



## ***Installing the Jaypro Max-1 With Adjustable Crossbar Football Goal Posts***



### ***Model:***

***FBGP-420AX/FBGP-920AX (Expandable 18'6"-23'4" with 20FT Uprights)***

# 1 Introduction

This user guide describes how to install the Jaypro Max-1 football goal post models FBGP-920AX and FBGP-420AX. The telescoping feature of the crossbar allows the Max-1 football goal post to be set at either 23'-4" between uprights for the official High School use or 18' 6" for official College width.

This user guide is written for experienced mechanical contractors. If you need additional information or support to install your Jaypro goal post, you can reach the Jaypro Sports customer support team, Monday through Friday, 8:00 A.M. to 5:00 P.M. Eastern Time at 1-800-243-0533.

## IMPORTANT NOTICE

- It is the installer's responsibility to ensure that the goalpost, gooseneck, and crossbar are properly located and lined up with respect to the field. Proper location and alignment should be confirmed with each step.
- It is the installer's responsibility to ensure that the crossbar is level and the uprights are plumb.
  - All critical holes are to be drilled by the installer in an effort to help ensure that all components are square, plumb, and level.
  - Verify after every drilling operation that affected components are still square, plumb, and/or level. Correct as necessary.
  - It is recommended that drilled holes be piloted with a 3/16" drill bit, and opened up incrementally to the final size.

## 2 Safety

Some of the goal post components are heavy and require at least three people to maneuver into place. To maintain control and prevent injury when moving heavy components, ensure you have a sufficient number of technicians to support the components without dropping them.

### 3 Equipment and Materials

Gather the following user-supplied equipment and materials:

- Equipment to excavate a 72- by 36-inch hole
- 20-foot high scaffold (or scissor lift or boom)
- 10-foot (minimum) high step ladder
- Mechanic's tool set
- Wrench Set
- Level, 3' minimum
- 100-foot tape measure
- Electric Drill
- Drill Bits:
  - 5/16", 1/2", and 5/8" bits
- Rubber mallet

The following equipment is optional, but strongly recommended:

- 17/32", 21/32", and 11/16" transfer punches (highly recommended)
- 3/16", 3/8" drill bits to pilot holes (highly recommended)
- Heavy grease or white lithium grease
- Antiseize Lubricant
- Baling wire (if using rebar)
- (6), 54-inch lengths of 5/8-inch rebar

### 4 Check Components

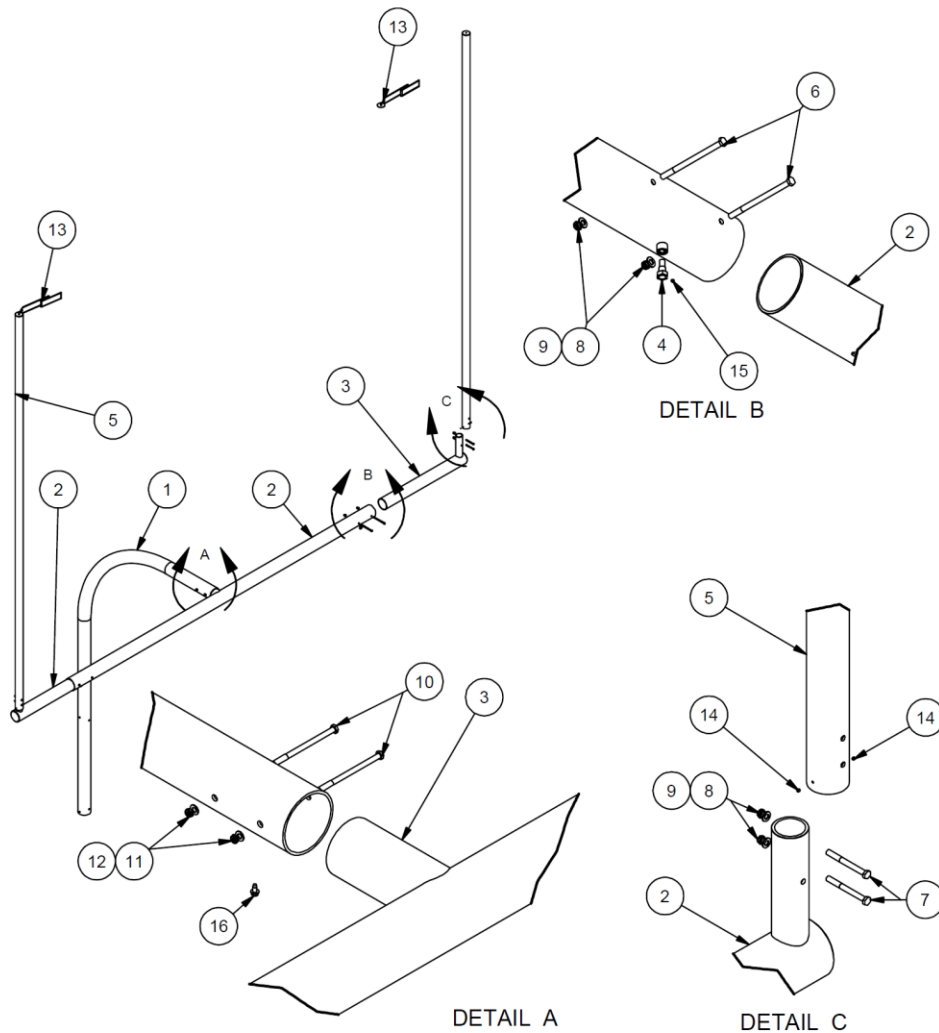
Goal posts are sold in pairs. Inspect your goal post shipment and ensure you received these parts:

