

Explora Dome Roof Support Assembly Instructions

This is a lay out for the Roof & Dome Support for a 10 X 10 Observatory Building for the Explora-Dome.

These dimensions are approximate and may vary slightly. It is recommended that you use 2- 2 X 10's side by side on 2 sides of the Dome Support Area for the Dome Mounting Ring

I recommend using Screws for 2 reasons 1 they hold better and 2 If you make a mistake it is easier to repair it.

Always check with local building codes before starting this project.

Below is a list of materials you will need to build the Dome Support Structure for a 10 X 10 Building

2- 2 X 6's 119" Long

2- 2 X 6's 116" Long

2- 2 X 10's X 116" Long (Cut like Fig 1B) (4 if you are in Snow Country)

2- 2 X 10's 87" Long

20 - 2 X 10's X 13 " Cut like section AA (Cut Last) Like page 2.

4 - 2 X 6's X 33" Cut 45 degrees on both ends like Fig. 4B Page 5

150 – 3 1/2" Screws and 30 – 2 1/2" Screws

If you build your Mounting Ring out of Plywood you will also need

18 - 2 X 2 3/4 X 4 1/2" Tall (Depending on how far apart you space them)

2 Pieces of 3/4" plywood cut like Diagram 2

2- Pieces of 3/4" plywood cut like Diagram 2

50 – 2 1/2" Screws

Step 1: Start by cutting 2 - 2 X 6's X 116" long and 2 – 2 X 6's X 119" long, now cut the 15 degree bevel on all 4 - 2 x 6's as shown in Fig 1A. Now assemble the 2 X 6's making the 119" Sq. frame, using 2 - 3 1/2" long screws in each corner, assemble all four sides. Once this is done trim off the little nub that sticks up on each corner of the 2 X 6's.

Step 2: Now take 2 of the 2 X 10's that are 116" long and cut like Fig. 1B and place the in the 2 x 6 square and set them to the measurements shown in Step 2 There should be 13" between the 2 X 6 and the 2 X 10's. Now place the 87" 2 X 10's also like shown in Step 2 there should also be 13" space between the 2 X 6 and the 2 X 10's Fasten them in place using 3 – 3 1/2" screws in each corner. Now you should have 87" between each 2 X 10 making a 87" square Fig 2 A. (If you are in Snow Country you may want to use 2 more 2 X 10's shown in red in Step 2 Fig 2 B. You will need to cut the outside edges on the 2 X 10 to the 15 degree bevel like the 2 X 6's. Then you will need to cut 12 of the spacers to 11 1/2" from the narrow end of the spacer this will allow for it needing to be slightly narrower on the wide end.

Step 3: Now in the 2 sections (Fig 3 A.) that are 87" long X 13" wide you can put in the 4 spacers shown that are shown in Fig 3 A, these should be 13" long and should be spaced 17 3/4" on center from each end. Leaving a little more space in the center. Fasten in place using 3 – 3 1/2" long screws on the 2 X 10 side and 2 – 3 1/2" screws on the 2 X 6 side.

(If it is not 13" between the 2 X 10 and the 2 X 6 than adjust the measurement accordingly).

