# ***Auto Rotisserie Plans***


Matt & Suzie Kline – Owners
Red Wing Steel Works
1526 South Park St.
Red Wing, MN 55066
USA

Phone: 612-584-9353
Email: redwingsteelworks@gmail.com
Website: http://redwingsteelworksplans.com

# Auto Rotisserie Building Notes

I have built and used many different auto rotisseries. The exact replica of this one is among the best and cheapest to make. This is a “no frills” rotisserie, after all the trial and error building different features these seem to be the best.

The rotisserie is made up of 7 different main parts and many different pieces to make up the main parts. The main part names are as follows: End frame, Hanger bracket, Pivot point, Pivot arm, Mounting arms, Body mount bracket, And Body mount. I have made drawings of all the individual parts as well as the main parts.

All .75” nuts should be welded on at least 3 sides and that is if you are a good welder, if not they should be welded all the way around. It has been my experience that using smaller nuts not only dents the tube you are pressing against but over many uses of the rotisserie the nuts can become stripped out. Not to mention more warping during welding making them hard to use.

Many of the parts are designed with ease and usability in mind. For instance The body mounts and body mount brackets are optional. If you don’t think you need them for easy hook up for your car then don’t build them. Just drill the hole in the end of the mounting arms that I call out in the part drawings. The caster plates are obviously optional and only needed if you want to be able to move the rotisserie around. The caster plates are a for a standard 6” caster. If you are going to use a different size I would recommend getting the caster first and making the plates to fit your casters.

The gusset plates are more for added welding surface than they are for structural integrity (except for the pivot point gusset plate, it is for both reasons). If you want to make the gusset plates bigger that is fine, but I wouldn’t make them any smaller.

The space between the hanger bracket and the end frame is enough in case you wish to add a hydraulic jack to raise and lower the pivot point up and down the end frame vertical tube. I didn’t draw this option because there are so many different sizes and styles of hydraulic jacks out there I would never be able to guess which one you would be using. I never felt that a hydraulic jack was necessary unless you have ceiling clearance problems in your garage.

The .188” thickness is a standard tube size that not only makes the rotisserie heavy duty but also makes all the tubes slide inside one another quite nicely. I wouldn’t use lighter tube because of strength reasons as well as the amount of slop in between mating parts.

You will notice in the prints that I call out some weird hole sizes. I drill all my holes 1/32” bigger than the bolt I use to make life easier down the road. There is nothing wrong with making the holes exact size or 1/16” bigger. It all depends on what drill bits you already have. If I call for a .813” hole and you only have a 3/4” bit by all means use it instead of going out and buying a new bit. If you have a 7/8” bit, use it, you get the idea. If I call for a through hole that means all the way through the other side of the tube.

You will notice on some of the 4 view drawings that some of the views are out of proportion with the others. This is for clarity and to give you the biggest view possible for standard paper from your printer. Please note that drawings are not to scale, so don’t measure off the drawings. there is enough information on each part to build each part. If you have any problems figuring something out, just look at another print that has that part on it or a picture view. This rotisserie was drawn with common sense in mind, it is not rocket science. If there is something really important I made a note of it on the drawing or building notes page, otherwise it is no big deal.

# Material list

End frames

2 - 72” x 2.5” x 2.5” x .188” square tube

2 - 50” x 2.5” x 2.5” x .188” square tube

2 - 18” x 2.5” x 2.5” x .188” square tube

4 - 17” x 2” x 2” x .188” square tube

2 - 4” x 4” x .25” flat

6 - 4.5” x 4” x .25” flat

Hanger brackets

2 - 60” x 2.5” x 2.5” x .188” square tube

2 - 31” x 2.5” x 2.5” x .188” square tube

4 - 4” x 4” x .25” flat

Pivot Points

2 - 16” x  3” x 3” x .188” square tube

2 - 10” x 3” schedule 80 black pipe

2 - 4” x 4” x .25” flat

Pivot arms

2 - 12” x 3” x 3” x.188” square tube

2 - 10.5” x 2.5” schedule 80 black pipe

Mounting arms

4 - 10” x 3” x 3” x .188” square tube

4 - 24” x 2” x 2” x .188” square tube

Body mount brackets

4 - 5” x 2.5” x 2.5” x .188” square tube

4 - 4” x 2” x 2” x .188” square tube

Body mounts

4 - 12” x 1.5” x 1.5” x .188” square tube

4 - 5” x 3” x .25” flat

Nuts & bolts

30 - .75” nuts

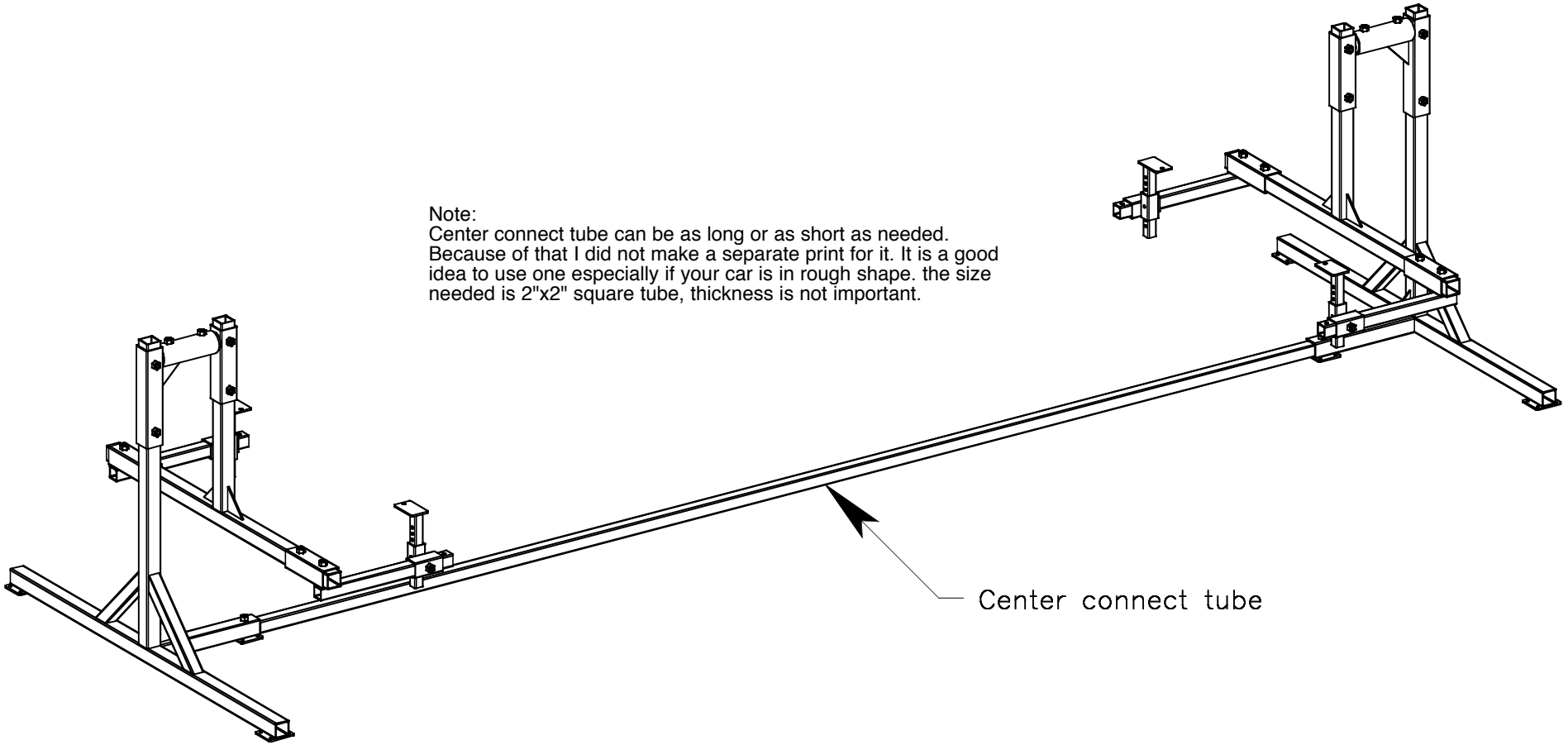
30 - .75” x 1.5” bolts

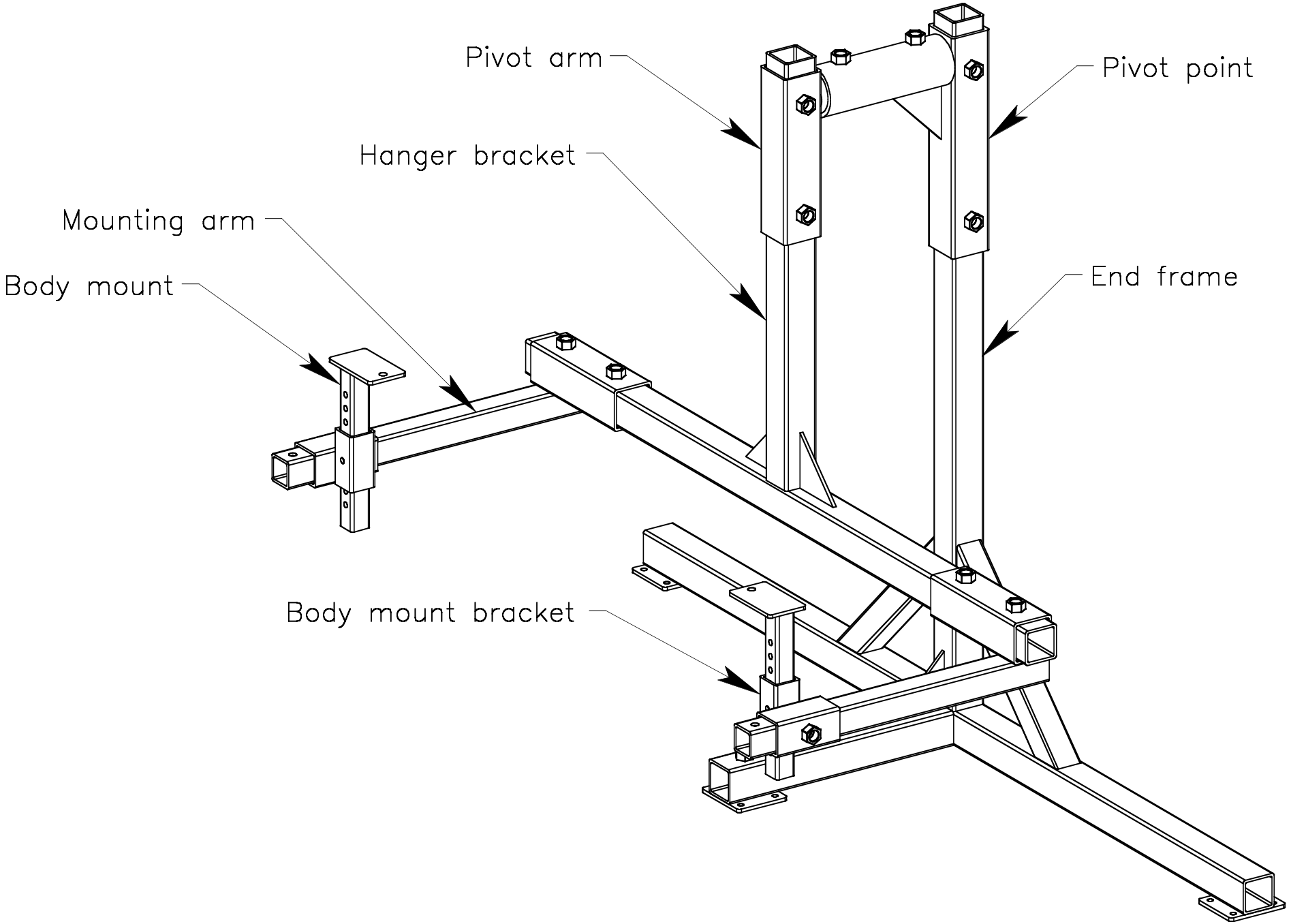
28 - .375” nuts

4 - .375” x 2.5” bolts

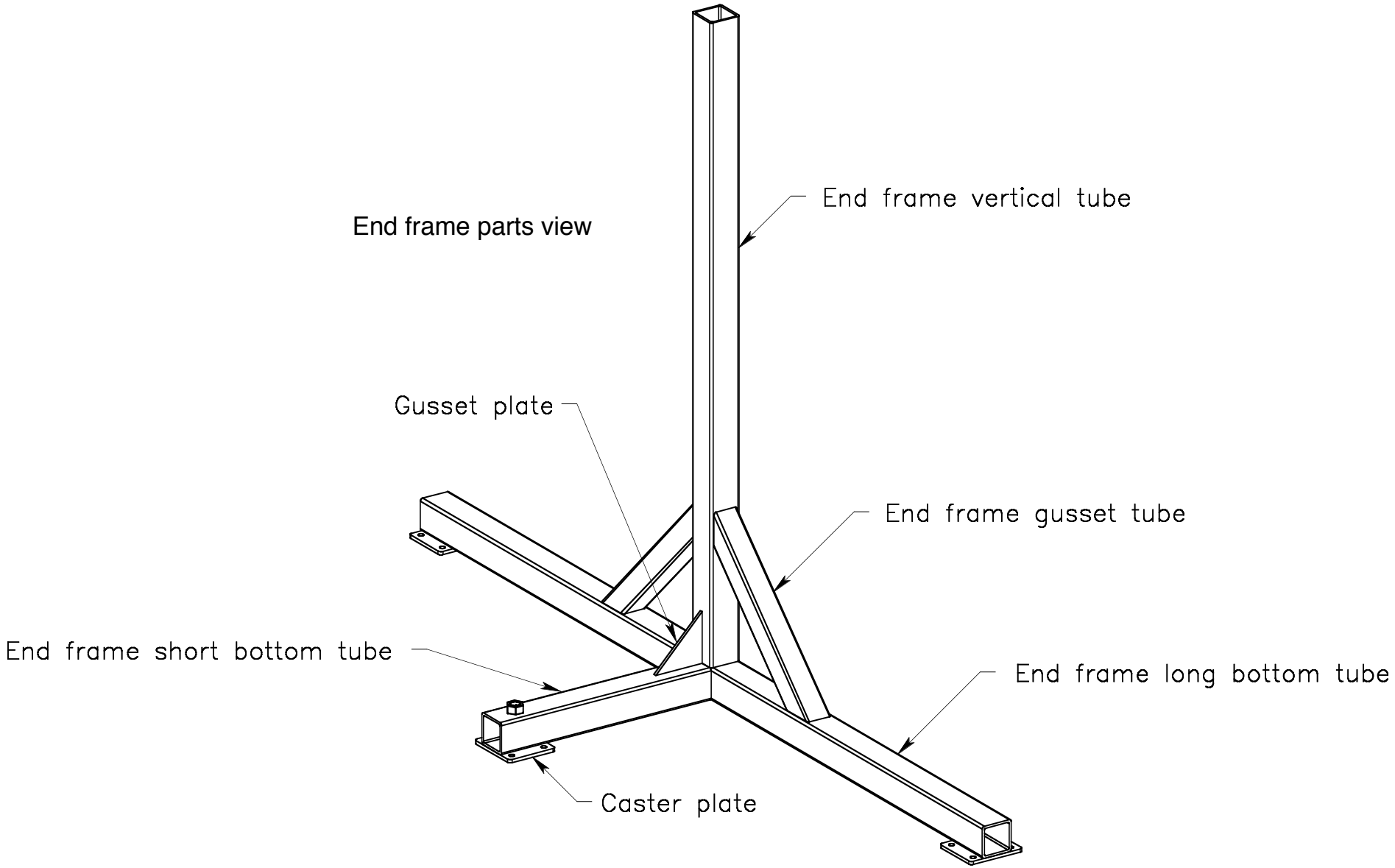
24 - .375” x 1” bolts (Casters)