#### ***Parts List***

2 Goosenecks  
2 Anchor Kits (If installing with FBHG-1 hinge kit, do not use supplied footing plates)  
2 Crossbars  
4 Twenty foot uprights  
4 Upright end fittings  
4 Wind socks  
Yellow spray paint

Check to confirm that your Goal Post has shipped with all hardware. If any hardware or components are missing, contact the Jaypro Sports customer support team, Monday through Friday, 8:00 A.M. to 5:00 P.M. Eastern Time at 1-800-243-0533 for replacements.

**Figure 1: FBGP-900AX & FBGP-400AX Included Components and Hardware**



**FIGURE 1**

ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	6 5/8 in GOOSENECK	9	8	1/2 in SAE FLAT WASHER
2	1	ADJUSTABLE CROSSBAR	10	2	5/8-11 x 7 1/2 HX HD BOLT
3	2	ADJ END FITTING	11	2	5/8 in FLAT WASHER
4	2	ANTI-ROTATION BOLT	12	2	5/8-11 NYLOCK NUT
5	2	20 FT UPRIGHT	13	1	STREAMER
6	6	1/2-13 x 8 in HX HD BOLT	14	6	1/4-20 1/4 in SET SCREW-CONE POINT
7	4	1/2-13 x 5 HX HD BOLT	15	2	1/4-20 -1/4 in SET SCREW NYLON TIP
8	8	1/2-13 THIN NYLOCK NUT	16	2	3/8-16 x 3/4 in HX HD SELF TAP BOLT

## 5. Where to Install the Foundation and Goosenecks

Installing the foundation and anchors in the proper location at each end of the field ensures that the gooseneck, cross bar, and uprights will be positioned according to high school and college football regulations. By rule, the front edge of the crossbar should be even with the inside edge (field side) of the end line, such that the crossbars measure 360 ft apart, inside to inside<sup>1,2</sup>. Follow these steps to locate foundation.

1. From the field layout plan, determine and mark the location of the inside corners of the playing field including the end zone.
2. From the field layout plan or through consultation with the field contractor determine the final field elevation.
3. Using the corners as reference points, mark the points exactly 80 feet in from the inside edge of the sideline and **100-3/8 inches for FBGP 900 Series Goal Posts (82-3/8 inches for FBGP 400 Series)** in from the inside edge of the end zone at each end of the field (**Figure 2**)

NOTE: The dimensions provided account for the deflection of the gooseneck under the weight of the crossbar and uprights.

