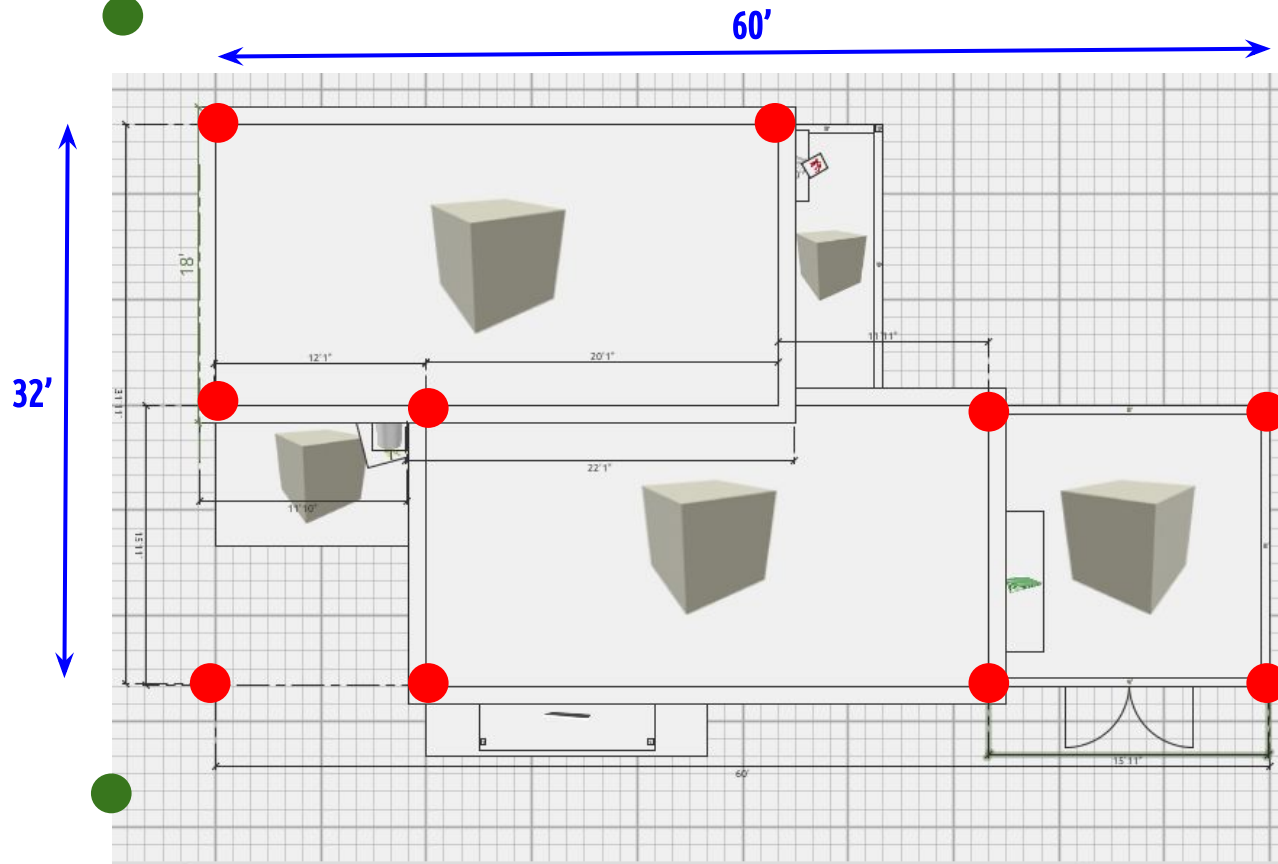


Foundation Marking

1. fsgdfg

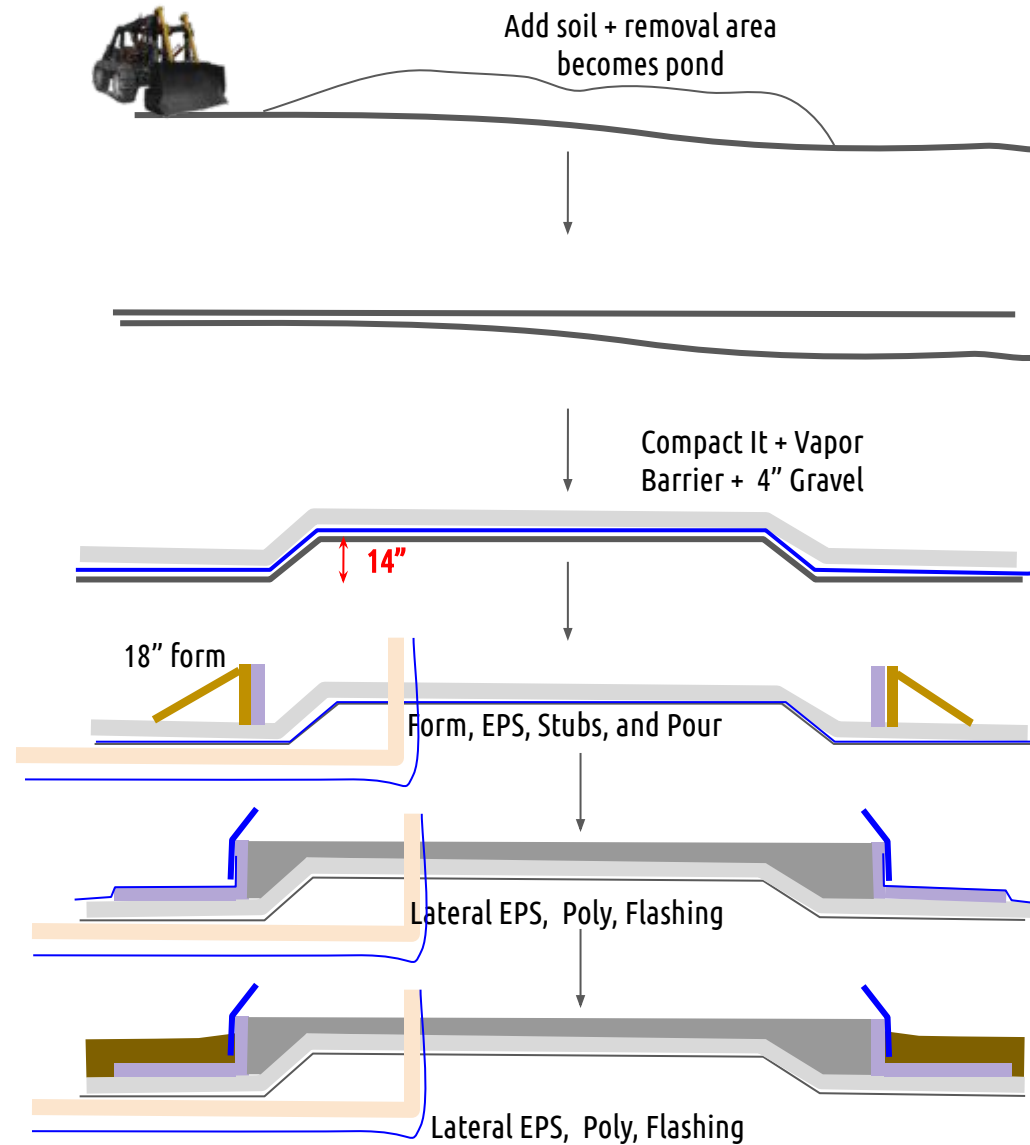


open source ecology

Foundation

Shallow Frost Protected Footer, 500 SF

- Grade. Grade for entire area of future expansion.
- Pile dirt in middle. For 512 sf of foundation - need $1\frac{1}{6}$ *
512 - 100 sf = 500 cu ft soil = 18.5 cu yd

