

Team Howell, Alfrey, Chambers

IET 120

Sam Mason

Activity 4

Planning and Building

The team started out by planning the dwelling based on the requirements of the project and taking into consideration what the needs of the class were. We kept our dwelling under 3500 sq. ft with an overall space of 3498 sq. ft. Our building is 53' x 66', contains amenities such as ADA approved facilities for the kitchen, bathrooms, entrances, and utility room. The design allows you three entrances/exits, with spacious areas for studying, sleeping, eating, relaxing and has two porches as well as a shed for storage. In planning for the dwelling, we found a sample construction schedule and used it to get an idea of what steps to take in building the project.

First, we'd start with contracts for property, plans, specifications, financing and a loan settlement. Next, we'd move into document review and revision. From there we'll move on to bids and contracts, grading and building permits, site work, foundation work, carpentry, concrete, H.V.A.C., plumbing, electrical, any specialty rough-ins and continue to roofing, exterior finishes, insulation, drywall, flooring, paint, trim, landscaping, hardware, and end with final punch-outs (not us and the contractors! ☺), cleaning, final walk through and then move-in.

Going Green

If all went as planned, we should finish the project in about five months; this of course is barring any unforeseen issues that always seem to come up when building. In trying to keep our materials list as green as possible, we decided on the following products to help Mother Earth:

- Icynene Foam Insulation
- Dow Cedar Shingles
- Bamboo Flooring
- PEX for floors, driveway, sidewalks, heating and piping
- 22 Seer Geothermal Unit with Pond Loop
- LED Light Fixtures
- Antibacterial Epoxy Floor Coating for Kitchen, Laundry & Bathrooms
- Programmable Thermostat
- Geothermal Hot Water with Electric Water Heater for back-up
- Electronic Air Filter with Charcoal Pre-filters
- Stucco for outside walls with Foam Board insulation
- Solar Outside Lighting
- Thermal Pane Windows
- Insulated Steel Doors

Money, Money, Money

From here we move on to the really important information. No matter how great your facility, you're required to pay the piper at the end (or several times from start to finish as per our construction schedule). Considering it runs anywhere from \$160 to \$170 a sq. ft to build a commercial grade building, we're looking at \$606, 900 just to build the building and when you add in the cost of appliances, furniture and all the other necessities for a building of this size and purpose, you're out another \$52, 256! Overall, our building is just under \$660, 000 when all is said and done. From experience we

know that you can always add another 15% or so on to that should you run into trouble along the way, however, with careful planning, good management skills of all the project directors, the project should go smoothly and result in a great place to live.