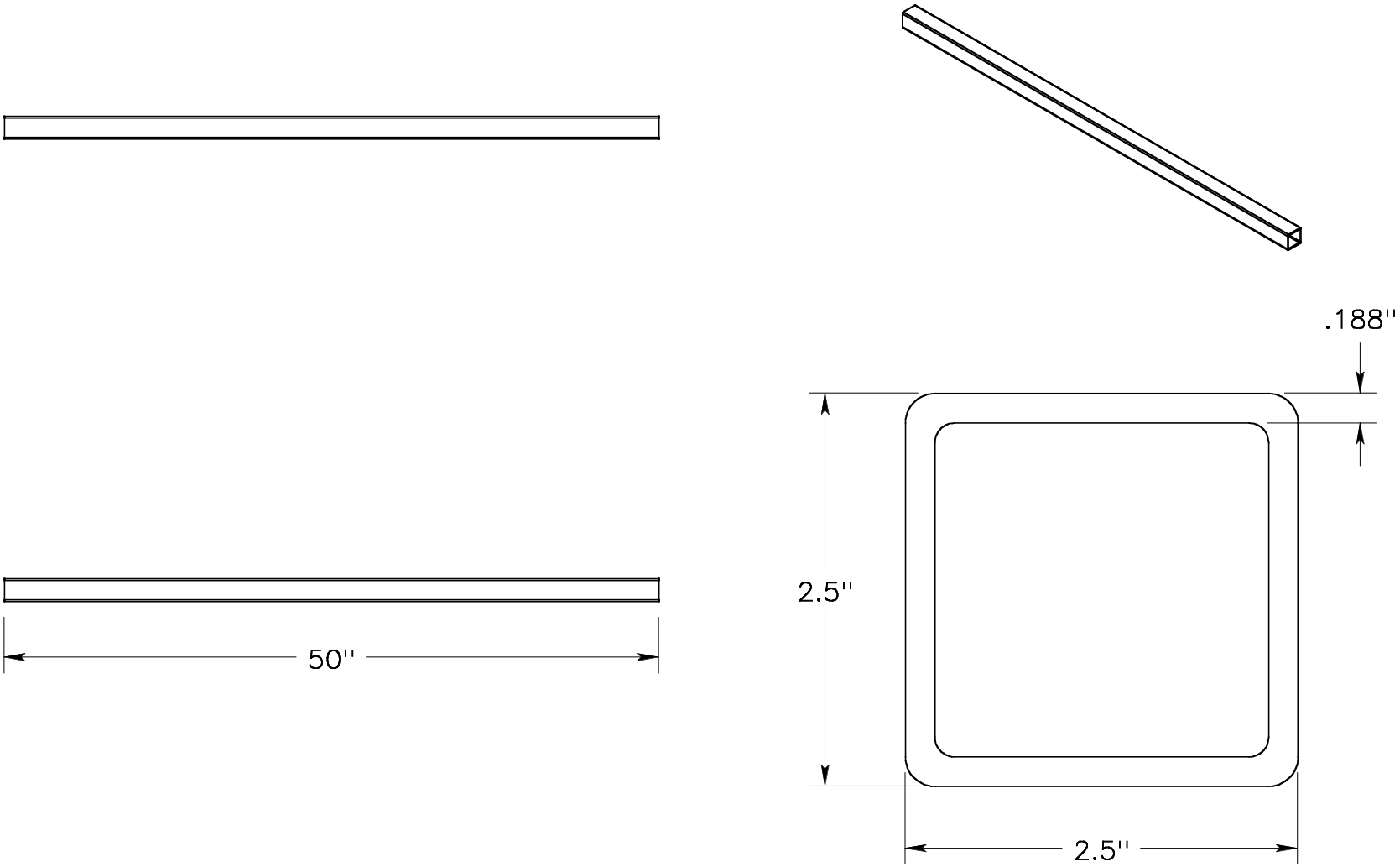
Note:
Center connect tube can be as long or as short as needed. Because of that I did not make a separate print for it. It is a good idea to use one especially if your car is in rough shape. the size needed is 2"x2" square tube, thickness is not important.



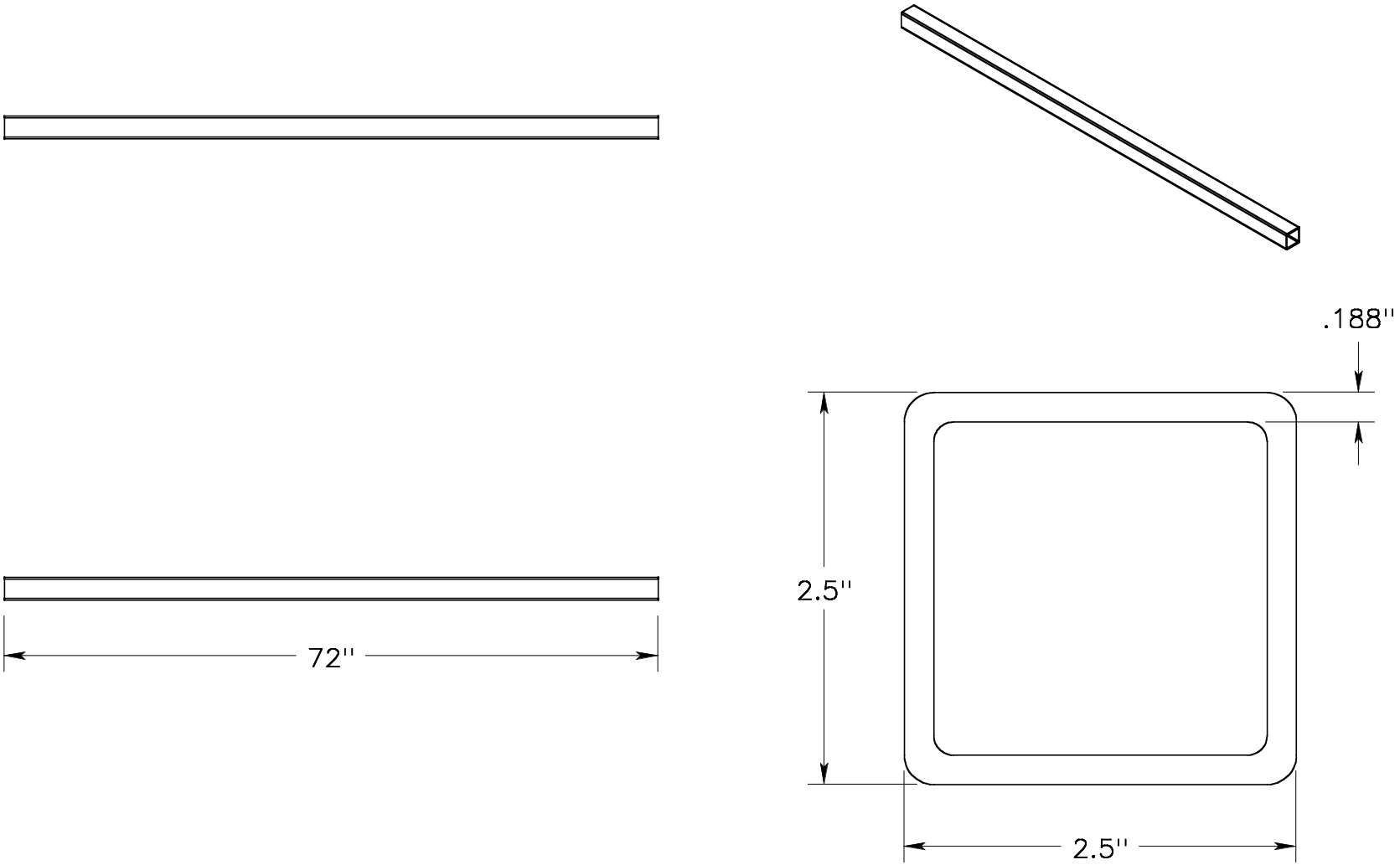

Pivot arm
Pivot point
Hanger bracket
Mounting arm
Body mount
End frame
Body mount bracket