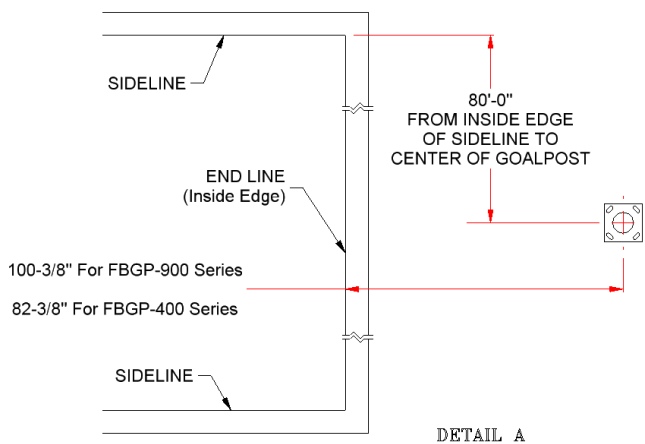
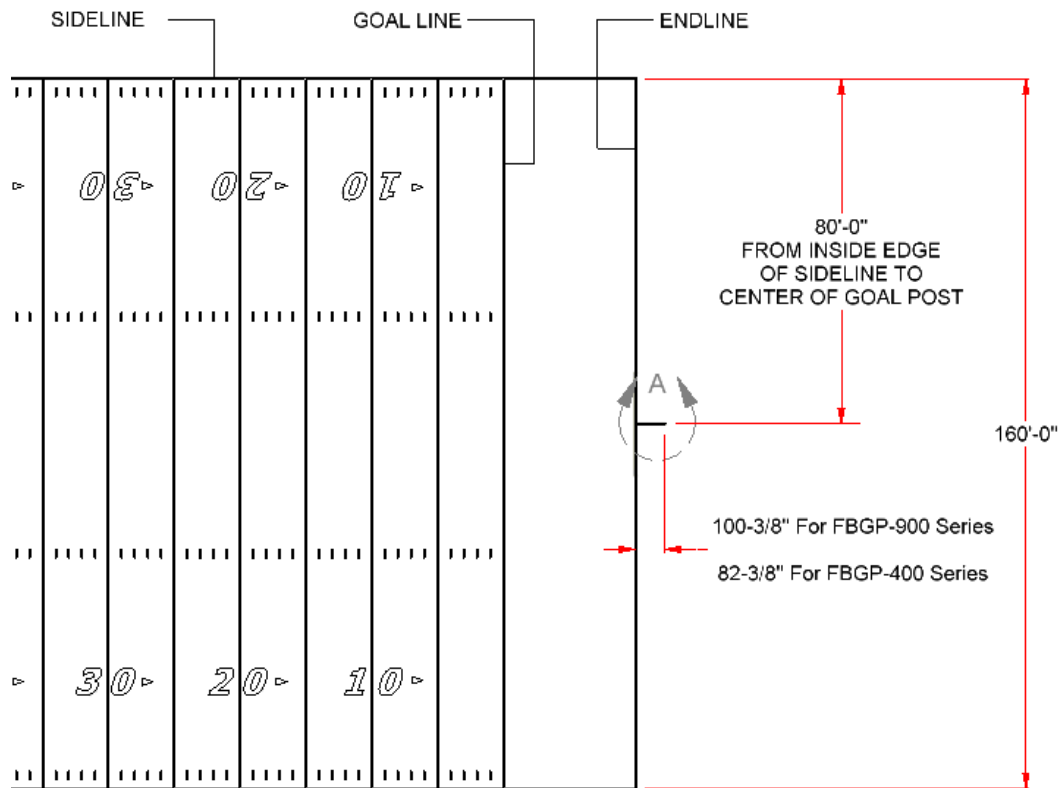
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<sup>1</sup> NFHS Football Rules Book, 2009

<sup>2</sup> NCAA Football Rules and Interpretations, 2002

**Figure 2: Location of the Center of the Upright Footing**

All measurements from field-side edges of lines.

