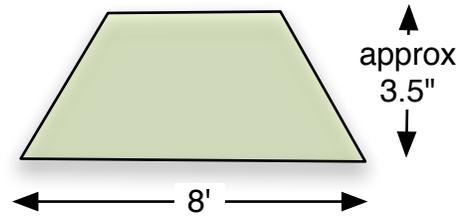
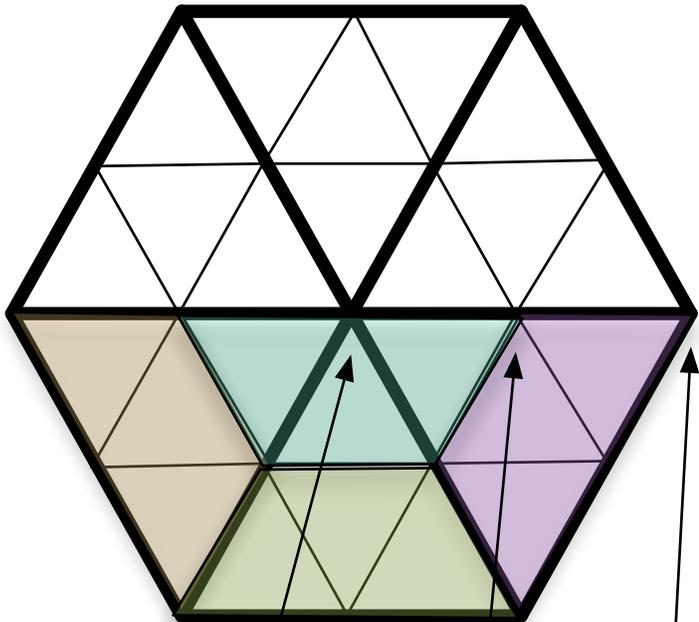


Floor Systems

1> Identical floor boards



Eight identical boards fit together to cover the floor.

Alternative cutting plans do not reduce the scrap appreciably - if the outer ring of boards are 4' wide, the scrap simply comes out of the inner boards. There may be manufacturing benefits either way.

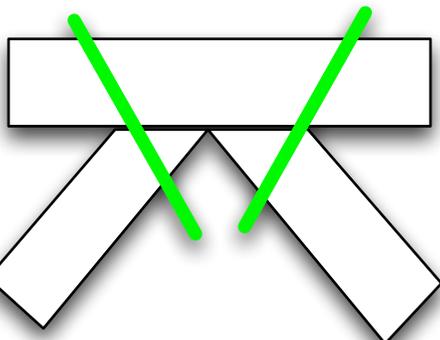
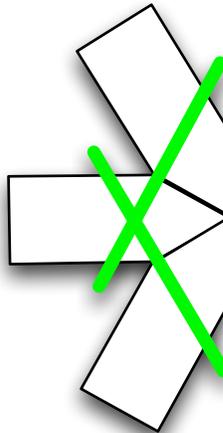
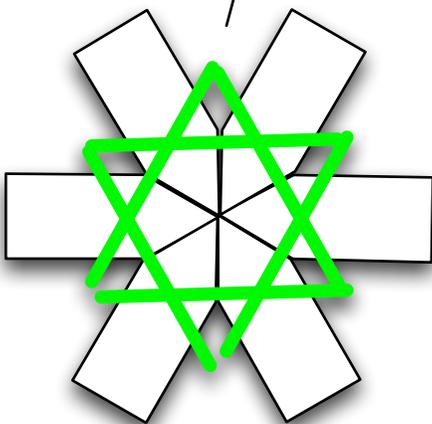
2> Joist option one: wood

The floor is made out of simple 2x4s.

This is a common approach in geodesic dome construction. It works very well. The hubs are extremely strong and held in very tight compression. Various kinds of very high spec deck screws are available at decent prices.

