



STORM WATER HOLDING SYSTEMS MEET SMALL FOOTPRINT STORAGE REQUIREMENT

RIALTO, Calif. - In order to control stormwater runoff for a new distribution center here, a pond was built on top of an underground detention system. This type of two-tiered structure is often utilized in places where space is at a premium, and where a deep pond with a high retaining wall is not desired. This system was constructed at the Alder Avenue Distribution Center, a 630,000 square foot state-of-the-art cross-dock facility. Built on 32-acres, it includes parking for 193 trailer trucks and 301 cars.

To control nearly 200,000 cubic feet of stormwater, a 26,270-square-foot-open pond was built to handle 145,735 cubic feet of stormwater. The additional 46,000 cubic feet of capacity is managed by the underground detention system that uses more than a mile of high-density polyethylene (HDPE) pipe in diameters ranging from 18 to 48 inches.

"The site constraints required a different stormwater control solution that was made possible through some innovative engineering and the use of HDPE pipe," said Daniel Currence, P. E. director of engineering for the Corrugated Plastic Pipe Division of the Plastics Pipe Institute, Inc. (PPI), the major trade association representing all segments of the plastic pipe industry. "While the small footprint limited the size of the above ground basin, there was the need for overflow and increased detention, which was provided by the underground HDPE pipe system."

Stormwater is stored first in the above ground basin and then infiltrates into the underground storage system where it makes its way into the perforated GOLDFLOW® WT watertight corrugated HDPE pipe from Prinsco, Inc. (Willmar, MN). The two systems work together to meet the site's required 191,735 cubic feet of storage.



HDPE was selected over other pipe material alternatives for this job according to Currence. "We were told that the engineer typically considers both corrugated metal pipe and corrugated HDPE pipe for these types of projects, but prefers to use HDPE when there is no significant difference in price. He feels that HDPE pipe offers greater longevity."

The project had an extremely short timeline of just a few days between order and material delivery, which Prinsco was able to accommodate using the company's Fresno, California manufacturing plant. Additionally, on-site construction time was also reduced due to use of pre-fabricated tees for the system manifolds.



"The Alder Avenue Distribution Center project is a great example of how underground plastic pipe systems offer flexibility and innovation in stormwater management system design," stated Tony Radoszewski, PPI president. "Systems can easily be customized to meet the unique demands of each project, and can be combined with other stormwater management solutions to provide the best possible outcome for the project."

Additional information can be found at the PPI website, www.plasticpipe.org.

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About PPI:

The Plastics Pipe Institute Inc. (PPI) is the major trade association representing all segments of the plastic pipe industry and is dedicated to promoting plastics as the material of choice for pipe applications. PPI is the premier technical, engineering and industry knowledge resource publishing data for use in development and design of plastic pipe systems. Additionally, PPI collaborates with industry organizations that set standards for manufacturing practices and installation methods.