End frame parts view

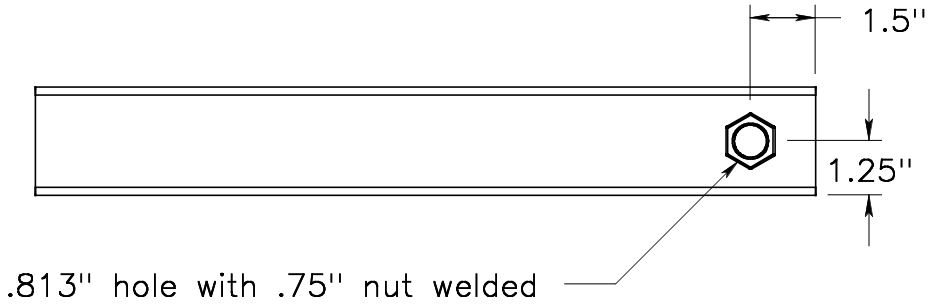


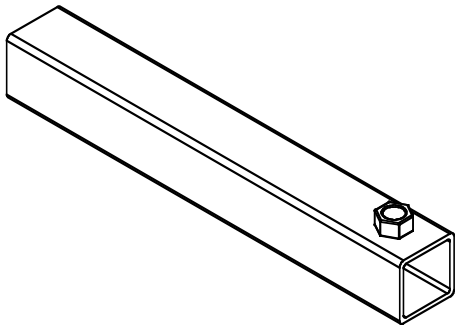


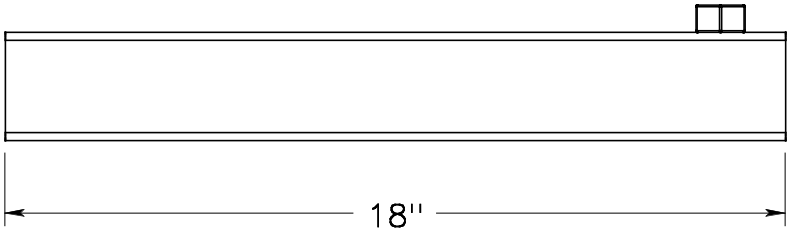

End frame vertical tube 4 views Quantity: 2

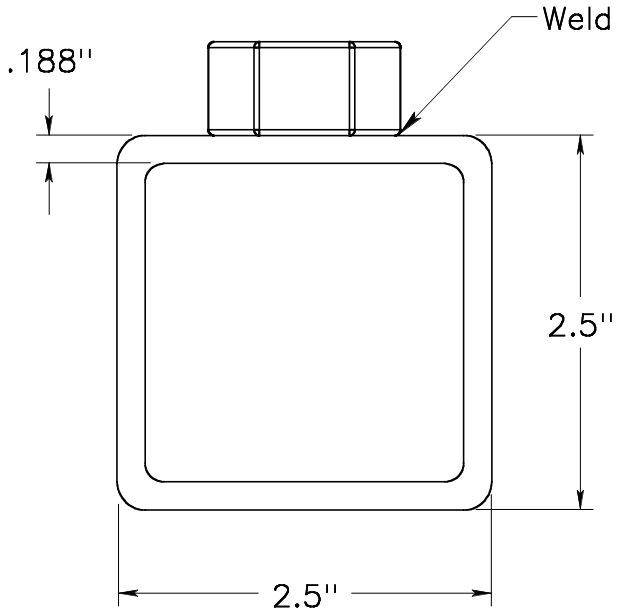



End frame long bottom tube 4 views Quantity: 2

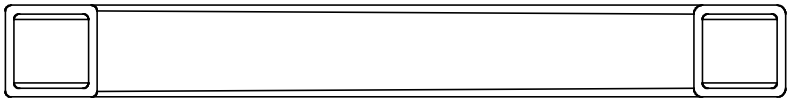


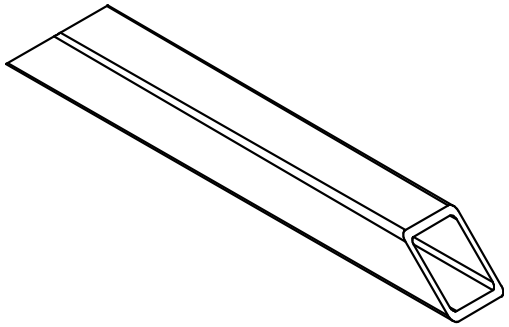



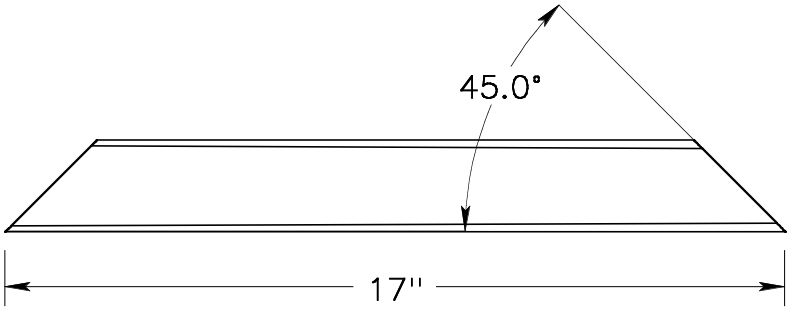


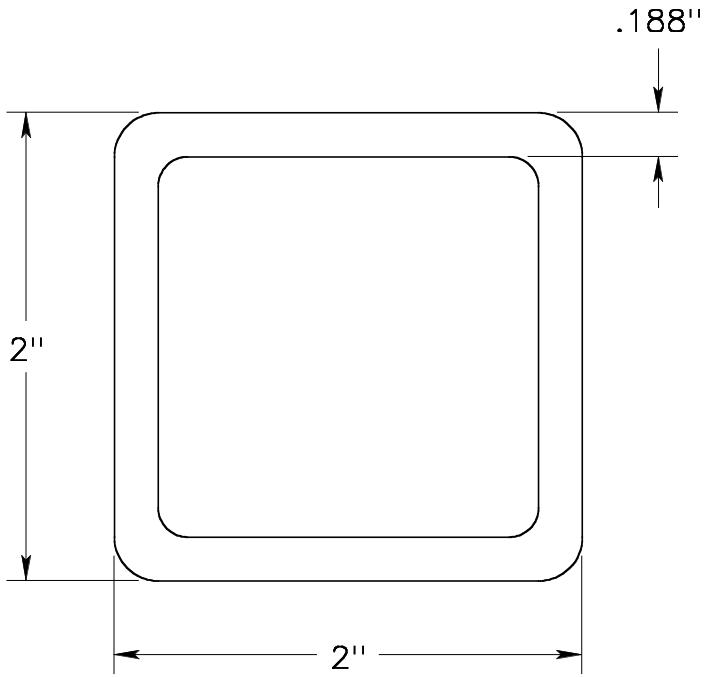




End frame short bottom tube 4 views Quantity: 2

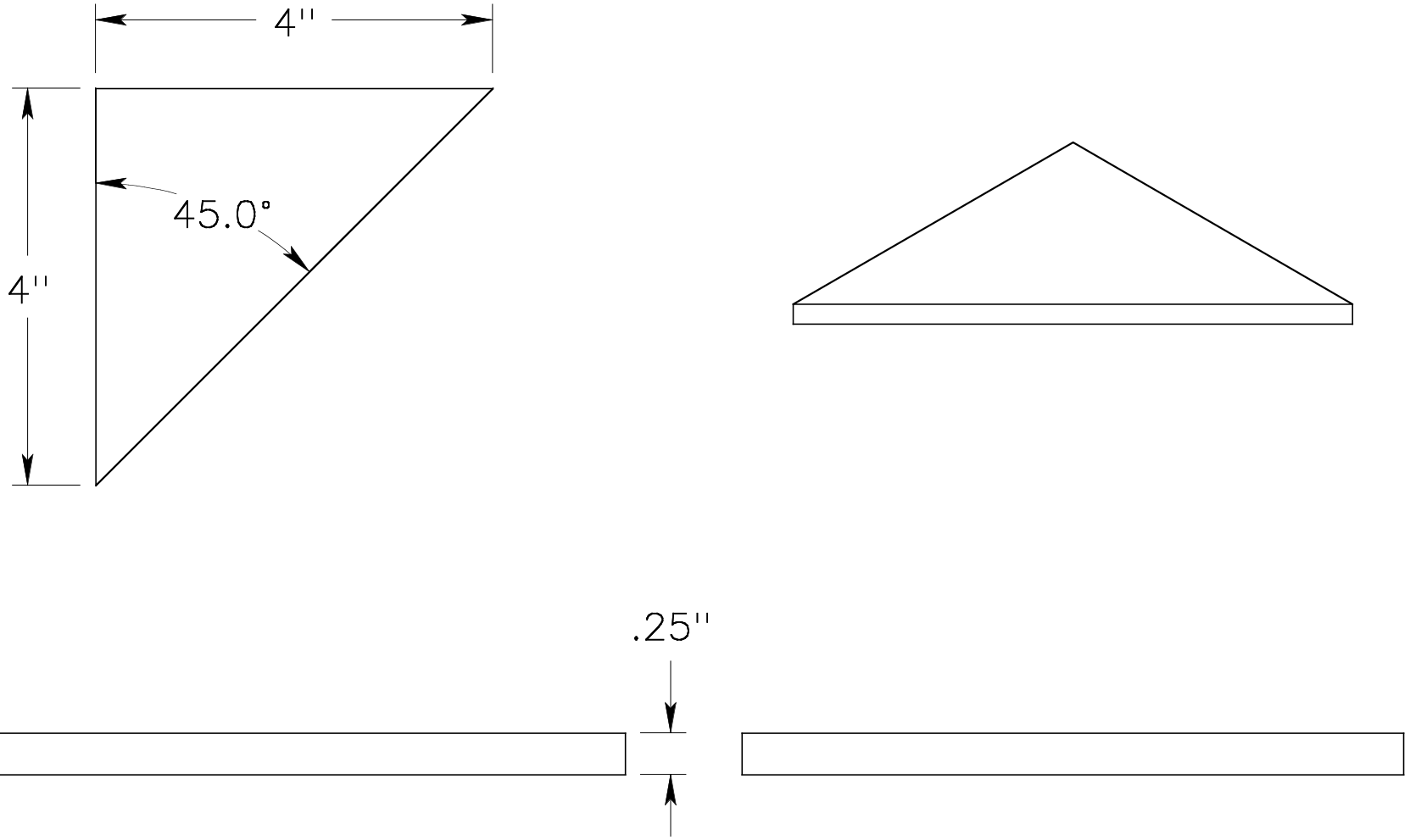




