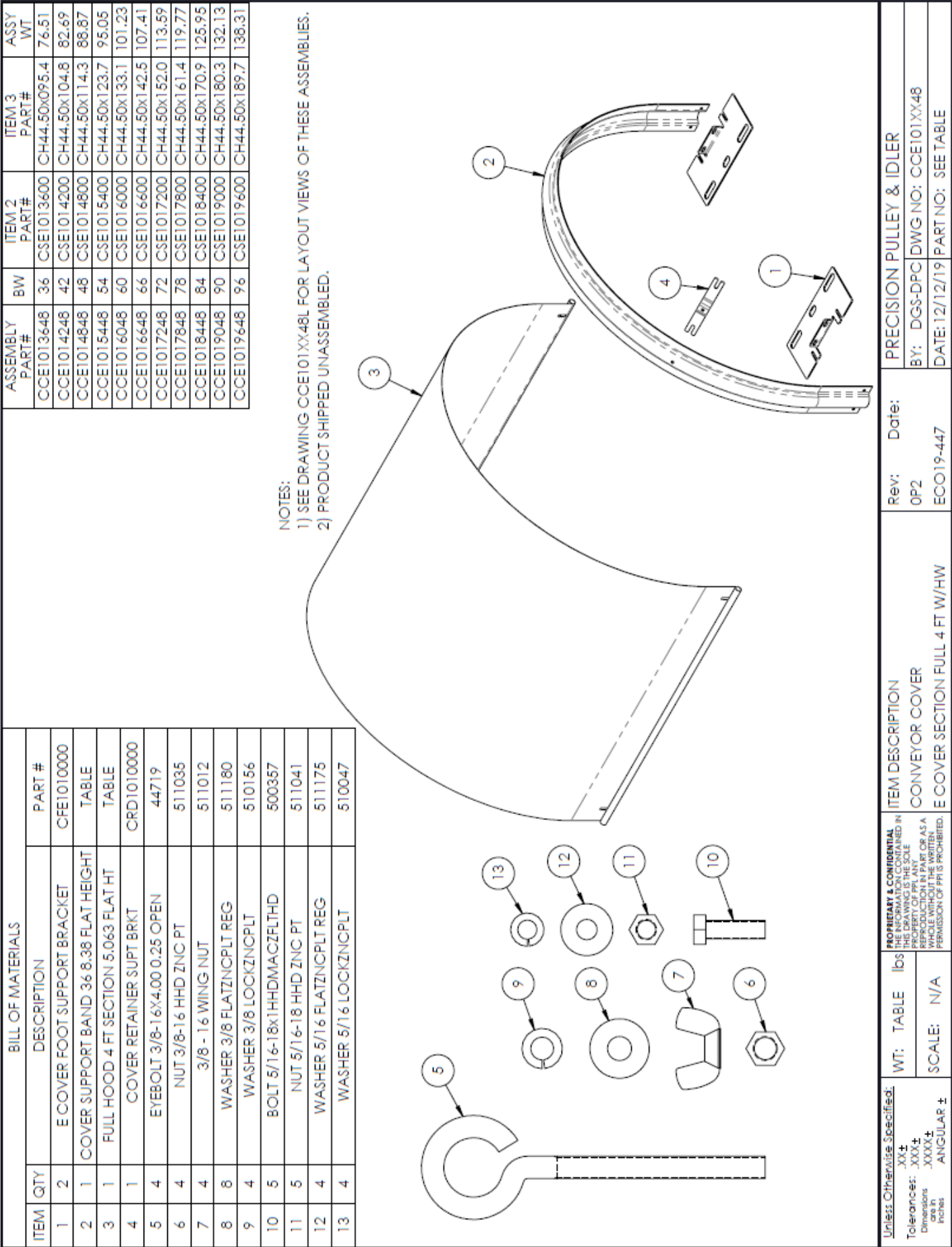


Figure 3: D 3/4 COVER 4 FOOT SECTION WITH HARDWARE

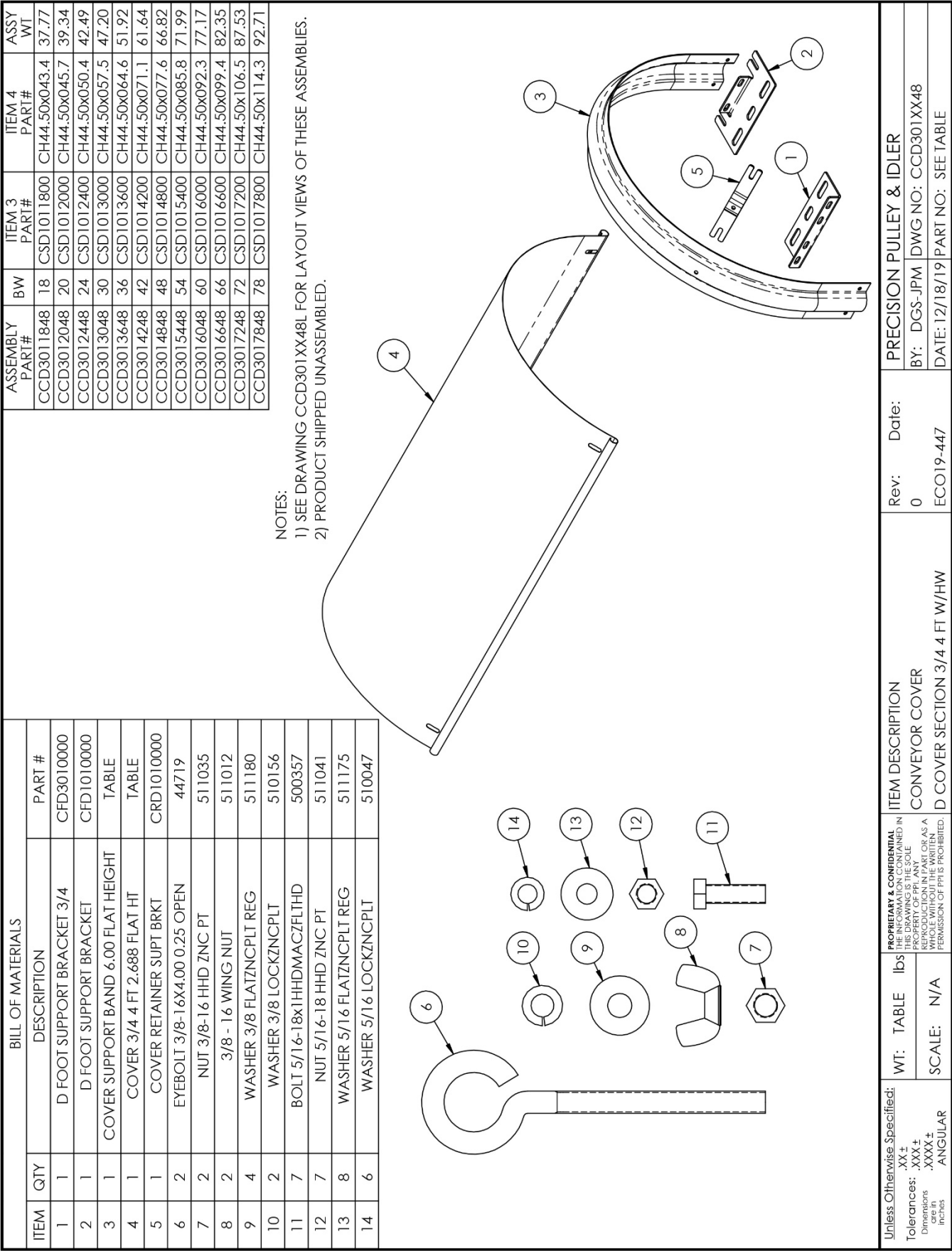
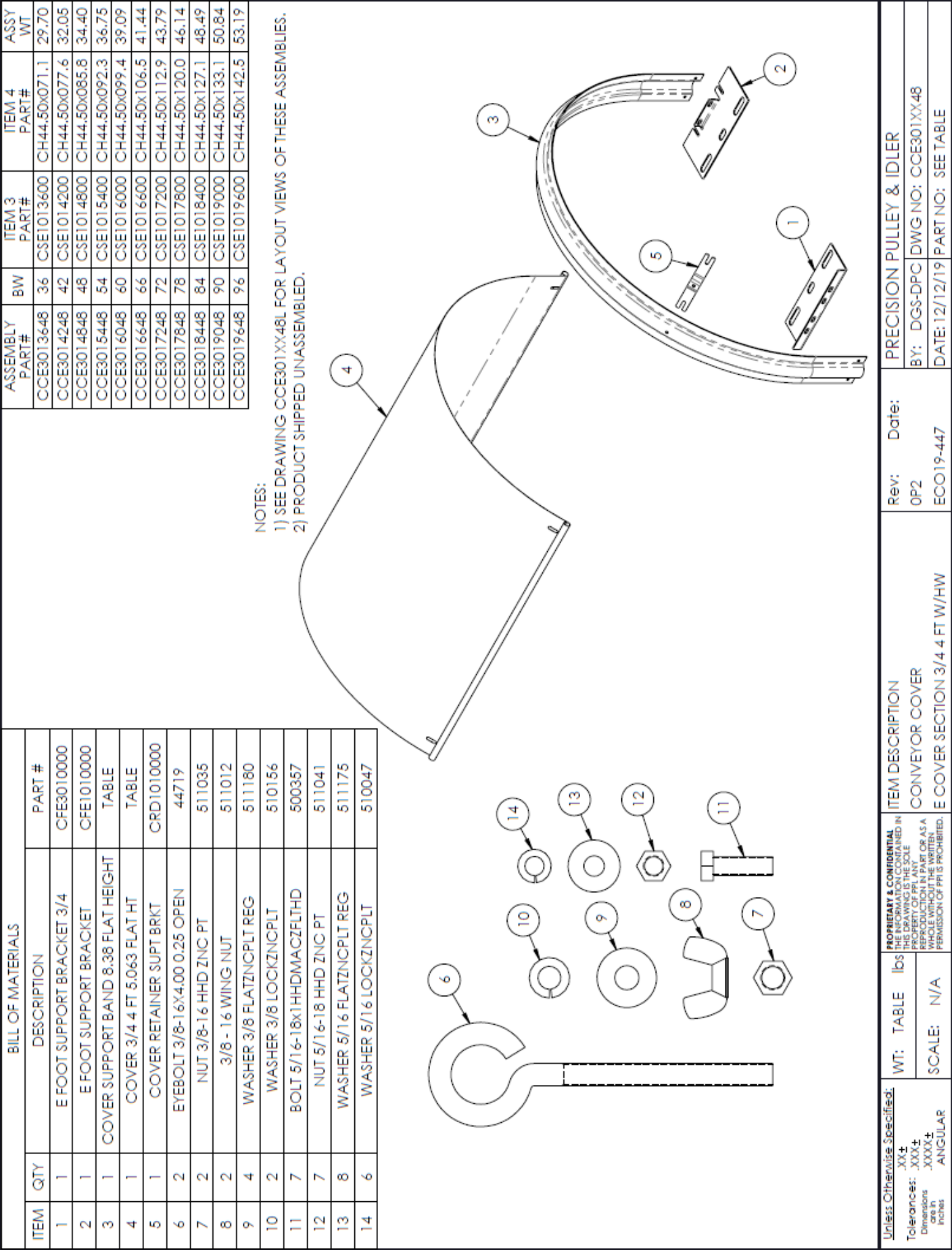


Figure 4: E 3/4 COVER 4 FOOT SECTION WITH HARDWARE



4. FULL COVER SUPPORT BAND ASSEMBLY

Assemble the Foot Support Brackets (Item 1) and the Retainer Support Bracket (Item 3) to the Support Band (Item 2) using the hardware shown Figure 5 or Figure 6. First bolt the Foot Support Brackets (Item 1) to the bottom of each side of the Support Band (Item 2).

Bolt the Retainer Support Bracket (Item 3) to the Support Band (Item 2) using the hole that is located around the curve in the Support Band (Item 2). This assembly of the Support Band, Foot Support Brackets and the Retainer Support Bracket can be done before mounting to the conveyor frame.