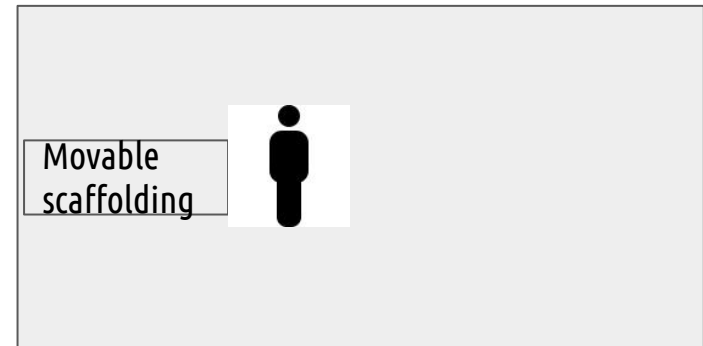


Seed Home Build Optimization - Roof

1. Joist hangers flange faces forward for ease of fastening
2. Design for swarm-ability: top plate comes with joist hangers pre-attached, and is made as part of the module build phase (prior to assembly phase)
 - a. This allows for 64 people to install ALL rafters in 10 minutes.
3. **Data points** (after top plate is on with joist hangers):
 - a. 1 person installing all rafters from the inside on scaffolding
 - b. 2 people - one per side, easiest
 - c. 4 people - does rate double over 2 people, and more than 4x over 1 person?
 - d. 32 people - 15 minutes to pick up lumber
4. Prediction
 - a. Measure and attach joist hangers

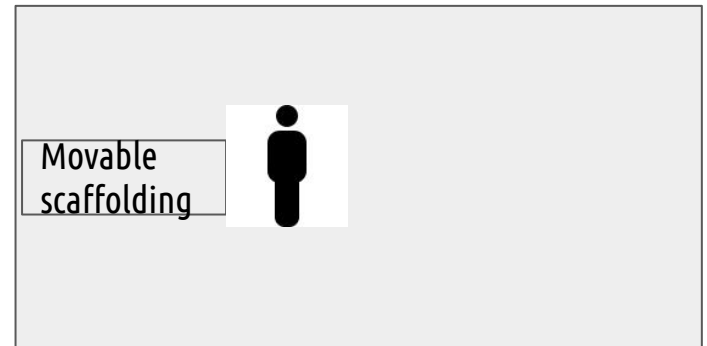


No screw heads allowed so inside trim is flat against wood for less air leaks.

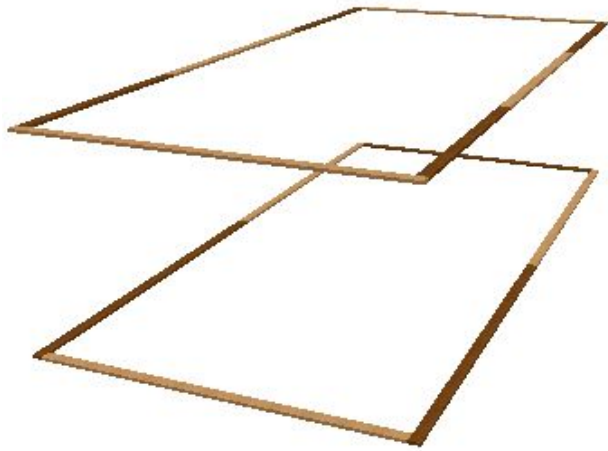


Time Predictions

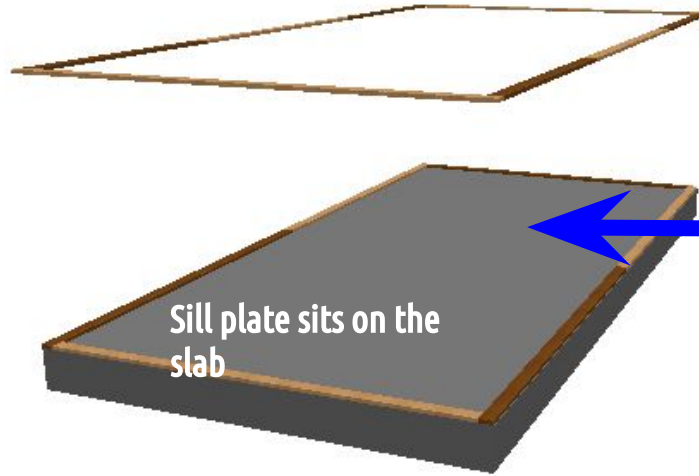
1. Predicting time forces you to consider all the steps, such that building consists of verifying hypotheses, not figuring things out
2. Examine detail in CAD first



Overall Design for Expandability: Mental Model for the Walls



Top plate and sill plate sandwiches the walls.