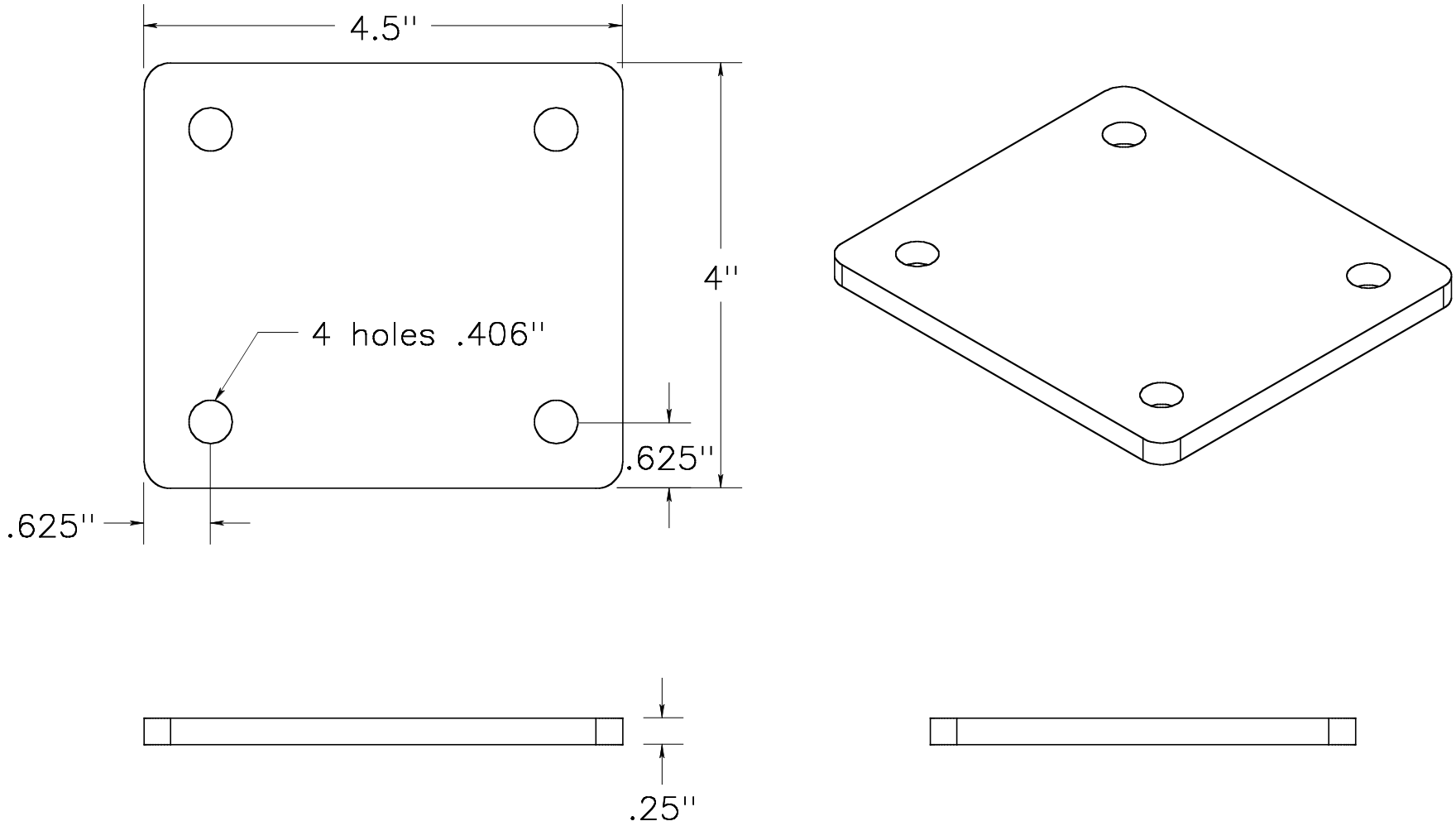


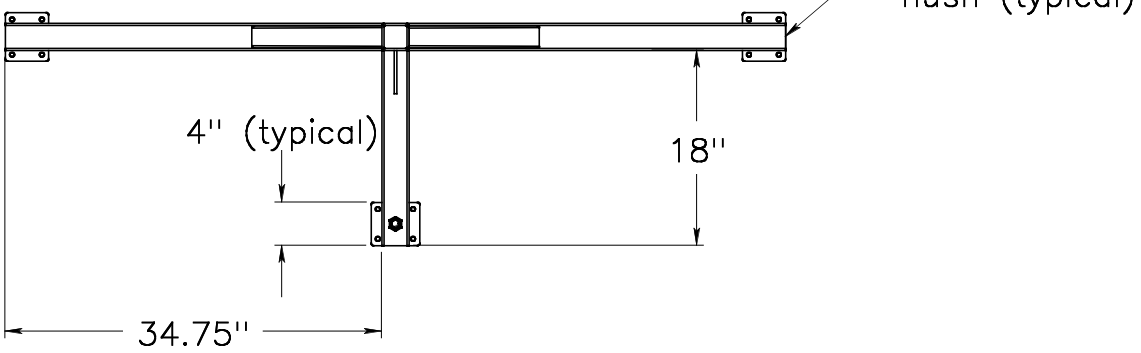

End frame gusset tube 4 views Quantity: 4

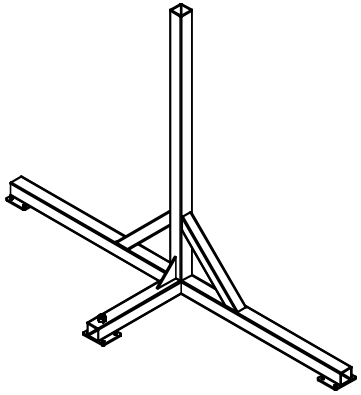


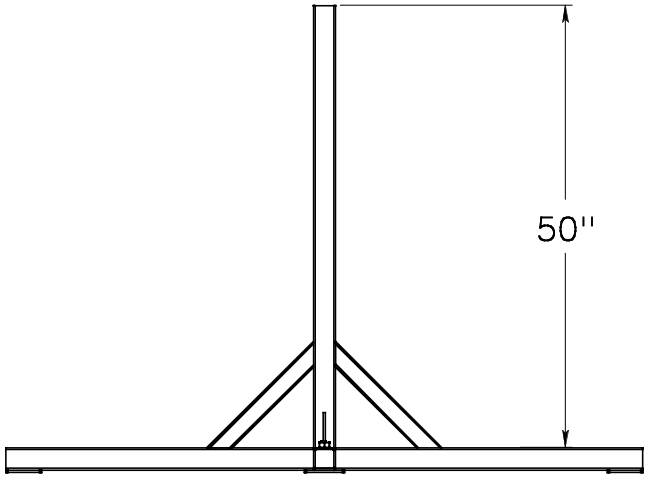

Gusset plate 4 views Quantity: 8



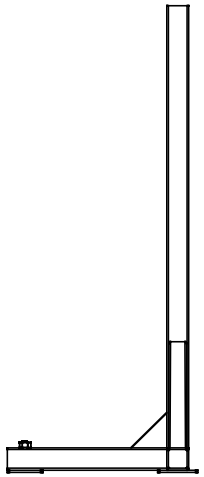

Caster plate 4 views Quantity: 6



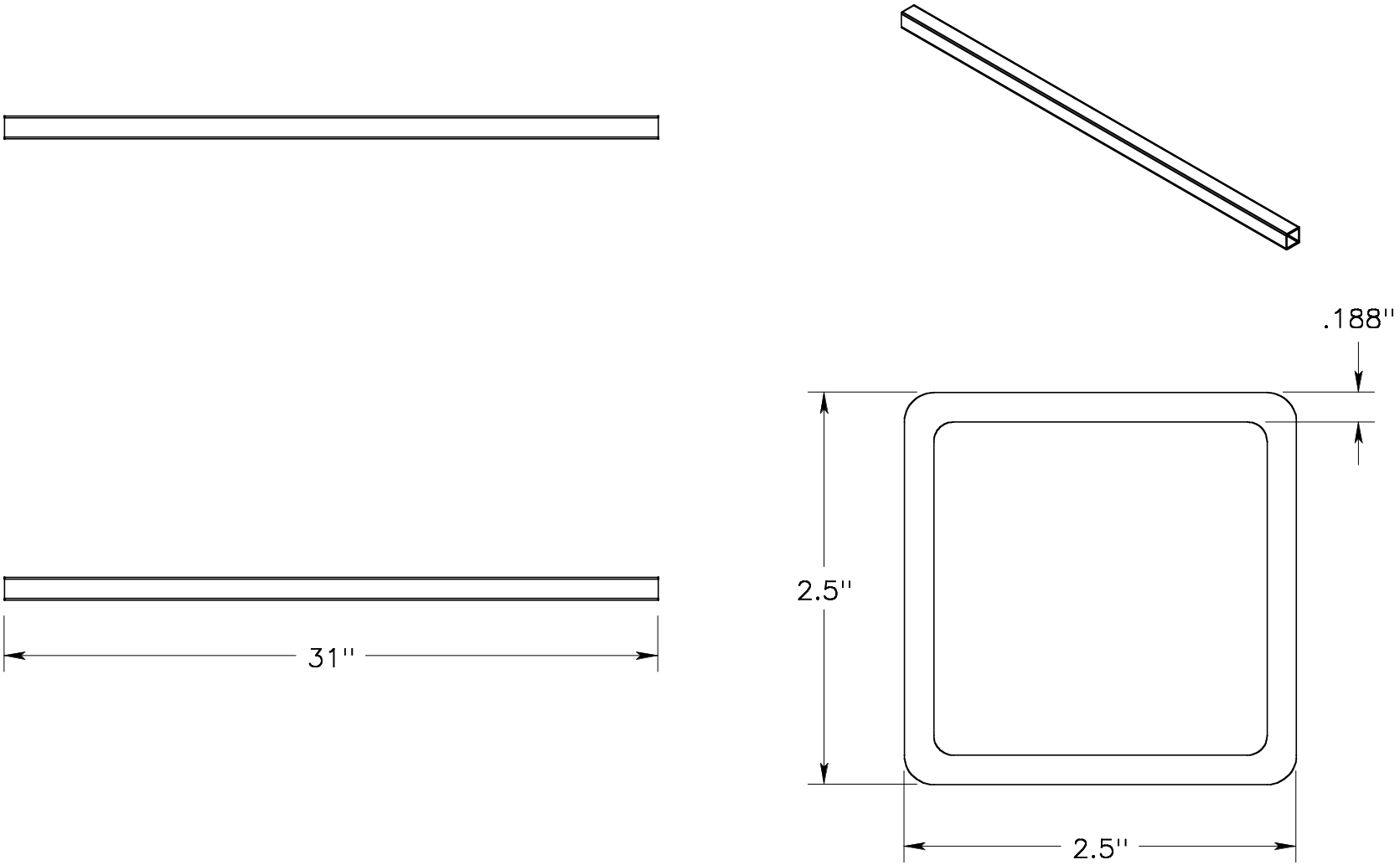





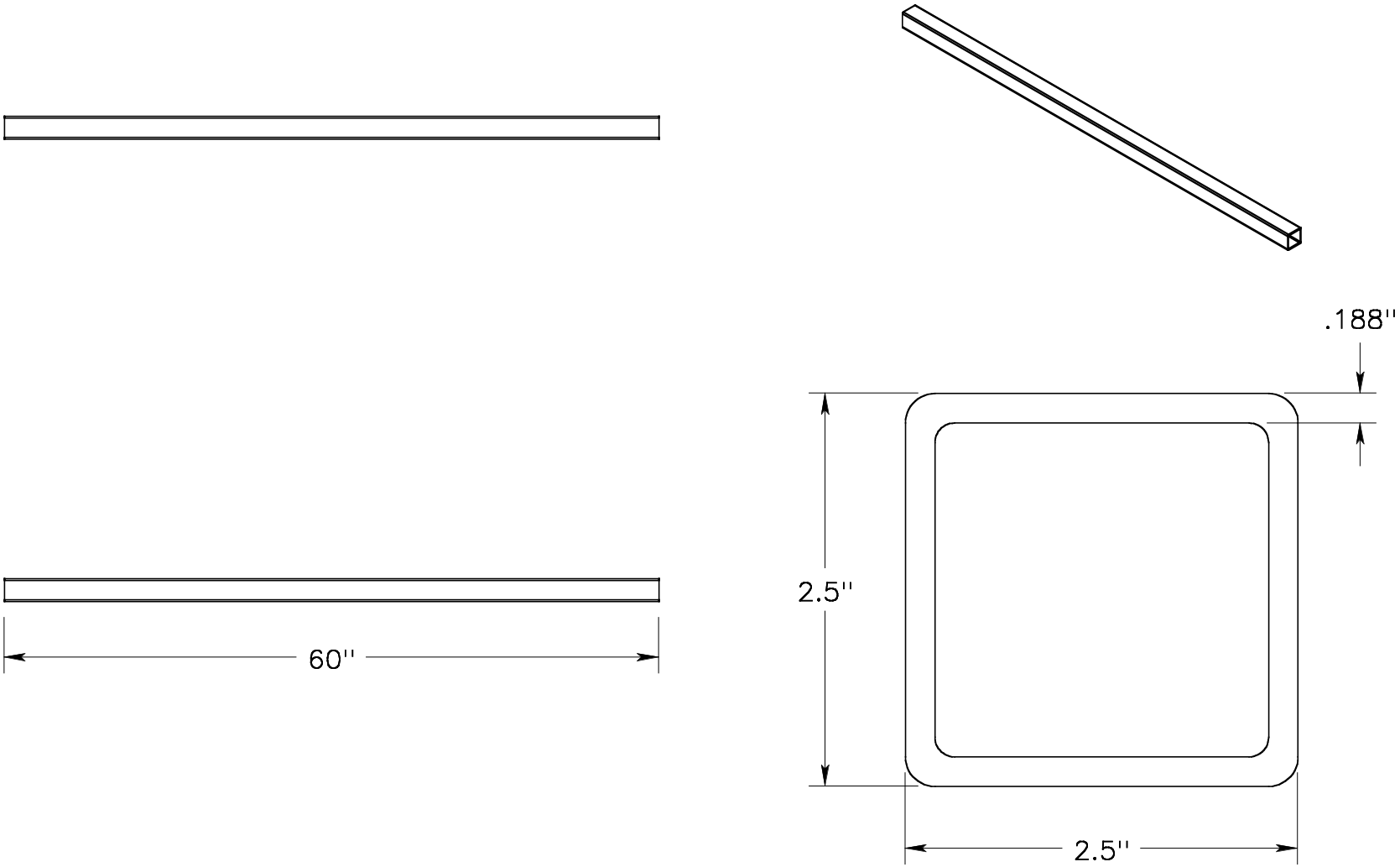

Note:
Everything gets welded all around, eccept for the caster plates. 2 sides will be enough for those.



