The Granddaddy Of All Underground Storage Areas

There are root cellars and then there are root cellars. This web page covers an underground storage container made from culvert. This concept is extremely bold in every way. When it comes to underground storage, this may very well be the granddaddy of them all. I am convinced this is one of the finest underground storage ideas you will find anywhere. This page features one of these storage areas, which should help you understand their possibilities and perhaps even get you thinking about what you would like if you designed one for yourself.

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A bold new concept: Whoever thought of this ranks as a genius of the simple. Basically, this underground storage area is made in a culvert that was designed for bridging creeks. Culverts are thin steel pipes that are very strong, light for their size, inexpensive when compared to other types of construction, galvanized and therefore rustproof. They come in a wide variety of sizes, from as small as one foot in diameter to 20 feet in diameter and bigger. Because of the huge size possibilities, culverts can fit into just about anyone's underground storage needs. Our showcase structure was built into an eight foot culvert, however, many people building this type of shelter are now using ten foot culverts.

Easily and quickly constructed: This photo shows the culvert as it was near the end of construction. It is made from an eight foot culvert 50 feet long. Steel plates were welded onto each end to enclose the culvert. A one foot in diameter vent tube, again made from culvert, was placed in the top of the culvert on each end (not shown). The culvert coming off the top side of the main culvert at one end in the photo is a four foot culvert. Before the shelter was set into place, the culvert was rotated down so the small attached culvert was on the side of the main culvert. Then a length of four foot diameter culvert was welded on which became the entrance way. Before it was set into place, the entire outside surface, especially the welded portions, were sprayed with tar to prevent rusting. The floor inside the culvert was constructed from 2X4s and 1 inch plywood. This was placed in the culvert at the five foot wide point, being about 10 inches above the bottom of the

culvert. With the floor at this point, there is slightly over seven feet of head room when standing. Next came the door on the front of the entrance way. Our featured shelter has a small six by six foot porch built around the culvert entrance which has a wooden door to the outside. There is also a second inner door constructed from steel, enclosing the four foot diameter entrance culvert. All that remains to be done is to put in the walls and shelves.

Quickly set into place: The hole for this shelter was dug in one day. The shelter was brought in and set into place with the vents and entrance pipe welded into place the next day, then it was buried the third day.

Inexpensive for the size: The owner of our featured shelter spent $5,000 in 1990 on all aspects of constructing and burying this shelter. (It would cost about $10K now (1998) with the proper blast doors.) He did say that a lot of the wood for the floor and shelves was scrounged.

Plenty of room: Our featured shelter's 5 foot wide floor has 250 square feet of surface. Total storage area volume comes out to about 2,400 cubic feet.

Easily adaptable as an underground shelter: Our featured shelter has a bed, dresser, small living area, library, and a large storage area.

This photo shows the end of the shelter next to the entrance. Note the 4 foot diameter culvert coming off the left just before the bed. The entrance pipe wasn't put on the very end of the 50 foot long culvert for a very good reason - so the bed would fit. Note also the vent pipe in the ceiling. The owner said he would cut it off close to flush with the ceiling if he had to do it over again.

We show you the first photo again to explain the two rock towers on top of the shelter. These enclose the vents, and was done this way so kids couldn't shoot holes through them.

Your underground shelter can easily be hidden from view - no one even needs to know it's there: With a tiny bit of forethought and planning, the vents could be easily hidden by terrain, in shrubbery, a rock garden, or in carefully placed outbuildings. The same could be done with the entrance way.

Where to learn more: Sharon Packer, a nuclear engineer and the head of the Civil Defense Volunteers of Utah has written a 150 page 8 1/2 by 11 inch book called Nuclear Defence Issues. You should get one if you are contemplating building one of these shelters. This book sells for $25.00 and includes:

- National Security Affairs
- Weapons Effects
- Building the Shelter
- Post War Survival