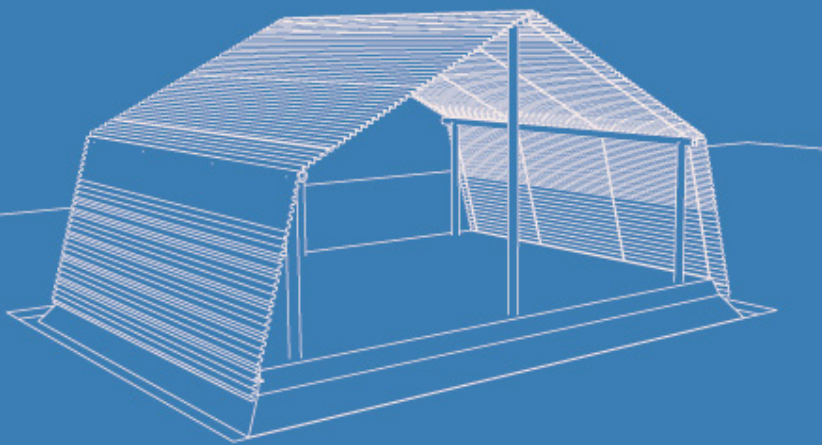


CONSTRUCTION MANUAL

FOR
TRANSITIONAL SHELTER

HABITAT FOR HUMANITY NEPAL



Safety Instructions:

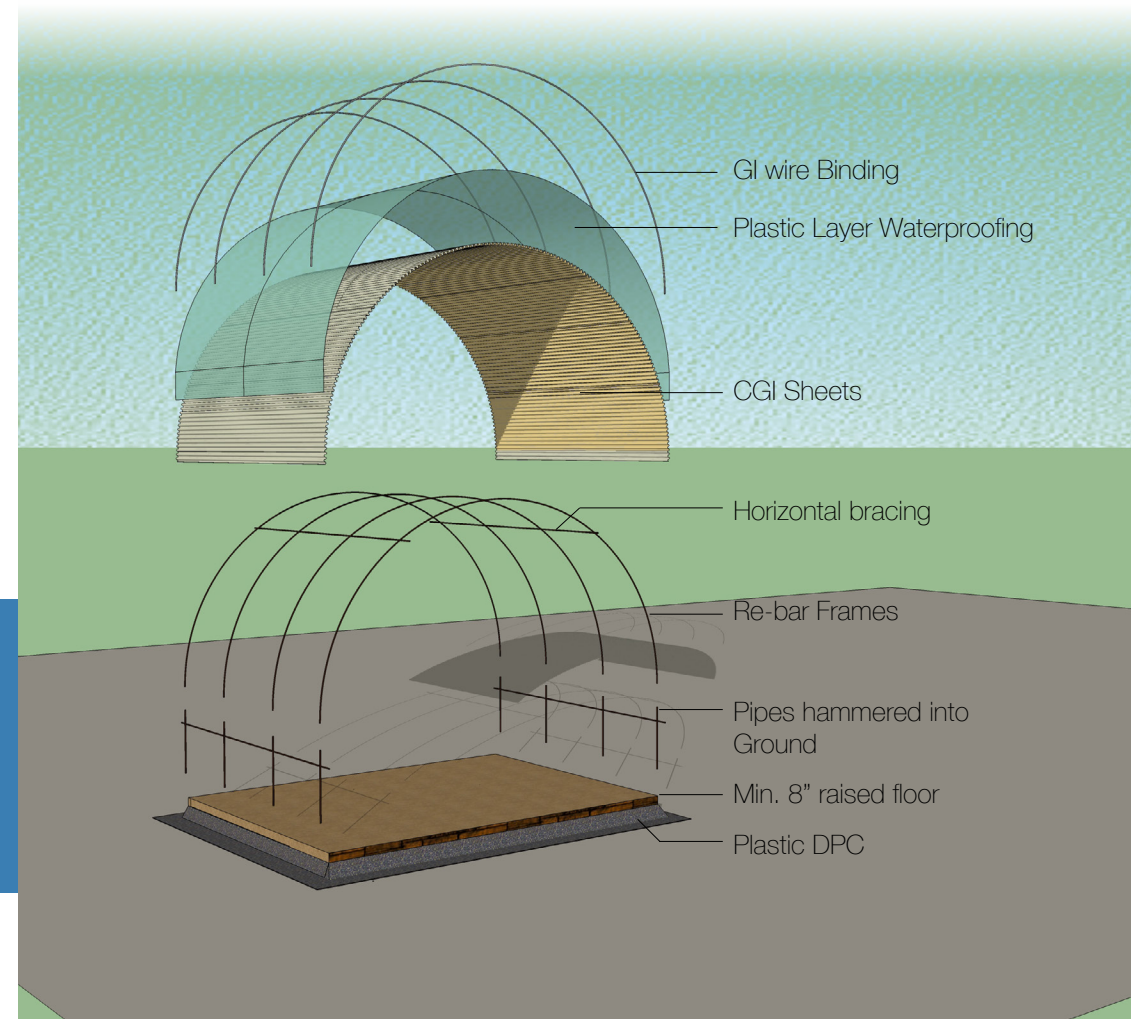
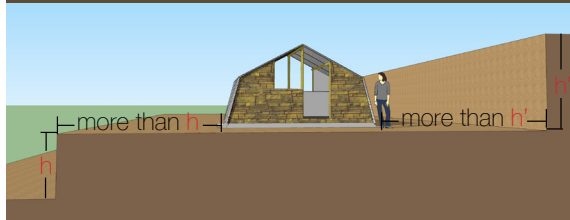
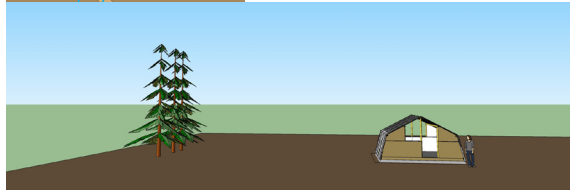
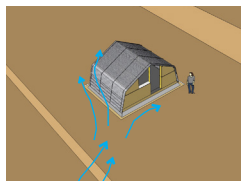
- Wear safety gears
- Think before act
- Be careful with the tools
- Do not use tools that you are not used to
- Keep unused tools in right place
- Drink and eat regularly