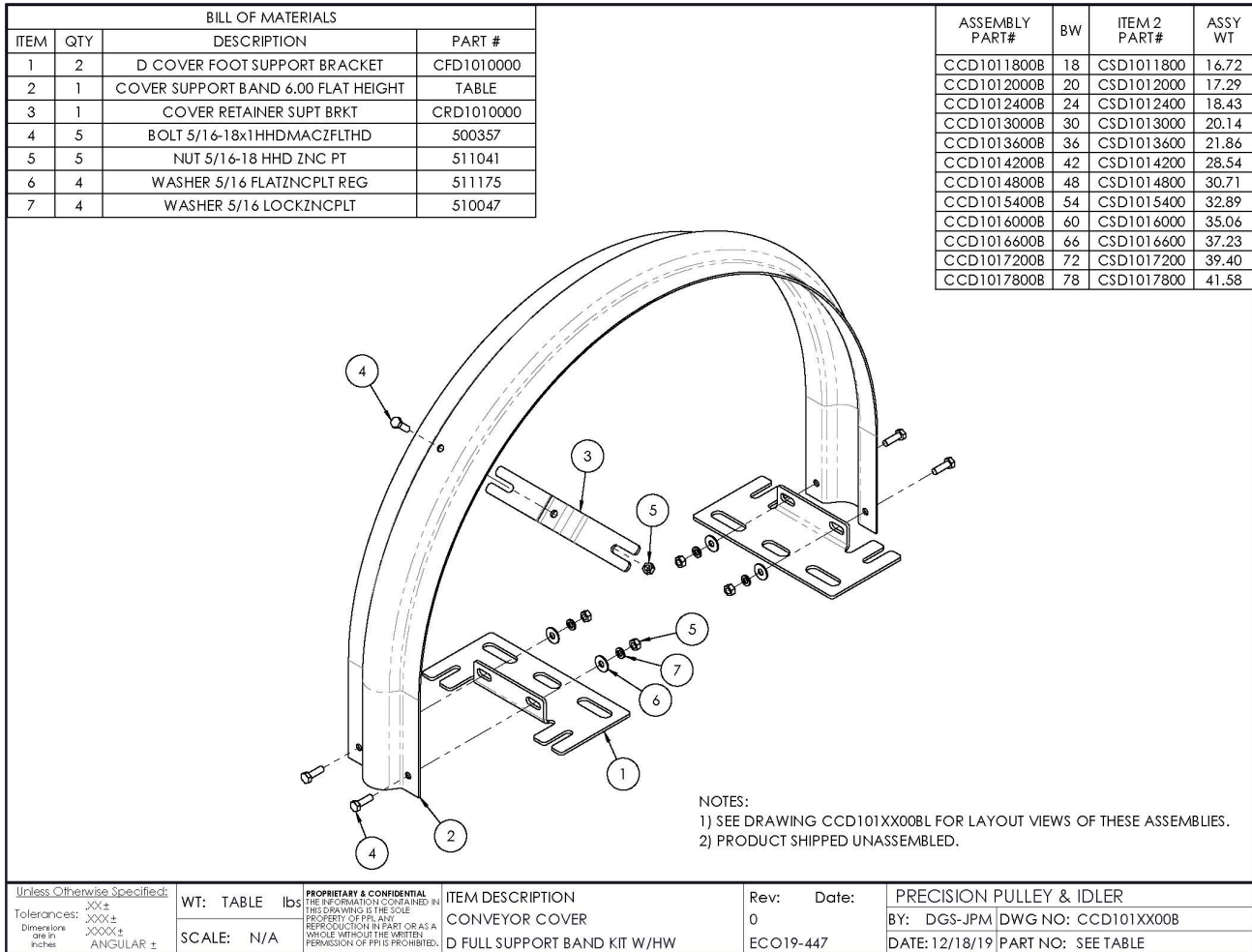


Figure 5: D FULL COVER SUPPORT BAND ASSEMBLY WITH LIST OF COMPONENTS

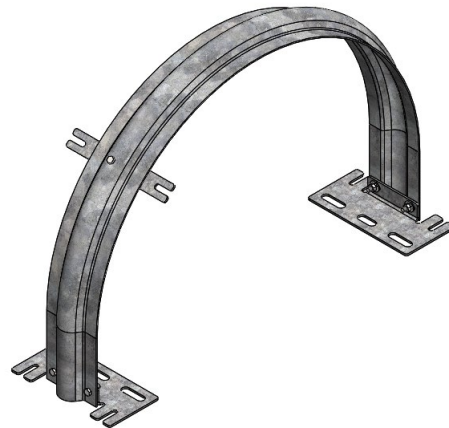


Figure 5.1: D FULL COVER SUPPORT BAND ASSEMBLY

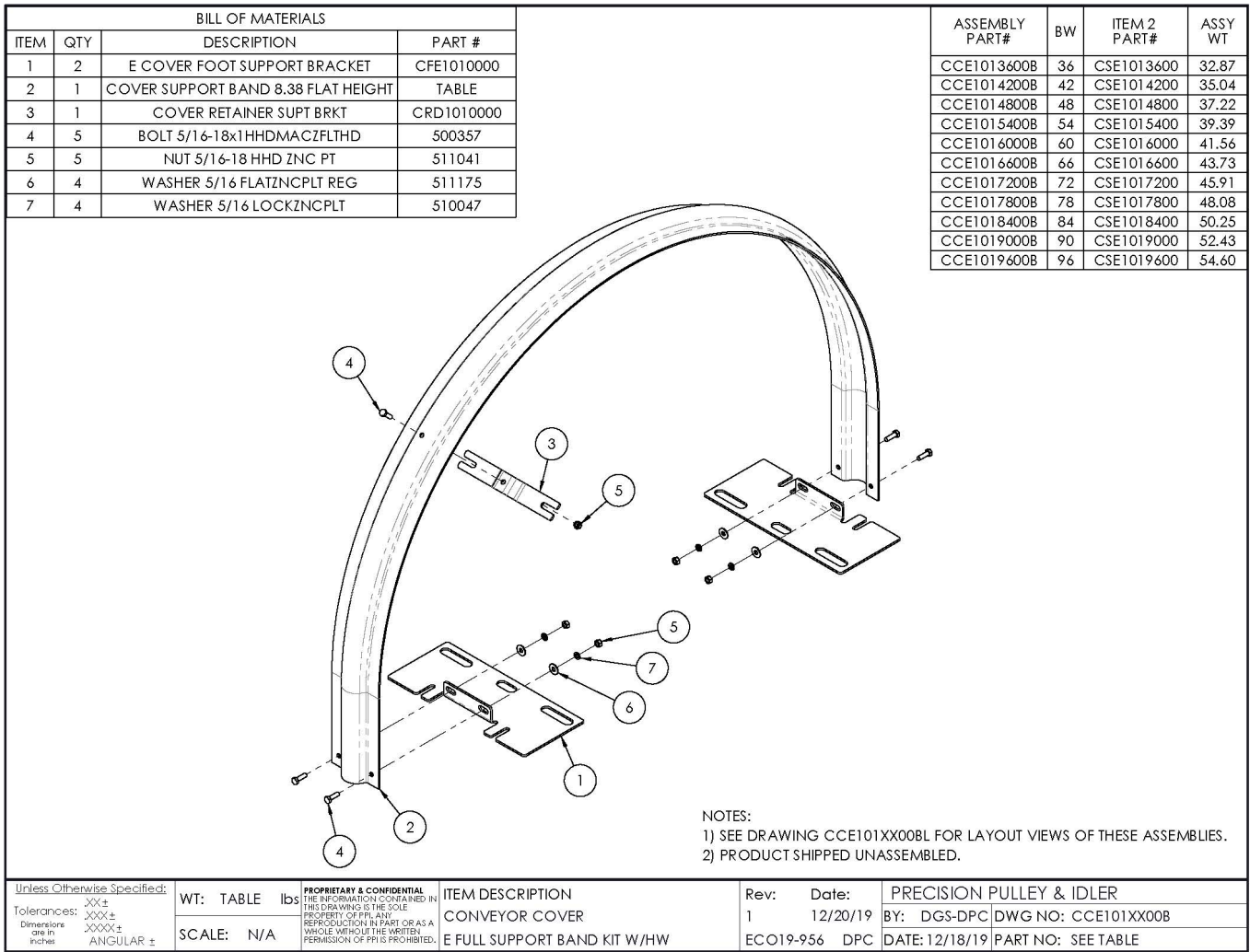


Figure 6: E FULL COVER SUPPORT BAND ASSEMBLY WITH LIST OF COMPONENTS



Figure 6.1: E FULL COVER SUPPORT BAND ASSEMBLY

5. 3/4 COVER SUPPORT BAND ASSEMBLY

Assemble the Foot Support Brackets (Items 1 and 2) and the Retainer Support Bracket (Item 4) to the Support Band (Item 3) using the hardware shown in Figure 7 or Figure 8. Make sure Item 4 and Item 1 are on the same side of the Support Band. First bolt the Foot Support Brackets (Items 1 and 2) to the bottom of each side of the Support Band (Item 3).

Bolt the Retainer Support Bracket (Item 4) to the Support Band (Item 3) using the hole that is located around the curve in the Support Band (Item 3). This assembly of the Support Band, Foot Support Brackets and the Retainer Support Bracket can be done before mounting to the conveyor frame.

