



Building a Stunning Earthship in the Rockies

In the remote Rocky Mountains, among abundant sage, bluebirds, flowering cactus, and Indian paintbrush, stands a noble citadel...

Don Rose broke ground five years ago. He had determined to build an Earthship as his

ancestral home on an acreage in the remote Rocky Mountains of Colorado. Recent world geopolitical events, coupled with the state of the environment, had convinced him that this home had to be self-sustaining and built using up-cycled and non-toxic materials. The Earthship would utilize passive solar power with added solar panels, bypassing the need for connection to any public grid or water system.



3500 used tires, 25 to a bale, provide a structure for the berm wall.

There would be no need for outsourced heat or air conditioning; he would engineer the home to provide a constant, year-round

ambient temperature between 65 and 75 degrees Fahrenheit. Its inhabitants would thrive, with nothing to block the health-giving direct current from the center of the Earth, due to the home's natural earthen floor. Food and plant life would be grown indoors, and all water used within the Earthship would be continuously reused until eventually it had been 100% absorbed by plants



The 16x48 ft. southern window provides ample solar gain in an exceptionally cold and windy climate.

or released into the atmosphere. Don would attempt to design his ancestral home to last for centuries.

This was not a rash decision. Don's interest in sustainable building began in the 1970s, when he was working with his father, building houses and in-ground swimming pools. Ideas about sustainable building nudged Don to attend a symposium on envelope houses in upstate New York in the mid-1970s, where he learned the latest innovations in natural passive solar. He went on to study civil engineering at Iowa State University, after which he launched his own construction company, building and remodeling custom homes, always with a keen eye for sustainability and artistic craftsmanship.



Curves! Curves! More curves—the superior physics of nature.

Throughout five decades working all areas of construction, Don's creative mind was building ideas that would someday materialize in his greatest project. The concept of the Earthship caught his attention in 2019. He traveled to Taos to see Micheal Reynolds' community of Earthships, which fascinated him in many ways. He remembers thinking, "Why aren't they curving the south windows to capture heat for a longer span of the day?"—an idea that would find fruition in his own project years later.

After 50 years in the construction world, it was time for Don to retire his construction business and begin his Crowning Achievement—

an Earthship of his own design, made to last through generations to come, providing a safe and sustainable home for his family and their descendants.

"In around 2020 I heard a statement on the internet by Michael Reynolds that he had done all he could do on the development of the Earthship and that it was up to others to take it further. I took this directive to heart," Don said.



A calm moment between bursts of winter wind.

Don experimented with several ways to improve upon existing heat retention methods, some quite elaborate. "In the end, I chose to stick with a simplicity of design in keeping with the

Earthship ethos, and also to ensure that future generations would not be faced with repairing such novel and complicated systems,” he explained.



All of the wood used in the Earthship is Engelmann spruce, sourced locally.

In addition to building the Earthship with curved south and north walls of different diameters, Don made use of his understanding of mathematics and physics to compute the angles of the logs supporting the entire ceiling of the ship. “The curve of the south window wall is much larger than the curve of the berm wall. Also the entire roof is curved, with a deep slope for collecting water. It was a complicated design that took some planning and drawing before I was ready to hoist the first log,” Don said.

Another original idea for saving energy was designing the 16 ft. by 48 ft. curved vinyl double-glazed window, inviting the Colorado sunshine into a 1000 sq. ft. atrium filled with trees and plant life. These would dampen the intensity of the radiant heat of the sun while providing a lovely green experience. The shower will be centrally located in the Atrium, with a wall only high enough to provide comfortable privacy while still allowing an immersive tropical experience. A central dividing half-wall made of dense earth bags is designed to absorb heat from the south window during daylight hours, and then release the heat during the cool of night.

Using his five decades of experience in all areas of construction, his education in

civil engineering, an unstoppable can-do attitude, and exceptional creative mind-power, Don has worked alone nearly every day for the past five years, financing the build with his social security payments and occasional construction work for his neighbors when the money ran out and building paused. Although Don had to skimp on many things, he has spent serious time thinking through every action and its resulting impact on the land.

At 72 years young, Don’s Earthship is enclosed but far from complete. He estimates it will take another three full years to complete if he continues at his present pace. He is seeking grants and donations for materials and skilled labor to ramp up the velocity of completion. Don is a natural teacher and enjoys sharing the concepts and procedures he has implemented for this project. **People seeking information on green and sustainable building, including teachers and students, are invited to attend a tour of Don’s earthship.** Inquire at the email listed below.

DON’S EARTH SHIP HAS UTILIZED AND DIVERTED FROM LANDFILLS:

3500 used automobile tires

4000 used plastic, glass, and metal containers

100 trees were planted and a permaculture consultant is in place.



“Never Stop”

*-Sue Rose, Author.
Inquiries: donroseco@gmail.com*

###