Tools Instructions:

- Hammer
- Hack saw
- Pliers
- Tin Cutter
- Kundi

Points to be considered while selecting building site:

- Access - Should be easily accessible from the old house.
- Slope - Should be on flat and stable land.
- Wind - Should not obstruct favourable wind.
- Water - Should be atleast 200 feet away from water source.
- Vegetation - Should not have vegetation. No trees or plantations should be affected while clearing the site.

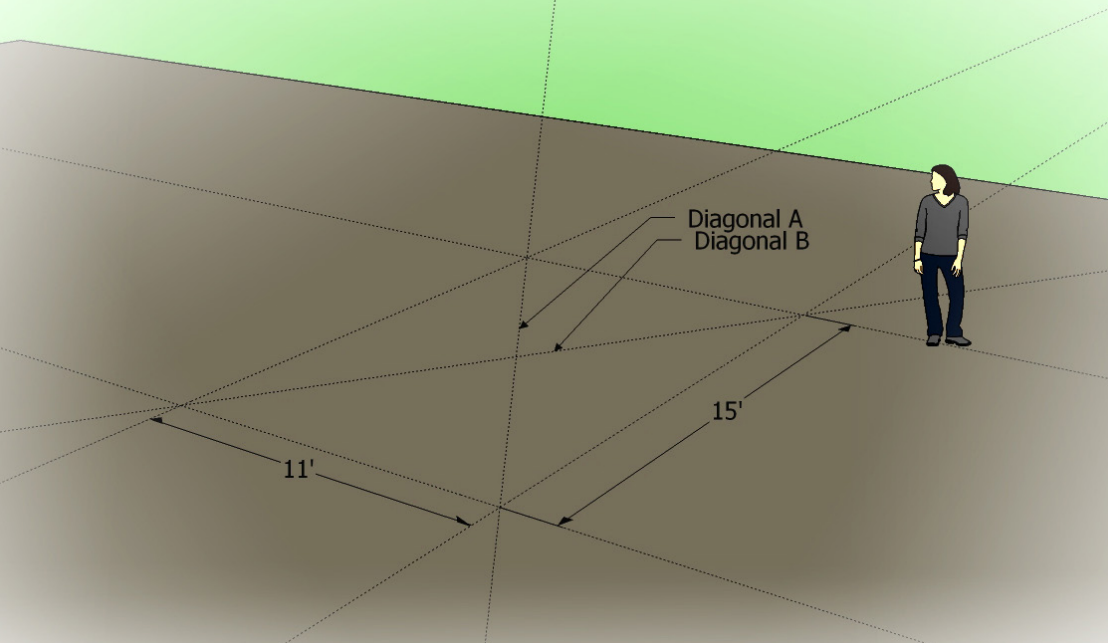


Semi-Circular Type

Rectangular 10'x15' room, Clear height 6.5' at the center.