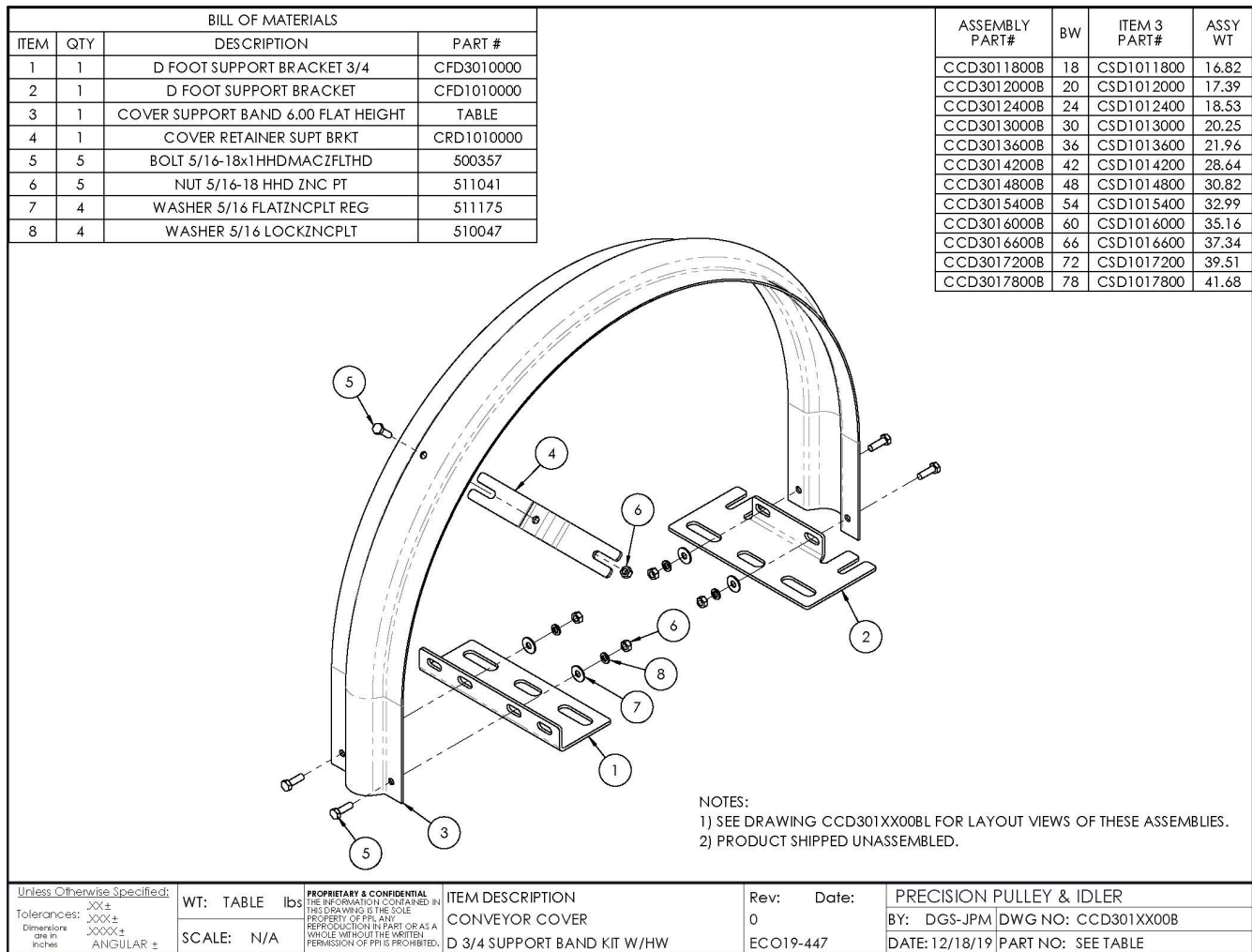


Figure 7: D 3/4 COVER SUPPORT BAND ASSEMBLY WITH LIST OF COMPONENTS

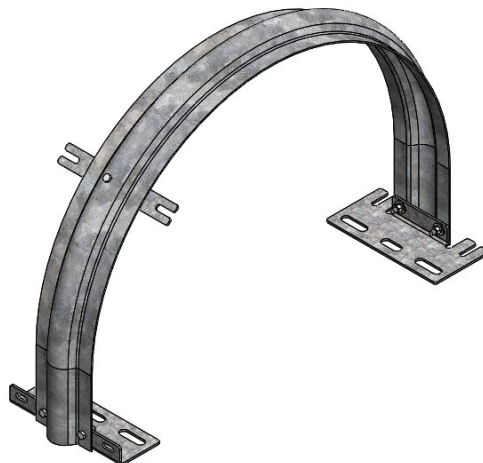


Figure 7.1: D 3/4 COVER SUPPORT BAND ASSEMBLY

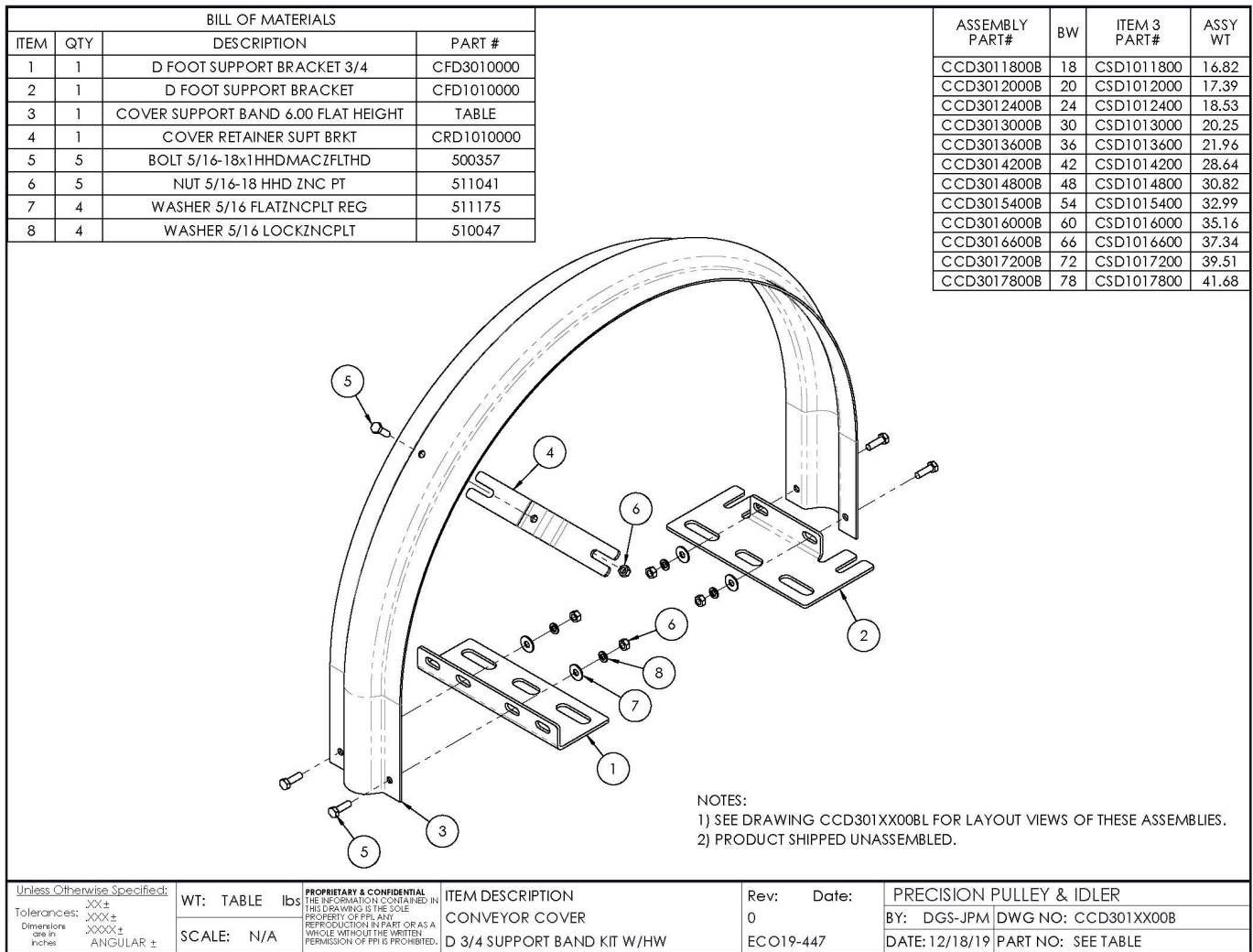


Figure 8: E 3/4 COVER SUPPORT BAND ASSEMBLY WITH LIST OF COMPONENTS



Figure 8.1: E 3/4 COVER SUPPORT BAND ASSEMBLY

6. SPACING OF SUPPORT BANDS

Normal spacing of Support Bands is 4'- 0" centers. However, Support Band spacing should match the Idler spacing. If the Idler spacing does not match the Conveyor Cover Support Band spacing, the Idler frame mounting foot pad will interfere with the Foot Support Bracket of the Conveyor Cover after a few sections are installed.