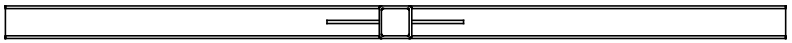
End frame 4 views Quantity: 2

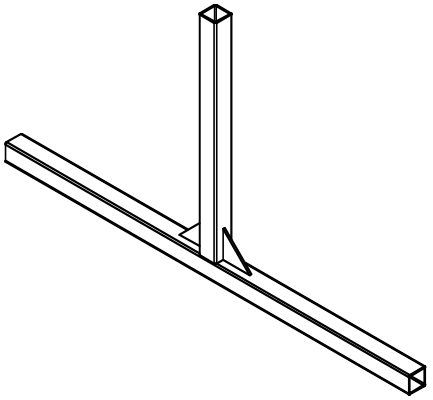


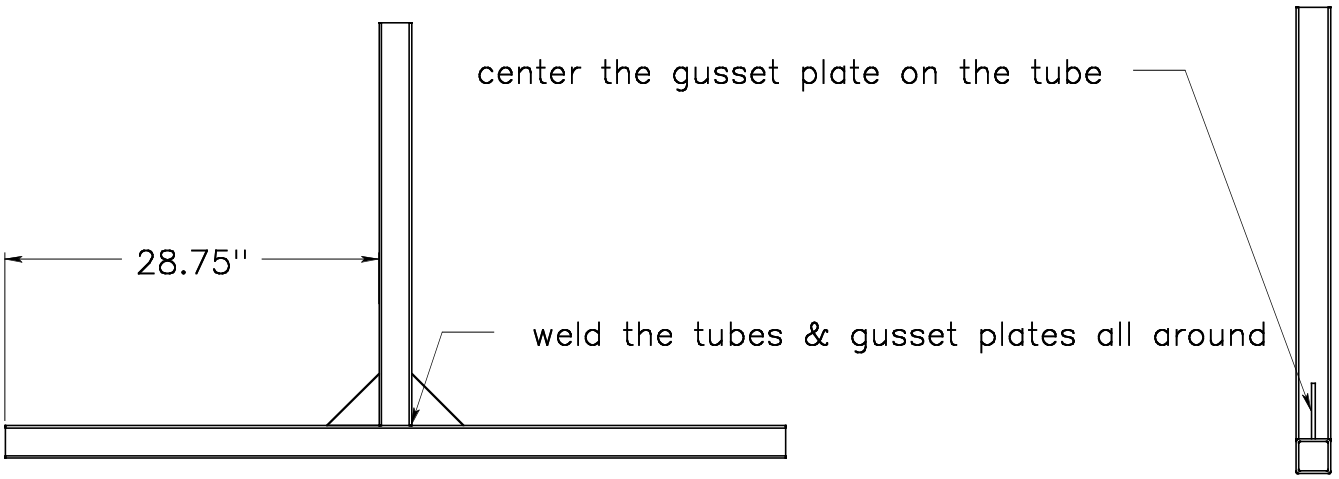

Hanger bracket vertical tube 4 views Quantity: 2



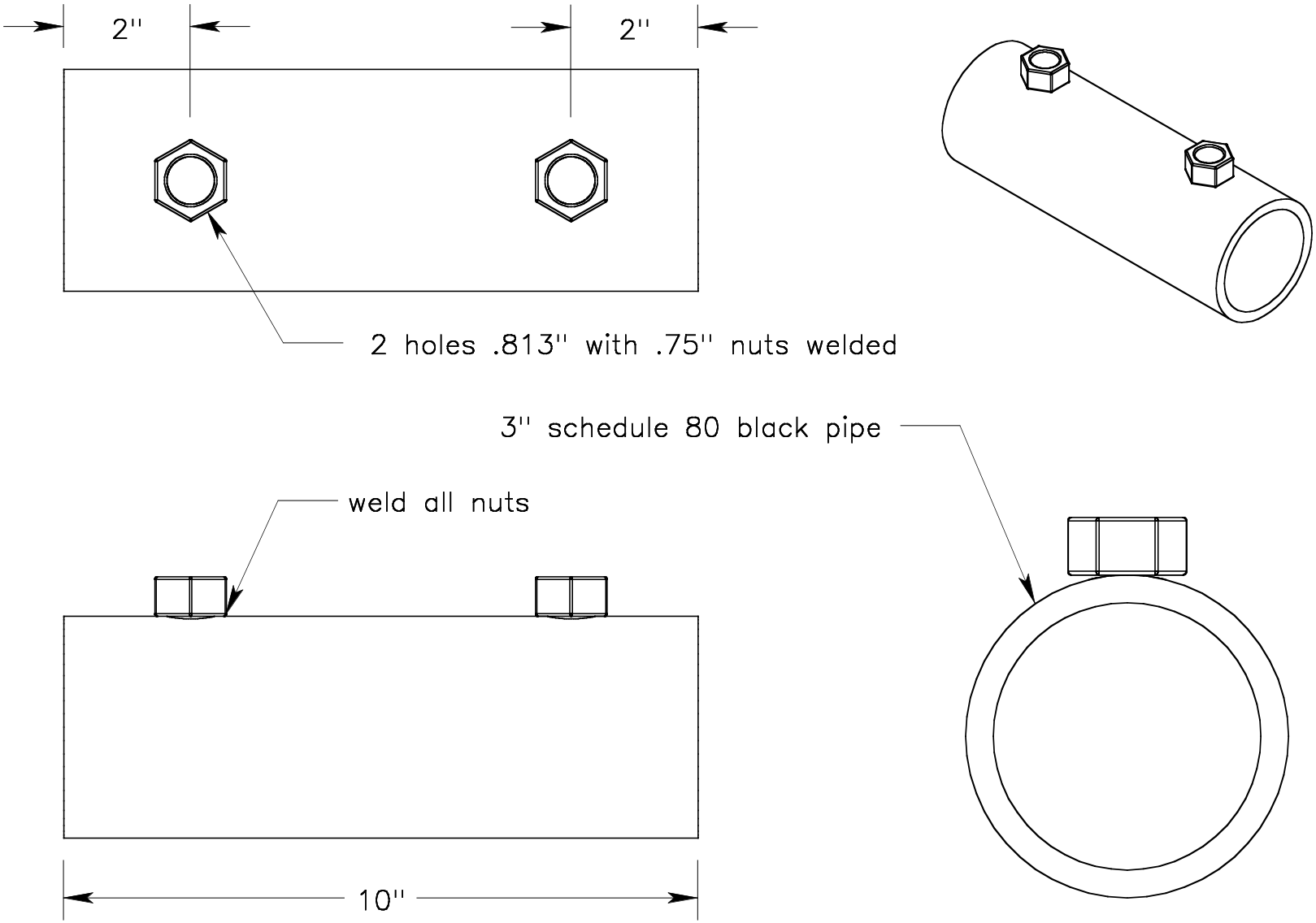

Hanger bracket horizontal tube 4 views Quantity: 2



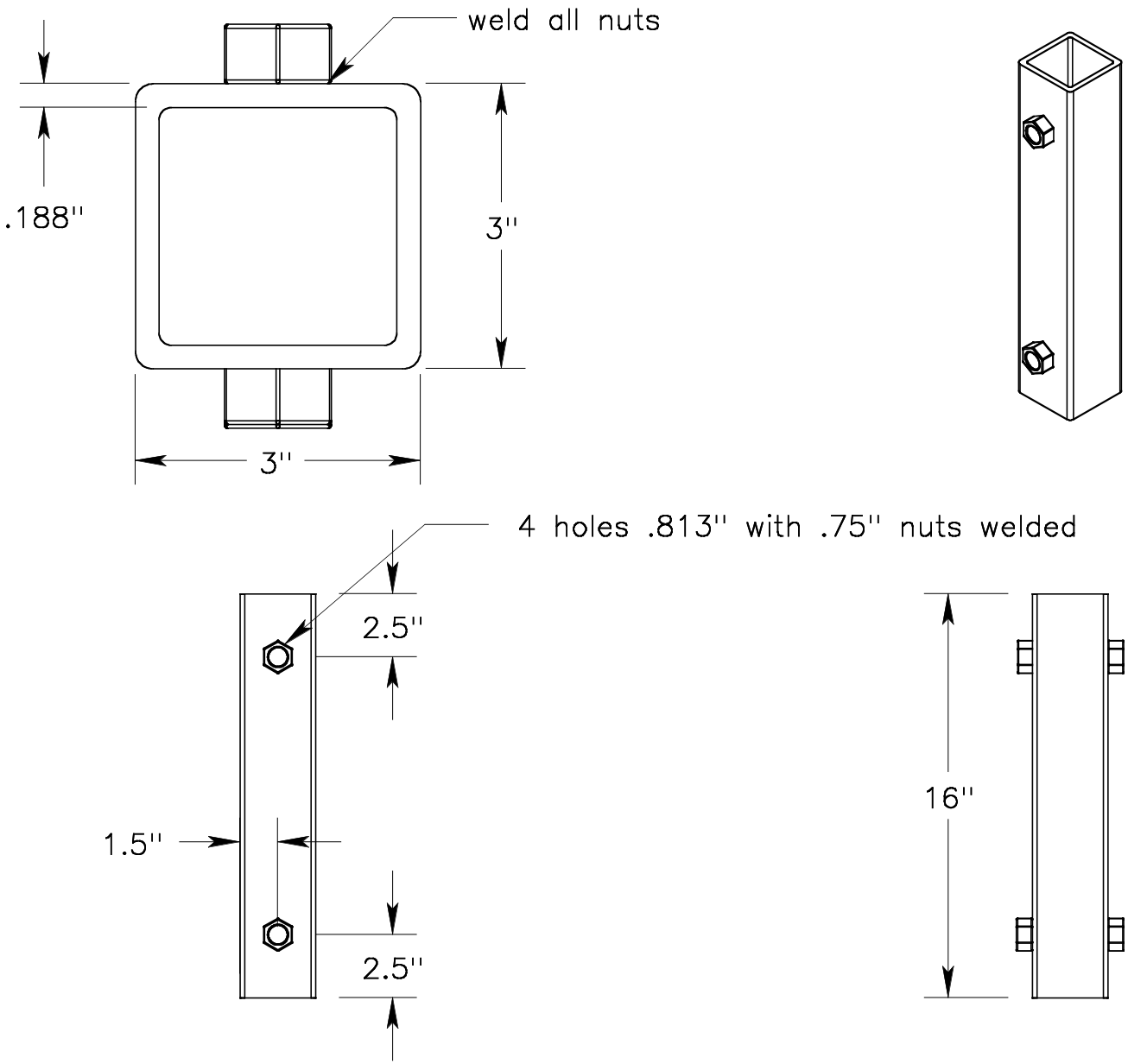




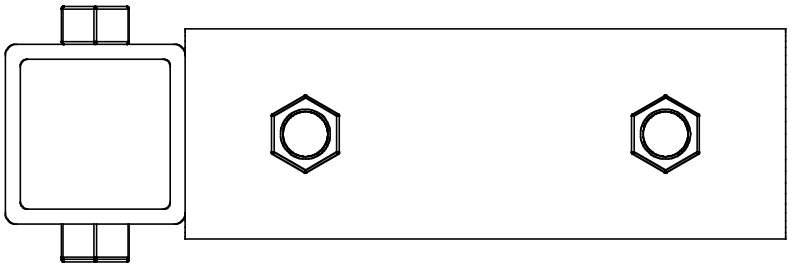

Hanger bracket 4 views Quantity: 2

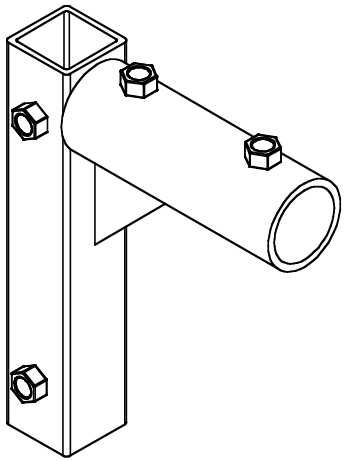


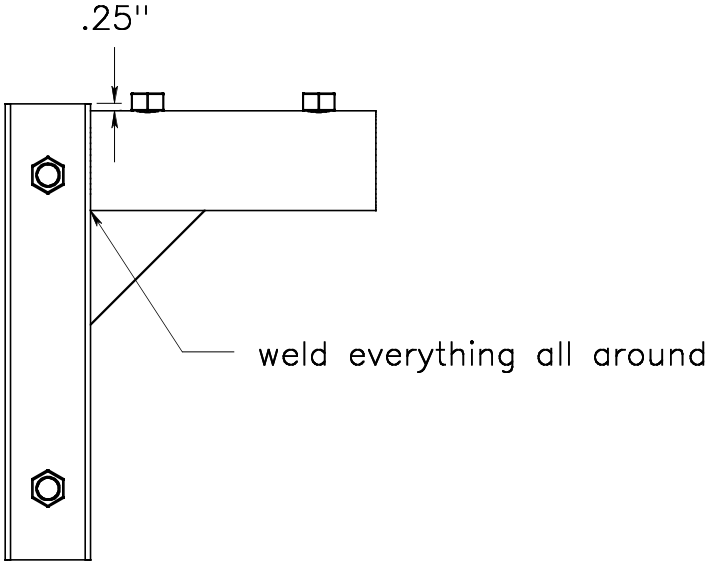

Pivot point pipe 4 views Quantity: 2

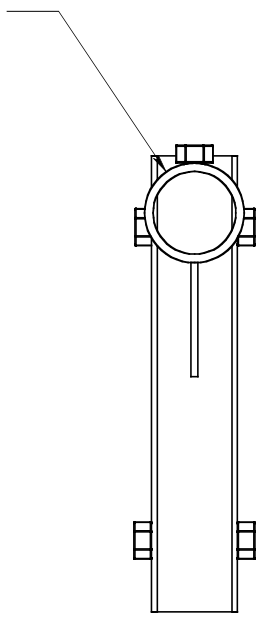



Pivot point tube 4 views Quantity: 2

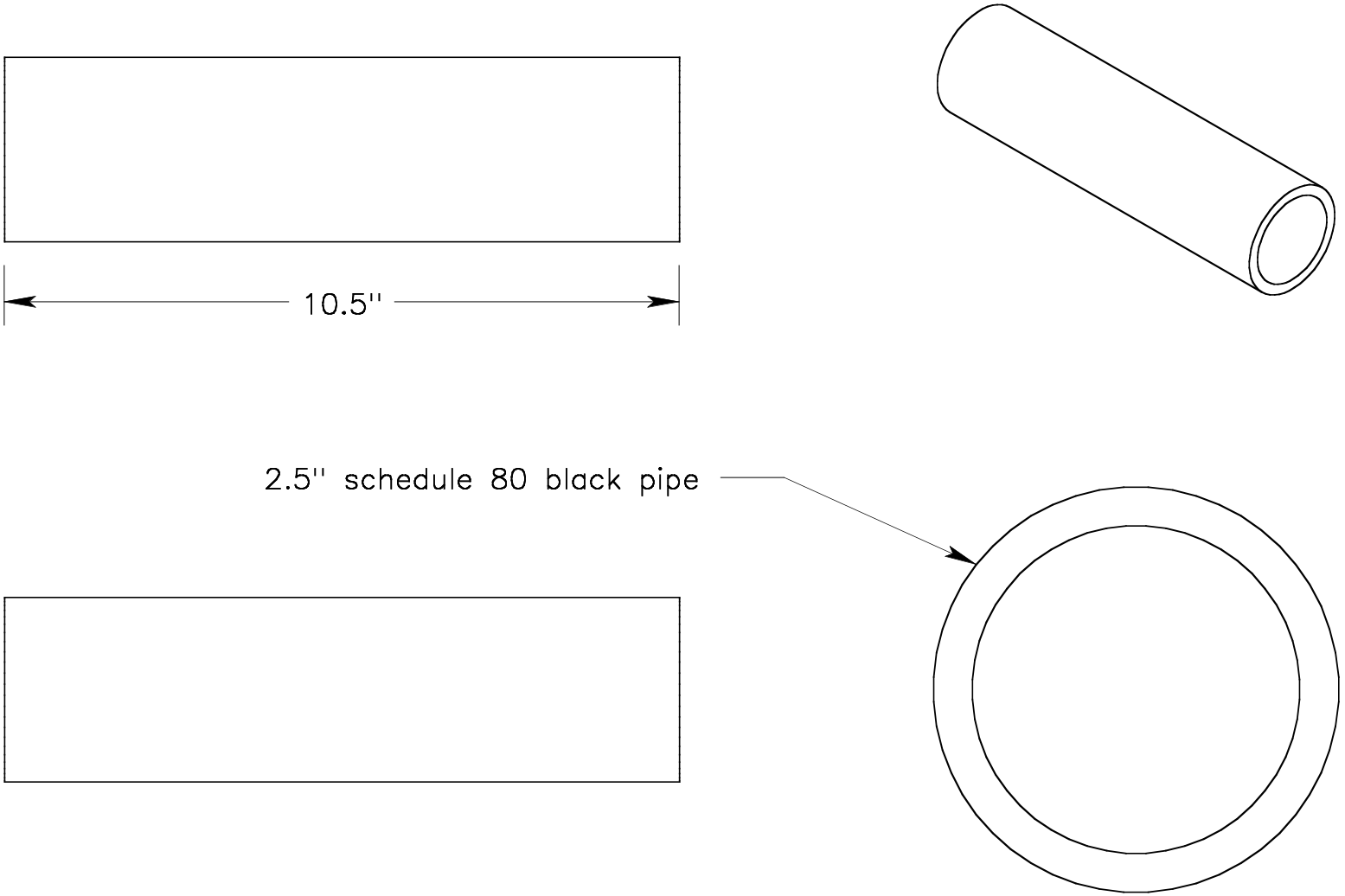




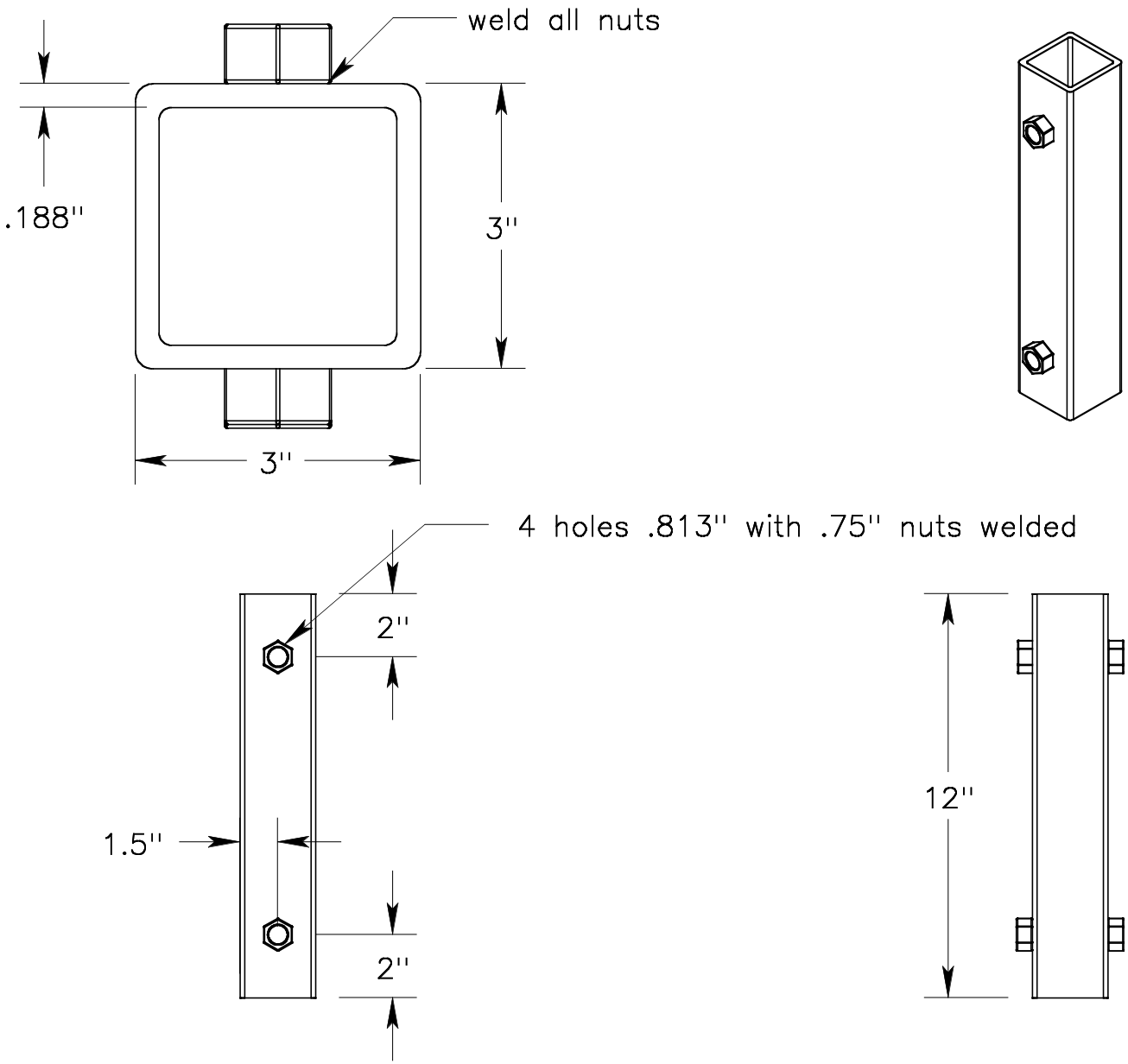


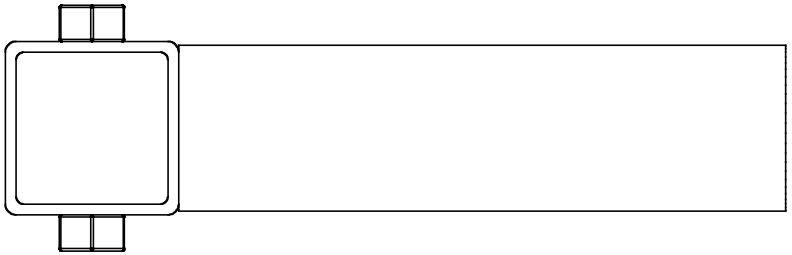

Pivot point 4 views Quantity: 2

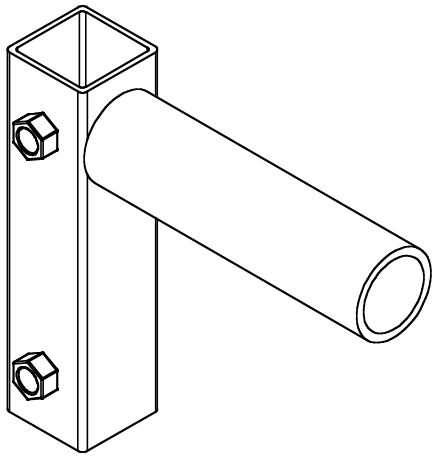