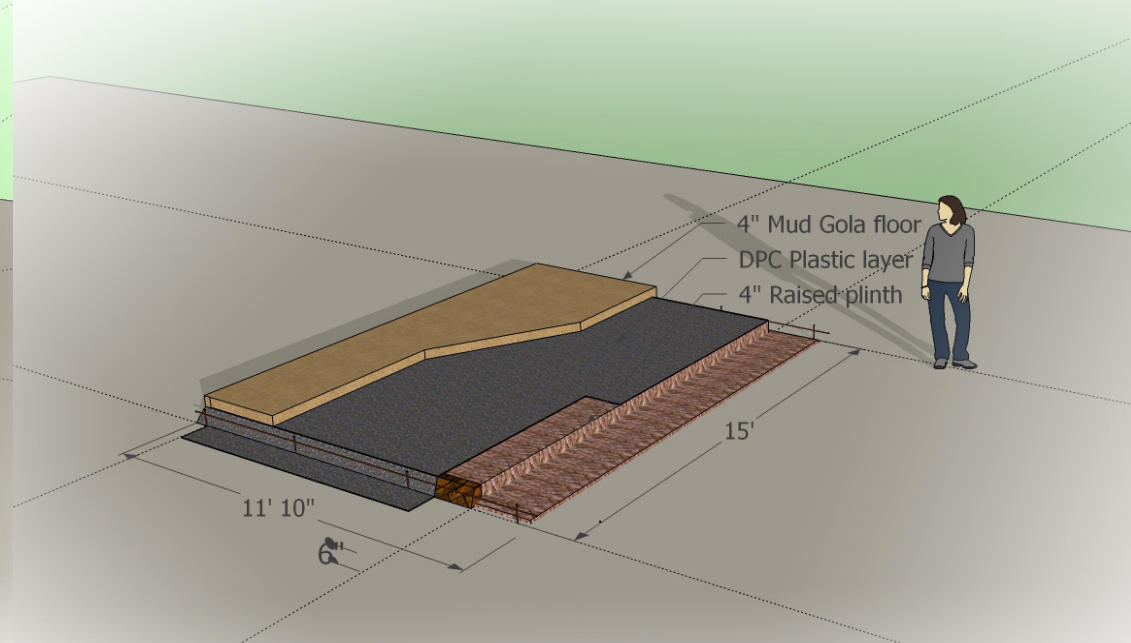
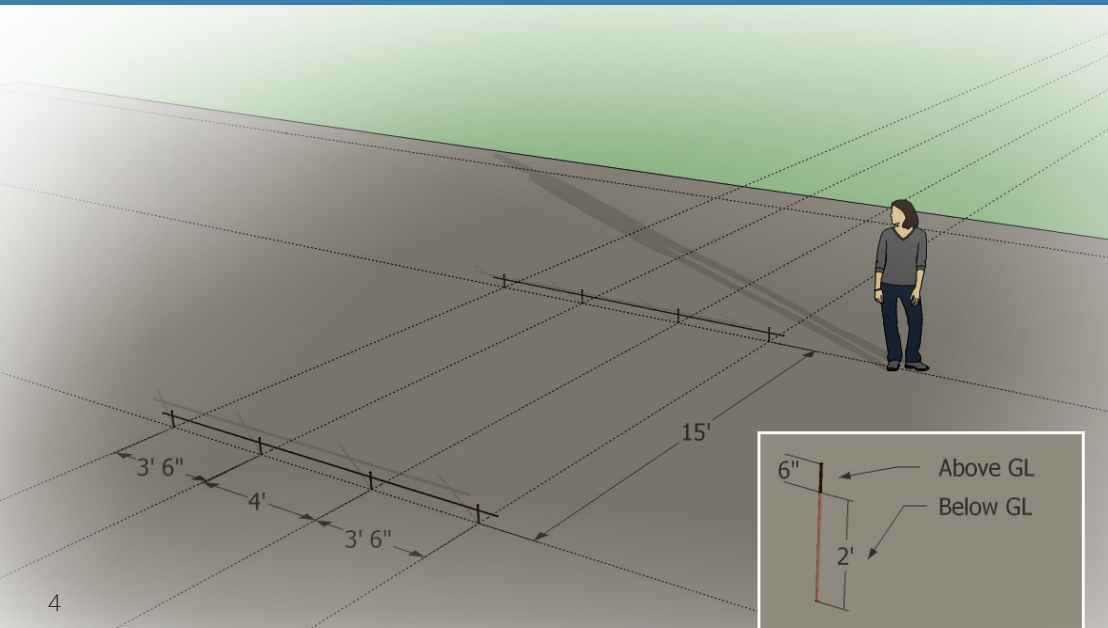
List of Materials:

1. Plastic DPC sheet 1 roll
2. 15mm dia pipe 20' long 1pc
3. 24' long 12mm dia Re-Bar 4 pcs
4. 2'8"x12' 26 gauge CGI sheets 10 pcs
5. 12' long Re-bar or bamboo strip 2 pcs
6. 2mm dia GI wire



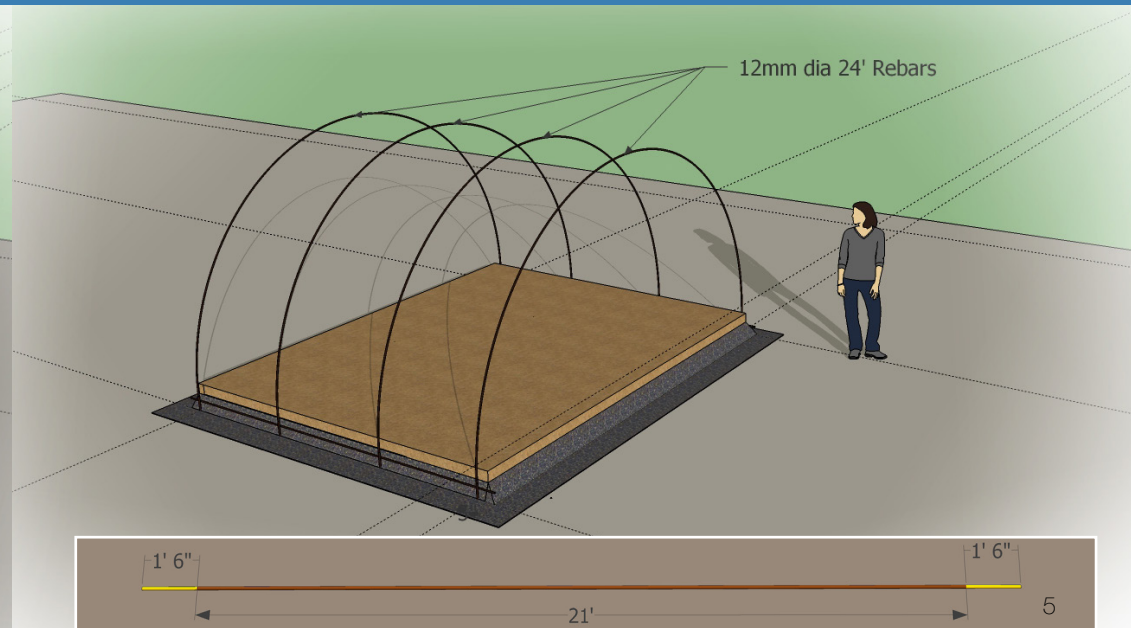
Step 1 : Draw lines for foundation with dimensions provided in figure above. Check whether both diagonals are equal or not.