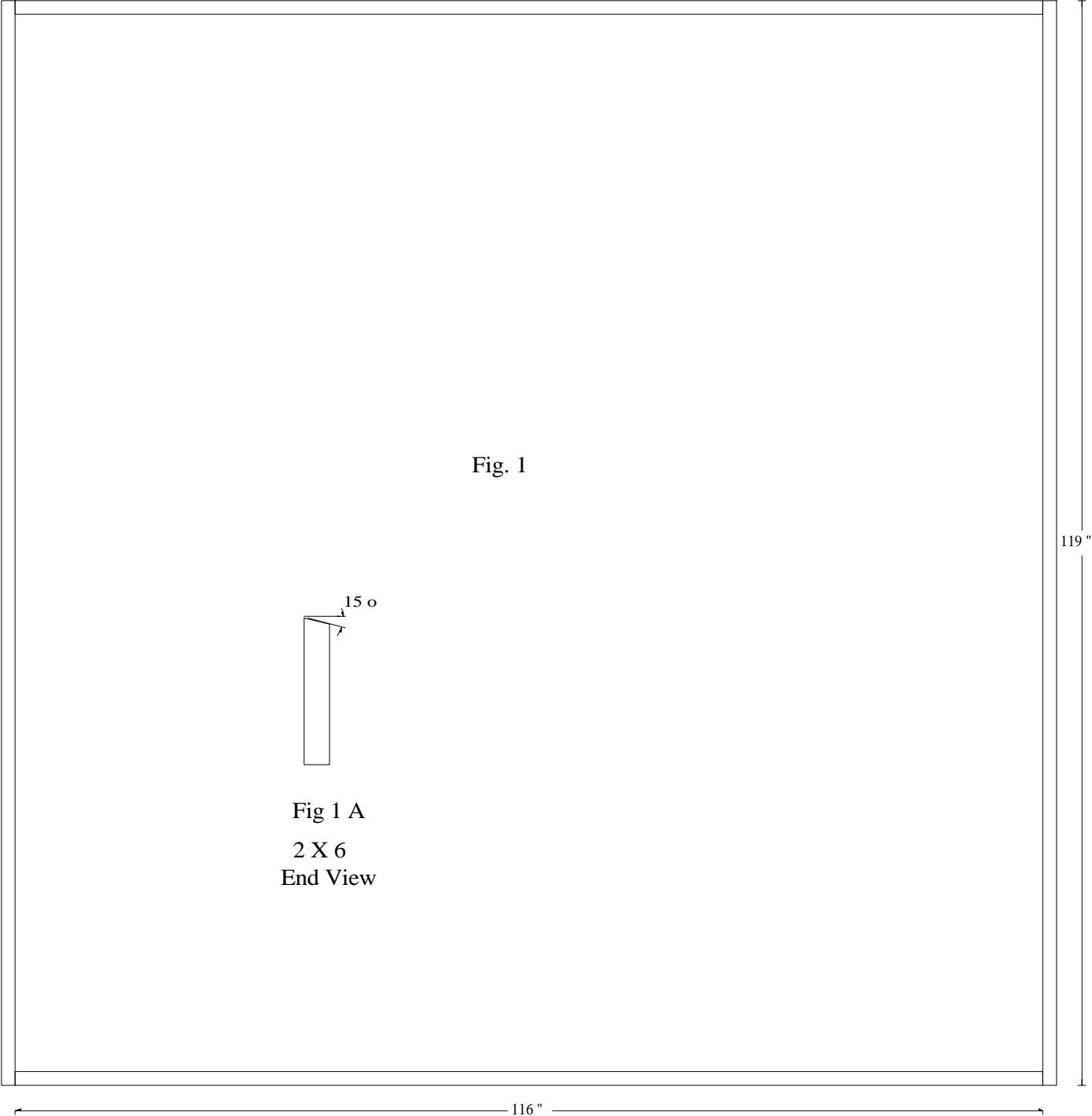
Step 4: Line up the 4 out side spacers with ea end of the 87" 2 x 10's already in place. (Fig 4A) Now measure in 17 3/4" from these spacers to the next set of spacers than put the second set of spacers in place and than measure in 17 3/4" again and set the 3rd set of spacers. It should look like Step 4. Fasten in place using 3 - 3 1/2" screws on the 2 X 10 side and 2 on the 2 X 6 side. Repeat this step on the other side also.

Now fasten the 4 – 2 X 6's that are cut 33" long and have the end cut at a 45 degree angle as shown in Fig 4D. Fasten in each corner of the subassembly as shown in Red in (Fig 4B) fasten in place using 2 – 2 1/2" Screws in each end start far enough in that they do not stick out the other side of the 2 X 10.

If you use our Roof Panels it Helps if you trim down the hump on the four corners pointed out below

Explora-Dome Roof Base Section Step 1

The Low side of the bevel goes to the outside of the square.