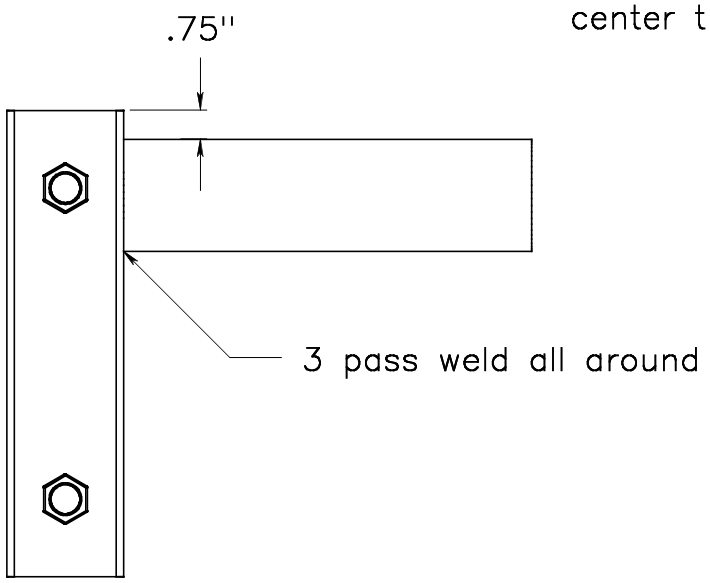

Pivot arm pipe 4 views Quantity: 2

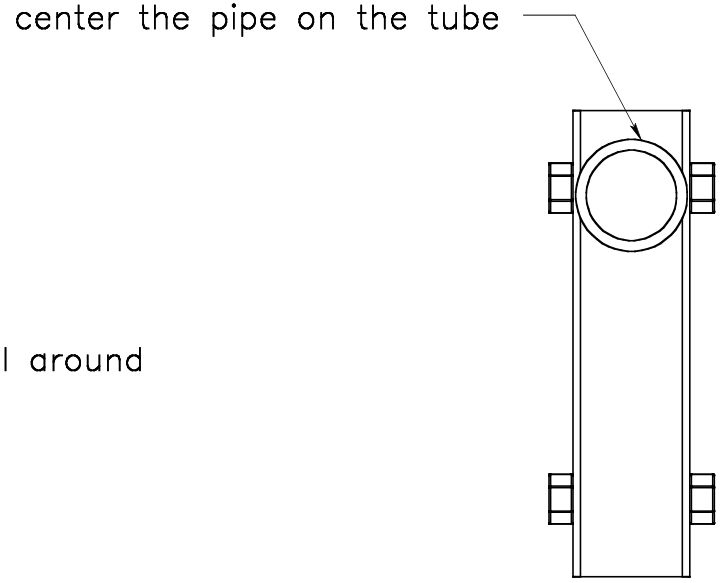



Pivot arm tube 4 views Quantity: 2

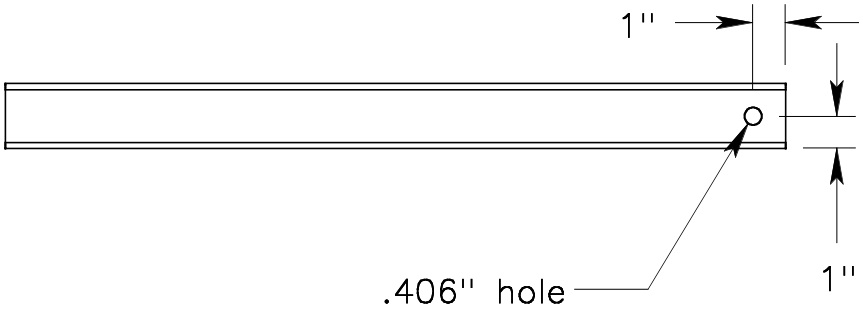


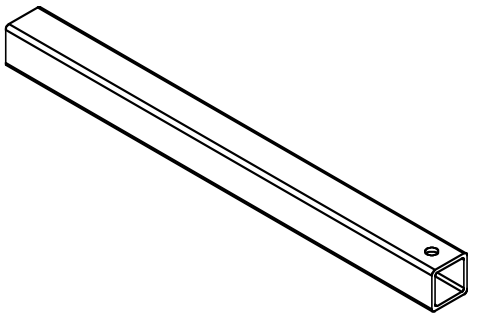


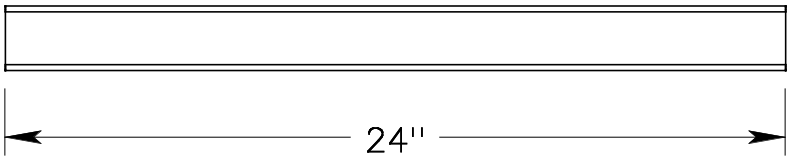


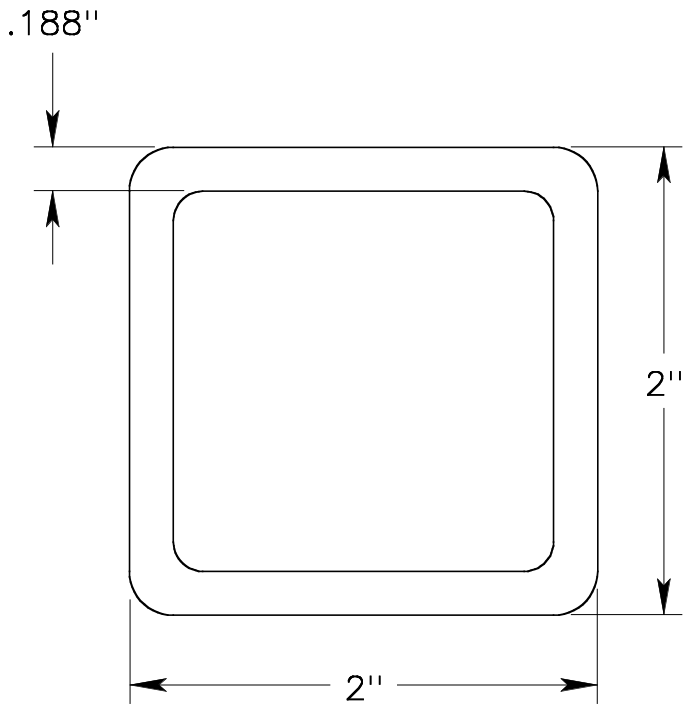




Pivot arm 4 views Quantity: 2

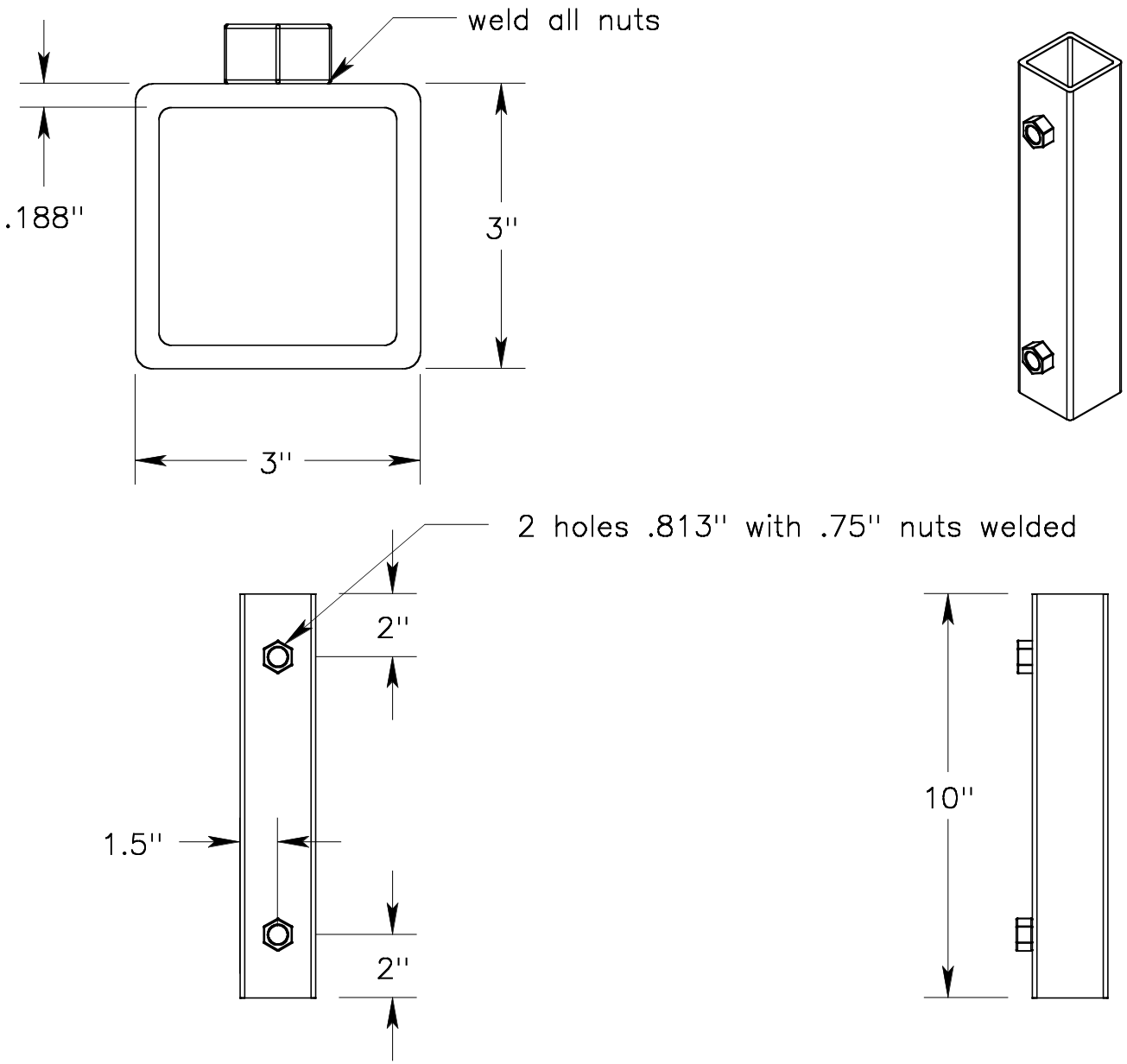


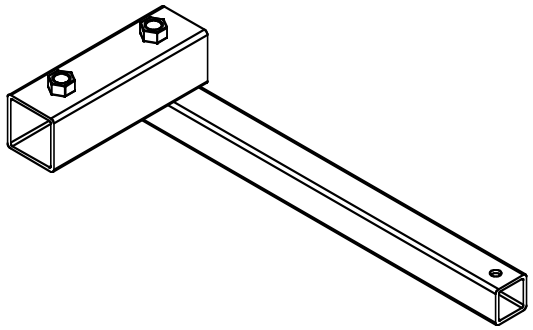


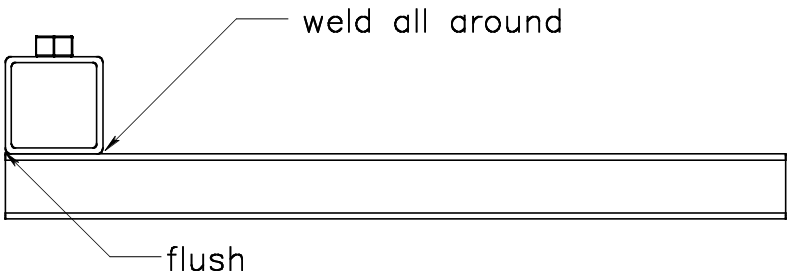



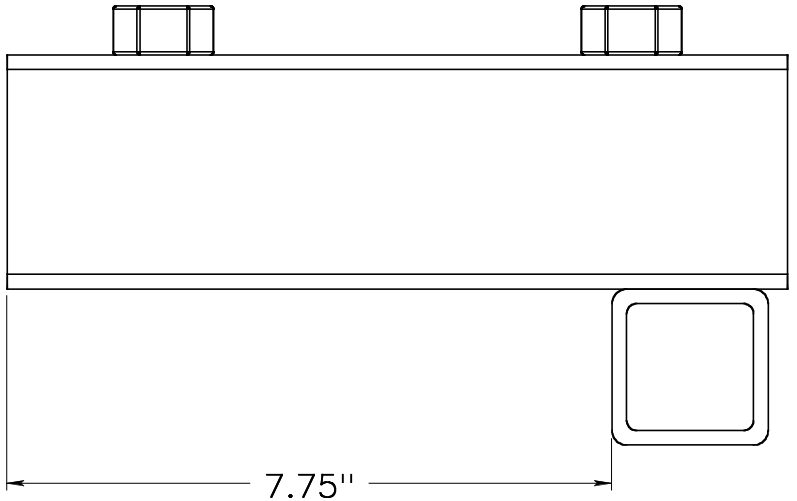

Mounting arm long tube 4 views Quantity: 4



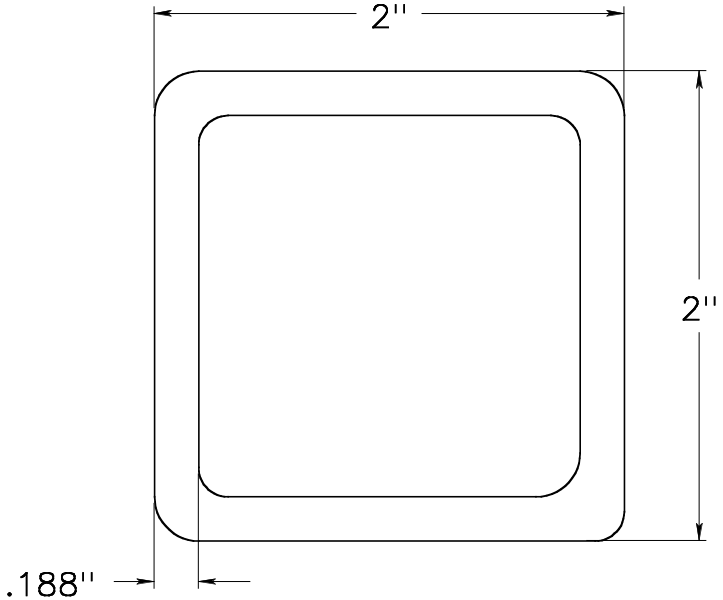

Mounting arm short tube 4 views Quantity: 4

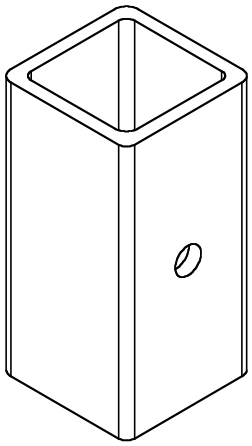


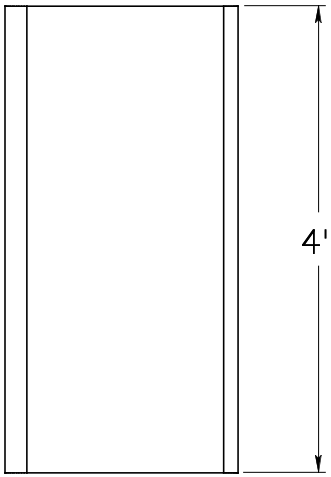


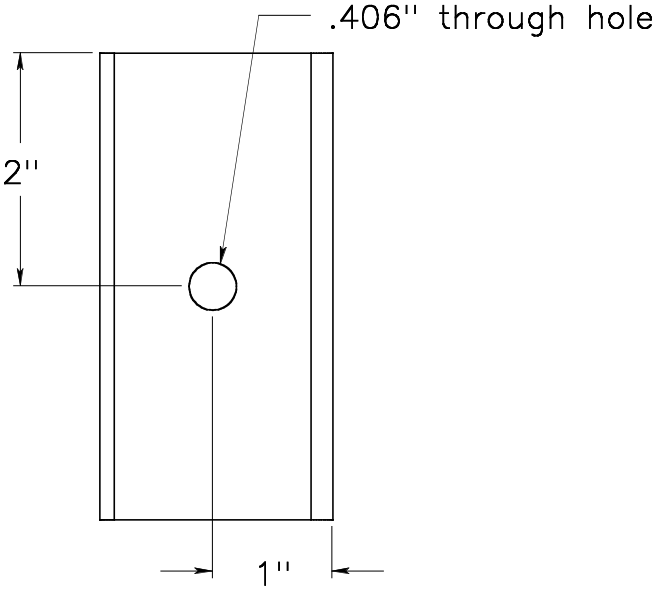




Mounting arms 4 views Quantity: 4 (2 right hand) (2 left hand)