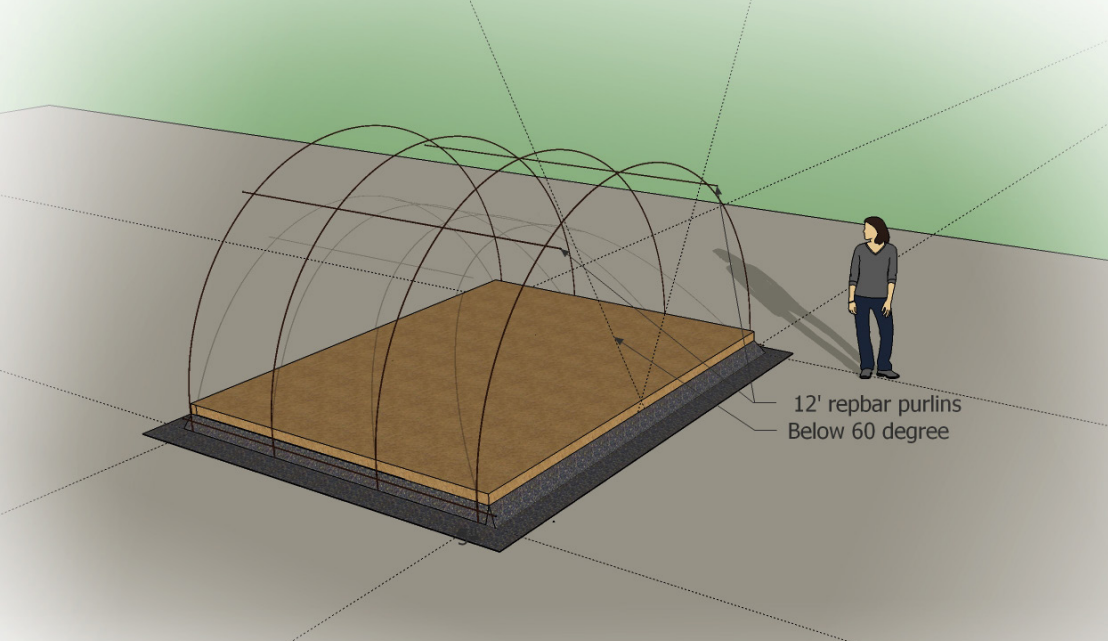
Step 2 : Insert pipes inside ground as shown in figure below.



Step 3 : Raise the floor level and provide DPC layer as shown in figure above. Stepped footing of atleast 1' should be dug on both 15' side if stone or brick is available.

Step 4: Mark at end of Rebars and tie 2 ring of GI wire at the mark. Then insert them inside the pipe upto the mark as shown in figure below.





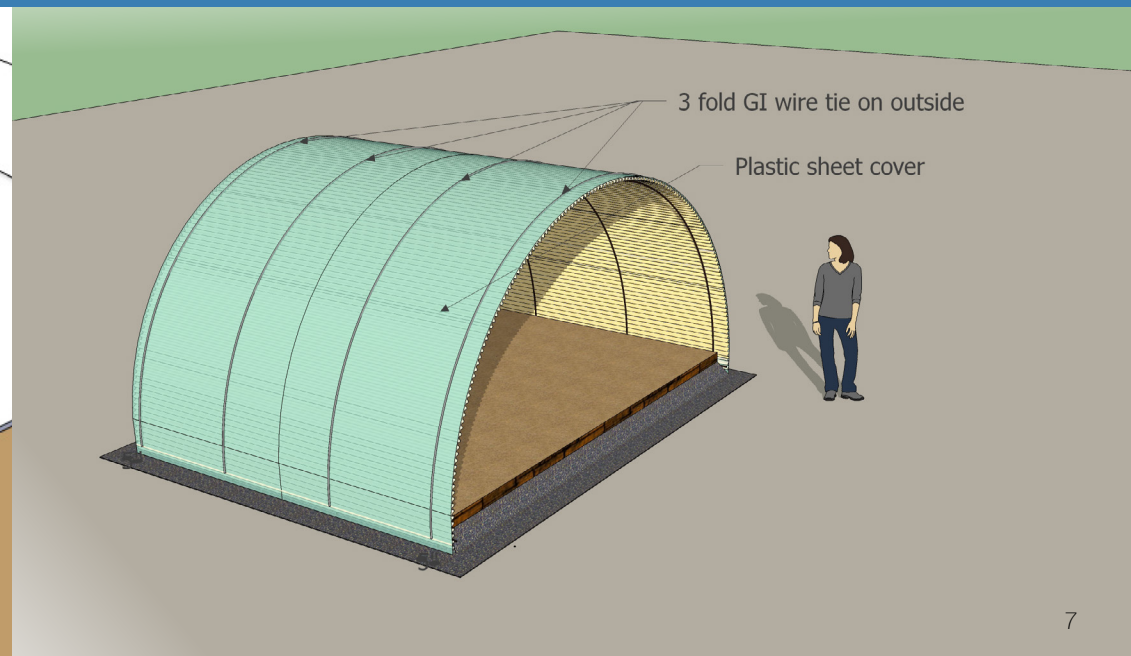
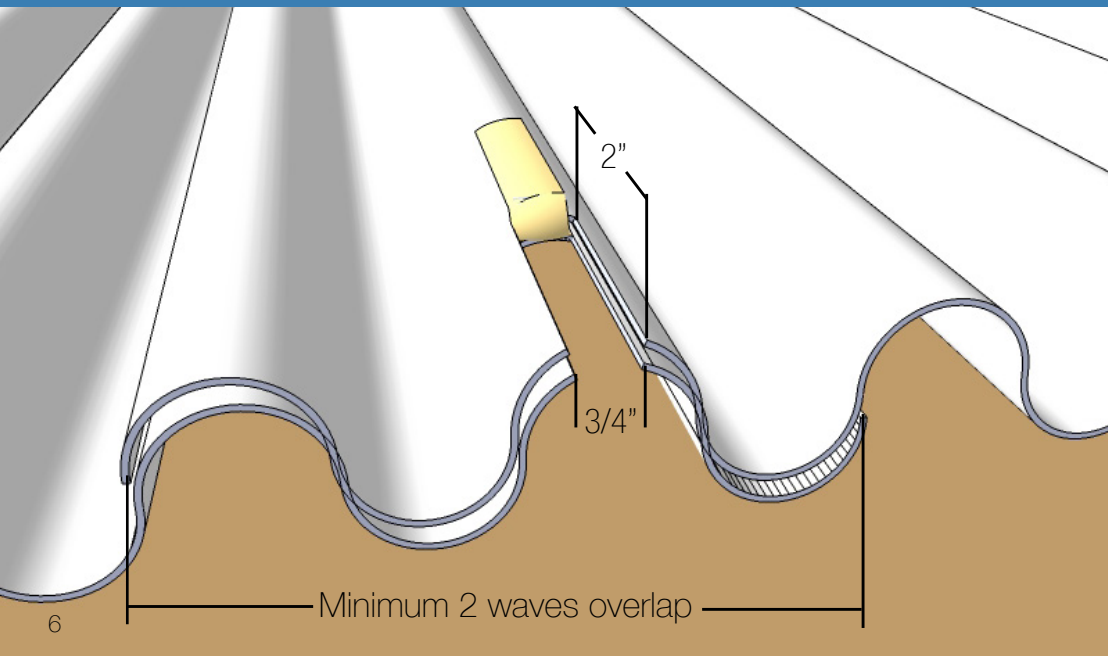
Step 5 : Tie purlins of wood/bamboo as shown in figure above.

