



**PRECAST SEPTIC SYSTEM
CENTENNIAL COMMONS
HAMPDEN, MA
NOVEMBER 19, 2009**

**ARROW CONCRETE PRODUCTS
560 SALMON BROOK STREET
GRANBY, CT 06035**



With a pump to relieve groundwater, the level compacted base of 3/4 inch stone is prepared to receive the precast components. Well drained glacial soil is typical to the area.

Phil Chatfield has worked for Arrow Concrete for many years. He is the experienced expert that goes to the tough jobs. Preparation for this job included pre-cut plywood strips that keep stones from being dragged into the joints. The black primer on the joint is CS-50 Liquid Rubber Primer. It was plant applied. The red bucket holds CS-300 All Weather Primer which will be applied on the site. Yes, primer on primer to insure a good seal.



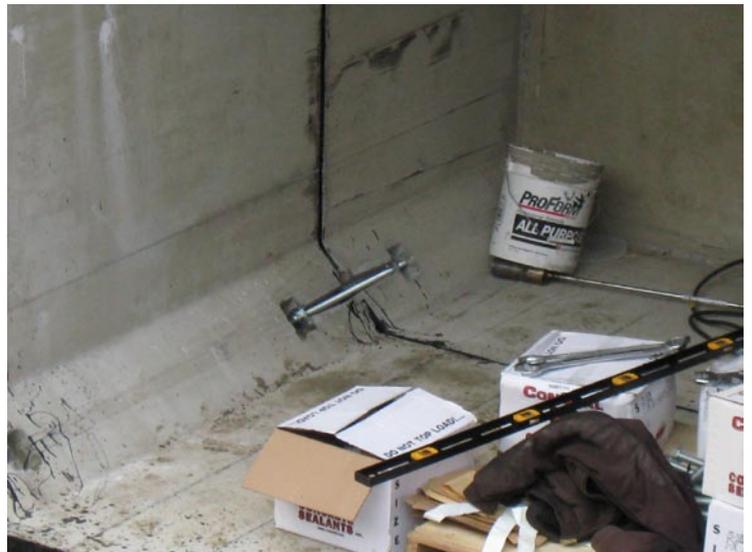
Matt Wench is Product Supervisor for Tunnel Tanks. Today he installs CS-235 Rapid Expanding Sealant

Laborers from the contractor help prepare the joints. Here, a roller is used to make sure the sealant is firmly attached to the primed surface



With ConSeal in place the pieces are carefully brought together. The “inside” seal is CS-102. It is seen here on the leading edge of the spigot. The “outer” seal is CS-235 Rapid Expanding Sealant. CS-235 will swell upon contact with water. Extra insurance for water tightness.

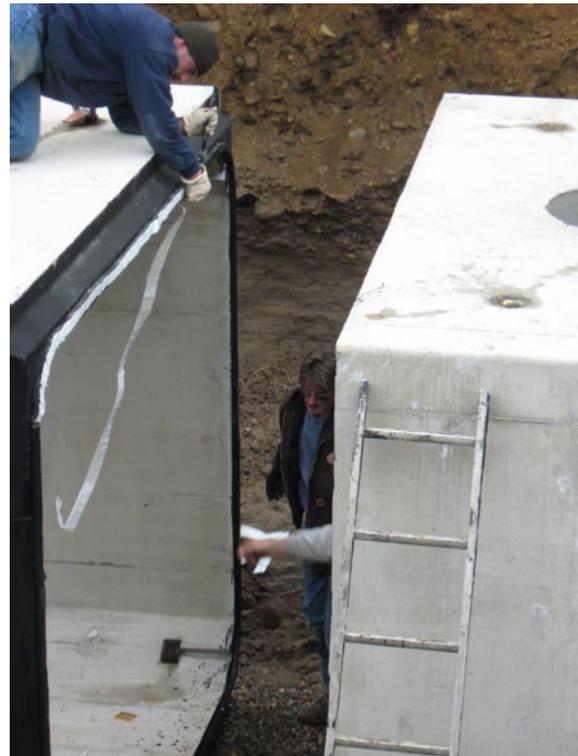
Bolt Pockets are used to draw the pieces together and hold them. Each inside haunch has a bolt pocket. This is the most common method of joining culvert sections in New England. Sometimes the Bolt Pockets are located in the floor, while the top ones may be located on the roof of the tunnel. In any case, the bolts hold the tunnel in alignment.





A good view of Bolt Pocket arrangement. This joint was primed in the plant with CS-50 Liquid Rubber Primer. Additional primer and a continuous strip of CS-102 will be applied just before joining the sections.

Phil makes certain that everything is ready before bringing the pieces together. Arrow Concrete Products wants him there to insure a completely water tight structure. This may be the first time these laborers have ever installed one of these tunnel tanks, but Phil has done it many times.





The tunnel tank is a 10,000 gallon recirculation pump tank. It cannot leak! Orange lines on the prepared base indicate where to put an 8,000 gallon septic tank.

The orange primer is CS-75 Water Based Primer. It was applied at the plant. CS-75 dries to a sticky finish, while the CS-50 Liquid Rubber dries hard and shiny. Both provide an excellent surface for water tight precast joints.



The septic tank is second in a treatment train of three vessels. The first, another 8,000 gallon tank receives the sewage from an elder community. It sends effluent to this tank, which then flows to the recirculating tunnel tank. Septage is pumped to a sand filter which drains back to the second tank. After a number of passes, the treated effluent is dispersed to a drain field.

ADDITIONAL PICTURES



Top bolt pockets are equipped with this guard, which keeps the bolt from dropping on Phil's head while he tightens the bottom bolts.

This crane and operator assembled both structures in about three hours. Planning and preparation made for a smooth job. Before backfilling, all precast tanks were vacuum tested to insure water tightness. They all passed.

Vacuum testing is preferred by Arrow because it is quick. The alternative water test requires too much time and expense.



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