

Pipe Takes Off in Airport Storm Water Detention System

Reinforced concrete pipe (RCP) has many advantages when it comes to the construction of storm water detention systems. According to the U.S. Army Corps of Engineers, RCP has a service life of 70 to 100 years, while corrugated metal pipe, aluminum pipe and high-density polyethylene (HDPE) pipe have material service lives of roughly 50 years.

Experienced contractors know that RCP producers supply quality-certified products ideally suited to the vast majority of storm water detention projects. System designers can choose from five concrete pipe classes and special designs, and four installation types.

Concrete pipe makes particular sense in certain applications due to its intrinsic structural benefits. For example, RCP was recently selected for a major airport project because it is highly durable and offers protection from environmental risks such as fire and collapse from vehicular weights.

The 10-year, \$110 million capital improvement plan at the Akron-Canton Airport in Ohio included construction of an underground storm water detention system under a new parking lot. RCP was selected by the contractor because there was a choice of materials in a well-considered specification. The project was originally designed and bid

as 60-in. diameter HDPE conduit with HDPE pipe fittings, with 72-in. diameter RCP with fittings as an alternate.

The contractor chose RCP to reduce the structure's footprint, footage of pipe to be installed and the amount of work required to complete the load requirements of the installation. RCP provided security and strength below the 10 to 15 ft of fill and live load of the parking area. In addition, a redesign reduced the spacing of the pipes from 5 ft to 32 in., resulting in significant savings in structural backfill material. The project began in the fall of 2011 and was commissioned in 2012. [SWS](#)



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