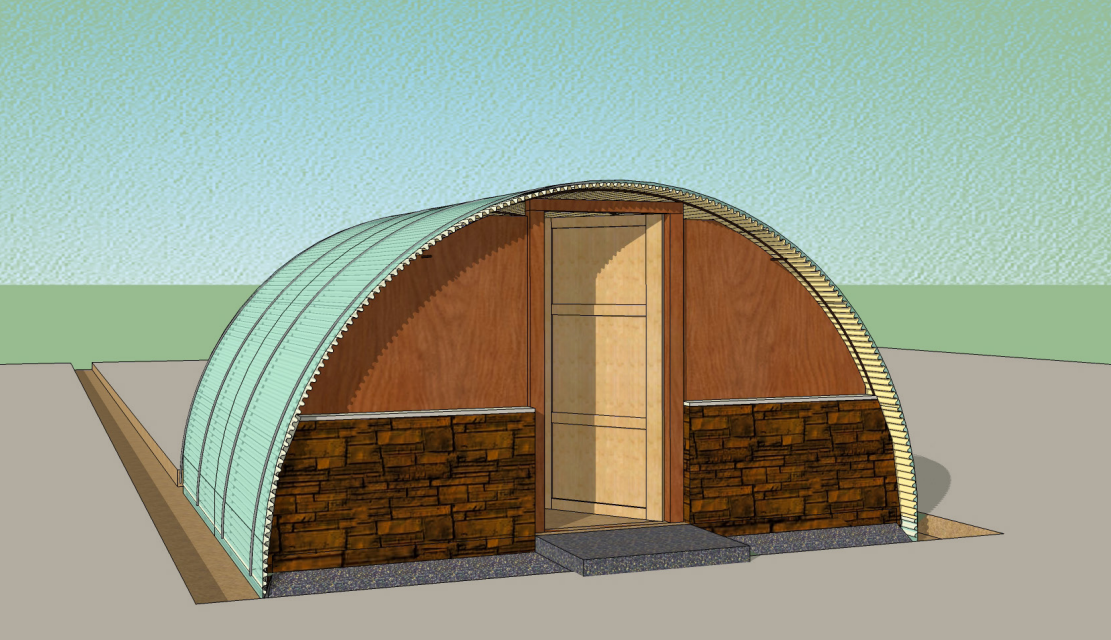
Step 6 : Attach two CGI Sheets as shown in figure below.



Step 7 : Now put the attached CGI sheets above rebars as shown in figure above.

