

BMPs Save Cost For New Development

In Albemarle County, near Charlottesville, Va., a large neighborhood model development is completing Phase One construction of a 65-acre site. Stonefield, a 270,000-sq-ft retail center with a central plaza and 245 residential units, is scheduled to open in late 2012.

The original site plans included nearly 1,200 linear ft of 30-ft-high retaining wall, which made it necessary to construct two storm water management ponds. A significant investment was required for the storm water management portion of the project. The owner, South Carolina-based Edens, and the engineer, WW Associates of Charlottesville, worked with Contech Engineered Solutions for a more cost-effective solution.

After reviewing multiple Contech storm water management products, the project team chose a treatment train solution that uses best management practices through integration of pretreatment, detention and treatment. This treatment train met all regulatory needs and allowed the developer to retain more usable land than alternative options; it also reduced the cost estimate of constructing the ponds by one-third.

The storm water management system included a corrugated metal pipe (CMP) underground detention system engineered from 2,411 linear ft of 138-in.-diameter, 10-gauge, Aluminized Steel Type 2 pipe; a StormFilter 8-ft-by-10-ft-by-48-ft box culvert comprising 98 filter cartridges, using a variety of sustainable media to remove challenging pollutants; a Vortechs 3000 hydrodynamic separator, which is a high-performance, low-energy swirl-chamber system ideal for very fine sediment removal (down to 50 μ); and two temporary sediment basins with outfall pipe.

With this storm water treatment train solution, Contech reduced both production time and logistical costs for the site contractor, Faulconer Construction of Charlottesville, Va., during the early project construction. This was accomplished, in part, by utilizing the Contech Mobile Production Vehicle (MPV), in which Contech manufactured most of the CMP detention pipe on the project site within just five days.



The MPV is designed to be an intermodal, self-supporting factory used for quick deployment to produce CMP with diameters from 3 to 16 ft and up to 35 ft long. The CMP are ready for installation in as little as four hours. Using the same quality construction levels as Contech plant-manufactured products, the MPV is ideal for remote job sites; projects requiring large continuous pipe production, such as windmill foundation forms, vertical shafts or caissons; support for immediate rebuilding and deployment following a natural disaster; and sites with limited storage space or restricted traffic patterns, including mines, military bases or airports. SWS

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