When Conveyor Covers are applied to curved structure for concave and convex curves, see the CONCAVE CURVES section or the CONVEX CURVES section of this manual for further instructions.

7. SPACING FOR SUPPORT BANDS ON CONCAVE CURVES

Using standard 4 foot sections of Conveyor Covers on concave curves can be obtained in two ways. First by installing the Support Bands on 4'- 0" centers as usual and taking up the built-in longitudinal clearance between Cover and Support Bands. Second by installing the Support Bands on up to 4'- 1" centers, thus increasing the available clearance mentioned above.

Table 1 indicates the minimum radius obtained with Support Band centers indicated across the top of the table. By increasing the centers wider than 4' 0" the radius of the concave curve can be decreased. If this method does not fit your concave curve radius contact PPI or your local PPI Conveyor Components Distributor.

Table 1. MINIMUM CONCAVE CURVE RADIUS (Feet)

Nominal Cover Size (Belt Width)	Support Band Centers 4'-0" Standard	Support Band Centers 4'-1/4" Standard	Support Band Centers 4'-1/2" Standard	Support Band Centers 4'-3/4" Standard	Support Band Centers 4'-1" Standard
18"	240	145	100	80	65
20"	250	150	110	85	70
24"	270	165	120	90	75
30"	300	180	130	100	85
36"	335	200	145	115	95
42"	370	220	160	125	105
48"	400	240	170	135	115
54"	430	260	190	145	120
60"	460	280	200	155	130
66"	490	300	210	165	140
72"	520	320	220	175	150
78"	550	340	230	185	160

8. SPACING FOR SUPPORT BANDS ON CONVEX CURVES

For convex curves the standard 4'- 0" centers for the Support Band is to be kept. The minimum radius obtainable for each belt width is as follows.

If this method does not fit your convex curve radius contact PPI or your local PPI Conveyor Components Distributor.

Table 2. MINIMUM CONVEX CURVE RADIUS (Feet)

Nominal Cover Size (Belt Width)	Minimum Radius (Feet)
18"	65
20"	70
24"	75
30"	85
36"	95
42"	105
48"	115
54"	120
60"	130
66"	135
72"	140
78"	150

9. SUPPORT BAND INSTALLATION ON THE CONVEYOR

Bolt the Foot Support Bracket of the Support Bands to the conveyor structure stringer through the rear slots. As the Support Bands are mounted on the conveyor frame, care must be taken to be sure that they are all positioned so that the Retaining Bracket is facing the main access side of the conveyor i.e. towards the walkway or the maintenance aisle.

It is necessary that all the Retaining Brackets are on the same and correct side as they are the means for fastening the cover sections in the open position. Be sure that the Support Bands are all in-line and perpendicular to the conveyor centerline before tightening the mounting bolts.

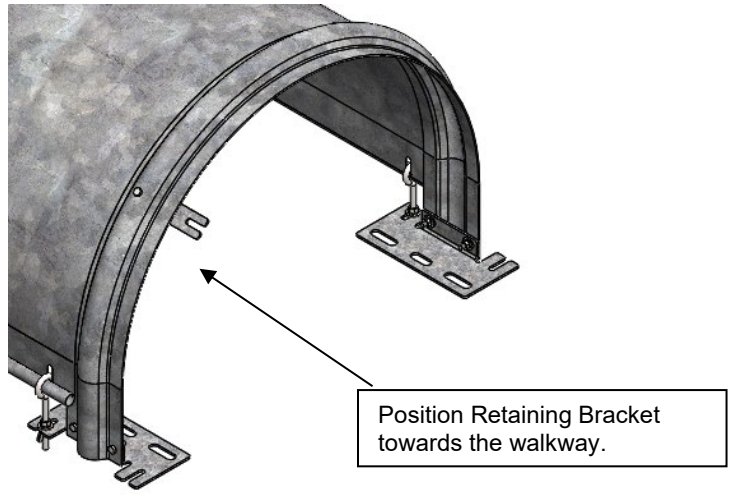
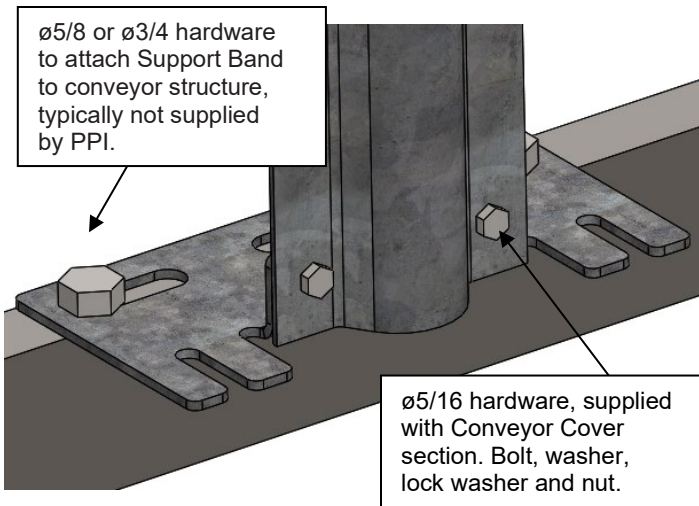