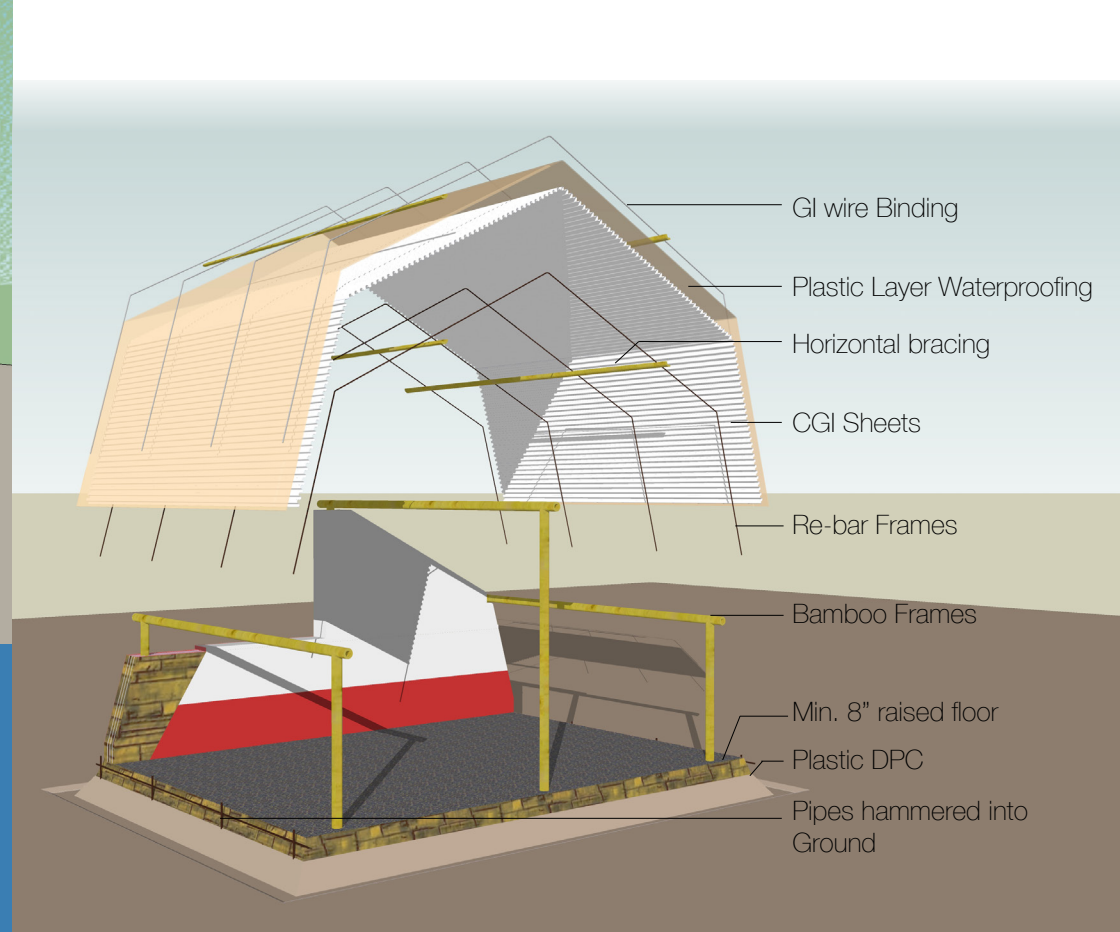
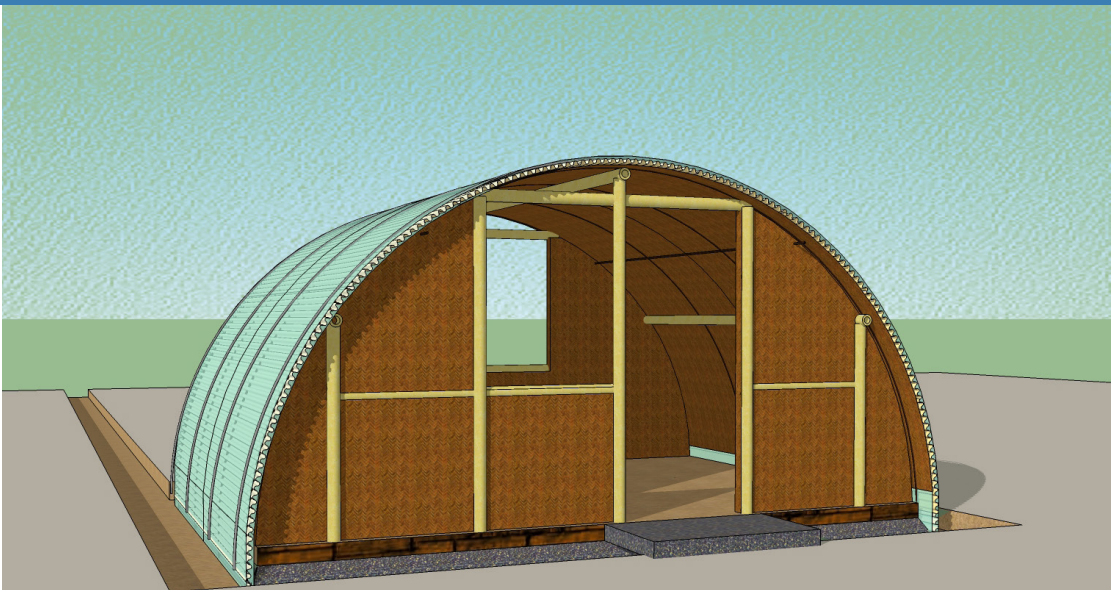
Step 8 : Put Plastic sheet above the CGI sheet and tie them with pipes using GI wire as shown in figure below. You can also put straws/ hay / jute sacks etc over plastic for insulation and tie it using GI wire.





Step 9: Dig 6" deep 1' wide drainage around the House.

Step 10: With stepped foundation of minimum 1' deep, you can build wall in 2 sides with materials you have. It is advised that you make wall upto 3' only with stones/bricks and then use light weight material like wood planks/bamboo/tarpaulin etc for remaining portion. Or lighter bamboo frame can be made with mud/cement plaster on bamboo weaving.