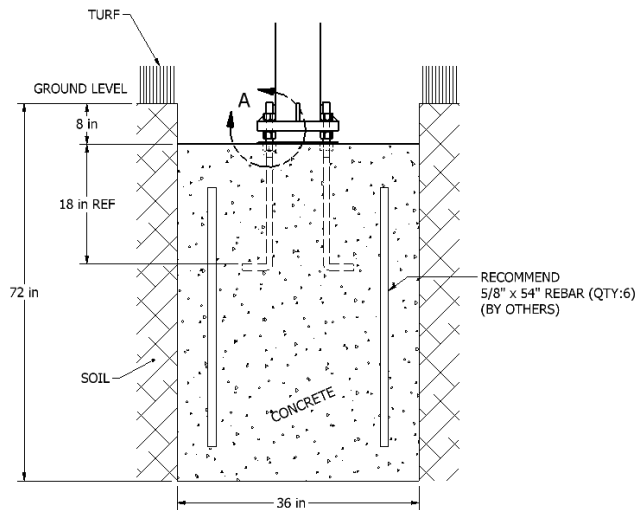


## Installation Steps

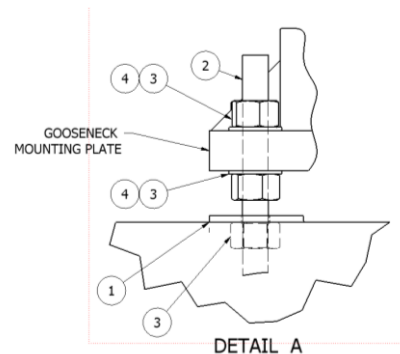
Follow these steps to install the foundation at each end of the playing field.

1. Excavate the footing hole; As shown in **Figure 3**.  
**NOTE: If installing a Goalpost Hinge Kit (FBHG-1) refer to Figure 4.**
2. While not required, Jaypro recommends using 6 lengths of 5/8-inch rebar, 54 inches long, wired together into a 24-inch diameter basket and placed around the ground sleeve in the footer hole.
3. Fill the footing hole with 4,000 psi (minimum) concrete to 8 inches below ground level.
4. Assemble and install the anchor kit as shown.
5. Allow the concrete to cure for 48 hours before installing the gooseneck, crossbar and uprights.
6. Install gooseneck as shown. Note that the end of the gooseneck will deflect downwards approximately 1 1/2" after installing the crossbar and uprights.

**FIGURE 3 Footing Detail Surface Mounted Gooseneck**



If installing with FBHG-1 hinge kit, do not use supplied 12" x 12" footing plates



1	1	SR5402	FOOTING PLATE
2	4	SR5401	24" L-HOOK, GALV
3	12	HN274	1"-8 HEX NUT, GALV
4	8	HW5052	1" FALT WASHER, GALV
ITEM	QTY	PART #	DESCRIPTION

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See a more complete and illustrated instruction for installing the hinged Gooseneck by looking at **HINGED GOOSENECK KIT FBHG-1**.

## 5 Install Gooseneck

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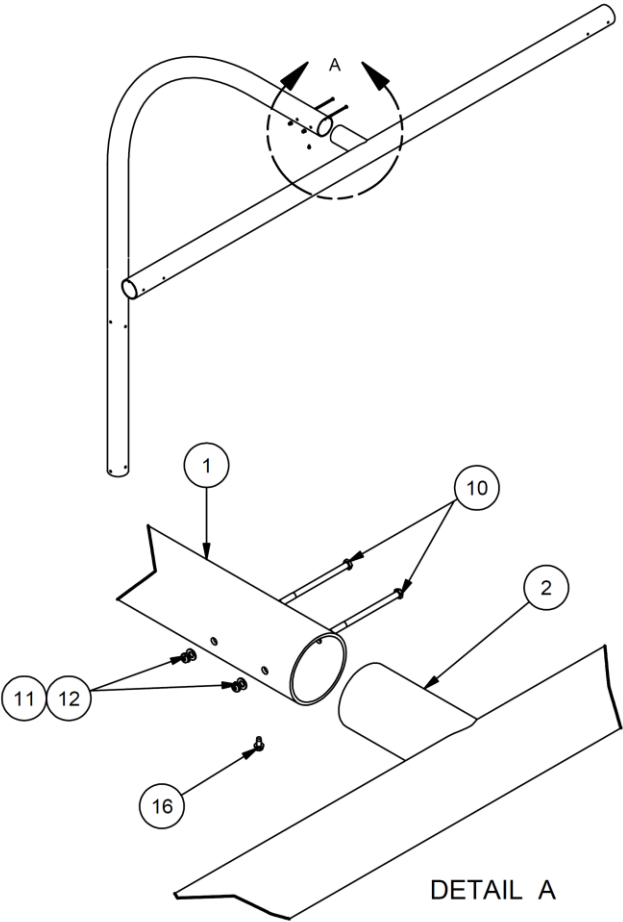