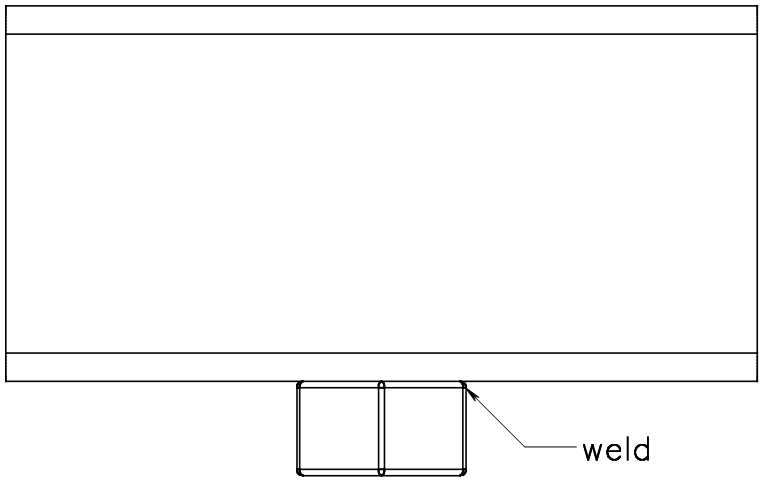


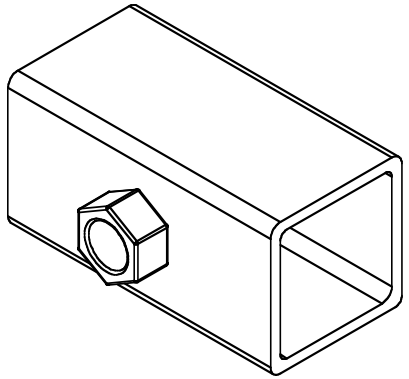



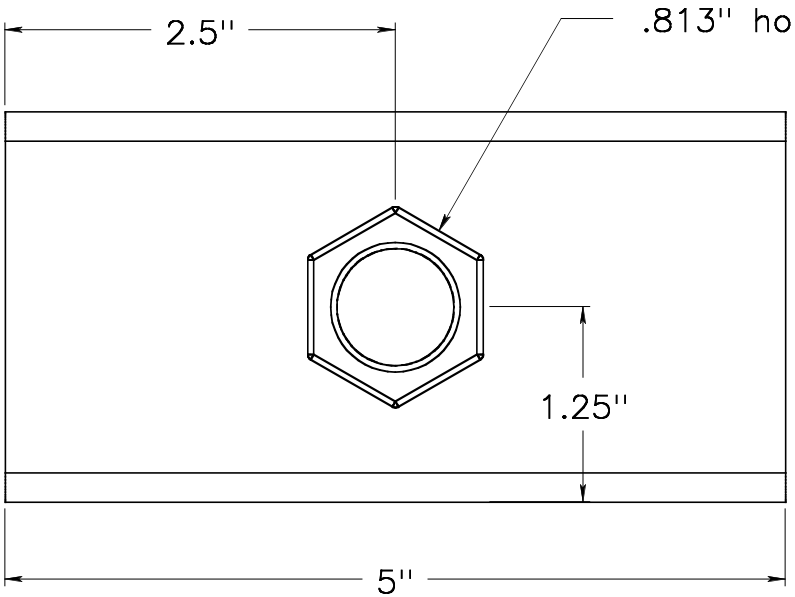


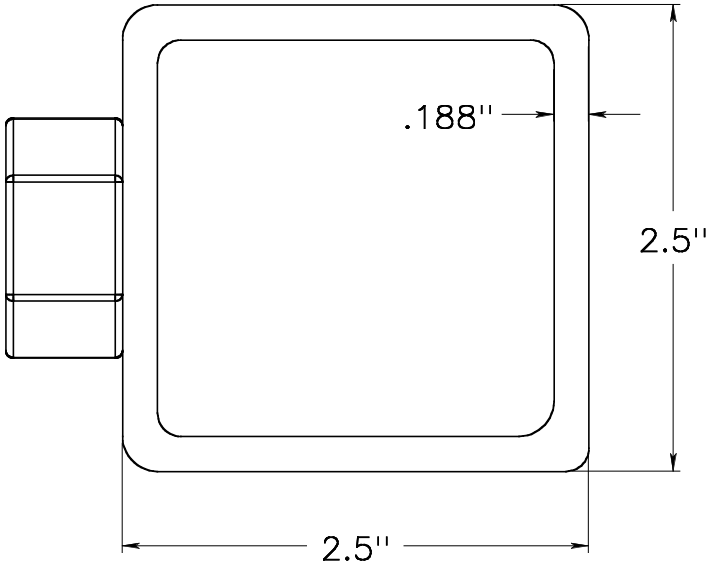




Body mount bracket vertical tube 4 views Quantity: 4

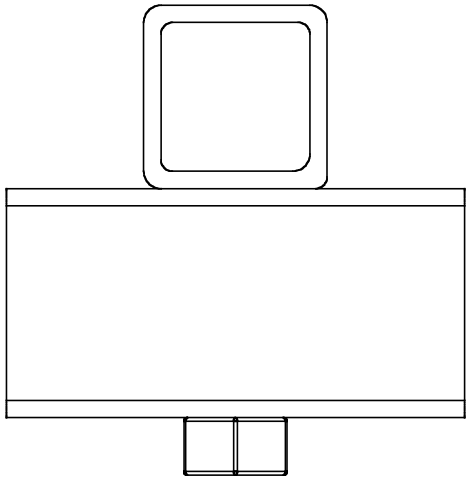


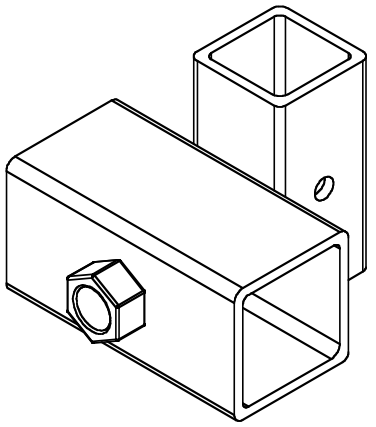



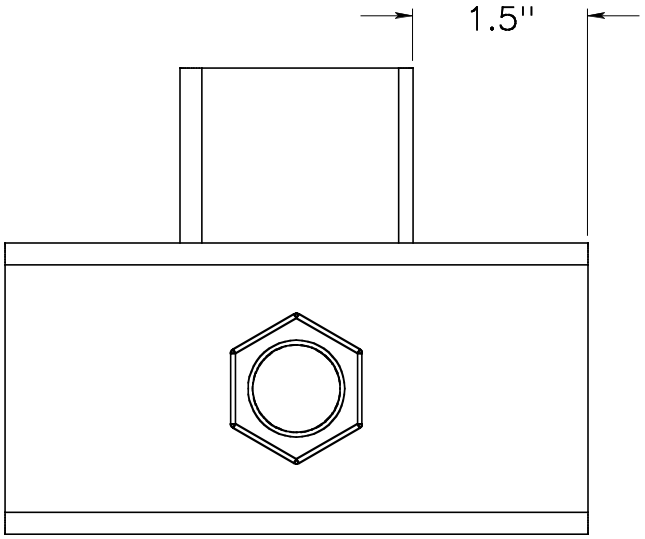


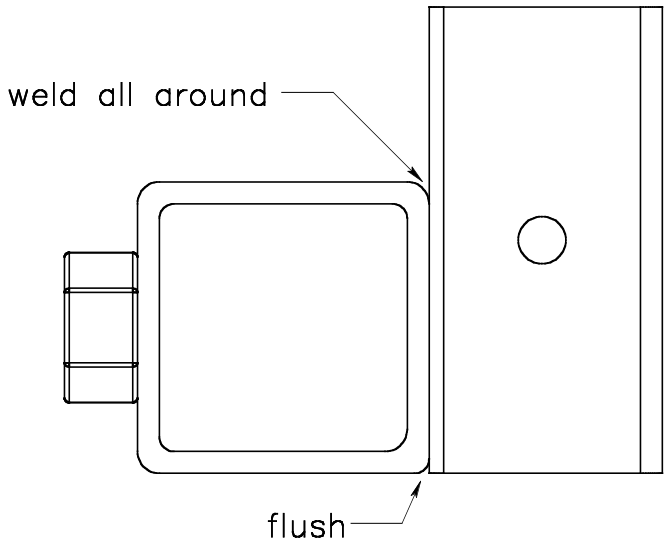




Body mount bracket horizontal tube 4 views Quantity: 4

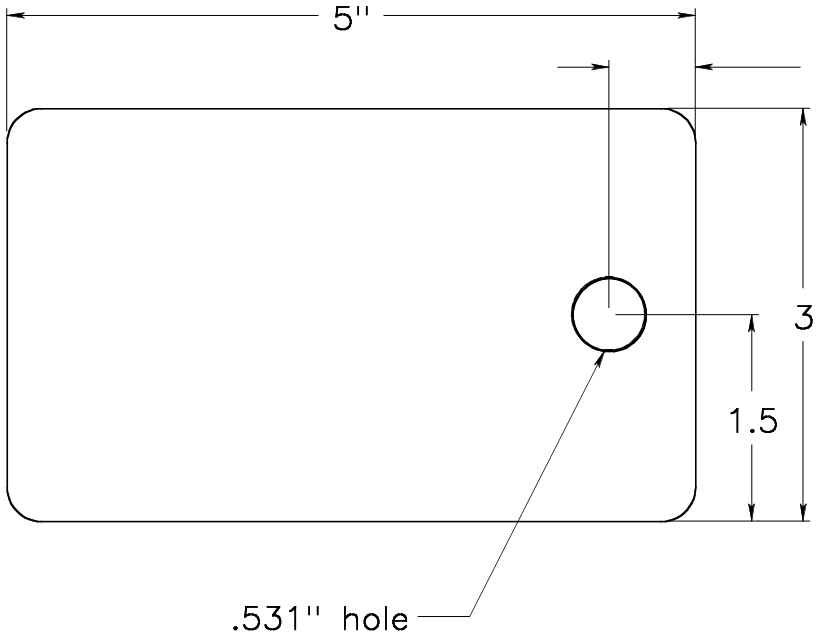


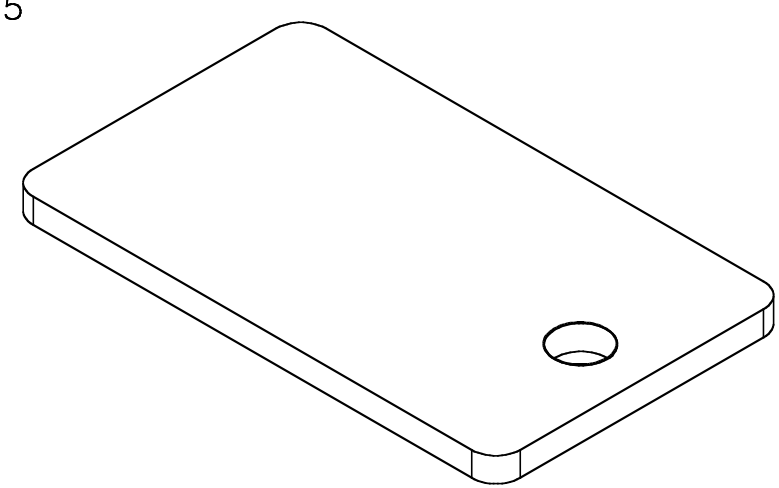


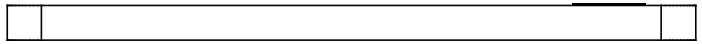


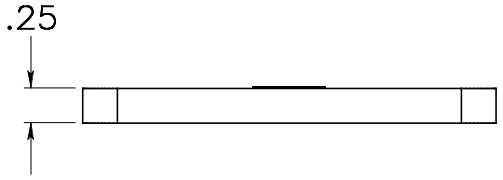




Body mount bracket 4 view Quantity: 4

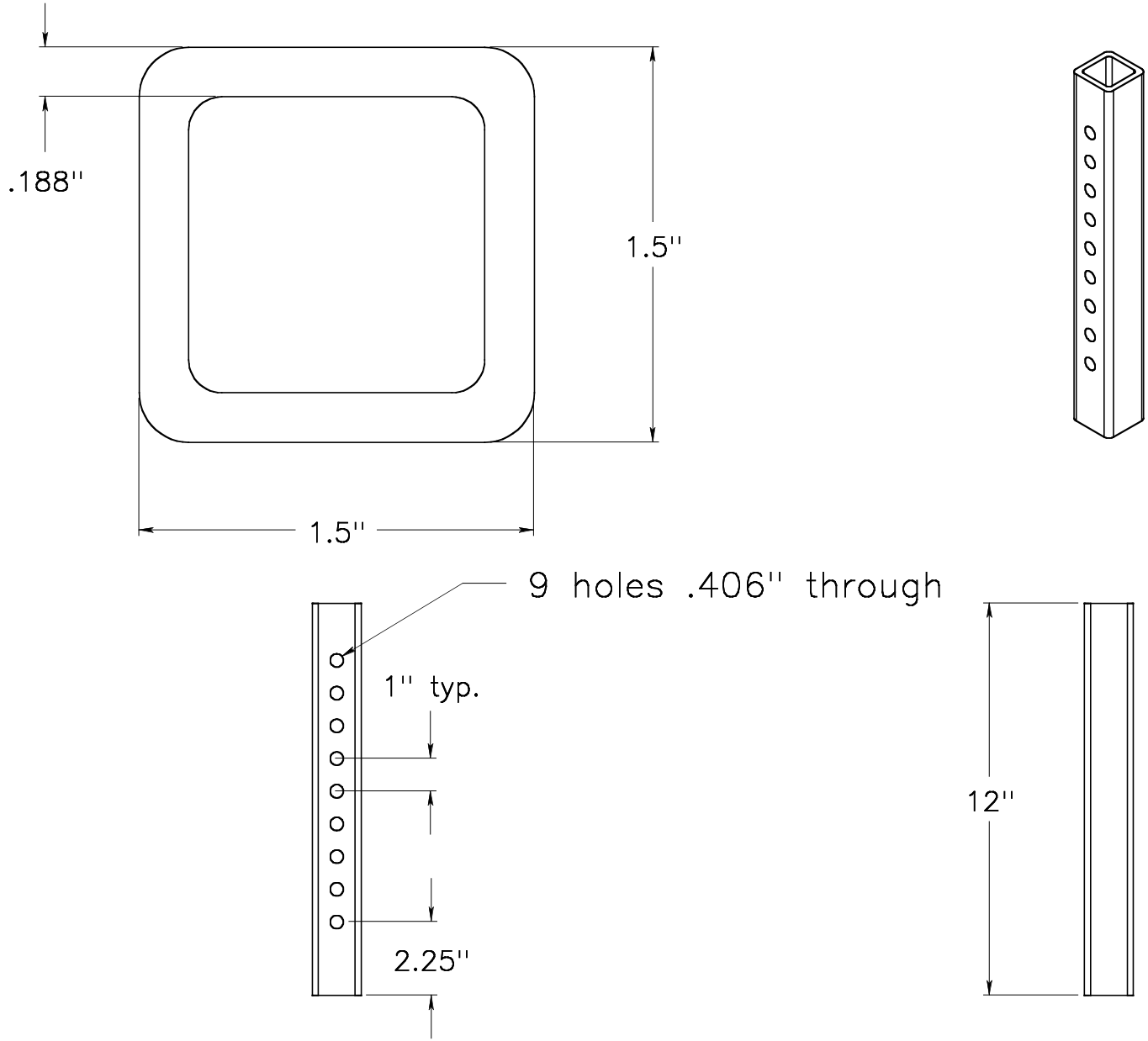


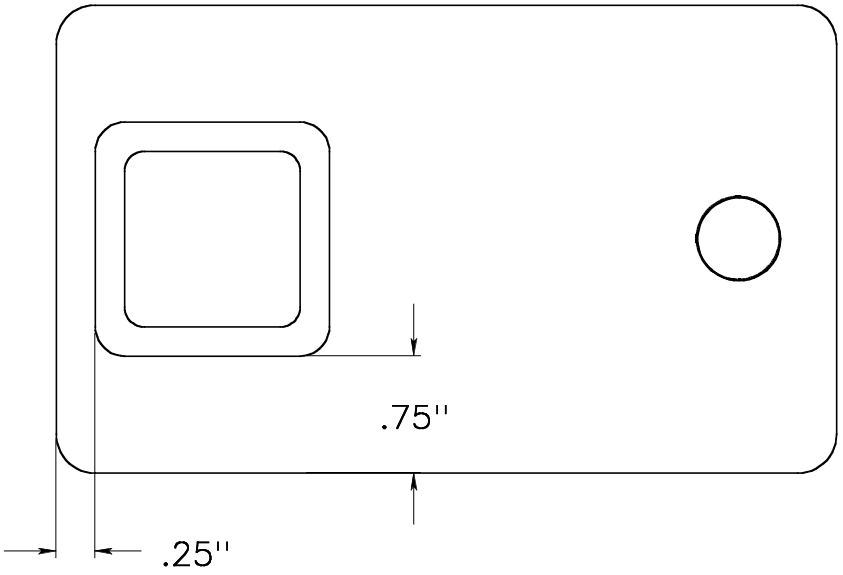


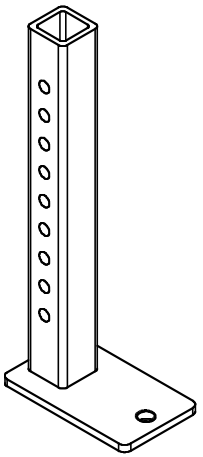


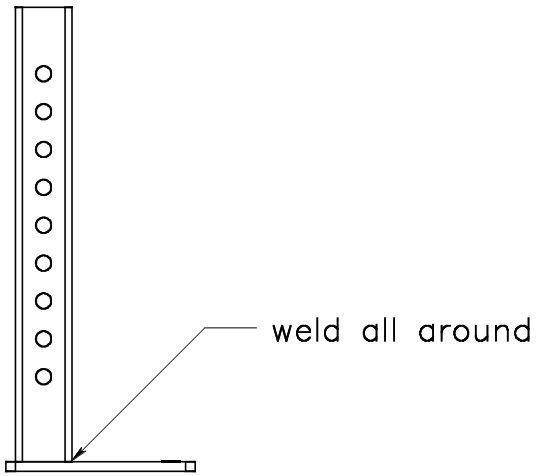

Body mount plate 4 views Quantity: 4

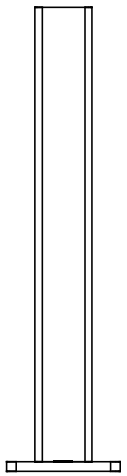



Body mount tube 4 views Quantity: 4



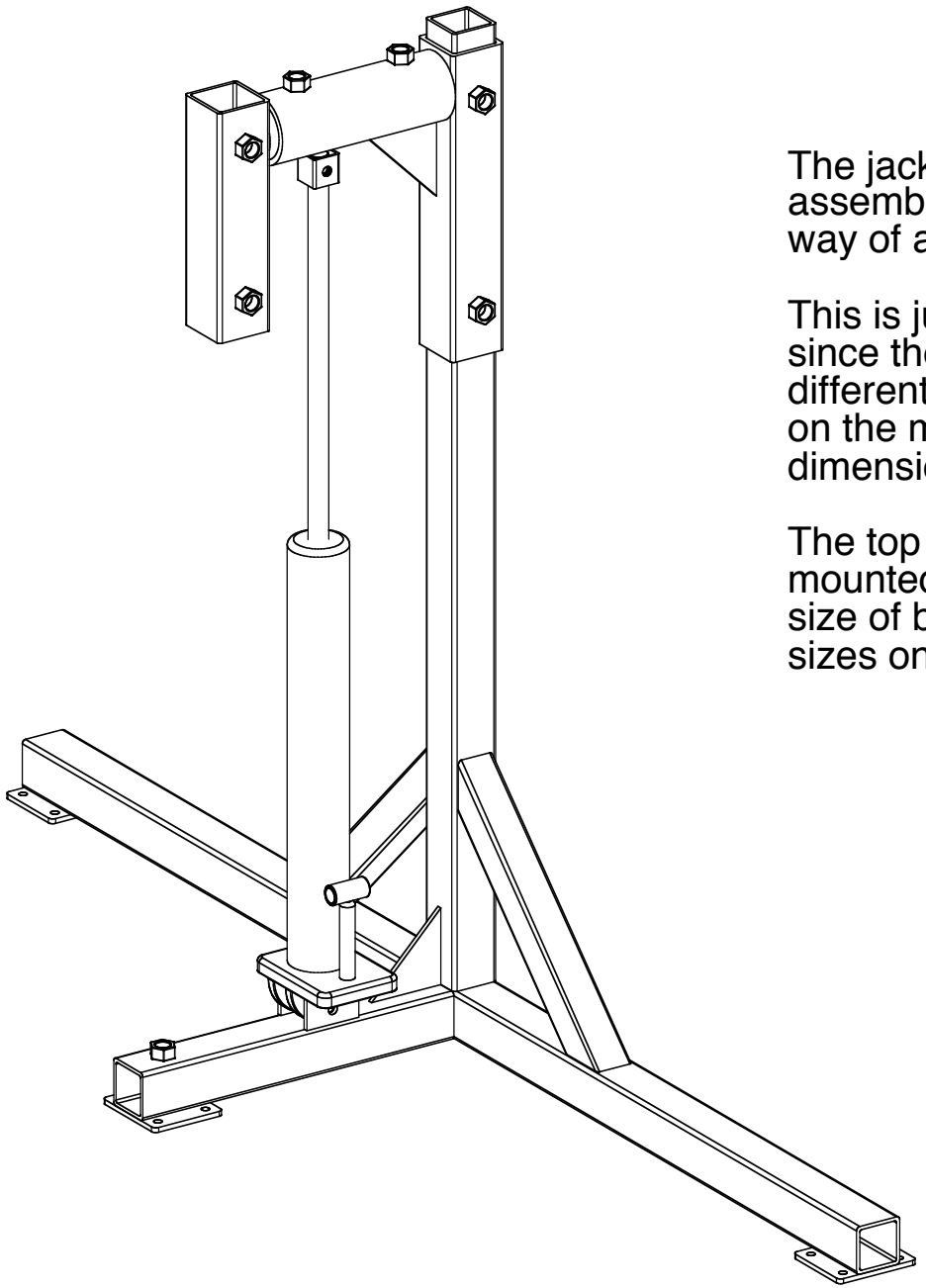


Body mount 4 views Quantity: 4

Note: This view is showing the optional hydraulic rams mounted to the end frame.

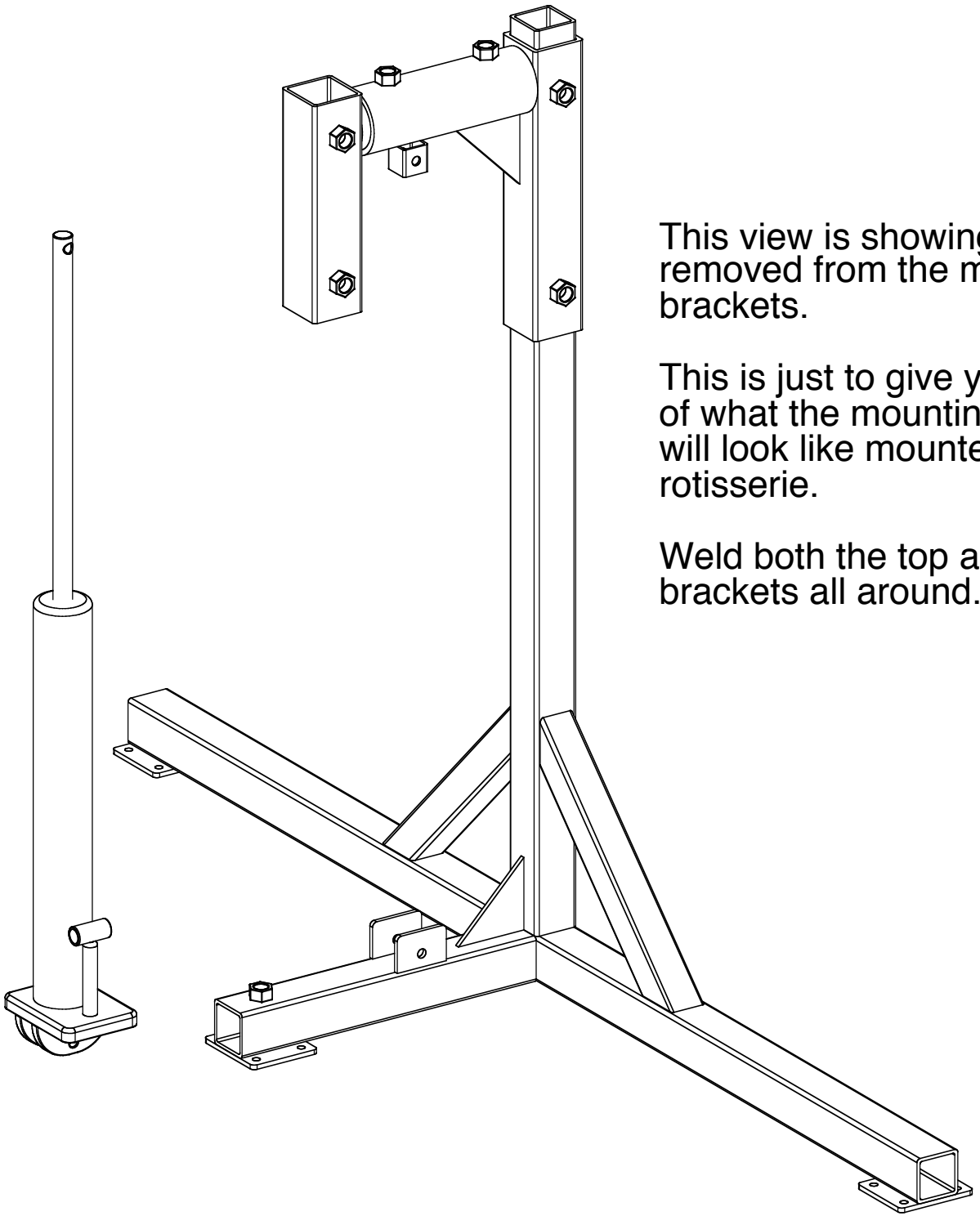
Some of the parts have been removed for clarity.