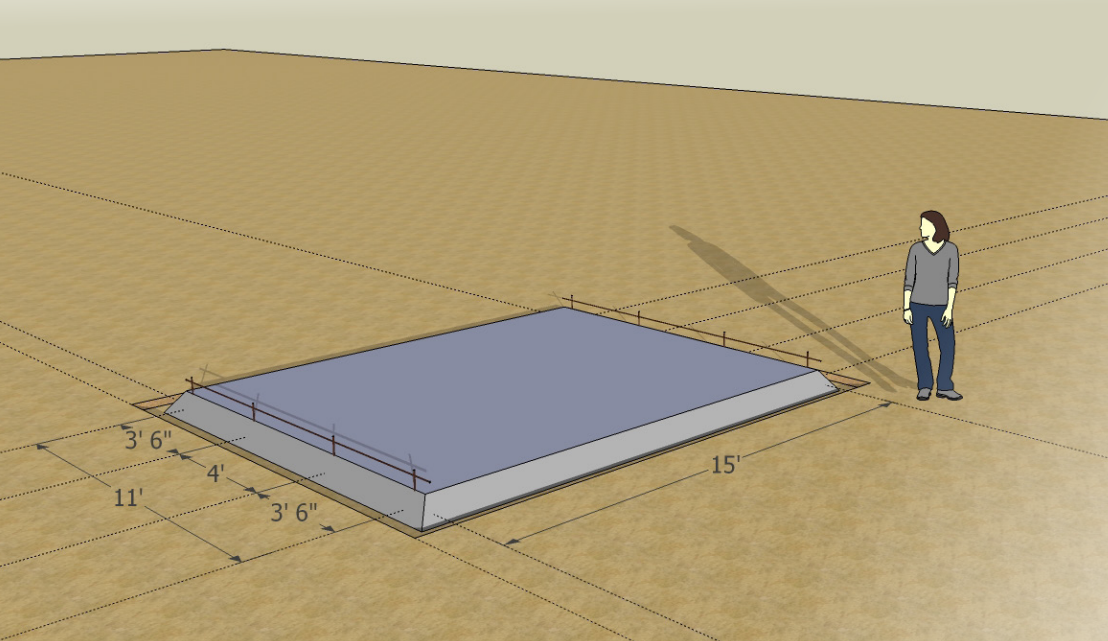


Two-Way Roof Type

Rectangular 10'x15' room, Clear height 7.5' at the center.

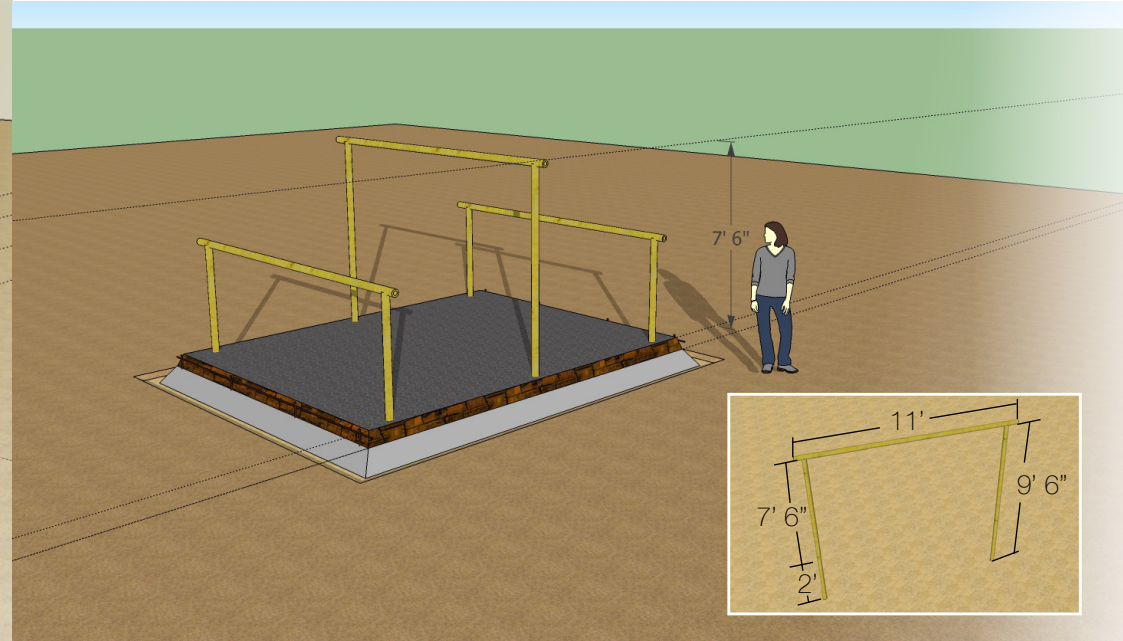
List of Materials:

1. Plastic DPC sheet 1 roll
2. 15mm dia pipe 20' long 1pc
3. 24' long 12mm dia Re-Bar 4 pcs
4. 2'8"x12' 26 gauge CGI sheets 10 pcs
5. 12' long Re-bar or bamboo strip 2 pcs
6. 2mm dia GI wire