## 6 Install and Level the Crossbar

Follow these steps to install and level the crossbar (refer to **Figure 5 Installing and Leveling Crossbar**)

1. Carefully insert the crossbar nipple into the gooseneck.
  - a. Application of lubricant to crossbar and inside of gooseneck is strongly recommended.
2. Set the depth of the crossbar in the gooseneck such that the front edge of the crossbar is aligned with the inside (field side) edge of the end line. See **Figure 2**.
3. Level the crossbar.
  - a. It is recommended that you fasten a level to the crossbar to quickly and easily verify level after each step.
4. Drill a 5/8" hole in crossbar insert using either of the holes in the gooseneck as a guide.
  - a. Use of a 21/32" transfer punch is strongly recommended.
  - b. It is recommended that you pilot the hole with a 3/16" bit, step up to a 3/8" bit and finish with a 5/8" bit.
  - c. To ensure proper alignment of holes, do not try to drill all the way through both faces of crossbar at once. Instead drill from each side of crossbar and check for level after each drilling operation.
5. Insert a 5/8"-11 x 7.5-inch-long hex head bolt through the hole in the gooseneck and crossbar fitting. Install 5/8-inch washers and 5/8"-11 nuts on the bolts, tighten, and verify the depth and levelness of the crossbar.
6. Drill a second 5/8" hole in the same manner as the first.
7. Verify depth and levelness of crossbar and tighten both nuts as much as possible.
8. Drill two 5/16" holes in the bottom of the gooseneck through the gooseneck and crossbar insert. Drill the holes approximately 3 and 6 1/2-inches from the edge of the gooseneck (where the crossbar inserts). See Figure 5 Item 15
  - a. Check level of crossbar after each drilling operation. If the crossbar has come out of level, re-level and drill a new hole ~1" away.
9. Thread the 3/8"-16 self-tapping screws into the drilled holes.

**Figure 5: Installing and Leveling the Crossbar**



(Quantities Given Per Goal Post)

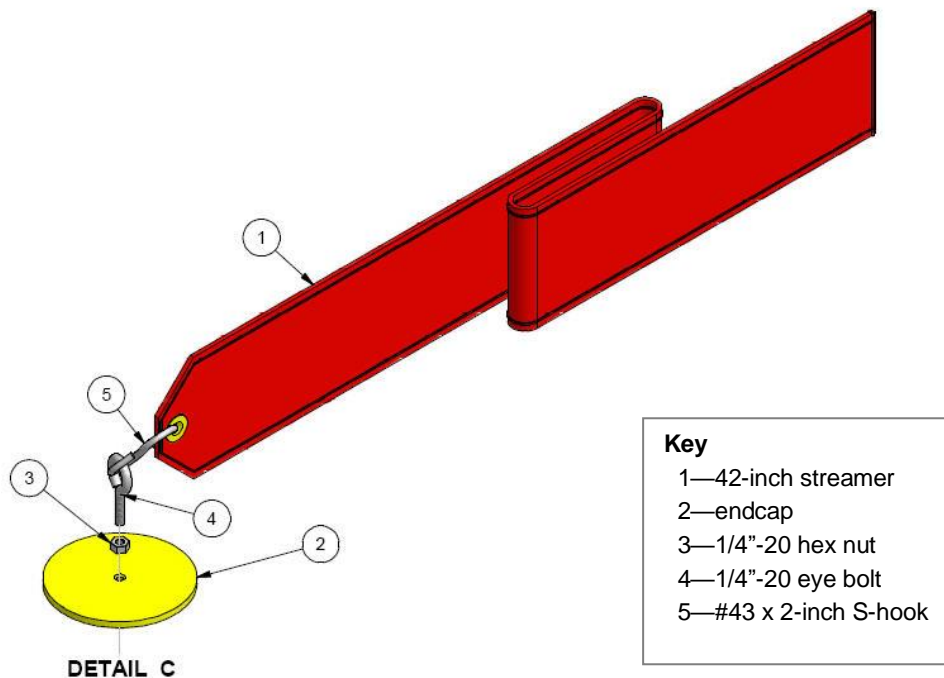
ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	GOOSENECK	11	2	5/8 in FLAT WASHER
2	1	ADJ CROSSBAR	12	2	5/8-11 NYLOCK NUT
10	2	5/8-11 x 7 1/2 HX HD BOLT	16	2	3/8-16 x 1/4 SELF TAPPING