Explora-Dome Roof Base Section Step 2

Fig. 2

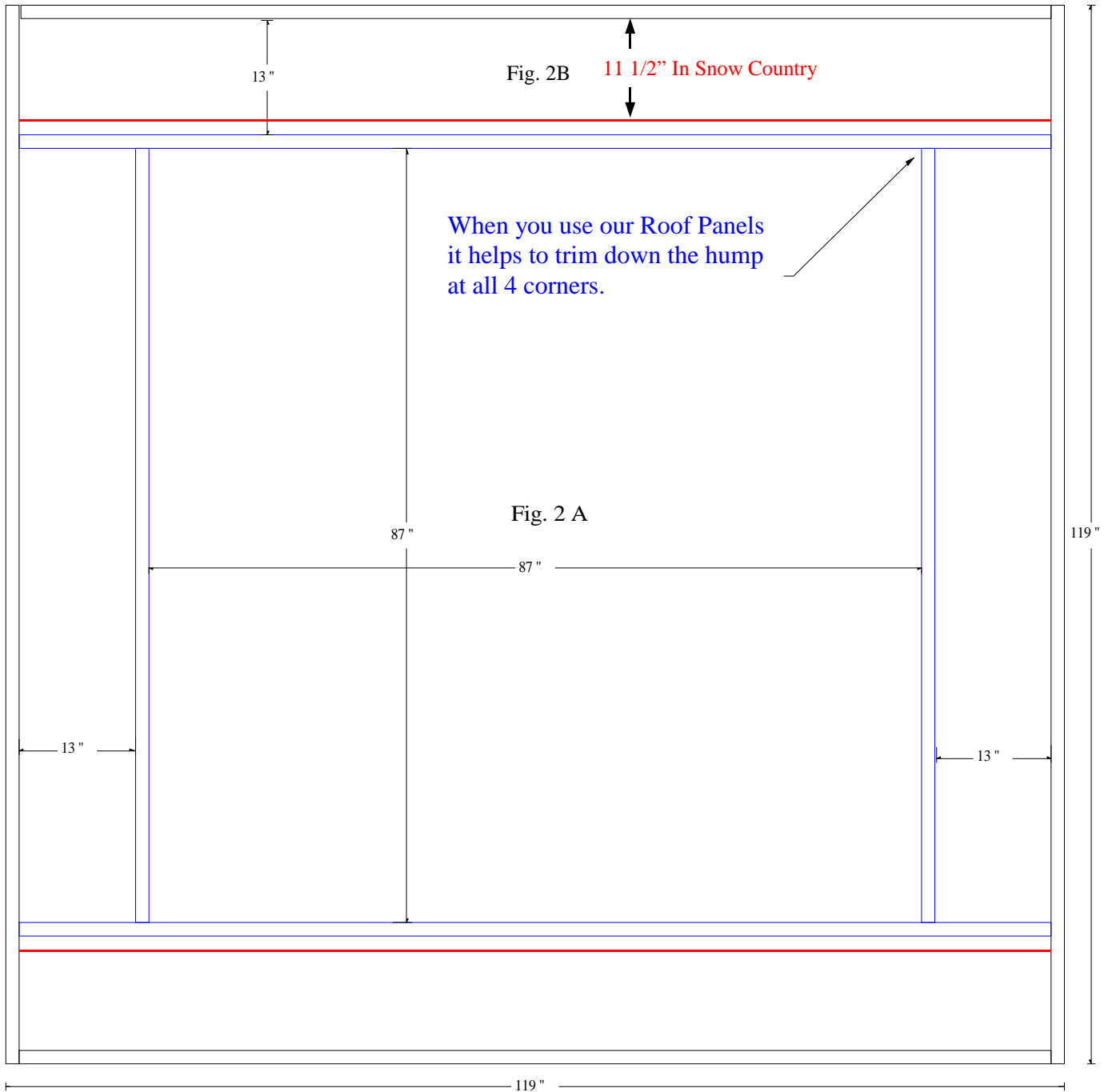
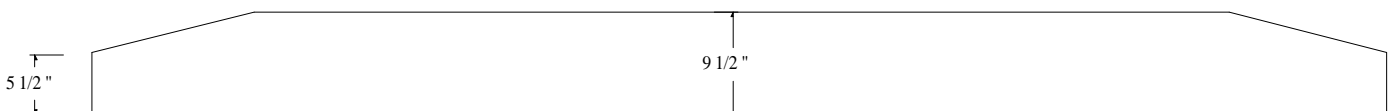


Fig 1B



Explora-Dome Roof Base Section Step 3

Fig. 3