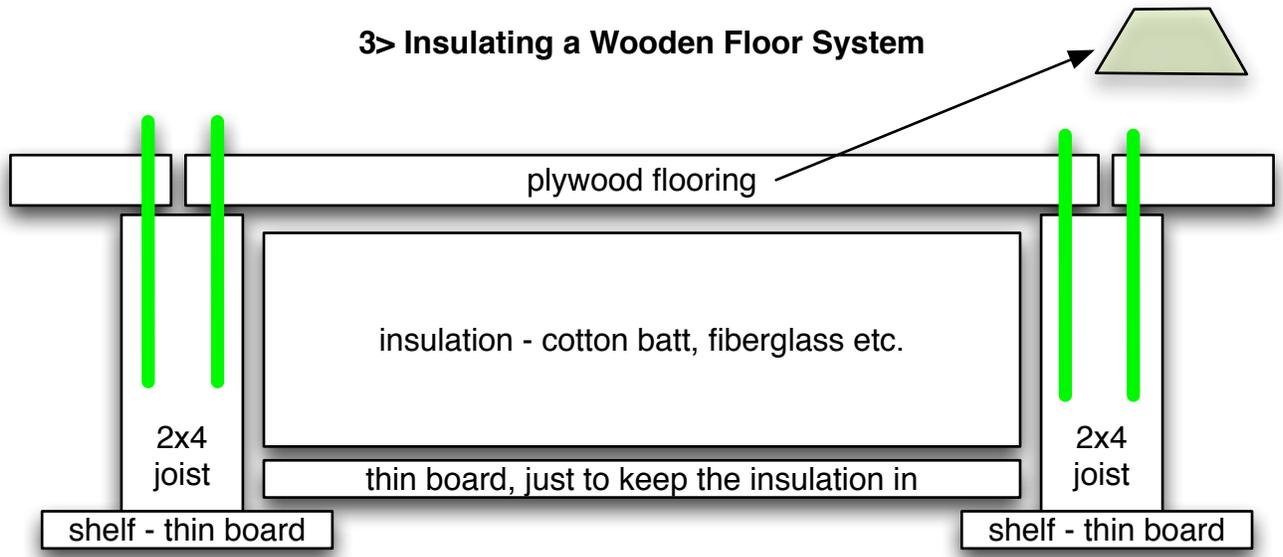
Note that no special steel is required for this, just a radial arm saw. All lumber is pre-cut. Holes may be pre-drilled in the lumber at manufacture to get the screws started in accurate positions.

The center point and beam edges will be supported from below - see subsequent pages.



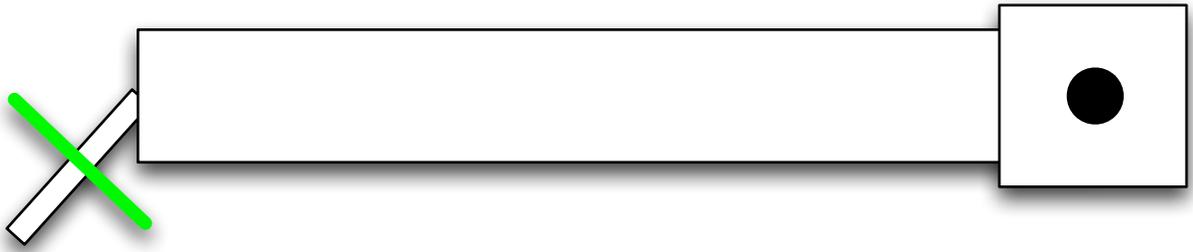
deck screw

3> Insulating a Wooden Floor System



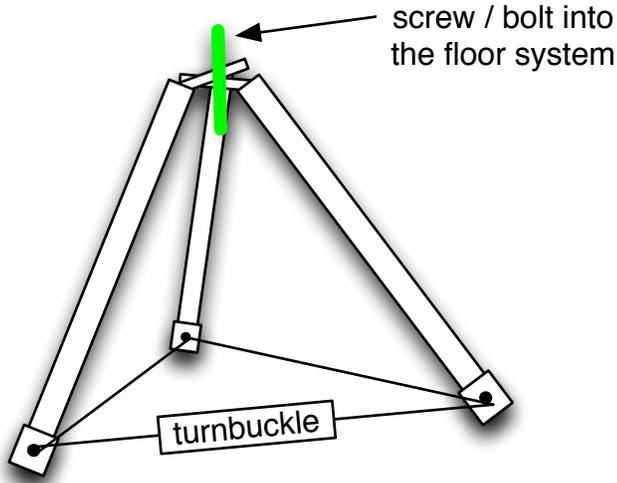
This shows a side view of one easy, cheap approach to doing under-floor insulation in a wooden floor system.