## 7 Install the Wind Streamers

Before installing the uprights, install the wind streamer following these steps (see **Figure 6**).

1. Hook one end of the #43, 2-inch S hook into the streamer eyelet and crimp the hook with pliers .
2. Hook the other end of the S hook into the 1/4"-20 eye-bolt and crimp the hook with pliers.
3. Thread the 1/4"-20 jam nut onto the eye-bolt, and thread the eye-bolt into the upright cap.
4. Tighten the jam nut against the end cap.
5. Repeat the above steps for the other wind streamers.

**Figure 6: Installing the Wind Streamers**



## 8 Install the End Fittings & Uprights

Follow the steps below to install the end fittings and uprights. (See **Figure 7**)

### 8.1 Preliminary Installation of First Upright and End Fitting

1. Insert one end fitting into one end of the crossbar.
  - a. It is recommended that you lubricate the end fitting and the inside of the crossbar with white lithium grease.
2. Rotate end fitting such that the upright insert is pointing downward at about a 45-degree angle.
3. Lift one upright over the upright insert on the end fitting.
4. Install a 1/2-13 x 5-inch bolt, a 1/2" washer and 1/2-13 nut in through the upright and pre-drilled hole in the upright insert.
5. Rotate the end fitting until the upright is vertical and install the anti rotational bolt in the crossbar along with the 1/4-20 x 1/4 in set screw to lock it in position (See Figure 9). It is recommended that you use an Antiseize Lubricant on both the anti rotation bolt and the set screw.
6. The end fittings are adjustable, spaced 23'-4" between uprights for High School play and 18'-6" between uprights for College play. Start by inserting the end fitting into the crossbar to the College position measuring 5 inches between the inside on the upright to the outer edge of the Crossbar.(see Figure 8). This should give you 18'-6" between the inside edges of both uprights suitable for College play.
  - a. Again it is recommended that the end fitting and the inside of the crossbar be lubricated with white lithium grease.
  - b. Use a rubber mallet if necessary to move the upright in or out as needed.
7. Plumb the upright/end fitting in two directions: front to back (perpendicular to goal line) and side to side (parallel to goal line).
  - a. Use the two set screws in the upright to adjust and maintain the plumb of the upright in the direction parallel to the goal line (DO NOT DRILL HOLE IN UPRIGHT INSERT YET).
8. Drill a 1/2" hole in end fitting using the hole in the crossbar closest to the gooseneck as a guide.

- a. Use of a 17/32" transfer punch to center hole is strongly recommended.
- b. It is recommended that you pilot the hole with a 3/16" bit, step up to a 3/8" bit and finish with a 1/2" bit.
- c. To ensure proper alignment of holes, do not try to drill all the way through both faces of end fitting at once. Instead drill from each side of end fitting and check for plumb after each drilling operation.

Insert a 1/2-13 x 7.5-inch-long hex head bolt through the hole in the crossbar and end fitting. Install two 1/2-inch washers and 1/2"-13 nut and tighten.

## **8.2 Installation of Second Upright and End Fitting**

1. Repeat steps 1 through 0 of section 8.1 above for the other end fitting and upright.
2. Confirm level of crossbar and plumbness of both uprights, adjust as necessary.
3. Drill second hole in end fitting in manner described above, using the other hole in crossbar as a guide.
4. Install 1/2-13 x 7-1/2" hex bolt, washers, and nut.
5. Confirm level of crossbar and plumbness of both uprights, adjust as necessary.
6. Drill second hole in upright insert in manner described above, using the remaining hole in upright as a guide.
7. Install 1/2-13 x 5" hex bolt into hole.

