The simple shed roof is raised above the south-facing wall to admit generous passive solar heat and light.
The projecting metal-clad enclosure houses a couch and stove.

Home Displaying Creative Use of Recycled Materials

Powers-Hanson Residence • Victor, Idaho

Our Story

"We began building our house in the spring of 2004. We were fortunate to have friends and family who helped us immensely through the whole building process. Aaron's father and sister and my sister stayed with us that summer to help. We lived in a compound of two RVs, a tipi, a wall tent, and a small sauna building converted to a bathroom. Our plan was to build a small strawbale house with no construction loan. Thus, local and salvaged materials, a small footprint, and sweat equity were all really important.

"Our house is largely a mix of many past houses. It started with a trip to the dump one day that culminated in our returning with more than we left with. It was amazing the great things we found: doors, chairs, windows, lumber, drills and many more valuable materials. Throughout the building process, we frequented the dumps. Before long, word got out about our dump diving. We were made aware of a few houses slated for the dump that had not yet been demolished. This was even better. We embarked on a two-month spree of retrieving material and objects slated for the landfill.

Aaron and Meghan.

"One of these houses provided about 85 percent of the lumber and timber, all windows, most doors, floor tiles, appliances, and chimney pipe, as well as things such as the paint mixer, the BBQ grills, clothes (retro '70s), and an elevator that we have not used yet. Our shower/tub is made of redwood we removed from a sauna room being torn down. The bathroom tile is a past kitchen countertop tile (chipped off the counter tile by tile). And our deep windowsills are beetle-killed pine that a friend found in the dump.

"The north, east, and west walls of the house are strawbale. We chose straw because of its insulating properties and because there is so much of it here in Teton Valley. The exterior plaster is a lime mix we made on-site. And the interior plaster is earthen, consisting of local clay, sand, and straw. Our south wall is largely glass, so we framed it conventionally and used recycled denim insulation. Some materials that we couldn't find, we bought salvaged. The metal on both the roof and ceiling is reclaimed from old sheds in Montana. The roof is insulated with blown-in recycled-content cellulose.

"The footprint of our house is less than 850 square feet. With two people and two large dogs, we needed to plan some space-saving ideas

Specifications	
Exterior Area:	800 Square Feet
Interior Area:	666 Square Feet
Designer/Architect:	Aaron Powers and Meghan Hanson
Contractor/Builder:	Owners and Family
Structural System:	Post and Beam
Exterior Plaster:	Earthen-and-Lime Plaster
Interior Plaster:	Earthen Plaster
Bales:	Two-String Wheat Flat with Bamboo Pinning

into the house. Thus, our dining table is sunken in the floor and there is a removable piece over it. This area transitions between being the living room and the dining room. Part of our redwood shower is a focal point in the living room. Also, there are no walls between the living room and kitchen. The enclosed areas, like closets and the bathroom, have low ceilings to allow the main ceiling to extend above and give the house an open feel.

"Building our house was an eye-opening experience for us. Our heating bill was the same in July and August as it was in December and January. We turned off our radiant heat. With the south glazing and a dark floor, the sun heats our house. When it's cloudy, a small pellet stove is plenty to warm the house. In the summer, the overhang on our roof shields the south wall from the sun, leaving it in shade for most of the day. High windows combined with windows on the north, west, and east promote cooling ventilation.

"Along with the house, we placed a 27-foot-diameter grain silo on-site. We bought it from a local farmer who no longer used it. We added two levels in it and now use it as a studio/shop above and sailboat storage below. All the lumber and plywood are reclaimed from destroyed houses. We still have our own 'lumberyard' out back.

"Our house and outbuildings are still in process, and I think they may always be. A trip to the dump is now prefaced by a little excited anticipation. What will we find today?"

—Aaron and Meghan

Mortgage Free

On property they had traded for work, Meghan and Aaron wanted to build a house with salvaged materials, personal effort, and only the money they could allocate from their income. To be mortgage free was the objective.

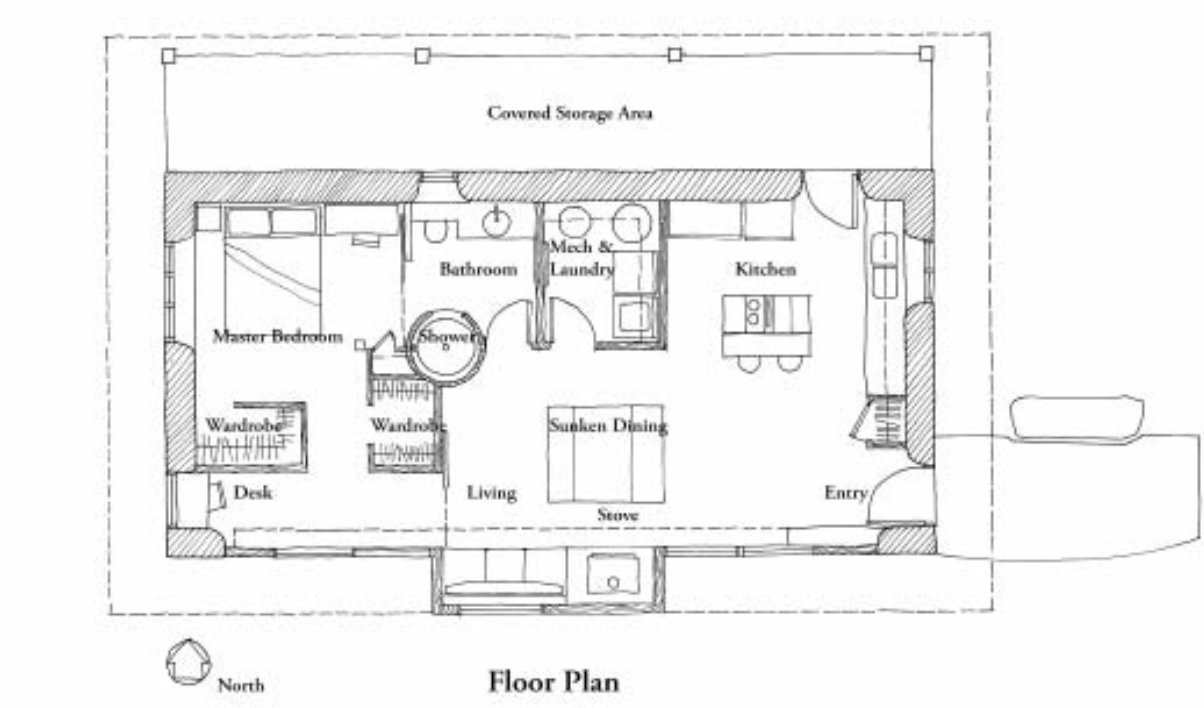
Many of the structural materials were salvaged from houses being remodeled in a neighboring city. The ceiling is recycled corrugated, galvanized steel. The roof projects to the north to provide covered outdoor storage. The strawbales were inexpensive as was the earthen plaster inside and out. Cabinets were made with exposed wheat board and then oiled.

The house is heated with a pellet stove located next to a built-in sofa in a bay projecting south of the living area. The dining area is in a recessed well in the earthen floor. A removable lid reveals a wood table and two opposing built-in benches below.

If one wants to live mortgage free and has a lot of ingenuity and energy, one can build his or her dream home.

As a space-saving strategy, the dining table is recessed into the floor and can be covered to become the living area. The kitchen and entrance are beyond.

The recessed dining area is in the foreground next to the kitchen on the right. On the left is the pellet stove and built-in seating. The back of the cylindrical shower projects out into the living space.



Floor Plan