Sill plate sits on the slab

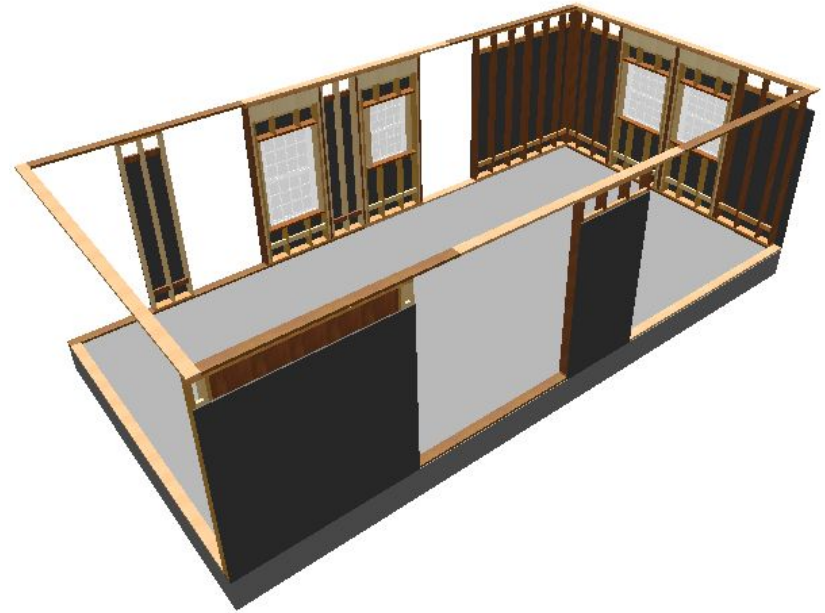
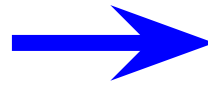
Sill plate is fastened to the slab with wrap-around anchors ([mudsill anchors](#)) embedded in concrete slab



Slip the house walls in between the sill plate and top plate



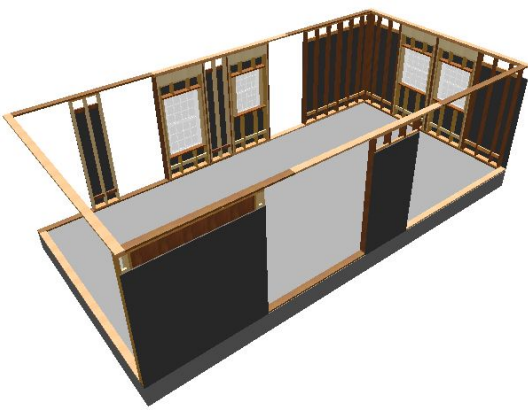
Overall Design for Expandability: Mental Model for the Walls 2



Just as you can slip 4'x8' wall modules into the house, so can you take them out and modify the house on any side

Take out 4'x8' modules at will.





Wall Modularity Challenges For Modifications

- 4x8 modules are easy to work with, can be extracted easily on non-bearing sides
 - Take off exterior trim
 - Cut seam tape
 - Unscrew wall section
 - Take out module
- 4x modules can be taken out on load bearing sides even if second story is already on!
 - Use triangle support
 - Or use a jack
- 8x8 modules are heavy
 - Broken up to paneling (separate)
 - Broken up to stud frame
 - Broken up to door frame
- Do not take out load bearing sections, or reinforce if you do.