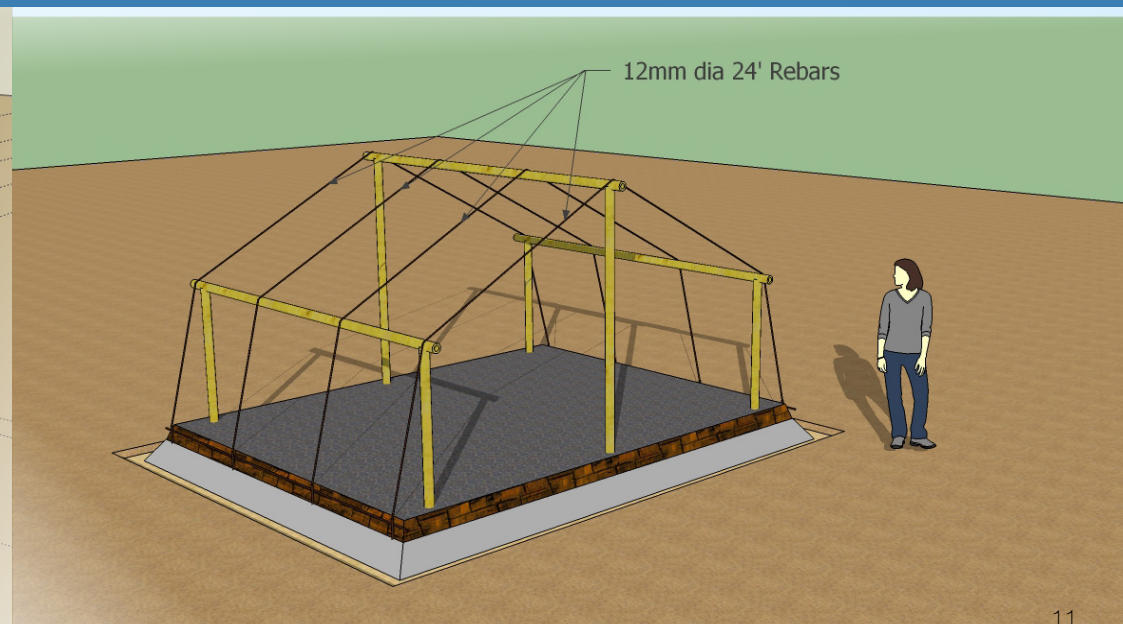
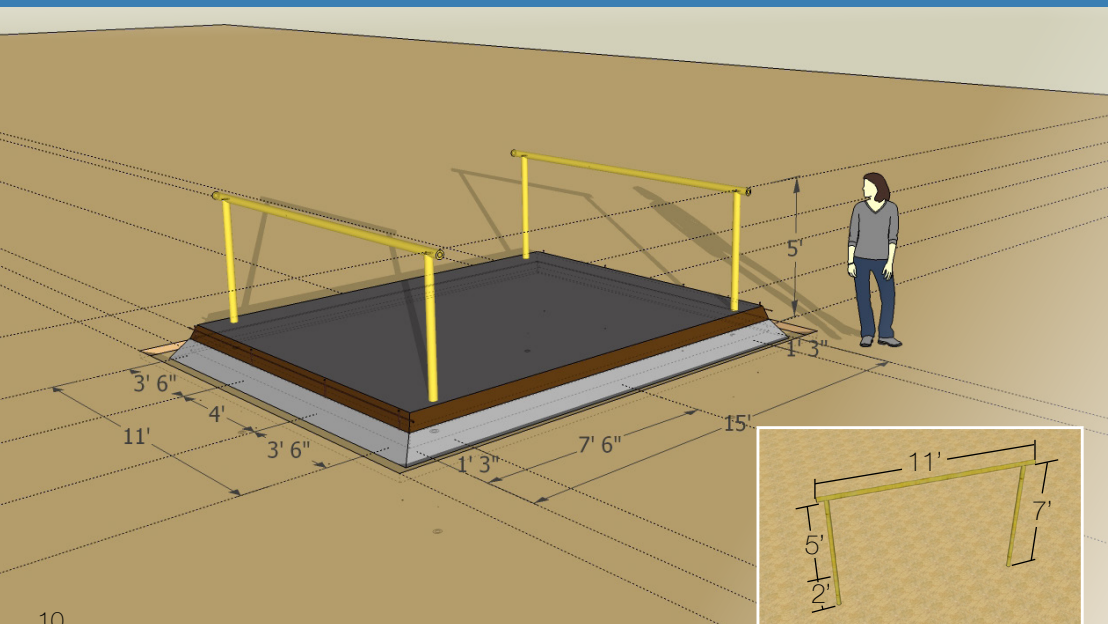
Step 1 : Layout the building similar to previous building. Insert pipes and bind them with horizontal bracing.

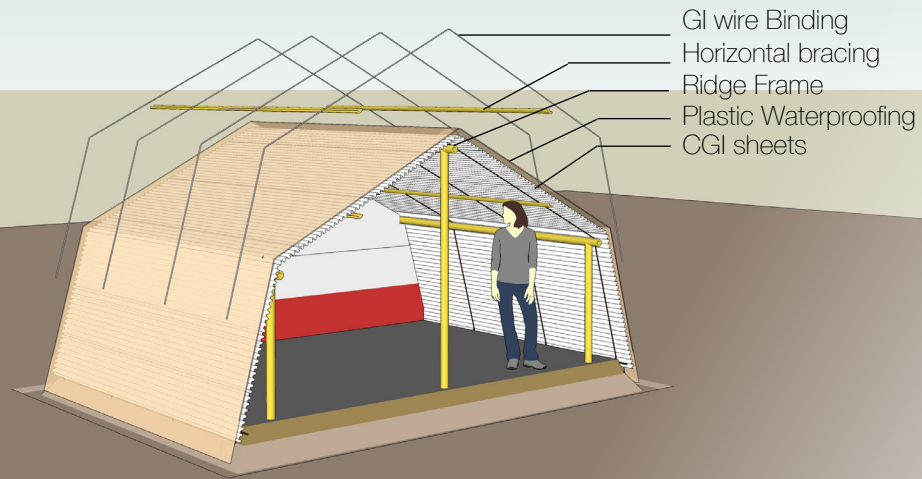
Step 2 : Raise floor with Plastic DPC and then dig holes for outer columns. Outer posts are 7' long and inserted 2' below ground.



Step 3 : Dig holes and insert ridge frame. The Frame size is shown in figure.

Step 4: Mark at end of Rebars and insert them inside the pipe upto the mark as shown in figure below.





Step 5 : Tie purlins of wood/bamboo as shown in figure above. Then lay the CGI sheets and then Plastic waterproofing. Tie horizontal bracings with purlins below the CGI sheets. Then tie the whole roofing with the pipes inserted to the ground with 3 fold GI wire.

Step 6 : Stone/Brick masonry or the bamboo frame with weaving can be used on the side walls.