## **8.3 Complete Installation of First Upright and End Fitting**

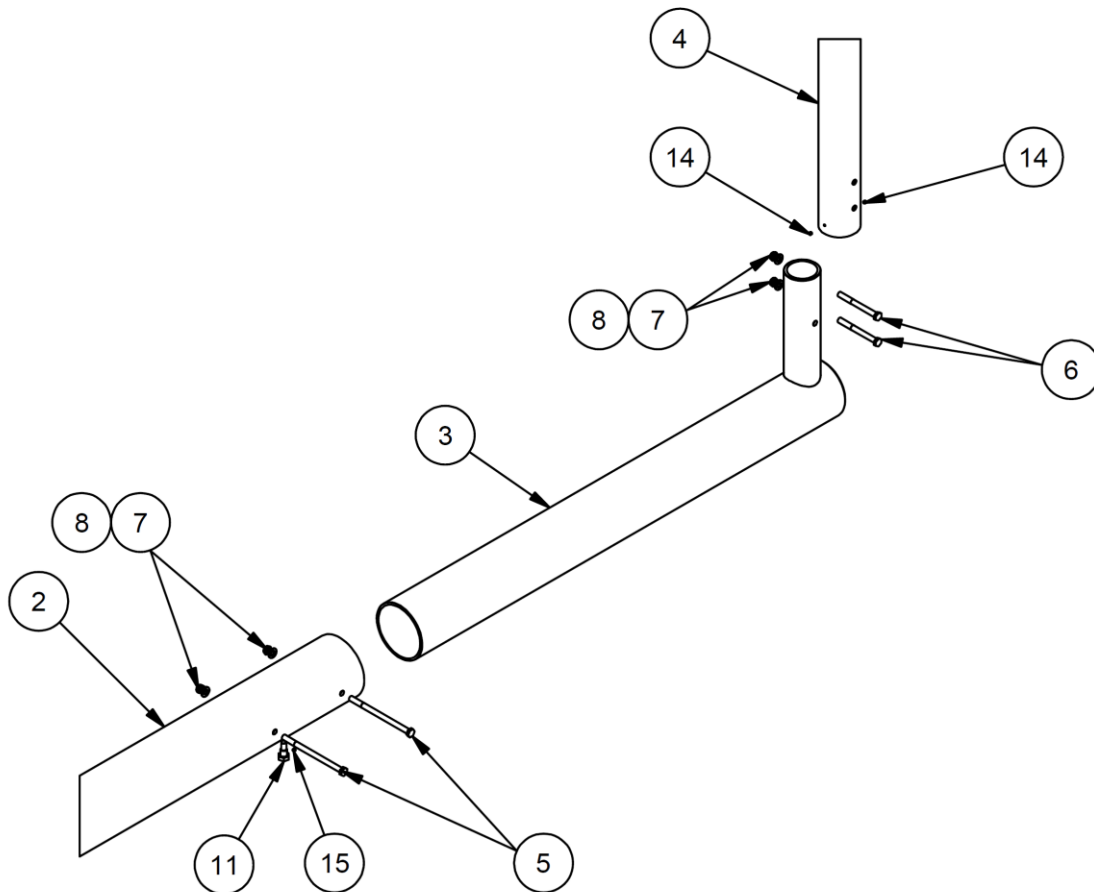
1. Confirm level of crossbar and plumbness of both uprights, adjust as necessary.
2. Repeat steps 3 through 7 in section 8.2 above for other upright and end fitting.
3. Tighten all bolts in end fittings and uprights as much as possible.

## **8.4 Adjust End Fitting to High School Position.**

1. Working with one end fitting at a time, remove the 7 ½ in bolts that were installed to lock the end fitting into place at the College position.
2. Pull the end fitting out so that the inside of the upright measures 34 inches to the outer end of the crossbar (See Figure 8). Note that the anti rotation bolt will hold the upright vertical but the end fitting will go out further than the 34 inches.