Figure 9: ATTACHING FOOT SUPPORT BRACKET TO CONVEYOR STRUCTURE

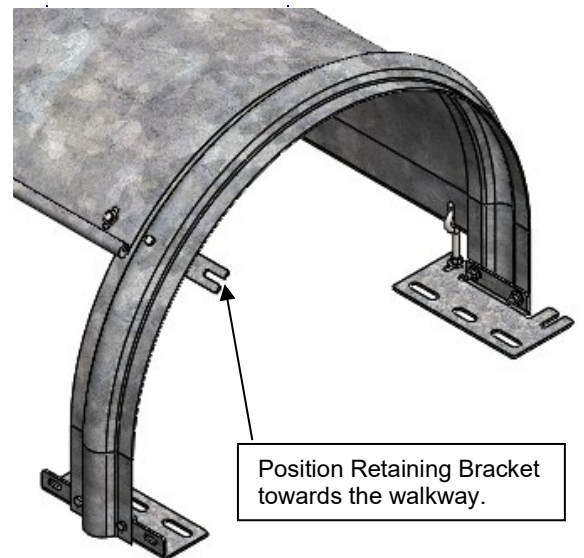
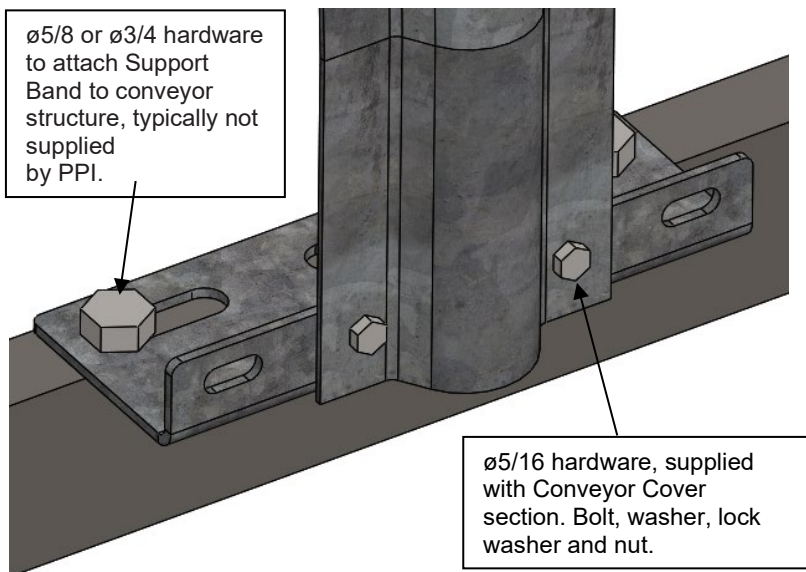


Figure 10: ATTACHING FOOT SUPPORT BRACKET 3/4 TO CONVEYOR STRUCTURE

10. FULL COVER SECTION ASSEMBLY

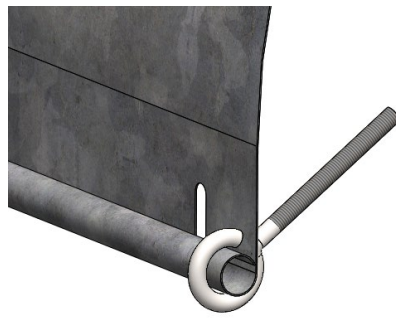
PPI Conveyor Covers are shipped unassembled. See Figures 1 through 4 for complete list of hardware.

Assemble eyebolts by sliding over and along the rolled end of the cover section to the slotted holes.

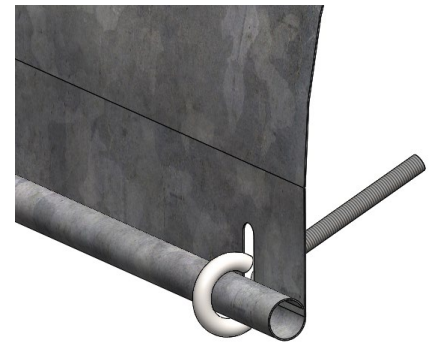
The eyebolt must be oriented so that the shank is behind the cover as shown below. It will then slide easily along the rolled edge. Secure cover sections to the Support Band Foot Support Bracket with the bolts, nuts and washers provided.



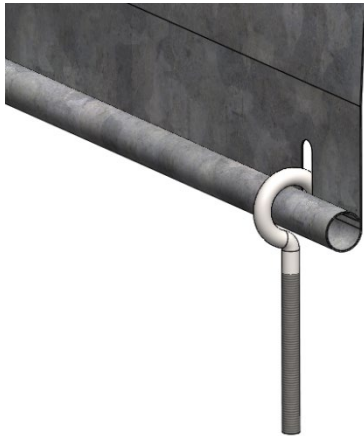
STEP 1



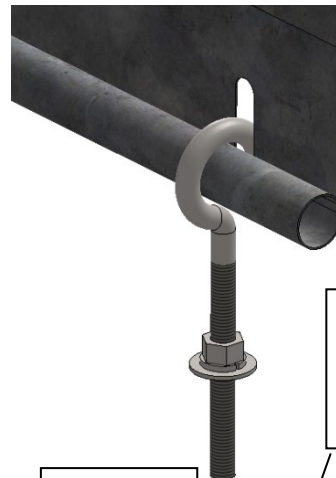
STEP 2



STEP 3

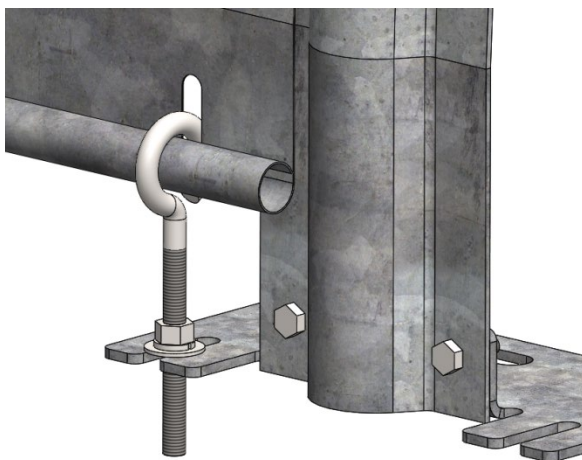


STEP 4

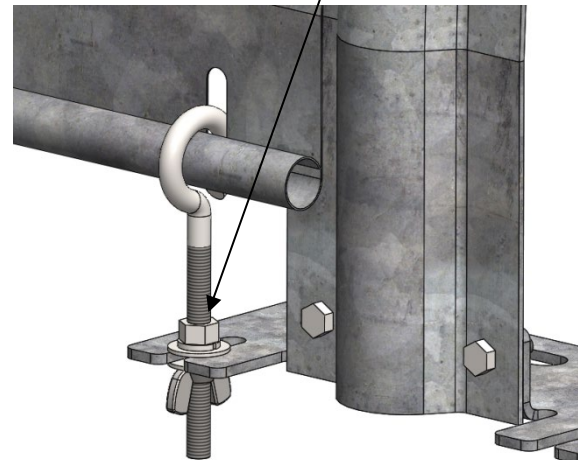


STEP 5

Ø3/8 eyebolt and hardware, supplied with Conveyor Cover section. Eyebolt, nut, wing nut, washer and lock washer.



