RockHardscp® Precast Project Profile
Wetwell Structure

Project: 13’ L x 11’ W x 20’ H RockHardscp® Precast Wetwell
Owner: Pima County – Tucson, Arizona
Engineering/Consultant: WestLand Resources
Contractor: PCL Construction
Date of Installation: November 2017

The Continental Ranch Sewer Pump Station was built in the late 1980’s and put into service in the early 1990’s. Over the years the station had experienced normal wear and tear associated with sewer pump stations, such as the station’s Portland cement concrete wet well which needed repairs due to severe corrosion. Along with the physical repairs, Pima County wanted to update the pump station to meet current NFPA 820 safety codes. The county also looked to provide permanent bypass and back-up power, so the pump station could be activated whenever necessary. Westland Resources, Inc., the design engineer, was instrumental in suggesting the permanent bypass station be equipped with diesel fueled pumps so the back-up power and bypass facility could be combined into one location. It also suggested redesigning the precast wet well structure using a corrosion resistant polymer composite material-of-construction called RockHardscp®.

RockHardscp® Precast Project Profile
Wetwell Structure

In November of 2017 Pima County invited the RockHardscp® team to offer their unique design and to provide a new RockHardscp® Precast wetwell structure for the Continental Ranch wastewater facility. The original epoxy coated, Portland cement concrete wet well, which had been scheduled for replacement in March 2018, had structurally deteriorated due to severe microbiologically induced corrosion and was rescheduled for emergency replacement. The RockHardscp® team reviewed the initial Portland concrete wet well proposal and presented a RockHardscp® Precast alternative:

- RockHardscp® is a totally corrosion resistant material-of-construction having physical properties more than 5X greater than that of Portland cement concrete.
- Utilizing RockHardscp® reduced the wet well wall thickness from 12” to 4” and eliminated the need for a protective coating.
- Reducing the wall thickness and weight of the precast structure by 66%, allowed the general contractor, PCL Construction, to utilize lighter-duty equipment to install the structure.
- Furthermore, the RockHardscp® team provided the complete services of engineering, fabrication and on-site technical support.

- Choosing RockHardscp® with its 50 Year corrosion warranty, eliminated the additional 30 days to cure a concrete structure before requiring a sub-contractor to install a low-cost, thin-film epoxy coating.

Bearing in mind the time sensitive project, the engineering and approval stage took approximately 10 days, while the fabrication and shipment of the wet well structure took approximately 3 weeks. It took PCL Construction an additional 10 days to successfully install and test of the RockHardscp® structure.