Darrell Buchholz used cement blocks to build this swimming pool at a fraction of the cost of a commercial-built pool.

Buchholz documented building materials needed, location planning, and each step in the construction process.

Build Your Own Cement Block Swimming Pool

Building your own swimming pool with cement blocks isn't hard, according to Darrell Buchholz. He built one for a friend, and now sells plans for others to do the same.

"I built a pool for myself using pressure treated wooden sidewalls, but I live in sandy soil, which is more forgiving for wood-based walls," says Buchholz. "A friend's mother wanted to put one in, but couldn't afford a commercial installation. I offered to do it for her. I took lots of photos and based my plans

on it."

Buchholz says both the wood and concrete block pools are doing fine after several years of use. Liners will wear out and have to be replaced within 10 to 15 years.

Since posting his plans for sale on his website and sites like Gizmoplans.com, he has sold several hundred sets of plans. Plans can be downloaded for $19.95 or may be special ordered on CD or paper, but at a higher price.

"You do need some familiarity with masonry and plumbing, but you don't have to be a professional," says Buchholz. "My plans are for do-it-yourselfers."

The plans include the building materials needed, location planning and layout and each step in the construction process. There are plenty of color pictures and diagrams detailing layout and footings to building the cement block walls and more. He also includes detailed explanations of installation

of hardware and liner, all the way to filling the pool and installing a deck.

"I emphasize planning and being conscious of future possible changes," says Buchholz. "Installing changing rooms or making other changes requires forward planning for electrical and other aspects of the plan."

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Son's 4-H Project A Great Addition To Farm

When Jeff Lee dumps a truckload of grain, he can thank the 4-H contest that inspired his son Ray when he was 16 years old. Ray converted a conventional bed 1982 GMC 3500 to a lift bed that's also equipped with hydraulics and a winch. With son Ray now working at Iowa State, Lee keeps the truck busy hauling hay, grain and scrap metal.

Ray started by stripping off the old bed and building a subframe for the hoist and a new shorter 10-ft. bed. The short bed left room for an 18-in. sub bed behind the cab to mount hydraulic reservoir tanks, a spare tire and exhaust stacks. There's also enough room to fit a return line filter system from an old backhoe.

For hydraulic power, Ray added a trans-mounted pto with a direct mount 20 gpm, 2,500 psi, Parker closed-center, pto driven, variable displacement hydraulic pump from an old utility line truck. His dad says the closed-center system ensures there's no lag in the lift as with an open center, where the lifted bed will drop slightly when the pump activates. The closed center system comes to pressure and starts moving with no hesitation or drop.

Lee says his son also had to do some cutting and rearranging on the original truck frame to make room for the old wagon hoist he installed. Mounting the hoist was complicated by a gooseneck hitch with a flip-over ball. It sticks up through a removable plate in the bed when needed.

"He had to install the hoist backwards to clear the gooseneck hitch bolster," says Lee. "Getting it right was probably the toughest part of the whole project. There isn't any unused space."

The closed center system uses solenoid-operated, hydraulic valves. Lee's son installed three separate hydraulic circuits. One runs to the hoist and one to the rear of the frame for auxiliary uses. The third runs to the gooseneck hole in case they want to use

a hydraulic gooseneck dump trailer at some point.

"With three valves, it would be messy controlling them all with cables," says Lee. "Ray used regular industrial solenoid valves that he bought off eBay."

To control the hydraulics, Ray installed a mechanically linked 8-ball shifter in the cab for the pto. To operate the hoist, his dad simply hits a solenoid switch installed in a panel on the dash, along with switches for the other two circuits. He can also use a remote cable for them.

"We keep a 30-ft. cable with a pendant control in a toolbox on the side of the truck," says Lee. "We have a 6,000-lb. Ramsey winch on a flatbed trailer. The cable and pendant control plugs in behind the cab and gives me lots of options when loading the trailer."

While nearly all components were salvaged from other equipment, Lee says his son built the actual lift bed using half new and half salvaged steel. One chunk of 1/2-in. thick, 10-in. I-beam ended up as a rear bumper on the truck. On the front end, he mounted a pusher rack made from heavy pipe with a 2-in. receiver hitch at its bottom.

Other improvements to the truck included a total rebuild of the 4-barrel, 350 cu. in., 4 bolt-mains motor with 4-speed Muncie manual transmission. Ray installed a brake controller cut-out switch for backing up. He also installed numerous field lights, repaired body damage on the old truck, reupholstered the seat, and had the truck repainted.

"When Ray took it to the fair, the judge didn't believe he could have done all the work, but he did," says Lee. "He got a special honor prize."

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Ray Lee converted a conventional bed 1982 GM 3500 pickup into this lift bed model that's also equipped with hydraulics and a winch.

He stripped off the old bed and built a shorter 10-ft. bed. That left room for an 18-in. sub bed behind the cab to mount hydraulic reservoir tanks, a spare tire and exhaust stacks.

Closed center system uses solenoid-operated, hydraulic valves. To control the hydraulics, Ray installed a mechanically linked 8-ball shifter in the cab for the pto.