STEP 6



STEP 7

Figure 11: FULL COVER SECTION ASSEMBLY

11. SAFETY PRECAUTIONS - FULL COVERS

When a cover section is opened, it should always be carefully raised to the Retaining Bracket and fastened securely to it before performing any inspection or maintenance functions. Check that the nuts and washers on the eyebolts are firmly holding the eyebolts to the Retaining Brackets. Never open a cover section in high winds. Personal injury and damage to the cover may occur. Never unfasten all four of the eyebolts of a cover section cover on both sides of the conveyor without taking adequate precautions regarding the handling of the completely free cover section, particularly in windy conditions.

When a cover section is closed, it should always be securely fastened back to the Foot Support Brackets. Check that the nuts and washers on the eyebolts are firmly holding the eyebolts to the Foot Support Brackets. Also check that the eyebolts are providing enough tension to keep the cover sections sealed tightly against the Support Bands.



Figure 12: FULL COVERS CLOSED

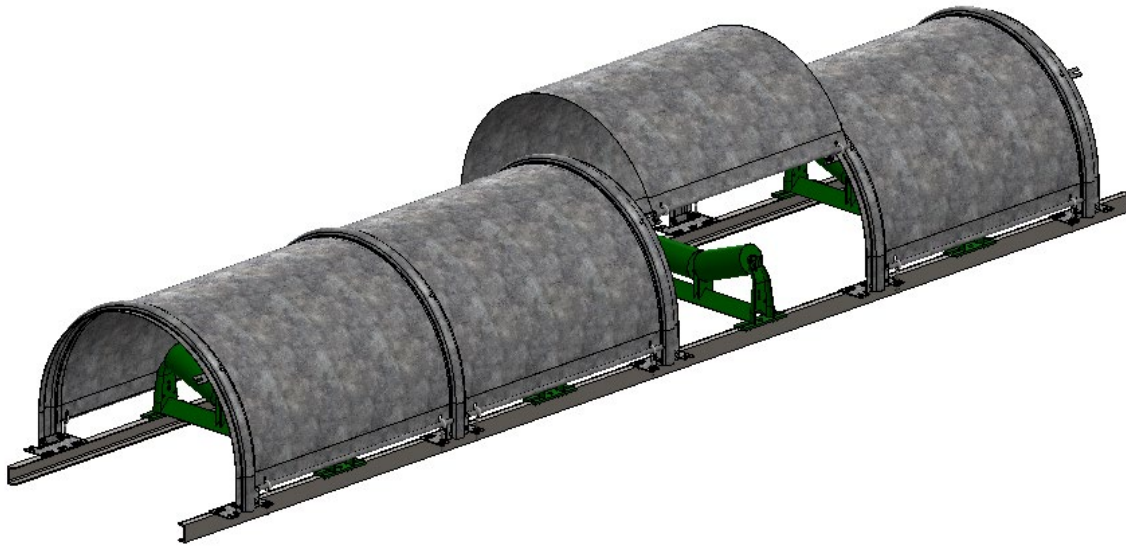


Figure 13: FULL COVERS WITH ONE OPEN SECTION

12. 3/4 COVER SECTION ASSEMBLY

PPI Conveyor Covers are shipped unassembled.

Start with connecting the back side of the cover to the Foot Support Bracket as shown in section 10 FULL COVER SECTION ASSEMBLY steps 1 through 7.

When the back side of the cover is loosely assembled, connect the front side as shown in Figure 14. When the front side is connected, then go back and tighten the back side eyebolts.

ø5/16 hardware, supplied with Conveyor Cover section. Bolt, washer, lock washer and nut.

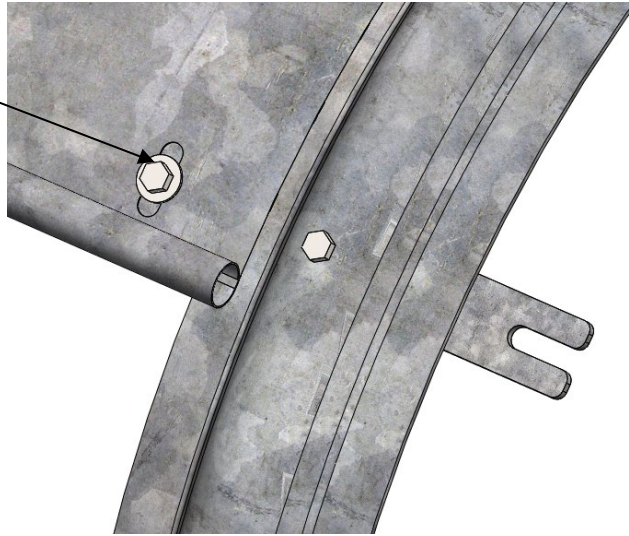


Figure 14: 3/4 COVER ATTACHMENT TO RETAINER SUPPORT BRACKET

13. SAFETY PRECAUTIONS - 3/4 COVERS

Check that the nuts and washers on the bolts and eyebolts are firmly holding and tightened securely to the Foot Support Brackets and the Retainer Support Brackets.

Never unfasten all four of the bolts of a cover section on both sides of the conveyor run without taking adequate precautions regarding the handling of the completely free cover section, particularly in windy conditions.

Also check that the eyebolts are providing enough tension to keep the cover sections sealed tightly against the Support Band.



Figure 15: 3/4 COVERS



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