

New Sewerage Pumping Station in Southington, CT

Oldcastle Supplies Precast Concrete for New Pump Station

By Joanne Ray

Things are not always what they seem, and the community of Southington, CT, has the building to prove it.

It was only a few months ago that the Southington DPW completed a sewerage pumping station in the residential pond view neighborhood.

"The interesting part of this project was that this pump station was replacing one that was failing, and the only logical place to install the new station was on the property of a private resident," said Ken Pasco, value added products manager from Oldcastle Precast in Avon, CT. "The DPW made a deal with this family to install the station in his front yard and build the building to look exactly like a two-car garage (matching the siding and trim to his existing house). Now the DPW would have rights to one half of the building (generator/control and access tube to the below-grade dry well) and he would have access to the other half of the building (i.e. gaining a single-car garage). The accesses in the front are two similar garage doors, which makes it look just like a two-car garage."



Setting the base section of the dry pit pump station. Ten-foot by 16-foot inner diameter rounded corner piece (Oldcastle standard size: RC10x16) weighs 29 tons. The depth of dry well is 20 feet 10 inches from grade to its bottom. Equipment pre-installed and pre-tested: pumps, piping and valves sump pump, instrumentation controls/alarms, lighting, ventilation, and minor plumbing.

According to Anthony Tranquillo, director of the DPW in Southington, the replacement project began in the spring of 2003. The cost of the project was just under \$1 million.

"We had to do a replacement of a pump that was installed in 1965, and the original station had live out its useful life," said Tranquillo. "The design made by Metcalf and Eddy was a duplex with an underground pumping station that was a dry well-wet well



Installing top half of dry well.



Front half of the precast building is set. Oldcastle standard size precast building (both halves) is 22 feet 6 inches deep by 26 feet long with 9-foot inner diameter and divider wall that separates residence garage from generator room. Product weight for each half (i.e. each pick) is 35 tons. Notice how the building is being set on the grade beams, and the 3-foot by 4-foot riser tube to the drywell will protrude through the floor of the generator room half. Equipment supplied with the structure: garage doors, exterior insulation and plywood sheathing, generator intake louver/MOD, interior epoxy-coated walls and ceiling, window on garage side, lighting, device conduits, and wiring.

arrangement. The 24-foot by 28-foot building was to be a two-bay garage that houses an emergency generator and electrical equipment."

The project began with an unnamed contractor who did not work out, which paved the way for VMS, who started the job in early fall of 2007.

"We took over the job after another contractor resigned from the project," said Victor Serrambana of VMS. "We were able to get the hole dewatered. When we came on the project the hole was already 17 feet deep and had been open for two years. The former contractor had not been able to control the water hole."

VMS came in with a team of five or six laborers and used the CAT 345B to dig the hole down 29 feet. They lowered a smaller excavator – a John Deere 50D – into the hole to make up for the reach. The hole was 40 feet across.

"The other machine was able to gather the material to the far side of the hole," said Victor Serrambana of VMS Construction. "Some material was trucked away to another site, and some was brought back in to fill the hole."

Once the hole was completed, Oldcastle Precast-Rotondo of Avon, CT,



Second half of building being set; sizes and weights are the same as first half. Additional equipment supplied with precast structure: side access door to garage half, side access door to generator room half, power distribution, emergency generator and ATS, HVAC.



Complete set of the above-grade building looking at the generator room side. Insulation and sheeting was completed at the building joints on the day of the set. The site contractor was responsible for building the wooden false roof and side/trim of the building exterior to match the house.

which manufactures custom precast concrete structures, came on site to install the pump station.

"We work closely with the end user and their design engineers to provide products that can be manufactured off-site in our environmentally controlled manufacturing facility (year round), and shipped to the job site for a one-day installation (in most cases)," Pasco said. "In this case, Oldcastle Precast manufactured the below-grade dry pit



Installing 3-foot by 4-foot inner diameter riser tube sections on top of dry well with hinged aluminum access grating and ladder assembly inside. This is the access from the generator building above grade to the dry well. You can see base section of 6-foot-diameter precast wet well in the background. The wet well will be stacked so its top is flush with grade. Ductile iron suction piping and level controls/alarms will be run between the wet well and the dry well. Gravity inlet line is run into the wet well by the site contractor so complete backfilling can begin. Once backfilled, grade beams will be cast in place to support the generator building/garage.

pumping station, entrance riser tube to the pump station, adjacent round wet well, and the above-grade divided building for this project. We completely outfitted these structures in our



Finished building resembles a two-car garage.

manufacturing facility and pre-tested the complete pump station before it was shipped to the job site. The dry well, riser tube and wet well were all installed in one day. Backfilling and foundation site work was performed after the initial set, and then the generator/control/garage building was installed, again in one day."

Tranquillo said the pumping station is capable of pumping 200 gallons per minute and services 30 homes.

"As far as I can determine, it fits in very well with the neighborhood," Tranquillo said. "Driving by, you would never know there is a sewerage pumping station in there." ■