4> Cheap, Adjustable Jacks



This is a normal Burning Man style dome pole, more or less.

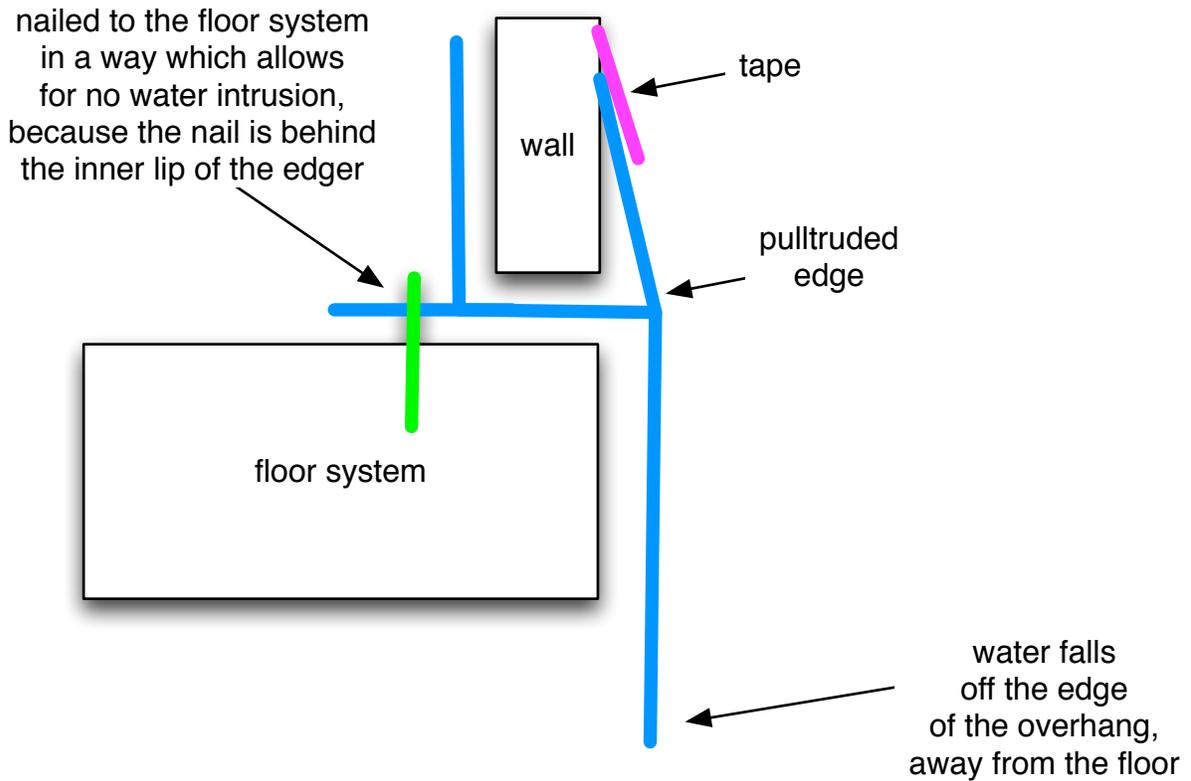
Typical materials would be steel conduit. The ends are banged flat in a hydraulic press or similar, and have a hole punched / drilled in place. Unusually, the ends are banged flat at roughly 90 degrees to each other, and one of them is bent 60 degrees. The metal is sufficiently ductile to support this, I've seen it done.



The jacks are positioned below the six corners and center node of the floor system.

A steel cable is threaded through the three holes in the bottom of the legs. When the jack is positioned, the cable is tightened to prevent the legs from splaying under the weight of the shelter. Chain with hooks might also work well, and be more corrosion resistant.

5> Floor / wall interface pulltrusion



Likely Costs

Component	Number	Cost	Total
8' 2x4 major axis joists	12	\$4	\$48
4' 2x4 minor joists	18	\$2	\$36
plywood 4x8	12	\$10	\$80
tripods	7	\$10	\$70
insulation	166 ft	\$0.50 a square, some waste	\$100
pulltrusion	48ft	\$0.50 / ft?	\$24
Total		just over \$2 per square foot	\$358