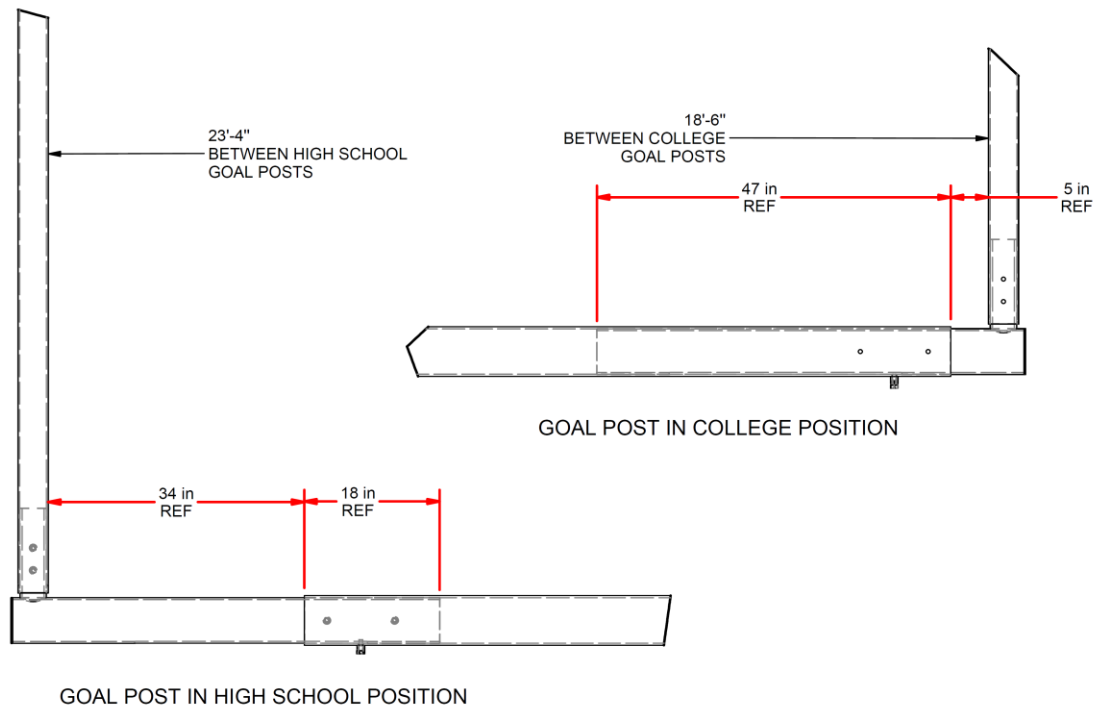
- a. Use a rubber mallet if necessary to get the end fitting started or to make small adjustments.
3. Check that the upright is still plumb once at the 34 inch position. Follow the procedures in Section 8.1 Steps 8 and 9 to install the 7 ½ inch long bolts at the High School position.
4. Now go to the other end and install the upright to the High School position repeating the procedures as outlined in Section 8.4 numbers 1 through 3.

**Figure 7: Installing End Fittings and Uprights**

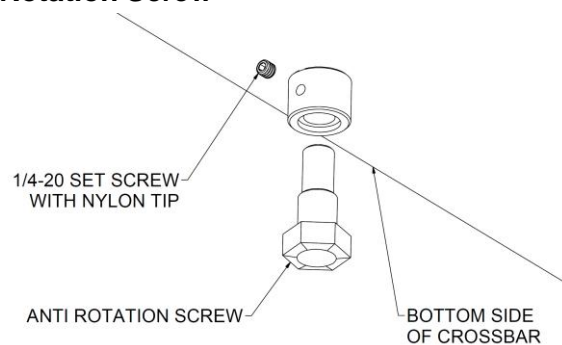


ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
2	1	ADJ CROSSBAR	7	8	½-13 NYLON LOCK NUT
3	2	END FITTING	8	8	½ in FLAT WASHER
4	2	20' UPRIGHT	11	2	ANTI ROTATION BOLT
5	4	½-13 x 7 ½ in HX HD BOLT	14	4	¼-20 x 1/4 in SET SCREW CONE POINT
6	4	½-13 x 5 in HEX HEAD BOLT	15	2	¼-20 x 1/4 in SET SCREW NYLON TIP

**Figure 8 Upright Spacing**



**Figure 9 Anti-Rotation Screw**



**NOTE:** It is recommended that you use an Antiseize Lubricant on both the anti rotation bolt and the set screw.