The jack will fit anywhere on the assembly as long as it is out of way of any moving parts.

This is just a visual reference since there are far too many different sizes and types of jacks on the market for me to give hard dimensions.

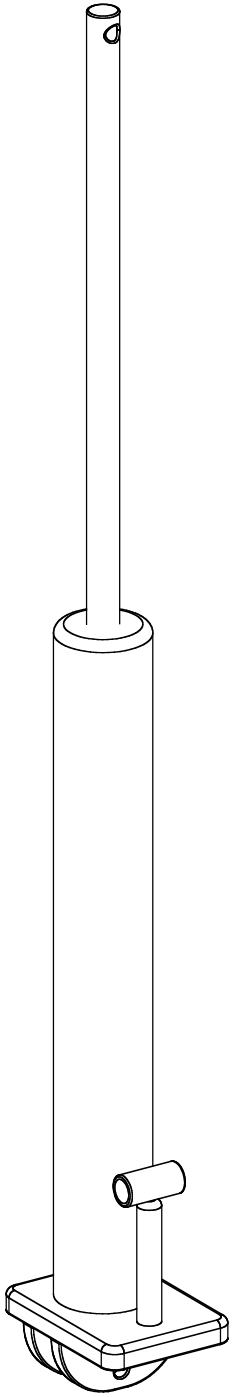
The top and bottom of the jack is mounted with standard bolts. The size of bolts depends on the hole sizes on your jacks.

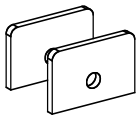


This view is showing the jack removed from the mounting brackets.

This is just to give you an idea of what the mounting brackets will look like mounted to the rotisserie.

Weld both the top and bottom brackets all around.





The top bracket is simply a piece of square tube 1.5" x1.5" x.11ga. 1.5" long. The hole is .5" drilled completely through the tube.

The model of jack that I used was made by Torin. It is a 3 ton jack and the model # is T30306. It was purchased from Northern Tool.

At the time of this drawing it was still available. If you can't find one, any type of ram for an engine hoist will do the job.

The bottom brackets are plates that are 3" long x 2" high x .25" thick. The holes are .5" and were made to fit the jack for hole location.