



Infrastructure Innovators Since 1994

QuakeWrap, Inc.

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PROJECT PROFILE

36-inch Diameter Wastewater Process Piping External Rehabilitation with QuakeWrap

Repair System: QuakeWrap FRP technology applied to rehab 36-inch diameter Wastewater Process Piping

Owner: Cobb County Water System

FRP Installer: FRP Construction

Design and Materials: QuakeWrap, Inc.

Location: Cobb County, GA

Project Synopsis:

- This design called for Carbon Fiber Reinforced Polymer (CFRP) to retrofit a 36" Diameter Pipe with 54 ft length for Cobb County Water Treatment Plan.
- QuakeWrap (design and materials) and FRP Construction (installation) team was selected for a design-build solution.
- QuakeWrap designed a fully-structural carbon fiber reinforced polymer (CFRP) liner system to withstand the operating pressure of 65 psi.
- A dual-layer glass fabric laminate was applied as the first layer to obtain impermeability, create a dielectric barrier between the host steel pipe and carbon fiber laminate, and contribute additional strength to the system in both directions of significant stress (hoop and longitudinal).
- Overall system is comprised of a tack coat (high-adhesion epoxy), two layers of carbon fiber and one layer of glass fiber laminae (QW U27C & B2610G), a 40-mil thick primary top coat (epoxy) and 20 mils thick secondary top coat to protect the FRP system against UV degradation..
- Surface preparation to the existing pipe substrate by abrasive wire wheeling to achieve appropriate surface profile for FRP installation. Left over dust and residuals were removed with an air blower and wiped clean prior to installation of FRP. Installation was performed successfully by FRP Construction using the external wet layup method.
- The expected service life of the FRP lining is more than 50 years with a potential need to replenish the UV resistant top coat after extended period of time in service.

**Contact an engineer today at
info@quakewrap.com**



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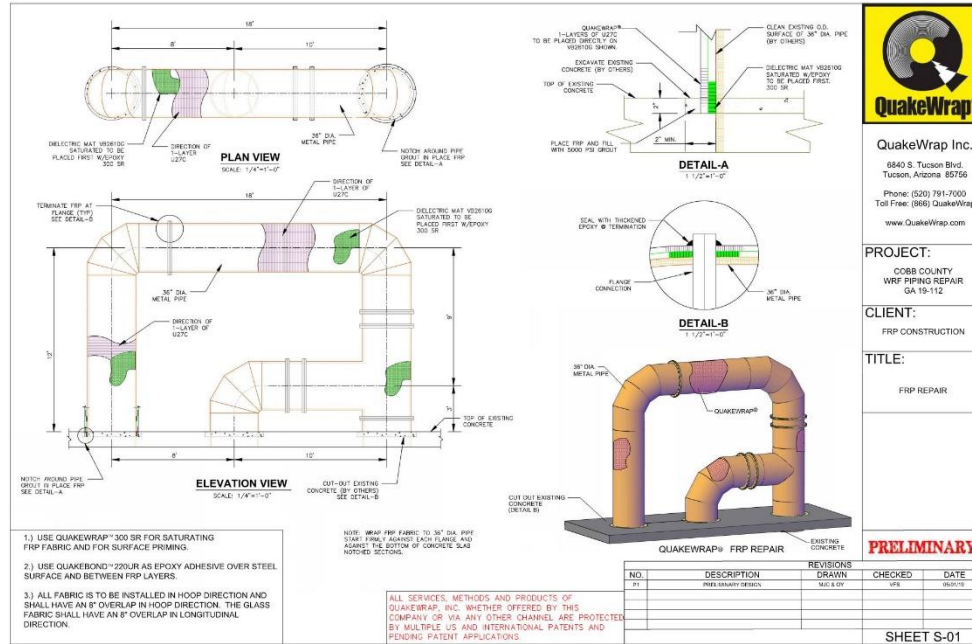
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Project Design



Project Photos



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